

# THE FUTURE OF GENDER EQUALITY IN EUROPEAN RESEARCH AND INNOVATION

In recent years Member States, the Commission and research funding and performing institutions have implemented major initiatives to advance gender equality in research and innovation in the European Research Area (ERA). These efforts must continue and expand for research and innovation to contribute to the resilience and quality of our democratic institutions, sustainability and competitiveness in the EU.

## The European Research Area post-2020

In 2019, we are celebrating the 20<sup>th</sup> anniversary of European activities promoting gender equality in research. During that time, **Europe has made great forward strides, and gender equality and gender mainstreaming have become one of the ERA priorities**, with the three objectives of gender balance in research teams, gender balance in decision-making and the gender dimension in research content. Actions have moved from “fixing women” to “fixing institutions” through comprehensive gender equality plans to achieve institutional change and to “fixing knowledge” with Horizon 2020 and several national research funders introducing measures to ensure that new research incorporates sex and gender analysis. The body of scientific knowledge on gender and other forms of inequality in research and innovation (R&I) has expanded greatly.

However, **political consensus about gender equality as a priority of the European Research Area is under threat.**

There is a tendency to reduce gender equality to female participation in research or to ensuring work-life balance. Furthermore, there is a threat to Research Performing Organizations as democratic institutions and their academic freedoms through a wave of anti-genderism coming from right-wing populist and neoconservative regimes on a global scale.

The ERA Roadmap 2015 – 2020 is coming under review in 2020 with a view to developing a new Communication for the period beyond 2020, which should propose revised ERA priorities and ERA monitoring mechanism at national and EU level, to be followed by Council Conclusions on the new ERA advisory structure. The ERA Roadmap has been a catalyst for gender equality policy and measures in many EU countries, especially those where such

measures had not been in place previously (Standing Working Group on Gender in Research and Innovation 2018). GENDERACTION Deliverable report 3.1 shows that for 57% newer Member States and 25% of the older Member States, the ERA Roadmap was the first policy document dedicated to gender equality in research. Europe must do more to build a fair, just and equal research and innovation environment that answers the needs of its population.

Other ERA stakeholders, umbrella organisations including LERU, EUA, Science Europe and NordForsk, have taken measures and developed recommendations. Financial support for implementing gender equality plans in Research Funding and Research Performing Organizations at the EU and national levels has been vital to raising awareness, building uptake and implementing concrete measures to change the organisational culture and practices and procedures. This work must continue.

Intersectional approaches to gender equality (an analytical framework examining interlocking intersecting systems of power between gender and other social categories and identities, such as ethnicity and race, gender identity, sexual orientation, socio-economic status and disability) are rarely adopted at policy or institutional level in the ERA, with the exception of a few countries. The experience of the current institutional change projects funded through Horizon 2020 and Framework Programme 7, including most recently experience gathered at the GENDERACTION Mutual Learning Workshop on Best Practice Exchange to Support Institutional Change, suggests that **intersectionality is crucial for addressing the multiple axes of inequality that researchers experience.**

## Recommendations

- Gender equality and gender mainstreaming must continue as one of the

policy priorities for the future European Research Area.

- The Innovation Sector should be included in the European Research and Innovation Area with concrete actions and indicators (for more on the Business Enterprise Sector see below).
- The budget for implementing gender equality plans should be increased in Horizon Europe compared to Horizon 2020, given the importance of the added value of European cooperation among institutions. Member States should use European Social Fund to complement these Commission efforts at national level, by supporting institutional changes through gender equality plans or similar instruments.
- The new Horizon Europe broad line on “advanced strategies and innovative methods for gender equality in all social, economic and cultural domains, and to deal with gender biases and gender-based violence” needs to ensure regular annual calls which allow enough funding for an appropriate number of projects, in order to meet the objective of providing innovative solutions for gender equality challenges in the EU and worldwide.
- Policy exchange, mutual learning and coordination among Member States, Associated Countries and the Commission has proven crucial. A dedicated working group of national and Commission representatives must continue, with clear mandate and increased cooperation with other ERA stakeholders, most notably the umbrella organizations gathered in the ERA Stakeholder Platform.
- Intersectional approaches to gender equality must be adopted at institutional, national and EU level, addressing issues of race and ethnicity, including migration and refugees, LGBT+ and disability. Gender equality plans fund-



**Gender equality and gender mainstreaming must continue as one of the policy priorities for the future European Research Area.**

ed by the Commission and at national level should incorporate intersectionality as an obligation. Opportunities for sharing experience among responsible staff, research and other forms of support should be supported both at the EU and MS level.

### **Measuring equality, bridging the Widening divide**

Despite progress, **development remains uneven across the EU**, both for innovation capacity and gender equality (Standing Working Group on Gender in Research and Innovation 2018, ERA Progress Report 2018). The Figures 2018 identifies important improvements but also shows we are still far from reaching equality. The uptake of institutional change through gender equality plans and the integration of the gender dimension in research content, in particular, require significant improvement in action.

The current **ERA headline indicator for gender equality**, proportion of women in Grade A, only reflects the situation in the Higher Education Sector. Importantly, this indicator does not necessarily reflect the working conditions for women and other

disadvantaged groups and may be related more to research and development investment and occupational prestige in a given country. In fact, the Priority 4 headline indicator may be inversely correlated with ERA research excellence indicator and the GBARD as percentage of GDP (ERA Progress Report 2018). Analysis of the National Action Plans and Strategies carried out by GENDERACTION confirms differences among countries in how they conceptualise gender equality and which ERA priorities they address (GENDERACTION Deliverable 3.1), and this was also corroborated by a 2018 analysis of the implementation of Council Conclusions on advancing gender equality in the ERA, carried out by the ERAC Standing Working Group on Gender in Research and Innovation.

This suggests that it is necessary to review the way gender equality is defined, how progress is measured in achieving gender equality and which indicators are used.

### **Recommendations**

- Member States, Associated Countries and the Commission must step up efforts for gender equality and gender mainstreaming as a priority for the European Research Area post 2020, particularly in the Widening countries.
- Specifically, it is necessary to review how progress in this priority is defined and develop adequate indicators which should be complemented by indicators reflecting contextual factors such as R&D intensity. ERAC Standing Working Group on Gender in Research and Innovation should be involved in this process.
- A European study should be commissioned from the Joint Research Centre to examine the correlation among proportion of women among PhD holders, researchers, professors in Grade A and

in the Business Enterprise Sector (BES) and the implementation of gender equality policies as well as the research and innovation intensity.

- In implementing Horizon Europe, the Commission should adopt concrete measures to incentivize the Widening countries to develop gender equality measures, for example through a dedicated gender-related call for proposals or by topping up Widening project budgets for targeted gender equality measures to be implemented within the project.

### **The Business Enterprise Sector: Taking corporate social responsibility seriously**

There is evidence already that gender balance is good for business; experience also shows that measures and actions that benefit women actually benefit all. Still, women make up only 20.2% of researchers in the Business Enterprise Sector (BES), a huge employer of researchers and innovators in the EU. Women are strongly under-represented among patent inventors and there is a strong gender gap in the patent teams where 47% of teams were male only, followed by 37% of one-man inventor teams. Between 2006 and 2016, the majority of research and development expenditure was in the BES, rising from 1.12% of GDP in 2006 to 1.32% by 2016, an overall increase of 17.9% (Eurostat 2018). In contrast, the second strongest Higher Education sector performed 0.47% of GDP but has been stagnant from 2010 onward; the government sector performed 0.23% of GDP and the private non-profit sector 0.02% of GDP, both at the same levels as ten years ago.

While some corporations have developed programmes to increase the participation of women and other under-represented populations, these initiatives



**The Innovation Sector should be included in the European Research and Innovation Area with concrete actions and indicators.**

rarely address the organizational culture and structures and they are implemented very unevenly in their subsidiaries. Women-led tech SMEs and start-ups are receiving increasing attention yet the 2018 State of European Tech report shows that 93% of all funds raised by European venture capital backed companies in 2018 went to all-male founding teams and 46% of women surveyed declared they experienced discrimination in the European tech sector. Research shows that BES can benefit from higher participation of women both in boardrooms and as owners (Mitchell 2011). One of the recommendations of the Kauffmann Foundation (2016) is to increase SME research funding for women-owned businesses. As BES is taking advantage of public funding for research, public funders can take a proactive stance towards promoting gender equality by making funding contingent on active promotion of gender equality in BES applicants and supporting women-led businesses. This must include the integration of the gender dimension in the research and innovation content, not least in order to avoid financial and prestige losses.

Lastly, it is necessary to change the perception of entrepreneurship and technol-

ogy as a masculine domain. The EU Prize for Women Innovators is a good step toward celebrating successful women entrepreneurs. Such measures should be put in place across the European Research Area, with a view to stimulate the establishment of women-led start-ups and businesses and provide role models.

## Recommendations

- The BES, including Small and Medium Sized Enterprises and start-ups, should take their corporate social responsibility seriously, promote institutional changes for equality and diversity internally and address the gender dimension in the research and innovation solutions they develop.
- Public funding allocated to the BES, including SMEs and start-ups, should be made contingent upon gender and diversity measures in place.
- Specific funding should be allocated for tech companies and start-ups led by women and minorities at European Innovation Council and similar national programmes.
- Funding lines for innovation at the EU and MS levels should, as a rule, address the gender and diversity dimensions in innovation, so that gender and other forms of bias are not built into new technologies and innovations. This must apply as well to the European Innovation Council and European Institute of Innovation and Technology.
- The Commission should promote the EU Prize for Women Innovators more widely, to strengthen the brand and awareness in the EU. Member States should join the Commission and incentivise the unique role of women as social innovators and entrepreneurs and enhance their role in driving smart specialisation, by establishing funding schemes, prizes or other similar instruments.

## Global challenges for European societies: Addressing intersectional gender-related gaps and needs

The evidence is mounting that integration of the gender dimension in research and innovation leads to better solutions and conversely, when this is not done, the negative impact falls disproportionately on women (Saini 2017, Criado Perez 2019). New evidence also suggests that **racial bias is re-emerging in research**, as racialized nationalism is a resurgent threat across the globe (Saini 2019). In addition, the wake-up call from #MeToo presents a challenge to European research communities to address the extent to which gender based harassment is embedded in global academic culture (Bondestam & Lundqvist 2018). There are no solutions to missions and global challenges without paying attention to the ways they are embedded in power structures and gendered.

As Europe designs its future research and innovation strategies in the face of pressing global challenges, Horizon Europe will link closely to **the 2030 Agenda for sustainable development and Sustainable Development Goals**. The United Nations consider “the systematic mainstreaming of a gender perspective in the implementation of the Agenda” (United Nations 2015) to be crucial; similarly, **Horizon Europe should take further the actions developed in Horizon 2020 to incorporate the gender dimension in the content of research and innovation**.

The Gendered Innovations initiative launched by the Commission and Stanford University in 2011 provided excellent concrete examples of what sex and gender analysis can contribute. Now the Commission is taking this work further with a Gendered Innovations 2 expert group, which will develop new case studies and methodologies which should showcase Horizon 2020 projects that have integrated a gender dimension in their

**Horizon Europe and national Research Funding Organizations, including the European Social Fund, should open calls for future research to address the Sustainable Development Goals, including the gender dimension across all the SGDs.**

contents and provide recommendations for Horizon Europe. Following the adoption of Horizon Europe, GENDERACTION will explore the gender dimension in Horizon Europe's Missions and Partnerships, to provide recommendations for the integration of sex/gender analysis. A specific Mission on gender equality SDG5 has already been suggested by GENDERACTION in Policy Brief on Gender for Horizon Europe Research and Innovation Missions.

Both gender specific research and the integration of gender into research and innovation contents are crucial for improving EU policies as well as for attaining United Nations Sustainable Development Goals. The lack of gender awareness and gender knowledge at various levels of the R&I systems still requires an effort for capacity building of key actors in order to facilitate the implementation of gender policies in the ERA. More research-based evidence is needed on the gender-related impacts of R&I policies including gender equality and gender mainstreaming policies in the field.

### **Recommendations**

- In implementing Horizon Europe, the gender dimension should be addressed

as a requirement in terms of excellence and impact in all relevant areas linked to the Sustainable Development Goals, requiring applicants to develop sex/gender analysis and include gender experts in the consortia for these topics. Project reporting should require that sex/gender analysis should be specifically addressed. Monitoring of the inclusion of the gender dimension should be improved in Horizon Europe research projects.

- Horizon Europe and national Research Funding Organizations, including the European Social Fund, should open calls for future research to address the Sustainable Development Goals, including the gender dimension across all the SGDs.

### **International cooperation: Global inequalities, empowerment, resilience and inclusion**

Ethical concerns, including gender, economic and ethnic/racial inequality, must be given the highest priority due to unequal power contexts in which we live, globally and within the EU. Poor and at risk areas of the globe and populations must be protected from exploitation for research and innovation purposes (use of resources such as land and indigenous crops, informed consent etc.). Research and innovation must open up further, to ensure stakeholder multiplicity ranging from the usual suspects of governments, researchers and corporations, to NGOs and communities, including women's grassroots organizations and gender equality networks. Without people's subscription, developed solutions will have a hard time succeeding.

The European Commission Strategic European Framework for International Science and Technology Cooperation (2009) highlighted that "special attention should

be paid to promoting and facilitating gender equality and the role of private sector investment in S&T in developing countries". Yet, to date international cooperation in the ERA rarely incorporates gender equality concerns.

In response to the 2015 Council Conclusions on Advancing Gender Equality in the ERA, the Standing Working Group on Gender in Research and Innovation and the Strategic Forum for International Cooperation produced an **Opinion on developing joint guidelines on a gender perspective for international cooperation in STI**. GENDERACTION drafted a **Methodological Framework to Assess Gender in International Cooperation in STI** with a checklist and concrete examples of implementation and **Policy brief no. 6 on Gender-responsive international cooperation for Horizon Europe**.

## Recommendations

- The European Commission, Member States, Research Funding and Research Performing Organizations should pay attention to effectively addressing gender equality issues in their new research and innovation collaborations with third countries through bi- and multi-lateral agreements (including JPIs and ERA-Net Cofund schemes *inter alia*), with a view to foster empowerment, inclusion and solidarity across nations.

## References

Atomico. 2018. The State of European Tech 2018. Available online at <https://2018.stateofeuropean-tech.com/>.

Bondestam, Fredrik & Lundqvist, Maja. 2018. *Sexual harassment in academia. An International research review*. Stockholm: The Swedish Research Council. Available at [https://www.vr.se/download/18.ad27632166e0b1efab17ba/1543568692760/Sexual-harassment-in-academia\\_VR\\_2018.pdf](https://www.vr.se/download/18.ad27632166e0b1efab17ba/1543568692760/Sexual-harassment-in-academia_VR_2018.pdf).

Criado Perez, Caroline. 2019. *Invisible Women: Exposing Data Bias in a World Designed for Men*. Vintage Publishing.

European Commission. 2019. *ERA Progress Report 2018*. Luxembourg: Publications Office of the European Union. Available at <https://publications.europa.eu/en/web/eu-law-and-publications/publication-detail/-/publication/5641328c-33f8-11e9-8d04-01aa75ed71a1>.

European Commission. 2019. *She Figures 2018*. Luxembourg: Publications Office of the European Union. Available at <https://publications.europa.eu/en/publication-detail/-/publication/9540ffa1-4478-11e9-a8ed-01aa75ed71a1/language-en>.

European Commission. 2009. *A Strategic European Framework for International Science and Technology Cooperation. Communication from the Commission to the Council and the European Parliament*. Luxembourg: Office for Official Publications of the European Communities. [https://ec.europa.eu/research/iscp/pdf/policy/com\\_2008\\_588\\_en.pdf](https://ec.europa.eu/research/iscp/pdf/policy/com_2008_588_en.pdf).

European Commission. 1999. Communication of 17 February 1999 entitled 'Women and science: Mobilising women to enrich European research'. Available at [https://ec.europa.eu/research/swafs/pdf/pub\\_gender\\_equality/g\\_wo\\_co\\_en.pdf](https://ec.europa.eu/research/swafs/pdf/pub_gender_equality/g_wo_co_en.pdf).

Eurostat. 2018. R&I expenditure. Available at [https://ec.europa.eu/eurostat/statistics-explained/index.php/R\\_%26\\_D\\_expenditure](https://ec.europa.eu/eurostat/statistics-explained/index.php/R_%26_D_expenditure).

Kauffman Foundation. 2016. *Kauffman Compilation. Research on Gender and Entrepreneurship*. Available online [https://www.kauffman.org/-/media/kauffman\\_org/resources/2016/gender\\_compilation\\_83016.pdf](https://www.kauffman.org/-/media/kauffman_org/resources/2016/gender_compilation_83016.pdf).

Kauffman Foundation. 2015. *Entrepreneurship Policy Digest. Women Entrepreneurs are Key to Accelerating Growth*. Available at [https://www.kauffman.org/-/media/kauffman\\_org/resources/2015/entrepreneurship-policy-digest/july-2015/women\\_entrepreneurs\\_are\\_key\\_to\\_accelerating\\_growth.pdf](https://www.kauffman.org/-/media/kauffman_org/resources/2015/entrepreneurship-policy-digest/july-2015/women_entrepreneurs_are_key_to_accelerating_growth.pdf).

Mitchell, Lesa. 2011. *Overcoming the Gender Gap: Women Entrepreneurs as Economic Drivers*. Ewing Marion Kauffman Foundation. Available online at [https://www.kauffman.org/-/media/kauffman\\_org/research%20reports%20and%20covers/2011/09/growing\\_the\\_economy\\_women\\_entrepreneurs.pdf](https://www.kauffman.org/-/media/kauffman_org/research%20reports%20and%20covers/2011/09/growing_the_economy_women_entrepreneurs.pdf).

GENDERACTION. 2018. *ERA Roadmap Priority 4 Benchmarking. Report on national roadmaps and mechanisms in ERA priority 4*. Deliverable 3.1 available at [http://genderaction.eu/wp-content/uploads/2018/12/741466\\_GENDERACTION\\_D05\\_NAPS\\_submitted.pdf](http://genderaction.eu/wp-content/uploads/2018/12/741466_GENDERACTION_D05_NAPS_submitted.pdf).

GENDERACTION. 2018. *Briefing paper n.4 on Gender for Horizon Europe. Research & Innovation Missions. Ensuring a fast-track to better future for all*. Available at [http://genderaction.eu/wp-content/uploads/2018/07/GENDERACTION\\_Policy-Brief\\_4\\_GENDER-IN-HE-Missions.pdf](http://genderaction.eu/wp-content/uploads/2018/07/GENDERACTION_Policy-Brief_4_GENDER-IN-HE-Missions.pdf).

GENDERACTION. 2018. *Policy brief no. 6 on Gender-responsive International Cooperation for Horizon Europe*. Available at [http://genderaction.eu/wp-content/uploads/2018/07/GENDERACTION\\_PolicyBrief\\_FP9\\_IntCooperation.pdf](http://genderaction.eu/wp-content/uploads/2018/07/GENDERACTION_PolicyBrief_FP9_IntCooperation.pdf).

GENDERACTION. 2018. *Methodological Framework to assess gender in international cooperation in STI*. Available at [http://genderaction.eu/wp-content/uploads/2018/12/741466\\_GENDERACTION\\_D14\\_methodological-framework\\_submitted.pdf](http://genderaction.eu/wp-content/uploads/2018/12/741466_GENDERACTION_D14_methodological-framework_submitted.pdf).

Saini, Angela. 2017. *Inferior. How Science Got Women Wrong and the New Research That's Rewriting the Story*. Harper Collins.

Saini, Angela. 2019 (in print). *Superior. The Return of Race Science*. Penguin Random House.

Standing Working Group on Gender in Research and Innovation. 2018. *Report on the implementation of Council Conclusions of 1 December 2015 on Advancing Gender Equality in the European Research Area*. ERAC. Available at [https://era.gv.at/object/document/4442/attach/Report\\_Implementation\\_CC\\_of\\_1\\_Dec\\_2015.pdf](https://era.gv.at/object/document/4442/attach/Report_Implementation_CC_of_1_Dec_2015.pdf).

Strategic Forum for International Cooperation and Standing Working Group on Gender in Research and Innovation. 2018. *SFIC and SWG-GRI opinion on developing joint guidelines on a gender perspective for international cooperation in Science, Technology and Innovation (STI)*. Available at <http://data.consilium.europa.eu/doc/document/ST-1352-2018-INIT/en/pdf>.







## **CONTACT**

### **GENDERACTION Coordinator**

Marcela Linková, PhD  
Centre for Gender and Science  
Institute of Sociology  
Czech Academy of Sciences  
Jilská 1  
110 00 Prague 1  
Czech Republic  
email: [info@genderaction.eu](mailto:info@genderaction.eu)



Project duration 1<sup>st</sup> April 2017—31<sup>st</sup> March 2021

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 741466.

Disclaimer — The views and opinions expressed in this document are solely those of the project, not those of the European Commission. The European Commission is not responsible for any use that may be made of the information it contains.