

Accelerating the transition to a climate prepared and resilient Europe

What gender dimension means and why is it important in the field of climate studies?

A gender dimension in the context of Horizon Europe missions refers to the **integration of sex/gender analysis methods in the research content**. Its aim is to stimulate excellence in science and technology by “fixing the knowledge”. “Sex” and “gender” are two distinct terms that should not be used interchangeably.

“**Sex**” refers to the biological characteristics of beings, whether female, male, or intersex. This involves different levels of expression: genes, gametes, morphology (primary and secondary sex characteristics).

“**Gender**” refers to socio-cultural processes that shape behaviours, preferences, values, products, technologies, knowledges, and so on, and how individuals and groups interact with their environment. Importantly, those two terms interact and influence each other. There is no anteriority of one on the other but rather a co-influence. Analysing **factors intersecting with sex and gender** is key to avoid overlooking or overemphasizing sex or gender differences (e.g. age, comorbidities, disabilities, environment, ethnicity, geography, religion, sexual orientation, socioeconomic status...).

As Gendered Innovation¹ presents it: “[s]ex and gender can influence all stages of research or development processes, from strategic considerations for establishing priorities and building theory to more routine tasks of formulating questions, designing methodologies, and interpreting data. Many pitfalls can be avoided—and new ideas or opportunities identified—by designing sex and gender analysis into research from the start. Sex and gender analysis work alongside other methodologies in a field to provide yet further “controls” (or filters for bias) providing critical rigor in science, medicine, and engineering research, policy, and practice”.

The report highlights the socio-economic consequences of climate change and the principles of “*the resilience of social and economic systems with a commitment to equity, social justice and to leave no one behind*” (p. 9).

We argue that sex and gender should be mainstreamed throughout the Mission as a cross-cutting issue. Climate change is also a cross-cutting issue, but as other EU Missions already focus on soils, waters, and cities, we will not focus on these aspects specifically here². Below, we will present examples of how gender and sex are relevant in climate change research and innovation, covering gendered impacts of climate disruptions, the role of women in risk management, building resilience, and mitigation.

Examples of how sex and gender interact in relation to climate change

Gendered impacts of climate disruptions

Gendered impacts of climate disruptions in developing countries³: Climate disruptions such as droughts, crops fail, extreme weather and natural disasters affect developing countries to a larger extent. There are different risks when facing these disruptions from a gender perspective. On the one hand, women may have to walk longer to get water because of droughts (as they are the primary house workers). They also may have less possibilities to flee a disaster because of their care duties, cultural expectations that restrict their mobility or the fact that they were not taught how to behave in an extreme case. On the other hand, men face higher death rates as cultural pressures of masculinity imply that they take more risks.

Gendered impacts of climate disruptions in Europe

The heatwave in 2006 in France killed around “1% more elderly women than men due to cardiovascular disease, respiratory disease and directly heat-related deaths”⁴. In Italy, another study shows that more men than women die from landslides and floods due to “a different propensity towards the risk taking and a different degree of exposure between males and females”⁵. In Serbia, the 2014 floods impacted more women, elderly people and disabled people because of the lack of information on the state of emergency, the possibilities for evacuation and difficulties during the rehabilitation after the disaster⁶.

Increase of gender-based violence during/after climate change-induced disasters⁷: Extensive literature shows that gender-based violence and

inequalities, especially towards women and girls, but also against LGBTIQ+ communities⁸, increase during and after a climate change-induced disaster whether in the domestic sphere⁹, or during displacements and sheltering. This is due to marginalisation from social and political spaces and from economic resources that aggravate their vulnerabilities.

Accelerate transition to a resilient future

Women as agents of change: A growing number of studies^{10,11,12} show that women tend to have more environmentally friendly consumption patterns in terms of nutrition (they are more likely to buy eco-labelled products than men, they eat less meat) and transportation (they are more likely to use public transports, for economic reasons but also as a choice) and are more willing to change their behaviour due to environmental pressures than men.

Women and mitigation strategies¹³: EIGE showed that women, in Europe, were more at risk of energy poverty because of their average lower incomes. On the other hand, as they spend more time at home doing unpaid housework, they rely on energy for heating, air quality, and household devices. Mitigation measures to lower GHG emissions might put pressures on women because of the financial burden. Research still needs to be done on women's need for energy and its impact on climate change and the possible counterbalance with women's willingness to change their behaviours toward more environmental friendliness.

Inclusion of women in climate innovations:

- **Women's Weather Watch**¹⁴: After the floods in 2004 in the northern part of Fiji, WWW developed a community radio, providing real-time information via SMS alerts, a Viber group and Facebook page. The radio is composed of women leaders and correspondents.

- **Gender and water infrastructure**¹⁵: In developing countries, as women and girls spend a lot of time fetching water, they develop knowledge of soils and water yields. Using their knowledge and skills has proven efficient as the three case-studies on water infrastructure, on girls' and boys' education on water and health and on assistive technology to fetch water from Gendered Innovations show.

The inclusion of women in risk management¹⁶:

Two case studies show that women take an important part in the aftermath of a disaster. They are usually taking on typical caring work, emotional work and taking care of resources such as food and water. But they also take part in the reconstruction and recovery processes through agriculture and rebuilding houses devastated by disasters. The issue is that they are rarely part of the decision-making thus, their needs and concerns are not considered, and their potential knowledge and skills lost.

Harmful consequences of gender-blind EU responses to climate¹⁷:

EU measures to reduce its use of fossil fuels and emissions from transports led to an increased demand for biofuels. This has the consequence of importing them from developing countries and to "*land use changes, which are often gendered, since the land used for biofuels production is most likely to be marginal land farmed by women for household subsistence rather than the prime agricultural land farmed by men for export*".

Women in energy and climate change¹⁸:

In Europe, sectors such as energy, transports and technological sustainable development are dominated by men in the workforce. It is also true in decision-making positions in ministries (18.2%) and at managerial level (27%). This is despite the fact that women make up (in 2012) 53% of the tertiary graduates in natural sciences and technologies.

Recommendations

- Include sex and gender analysis where relevant and on topics affecting human populations as a default requirement. If sex and gender are not relevant, an explanation must be provided why not. Sex and gender must be included in the entire research/innovation cycle from research design, methodology, to data interpretation and communication.
- Include gender experts and local women active in climate actions in all of the actions of the Mission (the creation of climate risk profiles and comprehensive climate risk management plans, community resilience contracts, adaptation pathways, actionable solutions and Deep Demonstrations).
- Ensure the mainstreaming of gender perspectives in all the actions of the Mission.
- Make sure that the community infrastructures are safe, including prevention of gender-based violence.
- Ensure the production and use of sex-disaggregated data on climate change.
- Strive for gender balance in governance.

- To improve women's participation and representation in climate change studies and workforce, we advise you to take a look at our policy papers on [structural change](#), [disruptive measures](#) for gender equality in R&I and on the [role of Research Funding Organisations](#).

References

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- 1 Gendered Innovations (a collaboration between Stanford University and the European Commission): <https://genderedinnovations.stanford.edu/methods-sex-and-gender-analysis.html>. This initiative provides with a wide range of terms explanation, methods, checklists and case studies in science, health & medicine, engineering and environment with regards to the integration of a gender dimension in R&I.
- 2 Make sure to consult our other 2-pagers on Horizon Europe Missions: <https://genderaction.eu/genderaction-for-he-missions/>
- 3 Allwood, Gill (2014): 'Gender mainstreaming and EU climate change policy', in: Weiner, Elaine and Heather MacRae(eds): 'The persistent invisibility of gender in EU policy' European Integration online Papers (EIoP), Special issue 1, Vol. 18, Article 6, <http://eiop.or.at/eiop/texte/2014-006a.htm>, pp. 1-26
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- 12 European Commission (2017) Special Eurobarometer 468: Attitudes of European Citizens towards the Environment Brussels: European Union.
- 13 European Institute for Gender Equality (2012), *Ibid*.
- 14 <https://actionaid.org.au/articles/innovation-station-womens-weather-watch-fiji/>
- 15 <http://genderedinnovations.stanford.edu/case-studies/water.html#tabs-2>
- 16 Julie Drolet, Lena Dominelli, Margaret Alston, Robin Erasing, Golam Mathbor & Haorui Wu (2015) Women rebuilding lives post-disaster: innovative community practices for building resilience and promoting sustainable development, *Gender & Development*, 23:3, 433-448, DOI: 10.1080/13552074.2015.1096040.
- 17 Allwood, Gill (2014): *Ibid*.
- 18 https://eige.europa.eu/gender-statistics/dqs/browse/bpfa/bpfa_k/bpfa_k_offic/bpfa_k_offic_k4



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