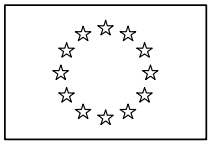

EUROPEAN COMMISSION
RESEARCH DIRECTORATE-GENERAL

Directorate C - Science and society
Women and science

Gender Action Plan
in
Integrated Projects and Networks of Excellence

A Compendium of Best Practices

October 2004

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I. INTRODUCTION

The purpose of this document is to give guidance for proposers on how to design a Gender Action Plan for Integrated Project (IP) or Network of Excellence research proposals being submitted under the 7 thematic areas of the Sixth Framework Programme.

It should first be reminded that the European Commission considers that without gender equality in science and without a better use of the human resources available, scientific excellence will never be truly achieved within the European Research Area. This is why it has developed a gender equality policy based on at least two combined objectives:

- promoting the participation of women scientists in Framework programme activities;
- ensuring that the gender dimension is properly addressed in EU-funded research content.

This can be symbolically represented by the following simple formula:

GE=GD + WP

GE: **G**ender **E**quality

GD: **G**ender **D**imension of the Research Content

WP: Encouraging **W**omen's **P**articipation

By introducing the Gender Action Plan in the new FP6 instruments the European Commission pursues the following objectives:

- To increase women's participation, at all levels, within the research workforce;
- To allow a better understanding of the gender dimension in research, especially for the definition and the evaluation of scientific excellence;
- To raise the gender awareness of different categories of actors, within and outside the European Commission, involved in the design, the evaluation, the selection, the negotiation, the realisation, the implementation and the follow-up of IP and NoE research projects;
- To highlight the respective responsibility of each category of actors regarding the EU commitment to ensure gender equality and to implement a gender mainstreaming strategy in all its policies and programmes, including the Research policy and the Framework Programme.

II. GENDER ACTION PLAN IN PRACTICE

For Networks of Excellence and Integrated Project, the guide for proposers mentions, in part B, two different kinds of request:

B.10.1. Gender Action Plan:

Proposers are requested to elaborate an action plan indicating all kinds of actions and activities that will be developed to promote gender equality within the project. In a view to elaborate the Gender Action Plan, proposers are also requested to provide sex-disaggregated data on the workforce involved in the research proposal.

number (and %) of women involved in the scientific management of the project; number (and %) of women involved in the scientific partnership as scientific team leaders of the project; number (and %) of women early researchers; number (and %) of women experienced researchers; number (and %) of women responsible for work packages; number (and %) of women members of the different kinds of boards (advisory board, scientific board, management board, ethical board, etc.)

B.10.2. Gender issues

Proposers are requested to explain if there are gender issues associated with the subject of the research proposal and how these gender aspects have been taken into consideration into the research content.

Thematic Priority 1 (Life Sciences, genomics and biotechnology for health) has a much more detailed Part B.10.2, because of the special relevance of gender issues to the research subject (a specific gender approach is necessary here).

What is a good Gender Action Plan? Women and Science Unit Recommendations

A good Gender Action Plan should be build around the 2 following steps:

1. A diagnosis on the current situation regarding gender (women's participation and gender aspects in research) within one proposal.
2. Practical proposed actions (no general statements) based on the above diagnosis, giving therefore real chances of success.

The starting point does not matter but rather the progress intended to be done.

The Gender Action Plan should thus provide two different kinds of information:

1. On actions to be undertaken - and monitored – to:

- encourage women to apply for research positions
- ensure that equal opportunities will be promoted in recruitment at all levels;
- allow women researchers to participate in all project's activities
- encourage women to participate in the management and scientific committees.

In practice, the Consortium could consider:

- Collecting gender statistics on the workforce employed by the Consortium and monitor the progress made in terms of gender balance;
- Establishing a Gender Awareness Group or equivalent structure to encourage networking and mentoring amongst women researchers,
- Organising outreach activities such as girls' days,
- Organising incentives (fellowships and training awards) that really fit the needs of women beneficiaries,

2. On the specific gender aspects of research to be addressed:

Integrating the gender dimension in research means questioning systematically whether, and in what sense, sex and gender are relevant in the objectives and in the methodology of projects. Many science and research projects include humans as subjects. There is no such thing as a universally neutral person. Because gender differences are fundamental organising features of life and society, recognising these differences has important implications in scientific knowledge.

The following list shows examples of gender relevant research topics:

- Gender differences are relevant in health research for combating diseases, and in the fundamental research on genomics and its applications for health

- In information technologies, gender disparities exist at user level and in the labour market. By assuming that information technology is neutral, biases can enter into technological research and development, which can have a negative impact on gender equality.

- Gender-specific needs could be relevant to the development of materials for use in the biomedical sector.

- Gender differences could exist in the impact on health of food products, such as those containing genetically modified organisms.

- Gender may also be relevant in the epidemiology of food-related diseases and allergies.

- Gender differences are relevant in the design and development of sustainable technologies and in sectors such as transport

- There are differences in gender roles and responsibilities, as well as in the relationship to the resource base, which are relevant to sustainable development research (land management, agricultural and forest resources, water cycle)

- Developments in the knowledge-based society and in the new forms of relationship between citizens and institutions in Europe have some significant gender dimensions.

III. GOOD PRACTICES IN DESIGNING A GENDER ACTION PLAN

Following a request regularly addressed to the Women and Science Unit, a compendium of good practices in designing a Gender Action Plan has been produced.

The good Gender Action Plans presented below have been gathered by the representatives of the different services involved in implementing Framework Programme (FP6) participating in the working group on Women and Science. This Compendium does not yet include the Thematic Priority 2 *Information Society Technologies* and the Thematic Priority 7 *Citizens and governance in a knowledge-based society.*

TP1- LIFE SCIENCES, GENOMICS AND BIOTECHNOLOGY FOR HEALTH

1. Project Title: Epigenetic plasticity of the Genome
Acronym: EPIGENOME
Instrument: Network of Excellence

Project summary: This NoE project results from the merging of two NoE proposals into one NoE on epigenetics. This area has recently moved to the forefront of human genetics research by providing new insights into the regulation of genes. The resulting "EPIGENOME" project aims to unravel the basic mechanisms underlying epigenetic regulation and focuses on various aspects of chromatin dynamics, the histone code and nucleosomes remodelling. Ever since the discoveries of figures such as Gregor Mendel and Theodore Boveri, Europe has been a world leader in genetic and chromosome research, leading to major advances in our understanding of the fundamental principles of heredity. Having recently completed the sequencing of a number of genomes of scientific interest, including the human genome, it has become clear that the more complex an organism, the bigger its genome. However, it is also evident that increased bio-complexity is not reflected by an equivalent increase in the number of protein coding genes in each genome, with, for example, 15,000 in a fly compared with only 40,000 in a human. This suggests that the DNA sequence itself is not the only source of heritable information, and that mechanisms other than DNA sequence information have been adopted during evolution. The discovery of epigenetic mechanisms that considerably extend the information potential of the genetic code mean that we are more than the sum of our genes, opening up a post-genomic era that will define more clearly the molecular basis of our identity.

To ensure that Europe remains at the leading edge in this field, the European Commission, through its Sixth Framework Programme (FP6), has opted to finance a new Network of Excellence (NoE) called 'The Epigenome'. The network aims to provide a coherent platform for Europe's epigenetic research community over the next five years. The Epigenome brings together 25 of Europe's leading research institutes in this field under the coordination of Professor Thomas Jenuwein from the Research Institute for Molecular Pathology in Vienna, Austria. The 'virtual institute' created through the NoE will have three main objectives: to devise a joint research programme to advance understanding of epigenetic mechanisms, to integrate 22 of Europe's most promising newly established research teams into the initiative (the NET programme), and to establish an interactive website to transfer knowledge to the scientific community and the general public. Through its NET programme, the Epigenome network will progressively expand to incorporate additional research teams during its five years of EU funding, with 25 per cent of the NoE's total funding being used to affiliate newly established research teams for a period of three years. In addition, funds will provide all NoE members with access to infrastructures designed to enable them to fully exploit the results of their research, and to organise a biennial conference on epigenetics and various other public events. However, the NoE members are fully aware that the 12.5 million euro of EU funding is a founding instrument, and that additional resources will have to be secured in order to extend the initiative beyond the initial 2009 lifetime.

Web site address: http://www.epigenome.imp.ac.at/index.html

Gender Action Plan: The “Helsinki Group on Women and Science”, commissioned by the EC to investigate gender distribution in scientific careers have clearly highlighted gender disparity, particularly at the top levels of existing career structures. This awareness, substantiated by extensive statistics is a first step towards addressing the issue of gender biasing. The next stage would be to take positive action to redress the balance. This NoE has a critical mass of scientists within the field of epigenetics to be in a position to positively influence levelling these gender biases.

Are there women directly involved:	
- in the scientific management of the project?	YES
- in the scientific partnership team leader in the projects	YES%
% of women scientists involved in the project:-	
Early researchers (less than 4 years after graduate)? 56%	
- Experienced researchers (min 4 years after graduate or having a PhD)	44%

The positive actions that can be expected from this NoE come under three headings. Firstly, the significant female representation in NoE governance can influence the decision making concerning issues that can promote gender equality. Secondly this strong representation in NoE leadership will ensure a voice for discussing gender issues as well as providing role models of women in science to the public and mentoring to female junior members of the NoE. Finally the NoE has a recruitment initiative which is integral to NoE development (the YT programme) and represents a novel scientific career development platform where gender issues can unequivocally be accounted for.

The 8-member governing board consists of three women (-40%) – Geneviève Almouzni (NoE deputy coordinator, ICP, Paris), Amanda Fisher (Public Science coordinator, MRC CSC, London) and Susan Chesser (E-publications coordinator, UNICE, Geneva). In addition, Wendy Bickmore (MRC HGU, Edingurgh) will be coordinating the Epigenome web site project and greatly contributing to public science events. In fact, the progress of 8 out of the 19 workpackages (WPs) will be the responsibility of female members of the NoE. These members already have excellent track records in actively contributing to science policy and the public dissemination of science. This demonstrates that not only will women be influential in all NoE decision making, but will be visibly and actively responsible for shaping initiatives that can bring about gender mainstreaming.

In line with the Helsinki Group mandate, this NoE will stimulate discussion and exchange experiences relating to women in science both within the NoE and in the disseminating public forums. This will have a positive impact in encouraging women, presently trained as young scientists in the NoE, to progress the career ladder of science. But also there is the need to raise the profile of women in science with the public, to bring sustainable long-term change. This NoE will therefore facilitate discussion at a number of levels, within the context of the defined NoE activities. The Epigenome website, and in particular the web consulting facility (WP16) can contain information, and answer questions about careers for women in science. Furthermore, a number of E-journal articles (WP18) and Café Scientifique events (WP17), or sections thereof, will be earmarked for raising awareness and debating gender issues in science. The planned school events will provide the opportunity to highlight the reality of women in scientific careers. Efforts will also be made by this NoE to establish links with Helsinki Group national representatives to aid, advise and perhaps even participate in some of the activities. It is without doubt, that the active participation, particularly of women from the NoE, in public science initiatives can greatly impact future gender equality in science.

In establishing the recruitment policy, the committee will implement criteria to promote gender equality. Already in evidence is the fact that one out of the two current young talented scientists of the NoE is female (Edith Heard; ICP, Paris). In particular, recruitment will take into account “career age” in instances where career maternity breaks have been taken, to alleviate the restrictions of age limits often found in other grant applications which contribute to the exclusion of women’s progression in science.The final result to addressing the gender balance in science would be to see a greater level of gender equality at the upper echelons of science. This can be anticipated in years to come with the aid of proactive gender issue considerations and actions, as demonstrated by this NoE.

Gender aspects in research

	Yes	No
Does the project involve human subjects?		X
Does the project use human cells / tissues / other specimens		X
If human subjects are not involved or human materials not used, does the research involve animal subjects or animal tissues / cells / other specimens (*as models of human biology/physiology*) in such a way that it is expected that may have implications for	X	

humans?		
Does the project use collection of data related to human subjects, human materials, animal subjects or animal materials		X

A positive answer to any of these questions implies that gender/sex aspect should be taken into consideration in the research proposal.

	Yes	No
Are gender/sex differences with respect to the research documented in the literature?	X	

A number of questions being addressed within the research topics of this NoE are aimed at shedding light on our understanding of the epigenetic mechanisms that regulate gender specific cell fate determination and development. Firstly the molecular mechanisms governing the induction and maintenance of X chromosome inactivation in female XX cells, initiated during early embryo development are being investigated (main players are Anto Wutz, IMP; Edith Heard, ICP). Secondly the erasure and setting of parent-of-origin specific imprints in germ cells (genomic imprinting), required for normal mammalian development are being studied (Azinn Surani; UCAM, Cambridge). Understanding the latter will potentially contribute to a more general understanding of epigenetic reprogramming, which in turn has implications in stern cell technology. In a broad sense, both of these processes involve monoallelic gene regulation and represent paradigms for epigenetic research. Indeed these systems were pivotal in highlighting the fact that there must be mechanisms beyond the DNA sequence which differentially regulate gene expression. As such they were crucial in driving the emergence of this field of research. Nonetheless there is still a great deal of research to be done to elucidate the molecular mechanisms that control these fundamental gender specific biological processes.

An example of “gender-linked” protein function can be seen with the Enhancer of Zeste protein. It is, on the one hand, involved in female X inactivation, and on the other has been linked to the development of prostate cancer in males. It’s chromatin function will continue to be investigated in a number of the WPs to bring further understanding of its pleiotropic function. This exemplifies the broader aims to provide insights into the potential differences between the genders in the maintenance of the epigenetic marks which can be affected by environmental stress (e.g. hormonal, drug induced etc.) and disease.

2. Project Title: Recombinant Pharmaceuticals from Plants fir Human Health
Acronym: PHARMAPLANTA
Instrument: Integrated Project

Project summary: The project aims to use plants as expression systems to produce recombinant antibodies for use in medicine. It includes consideration of regulatory requirements, GMP and pre-clinical toxicity testing, and new strategies for a second generation of recombinant molecules. The European Commission is providing 12 million euro under the Sixth Framework Programme (FP6) for a new project aimed at using genetically modified (GM) plants to grow vaccines against rabies, tuberculosis, diabetes and HIV. The first international project of its kind, Pharma-Planta brings together 39 scientists from 11 European countries and South Africa. The team of researchers will develop the concept from plant modification through to clinical trials, and expect to begin human trials of the drugs by 2009.

The project will address significant health problems both in Europe and the developing world, although the primary aim is to provide medicines for poorer countries. GM technology can be used to force a plant's molecular apparatus to produce a range of medically useful compounds. For example, the use of genetic modification has been used to generate human insulin and a hepatitis B vaccine. However, plant derived materials used in humans have never been formally addressed within the EU. This ground-breaking project is aimed at helping the 3.3 million people a year that die from preventable diseases such as tuberculosis, rabies or diphtheria. Indeed, plants have enormous potential for the production of recombinant pharmaceutical proteins, as they are inexpensive and versatile.

The cost of developing plant-derived products could be 10 to 100 times lower than conventional production, which is 'labour intensive, expensive and often produces relatively small amounts of

pharmaceuticals.' If the technique is successful, it would be licensed freely to developing countries who could start up their own production at low cost and generate the amounts that they require. Although the project has not yet decided which plants will be used, the likely candidates are tobacco, maize, potatoes and tomatoes.
Project website: http://www.pharma-planta.org/

Gender action plan

Are there women directly involved:	
- in the scientific management of the project?	YES
- in the scientific partnership as scientific team leader in the project?	YES
% of women scientists involved in the project:	
⇒ Early researchers (less than 4 years after graduate)?	19.67 %
⇒ Experienced researchers (minimum 4 years after graduate or having a PhD)?	26.23 %

The project comprises 35 participant organisations. Total women participation is 45.90 % of the total personnel committed to the project (excluding personnel to be hired from the EU contribution). We are encouraged by the proportion of younger women scientists, but we will attempt to promote participation of women through a number of measures, so that over time the ratio of women scientists in senior management positions in EU scientific research will increase. These include:

Recruitment: all participants in the Consortium are committed to promoting equality of opportunity in recruitment of staff and students. Statements to this effect are included in all advertisements for positions. In advertisements for research fellows or for PhD studentships for this programme, where local and national regulations allow, we shall include an additional statement to the effect “recognising that women are underrepresented in this scientific field, we welcome applications from women”. As far as possible, women will be equally represented on interview panels for these positions.

Employment: conditions of employment may discriminate against employees with responsibilities for child care. Where possible, and without detriment to the progress of the scientific programme, some flexibility in working hours may be allowed. Monitoring: gender outcomes of recruitment of staff and students will be monitored by the Project Administrator, as Fraunhofer Gesellschaft.

In addition, the following action plan will be developed: through our training program we will actively encourage recruitment of women candidates from member states and also from candidate states and developing countries. Members of the consortium, particularly senior female partners will be asked to devote part of their time, at a national level to explain to high school and early undergraduate female students how careers in the life sciences can be an attractive option for them.

We believe education at an early stage will help to encourage more young female students to choose careers in the life sciences. We will also encourage participants to hold “open days” where female (and male, where appropriate) scientists will team up with small groups of high-school girls for an entire day to allow hands-on exposure to a life science working environment. We prefer to encourage our senior women colleagues to take the lead in such activities as they are better suited to provide useful role models. As the number of female students entering the life sciences increases progressively, it is reasonable to expect that more women will ultimately reach senior positions. Even though we recognise that the ratio of senior women scientists in our project is relatively low compared to men (18%) we believe that we are being pro-active in ultimately contributing to changing this over the medium to longer term.

TP3 - NANOTECHNOLOGIES AND NANOSCIENCE, KNOWLEDGE-BASED MULTIFUNCTIONAL MATERIALS, AND NEW PRODUCTION PROCESSES AND DEVICES

1. Project Title: Intelligent Materials for Active Noise Reduction
Acronym: InMAR
Instrument: Integrated Project

Project summary: The objective of the proposed Integrated Project "Intelligent Materials for Active Noise Reduction (InMAR)" is therefore the realization of intelligent, high performing adaptive material systems with integrated electronics able to be applied for noise mitigation purposes, even in highly loaded structures as construction material in the same manner as common passive or light weight materials are used (42 partners).

Gender Action Plan: The IP *InMAR* **supports the EC policy on gender mainstreaming** and has foreseen the incorporation of **equal opportunities** for women and men in the project. The technical objectives with respect to intelligent material systems and active systems do not entail a gender aspect. But the introduction of active noise reduction systems into daily life will have a significant impact on the quality of life of not only women and children. But as stated earlier, particularly women and children are affected by continuous noise exposure which leads to stress and secondary negative health effects. Again, since they are autonomously working technical systems without human interaction, these systems do not entail a gender aspect. Consequently, the gender mainstreaming within the IP *InMAR* concentrates on activities that provide equal opportunities for women in male-dominated technology areas such as mechanical engineering. Important to mention is that the IP *InMAR*'s newly created employment diversity will also have a positive impact on equal opportunities for women in a traditionally male-dominated industry.

Training activities such as the high school program, the summer trainee program, and the mobility program are predominantly addressed to female participants.

- A high school program will be set up where mostly members from universities and research organizations will give lectures on intelligent materials and smart structure technology in high schools. The objective is to enhance the awareness of female high school students and teachers of the potential, risks, and necessity of key technologies such as intelligent materials. It should also lower the threshold for female students when choosing a technically-oriented course of study which is currently dominated by males.
- A summer trainee program will be set up that will be open to female high school students, students from universities, Ph.D. students, and the staff (technicians, researcher, etc.) of participating partners. Within this trainee program high school students will get an inside look at the daily business of RTD work in the industry and research organizations. It should principally but not exclusively address female students to encourage them to choose a technical and still male-dominated course of study. The program is also open for Ph.D. students and staff of participating partners to train on skills and knowledge required in the RTD work of the project. It will be a key element to improve skill employment in the participating industry and research organization.
- The participating industry and research organizations will initiate a Girls' Day at selected facilities. The Girls' Day is aimed at girls between the ages of 13 – 18 to provide an understanding of technically-oriented professions and lower the threshold of choosing a career in a male-dominated field.
- Within the project a network for female participants will be established. The objective of the network will be the promotion and supervision of young female scientists by a female senior scientist or manager. The network will also be a communication and discussion platform for all gender-specific aspects.

These activities are aimed at acquiring highly skilled female students for the research activities performed in the IP *InMAR* and at skilled employees for the industry and research organizations later on. A key action within *InMAR* will be the establishment of a network among the female participants.

The objective of this network is the supervision and assistance of young, female scientists in all gender-related issues. In particular, this network will allocate a fixed budget to comprise elements such as child care or job sharing. Most of the participating universities and research organizations already have personnel policies and programs that strengthen the position of female employees. As an example, the Fraunhofer-Gesellschaft has gender mainstreaming as a fixed element in its policy. Special programs have been established for equal opportunity employment that primarily addresses junior researchers and female managers. The objective is to increase the share of female employment far above the current status. The activities also compromise coaching and mentoring for female researchers and managers as well as flexible working hours. A similar policy will be adopted in the IP *InMAR*. The overall aim is to increase the share of female researcher in *InMAR* significantly.

Every year, Ford organizes an s.c. 'Girls' Day' aiming to increase the awareness and interest of young female persons - normally teenager students - to technics-based careers. These actions are in-line with the Company's policy of 'Diversity', which intends – among other things - to increase the share of the female employees in all departments of the Company. At Girl's Day, the girls are involved in a demonstrative 'NVH project', where they actively contribute to find a solution to a noise problem, followed by an analysis and discussion of outcomes with a NVH engineer. In years 2004...2009, an *InMAR* related application would be taken as a 'project' for Girl's Day. These 'Girls' Day' will be adopted in other participating companies as one of the gender action items. The results of the GAP implementation will be described in the final report.

2. Project Title: Integration of manufacturing systems for Mass-Manufacture of miniature/micro-products
Acronym: MASMICRO
Instrument: Integrated Project

Project summary: The overall objective of the project is to develop an integrated solution for European miniature/micro- manufacturing and related industries - an integrated manufacturing facility for mass manufacture of miniature/micro-products, and a technology transfer/training package for transforming EU Industries (36 partners).

Gender Action Plan: Gender issues have been discussed within the MASMICRO Consortium. Through the discussion, realisation of the importance to address gender issues in MASMICRO is further enhanced. It is recognised that participation of women in industrial and academic processes related to the project is still low, due to various reasons, ranging from low numbers of female students in engineering and science disciplines, difficulties to find solutions for maintaining both, work and family, to the lack of networks to support women to develop their careers, etc. It was agreed that each key-partner should make a recommendation to the Project Co-ordinator, concerning the "Gender Action Plan", based on the good practice employed in each participating organisation. These recommendations form a basis of developing the "Gender Action Plan" of MASMICRO.

- **Installation of an advisory board**: To ensure the implementation of the gender action plan and to support the individual partners in that issue an advisory board of participating woman will be installed. It is intended by the consortium to attract an independent trusted third party to chair the advisory board.
- **Establishment of a Gender Awareness Group (GAG)**: the group will be established among the women being involved in MASMICRO. The group will encourage networking and mentoring among women not only who are involved in this project, but also those who are not involved but working in the participating oranisations. The *Project Advisory Board* will offer advice to the group on its operation, and will offer support to the group in organising its activities. The *GAG* will also, on behalf of the *Project Advisory Board*, collect gender statistics data, periodically, through the life of the project, which will be a basis for reporting to the Commission on the gender issues. The group will be playing major roles in inviting women to attend the training programmes and public/local mini events organised by the project.

- **Encouraging women to participate in RTD activities of MASMICRO:** This will be fulfilled by including current women employees in the team participating in MASMICRO, and/or taking the issue into account when recruiting new staff for the project. Each partner will have to report to the advisory board and the project co-ordinator on how the partner will implement this plan. Some key partners have already developed their own plan for promoting gender equity within the project, concerning the tasks which they will be involved. For example, IFP has identified four female researchers as the key researchers for MASMICRO, also including a number of female technicians. STR, GAM, IPA and AIN both have a plan for including female researchers in the project.
- **Training women for Project Management, Research and Engineering/Technology Specialisation**: MASMICRO will run four major training programmes for which a significant numbers of the women will be invited to attend. These programmes aim to educate the participants on the knowledge in miniature/micro-manufacturing, and to develop skills in conducting research, project management, use of advanced manufacturing facilities, etc.
- **Exchange of the experiences:** Most of the project partners have their own specific programs, such as flexible or reduced working hours, part-time arrangement, and facilities (such as, kindergarten), women networking, equal opportunity monitoring, continuous education of women, etc. These will be particularly helpful for women to join the partners in this project. To support the partners in implementing such programs and facilities, individual experiences with such issues will be exchanged within the consortium. Partners are, particularly, encouraged to read the publications from the EC Woman and Science WIR initiative (www.europa.eu.int/comm/research/wir/), and inform the decision-makers in individual participating organisations on the availability of these publications.
- **Attracting more women to manufacturing industries**: MASMICRO will implement the following plan, with a view to attracting more women to manufacturing industries, Miniature/Micro-Manufacturing, in particular:

    - **MASMICRO Public Events**: Two major public events will be organized by the consortium, with a view to disseminating MASMICRO information, promoting image of Scientific Research, Technology Development and Applications. The *Project Exploitation Board* will pay a particular attention to the invitation of women to the events.
    - **Local MASMICRO-events**: local events, such as "Girls Days", Workshops in local high-schools, etc. will be organized by individual partners, with a view to revitalizing the image of Science & Technology, and industries, and to rising interest from girls to choose technical/engineering subjects in their education. The partners will be encouraged to establish partnerships between the industries and local schools. These partnerships should enable girls to visit companies to get acquainted with the world of work and to get information on working, training and earning opportunities in different companies. These events will be planned, in detail, by the *Project Exploitation Board* and the *Project Training Board*, jointly.
    - **Internships for Women**: 3-month internships at a consortium partner in the home country and 3-month internships at a consortium partner in a different EU country, will be initiated to support women during their studies to rise interests in miniature/micro-manufacturing and to build networks which will benefit them in future career development. Targeted groups will be women in universities, colleges, etc. Internships will be advertised through the MASMICRO web-site and local institutions like colleges, universities, networks, etc..

The costs incurred for implementing the Gender Action Plan will be attributed respectively to the Innovation, Demonstration, Training and Consortium Management Activities.

TP4 - AERONAUTICS AND SPACE

1. Project Title: Services, integrating EO monitoring capacities, to support the implementation of European directives and policies related to land cover and vegetation
Acronym: GEOLAND
Instrument: Network of Excellence

Project summary: GEOLAND combines 56 European service providers, research institutions, and user organisations. GEOLAND organises the broad range of "land applications" addressed by European Directives and Policies into eight sub-projects offering a comprehensive portfolio of 61 products and services to be demonstrated and validated on 16 representative European and international test sites with 31 key user organisations. GEOLAND observatories are providing products and services addressing regional monitoring and reporting for nature protection, water and soil issues, spatial planning, and strategic information on food security and crop monitoring, global land cover and forest change, and natural carbon fluxes. GEOLAND is supported by a unique group of European and international organisations with a legal mandate for policy making, establishing standards and implementing policies and directives through monitoring and reporting. These users are directly involved in the product development and validation process either as members of the consortium or as associated partners committed to locally test the products and services. GEOLAND is efficiently managed by setting a flexible framework for all partners sharing common product development and quality standards, and common intermediate products between all sub-projects. Partners targeting the same application segment are horizontally integrated; they joint develop the product portfolio on core test sites, share common value chains as far as possible, and systematically roll out to all European regions resp. global test sites. GEOLAND supports the observatories and core services implementation with a joint "operational scenario" team analysing service infrastructure and GMES operational implementation models following an open service concept; a support team provides all partners with specific project management, strategic analysis, and communication and professional training support.

Gender Action Plan: GEOLAND was obliged during negotiations to come up with a Gender Action Plan. One task identified early on was the collection of statistics about women and their role in GEOLAND. In order to find out, what the needs of the individuals in the group are, a preliminary questionnaire had been circulated in September 2003 already. 7 out of 19 women on the list answered the request. This questionnaire needs to be revised, extended and re-circulated once again within the project.

At the Kick-off meeting, a working lunch session on gender issues was included. Throughout the discussion, at least 3 groups of women have been identified:

- Women seeking access to established and mostly male dominated science and management networks - looking for links and contacts to established research and science networks.
- Women at the beginning of their career - possibly seeking a mentor.
- Women in the middle of their career having a family to take care of - need changes in their own company/institution.

At the GEOLAND Kick-off meeting, the formation of a Gender Action Group has started its work through the convention of all interested women and men, forming a discussion forum. The group is to be kept open to both sexes, according to the group. It has been made clear, that gender issues are an important topic for all GEOLAND participants.

Career support, which was felt to be one central issue in the Gender Action Plan is to be understood as the support of a personal career, i.e. not every woman want to become a top manager but wants to find her own most appropriate spot on the career ladder. It is important though, to give women the choice among possibilities for their career.

The following deliverables are currently foreseen:

- Deliverable 64: Gender situation analysis
- Deliverable 65: Gender Action plan (a collection of ideas on how to support the role of women in science and scientific projects.)
- Deliverable 62: Report on the Gender Action plan
- Deliverable 63: Report on raising public participation and awareness

A section on the GEOLAND homepage is foreseen. It will mirror the ongoing discussions and will be suitable to promote the awareness for gender issues among interested website readers. It will be containing links to other websites. Case studies could be included to give people ideas on what is possible and how other countries solve the problem. The overall aim is the initiation of an establishment of best practice at home and to learn from other countries.

2. Project Title: Global Monitoring for security and stability
Acronym: GMOSS
Instrument: Network of Excellence

Project summary: The objective of GMOSS is to gather Europe's research community into a network of excellence that is able to work together towards an enhanced European capability in monitoring for civil security applications through a joint programme of research whose priorities are agreed with end-users and where each partner's effort contributes to the overall objectives. The partners will share staff, software and infrastructure in work which includes

- research into solutions for remote monitoring including the development and assessment of airborne (manned and unmanned) and satellite sensors as well as the ground and communication systems necessary to make the images and signals available for processing as rapidly as possible.
- development and assessment of tools and algorithms that can automate the processing, interpreting, cataloguing and archiving of images including classification, feature extraction, change detection, map generation and visualisation
- understanding how to use this information to provide the EU with the knowledge it needs to act more effectively and efficiently in four main areas:
  a) humanitarian aid - including early warnings, vulnerability assessment, information flow between field and headquarters personnel;
  b) reconstruction - including damage assessment, mine clearance operations;
  c) verification of non-proliferation treaties including characterization of nuclear and chemical facilities, development of tools for remote verification of treaties, localization of testing sites;
  d) police operations including protection of Europe's security through vulnerability assessment and developing stability beyond the EU's borders through better border control, conflict prevention and infrastructure monitoring.
  e) developing and identifying at a European level future organisational scenarios that could enable the timely communication and exchange of critical information and proper decision-taking mechanisms in the civil security domain.

Additional project information: **Project website**

Gender Action Plan: Our first step in developing a “gender action plan” for GMOSS was to look at suggestions in the “guide for proposers”. Among other measures it proposes “linking with schools and universities to trigger the interest of women in the project – a girls’ day”. We were not really convinced that a group of middle-aged men visiting schools and asking to speak to only the girls about GMOSS would be the best strategy for integrating the gender dimension in our Network. The girls might be suspicious of our motives and the boys might feel discriminated against. So instead we chose a different approach.

Diversity is a benefit in research networks because it brings a range of outlook, experience and knowledge. We already have a large diversity in the type of organisation and in the nationalities involved. However because there are fewer women scientists than men in the institutions belonging to the Network, it is unarguably more difficult to maintain a healthy diversity of gender. So a number of active steps need to be taken. The two main measures to be taken within GMOSS are:

1) avoiding all-male groupings
2) arranging baby-sitting facilities for Network meetings

The first measure is aimed as an encouragement to young potential scientists. The main reason for the lack of women in science in general and in this Network in particular is clearly that fewer women than men study science and engineering at school and university. Visible women scientists might encourage them to change. This Network will do this by actively seeking to avoid all-male groupings in presentations of the Network to the Commission or to the public. Two out of seven of the Work Area Coordinators are women.

The second measure is to help women researchers in the Network combine work and family responsibilities. Although we believe that women are rarely actively discriminated against in their careers, those that are most successful tend not to have the additional responsibility of raising children. According to a recent survey 42% of high-earning businesswomen and academics between the ages of 40 and 55 were childless[1]. Women do tend to be more conscientious than men in their family responsibilities and this may cause them to work less hours or avoid travel. Obviously the best remedy would be to convince their partners to shoulder responsibilities fairly but this might be an over-ambitious target for the Network to achieve.

The avoidance of travel by any woman in our Network would be a major blow to our attempts to maintain diversity. So, as a practical measure, all members of the Network have agreed that babysitting or crèche facilities will be made available for any Network partner, male or female, who wishes to bring a child with them to a Network event. A simple phone call to the event organiser will be all that is needed to arrange it – thus allowing the parent concerned to avoid an additional organisational burden in an already busy life.

Additional information:

At proposal stage, out of 140 researchers: 23 female & 117 male (16.4% of women). After negotiation, out of 73 researchers: 13 female & 60 male (17.8% of women).
At proposal stage, out of 14 students: 5 female & 9 male (36% of women). After negotiation, out of 20 students: 8 female & 12 male (40% of women)
3 women are work package leaders out of 16 (18.8%).

3. Project Title: European Wind tunnel Association
Acronym: EWA
Instrument: Network of Excellence

Project summary: The goal of EWA is to form a European Wind Tunnel Association for aeronautical applications and related advanced measuring technologies with a uniform and cohesive management structure and a technical organisation to execute a joint programme of activities. Its partnership comprises in total 14 partners from 8 European countries, including 3 industrial operators, 3 commercial operators, 7 research organisations, and one organisation for post-doctoral education. The wind tunnels, which are of utmost importance for industrial wind tunnel testing for aeronautics in Europe, are operated by 11 of the 14 partners. Five partners are leading developers of advanced measuring technologies for wind tunnels in Europe. Due to the complexity of the organisational structures and missions of the existing wind tunnel organisations, EWA will proceed in a four-step approach (Preparation, Harmonisation, Implementation and Presentation of Integration). In particular, EWA will integrate and strengthen the European research area by building lasting relationships and interdependencies between the major European wind tunnel operators and developers of advanced measuring technologies. This will allow all partners to offer to researchers and the aerospace industry a comprehensive set of services and will bring new experimental

[1] Silvia Ann Hewlett, “Creating a Life: Professional Women and the Quest for Children”, Miramax Books

techniques into operation in industrial wind tunnels much faster than in the past. Methods for harmonising standards and for assessing the quality of experimental simulation as well as methods to harmonise wind tunnel test techniques will be developed jointly. Due to this approach, considerable improvements in quality and reduction of costs for wind tunnel testing can be expected. These core activities will be complemented by information exchange with industrial end users, with SME's for manufacturing wind tunnel models and/or instrumentation, with universities for training students and for developing new measuring technologies and by training and exchange of personnel.

Gender Action Plan: Several European authorities and organizations have already pointed out the need for promoting gender equality. General recommendations were issued, while some specific regulations have been implemented, mainly in the public sector. As an example it should be mentioned here that DLR pursues an 'Equal Opportunities' project following the criteria of 'Total-E-Quality' and it has achieved the Basic Certificate: Audit Beruf und Familie © (June 2002).

Gender equality must be promoted within the field of aeronautics as well as all other fields of research. This is believed to both strengthen efficiency and improve quality in all work and co-operation. Male and Female researchers should therefore be offered equal opportunities and encouragement considering their personal resources and life patterns. The aim for gender equality should be a natural part of all work and co-operation within the field of aeronautics.

In general, the number of women within wind-tunnel testing and measurement, like in other areas of engineering research, is much smaller than that of men. This is also the case for the composition of the researchers of EWA: out of a total of 224 researchers there are only 21 female and 203 male researchers (March 2004). To eliminate such inequalities is a long term task, which should start with trying to interest school girls in engineering sciences such as aeronautics, to encourage female students to perform internships or diploma or doctoral theses in the field of aeronautics and to provide an environment in wind tunnel testing and development of advanced measuring techniques which addresses women's needs as much as men's needs.

A number of actions such as mentoring, equal opportunity projects, linking to female students at the universities, networks for female researchers are of course already carried out by a number of organisations. However, this EWA partnership can contribute to gender equality by forcing all partners to consider good examples and experiences in order to take further steps towards gender equality. Moreover, EWA will set up its own strategy to deal with gender issues, assuming the basic limitation of an initiative "within the walls". There are very few options to act beyond NoE's own boundaries. Nevertheless, the actions internally taken in this matter could set an example of using integration as a tool for implementing gender equality.

Further, within the scope of the EWA partnership, gender equality should be promoted through the following actions:

- **Working group on gender issues**
  A working group will be set up to deal not only with internal aspects of an NoE, addressing also matters like the impact of integrated research, the organization of work to favour equal participation of women and to build institutional links with trade unions, interface entities and representative organizations, actions in the field of gender equality.

- **Data base about gender aspect of human resources**
  A data base will be build up, beginning with an inventory of the present situation, to promote a better knowledge of the working environment (current biases, potential opportunities, etc.) within NoE partners.

4. Title: Value Improvement through a Virtual Aeronautical Collaborative Enterprise
Acronym: VIVACE
Instrument: Integrated Project

Project summary: VIVACE is a project set-up in the framework of AECMA addressing aeronautics' Vision 2020 objectives to contribute significantly to fulfilling 3 specific targets of the aeronautics industry Strategic Research Agenda:

1. Halve the time to market for new products with the help of advanced electronic analytical, design, manufacturing and maintenance process, methods & tools
2. Increase the integration of the supply chain into the network
3. Maintain a steady and continuous fall in travel charges through substantial cuts in operating costs.

VIVACE will develop advanced capabilities (Knowledge Enabled Engineering, Multidisciplinary Design and Optimisation, Design to Decision Objectives, Engineering Data Management, Distributed Information Systems Infrastructure for Large Enterprise and Collaborative Hub for Heterogeneous Enterprises) applied on real case engineering and business scenarios from the aircraft and engine sectors. The main result of VIVACE will be an Aeronautical Collaborative Design Environment and associated Processes, Models and Methods to design an aircraft and its engines as a whole, providing to the aeronautics supply chain in an extended enterprise, virtual products with all requested functionality and components in each phase of the product engineering life cycle. VIVACE will make its approach available to the aeronautics supply chain via existing networks, information dissemination, training and technology transfer actions. It will last 4 years and be organised into 3 technical sub projects dealing with the Aircraft, the Engine and Advanced Capabilities that will federate all developments. A fourth sub project will take care of management and innovation issues. VIVACE will start from past experiences and results gained in concurrent Engineering such as ENHANCE and will bring together 55 partners from industry, research institutes, universities and technology providers.

Gender Action Plan: The consortium is committed to active promotion of gender equality within the project. As such gender issues will be continuously monitored during the course of the project. VIVACE will build upon the recommendations outlined in the 'Gender Impact Assessment of the Specific Programmes of the 5th Framework Programme' published by Bradley Dunbar Associates limited.

This project will therefore include the following activities:

- Statistical analysis and monitoring of females employed under the VIVACE project showing trends over the 4 years, gearing of males to females, level of accountability patterns;
- Preparation and dissemination of materials at the 3 forums promoting the role of women in VIVACE;
- Compilation of databases showing female role models and networks of female engineers for mentoring;
- Debates during the Project Management Committees reviewing further ways to promote gender equality under the VIVACE project.

TP5 - FOOD QUALITY AND SAFETY

1. Project Title: Diet, genomics and the metabolic syndrome: an integrated nutrition, agro-food, social and economic analysis
Acronym: LIPGENE
Instrument: Integrated Project

Project summary: The focus of LIPGENE Integrated Project (24 participants) is the interaction between dietary fat composition and genotype in the metabolic syndrome. This disorder is associated with overweight and obesity and is characterised by insulin resistance, dyslipidaemia and hypertension. Access to a large prospective cohort, together with clinical and nutritional data, provides a unique opportunity to determine diet-gene interaction in the development of the metabolic syndrome. A large multi-centre dietary intervention study will examine responsiveness to dietary fat modification, varying in both fat content and composition, influence insulin sensitivity and other aspects of the metabolic syndrome. A key aim of the project is to improve the fat composition of milk and meat products (animal nutrition) and to provide novel sources of fatty acids (plant biotechnology). An economic analysis of the costs associated to the metabolic syndrome will be undertaken, while consumer attitudes will be analysed.

Contact person: Dr. Mike Gibney, St. James Hospital, Ireland, mgibney@tcd.ie

Gender Action Plan: The year 2004 represents the 100th anniversary of the admission of women to Trinity College Dublin (the coordinator) and a high profile series of events will celebrate 100 years of women in the life of the College. LIPGEN will incorporate a series of steps to ensure the issues and the technologies of the present proposal have (a) particular relevance to women for their own health and (b) can maximize the involvement of women in these research areas. The Director of the Centre for Gender and Womens' Studies at TCD will be a member of the external Project Advisory Group. Within this role she will be available to advise all partners on gender issues. Women are represented in the scientific management of the project in all committee's of the project as team leaders or deputies of team leaders or section coordinators. *The female participation rate is 42 %, exceeding the average share of women in the academic career rank as experienced researchers in most of the (candidate) member states according the report of the Helsinki group on Women and Science about national policies on women and science in Europe (2002).* The consortium will ensure that there will be no gender discrimination in the allocation of grants.

The partners agree to promote gender equality in the formation of the different sections of the project as well as the formation of the teams responsible for the different committees. The action plan includes the following measures and activities:

- All partners will initially be sensitised to aspects of gender bias within the project through the preparation of publications with direct links to the Helsinki report on the outcomes of the 5th frame work programme
- Each partner will promote gender awareness and equality issues within the centre. Each partner will report back annually to the Project Plenary Committee about gender issues.
- LIPGEN intends to implement as far as is possible an equal proportion of women and men in the research groups and the scientific management of the project.
- At the first project plenary meeting a representative of the Centre for Gender and Women's Studies at TCD will organise a round-table discussion on gender issues and review the LIPGEN action plan on gender. A representative of this centre will be asked to participate in the Project Advisory group.

Gender aspects in research relevant to The Metabolic Syndrome:
There are several aspects in the aetiology, morbidity and treatment of the metabolic syndrome that are different between men and women. For example:

- Prevalence of type 2 diabetes and obesity in the different regions of Europe is greater in women than in men. (WHO, 1998 who/nut/ncd/98.1)
- Obesity, insulin resistance, glucose intolerance and type 2 diabetes may have a significant adverse impact on female reproductive life: early menarche, menstrual disturbances, reduced fertility, increased risk of pregnancy and delivery complications, foetal growth disturbances, possibly with long-term adverse programming effects, lower rate of initiation and shorter duration of breast feeding (WHO, 1998 who/nut/ncd/98.1).
- In some women, the development of obesity seems to be induced or reinforced by pregnancies when followed by increased postpartum weight retention (WHO, 1998 who/nut/ncd/98.1).
- There is a steep inverse social class –obesity gradient for women as compared to men (WHO, 1998; who/nut/ncd/98.1)
- The gender effect on obesity is important because obesity is the major aetiological factor in the pathogenesis of the metabolic syndrome.

Clearly, it is therefore essential that women are adequately represented in the present study and the following summarises the consideration of the study design to consider gender issues in research:

- In the study of the SUVIMAX cohort, every effort will be made to ensure the maximum number of subjects recruited will be female. The prevalence of the metabolic syndrome is much greater in men, and whereas we may aspire to achieve a maximum target of women and the primary objective must be to maximise the contrast between cases and controls.
- In the human nutrition intervention study, every effort will be made to have equal representation of women. However, given the lower incidence of the metabolic syndrome in women, something short of equal numbers will have to be accepted. However, all statistical analyses will examine the statistical significance of gender and its interactions.
- Women will be equally represented in demonstration project.

2. Project Title: European Nutrigenomics Organisation - linking genomics, nutrition and health research
Acronym: NUGO
Instrument: Network of Excellence

Project summary : The NUGO Network of Excellence (20 participants) aims to integrate and develop nutritional genomics in Europe. Nutrition and health research is focussed on the prevention of disease by optimising and maintaining cellular, tissue, organ and whole-body homeostasis. This requires understanding, and ultimately regulating, a multitude of nutrient-related interactions at the gene, protein and metabolic levels. This project will enable nutrition research to fully complement the biomedical and pharmacological research communities that are currently using genomics for the development of curative therapy. A key objective of the network will be the development, data warehousing and exploitation of nutrition and health-related bioinformatics for the benefit of European nutrition researchers, and for the community as a whole.

Contact persons: **Dr. Sue Southon, IFR, UK, sue.southon@bbsrc.ac.uk**
Dr. Ineke Klinge, Maastricht University, NL, i.klinge@zw.unimaas.nl

Gender Action Plan: As tasks for the gender experts the NoE formulated two audits:

- Audit WP (women's participation). This audit will address the participation of women at all levels.
- Audit GD (gender dimension). It concerns the consideration of gender issues in the joint programmes for research.

The NUGO network already developed an extensive Action Plan comprising the following elements: (WP)

- To bring more women into the project
- Linking with networks of women scientists within the field of the network
- Linking with schools and Universities to trigger the interest of women in the project
- Hiring gender experts to audit gender dimension project
- Organising seminars to raise awareness about need to increase gender equality

The NUGO network is conscious of the gender dimension of the contents of research as can be read from taking notice of: (GD)

- Different susceptibility m/f to diet related disease
- Different acute and chronic response m/f to nutrients
- Differently m/f affected by gene polymorphisms
- Different motivations m/f with regard to own and family's nutrition
- Different processing m/f of nutrition information, attend to different elements of dietary advice
- Different barriers m/f affecting behavioural change

Planned actions are: to consider gender issues in: (GD)

- Use of cell and animal models
- Selection of human volunteers
- Research and provision of information on nutrient effects
- Research and provision of information on nutrient-gene interactions
- Research and provision of information

The deliverables of the two audits are two reports (by month 18) which are to be disseminated and discussed in the Network, and which should results in amendments (if necessary) to the Action Plan for the remaining period.
The gender audits are part of workpackage.

3. Project Title: Promoting food safety through a new integrated risk analysis approach for foods
Acronym: SAFE FOODS
Instrument: Integrated Project

Project summary: This **Integrated Project** addresses the issue of how consumer confidence in consumer protection and risk analysis can be restored and strengthened. The proposed research attempts to improve current risk analysis practices for foods produced by different breeding approaches and production practices deploying high and low input systems. The research activities will result in designing new effective procedures for risk analysis underpinned by new scientific assessment methods, and embedded in a broad impact analysis of social, financial and economic consequences, and with high levels of transparency, active public engagement and improved risk communication.

Contact person : **Dr. Hans Marvin, RIKILT, NL, Hans.Marvin@wur.nl**
Dr. Ineke Klinge, Maastricht University, NL, i.klinge@zw.unimaas.nl

Gender Action Plan: The gender audit of SAFEFOODS has as main objective to develop a gender policy including a detailed action plan. Envisaged already are the following activities:

- To stimulate the occupation of leading positions in the project by women (starting point 30% women in Project Management Team)
- Assessment of women's participation at all levels of the project including needs for amelioration and strategies for increasing participation
- Develop a plan to identify which aspects of the project are relevant for gender stimulation.

The SAFEFOODS gender audit will address both Women's Participation and Gender Dimension (of the relevant workpackages). Deliverable is a report and recommendations to the management team. The effectiveness of the management team in implementing these recommendations (month 18-48) will be evaluated and a report on the effectiveness of gender relevant activities will be the final deliverable.
The gender audit is located in Work Package 4 (Consumer confidence in risk analysis practices regarding novel and conventional foods). In carrying out these gender audits it is intended to make use of an Action Plan, concerning Women's Participation and Gender Dimension, developed by Mineke Bosch from the Centre for Gender and Diversity & Ineke Klinge from the Faculty of Health Sciences, University of Maastricht, comprising five elements:

- Monitoring (statistics)
- Communication, sensibilisation, advice
- Networking
- Analysis
- Training

4. Project Title: New strategies to improve grain legumes for food and feed
Acronym: GRAINLEGUMES
Instrument: Integrated Project

Project summary: This Integrated Project (66 participants) will mobilise and integrate European scientific research on grain legumes by addressing the following objectives; i) to identify optimal parameters for legumes in feed and food quality and safety, including GMOs, while using legumes to develop healthy and sustainable agriculture, ii) to investigate variation in grain legume seed composition and the factors affecting it, iii) to develop new genetic, genomic, post-genomic and bioinformatic tools to improve and sustain grain legume seed production and quality. To achieve objectives the project will integrate an ambitious combination of approaches, including biochemistry, plant & crop physiology, agronomy, plant genomics & breeding, and human nutrition & health studies. Particular emphasis will be placed upon the use of state-of-the-art methodologies including genomics and bioinformatics, together with transcriptomics and metabolomics.

Contact person : Dr. Noel Ellis, John Innes Center, UK, Noel.ellis@bbscr.ac.uk

Gender Action Plan: It is subdivided into 4 aspects: leadership, training, mobility and gender awareness

1. Leadership

In the design of the Integrated Project Work Package leaders were identified on the basis of their ability to act as a focus for the assembly of a coherent and interactive experimental project. Inevitably these include both men and women. It is clear from the IP structure that there are more men than women in this position (4 women out of 22 people). This to be expected from a random sampling in the field. However, this interpretation hides some pertinent considerations. We have chosen to enable WP coordination to be undertaken collaboratively rather than to impose a hierarchy of dominance. The intention of this is to "change the working culture" to reflect what best serves the needs of the Integrated Project rather than to perpetuate a stereotype of masculine hierarchical values. At the level of the Module leaders there is only one woman for seven men. So a female WP leader will be co-opted to the Executive Committee of the Integrated Project to compensate for this bias. This representative will not necessarily be the same individual for the lifetime of the project. In addition, the yearly reviews for the project will include a formal consideration of the possibility to change the leadership of the different WP to another person of the team to favour gender equality.

2. Training related aspects

We propose to use the system of quotas in order to promote gender equilibrium in the people benefiting from training activities and other activities of WP7.2. In this way, the proportion of women awarded training fellowships or positions on training courses will not be allowed to fall below the proportion of eligible women applicants.

3. Mobility related aspects

There is a strong trend within international projects to hold meetings that extend beyond the normal working week. The usual justification for this is to reduce travel cost and to reduce time pressure associated with work. These two gains need to be balanced against the erosion of time available for family life and personal social interaction. This may be considered a 'gender issue'. The IP will endeavour to avoid this type of conflict, by avoiding week-end meetings.

4. Specific activities for awareness on gender equality

Recent studies suggest that women are disadvantaged by less dense networking, so the simple expedient of initiating a mentoring system to help women build better networks within the scientific community may have significant value. Mentors will primarily be women but may also be men, where a sympathetic relationship can be established. Time will be set aside for these mentoring activities at the annual meeting and will be encouraged throughout the project.

5. Project Title: Health improving, safe seafood of high quality in a consumer driven fork-to-farm concept
Acronym: SEAFOODPLUS
Instrument: Integrated Project

This Integrated Project (80 participants) aims to reduce health problems and to increase well-being among European consumers by applying the benefits obtained through consumption of health promoting and safe seafood products of high eating quality. The relevance of seafood in the diet to diminish the higher incidences of cardiovascular, cancer and inflammatory diseases for instance will be assessed by performing dietary intervention and epidemiological studies. Seafood's importance for consumer well-being and behaviour will be assessed to understand determinants of consumers' seafood consumption and to adapt seafood products to consumer demands. The objectives of the seafood safety component are to make seafood safe for the consumer, by identifying risk factors and to undertake risk-benefit analysis. Validated traceability systems will be assessed to make it possible to apply a total chain approach from the live fish to the consumer product, and to trace back any feature from fork-to-farm.

Contact person : Dr. Lucay Han Ching, IFREMER, France, Lucay.Han.Ching@ifremer.fr

Gender Action Plan: Within the SEAFOODPLUS organisation structure, a special team has been provided for working out the details of the Gender Action Plan and to management it once the Council has adopted it. The activities will be coordinated within the ITD pillar 1 "Communication to Industry, Consumer and Public Administration ; Socio-economic, Gender and Ethical aspects". The programme of ITD pillar 1 includes a significant part of activities in order to develop new forms of relationships between citizens and institutions in Europe, including organisations working for the promotion of gender equality and networks of women scientists.

The Gender Action Plan for SEAFOOD plus will include the following measures:

- Establishing of a monitoring scheme for the new women phd students or other junior scientists entering SEAFOODplus,
- Taking special action to bring women into the SEAFOODplus research projects,
- Aspiring women research scientists to attend management meetings and to take courses in research leadership at all levels,
- Participation in networks created in the NoE and IPs granted in the 6TH Framework Program, Priority 5, first call,
- Organise seminars and workshops to raise awareness for increased gender equality through networking activities,
- Link with networks of women scientists within the discipline areas of SEAFOODplus,
- Link with high schools and universities to trigger the interest of women in the projects.

Regarding the action of linking to schools and universities, students will be asked to participate in thematic contests arranged in collaboration with women's associations, where dissemination is a central dimension. The best contributions delivered by the students will be selected by a jury for electing two students (1 male

and 1 female) according to the quality of work and their commitment to the dissemination activities. Women associations will be approached for their collaboration and participation to the jury.

The Gender Action Plan will be made public on the SEAFOODPLUS homepage, www.SEAFOODPLUS.org, and the results of the actions will be disseminated through special arrangements under the dissemination plan and also published on the website.

6. Project Title: Chemicals as contaminents in the food chain risk
Acronym: CASCADE
Instrument: Network of Excellence

Project summary: This Network of Excellence (19 participants) seeks durable coordination and integration of European research on human health effects of chemical residues in the numerous chemicals, present at even low levels in the environment and food or drinking water, that interfere particularly with the function of a cellular structure called nuclear receptor, which, when perturbed by chemicals, is linked to development of cardiovascular disease, obesity, diabetes, decline in fertility, breast, prostate, colon cancer, neurodegenerative disease, etc. Assessing the risk for humans, especially women, new-born children, and other susceptible populations has proved difficult, owing to insufficient information on the mechanisms of action of these chemical residues, their levels in the food chain, differences in sampling techniques and lack of reliable biological markers. To address these issues competently and responsibly requires efficient integration of key areas of European research. Deliverables will include training programmes and provision of rationalised information for assessing the risk that these compounds pose to human health. It is also important that to channel scientific information of potential use to consumers and for implementation of legislative measures.

Contact persons: Dr. Barbara Demeneix, Musée National d'Histoire Naturelle, France (Demeneix@mnhn.fr) et Dr. Maria Bondesson, Karolinska Institutet, Sweden (Maria.bondesson@biosci.ki.se)

Gender Action Plan: the CASCADE network finds gender related research and scientific issues important and CASCADE will be in line with, and actively work towards, the Commission policy concerning women and research. The CASCADE gender plan is in line with following Commission policies: Council Resolution of 20 May 1999 on women and science (1999/C 201/01) states that "the gender mainstreaming of research policy is not limited to promotion of women as research workers but should also ensure that research meets the needs of all citizens and contributes to the understanding of gender-relevant issues". COM (99) 76 final does also stress that "to ensure that research genuinely meets the needs of women, it is essential to have at least a 40% participation of women at all levels in implementing and managing research programmes". According to "Women and science" Mobilising women to enrich European research (COM (99) 76 final) the encouraging and promotion of women in the field of RTD must take place at several levels: the aim must be to promote research by, for and on women. CASCADE will fully meet this aim as research activities will be conducted by women. Further, the research meets the needs of its female citizens (such as focus on health risks for pregnant women) and diseases related to women (such as breast cancer). Thus, CASCADE will emphasise the promotion of gender equality on all levels. To ensure equality two main actions will be carried out : assurance of the full participation of women at all levels and more importantly, a mentorship program.

1. Gender representation in CASCADE

At present, women scientists are well represented in CASCADE network (45% of the experienced researchers and 60% of the early researchers), which clearly indicates that women's participation in research will be encouraged and promoted on long-term. Special attention has been paid to guarantee that gender equality is fulfilled in the management and coordination of CASCADE. To ensure this, a major part of the key positions of strategic importance are held by women.

2. Mentorship program

There is still a clear gender imbalance amongst the independent senior scientists in Europe. In the network we have identified this problem and we designed an action plan to increase the amount of women in senior position. In our opinion, it is clear that there is a structural problem. There are more women than men who enter science, however, there are few women that actually continue and fulfil a scientific career. We consider that we not necessarily have to promote women to enter a scientific career, in fact the potential is already there, instead we believe that it is important top encourage women to advance in science. In CASCADE, a mentorship programme has been established under the leadership of Prof. Barbara Demeneix (partner 6), which aims to facilitate the progress of junior women scientists to senior positions and to achieve independent scientific career as group leaders. In particular, we will take into consideration the life patterns, needs and interests of women, in order to change the working culture to a direction, which allows equal opportunities to both genders. The mentorship programme will be open to both sexes, however with the female majority of junior researchers in CASCADE we are confident that this system will facilitate for, encourage and thereby increase, the number of future female senior scientists.

The mentorship program will aim towards young scientists in early stages of their career and is based on close contacts between young promising scientists and senior well established researchers. This mentorship program, which will be chaired by Prof. Barbara Demeniex will include of both male and female senior scientists who will be available to provide advice and guidance in career development. This mentorship program will be launched when the network start and will be validated after 18 months and then if necessary we will improve the system. Though the mentorship program is to be finalised the basic structure for the program is foreseen: it will be designed as a tutor system where the mentor meets with the researchers to be guided as early as possible in the program/ their career. Together they will identify and set up goals and strategies to implement over a given time period (3-5 years). The aim is to early identify and pre-empt any potential pitfalls in choice of career moves, inappropriate targets etc. Specifically, the senior members of this program will give advice and encourage young researchers to apply for suitable positions, grants etc. The intention is to keep the mentorship transnational and there will be coordination between the mentors. Each mentor will support two or three early researchers and mentorship for graduate students should be coordinated with the thesis supervisor. In order to execute an independent review of the mentorship programme a reviewer from outside the consortium will be selected. The reviewer will preferably be a senior scientist with extensive knowledge of problems posed in different European contexts and gender issues.

3. Scientific and research related gender issues

Gender equality is addressed also in the research, as the health problems of both genders will be under investigation. Until now, the main target in this research area has been male reproductive health, and the putative health problems of women have not been evaluated in depth. CASCADE aims to take a broader view, and specific attention will be given to women and children as sensitive target groups'. A network with a strong focus on nuclear receptors including those for steroidal sex hormones is inevitably touching sex and possibly also gender specific issues. This applies to adults of either sex but also to pregnant women and children since they are considered to be particularly sensitive. While there are EC-funded programmes such as EDEN or CREDO-CLUSTER that by concept are dedicated to male-specific problems, the CASCADE proposal is open to several diseases each of which may be more relevant either to females or males. Despite the principle openness in scientific approach the sex/ gender issue is addressed in detail below. One major source of guidance for the choice of relevant questions within CASCADE is the evaluation of human risk data depending on food habits and preferences. The data evaluation process of our joint research activities ensures that data are collected and interpreted with respect to the possibility of sex and/or gender differences.

The second main approach to hypothesis generation within CASCADE is guided by the biology of nuclear receptors. This prime decision of the CASCADE NoE implies that also but not exclusively sex-specific physiological processes and diseases shall be addressed in the joint research activities. From current knowledge it is obvious that breast cancer, potential reduction of male sperm counts, and alteration of sex rations in children of dioxin-exposed Seveso victims are sex/gender specific issues that need to be addressed and presented with appropriate reference to the sex. Due to the focus of the network on nuclear receptors there is no inbuilt bias for either male or female specific problems. Nevertheless, most

likely also other problems such as bone weakness are influenced by the sex and possibly other diseases within the scope of this NoE such as metabolic disorders or neurodegeneration may be affected by sex. In the latter cases it is difficult to predict whether in the course of the joint research activities clear evidences for sex differences in either way will be obtained but research will be conducted, e.g. by appropriate design of animal studies, to be able to detect evidence for such differences. In the process of presenting data for the scientific community and to the public, care will be taken to convey proper guidance with respect to sex/gender issues if proper evidence exists without overstressing this issue in case of weak scientific evidence.

7. Project Title: Integration of animal welfare in the food quality chain: From public concern to improved welfare and transparent quality
Acronym: WELFARE QUALITY
Instrument: Integrated Project

Project Summary :This Integrated Project (48 participants) addresses these objectives and, importantly, pays particular attention to the "fork-to-farm" approach through establishing a strong society-science dialogue. In this context, appropriate and robust on-farm welfare assessment methodologies will be developed together with information frameworks and an array of targeted, high priority welfare improvements. The proposal brings together many important European players in a well-structured project that offers a real possibility for Europe to cement its position as a leader in farm animal welfare research.

Contact persons : **Dr. Harry Blokhuis, Animal Sciences Group, NL, Harry.blokhuis@wur.nl**
Dr. Isabelle Veissier, INRA, France, Veissier@clermont.inra.fr

Gender Action Plan

"Using the full potential of women is a key to the realisation of the European Research Area (ERA)" (http://europa.eu.int/comm/research/science-society/women/wir/index_en.html).
"Despite country variations in systems and structures, the proportion of women in senior scientific positions is consistently extremely small. In many Member States less than 5% of the members of learned academies are female (Science policies in the EU, EC 2000)

General perception, state of the art
There has been growing concern at EU level about the issue of women and science, and more specifically, the under-representation of women in scientific careers. There is considerable wastage of women's skills and knowledge as a results of the 'leaky pipeline', whereby women drop out of scientific careers in disproportionate numbers at every level (Rees, 2002). There is considerable diversity among countries in terms of scientific infrastructures, equality measures and the climate for women seeking to pursue scientific careers. Common factors include a lack of gender balance in decision-making about science policy and among those who determine what is 'good' science. Gender mainstreaming is the systematic integration of gender equality into all policies and programmes, and into organisations and their cultures. It is supported by the European Commission, in its Communication: Women and science – Mobilising women to enrich European Research. Gender mainstreaming includes tools like legislation, sex-disaggregated statistics, engendering human resource management in science, measures to facilitate a work/life balance etc. Clearly, many of these go far beyond the possibilities of the present Integrated Project. Still, gender mainstreaming is one of the basic starting points in WELFARE QUALITY.

The gender imbalance is also seen in research institutes and universities. Thus, they display the familiar pyramid structure, with women occupying a greater percentage of the lower grades and relatively few of the top positions. Hence, the percentage of female senior staff in research institutes is usually comparable to or indeed less than the corresponding number given for full professors in the universities. Variation depends on the focus of the research institute and on the country in which it is located. It is stressed here that in the WELFARE QUALITY project the participation of women is one of the policy items. There is

considerable variation among the Member States in how scientific careers are organised in research institutes and universities. In some, there has been a considerable growth in short-term contracts. This has been referred to as the 'casualisation' of research careers. Women are more likely to be among those on short-term contracts. In the UK, for example, 41% of higher education and teaching staff are now on fixed term contracts. Women are a minority of academic staff but are disproportionately represented among contract workers: they comprise 43.5% of contract staff but only 36.7% of tenured staff.. There are dangers that such scientists become lost to the profession through their inability to get a secure position and that their work is affected by stress associated with uncertainty about their futures. In other Member States, such as Sweden, tenure is the exception rather than the norm but 'leakage' still occurs. There are also variations in the age at which a scientific career 'takes off ' which makes cross-national comparison difficult. The various patterns have different implications for women in terms of how they integrate career breaks into their professional lives. Career planning can also be complicated by structural barriers present in some countries, such as the Habilitation degree that has until recently been considered an essential qualification for professors in Germany, Austria and Switzerland.

Women and agriculture

Although 37 % of the agricultural workforce in the EU is female, farming is still regarded as a 'man's world'. Statistics presented by Member States show, for example, that in Portugal, an estimated 60 % of farms under five hectares are managed by women, and in Finland nearly half the rural workforce is female. Despite this, men remain the chief beneficiaries of production aid from structural funds. This clearly demonstrates a need to support and raise women's profile in the decision-making process. For women to play a key role in rural development strategy, and to ensure the equal distribution of resources, it means undertaking adequate analyses of the potential repercussions on gender equality prior to implementing new programmes. This could be supported by breaking down Member States' statistical information by gender. Although current EU initiatives such as Leader+ already contribute to raising rural women's profile (women are regarded as a priority in this programme), still more can be done to develop and encourage their participation in women's organisations in rural areas. Through concrete actions such as these we will strengthen women's position in the rural economy. The rural development policy offers ample opportunity for Member States to include such actions in their programmes.

This Integrated Project aims to realise a 10 % growth of women's participation in this scientific project by creating awareness of the gender problems and promoting women to take part in all segments of the project. In case of equally suitable candidates a woman will be preferred.

Gender action lines in the WELFARE QUALITY project: In the present project four action lines will be developed.

Action line 1. Statistics (make a description of the current situation)

Gender and Research Conference, Brussels 8-9 November 2001 Conclusions, D(2001) DG RTD C-5 TL: "More detailed statistics are required for a clearer comprehension of the situation".

In order to monitor progress on involving more women in our science, it is crucial to have up-to-date statistics and indicators that tell us whether the situation is improving and how it differs across scientific disciplines and countries. These will help to identify where pressure needs to be put. The participation of women will be monitored through the man-months reporting system. This system will not only be multidisciplinary but will also be divided into male and female categories. Of course, these categories will account for full-time equivalent input so no sex-disaggregated statistic mistakes can be made and realistic statistics can be shown as a project result. At the start of the project a zero-measurement will be made in order to obtain information on the percentage women participating in the project in the first month. The aim of this activity is to induce a female participation growth during the project.

Action 2. Equal opportunity policy (decide what our policy will be)

In case of equal qualification of more job candidates to participate in this project preference will be given to the female applicant. This equal opportunity policy which includes the encouragement of alternative working patterns, particularly where these would enable staff with domestic commitment to remain in employment is already common policy within several organisations in the project. In this project the

Steering Committee will promote this policy through amongst others an additional paragraph in the consortium agreement in which the project partners commit themselves to equal opportunity policy.

Action 3. Gender-issue awareness (make your policy clear)
To create awareness on discrepancies in gender approach and opportunities within the rural and scientific sector a contribution will be established through a workshop module that will be integrated part of training activities of this IP project. Secondly, trainee-ships and PhD-programmes in the horizontal activity will be encouraged and are intended for both sexes.Finally, in announcements, advertising or on-line publications necessary for the project gender-related issues will be referred to.

Action 4. Gender-related impact of results
In this project many gender and sex-related activities are intended to improve the role of women in the field of research related to animal welfare. If possible, in publications on the project results special emphasis will be given to the gender-related impact of these results. Especially in the various horizontal activities special attention will be paid to the role of women in the field of animal welfare. The female communication manager (position within the project office) will encourage communication plans (within the context of science-society and dissemination of results) in which women can play a substantial role. In the Steering Committee, the female manager responsible for training will set up programmes in which women are encouraged to participate.

Gender issues in the content of this project: In order to develop activities, just described, the current situation in the WELFARE QUALITY project has been monitored. The following dedicated information is available. All partners in this project have completed questionnaires and expressed their willingness to pay attention to the gender issue and to follow the general gender policy of the Steering Committee. Moreover some striking examples were presented in which some participants elucidated that in some cases the participation of women involved in this project will exceed 75%. In various organisations the gender issues proof to be very important. Some organisations made clear that they use a so-called gender statement (an official organisational questionnaire) to be completed by that part of the organisation, which has the vacancies.
The Steering Committee has made an inventory of the women involved in the WELFARE QUALITY project.

Body	Total members	Number of women	Percentage
Assembly	53	22	41%
Steering Committee	5	2	40%
Management committee	11	5	45%
Project office	3	2	66%
Subproject leaders	4	1	25%
In the subprojects	Not identified yet	Not identified yet	

Inventory: Women in management roles

8. Project Title: Network of prevention and control of zoonoses
Acronym: MED-VET-NET
Instrument: Network of Excellence

Project Summary: The overall objective of this Network of Excellence (10 participants) is to integrate veterinary, medical and food scientists in the field of food safety at European level, in order to improve research on the prevention and control of zoonoses, including food borne diseases, while taking into account the public health concerns of consumers and other stakeholders throughout the food chain. The network comprises 5 veterinary and 5 public health institutes in 8 European countries. All partner institutes have national reference laboratory-based responsibilities for the prevention and control of zoonoses. The network will develop activities to enable integration, including structured and systematic communications, and training. The programme will address zoonotic agents selected on the basis of importance in Europe and covering four thematic areas: epidemiology, host-microbe interactions, detection and control and risk analysis.

Contact person : Dr. Lucinda Cranham, Veterinary Laboratories Agency, UK, l.cranham@vla.defra.gsi.gov.uk

Gender Action Plan

Participation of women in MED-VET-NET

AFSSA	CIDC	ISCIII	DVI	ISS	PZH	HPA	SVA	SSI	VLA

Women involved in the project per institute

Males/Females	22/18	20/6	8/15	21/17	15/16	10/22	15/8	15/11	12/8	23/24
% women	45	23	65	47	52	69	35	42	40	51

Women involved in the project in total

Early researchers : none
Experienced researchers : 306 in total – 47% of women

Overall the percentage of women key scientists in MED-VET-NET is 47 %. However, there is some variation between institutes (Table above). The gender ratio of the overall network is, unfortunately, not reflected within the MED-VET-NET Management Team. Currently the Deputy Coordinator, 2 of the 10 Institute Coordinators and 3 of the 8 Thematic Coordinators and deputies are women. Only 3 work packages scientific leaders and 13 of the 39 Thematic Committees members so far appointed, are women.

Improvements to the gender ratio is an objective of MED-VET-NET. Only 50% of the partner institutes have action plans to promote gender equality. The following action plan is proposed:

- The collection of gender-related statistics and gender segregation indicators within the partner institutes in order to better understand the role of women in the network;
- The organisation of a meeting of representatives from the partner institutes to share experiences on gender policies. Since 3 of the 10 institutes have a gender action plan in place, this could help the other institutions to follow their example;
- Where appropriate positive actions and procedures will be taken to guarantee gender equality at senior management and decision-taking positions;
- The organisation of training on equality issues to raise awareness.

Revised proposal for a gender action plan to complement the original plan

- Analyse the reason for the gender shift – report back to the project coordinator
- Liaise with our partners to collate their gender awareness policies and
- Introduce the issue as a standing agenda item during the MED VET NET project meetings – this will-
    - Raise awareness of any issues
    - Provide a forum to share ideas
    - Promote best practice
- Develop the members area of the project website to include pages with regard to gender

9. Project Title: GLOBAL ALLERGY AND ASTHMA EUROPEAN NETWORK" Acronym: GA2LEN Instrument: Network of Excellence

Project Summary: This Network of Excellence (27 participants) will study allergy and asthma throughout the course of life, including intrauterine life and foeto-maternal interface, interaction between genetic and environmental factors in early life and development of allergies, via existing and new birth cohorts. It will establish an international network of European centres of excellence that will conduct specific integrated multidisciplinary research programmes on issues relating to environment (including outdoor and indoor pollution), nutrition, lifestyle (including occupation), infections and genetic susceptibility. Genetic and epidemiological studies will address gene-environment interactions that might underpin the dramatic increase in allergy rates in the EU in the last few decades. The work also encompasses, through region-specific epidemiological studies, the impact of nutritional status on allergic disposition, and the dissemination of information to patients and public, as a fundamental task to reduce the socio-economic burden of allergy and asthma.

Contact persons :Dr. Sofie Claeys, University of Ghent, Belgium, sem.claeys@ rug.ac.be

Gender Action Plan: In GA2LEN the gender issues will be approached from two different angles:

- The gender issues regarding the participation of both sexes in research, education and dissemination programs of the GA2LEN Network.
- The gender issues in different aspects of the diseases allergy and asthma (basic mechanisms, epidemiology, symptoms, diagnosis and treatment).

1) Gender issues in the participation of both sexes in research, education and dissemination programs of the GA2LEN Network.

Participation of women in the GA2LEN NoE

Are there women directly involved:	
in the scientific management of the project?	Yes
in the scientific partnership as scientific team leader in the project?	Yes
% of women scientists involved in the project:	
-young researchers (less than 4 years after graduate)	59,8 %
-experienced researchers (minimum 4 years after graduate or having a PhD)	40,2 %

It is the aim of the GA2LEN to achieve an equality of genders in all positions. Currently, a nearly equal proportion is seen in the group of research students, junior researchers and also at the level of senior researchers. However, equality is currently not seen at the level of the professors.

The Gender Action Plan of the NoE GA2LEN consists of the following elements:
Gender has been carefully examined in the proposal and the percentage of women scientists meets the expected EU criteria (at least 40%). Gender equality will be guaranteed in the allocation of staff and mobility grants. This is of highest importance since these activities are frequently an important step in the further academic career. In the exchange programme for the staff, a special attention will be made for

female junior and experienced researchers. Teaching programmes will be evaluated for success under special regard of gender Partners will be encouraged to put up special professorships for allergy at their own universities reserved for females in a gender action programme. The NoE will actively assist these partners with background information. At the Charité, for example, as one of the partners' centres already now in view of the NoE proposal, such an activity has started.

The partners of GA2LEN will actively link the activities with the existing Gender Action Plans of their own universities, which are already present at the majority of the contractors' institutions. If some of the partners do not have such action plans, they will be encouraged to use those already existing. An expert in gender issues will be asked to join the Advisory Board. In the Balance Score Card System to evaluate the partners, an item will be included to ensure that active measures to ensure gender equality will be pursued by the contracted partners. Each year the Advisory Board and Assembly will examine all of these gender issues.

We have a special Work Package on these gender issues (combined with ethical issues). The description is given below:

WP1.8. Ethical and gender issues

Workpackage number	1.8.	**Start date or starting event:**	Mo 1
Activity type	Integrating activities		
Participant id	**Univ. of Ghent**	All other partners	
Person-months (first 18 mo.)	3	0.5	

Objectives
To assist the GA2LEN executive committee and partners in ethical and gender issues

Description of work
Ethics …. Gender To establish a GA2LEN gender board in a close collaboration with the executive committee and advisory board of GA2LEN, the EC and EAACI To prepare a report of gender issues in training programmes for young scientists To provide the executive committee regular reports on the evolution of gender integration in the GA2LEN network

Deliverables :
D 25: first report on ethical and gender issues submitted to the executive committee (Mo 12)

Milestones:
M 13:composition of a GA2LEN gender board (Mo 6)

2) *The gender issues in different aspects of the diseases allergy and asthma (basic mechanisms, epidemiology, symptoms, diagnosis and treatment).*

In contrast to other research areas, such as cardiovascular diseases, gender differences in the development, diagnosis and treatment of asthma and allergy have received little attention. Gender, besides genetic, physiological or biological differences between males or females (often studied under sex differences) encompasses environmental and socio-cultural factors that can determine roles and responsibilities. Incidence, prevalence, report of symptoms and severity of asthma and allergy differ by gender. Boys suffer more often from asthma and allergic rhinitis during childhood, and exhibit higher levels of biological allergy markers, such as skin prick test positivity or IgE level than girls, whereas by adolescence the incidence of asthma is more common in girls. Women have more frequently bronchial hyper responsiveness, a key physiological characteristic of asthma. Sex differences in lung physiology and immune characteristics are well documented.

Regarding women specifically, too little is known regarding pre-menstrual asthma, the evolution of asthma during pregnancy, the influence of hormones on asthma and allergy over the lifespan (age at menarche, contraception, menopause, hormone replacement therapy). Regarding both genders, too little is known on the effect of hormones as potential modifiers of environmental factors. Recent results suggest a greater impact of smoking and air pollution on respiratory consequences for women than for men. There has not much consideration been given on the impact of gender on the appropriateness of instruments of data collection, on differences in exposures or on health service delivery From a patient perspective, women report more symptoms, greater utilisation of health services and worse quality of life. Breathlessness is better perceived by women for physiological reasons, and also more likely to be reported. Diagnostic labelling is gender biased regarding asthma. Gender differences in the treatment for asthma and allergy are not sufficiently investigated. Therefore, understanding gender differences may have profound influences on the understanding of the aetiology and on the management of patients suffering from allergic diseases and asthma. All components of the GA2LEN WP's will address the impact of gender on the development, diagnosis, treatment and prevention of allergic disease & asthma and integrate the gender dimension into research and management of allergic disease in Europe.
Integration will be sought by including patient groups, organisations such as EFA as well as initiatives promoting women's or men's health, respectively, to collect information on the extent of the burden of asthma and allergy, the quality of life and gender-specific needs in the fields of patient education and health care.The results of the NoE and current scientific knowledge will be disseminated by promoting the incorporation of gender issues into health programmes and health care for asthma and allergy. The main focus will be the development of recommendations for integrating gender aspects into medical education to increase the attention to gender in the training of health care professionals and on the implementation of guidelines for gender-based medicine and health promotion in the field of allergic disease.

In the first 18 months:
The Network will set up a working group on gender/sex and organise an initial workshop to prepare work in three areas: The reanalysis of epidemiological data where analyses have often paid insufficient attention to gender differences as potential effect modifiers; this will reassess:

- The extent of gender/sex differences in the incidence and prevalence of asthma and allergy at different ages and in different populations across Europe.
- The role of gender-based differential exposure and vulnerability in explaining the observed differences.
- The extent of gender/sex differences in the management and burden of asthma and allergy at different ages and in different populations across Europe.

This part of the project is a prerequisite for 1) development of evidence-based concepts for primary prevention that take gender-specific needs into account. 2) refinement of the research questions to be addressed in the latter part of the programme. A critical appraisal of the type and validity of instruments for data collection used in the surveys (e.g. questionnaires on perceived symptoms, measurements of BHR) in terms of gender appropriateness will be considered.

Analysis of the impact of sex hormones and sex-specific genetic regulation in biological studies: data from relevant animal models in allergy research will be used to assess the influence of sex-specific genetic regulations and sex hormones on the development of the immune system, especially T cell differentiation and IgE production.This part of the project should enable the assessment whether gender/sex is relevant in genetic and epigenetic as well as in immunological mechanisms of allergy and asthma. Contacts with specialists in endocrinology will specially be sought. The involvement of genetic factors will be considered in relation to studies including genetic data.

Gender related factors in the management of the disease: we will specifically seek to develop a programme with EFA to consider both attitudes and representations of patients and clinicians towards disease and its risk factors (regarding both the risk factors of disease and the triggers of asthma attacks) and gender differences in response to therapy. This work will benefit from the European nature of the network, which will allow access to populations with very different gender roles.In the subsequent programme we will develop recommendations for integrating gender aspects into medical education to increase the attention to gender in the training of health care professionals and on the implementation of guidelines for gender-based medicine and health promotion in the field of allergic disease.

Integration within WP 2.5

The INSERM in France (partner n¡ 7) will be the WP leader for analysis of the gender effects on allergy and asthma. The WP responsible will initiate a review of the past studies to assess the methods of analysis and results of studies dealing with gender, allergy and asthma. The tasks for reviewing will be allocated to each partner and, in function of their experience in the field, the partners will be requested to participate in the report summarising the literature review. All the WP partners (partners n¡ 5, 7, 8, 10, 12, 17, 21, 24, 26, 27) will define methods for studies on gender in allergy. Besides these activities, several partners (partners n¡ 7, 24…) will have the task to prepare the workshop on gender issue. All partners will present the results of their analysis during this symposium. We have a special Work Package to deal with these items:

WP2.5. Gender

Workpackage number	2.5	**Start date or starting event:** Mo 1							
Activity type	Jointly executed research activities								
Participant id	**7**	5	8	10	12	17	21	24	26	27
Person-months/participants	*10*	*4*	*4*	*4*	*4*	*8*	*2*	*10*	*2*	*6*

Objectives

To reassess, where available, original data from past studies to explore further effect modification by sex and gender, and to review methods of assessing the effects of gender.
To develop novel studies to identify the effects of gender on development, persistence and severity of allergic disease.
To review animal models of sex-specific genetic regulation and sex hormone influences on the development of allergic responses.
To assess the effects of gender on management and response to treatment

Description of work

There will be a review of past studies to assess their methods of analysis and specifically to review how far potential interactive effects of sex have been adequately analysed. Where available, data from past studies will be re-analysed.
Animal models will be reviewed and protocols set up to assess sex-specific genetic regulation and the potential effects of sex hormones on allergic conditions.
Consideration will be given to the effects of gender on the management and response to disease, and novel studies to set up to inform medical education and the improvement of current programmes of management.

Deliverables

D 40: Individual meta-analysis of available data to explore role of gender in incidence, persistence and severity of allergic disease (Mo18)
D 41: Build-up of methods for the study on gender in allergy (Mo18)

Milestones

M 23: Workshop on gender issues in allergy and asthma (Mo18)

Indicators	**M0**	**M18**	**M60**
I 37: Number of jointly funded projects	-	-	2
I 38: Number of joint publications	-	1	4
I 39: Number of centres included	10	**15**	**20**

10. Project Title: Prevention, control and management of prion diseases
Acronym: PCM PRION
Instrument: Network of Excellence

Project Summary: This Network of Excellence (29 participants) is expected to provide European researchers with an effective communication strategy with the public, with policy makers and between themselves, allowing the sharing of prior, current and future knowledge. It is expected to provide better value for money from European and nationally funded research, allow the better exploitation of knowledge and promote a concerted European response to various issues or future TSE crises.
Contact person: Dr. Valentine Vierne, ARMINES, France, vierne@ensmp.fr

Gender Action Plan: The prion field is not an area of research suffering from a low presence of women in the research teams. Consequently, the creation of a Gender Action plan is a necessity in order to have a constant control over the gender equality within the NoE, NeuroPrion. In NeuroPrion, 150 researchers out of 290 eligible have been integrated. These correspond to scientists completely involved in the field and others which have asked to be integrated (i.e. 52%). At equal skill levels, the choice was made to respect gender equality, and 62% of women (69/111) versus 45 % for men (81/179) have been chosen. Therefore, women who represented 38% of eligible researchers, take up 46% of the available positions in the NoE.

	F	M	% F	Total	Integrated	% int	F int	M int	% F int
France	33	74	31%	107	33	31%	10	23	30%
United Kingdom	16	30	35%	46	29	63%	13	16	45%
Ireland	2	2	50%	4	3	75%	2	1	67%
Germany	12	17	41%	29	23	79%	12	11	52%
Netherlands	1	6	14%	7	6	86%	1	5	17%
Italy	27	19	59%	46	25	54%	16	9	64%
Austria	5	5	50%	10	7	70%	4	3	57%
Switzerland	0	3	0%	3	3	100%	0	3	0%
Norway	2	3	40%	5	3	60%	2	1	67%
Belgium	0	2	0%	2	2	100%	0	2	0%
Israel	2	3	40%	5	3	60%	2	1	67%
Spain	11	15	42%	26	13	50%	7	6	54%
Total	111	179	38%	**290**	**150**	52%	69	81	46%

A similar gender action plan will be applied to the funding dedicated to researchers and student mobility in order to create gender equality among participants. In the same way, the gender equality, expressed as the number of male and female students in each training institutes, will be overseen in order to prevent the creation of a gap between the number of future women and men scientists. In the frame of one of the work packages an annual report concerning gender equality will be delivered. At that day the Technical Annex is being finalized. Following the enlargement of the consortium other researchers should be integrated to the project. Since their number will not be important this enlargement of the scientists list should not induce an important modification of the gender issues and the women representation in NeuroPrion.

11. Project Title: European Animal Disease Genomics Network of Excellence for animal health and food safety
Acronym: EADGENE
Instrument: Network of Excellence

Project Summary: This Network of Excellence (14 partners) will bring together sufficient excellence and resources to make a real difference to animal and human health, and improve the quality of animal products. Integrating activities will ensure that all partners have easy and durable access to the best available facilities, biological resources, technological platforms, software, analytical tools and knowledge. The joint research programme will ensure that this integration results in high quality research that is directed towards the most pressing issues, and presents the best opportunities to address European concerns. The network will: create a durable virtual laboratory in genomics of host-pathogen interactions; co-ordinate and orient European animal genomics and disease research; apply genomics as a tool to improve animal health, food quality and safety.

Contact person: Dr. Elisabetta Giuffra, Roslin Institute, UK elisabetta.giuffra@bbsrc.ac.uk

Gender Action Plan: It was widely recognised that a transition to a both gender-balanced and gender-sensitive organisation was needed to promote gender integration into research where the total participation rate of women is particularly low. In addition, women's participation rate in the Quality of Life programme in FP5 was particularly low as well. For example, there were only 18.5% of female project co-ordinators under the 1st Call in 1999 (16% for all disciplines considered and 10% in FP4) and the percentage of women partners was 14-18%. Furthermore, over 33% of projects included only one female partner and 27% of projects lacked female partner.

Participation of women:
Are there women directly involved:
• in the scientific management of the project? **Yes**
• in the scientific partnership as scientific team leader of the project? **Yes**

% of women scientists involved in the project:
• Early researchers (less than 4 years after graduation) **56%**
• Experienced researchers (minimum 4 years after graduation or having a PhD) **35%**

Comments and justifications
The coordinator of the Network is a female. Furthermore, women are involved in the activities and in 4 cases as an activity leader (9 activities in all). Although women are not over-represented in this area of research, they are very well represented in the Network of Excellence.
Women are well represented in the Network of Excellence, especially if compared to their representation in the area of research. Their active role will stimulate other women to enter this type of research and take responsibilities. Additionally, the activities in raising interest about science will put extra emphasis on involving women. Several measures will be implemented during the project.
In order to make up for the lack, the EADGENE partners are committed to promoting equal employment opportunities and to continuing the programme of actions to make this policy fully effective. The EADGENE network will therefore strive to employ more women among the research staff, especially for the top decisionmaking positions. Women are already involved in the Network as key partners: the NoE co-ordinator (INRA) and 4 of the representative partners (NSVS, PTP, FAIP and SANGER) are women. In actuality, the consortium includes 14 representative partners. In addition, a number of responsibilities have been assigned to women; amongst the 9 activity leaders, 4 are females (44%). Then, EADGENE by the network shows its implication to promote equality between women and men. In addition 56% of PhD students in EADGENE are females. This element shows that the future of animal genetics does not really present a gender issue in this scientific field.

Additionally, the partner of Roslin Institute is sponsored by the BBSRC, (the Biotechnology and Biological sciences Research Council), which has a well-developed Equal Opportunities Policy (see www.bbsrc.ac.uk) including initiatives to promote "Women in Science" that are strongly supported by the

current CEO, Professor Julia Goodfellow. As part of its contribution to family-friendly policies, Roslin Institute operates flexible working hours and an on-site nursery.

The goal is to maintain the participation rate during the project by implementing specific measures:
• EADGENE will strive to employ equal number of women and men among the research staff, with specific efforts to consider gender issues in recruitment practices. The target rate of 50% of women employed at different positions will be monitored.
• Organisation's awareness of the importance of gender equality in research structures will be increased. Incentives will be given to employ women in laboratories. In the scheme to raise awareness in science, Students will be invited to visit laboratories with a view to increasing society's awareness and understanding of science. This activity will focus on raising interest among young women. Besides, flexible working hours and other family-friendly policies will be initiated.
• Establishment of a system for monitoring gender equality in mobility schemes such as equality of access and participation and subsequent impact on professional careers. In mobility, extra funds will be available to cover child care costs for mobility of female researchers who have a primary role in the care of young dependents. Moreover, in order to ensure gender equality, efforts have to be done to obtain and disseminate data and information on the gender aspects of mobility in consortium like information on the different experiences, needs and interests of women and men concerning mobility, due to issues such as discipline, occupation and marital status.
• A set of gender indicators will be produced in order to measure progress towards gender equality in animal genomics research. For this, EADGENE should make use of the strategy developed by the European Commission in order to approach the lack of sex-disaggregated data on scientists. The Helsinki Group on Women and Science who considers that the gendering of indicators on human resources in science is to be tackled from a threefold perspective: the 'top-down' approach, the 'bottom-up approach, and the gendering of the benchmarking exercise. In fact, 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. More precisely, there is a need to develop both quantitative and qualitative gender indicators in order to 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.
• Possible actions against institutions which are not respecting the principles concerning equal opportunities could also be foreseen.
• Besides, the impact on gender equality could possibly be relevant as regards education. EADGENE integrates a number of universities which will do actions in this sense. For example, the senior female project leaders and activities leaders should act as mentors for more junior female researchers and establish an electronic contact list to provide support and advice in career development and progression.

Gender aspects in research
Does the project involve human subjects? **No**
Does the project use human cells/tissues/other specimens? **No**
If human subjects are not involved or human materials not used, does the research involve animal subjects or animal tissues/cells/other specimens (as models of human biology/physiology) in such a way that it is expected that they may have implications for humans? **Yes**
Does the project use collection of data related to human subjects, human materials, animal subjects or animal materials **No**
Are there gender/sex differences with respect to the research documented in the literature? **Yes**

There are no specific gender aspects in this type of research. It is an interesting area, also for women. There are an increasing number of women choosing for a scientific career in research institutes. For instance at INRA, if considering different age groups, the percentage of women around 45 yr. old is 45%, 35 yr. old is 50% and 25 yr. old 55%, showing a steady increase of woman employees. The point remains to assure gender equality at all responsibility levels. Furthermore, the INRA has a female chief executive.
Sex effects on disease resistance traits or on immune responses have been often reported in the literature. In other words, it's not rare that a difference in response is seen between males and females, in farm animals as well as in humans. This sexual dimorphism is likely due to interactions between the

immune system and the hormonal system. Because effects are often varying between experiments, depending on the population and the pathogen studied, this possible sex effect will be always taken into account by, either testing one sex only, or by testing males and females together, preferably groups of brothers and sisters and by including then a sex effect in the statistical analysis model.

12. Project Title: Improving quality and safety and reduction of cost in the European organic and "low input" food supply chain
Acronym: QualityLowInputFood
Instrument: Integrated Project

Project Summary: This Integrated Project (33 participants) aims to lead to new technologies and systems for organic and low input production systems. One of its strengths is a matrix structure whereby the research will encompass the whole food chain from fork to farm for a number of sectors including protected crops (tomato), field vegetables (lettuce), fruit (apple), cereal (wheat), pork, dairy and poultry. It addresses consumer attitudes and expectations, impact of organic foods on nutritional, sensory, microbiological and toxicological quality/safety of foods, development of new technologies and identification of socio-economic, environmental and sustainability impacts of innovations. This project has the scientific rigour to provide the meaningful information that is lacking on the extent to which differences in production systems affect nutritional value, taste and safety of food. It is expected to make a significant impact on increasing the competitiveness of the organic industry in a number of sectors to the benefit of the European consumers. The project is organised in 8 sub-projects each comprising a set of work packages totally 27. The project consortium includes 31 partners and expects to recruit up to 5 new partners through open calls.
Contact person: Dr. Guner Ozay, Food Science and Technology Research Institute, Turkey, Guner.Ozay@mam.gov.tr

Gender action plan: One of 5 board members, and 2 of 7 subproject coordinators are women. Approx. 24 % of the Work package managers and site managers are women. Most of the early and some of the senior researchers (especially of the additional cost partners) will be recruited only when the contract has come into force. For the recruitment process, an Equal Opportunities Committee (EOC) will be established with the purpose of ensuring that no discrimination against sex, race, religion, etc. will be made. All partner Institutions have equal opportunity committees and established guidelines for the recruitment process, and provide mechanisms that enable equal opportunities. (e.g. appropriate provision for maternity leave cover).The consortium has agreed to aim at recruiting 60% women into postgraduate/junior postdoctoral positions, which is in line with recent trends gender interest in food and environmental related courses at undergraduate level in several of the University partner institutions of the IP. The consortium has agreed to aim at recruiting at least 40% of women into experienced researchers.

The consortium will follow the gender action plan outlined below:

Activity	Relevant WP(s)	Details
Focus on the gender issues in all the affected WPs	1.1.2, 2.1.7, 2.3.1, 2.3.2, 2.3.3, 7.4	Explicit focus on the gender issues will be given to all the affected WPs and on project management level (EOC)
Separate report on the gender issues concerning human subjects	1.1.2, 2.3.2, 2.3.3	The report will give scientific justification for the inclusion of men and women in the research activities
Separate report on the gender issues concerning animal subjects	2.1.7, WP 2.3.1	The report will give scientific justification for the inclusion of male and female animals in the research activities
Publishing of report on the external project website	1.1.2, 2.1.7, 2.3.1, 2.3.2, 2.3.3, 7.4	The above reports on the gender issues conc. animal and human subjects will be published on the project's website

Activity	Relevant WP(s)	Details
Promotion of the skills workshops to women scientists	7.4	In the promotion of the workshops, measures will be taken to ensure a balanced division of male & female participants
Promotion of scientist between partner laboratories	7.4	In the promotion of the exchange between laboratories, measures will be taken to ensure a balanced division of male and female participants
Promotion of training courses to women scientist	6.2	In the promotion of the training courses, measures will be taken to ensure a balanced division of male and female participants
Promotion of women scientist's participation in the annual IP congress	7.3	In the promotion of the annual IP congress, measures will be taken to ensure a balanced division of male and female participants

gender aspects in research:

	Yes	No
• Does the project involve human subjects?	X	
• Does the project use human cells / tissues / other specimens?		X[2]
• If human subjects are not involved or human materials not used, does the research involve animal subjects or animal tissues / cells / other specimens *(as models of human biology/physiology)* in such a way that it is expected that may have implications for humans?	X	
• Does the project use collection of data related to human subjects, human materials, animal subjects or animal materials	X	
	Yes	No
Are gender/sex differences with respect to the research documented in the literature?	X	

This project has two dimensions of gender issues, which are human and animal subjects. For both dimensions, gender has well known impacts on the scientific results, which calls for an inclusion of this question in all of the relevant activities of the project. This is further explained below. The human gender issues are relevant to WP 1.1.2, WP 2.3.2, WP 2.3.3, WP 7.4.
WP 1.1.2 includes the objective of examining in-depth how consumers define and construct meanings around the concepts of quality and safety in organic and "low input" foods. To achieve this objective a qualitative consumer research will be conducted through a series of focus group discussions. The selected focus group members in all six European countries will consist of an equal number of men and women, as opinions and behaviour of the two sexes are expected to be different on the issue of quality and safety in organic and "low input" foods. Furthermore, the proposed semi-structured interview schedule will be developed jointly by male and female researchers to reduce any gender determined bias in the scientific results.

The intervention study to be carried out under WP 2.3.2 will seek to identify effects of organic vs. conventional food based on health and well-being of children. The experimental design of the study will be based on equally sized groups of both girls and boys. As the human system of girls and boys differs, the gender issue is very important in the selection of the experimental research group in order to create non-biased results (Olsen et al., 2001).

[2] Blood samples and similar material (not tissue cultures) may be used in WPs 2.3.2 and 2.3.3. However, this is not yet decided, since it will depend on the detailed planning after the first 18 months.

Human studies will also be used in WP 2.3.3 with the purpose of identifying the impact of foods from organic and conventional production systems on selected human health characteristics. The cohort study will comprise data from already documented studies or new studies collected from more than 1500 participants using exclusively organic food, as well as data from a matching control group. In the experimental design of the study, an inclusion of both females and males is envisaged and the tender material for the study will give preference to this, although this criterion will not be an absolute requirement, if good reasons are provided for using another design. The argument is similar to the one for WP 2.3.2.
Animal gender issues are subject to the design of WP 2.1.7 and WP 2.3.1. In a field experiment in WP 2.1.7, where effects of fertility management, rotational positioning and plant protection strategies are combined in a factorial design, preference tests are made with rats. The rats used for the experiment will be males only, as these gives more stable scientific results, since they do not experience cyclic changes in anxiety due to oestrous related hormonal changes during the testing period. The scientific justification for this is given by Gulinello et al. 2003. The paper gives documentation to sex differences in anxiety, sensorimotor gating and expression of the α4 subunit of the $GABA_A$ receptor in the amygdala after progesterone withdrawal, in a study of the mechanisms by which “the human menstrual cycle and the rodent oestrous cycle, could play a role in mood and anxiety disorders”.

The work package 2.3.1 implies a test of the reproductive performance of boars, which have been fed with wheat, grown with and without a plant growth regulator (CCC). The boars are chosen for the test, contrary to a focus on ewes, because the examination of the sperm quality by microscopic assessment is significantly easier without harming the animals, compared with examining the egg quality. The data from earlier studies clearly indicate that plant growth regulators may have serious adverse effects on animal reproduction, and therefore probably also on human reproduction. Furthermore the data indicate that the effects are more severe in the male than in the female. This is in agreement with other experiments in which doses that produce abnormal testis development do not produce any effect in the female (Skakkebæk et al, 2000). Thus experiments that include semen fertilisation competence seems much more reliable than experiments based solely on female reproduction traits. As a consequence, experiments based solely on female reproduction traits may lead to false negatives with regard to general conclusions on effects on reproduction. Finally the data show that even though selected spermatogenesis parameters are unaffected, the fertilisation competence of semen can be severely compromised. Therefore it seems that fertilisation competence of semen can only be evaluated if fertilisation experiments (*in vivo* or *in vitro*) are conducted.

TP6 - SUSTAINABLE DEVELOPMENT, SUSTAINABLE SURFACE TRANSPORT, GLOBAL CHANGE AND ECOSYSTEMS

1. Project Title: Marine biodiversity and ecosystem functioning
Acronym: MARBEF
Instrument: Network of Excellence

Project summary: The project will: develop a European "taxonomy clearing system"; establish a joint training programme; form a Board of Governance to establish links with funding agencies and policy makers at national and European levels. In so doing, MARBEF will also contribute to other EU policies such as EU biodiversity research strategy and the CFP, and to Member State biodiversity research strategies as well as international initiatives and agreements (GLOBEC, CoML, DIVERSITAS etc.).

Gender Action Plan: The consortium will enshrine the principle that the criterion of excellence is independent of gender and will adhere to the gender mainstreaming strategies that have been adopted by the Commission. The network activities must contribute to promoting gender equality. Gender Mainstreaming is the systematic integration of equal opportunities for women and men into the organisation and its culture and into all programmes, policies and practices; into ways of seeing and doing. (Rees 1998 in ETAN report 2000)

The Gender Action Plan within the network main focus will be on the encouragement of women's participation in research ('Research by women'). Several activities will be developed:

A. Outreach activities:
(i) linking with schools and universities to trigger the interest of women in the project
A special section of the MARBEF 'off road show' will be devoted to promote the interest of women in Marine Biodiversity Research (e.g. provide positive role models for girls in science).
(ii) raise awareness about the need to increase gender equality in the field of the project
In the newsletter a special column 'Women in Science' will address issues of gender equality within the field of the project. Also the column will be used to illustrate that women play a prominent role in cutting edge research. Copies of the newsletter will be made available at the website.
(iii) preventing uncritical use of language and concepts regarding gender bias
The reports and outreach activities will be screened for use of language and concepts that can lead to gender bias, or fail to take account of gender.

B. Internal Gender Watch System:
An internal Gender Watch System will be set up to monitor and stimulate the integration of the gender dimension in the network. It will collect and report gender statistics and encourage women to participate in the future actions and decisions panels of the network. The representation of women should reflect the gender balance of the MARBEF community with a target of 40 %.
The actions will consist of:
(i) Collecting sex-disaggregated statistics
These data will reflect the gender balance of project teams during the course of the project. Statistics will be added to the yearly management reports.
The data will be made available to (external) studies aiming at the evaluation of the position of women in science. (Gender Watch System of the Commission)
(ii) Developing best practice policies in the recruitment and employment of scientists.
The system will ensure that employment activities within the field of the project are open and transparent. The jobs directly related to the field of the project will be advertised, and the appointment panels should be of mixed-sex. Salaries will be eligible for normal social security sick pay and parental leave.
(iii) Preventing uncritical use of language and concepts regarding gender bias
The reports and outreach activities will be screened for use of language and concepts that can lead to gender bias, or fail to take account of gender.
(iv) Support to specific initiatives

A specific budget will be available for the sabbatical system for women and for child care during conferences.

Performance indicators are:

1) the gender action plans with subsequent annual overviews on the integration of women in the activities of the Network

2. Project Title: Implementation of high-throughput genomic approaches to investigate the functioning of marine ecosystems and the biology of marine organisms.
Acronym: Marine Genomics
Instrument: Network of Excellence

Project summary: Experts in genomics, proteomics and bioinformatics from several Centres of Excellence in genomics in Europe will be grouped and networked with marine biologists who can make use of high-throughput genomics data. The network aims among others at sharing existing technological platforms; enabling access to major genomic centres; establishing a common DNA Stock Centre and a common Bioinformatics Centre. Marine Genomics will also develop complementary dissemination strategies, targeting public, private and institutional communities with the purpose of enhancing the integration of marine biologists in the ERA.
Additional project information: Project website CORDIS News article Marine Genomics Europe to hold kick-off meeting in France

Gender Action Plan: The under-representation of women in the natural sciences has been well documented over the past five years. MARINE GENOMICS takes gender mainstreaming very seriously. The coordinator, Dr. Catherine Boyen (CNRS-Roscoff) and Scientific Steering Committee (SSC) members Prof. Jeanine Olsen (University of Groningen, NL) and Prof. Esther Lubzens (National Institute for Oceanography, Israel) will take the lead. There are ≈10 additional senior women within the NoE who will be actively involved in various workpackages. Dr. Jeanine Olsen is actively involved with "Women in Science" issues at her university and nationally (NL). She will be responsible for the coordination of the gender action plan.
The following gender mainstreaming tools will be employed

- Engendering budgets in the form of two classes of fellowships for women scientists
- Active mentoring
- Awareness building for men and women in the network
- Monitoring through sex disaggregated statistics.

Information about the NoE-Marine Genomics Gender Equality action plan can be found using the action button on the Homepage of our Web site. (*Currently being developed*).

1. Marine Genomics Fellowships for Women.

For research stays of 1-3 months, the NoE will provide three fellowships per year for outstanding women scientists. Initially we will try to balance these among the three research themes (comparative, functional and environmental genomics) but depending on demand as the network develops, the SSC will periodically review the programme and adjust it accordingly.

The main objective is to ensure that gifted young women scientists are actively promoted.

2. Work/Life Balance Travel Grants.

One of the major integration activities within the NoE will be training workshops of many kinds usually lasting from 2-14 days. Young women scientists with babies or toddlers must often forego these activities in conjunction with childcare. In order to remove this obstacle, the NoE will establish a continuous special program for travel and crèche assistance designed to allow the mother to bring her infant with her. An application form will always be part of the announcement and registration forms.

The main objective is to remove short-term, participation obstacles.

3. Mentoring.

This must occur at two levels:
1) It is vital for junior women to interact with senior women. Although this is generally less severe in southern European countries where women account for 20-30% of the more senior levels, in northern European countries it is typically <10%. This means that most PhDs and post-docs effectively work in isolation never having an opportunity to talk with women about their experiences. It has been shown that the lack of role models makes it more difficult for women to believe that they can achieve their ambitions

2) It is vital that middle- and senior-level women be mentored by senior male colleagues who are presently engaged in higher management functions (e.g., directors of institutes, chairs of high-level committees, deans and so forth). This level is nearly the exclusive domain of men. Women candidates are seldom considered for top functions because they are typically outside male networks in the upper echelons and have not had the necessary step-wise training/mentoring/coaching that is essential to function effectively at the highest levels.

The NoE will, therefore, establish a mentoring programme for *all* women in the network appropriate to their level (1 or 2 above).

The main objectives are to strengthen understanding, extend networking both laterally and vertically, and to develop effective strategies for the advancement of women, i.e., bottom up and top down. This last point links to Point 4 below.

4. Gender Education for Men and Women Scientists.

Most people are only vaguely aware of the actual reasons behind under-representation of women in science. Most tend to dismiss it as “a problem of the 1970s”, associate it with “radical feminism”, as “a problem for the women to solve for themselves” or worst of all, “that it doesn’t really exist”. When the subject is raised, the common reaction among both men and women is often one of nervous laughter, weak jokes and uneasiness. Therefore, the goal of this part of the action plan is to raise awareness at the individual level, within the fabric of one’s own country/culture/institutions, and in the larger cross-cultural context. This will involve teaching scientists to identify and understand how existing institutional structure and policy discriminate however inadvertently. Experience shows that as all individuals become aware of “closed ” academic cultures, the inaccuracies of “popular mythology” about women’s issues, and the many forms of subtle discrimination that build up over the years through accumulation of many small incidents the ability and willingness to redress these inequities is strengthened into one of resolve.

Three approaches will be used.

First, a number of regular mini-symposia on gender issues will be embedded in the education and training (spreading) within the normal scientific programs of the larger NoE meetings. Use of hard statistics and sociological analyses will provide the basis.

Second, we will provide Web page learning modules and pertinent updates. Because the wealth of information available is large, we will develop as summary approach with links to the larger primary reports. Some examples include learning the meanings of such terms as transparency, glass ceiling, gender; critical examination of concepts about women’s ambitions, productivity, “north-south” divide discussions; differences in communication styles.

Third, we will stimulate individual contact with network participants from the Board of Governors to graduate students.

The main objective is to foster permanent structural change, which by itself, makes this component of the action plan the most difficult but also the most important in the long run.

3. Project Title: Assessment of the European terrestrial carbon balance
Acronym: CarboEurope
Instrument: Integrated Project

Project summary: The overarching aim of the CarboEurope is to understand and quantify the present terrestrial carbon balance of Europe and the associated uncertainty at local, regional and continental scale. In order to achieve this, the project addresses the three major topics: 1. Determination of the carbon balance of the European continent, its geographical patterns, and changes over time. This is achieved by (1) executing a strategically focussed set of surface based ecological measurements of carbon pools and CO_2 exchange, (2) further enhancement of an atmospheric high precision observation system for CO_2 and other trace gases, (3) execution of a regional high spatial resolution experiment, and (4) integration of these components by means of innovative data assimilation systems, bottom-up process modelling and top-down inverse modelling. The key innovation of the CarboEurope is in its conception as to apply single comprehensive experimental strategy, and its integration into a comprehensive carbon data assimilation framework. It is solving the scientific challenge of quantifying the terrestrial carbon balance at different scales and with known, acceptable uncertainties. The increase in spatial and temporal resolution of the observational and modelling program will allow for the first time a consistent application of a multiple constraint approach of bottom-up and top-down estimates to determine the terrestrial carbon balance of Europe with the geographical patterns and variability of sources and sinks. 2. Enhanced understanding of the controlling mechanisms of carbon cycling in European ecosystems, and the impact of climate change and variability, and changing land management on the European carbon balance. This is achieved by (1) the partitioning of carbon fluxes into their constituent parts (assimilation, respiration, fossil fuel burning), at local, regional and continental scales, (2) the quantification of the effects of management on net ecosystem carbon exchange based on data synthesis, and (3) the development, evaluation and optimisation of ecosystem process models. 3. Design and development of an observation system to detect changes of carbon stocks and carbon fluxes related to the European commitments under the Kyoto Protocol. This is achieved by (1) atmospheric measurements and a modelling framework to detect changes in atmospheric CO_2 concentrations during the time frame of a Kyoto commitment period, and (2) the outline of a carbon accounting system for the second Commitment period based on measuring carbon fluxes, stock changes by soil and biomass inventories, vegetation properties by remote sensing, and atmospheric concentrations. CarboEurope integrates and expands the research efforts of 67 European contractors and around 30 associated institutes. CarboEurope addresses basic scientific questions of high political relevance.
Additional project information: Project website Max Planck Inst. for Biogeochemistry (Jena) - Press release on kick-off meeting, Spoleto, January 2004 ("Public & press" section of the website)

Gender Action Plan: Its objective is to promote the role of female researchers in CarboEurope

Main expected results:

- Project gender committee
- Networking and mentoring programme
- Facilitated recruitment of female researchers
- Annual gender action reports

Methodology
Task 1: Project gender committee

The gender committee will actively promote the role of female researchers in the Integrated Project at all levels. It will be responsible for raising awareness of gender equality among the project consortium and will control whether the gender action plan is properly applied at the level of the Integrated Project as a whole and of its major components. In particular, it will act as the platform to channel experience and good ideas via web-based tools, but will also deal with complaints. It will produce the annual gender action report of CarboEurope-IP. The gender committee will consist of 3 members elected by all female project participants (PIs, PostDocs, PhD students) for a two-year period. Committee members can be re-elected. The Gender Committee is represented by one member in the Advisory Panel.

Task 1.1: Networking

Under the auspices of the gender committee, a female researchers network will be established within CarboEurope-IP to discuss potential conflicts between career and family and exchange experience. They also share announcements for jobs and training opportunities. The gender committee helps to recruit females for the CarboEurope-IP.

Task 1.2: Annual gender action report

Annual gender action report will contain an inventory of actions to promote gender equality which have been performed at the level of the Integrated Project as a whole and of its major components and will document the overall success as compared to targets of promotion of female researchers. The gender committee will produce the report with the input of all partners of the Integrated Project.

Task 2: Facilitated recruitment of female researchers

Recruiting young female academics is encouraged in CarboEurope-IP. All job announcements will encourage females to apply. The gender committee will produce school material dissemination "Women in carbon research" in collaboration with national gender programmes. All project partners are encouraged to participate in national events (cf. also "Training activities", B4.3).

Task 3: Active promotion of female researchers

11% of the scientists involved in the CarboEurope Cluster in the Fifth Framework Programme were female. Against this background, CarboEurope sets the target to double the participation of females, and to achieve 20% or more at all organisational levels in the project, within the frame of the national rules of the partners. This applies to the scientific work as well as to the active participation at workshops, conferences and publications.
In order to achieve this target,

- whenever open jobs are announced in CarboEurope-IP, the PIs commit themselves to contact the female-representatives at their institute, and the project gender committee, to help finding qualified females, and recruiting females.
- directly, or with help of the gender committee, a mentor who helps females to develop perspectives for their research career at critical stages when most females drop out of research: when finishing masters degree and at the end of the PhD thesis. The mentor will also encourage and support the mentee to write scientific publications and to co-chair workpackages or workshops (cf. also "Training activities", B4.3).
- CarboEurope sets the target to invite 20% or more female researchers to workshops, as speakers on workshops and conferences organised at the level of the Integrated Project and its major components (cf. also "Training activities", B4.3).
- as far as logistically possible, business meetings of workpackages will be equipped with video-conferencing upon request so that partners who cannot travel to business meetings can attend virtually. This will specifically help women taking care for their children.

Task 4: Consortium Agreement

We will set up in the Consortium Agreement the following minimum requirements to promote gender equality which all partners will have to adhere to:

- Take efforts to meet the gender equality targets of the Integrated Project
- Encourage applications by female researchers in job announcements and make sure that all positions are advertised and given to the best suited person in a transparent, objective way, with full consideration of gender equity.
- Take formal actions to guarantee that employees are properly informed about their parental obligations and rights

- Encourage female employees to participate in programmes for gender mainstreaming (information and coaching workshops and events, etc.), coaching programmes (communication and conflict management, self-presentation, mentoring) and seminars on project management
- Report annually the type and success of gender actions taken.

Main responsibilities

Task 1: Gender committee
Tasks 2-4: Co-ordinator, all partners

4. Title: European rail research network of excellence
Acronym: EUR²EX
Instrument: Network of Excellence

Project summary: The strategic objectives of the European Rail Research Network of Excellence are:

1. To integrate the fragmented European Rail Research landscape by networking together the critical mass of resources and expertise to provide European leadership and be a world class player
2. To promote the railway contribution to sustainable transport policy
3. To improve the competitiveness and economic stability of the railway sector and industry.

Gender Action Plan: the main goal of this Action Plan is to promote gender activity in all possible forms within this project. The purpose is to reconcile professional life, activity within this project and prevent any form of discrimination against women representatives of the partners. Main measures of Action Plan:

- Each partner takes action to increase significant representation of women (scientists) starting at the earlier stage of the project preparation
- According to the main aim of the EUR²EX project, which is to coordinate joint activity in order to improve knowledge while executing joint research and exploitation, the participant of the project are keen on methodological inclusion of equality between men and women
- In the frame of dissemination and exploitation activity one of the main goal will be to increase gender dimensions of the project by using gender expert to review gender aspects and to improve the interest of women on the project results
- The Board of EUR²EX will monitor gender aspect of the project on a regularly basis to tackle the gap for an “equal opportunities policy”.

Gender issues associated with the project:

- The transnational NOE project gives the possibilities to analyse the consequences and to interpret the scenarios including gender related effect, which are originated from the main activities of the project.
- Main areas of gender equality within this project are:
  - Development cooperation with a special reference with integrating activities and coordinating exchange program for researchers
  - Significant representation of women in science when implementing jointly shared tools, infrastructure and platforms
  - Education and training within the dissemination and exploitation activity
  - Special investigation on effect of technological development on the women in connection with results on research area of improved rail system performance (comfort, vibration and noise effect of new applied technology which cause a different sensation on men and on women).