

- Goal 5. Achieve gender equality and empower all women and girls.
 - 5.1 End all forms of discrimination against all women and girls everywhere
- 5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision making in political, economic and public life

ERA (European Research Area)

6 Priorities

- 1. more effective national research systems
- optimal transnational cooperation and competition, including optimal transnational cooperation and competition and research infrastructures
- 3. an open labour market for researchers
- 4. gender equality and gender mainstreaming in research
- 5. optimal circulation, access to and transfer of scientific knowledge including knowledge circulation and open access
- 6. international cooperation

ERA (European Research Area)

2.4. Gender equality and gender mainstreaming in research

Member estates are invited to:

- Remove legal and other barriers to the recruitment, retention and careeer progression of female researchers while fully complying with EU law on Gender Equality (Directive 2006/54/EC)
- Address gender imbalances in decision making processes
- Strengthen the gender dimension in research programmes

ERA (European Research Area)

2.4. Gender equality and gender mainstreaming in research

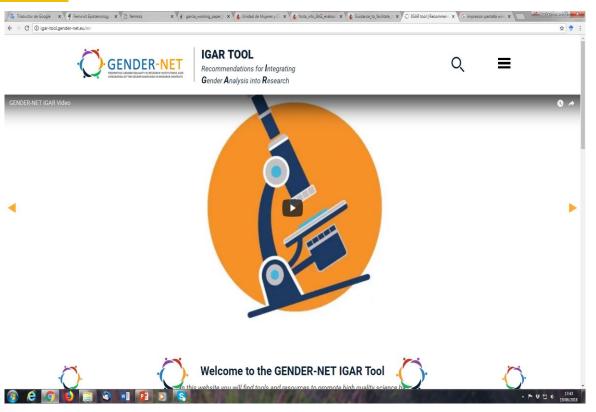
Research stakeholder organisations are invited to:

Implement institutional change relating to HR management, funding, decisionmaking and research programmes through Gender Equality Plans which aim to:

- Conduct impact assessment / audits of procedures and practices to identify gender bias
- Implement innovative strategies to correct any bias
- Set targets and monitor progress via indicators

IGAR (Introducing Gender Analysis Research)

 PROJECTE GENDER-NET IGAR TOOL http://igar-tool.gendernet.eu/en



Feminist science

Dona Haraway (1988), Sandra Harding (1993) and K.
 Bhavnani (1993)

"Objectivity needs to be transformed into "feminist objectivity". D. Haraway defines feminist objectivity as 'situated knowledges': *Knowledge and truth are partial, situated, subjective, power imbued, and relational*" (in Hesse-Bibber, 2012:9)

Feminist science

Feminist perspectives:

"also carry messages of **empowerment** that challenge the encircling of knowledge claims by those who occupy **privilege positions.** Feminist thinking and practice requiere taking steps from the 'margins to the center' while eliminating boundaries that privilege dominant forms of knowledge building, boundaries that mark who can be a knower and what can be known" (Hesse Biber, 2012:39

Feminist criticism in Sciences

Key points in feminist critics in science (Anderson, 2015)

Although science is apparently neutral, it is nonetheless affected by conditions such as **context and subjective values**. "Introducing gender in our analysis (clearly contextual) sheds light on problems (Pérez-Sedeño, 2005: 453) and offers new possibilities.

- Science has rejected knowledge produced by women
- Science has discredited knowledge about women and about gender inequalities
- Science seems objective, but the social context in which has arise and its own socially intern practices (how is knowledge produced) need to be beared in mind.
- Science is produced by upper-middle class white men (who usually holds positions of power and responsibility among the science fields)
- Andocentric bias in the selection of problem and of research questions

Science models

 Model by Margo Brouns (EC, 2004) summarised by M. Jesus Izquierdo and compiled by Elisabetta Addis (2010). The second model would be optimal to facilitate the inclusion of the gender perspective (García-Calvente et al. 2013: 20)

Olympus model	Agora model
Neutrality	Engagement
Autonomy	Heteronomy, linkage
Competitiveness	Cooperation
Exclusivity	Conciliation

(in Addis, 2010: 55, translated from Izquierdo et al., 2008:77)

Gender Sensitive Research

- Includes Gender Equality in the research teams
- Gender as a complex and relevant dimension in the proposal: in the research problem, the object of study, the methodologies, in the analysis and the publication of results (Leduc, 2009; Gender in EU-funded research Toolkit, 2009, Schiebinger & Schraudner, 2011).
- Gender Sensitive research empowers participants, make research more participatory, creative and inclusive, Helps to improve people and social groups' lives and rebalances power, especially in relation to women and other marginalised groups (UN-INSTRAW, 2012:1, Leduc, 2009).

Gender dimension in research

- "For a better Integration of the gender dimension in Horizon 2020 work Programme 2018-2020".
 - "The *gender dimension* is a dynamic concept which puts researchers at the forefront of questioning gender norms and stereotypes, and addresses the evolving needs and social roles of women and men. Depending of the field of research, it entails an analysis of gender, sex or both". (EC, 2016: 2)
 - "(...) entails taking into account sex and gender in the research process, when developing concepts and theories, formulating research questions, collecting and analysing data and using the analytical tools that are specific to each scientific area. Sex and gender analysis also helps rethinking Standards and reference models". (EC, 2016: 2)

Gender in Horizon 2020

- According to its commitment with gender equality, the European Commission considers the mainstreaming of gender in research projects as an assessable element, which evaluates
 - Balanced representation of both sexes in research teams
 - Balanced representation of both sexes in decision-making positions (40% of the underrepresented sex in panels and groups and 50% in Advisory Councils)
 - The inclusion of the sex/gender analysis in research and innovation, which contributes to scientific quality, social relevance of the knowledge production, technology and innovation..

http://eige.europa.eu/sites/default/files/h2020-hi-guide-gender en.pdf

"How to include gender dimension" - Horizon 2020. Recommendations

- "Explain why sex and or gender matter in your area
- Make it explicit (very explicit in the topics)
- Foster de production of new knowledge on gender and "which gender aspects should be explored"
- Addressing sex and gender aspects is often part of a multidisciplinary approach
- Include gender in the impact statement
- Remember that specific studies on gender, and the training on gender dimension can be included by applicants as eligible cost"

Source: "For a better Integration of the gender dimension in the Horizon 2020 Work Programme 2018-2010" (EC, 2016: 3)

Gender Bias in Health Research

- Research affect differently the lives of women and men:
 - "Between 1997 and 2000 ten medicines were taken off the US market because of potentially life threatening effects, and four of them were even more dangerous for women. Part of the problem resides in preclinical research preferentially using male animals (Schiebinger, L., Schraudner, M. 2011: 158)
 - "The study of Jamison and Wood (2015) on second generation metals in hip replacements reveals that these replacements cause more problems to women than men because of hormonal differences" (UMyC, 2016)

Gender bias in Health

- Mainly men samples results are extrapolated to women (Ruiz Cantero and Verdú Delgado, 2004)
- Adverse reaction are twice as recurring in women than in men (Schiebinger, 2008) (Cantero et al. 2012: 18-19)
- Doctors take more consideration into men's health complains and are keen to diagnose women's as caused by psychosomatic factors (Markez et al., 2004; Ruiz and Verdú, 2004)
- Lack of knowledge on specific illnesses that affect women (Caprile et al. 2012: 18-19)

Concret suggestions for each Horizon 2020 Work Programme / Societal Challenges 1 / Health, demographic change and wellbeing (EC, 2016)

- Clinical trials, experimental and non-experimental research should reflext the sex distribution of the population groups to be included
- Some therapeutic options are not equally effective and safe in men and women, girls and boys
- Personalised medicine: include sex and gender analysis, incorporating sex specific epigenetic modifications through lifestyle and environmental effects.
- Women and men should be included as subjects in the research unless there is a good explanation as to why not.

Sex and Gender in Biomedical and Health Research (Linda Nieuwenhoven and Ineke Klinge, 2010)

- Analysis by sex, by gender and how interact sex/gender.
- Differences and similarities (sex/gender)
- Gender:
 - "Gender influences environmental factors".
 - "Gender mediates risk perception"
 - "Men make less use of health services that women, and less frequent contact doctor-patient"
- "Every cell has a sex"
- Sex-disaggregated statistics (the first step)

Sex/Gender Toolbox for Experimental Scientists (Stacey Ritz, et al. (2013)

- Develop your knowledge of S/G issues
 - Develop a careful literature review. Are there known sex differences or gender disparities for the phenomenon of interest?
 - Avoid using the terms 'sex' and 'gender' interchangeably in your writing
- Discuss S/G where a
 - Always report the sex of the cells, tissues, animals, or subjects you are using
 - If using one sex only, justify why, and note the limitations in your discussion
 - Always discuss the possible s/g implications of your findings

- Introduce a small intervention
 - Do a small pilot experiment to examine the influence of some element of s/g in your model system:
 - Add a hormone to one of your cultures
 - Include male and female animals in the key experimental groups
 - Report what you find, whether sex differences are observed or not.
- Raise the profile of S/G
 - As a reviewer, ensure that applicants/authors identify and justify the sex of the materials used, and make sure that the terms "sex" and "gender" are used appropriately.
 - Ask questions of colleagues and trainees: have they considered whether s/g issues might be relevant to their work?

Gender equality in teams (Gender Toolkit, 2009)

- "Foster equal participation of men and women in research teams at all levels."
- "Create work conditions that allow men and women to develop equally productive (and rewarding) careers".

Training opportunities

- Access to grants and funds
- Organise and set meetings (work-life balance)
- Gender relationships within teams (Remember the Protocol against sexual harassment and harassment on grounds of sex, sexual orientation, gender identity or gender expression, 2018)
- HR Excellence in Research UAB. Euroaxess
 - European Charter for Researchers
 - Code of conduct for the Recruitment of Researchers

Design of research

- Rethink priorities: who will benefit and who will not? Which norms and gender relations could result reinforced? Which opportunities may be lost when not paying attention to sex or gender? (Schiebinger et al., 2011 a Caprile et al. 2012: 8)
- Reflexivity: It is necessary, in research, to bear in mind the role of our own subjectivity and social status, of our concerns and interests as factors that guide our research (Leduc, 2009), including the role of researchers and power relationships with the subjects.
- Take into account the interests and the impact of research in the lives of the participant subjects (Reinharz, 1992; Leduc, 2009; Hesse-Biber, 2014), specially in women. Will it affect women differently? Or women from lower social classes, or those from ethnic minorities?

Theoretical review and concepts

- "Include a systematic analysis and an assessment of the sex/gender state of the art and of how the findings can affect our research" (Gender-Net, 2016:43)
- "(...) take into account the results from the theoretical review of including the sex/gender analysis or explain the implications for men and/or women? Gender-Net, 2016: 42
- Rethink concepts and theories used in research: are there implicit or explicit assumptions about sex or gender? (Schiebinger et al., 2011 in Caprile et al. 2012: 10)

Research questions

- Are the research questions based on sex/gender explicit or implicit assumptions? (Caprile et al. 2012: 11)
- "Key issue: does your research bear in mind the sex/gender analysis to clarify the differences or similarities between women and men (or between animals, tissues or cells)" (Gender-Net, 2016:43)
- Reflect on who is described by the categories: "subjects", "patients", "students", "the elderly", "the youth", and even "women" and "men"?
- Draft a design that includes quantitative and qualitative indicators that allow assessing the gender impact before and after the research

Sex analysis

- Notify of the subjects' sex and analyse the differences as per sex (whether they are people, animals, tissues or cells)
- "Guarantee that the research sample (participants, users, clients...) is appropriate and that when necessary, a proportional representation of men/boys or women/girls is included (or between animals, tissues or cells) in order to collect the information factors based on sex, gender or on other factors that intersect with these two (age, ethnic origin, disabilities, religion, sexual orientation...)
- "Analyse the existing differences from among each sex" (Schiebinger et al. 2011 in Caprile et al. 2012: 12)

Analyse co-variables

- Men and women are not homogeneous groups. There are differences according to their relation with the environment, socio-economical circumstances or physical factors.
 - Analyse differences among each sex or gender avoids overdesigning sex and gender.

Identify relevant factors or variables and how they interact with sex and gender. Intersectional approximations.

Methods and techniques

- Questionnaires, notes and all instruments should be aimed to collect the experiences of women and men and should use nonsexist language.
- Including qualitative techniques to analyse the complexity of the data's "how" and "why" (Leduc, 2009).
- "Key question: would it be possible to collect the data disaggregated by sex and/or gender and information that is appropriate for a sex/gender analysis?" (Gender-Net, 2016:43)

Dissemination and communication of research

- Present all data disaggregated by sex
- Use non-sexist language in research reports or in any communication of the project (See Guides)
- "Guarantee that the design proposal or the research include a strong dissemination strategy that shall facilitate the effective communication of results on sex/gender (...)
- "If no differences are found, be explicit about it (...). Report to the scientific community, but also to society, politicians, mass media and other institutions. (...)
- (..) "Highly relevant information can be provided on the impact of certain policies or measures, to stimulate public debates about norms and values so as to lead societies towards a more equalitarian situation" (GenderNet, 2016: 44)

 EC (2015). For a better Integration of the Gender Dimension in Horizon 2020 Work Programme 2018-2020.

http://ec.europa.eu/transparency/rege xpert/index.cfm?do=groupDetail.group DetailDoc&id=28824&no=1

For a better integration of the gender dimension in the Horizon 2020 Work Programme 2018-2020

Position paper Advisory Group for Gender December 2016

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Space (LEIT Space)
Access to risk finance
Innovation in SMEs
Excellent Science

 EC (2016). Guidance on Gender Equality in Horizon 2020

http://eige.europa.eu/sites/default/files/h2020-hi-guide-gender_en.pdf



H2020 Programme

Guidance on

Gender Equality in Horizon 2020

 EC (2016) Vademecum on Gender Equality in Horizon 2020.

https://ec.europa.eu/research/s wafs/pdf/pub_gender_equality/ 2016-03-21-Vademecum_Gender%20in%20 H2020-clean-rev.pdf



RTD-B7 "Science with and for Society" 26-02-2014 | Rev. 15-03-2016

Vademecum on Gender Equality in Horizon 2020

I. INTRODUCTION

The purpose of this Vademecum is to provide staff of the European Commission/Executive Agency², potential applicants, the Helsinki Group, NCPs, as well as experts evaluators and other actors involved in the implementation of Horizon 2020 with practical guidance on the effective application of the new gender equality provisions in Horizon 2020. This entails integrating gender equality issues at each stage of the research cycle: from programming through implementation, monitoring and programme evaluation.

II. OBJECTIVES

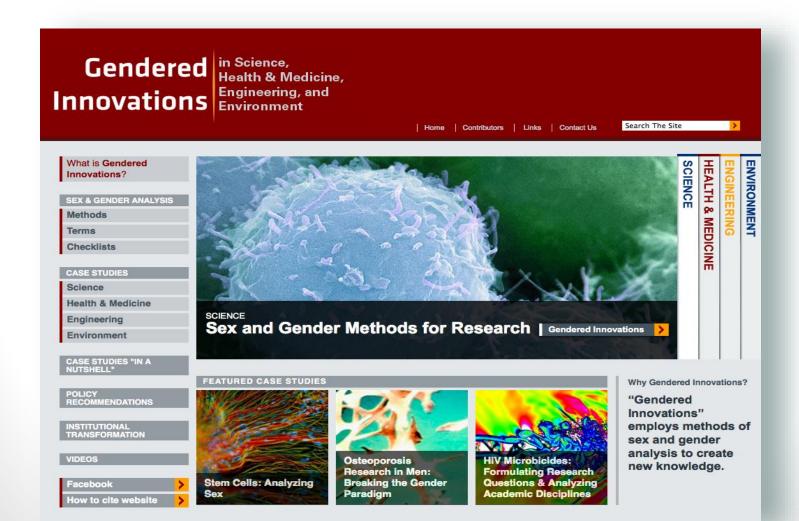
Three objectives underpin the Commission's activities on gender equality in Horizon 2020. They are in line with RTD strategy on gender as well as with the ones set in the ERA Communication of July 2012:

- Fostering gender balance in Horizon 2020 research teams, in order to address the gaps in the participation of women in the Framework Programme's projects
- Ensuring gender balance in decision-making, in order to reach the Commission's target of 40% of the under-represented sex in panels and groups (50% for Advisory Groups)

¹ This text reflects the provisions as they stand on 26/02/2014

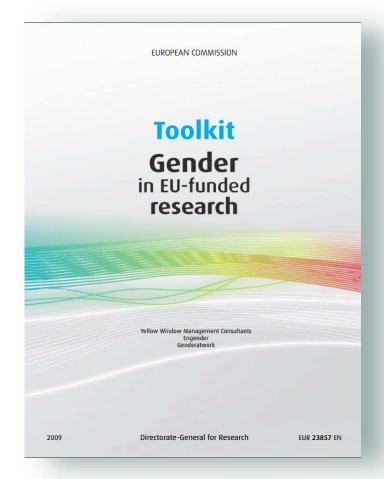
² Scientific and project officers, call coordinators, Work Programme drafters etc.

 Gendered Innovations: How Gender analysis contributes to research (2013) http://genderedinnovations.stanford.edu



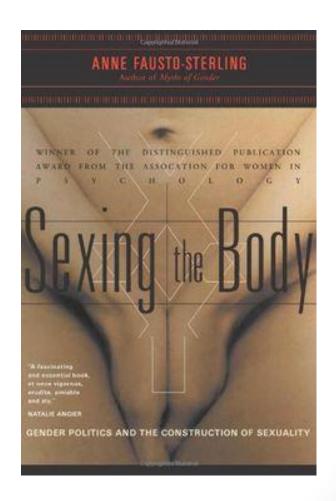
Toolkit Gender in EU-Funded research (2008-2012). European Commission.

http://www.idi.mineco.gob.es/portal/site/MICINN/menuitem.26172fcf4eb029fa6ec7da6901432ea0/?vgnextoid=e218c5aa16493210VgnVCM1000001d04140aRCRD





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 (2000). Sexing the Body:
 Gender politics and the construction of sexuality.
 - Professor of Biology and Medicine at Brown University (US).



Verification lists

 Checklist for gender in research. Gender Toolkit-Yellowindow (EC, 2009). Available at http://www.yellowwindow.be/genderinresearch/downloads/YW2009 GenderToolKit CheckList.pdf

Tissues & Cells, Urban Planning & Design. Gendered Innovations (EC, 2013). Available at: http://ec.europa.eu/research/science-society/gendered-innovations/index_en.cfm

Group discussions Sex-gender in our researches

- How are sex and gender considered within the thesis or the research
- How are they addressed by the fields in which the thesis or the research are held on.
- Application of the checklist "Gender Toolkit 2009"
- Are there any bias or obscurities?
- Are the concepts of sex and gender specified in the thesis?
- Are the concepts of sex-gender and others related defined in the thesis?

Resources

- Unidad de Mujeres y Ciencia (UMYC)
- IGAR TOOL. Recommendations for Integrating Gender Analysis into Research
- http://www.annefaustosterling.com/fields-of-inquiry/gender-race-science/
- EIGE (European Institute of Gender Equality)
- Gender CC-Women for Climate Justice
- GenPORT- Resources on gender and science
- GenderNET-ERA NET. Manuals and directives to integrate the analysis of sex and gender in research
- Gender, Science, Technology and Environment genderSTE
- Gender Equality Index: Data about time, cure, social activities, work, participacion http://eige.europa.eu/gender-equality-index/2012/domain/time/1/ES

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