GENDER ACTION

A SUSTAINABILITY APPROACH TO HORIZON EUROPE CLUSTER 4 AND 5

Horizon Europe
PILLAR II: Global Challenges & Industrial Competitiveness

Gender and Sustainability Dimensions of Horizon Europe Cluster 4: Digital, Industry and Space and Cluster 5: Climate, Energy and Mobility

This policy brief by GENDERACTION highlights the importance of integrating a gender dimension in the SDGs, the Sustainable Development Goals, as well as in Cluster 4 and 5. This is needed in order to promote economic, social and ecological sustainability throughout EU. **The overall aim is to strengthen the capacity of Horizon Europe to contribute to gender equality and achieving the Sustainable Development Goals (SDGs) of the 2030 Agenda.** Further, integrating a gender dimension in the SDGs will enhance ERA development as well as strengthen policy development in R&I within national contexts. The aim of integrating a gender dimension in SDGs is also highly relevant, both as a response to the current design of the Work Programme in Cluster 4 and 5 and for developing the Second Strategic Plan 2025-2027.

Horizon Europe sets gender equality as a crosscutting principle and aims to eliminate gender inequality and intersecting socioeconomic inequalities throughout research and innovation systems (European Union, 2021). GENDERACTION acknowledges this as an important development. In particular, this is stressed in relation to Pillar II Cluster 2 - Culture, Creativity and Inclusive Society. This is also a development

GENDERACTION welcomes. However, it is important to acknowledge the importance of including a gender dimension in all clusters. In the Second Strategic Plan 2025-2027, **Horizon Europe Pillar II should add the SDGs as a cross-cutting issue for all Clusters and Areas of Intervention. In order to ensure inclusiveness, an intersectional approach towards integrating a gender dimension in SDGs is crucial,**

in line with the overall gender equality strategy for EU (EC, 2020).

Horizon Europe Pillar II mainly targets the impact of research and innovation, supports the uptake of innovative solutions to address global challenges, and thus fostering change in order to achieve the SDGs. Also, moving the 2030 Agenda forward, interdisciplinary research on sustainability is crucial. Addressing the gender dimension in relation to the SDGs in Pillar II, both as a specific Area of Intervention and as a cross-cutting issue, will especially enhance EU and global policies for attaining SDG 5 (gender equality and women's empowerment). It will help to boost EU's innovation, competitiveness, security and inclusiveness, as it increases the scholarly quality and societal relevance of scientific knowledge. Further, strengthening knowledge on gender and SDGs are at the core of achieving the objectives of the Commission's plan for a new ERA, based on the quality of research, especially fostering a green transition and recovery, as well as promoting gender and diversity in science more generally.

Structural change through integrating a gender dimension will be crucial for achieving the SDGs, and this entails several aspects in terms of analysis and policy coordination. Research shows how SDG outcomes are contextual, interdependent, and complex, coupling human, technical and natural systems in multiple ways (Sachs et al., 2019). It is therefore necessary to treat the SDGs as interlinked, rather than isolated, goals. The way SDGs interact is a key question in the implementation of Agenda 2030 itself. Identifying synergies, clashing interests or goals counteracting each other, is therefore highly relevant. The SDGs interactions should be analysed with respect to their systemic and contextual character (Weitz et al., 2018). Therefore, the interactions between the goals and their targets, as well as interactions within the Clusters in Pillar II, are in need of an intersectional

gender analysis in order to foster structural change (Widegren & Sand, 2021).

- A *gender dimension* in research involves a shift in perspective, away from normative and non-reflective notions on gender, e.g. asking new and different questions, collecting data differently and starting out with different theoretical perspectives. Sex and gender are separate, but interrelated, concepts. *Sex* generally refers to biological characteristics in humans or animals. *Gender* refers to socio-cultural processes that shape behaviors, values, norms, knowledges etc. An *intersectional approach* concerns how categories such as gender, race, sexual orientation, functionality, geography, class etc. interact and create inequalities and oppression. One category of difference is often interlinked with others in several ways, which makes it highly relevant to always use intersectional perspectives when integrating gender dimensions in research.

- Sustainability is another central concept to be explored further. The three-pillar conception of sustainability – social, economic and environmental – can be understood in a somewhat similar way as intersectionality, with several dimensions interacting with each other. In order to move forward with the 2030 Agenda, there is an urgent need for more interdisciplinary research on sustainability with intersectional gender analysis that takes power structures into account. The fact that the word 'power' is mentioned only once in the 2030 Agenda, while the more individual-oriented 'empowerment' occurs abundantly, indicates a lack of awareness and knowledge on these important issues. This has consequences for the Agenda's account of gender (as well as gender equality) as SDG 5 lacks analysis of the origin and nature of the gender inequality that should – ideally – be remedied by gender equality.
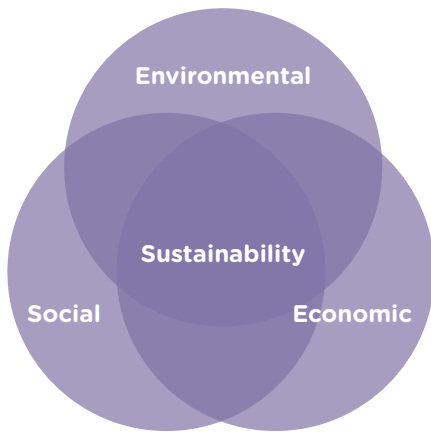
The importance of keeping track of different understandings of gender cannot be stressed enough (Widegren & Sand, 2021).

Examples of how sex and gender interact in relation to cluster 4 & 5

Climate change has the greatest impact on vulnerable groups

Climate change has the greatest impact on those that are most reliant on natural resources for their livelihoods and those who have the least capacity to respond to natural hazards, such as droughts, landslides, floods and hurricanes. Often these two groups overlap. Women commonly face higher risks and greater burdens from the impacts of climate change than men in situations of poverty, and the majority of the poor are women. Women's unequal participation in decision-making and labour market inequalities often prevent women from fully contributing to climate-related planning, policy-making and implementation (UN Women, 2016). Cultural norms related to gender sometimes also limit the ability of women to make quick decisions

on whether to move to safer grounds in disaster situations until it is too late. In short, women and other vulnerable groups suffer more from the effects of eco-systematic failures, and gain less from the exploitation of natural recourses, than privileged groups (Kotzé & French, 2018).

Local knowledge, indigenous knowledge

There is an increasing recognition of the importance of traditional knowledge and technologies (often referred to as TKT) in climate change research, policy, and programs. For an environmentally sustainable future and in order to advance climate science and solutions for a climate neutral and resilient society as well as to ensure social inclusion, human rights, gender equity and Indigenous and local knowledge are three essential, complementary dimensions of analysis (Brown et al., 2020). Traditional knowledge and technologies have for example been used for resilient agricultural production, weather forecasting, combatting deforestation and supporting ecological restoration, and water management to improve resilience to droughts. Indigenous knowledge that supports integration and holistic understanding and practice could strengthen the SDGs as well as the Areas of Interventions in Pillar II in terms of clarity, meaning, purpose, and related actions (Brown et al., 2020).

An intersectional approach to new technologies

The rapid adoption of new technologies offers a lot of possibilities, but to ensure a green and digital transition that leaves no one behind, risks have to be taken into account as well. A human-centered, intersectional approach to new technologies is needed in order to not reproduce inequalities and bias. Today, AI products do

often reproduce gender and racial biases due to a lack of diversity in the data used in training AI applications, as well as a lack of diversity in the development workforce. For instance, facial recognition systems perform better on men's faces than on women's, and on lighter skin than darker skin. Error rates vary from 35% for darker-skinned women, to 12% for darker-skinned men, 7% for lighter-skinned women, and less than 1% for lighter-skinned men. Women are also more likely to feel unwell when using virtual reality (VR). The symptoms experienced include pallor, sweating, increased heart rate, drowsiness, disorientation and general discomfort (European Commission, 2020). Built-in bias and gender-blindness in technology development can partly be explained by the homogeneity in the ICT specialist workforce, who develop new technologies. Currently only around 17% of the almost 8 million ICT specialists in Europe are women (EIGE, 2018). New technologies need to be checked for bias and developed in a more accurate way, including testing on different genders. Gender balance in development teams needs to be promoted and developers have to be trained accordingly.

Recommendations

It is highly recommended that Horizon Europe Pillar II **add the SDGs as a cross-cutting issue for all Clusters and Areas of Intervention** in the forthcoming Strategic Plan 2025-2027. GENDERACTION strongly advice integrating a gender dimension in order to highlight and analyse the different baselines in the socioeconomic situation of women and men as well as gender drivers and gender impacts of the innovative solutions for SDGs. In order to take these aspects into account, it is also highly recommended that Cluster 4 and 5 and all Areas of Intervention in them are cross-read with SDG 5.

All Clusters and Areas of Intervention in Pillar II of Horizon Europe

- Include the SDGs as a cross-cutting issue for all Clusters and Areas of Intervention.
- Include gender factors as cross-cutting issues in relation to all the SDGs by cross-reading all the SDGs with SDG 5 (gender equality and women's empowerment).
- Include an intersectional approach and make sure women and men are not addressed as homogeneous groups but their heterogeneity is systematically included.
- Foster interdisciplinary research on sustainability, integrating the economic, social and ecological dimensions. This is crucial for moving the 2030 Agenda forward and may be achieved by encouraging interdisciplinary research through dedicated calls, in order to increase, deepen and broaden the knowledge needed for efficient sustainable development.
- Include a power analysis of the origin and nature of gender inequalities as a prerequisite for understanding set goals for gender equality.
- Keep track of different understandings of gender and gender equality and foster competence to make distinctions between different accounts of the concepts.
- Include gender experts and ensure gender balance and gender training among project evaluators.
- Strive for gender balance at all levels and in all areas of knowledge in research teams and in decision-making in the Commission.
- Explore and strengthen the development of alternative ways of reviewing research. This is especially relevant as structural change is required in order to reach the SDGs and since current research funding structures might un-

dermine research ideas with potential to systemic change.

- Promote collaborative research processes, such as the SDG Synergies Approach or *citizen science* (see Kullenberg et al., 2016), in future work programmes. The transformative claim of the 2030 Agenda requires knowledge interactions between relevant stakeholders, involving a wider range of actors than those traditionally involved in knowledge production and decision-making.
- Encourage analysis of interactions between SDG targets, and promote the development of gender knowledge on SDGs, in forthcoming work programmes.
- Integrate the assessment of SDG Relevance in the evaluation of applications.
- Ensure RPOs responsibilities for developing sustainable conditions for researcher and students. This is directly linked to how knowledge production can contribute to the transition to a sustainable world, given the negative effects of unsustainable working conditions on the quality of R&I. This calls for structural change with an intersectional approach, as developed in previous GENDERACTION Policy Briefs.

Cluster 4 & 5

- Include SDG 5 (gender equality and women's empowerment) as a cross-cutting issue in Cluster 4 and 5 and all areas of intervention in them. Cross-read Cluster 4 and 5 and all their Areas of Interventions with SDG 5.
- Monitor and analyse all funded projects which produce and cross-analyse sex-disaggregated data and encourage integrating a gender dimension as well as an intersectional approach.
- Encourage and establish calls for research targeting:
  – gender analysis of existing sex-disaggregated data, and of data of other

stratifiers of inequity. This can include, but is not limited to, an analysis of how gendered patterns and cultural norms surrounding masculinities and femininities shape women's and men's lives.
– multidisciplinary health research, moving beyond strict medical research fostering interdisciplinary research involving the social sciences and humanities
– multi-level, holistic approaches, in which local and indigenous traditional knowledge and technologies in climate change research are considered.
– intersectional approaches to new technologies, such as AI, artificial intelligence, and VR, virtual reality, in order to avoid reproducing inequalities.

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