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Recommendations for Action on the Gender Dimension in Science


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Recommendations for Action on the

Gender Dimension

in Science

This report contains the recommendation of the undersigned Science Leaders Panel, addressed to policy makers and leaders of science institutions

Prof Simone Buitendijk .....

Dr Concha Colomer-Revuelta .....

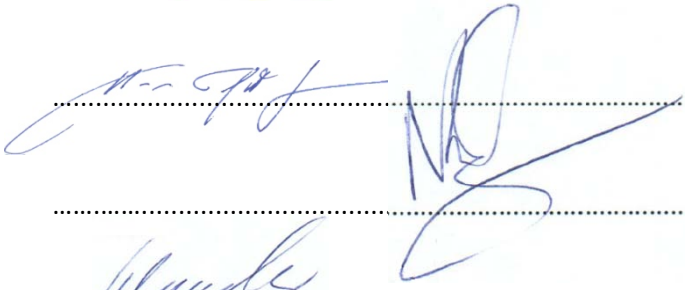
Dr Daniela Corda .....

Prof Anders Flodström .....

Dr Anita Holdcroft .....

Dr Jackie Hunter .....

Dr Astrid James .....



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This report represents one of the outputs from the genSET project
funded by the European Commission, under the FP7 Science in Society programme.

For more information about genSET and for copies of the 120+ research reports listed in the reference sections of this document please consult the project website, www.genderinscience.org.

JUNE 2010

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Introduction

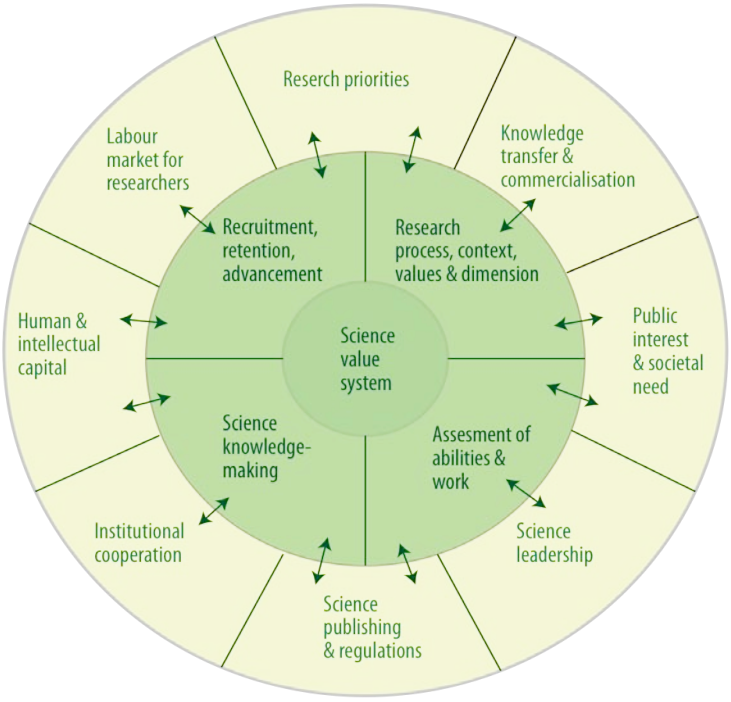
The project

genSET is a project funded by the Science in Society Programme of the European Commission's 7th Framework, in the area of Capacity Support Action. The duration is September 2009-February 2012 and the budget is €1.03m.

Through a series of seminars, workshops, and symposia, genSET creates a forum of sustainable dialogue between European science leaders, science stakeholder institutions, gender experts, and science strategy decision-makers to agree on the gender dimension in science in order to produce practical guidelines for implementing gender action plans within existing institutional mechanisms. The goal is to develop practical ways in which gender knowledge and gender mainstreaming expertise can be incorporated within European science institutions in order to improve individual and collective capacity for action to increase women's participation in science. genSET focuses on five key areas where gender inequalities and biases disadvantages women's participation in science:

1. science knowledge-making;
2. research process;
3. recruitment and retention;
4. assessment of women's work; and
5. science excellence value system

A key support action developed by genSET involved a series of three Consensus Seminars (CS) where 14 science leaders, supported by gender experts, discussed issues surrounding the gender dimension in science in order to arrive at a consensus view on institutional actions for mainstreaming gender in the European science system. Following these meetings, the results of which are contained in this report, the genSET Consortium will host three Capacity Building Workshops across Europe, working closely with institutional stakeholders and gender experts to implement more effective gender action plans. Over 100 institutions, 20 gender experts, and numerous strategy decision-makers will be involved in the process leading to greater institutional capacity of mainstreaming gender in science.



Areas of gender inequality and bias in science included in genSET project

Areas of policy in European Research Area where gender dimension has impact

Two valorisation symposia will also be held in Ireland and Poland in 2010. Extensive dissemination activities of the genSET patrons and partners will take place across Europe throughout the course of the project, which will distribute the Consensus Report to the widest scientific and science policy audience.

Executive Summary of Consensus Seminars & Recommendations

Between March and June 2010, three **genSET Consensus Seminars** brought together 14 European science leaders to share knowledge and experience and arrive at a consensus view on the gender dimension in science and on the priorities for gender action in scientific institutions. The question ***How European Science Can Benefit from Integrated Action on Gender*** framed the deliberations on the gender dimension, with a specific focus on:

1. bringing about greater equality of opportunity and treatment in recruitment and advancement of women and men scientists, and in assessment of their performance and work; and
2. incorporating gender and sex in the research process, in science knowledge making, and in the science value system to improve quality and excellence of scientific endeavours.

The Science Leaders Consensus Panel represents extensive knowledge of different scientific fields and sectors, with over 500 years of scientific and leadership experience; involvement in appointing over 4000 researchers; direction of over 300 major research programmes and research funding of over €500 million; executive decision making through over 100 Executive Board positions; and research publication record exceeding 1000 peer reviewed research papers. They collaborated with a group of equally high-ranking gender experts, who provided expertise through lectures and research evidence during the Consensus Seminars.

Science Leaders Panel combined experience

Years in science	>	500
Leadership positions	>	400
Research staff appointments	>	4000
Research programmes managed	>	300
Scientific publications	>	1000
Research funding managed	>	500m €

The genSET Consensus Seminars adapted the format of the traditional Consensus Conference model, putting the science leaders in the role of a 'lay panel,' meant to reach consensus with the help of gender researchers as 'experts,' and science stakeholder institutions as their 'public.'[1] Creating first a list of loose priority themes related to the gender dimension on science, the Panel proceeded to specific recommendations designated for science policy makers and scientific institutions. This was done with the help of invited gender experts during the second Seminar at the Technical University in Berlin. In the final Paris Seminar, additional gender experts and leaders and decision makers from the target science institutions assisted the panel in clarifying details of the final consensus recommendations.

The consensus recommendations call for action in four priority areas of the gender dimension in science: science knowledge making, deployment of human capital, institutional practices and processes, and regulation and compliance with gender-related processes and practices. All of these recommendations are meant to be included within an overall institutional science strategy.

Within the genSET project, these recommendations, matched with extensive research evidence related to the gender dimension in science, will form the basis of increasing institutional capacity for action on gender in the European science system. This will happen through genSET's Capacity Building Workshops, country-specific valorisation symposia, final conference, and finally through the sustainability measures in place after genSET ends in February 2012. The membership and networks of genSET Patron and Stakeholder organisations will help to further disseminate the Report to every country, sector and institution making up the European science system. It will be a well informed resource for integrated action on gender that will benefit European science.

[1] Consensus Conference and genSET Seminar procedures are explained in detail in the final section of this report.

Participants in Consensus Seminars[2]

Science Leaders Panel Members

1. Prof Simone Buitendijk, Head of the Child Health Programme,TNO (Netherlands)
2. Dr Philip Campbell, Editor-in-Chief, Nature (UK) (*acting as observer*)
3. Dr Concha Colomer-Revuelta, Director, Observatory on Women's Health, Ministry of Health and Consumer Affairs (Spain)
4. Dr Daniela Corda, Director, Institute of Protein Biochemistry National Research Council (Italy)
5. Prof Anders Flodström, University Chancellor and Head of Swedish National Agency for Higher Education (Sweden)
6. Dr Anita Holdcroft, MD, FRCA, Emeritus Professor of Anaesthesia, Imperial College London(UK)
7. Dr Jackie Hunter, past Senior Vice-President, GlaxoSmithKline, CEO of Pharmivation Ltd (International)
8. Dr Astrid James, Deputy Editor The Lancet (International)
9. Prof Henrik Toft Jensen, past Chairman of The Danish Rectors' Conference, (Denmark)
10. Dr Nick Kitchen, Vice President HR R&D, Unilever (International)
11. Prof Curt Rice, Pro-rector of R&D, University of Tromso (Norway)
12. Prof Martina Schraudner, University Professor, Technical University Berlin (Germany)
13. Dr Karen Sjørup, Associate Professor, Institute for Society and Globalization, Roskilde University (Denmark)
14. Hanne Ronneberg, Executive Vice President, SINTEF (Norway)
15. Prof Rolf Tarrach, Rector, University of Luxemburg (Luxemburg)

Gender Experts

Gender experts invited to Consensus Seminars:

1. Prof Teresa Rees, Pro Vice Chancellor of Research, University of Cardiff (UK)
2. Prof Londa Schiebinger, Professor of History of Science and Director of Michelle R. Clayman Institute for Gender Research, Stanford University (USA)
3. Prof Alison Woodward, Research Professor at the Free University of Brussels (VUB); co-director of RHEA, the Center for Gender Studies and Diversity Research (Belgium)
4. Prof Judith Glover, Professor of Employment Studies in the School of Business and Social Sciences, Roehampton University (UK)

Gender experts advising on the content of the Briefing Materials:

5. Dr Alexandra Bitusikova, Senior Researcher at Research Institute of Matej Bel University, Banska Bystrica (Slovakia); and Senior Adviser to European University Association - Council for Doctoral Education, Brussels (Belgium)
6. Dr Suzanne de Cheveigne, Director of Research, Shadyc (CNRS-EHESS), Marseille (France)
7. Dr Linda Rustad, Senior Advisor to the Committee for Gender Balance in Research, The Norwegian Association of Higher Education Institutions (Norway)
8. Dr Magdalena Skipper, Senior Editor, Biology, Nature (UK)

[2] For additional information about the Science Leaders Panel, Gender Experts, and Stakeholder Institutions, please see detailed descriptions starting on page 31

Representatives of Science and Strategy Stakeholder Institutions

1. Jennifer Campbell, L'Oreal Foundation, Women for Science Programme, Director for Partnerships and Philanthropy
2. Prof Richard Gamauf, University of Vienna, Chairperson of the Working Group for Equal Opportunity (Prof of Roman Law)
3. Prof Claudine Hermann, Vice-President of the European Platform of Women Scientists (ret Prof of Physics, Ecole Polytechnique)
4. Dr Lisbeth Jacobs, Bekaert Corporate Technology Manager, Material Transformational Technologies R&D Unit
5. Dr Brigitte Kessler, Swiss Federal Institute of Technology (ETH), Zurich, Office of Faculty Affairs
6. Dr Marisa Alonso Nunez, Eurodoc (European Council of Doctoral Candidates and Junior Researchers), General Board Member
7. Dr Marion Boland, Science Foundation Ireland, Scientific Programme Manager
8. Prof Nick Von Tunzelmann, University of Sussex Science and Technology Policy Research (Prof of Economics of Science and Technology)
9. Ursula Schwarzenbart, Daimler AG, Head of the Global Diversity Office

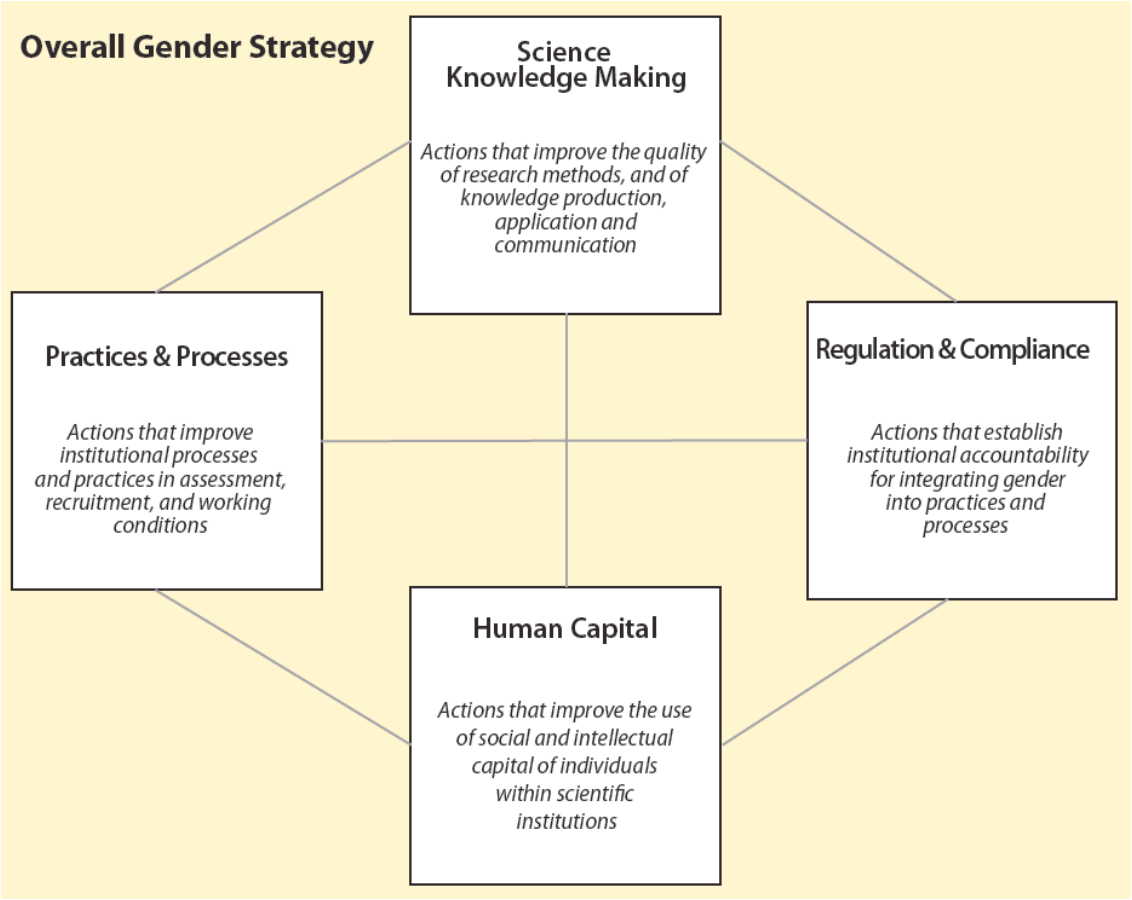
Representatives of Patrons and European Commission

1. Vice Admiral (ret) Jan Willem Kelder, TNO Board of Management Member, Chairman of TNO Board of Defence Research
2. Dr Hans M. Borchgrevink, Research Council of Norway Special Adviser, International Unit
3. Dr Vanessa Campo-Ruiz, European Science Foundation, Science Officer to the Chief Executive
4. Gunilla Jacobsson, Swedish National Agency for Higher Education, Project Manager, University Chancellor's Office
5. Dr Raymond Seltz, Euroscience, General Secretary
6. Yanna Wellander, Euroscience, Project Coordinator
7. Marina Marchetti, European Commission, Research Directorate-General, Policy Officer

Facilitators: Participant bvba, Mark Hongenaert & Stef Steyaert

Structure of the Report & Note on Research Evidence

The Science Leaders Panel has identified 13 specific recommendations in four priority areas. All of these recommendations are meant to be part of an **overall gender strategy in scientific institutions**.



Science Knowledge Making - This category covers actions that can improve the quality of research processes and methods and thus the quality of scientific knowledge. That is, the recommendations address designing sex and gender analysis into basic and applied knowledge production within scientific institutions.

Human Capital - This category covers actions that can improve the use of social and intellectual capital of individuals within scientific institutions. The recommendations aim to facilitate the capabilities and relations of those involved in the knowledge production process through improving the way they are organised, lead, and publicized.

Process and Practices – This category covers actions that improve already existent institutional processes and practices. Specifically, the recommendations in this section aim to recognise and improve the gender dimension in assessment methods, recruitment procedures, and policies related to working conditions most affecting women.

Regulation and Compliance – This category covers actions that can improve accountability for mainstreaming gender at individual, institutional, science system levels. The recommendations address enabling monitoring, analysis and reporting of gender-related outcomes.

When composing the recommendations that follow, the Science Leaders Panel consulted with several gender experts and had drew upon gender studies scholarship, using research on gender in science (120+ research reports) and Briefing Notes that extracted the key findings in these reports with the aid of the Gender Expert Group (see appendix). Thus, the argumentation behind each recommendation is based on both the extensive personal experience of the panel members and the available research evidence. As a reflection of this, the recommendations that follow at times cite relevant studies and examples that further justify their reasoning, but these citations should be viewed as neither exhaustive nor definitive.

Notably, the work of the Science Leaders Panel has highlighted only the beginning of an important dialogue between gender experts and leaders of scientific institutions. The resources used by the Panel in this report reflect only a small part of the gender expertise available across Europe.

Recommendations of the Science Leaders Panel

Section I: Knowledge Making

The following recommendations deal with the way research quality can be immediately improved by addressing sex and gender analysis in scientific research. These recommendations aim to change research processes and methods to impact scientific knowledge production.

The way research quality can be immediately improved by addressing sex and gender analysis in scientific research. These recommendations aim to change research processes and methods to impact scientific knowledge production.

Recommendation 1:

Leaders must be convinced that there is a need to incorporate methods of sex and gender analysis into basic and applied research; they must "buy into" the importance of the gender-dimension within knowledge making.

The most effective way of doing this will be to illustrate how continually incorporating sex and gender analysis promotes research excellence. Such examples should be inventoried by European institutions (e.g. DG Research, ESF) and made available to institutional "change agents" (e.g. deans, provosts, opinion makers, department heads).[3]

Argumentation for Recommendations 1-3 is on the final page of this Section (15).

[3] These examples may include those detailed in the Stanford Gendered Innovation Project and in (Schiebinger, 2008); numerous examples reveal that conceptual thinking about gender can prevent gender bias in clinical work – a bias that can skew results in all fields of scientific research (Wald & Wu, 2010; Risberg, 2009; Ruiz-Cantero, 2007; Greenspan, 2007; Klinge, 2010; Holdcroft, 2007).

Section I: Knowledge-Making

Recommendation 2:

Scientists should be trained in using methods of sex and gender analysis. Both managerial levels and researchers should be educated in such sex and gender analysis. Training in methods in sex and gender analysis should be integrated into all subjects across all basic and applied science curricula.[4]

Argumentation for Recommendations 1-3 is on the final page of this Section (15).

The way research quality can be immediately improved by addressing sex and gender analysis in scientific research. These recommendations aim to change research processes and methods to impact scientific knowledge production.

[4] Londa Schiebinger created a working list of methods of gender analysis for the Final Consensus Seminar (June 2010). These included: formulating research questions and envisioning design related to gender; analyzing research priorities and social outcomes; recognizing covariates of race, ethnicity, age, socioeconomic class, etc; sampling; analyzing reference models and male/female specific experience; rethinking language, iconographic representation, and stereotypes; and rethinking theory.

Impacts on Knowledge

Section I: Knowledge-Making

Recommendation 3:

In all assessments – paper selection for journals, appointments and promotions of individuals, grant reviews, etc. – the use and knowledge of methods for sex and gender analysis in research must be an explicit topic for consideration. Granting agencies, journal editors, policy makers at all levels, leaders of scientific institutions, and agencies responsible for curricula accreditation, should be among those responsible for incorporating these methods into their assessment procedures.

The way research quality can be immediately improved by addressing sex and gender analysis in scientific research. These recommendations aim to change research processes and methods to impact scientific knowledge production.

Argumentation for Recommendation 1-3:

Sex and gender methodology benefits the quality and excellence of scientific production and needs to be actively incorporated into current research processes.[5] It also potentially opens new fields of research and brings innovation through asking new questions. Taking a three-tiered approach of convincing leadership (1), engaging and enabling practitioners (2), and ensuring incorporation through assessment (3) is necessary to achieve this.[6] Institutional leaders need to be specifically targeted because they are the basic agents of change in their organisations.

[5] Science historians have shown the process of science knowledge-making to be influenced by the "science persona" of the researcher and the socio-cultural context in which the research process takes place (Daston & Galison, 2007). Studies also reveal that integrating social-science analysis of gender within so-called "hard-science" disciplines improves the ability and confidence of researchers and students (Sible, Wilhelm & Lederman, 2006). Examples of how the gender dimension benefits the quality of science production can be found in (Schiebinger, 2008).

[6] Higher levels of science and technology arising out of greater economic development do not correlate with increased gender equality – indeed, "market forces" tend to encourage the opposite (EC, *Benchmarking Policy Measures*, 2008)

Section II: Human Capital

The following recommendations deal with the way women and men in scientific institutions are managed, organised and publicised. These recommendations aim to improve the use of the human capital of individuals to create knowledge within scientific institutions.

The way women and men in scientific institutions are managed, organised, and are publicised.

These recommendations aim to improve the use of the human capital of individuals to create knowledge within scientific institutions.

Recommendation 4:

Research teams should be gender diverse.

Institutions should promote gender diversity of research teams through a variety of incentives (e.g. quality recognition and allocation of resources) and through transparency in hiring.

Argumentation for recommendation 4:

Increased diversity in research teams correlates positively with the quality of research. Differences in experiences and perspectives between men and women may bring new approaches and questions into research. That is, having diverse teams improves decision making by ensuring a variety of perspectives.[7]

Transparency in hiring processes makes it easier to eliminate bias or ambiguity in selection criteria and encourages those re-entering the workforce after a break to apply, thus often increasing the amount of women who are applying and selected.[8]

Various indirect incentives to increase the gender diversity of teams have also proven effective. Notably, increasing the international and interdisciplinary nature of research teams often correlates positively with the amount of gender diversity achieved.[9]

[7] In many studies, mixed-gender teams have emerged as more efficient, even though the decision-making process may take longer: if well managed, they are also more creative, contain more diverse points of view and show an improved quality of decision making. Notable studies and analyses of the subject include: Palich & Livingstone, 2003; Barjak & Robinson, 2008; van den Brink, 2009; Cisco Systems, 2009, Cahill, 2006

[8] This dynamic is discussed in van den Brink, 2009 and in Evans, et al. 2007.

[9] Examples can be found in the institutional work of gender experts Teresa Reese and Alison Woodward. Underlying relationships are discussed in Rothen, 2007.

Section II:
Human Capital

Recommendation 5:

Gender balancing efforts should be made in all committees, with priority given to key decision-making committees. Panels for selection of grants and applicants must be gender diverse. This must be the goal for management teams as well.

Argumentation for Recommendation 5:

The way women and men in scientific institutions are managed, organised, and are publicised.

These recommendations aim to improve the use of the human capital of individuals to create knowledge within scientific institutions.

The allocation of research funding affects not only scientific institutions, but the population as a whole. Therefore, decision-making committees that allocate funds in scientific institutions have an obligation to represent the diversity of the population, including in gender.

Women often represent minority populations in scientific institutions, meaning gender balancing efforts are often hindered by the shortage of candidates and may place excessive committee obligations on the few women available.[10] In this case, gender balancing is most important in key decision-making committees in order to be most effective.

Additionally, diversity of committees, like that of research teams, improves the quality of decision making in general.[11]

[10] Women are a clear minority in the leadership and senior management positions of science institutions (She Figures, 2009; ETAN, 2000). At the same time, several European countries already impose requirements for set percentages of women to participate in managerial boards and committees (EC, *Consultation on the Future EU 2020 Strategy*, 2009)

[11] For specific references, please consult footnote 5 under recommendation 4

Impacts on Individuals

Section II:
Human Capital

Recommendation 6:

Institutions should seek to improve the quality of their leadership by creating awareness, understanding, and appreciation of different management styles. This can be achieved through training, self-reflection, and various feedback mechanisms. Diversity training, specifically, is essential in this process.

Argumentation for recommendation 6:

A greater appreciation of a variety of management styles creates greater diversity within scientific institutions. This, in turn, allows for a wider range of working environments attractive to a wider range people.[12]

The visibility of a number of different managerial styles makes it more likely that a diversity of individuals (i.e. more women) would be attracted to managerial positions.[13]

The way women and men in scientific institutions are managed, organised, and are publicised.

These recommendations aim to improve the use of the human capital of individuals to create knowledge within scientific institutions.

[12] Styles of leadership/management and followers' perceptions of these styles, along with the relations of women and leadership within patterns of gender relations and dominance are among the most important issues in qualitative assessment of leadership and management (Eagly & Johannesen-Schmidt, 2001; MIT, 1999).

[13] There are some distinctions between male and female management styles. That is, men and women may tend to put varying degrees of emphasis on a range of "leadership behaviors" (e.g. people development, intellectual stimulation, efficient communication, role modeling, and expectations and rewards) (McKinsey & Company, 2008).

Impacts on Individuals

Section II:
Human Capital

Recommendation 7:

Women already within scientific institutions must be made more visible.

All public relations activities from scientific institutions should be gender-proofed (represent women appropriately), while avoiding tokenism. This could be done by including women in all promotional campaigns for scientific careers, by leaders nominating women for prizes, and by recognising women's achievements appropriately.

Deciding what to highlight should be informed by data from gender-mainstreaming tools such as gender-disaggregated data, information on resource allocation by gender, achievement records, etc.

The way women and men in scientific institutions are managed, organised, and are publicised.

These recommendations aim to improve the use of the human capital of individuals to create knowledge within scientific institutions.

Argumentation for recommendation 7:

Making women more visible allows for students and staff to see a number of possibilities in achievement and to choose from a variety of role models. Making women's work visible also encourages women already present in scientific institutions to reach higher positions.[14] Doing this in an informed way based on institutional data makes such positive outcomes more likely.

[14] Women's choices of careers in science seem heavily influenced by role model relationships and both genders have been shown to benefit from identifying with successful examples in various fields (Bonetta, 2010; Carrell et al., 2009; Lubinski & Benbow, 2006). Because there are a variety of attitudes toward careers and work balance within gender groups, female role models are not always best matched to other females, thus they must be shown in a wider context of institutional success (Chen, 1998; Desrochers & Sargent, 2004).

Impacts on Individuals

Section III: Practices and Processes

The following recommendations deal with the way assessment, recruitment, and creation of working conditions can be improved to better accommodate the gender dimension. These recommendations aim to improve already-existent institutional processes and practices.

The way assessment, recruitment, and creation of working conditions can be improved to better accommodate the gender dimension.

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Recommendation 8:

Assessment procedures must be re-defined to focus on the quality, rather than quantity, of individuals' publications and research output. This must be consistently applied in individual, departmental, and other levels of assessment.

For instance, researchers should select the most important articles that they have produced in a set number of years, rather than listing all publications. However, qualitative assessment must also avoid gender bias (e.g. reliance on recommendation letters in appointment procedures).

Argumentation for Recommendation 8:

Evidence suggests that present academic assessment systems are deeply flawed because they ignore factors particularly affecting women.[15] For instance, men tend to produce more publications and assessment protocols tend to value quantity over quality. The reasons for publication disparity between men and women may include women tending to work in new, interdisciplinary fields (that make it more difficult to publish) and women choosing smaller and less-funded institutions for employment (because of familial factors).

Additionally, research has shown that qualitative assessment can be heavily gender-biased. For instance, recommendation letter writers tend to use stronger language of praise when describing men, rather than women.[16]

[15] The flaws of current assessment methods and the discrepancy between men and women in publication amounts are widely discussed: Symonds, 2006; Lawrence, 2008; Whittington, 2009, Ding, 2006; Marsh, 2009. Individuals and institutions with pre-existent higher academic status have more access to resources and publication opportunities than those entering or less known in the field (Merton, 1968; Rossiter et al., 2003).

[16] The biases in recommendation letter writing are discussed in (Trix and Psenka, 2003)

Section III:
Practices and Processes

Recommendation 9:

Persons with disproportionate committee and administrative duties should be provided with additional support staff or reduced teaching assignments to ensure that their research does not suffer.

Argumentation for recommendation 9:

Balancing the gender composition of committees improves the quality of committee work and symbolically changes institutional cultures.[17] However, the requirements for gender balance in committees results in a disproportionate load of committee obligations on women in high-level scientific positions.[18] Measures to alleviate the time pressures involved in large amounts of committee obligations will achieve the benefits of gender balance while not taking time away from women's research activities.

The way assessment, recruitment, and creation of working conditions can be improved to better accommodate the gender dimension.

These recommendations aim to improve already-existent institutional processes and practices.

[17] For specific references, please consult footnote 5 in recommendation 4

[18] For specific references, please consult footnote 9 in recommendation 5

Impacts on Institutions

Section III:
Practices and Processes

Recommendation 10:

Policies and procedures specifically affecting working conditions that differentially impact men and women in scientific institutions must be reviewed and revised, ensuring positive benefits for personal and professional development for both men and women. Revisions are needed in:

- *implementing maternity and paternity leave policies at the institutional level;*
- *procedures for dual-career couples that specifically target increasing mobility of researchers by supporting partners in finding suitable employment in the same region (taking care to avoid nepotism);*
- *institutional strategies for careers developed later in life (e.g. maintaining contact with individuals taking career breaks; providing grant opportunities for individuals at critical career/life moments and returners); and*
- *awareness regarding salary negotiation tactics (through, for instance, targeted workshops and training for women)*

The way assessment, recruitment, and creation of working conditions can be improved to better accommodate the gender dimension.

These recommendations aim to improve already-existent institutional processes and practices.

Argumentation for recommendation 10:

This recommendation addresses four policies that, if undeveloped, seem to most affect women within scientific institutions:

- women tend to develop careers later in life and are more affected than men by inadequate maternity and paternity leave policies;[19]
- options for dual-career couples attract more women to institutions;[20]
- encouraging grants for returners and institutional contact with individuals on career breaks has proven effective in retaining women; [21] and
- there are differences between men and women in strategies taken during salary negotiation, with women being less aggressive negotiators.[22]

[19] ETAN, 2000; EC, *Women and Science*, 2005; EC, *Women in Science & Technology*, 2006

[20] Schiebinger, Henderson & Gilmartin, 2008

[21] Notable, for instance, are the the successful efforts of the Daphne Jackson Trust, an independent charity which gives returner grants to scientists (www.daphnejackson.org). For the effectiveness of maintaining contact with those on career breaks, see the *Guiding Principles* of the Equalitec project (Evans et al., 2007).

[22] Research reveals women often feel uncomfortable negotiation in order to enhance their own interests. (Bowles et al., 2005; Bowles & McGinn, 2008; Gonas, et al., 2009; Kolb, 2009)

Section III:
Practices and Processes

Recommendation 11:

Specific strategies should be employed for attracting women to apply for scientific positions. Announcements for recruitment should be formulated so that they encourage women to apply. That is, announcements should be broad, rather than narrowly focused. Job criteria for employment should be objective and transparent. Additionally, leaders should not just rely on self-initiated promotion but also encourage and promote applications, not just accept them. Finally, if there are no women in the applicant pool, the positions should be re-advertised.

Argumentation for recommendation 11:

The way assessment, recruitment, and creation of working conditions can be improved to better accommodate the gender dimension.

These recommendations aim to improve already-existent institutional processes and practices.

Broader announcement protocols open recruitment into fields where there are more women, which increases the likelihood of application. In promotion and recruitment, when only self-promotional procedures are used, the majority of applicants are men. Conversely, encouraging and soliciting applications increases the amount of women who apply.[23] Women also tend to apply more to re-advertised positions.[24]

Importantly, even if these procedures do not increase the proportion of women applicants in the selection pool (because of a general increase in applications), they will still increase the absolute number of women applying for positions.

[23] Isaac, C., Lee B. & Carnes, M. (2009).

[24] Evidence for this is available in case studies from the Netherlands, including in van den Brink, 2009.

Section IV: Regulation & Compliance

The following recommendations deal with the means of ensuring the gender dimension is indeed recognised in processes within scientific institutions. These recommendations aim to establish institutional accountability as regards to practices surrounding gender.

Recommendation 12:

Explicit targets to improve gender balance and action plans to reach them must be included in the overarching gender strategy of scientific institutions. The progress must subsequently be regularly monitored and be made public.

The means of ensuring the gender dimension is indeed recognised in processes within scientific institutions. These recommendations aim to establish institutional accountability as regards to practices surrounding gender.

Argumentation for recommendation 12:

Setting explicit targets to improve gender balance is extremely important for a number of reasons:

- Existing and future European and national legislation will require demonstration of non-discriminatory practices;
- Specific quantitative targets and the action plans are needed to initiate institutional change; and
- Clarity on targets creates accountability for institutions and individuals.

Additionally, more women in higher positions within scientific institutions immediately begin to change the culture of those institutions and provide visible role models for female students.[25]

[25] Women also apply some leadership behaviors more frequently than men, contributing to stronger organisational performance (McKinsey & Company, 2008). Nordic countries (Finland, Norway, Sweden) have employed a gender quota in public committees, such as national Research Councils for a long period of time, and according to the newest EU statistics these countries also have highest proportion of women as heads of universities in EU-27 (She Figures 2009).

Section IV:
Regulation & Compliance

Recommendation 13:

Gender issues must be an integral part of internal and external evaluation of institutions. Policies at all levels must require this inclusion. This should begin with a critical review of gender mainstreaming processes within each institution, identifying current successes and failures.

A member of the leadership team should be responsible for gender-related issues, such as following up on the gender action strategy for the institution.

Argumentation for recommendation 13:

Evaluation procedures are the only way to hold management and leadership within institutions accountable and guarantee that staff follows gender-related protocol. Evaluations will help institutions to acquire the necessary skills to perform gender mainstreaming effectively.[26]

The means of ensuring the gender dimension is indeed recognised in processes within scientific institutions.
These recommendations aim to establish institutional accountability as regards to practices surrounding gender.

[26] There is extensive EU legislation related to equality policy measures and also much advice available related to strengthening the participation of women researchers. However, much of these measures have not been effective, partially due to the lack of internal and external evaluation mechanisms (EC, *European Charter for Researchers,* 2005; Burri & Prechal, 2008).

Impacts on Institutions

Consensus Seminar Organisation and Procedure

Consensus Conferences versus genSET Consensus Seminars

Traditional Consensus Conferences, or "laymen's conferences", bring together a group of "ordinary citizens" to arrive at a joint opinion on a topic that has been, to that point, left chiefly to experts in the particular field. In Denmark, where such conferences were developed, this initially involved facilitating consensus opinions on technological developments or adaptations, usually related to biotechnology. The largest proportion of Conferences, held between 1987 (when the Danish Board of Technology organised the first Conference) and 2002 dealt with the topic of gene technology.[27] The Consensus Conference has thus been mostly a type of "bio-ethical tool", falling under the broader category of participatory technology assessment.

In the traditional Consensus Conference, the aim is to broaden and qualify public debate by altering the typical power balance between experts and lawmakers and so-called "laymen". In this format, lay perspectives on factual expertise take priority over the dominant policy discourse. Used worldwide, the Consensus Conference model opens a dialogue between two parties that have little contact on a regular basis. Conferences dealing with technological developments not only give voice to public opinions, but also reveal the discrepancies between the actual knowledge base of the public and that assumed as universal by experts. The Consensus Conference recommendations are both practical advice on given topics by previously untapped human resources, as well as markers of general attitudes surrounding the debate.

As is evident in the recommendations and introduction to this report, the genSET Consensus Seminars have altered the traditional formatting of the Consensus Conference, while maintaining the spirit of innovation and open dialogue that characterises the process. The two main differences are as follows: 1) the "lay panel" of the Consensus Conference was here comprised of top-level leaders and experts in European science; 2) due to the nature of the framing question of the Seminar, the factual evidence and expert testimony during the process required a great deal of additional individual interpretation by the Panel before eliciting recommendations.

Thus, while the members of the Science Leaders Panel acted as the "lay panel" in the Consensus Seminars, they were in fact drawing on an overwhelming level of experience and expertise within their respective fields and scientific institutions. As became evident during the Seminars, the Panel was keenly aware of the gender dimension of scientific research, although – as planned – the majority had not participated in outright gender-related research projects. This meant that the Gender Experts invited to the Seminars served primarily a clarifying and enriching role to the discussion of the Panel, rather than providing the entire factual basis of the discussion. The divisions of expert/non-expert partially eroded, and the question-answer format of traditional conferences was replaced by plenary discussion.

Structure of the genSET Consensus Seminars

The first meeting of the Science Leaders Panel occurred at the **Royal Academy of Engineering in London, on 24-25 March, 2010**. Prior to this meeting, the Panel members received an extensive Briefing Notes document highlighting current research on the gender dimension in science. The 60+ reports cited within this document (which were selected and reviewed with the help of members of the Gender Experts Group) were all readily available for additional review by the Panel during the first Seminar.[28]

[27] Nielson, A.P. et al. (2006). *Consensus Conference Manual*. Ethical Tools European Commission FP5 Project, Quality of Life Programme. The Hague. http://www.ethicaltools.info/content/ET4%20Manual%20CC%20%28Binnenwerk%2040p%29.pdf

[28] The Briefing Notes and the Supplement can be found in the appendix to this report, starting on page 44

After two days of intense deliberations, the Panel developed six topics related to the gender dimension in science, from which it would be most imperative to draw recommendations. These topics (or "chapters") were:

- the lack of role models;
- benefits of including gender perspectives in science and medicine (life sciences);
- the challenge of being one of a few: under-representation leads to excessive commitments;
- features of assessment, recruitment and promotion that may favour men over women;
- is this an individual or a system problem; and
- making a system to create a new balance where women and men can have equal careers.

During this Seminar, the Panel also noted questions for experts on gender research that were emerging during discussion and that would enrich the understanding of the chosen "chapters." Based on these questions and Panel concerns, the genSET staff, with the collaboration and advice of members in the Gender Experts Group, produced a Briefing Notes Supplement, with numerous additional resources (see appendix). This, along with a summary of the results of CS I were sent to the panel prior to the second Seminar.

The Panel met a second time at **Technical University, Berlin, on April 29-30, 2010**. Here, gender experts Professor Londa Schiebinger and Professor Teresa Rees presented the Panel with additional information on each theme. The Panel then began formulating specific recommendations related to the themes, assisted by feedback and advice from the gender experts during plenary discussions.

27 recommendations emerged from CS II in Berlin, which moved the focus of the report from original topics debated in CS I to four key themes:

- science knowledge making: actions that improve the quality of research process and methods, and of knowledge production, application and communication
- human capital: actions that improve the use of social and intellectual capital of individual already within scientific institutions
- practices & processes: actions that improve already existent institutional processes and practices in assessment, recruitment, and working conditions
- regulation & compliance: actions that establish institutional accountability for integrating gender in practices and processes

The genSET staff consolidated any overlaps between the 27 recommendations and matched the argumentation behind each recommendation with appropriate references with the result of narrowing the output from Berlin into 11 recommendations to be discussed at the final seminar. A copy of this consolidated document was sent to the Panel for review before CS III in Paris.

Work in Progress (CS I, London)

During the **third Consensus Seminar, June 3-4 in the University of London Institute in Paris**, the Panel revised the recommendations and themes that had emerged during the Berlin proceedings. In addition to Professor Londa Schiebinger and Professor Teresa Rees, Professor Alison Woodward and Professor Judith Glover joined the gender expert group that worked with the Panel in refining the recommended points.

Deliberations Continue (CS II, Berlin)

CS III in Paris was also opened to the "public" – in this case representatives of the science stakeholder institutions that would be using the recommendations to take integrated action on gender, as proposed in the framing question of the Seminars. These stakeholders provided additional feedback about the feasibility and practicality of the recommendations during plenary discussions with the Panel and the gender experts. While the Panel worked alone on the final versions of the recommendations, the representatives of stakeholder organisations held separate discussions on implementation plans to follow the Consensus Seminars.

The majority of the Science Leaders Panel attended each of the three Consensus Seminars. However, the high level of professional commitment and unexpected personal responsibilities of the Panel members meant that attendance of all members at each Seminar could not be guaranteed. Still, those Panel members who were not able to attend the final Paris Seminar were consulted and sent a copy of the final report for review before signing the document. Thus, this report represents a consensus of all those listed in the introduction of this document.

Dissemination of genSET Consensus Seminar Report

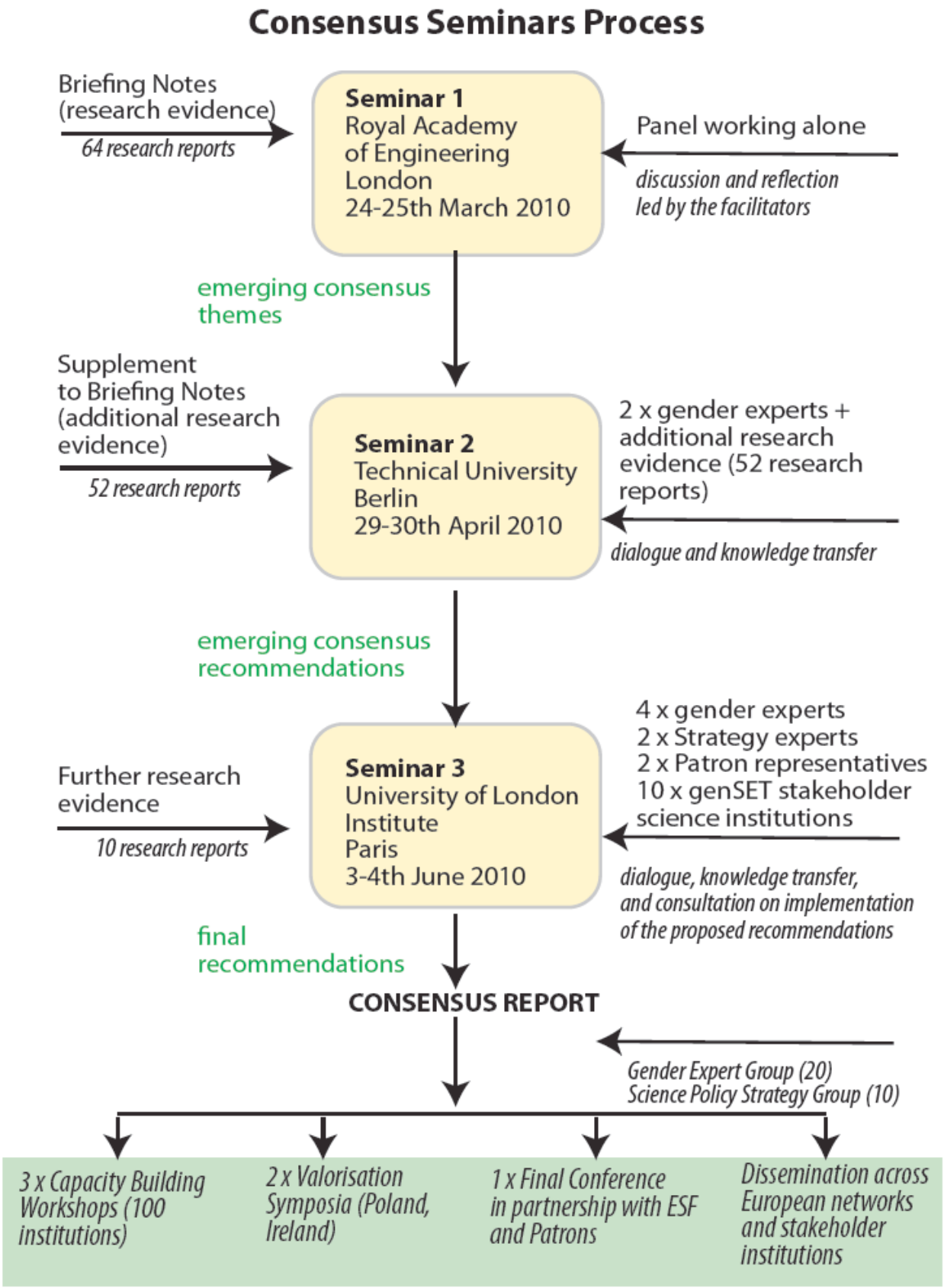
The report was completed by the Science Leaders Panel in Paris, and presented by them in a symbolic handover ceremony to genSET's Patrons – represented by Euroscience and ESF – as the first step in disseminating its findings to the science community and institutions at the pan-European level.

Handover of Report (CS III, Paris)

The work and ideas on the implementation of the recommendations of the stakeholder organisation representatives present during the final Consensus Seminar will be further discussed during the three Capacity Building Workshops, during which scientific institutions, assisted by gender experts, will be able to consider the feasible implementation of each of the recommended actions.

Thus, the Consensus Report continues to be disseminated on two levels: 1) through the supporting actions of the genSET project itself, as part of the basis for the Capacity Building Workshops and Symposia; 2) through the

networks of stakeholders and patrons collaborating within genSET.


Consensus Seminars Process
Briefing Notes (research evidence)
64 research reports
Seminar 1
Royal Academy of Engineering London
24-25th March 2010
Panel working alone
discussion and reflection led by the facilitators
emerging consensus themes
Supplement to Briefing Notes (additional research evidence)
52 research reports
Seminar 2
Technical University Berlin
29-30th April 2010
2 x gender experts + additional research evidence (52 research reports)
dialogue and knowledge transfer
emerging consensus recommendations
Further research evidence
10 research reports
Seminar 3
University of London Institute Paris
3-4th June 2010
4 x gender experts
2 x Strategy experts
2 x Patron representatives
10 x genSET stakeholder science institutions
dialogue, knowledge transfer, and consultation on implementation of the proposed recommendations
final recommendations
CONSENSUS REPORT
Gender Expert Group (20)
Science Policy Strategy Group (10)
3 x Capacity Building Workshops (100 institutions)
2 x Valorisation Symposia (Poland, Ireland)
1 x Final Conference in partnership with ESF and Patrons
Dissemination across European networks and stakeholder institutions

Consensus Seminar Participants

Biographies of Science Leaders Panel Members

Simone Buitendijk is Professor of Maternal and Child Health at Leiden University Medical Center and the University of Amsterdam Medical Center. She is also Head of the Child Health Programme at TNO Institute for Applied Science in the Netherlands. She received her MD at University of Utrecht, the Netherlands, MPH at Yale in the US, and PhD at Leiden University, the Netherlands. Dr Buitendijk's primary scholarship is in maternal and child health, with a focus on Midwifery Studies, Perinatal Epidemiology and Public Child Health. She is a member of the National Health Council that advises the Dutch Government on national issues in health.

Concha Colomer Revuelta MD is a specialist in Paediatrics and in Public Health. She is currently Deputy Director of the Quality Agency of the Spanish National Health System and Director of the Observatory of Women's Health in the Ministry of Health and Social Policy. Before holding this office at the Ministry, she worked as a teacher of health professionals and as a researcher. She co-founded the Spanish Gender and Health Research Network. She has participated in organisations and projects on women's health and gender, mainstreaming in health policies, in different NGOs and feminism activity. She is author of many scientific articles and books.

Daniela Corda is a cell biologist, Director of the Institute of Protein Biochemistry of the National Research Council in Naples, Italy. She obtained her degree in Biological Sciences at Perugia University, Italy and her Ph.D. in Life Sciences at the Weizmann Institute of Science, Rehovot, Israel. She has been working in the signal transduction and membrane lipid dynamics field for more than 20 years, first in Israel, and then at the National Institutes of Health, Bethesda, USA, for her post-doctoral studies. She moved to the "Mario Negri" Pharmacological Research Institute in Milan in 1986, and in 1987 she was one of the founders of the Consorzio Mario Negri Sud, where she served as Head of the Department of Cell Biology and Oncology from 1996 to 2003 and Director of Research and development until 2009. Since 1998 she has been active in science policy focussing on career development in Europe and on gender-related issues within European organisation such as the European Life Scientist Organisation (ELSO), the EC Marie Curie Programme and the Federation of European Biochemical Societies (FEBS) where she now chairs the Working Group on the Career of Young Scientists.

Anders Flodström is the University Chancellor of Sweden and the President of the Swedish National Agency for Higher Education. He is a member of the Executive Committee of EIT, the European Institute of Innovation and Technology and a member of the Directors Advisory Board. Prof Flodström started his career in Palo Alto, USA, as member of research staff in Xerox Palo Alto Research Centre. In 1985 he was appointed a professor of physics at the Royal Institute of Technology (KTH) in Stockholm, Sweden. Prof Flodström has been the Secretary General of the Swedish Research Council for Engineering Sciences and President at Linköping University (LiU), Sweden. He was President of the Royal Institute of Technology (KTH), Stockholm until July 2007 when he was appointed University Chancellor for Swedish universities. He is member of the Swedish Academy for the Engineering Sciences (IVA). He is also honorary doctor at Riga Technical University in Latvia, honorary doctor of Helsinki Technical University (TKK) and honorary professor in Dalian University of Technology in China. He is a member of the advisory board of Karlsruhe Technical Institute

(KIT) and a former Chairman of CLUSTER and Baltech a network of technical universities around the Baltic Sea. He has also been guest researcher at HASYLAB/DESY in Hamburg, Germany as well as in National Bureau of Standards (NBS) in Gaithersburg, USA.

Anita Holdcroft, the Emeritus Professor of Anaesthesia at Imperial College London, is a clinician specialising in acute pain medicine especially in females. She was the Secretary then Co-Chair of the International Association for the Study of Pain Special Interest Group on Sex, Gender and Pain until 2005. Now she is Past President of the Forum on Maternity and the Newborn and President of the Section of Anaesthesia at the Royal Society of Medicine. Her laboratory and clinical pain research has attracted Medical Research Council and charitable grants as well as funded studentships and keynote international lectures. As author/editor she has written books such as 'Principles and Practice of Obstetric Anaesthesia and Analgesia', 'Core Topics in Pain', 'Crises in Childbirth'. Other publications include chapters on 'Sex and Gender Differences in Pain' in Wall and Melzack's Textbook of Pain and papers on gender medicine particularly relating to women and childbirth. As a spin off from her research she champions academic women's employment issues and led the Women in Academic Medicine (WAM) project funded by the Higher Education Funding Council for England, the BMA and the Medical Women's Federation (MWF). She has co-chaired the BMA Medical Academic Staff Committee and is the MWF Treasurer.

Jackie Hunter is ex Senior Vice President of Science Environment Development at GlaxoSmithKline and CEO of Pharmivation Ltd. Dr Jackie Hunter has worked in the pharmaceutical industry for over 20 years, and 2002 she was appointed Head of the Neurology and GI Centre of Excellence for Drug Discovery (CEDD). The CEDD was focussed on the discovery and development of new therapeutics for neurodegenerative disease, pain and gastrointestinal disorders. Dr Hunter has published over 130 scientific papers and served on a number of industrial and academic boards. In 2008 she became Head of Science Environment Development with a remit to develop a pre-competitive research agenda and new ways of working with external science partners. Examples of this are her role in the Innovative Medicines Initiative in Europe and leadership of the establishment of the first biopharmaceutical open innovation campus at Stevenage, UK.

Astrid James is the Deputy Editor of the medical journal The Lancet. She qualified in medicine from University College Hospital, London, in 1986 and then worked in the NHS for five years in general medicine and surgery, cardiology, oncology, obstetrics and gynaecology, paediatrics, geriatrics, and in general practice. She completed general practice training and then decided to go into medical publishing, working first for Medical Tribune in the UK and then for Medical Action Communications. Astrid joined The Lancet as an Assistant Editor in 1993, becoming Deputy Editor in 2001. Among her interests is a commitment to promoting the need for women in medicine and more broadly in science, and to identifying and discussing barriers to their career development.

Henrik Toft Jensen is Lecturer at the Department of Environmental, Social and Spatial Change at Roskilde University, Denmark. He was Rector of Roskilde University from 1989 to 2006 and Chair of the Danish Rectors' Conference from 2000 to 2002. Dr Toft Jensen started his career at the Department of Geography of the University of Copenhagen where he worked from 1968 to 1973. Until 1975 he was an adjunct professor at Falkonergårdens Gymnasium, Denmark. He then joined the Department of Geography, Social Science and Computer Science of Roskilde University, where he served as Head of Department from 1982 to 1987. Dr Toft Jensen is involved in a variety of higher education projects and expert committees within and outside Europe. Amongst others, he has been member of the Committee for Research and Technological Development of the EU's 7th Framework Programme since 2007, the Chair of the steering committee of the E4 Group's European Quality Assurance Forum since 2006 and a member of the Irish Universities Quality Board (IUQB) since 2006. He is a member the External Review Panel of the Singaporean universities and was a member of an advisory panel to the Singaporean government from 2003 to 2006. He was the Chair of the Steering Committee of EUA's Institutional Evaluation Programme (2001-2007) and also represented EUA in the E4 Group until 2007. Dr Toft Jensen is and was also involved in several Danish bodies, both in the fields of higher education and geography. Dr Toft Jensen studied political science and geography at Copenhagen University and holds several honorary degrees. Amongst others, he is Doctor Honoris Causa of the Linguistic University of Nizhniy Novgorod, Russia.

Nick Kitchen is Vice President HR Research and Development at Unilever. Nick has a BA and DPhil in Chemistry and joined Unilever as a Research Scientist at Unilever Research, Colworth, in 1984. After a very short period as a scientist Nick moved into HR in 1985. His first role was as a Recruitment Manager for UK National Management and after this he has held a variety of factory and Head Office HR roles. These have included Lever UK, Brooke Bond Foods as well as a period back at Colworth, this time exploring how to help people change rather than playing with test-tubes. He was then responsible for a global HR project, Garuda, which was designed to change the way HR was structured and how processes were undertaken. Nick then moved to Unilever's Corporate Centre to be the VP, HR -Finance and IT. In this role his principal responsibilities were for the development of the future organisation of these functions and for future leaders. In 2004 Nick became HR Director for LeverFaberge, Unilever's Home & Personal Care business within the UK. In this role he was responsible for leading the development of skills, capabilities and culture to deliver market success for this £1m+ turnover business. He then returned to the Corporate Centre taking responsibility firstly for HPC Brand Development and then in late 2007 Nick became HR VP – R&D, responsible in a HR sense for Unilever's 6000+ R&D staff globally. As a member of the R&D Leadership Team this involves building capability for the future, identifying, and developing, the future leaders of the profession and representing the needs of R&D within the global HR community.

Curt Rice became the Vice Rector (prorektor) for Research and Development at the University of Tromsø on January 1st of 2009. From 2003-2008, he worked as the Director of the Centre for Advanced Study in Theoretical Linguistics (CASTL), which was the first Centre of Excellence at the University of Tromsø and in the first cohort of Centres of Excellence created in Norway. He also received funding from NordForsk to start a Nordic Network of Excellence, the Nordic Language Variation Network, which brings together sociolinguists and generative linguists to study issues of linguistic variation. Rice is a co-editor of Linguistic Inquiry and is on the editorial board of Lingua, Nordic Journal of Linguistics, and Norsk lingvistisk tidsskrift. He has written and spoken widely on various topics related to scientific leadership, including the connection between leadership and gender issues in the academy.

Martina Schraudner is Professor for Gender and Diversity in Organisations, Institute of Machine Tools and Factory Management at the Technische Universität Berlin. She also works for Fraunhofer, which is a special construct at the University of Berlin. Dr Schraudner studied biology and biotechnology at the Technical University of Munich, where she earned her doctorate. After several years of research visits to the Society for Environment and Health Research and the Swiss Federal Technical University in Zurich, she became Deputy Head of Department at the Research Centre Jülich. After completing her doctorate at the Faculty of Agriculture and Horticulture, Humboldt University, Berlin, Dr Schraudner moved to the Fraunhofer-Gesellschaft. The focus of their work includes the development of business health and life sciences as well as the establishment of gender mainstreaming in research, particularly the integration of gender issues in research. Since 2004 she has been in advisory bodies of the Federal Government and the EU. She has been a board member of the Total E-Quality eV since 2007.

Karen Sjørup is Associate Professor at the Institute for Society and Globalisation, Roskilde University. She has an MSc in Sociology from the University of Copenhagen. She is currently a member of the Lønkommissionen and of the Association for Gender Research in Denmark. Dr Sjørup was the Director of the Knowledge Centre for Gender and then the Centre Director of the Centre for Gender Research, CELI, at Roskilde University until 2006. Karen Sjørup has written several scholarly articles and anthology contributions on women, professionalism and social welfare in Denmark. She also lectures on sex, profession, organisation, development, gender policy, university policy and research. From 1996-2000 Karen was the vice rector for Roskilde University and from 2000-2005 she was a member of the board of directors for The Danish Technical University (DTU).

Hanne Rønneberg is currently Executive Vice President at SINTEF, the largest independent research organisation in Scandinavia, responsible for the operating unit SINTEF Building and Infrastructure. She is also a member of the Senior Executive team in SINTEF. Until joining SINTEF last September, Rønneberg has spent the past 11 years working for the global construction company Skanska holding several senior management positions in the company, both in Norway and globally. Amongst other positions, Rønneberg is the deputy leader of the Confederation of Norwegian Enterprises (NHO) committee for ethics and corporate social responsibility and member of the climate panel for Norwegian businesses, as well as the Strategic Council for Environmental Technology, established by the Norwegian Government. Hanne Rønneberg has a Master of Science degree in organic chemistry from the Norwegian University of Science and Technology (NTH 1983). She also spent two years working as assistant professor in concrete technology 1989-1990.

Rolf Tarrach is Rector of the University of Luxemburg and President of the Academic Cooperation Association. Dr Tarrach is professor of theoretical physics, and has served in that capacity at the universities of Valencia and Barcelona as well as the University of Saint Petersburg. Many organisations have taken advantage of his breadth of knowledge and his command of languages. He is a former president of the Spanish Scientific Research Council (CSIC), and a former member of the European Research Advisory Board (EURAB), European Heads of Research Councils (EUROHORCS), Euroscience Open Forum (ESOF2004). He regularly consults for the European Commission and is currently on the European University Association (EUA) Council.

Observer

Philip Campbell is the Editor-in-Chief of Nature and Nature Publications, based in London. He has a BSc in Aeronautical Engineering from the University of Bristol, and earned an MSc in Astrophysics at Queen Mary and Westfield College, University of London. Dr Campbell also possesses a PhD and postdoctoral fellowship in Upper Atmospheric Physics from University of Leicester. His areas of responsibility at Nature include editorial content and management of Nature and the long-term quality of all Nature Publications. He is also a trustee of Cancer Research UK.

Biographies of Gender Expert Group

Teresa Rees is Pro Vice Chancellor (Research) at Cardiff University and a Professor in the School of Social Sciences. She is an academican of the Academy of Social Sciences and was awarded a CBE for services to equal opportunities and higher education. She is a Fellow of the Sunningdale Institute and a member of the BBC's Audience Council Wales. She is particularly interested in gender mainstreaming and analysing how policies and practices can, inadvertently, reproduce patterns of inequality. Teresa has worked with a range of bodies and governments in Europe and elsewhere to apply a gender mainstreaming approach to the development of governance, education, training and labour market policies, regional economic development, the 'knowledge economy' and social exclusion. She has also worked as an expert advisor to the Research Directorate-General of the European Commission and was rapporteur for a series of international groups commissioned by the EC to inform policies on women in science, engineering and technology. She is currently working on a European Commission funded project on knowledge economies. She chaired two independent investigations on higher education funding for the Education and Lifelong Learning Minister of the Welsh Assembly Government (the 'Rees Reviews').

Londa Schiebinger is the John L. Hinds Professor of History of Science at Stanford University and Director of Stanford's Clayman Institute for Gender Research. Over the past twenty years, Schiebinger's work has been devoted to teasing apart three analytically distinct but interlocking pieces of the gender and science puzzle: the history of women's participation in science; the structure of scientific institutions; and the gendering of human knowledge. Her current work explores "Gendered Innovations in Science, Medicine, and Engineering". Gendered Innovations research and develop state-of-the-art gender methods for basic and applied research. Gender analysis - when turned to science, medicine, and engineering - can spark creativity by opening new perspectives, new questions, and new missions for future research. Her new volume is *Gendered Innovations in Science and Engineering* (Stanford University Press, 2008). And recently, her study on housework as an academic issue was profiled on ABC News. Londa Schiebinger has been the recipient of numerous prizes and awards, including the prestigious Alexander von Humboldt Research Prize and John Simon Guggenheim Fellowship. She has also served as a Senior Research Fellow at the Max-Planck-Institut für Wissenschaftsgeschichte in Berlin, the Jantine Tammes Chair in the Faculty of Mathematics and Natural Sciences at the University of Groningen, a guest professor at the Georg-August-Universität in Göttingen, and the Maria Goeppert-Meyer Distinguished Visitor, Oldenburg University. Her research has been supported by the National Science Foundation, National Institutes of Health, National Endowment for the Humanities, Rockefeller Foundation, Fulbright-Hays Commission, Woodrow Wilson Foundation, and Deutscher Akademischer Austauschdienst. She is the author of four major books, six edited volumes, two major reports, and 60 academic articles. Her work has been translated into over 13 languages.

Alison E. Woodward (Ph.D. University of California, Berkeley) is Research Professor at the Free University of Brussels (VUB) and co-director of RHEA, the Center for Gender Studies and Diversity Research. Since 2007 she has been a Senior Associate of the Institute for European Studies. Her research interests are in the field of comparative European Union public policy and organisation, especially in the areas of civil society transnational mobilisation, gender, migration, and equality. As professor or senior researcher she has been affiliated with the Universities of Uppsala, Antwerp and Brussels, Ruhr University, Wayne State University, Rutgers University, the Wissenschaftszentrum Berlin, and the Royal Institute of Technology in Stockholm. Working as a policy consultant she has assisted the European Commission, the Council of Europe, the United Nations and the Flemish government, and is frequently relied upon for expert contributions relating to social exclusion, gender and politics. An active member of the European Consortium for Political Research section on European Union Politics, she has convened the stream on Diversity, Gender and European Integration at the bi-annual conferences in Bologna, Istanbul and Riga. She is the Belgian coordinator for the Research Network Gender and the State funded by the European Science Foundation and the National Science Foundation, Belgian representative in the COST A-34 network on European Gender and Well-Being, and in the ATHENA EU Training and Education 3B network on gender and public policies. She was a scientific coordinator of the COST Action Conference European Social Movements and Well-Being at the International Institute of Social History, Amsterdam in March 2009.

Judith Glover is Professor of Employment Studies in Roehampton University Business School and has research interests in women's employment, with particular reference to women and scientific employment. She is included in the European Commission list of experts on specific science and technology policy issues and her work has been funded by the ESRC and the European Commission. She has worked with the European Commission's Research Directorate General on the production of *She Figures* and was a member of the ETAN/STRATA Expert Group on the situation of women scientists in Central & Eastern Europe and the Baltic States. She is on the editorial committee of the journal *Equal Opportunities International* and the *International Journal of Gender, Science and Technology*. Recent research includes a research project for Equalitec, funded by the European Social Fund and the Department for Trade and Industry on the practices of organisations that are recruiting women in Information Technology, Electronics and Communications. She is author of *Women and Scientific Employment* (Macmillan, 2000) and co-author (with Gill Kirton) of *Women, Employment and Organisations* (Routledge, 2006).

Gender Experts Advising on Briefing Notes

Dr Alexandra Bitusikova graduated in social anthropology and received PhD from Comenius University in Bratislava. She is Senior Researcher at the Research Institute at Matej Bel University in Banska Bystrica (Slovakia). She is also Senior Adviser to European Universities Association – Council for Doctoral Education, Brussels (Belgium). Her research projects include the EU funded projects: "Enlargement, Gender, Governance: Civic and Political Participation of Women in the EU Candidate Countries" (FP5), "Sustainable Development in a Diverse World" (FP6 Network of Excellence), and Gender Debate in the European Research Area (FP7). She was member of the expert group of the European Commission WIRDEM (Women in Research Decision Making). She is author of a number of publications on urban anthropology, gender, post-socialist social and cultural change in Central Europe, identities, minorities and diversity.

Dr Suzanne de Cheveigne is Director of Research at SHADYC (Sociology, Anthropology, and History of Cultural Dynamics) in Marseille (France). She is also an active researcher in the French *Centre National de la Recherche Scientifique* (CNRS) under the Institute for Humanities and Social Sciences (INSHS). She is fundamentally interested in the relations between science, technology, media and society. Her current research focuses on media coverage of the public debates on social implications of biotechnology.

Dr Linda Marie Rustad is Senior Advisor to the Committee for Gender Balance in Research in Norway. The committee is appointed by the Ministry of Education and Research. Dr Rustad is a philosopher with a special interest theory of science, research policy and gender. She has taught several university courses on these topics and has written several articles in about science and gender. She is now employed by the Norwegian Association of Higher Education Institutions were she is works with policy makers in order to improve gender balance in the research sector. She has also edited a handbook for research leaders.

Dr Magdalena Skipper is the Senior Editor of Biology at *Nature* magazine. She has a BSc Hons in Genetics from the University of Nottingham, and gained her PhD, MRC LMB, at the University of Cambridge. Dr Skipper also completed a postdoctoral fellowship at the Imperial Cancer Research Fund in London. At *Nature*, her areas of responsibility include: genetics, genomics, gene therapy, biotechnology, molecular evolution.

Stakeholder Organisations Represented in Final Consensus Seminar in Paris

Bekaert is a global market leader in drawn steel wire products and applications and a technological leader in its two core competence: advanced metal transformation and advanced materials and coatings. It is a global company based in Belgium that employs over 23000 people serving over 120 countries.

Daimler AG is based in Germany, and is one of the world's largest and most successful car corporations. With divisions of Mercedes-Benz Cars, Daimler Trucks, Mercedes-Benz Vans, Daimler Buses and Daimler Financial Services the Daimler Group is one of the biggest producers of premium cars and commercial vehicles with a global reach.

EPWS (European Platform of Women Scientists) is an international non-profit organisation that represents the needs, concerns, interests, and aspirations of more than 12000 women scientists in Europe and beyond. It is an umbrella organisation bringing together networks of women scientists and organisations committed to gender quality in research disciplines.

ETH (Swiss Federal Institute of Technology, Zurich) is a science and technology university ranked among the top universities in the world. With more than 15000 students in approximately 80 countries, it orients its research strategy around global challenges such as climate change, world food supply and human health issues.

Eurodoc (The European Council of Doctoral Candidates and Junior Researchers) is the European-wide federation of national associates of Ph.D. candidates and young researchers. Its objectives include representing young researchers at the European level in matters of education, research and professional development and advancing the quality of doctoral programs and standards of research activity in Europe.

L'Oreal is the world's largest cosmetics and beauty company that, in partnership with **UNESCO**, grants **Awards for Women in Science** which aim to improve the position of women in science by recognizing outstanding women researchers who have contributed to scientific progress as well as young women scientists engaged in exemplary and promising research projects.

Science Foundation Ireland is a statutory body of the Republic of Ireland with the responsibility for disbursing funds for basic science research with strategic focus. It invests in academic researchers and research teams most likely to generate new knowledge, leading edge technologies and competitive enterprises in the fields of science and engineering underpinning the areas of biology, ICT, and sustainable energy.

SPRU (Science and Technology Research) is a world-leading department at the **University of Sussex** where research and high-level policy are combined with postgraduate teaching in science, technology, and innovation policy and management. It is the centre of a worldwide network of interdisciplinary researchers addressing the analysis of the rate and direction of scientific change and innovation and paths to a more sustainable society.

University of Vienna is one of the largest and oldest universities in the German speaking area. Since 1365 it has grown to a complex organisation of more than 76,000 students and 8,600 employees. It has a Centre for Gender Equality coordinates and offers various measures aiming at gender equality and the promotion of women in academia, particularly in the sciences.

genSET Consortium Partners and Staff

Portia Ltd – London, UK (project lead)

Dr Elizabeth Pollitzer, Director
Henrietta Dale, Operations Manager
Emily Crane, Communications Officer
Alexandra Blaszczuk, Project Officer

Department of Thematic Studies (Gender Studies), Linköping University, Sweden

Prof Jeff Hearn, Professor of Gender Studies, Department of Thematic Studies, and Co-Director of GEXcel Centre of Gender Excellence, Linköping University, Sweden
Dr Liisa Husu, Guest Professor of Gender Studies, Department of Thematic Studies, Linköping University, Sweden, and Guest Professor of Gender Studies, Örebro University, Sweden

Institute for Applied and Computational Mathematics (FORTH) - Greece

Dr Kathy Kikis-Papadakis, Senior Scientist, Head of Educational Research & Evaluation Group
Athanasia Margetousaki, Research Fellow

Wissenschaftsladen Wien – Science Shop Vienna, Austria

Christine Urban, Senior Researcher and Co-Director of the Science Shop Vienna
Regina Reimer, Senior Researcher and Co-Director of the Science Shop Vienna
Michael Strähle, Senior Researcher and Co-Director of the Science Shop Vienna

Appendix 1

References in the Consensus Report

List of References Used in the Consensus Report

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Appendix 2

1. **Briefing Notes with References, prepared for the first Consensus Seminar in London**
2. **Briefing Notes Supplement with References, prepared for the second Consensus Seminar in Berlin**