

RESEARCH CAREERS: THE GROUND FOR GENDER+ INCLUSION

Introduction

Sustainable and inclusive research careers¹ are key foundations for ensuring high standards of science, research results, knowledge transfer, and innovation, in the sense that they allow for an optimal allocation of highly qualified human resources and capacities, improving the system's competitiveness in the short and the long run.

However, the frequent lack of funding, coupled with an overly restrictive definition of scientific excellence, has led to an excessive increase in competitiveness at the national and global levels, resulting in reduced success rates in grant application calls and a worsening of existing inequities and inequalities. Policies have to clearly address this complex problem in order to prevent or offset these contradictory impacts and to better preserve the sustainability and inclusiveness of the Higher Education (HE) and Research and Innovation (R&I) systems and of research and academic careers in particular. It is essential to further refine and adjust policies so that they more efficiently tackle their systemic and potential collateral effects, in particular the risk of the perverse 'cumulative advantage' as expressed in the so-called 'Matthew effect' (Merton, 1968).

Research careers have long been and remain the target of attention at the European policy level, and they are clearly the focus of several recent policy initiatives, including

1 | Research careers – a professional work life lived through the production of scientific knowledge that emphasises continuous learning and the accumulation of competences and connections. Research careers consist of four stages: R1: First Stage Researchers (up to the point of PhD); R2: Recognised Researchers (PhD holders or equivalent who are not yet fully independent); R3: Established Researchers (researchers who have developed a level of independence); R4: Leading Researchers (researchers leading their research area or field). These different stages are sector-neutral, applicable to companies, NGOs, research institutions, research universities, and universities in the applied sciences (according to the MORE 4 Report 2021). **Inclusive research careers** – include the acknowledgement and valorisation of diversity in research roles and careers [...] taking diversity into account in the broader sense (e.g. racial or ethnic origin, sexual orientation, socio-economic, disability) in research teams at all levels and in the content of research and innovation (Agreement on Reforming Research Assessment - adapted).

the [Council Conclusions on Deepening the European Research Area: Providing researchers with attractive and sustainable careers and working conditions and making brain circulation a reality \(2021\)](#), the [Council Recommendation on a Pact for Research and Innovation in Europe \(2021\)](#), the [European Research Area Policy Agenda](#) and dedicated actions for the period 2022-2024, the new frame of profiles and the [European Charter for Researchers \(2023\)](#), and the [European Framework for Research Careers](#) adopted in late 2023. Adding to these documents, the [Ljubljana Declaration \(2021\)](#) acknowledges gender equality principles and underlines the need for inclusive research careers. These policy documents increasingly address inclusiveness and gender equality in relation to advancing the framework for research careers, including the issue of gender-based violence.

The aim of this policy brief is to contribute to the more effective fulfilment of the vision, guidelines, and collective concerns expressed in the above policy documents, specifically focusing on the promotion of gender+ inclusive research careers, while emphasising gender and diversity as the mainstays of fair and balanced research careers. This would help to ensure equal chances of realising personal career ambitions for all and removing structural and cultural barriers.

The set of recommendations proposed are addressed to policymakers, at both the European and national levels, and to relevant national policymakers, research funding organisations (RFOs), research performing organisations (RPOs), and higher education institutions (HEIs). At the same time, these recommendations aim to seize this as an opportunity for greater policy coordination across the ERA, while also necessarily safeguarding the specific national contexts and policy ownership. Structural changes in research careers have to interact with the specifics of national legal frameworks and systemic constraints (including at the level of institutions, such as RFOs and RPOs). Tangible improvements in the research profession, and specifically inclusiveness issues, are very much in national hands.

The path to building gender+ inclusive research careers is complex and requires a shift in the focus of policies towards multiple equality dimensions and intersectional discrimination. R&I and HE systems must safeguard and support gender equality, diversity, and inclusiveness. In fact, the concept of ‘inclusive research careers’ used in this policy brief specifically means **gender+ inclusive research careers**². This understanding of inclusiveness is rooted in a concern about gender; it integrates other inequality dimensions and an intersectional approach while keeping gender at its core. In order to positively transform the reality of the R&I and HE systems this advance in terminology and knowledge (gender+) must therefore further impact the political sphere (which is the goal of this document).

These recommendations seek to address the barriers that arise along a research career, which is *taken as a continuum, from junior to senior* stages. Valuing the diversity of researchers’ profiles, roles, and research activities and outcomes, in recruitment and assessment, is a factor for greater gender balance and inclusion. Significantly impacting this diversity, [ResearchComp](#),² a EC tool, was created to specifically support the development of researchers’ transversal skills and foster intersectional careers (across all the relevant sectors of society, including academia, industry, public administration, and the non-profit sector).

² | [The European Competence Framework for Researchers](#).

The present recommendations derive from the gaps and main conclusions identified in the analysis of the benchmarking report on *Inclusive Research Careers*, which was developed under the GENDERACTIONplus project funded by the Horizon Europe that is dedicated to advancing inclusive gender equality in the European Research Area. This report was discussed within the GENDERACTIONplus team and the two Communities of Practice (CoPs) of National Authorities and RFOs. These recommendations were discussed with an external group of experts beyond the internal discussion within the Consortium.

Statement of the issue

The European Commission Statement *'We still need more women in science'*, published on 11 February 2024, clearly identifies the urgent need for more action, despite recognising progress in gender equality in science. *'In the EU, 41% of scientists and engineers are women. However, the picture changes when we look at women as self-employed professionals in science, engineering and information and communication technologies. The figure hovers just above 25% [...] Only if we address the crucial aspects of gender equality, diversity and inclusion can we be sure that research and innovation address challenges concerning us all.'*

Research careers are at the heart of the R&I and HE systems. Indeed, they are *par excellence* the ground where all policies and measures for improving gender equality and inclusiveness ultimately materialise and become tangible. It should be noted, however, that, across R&I and HE systems, policies on inclusive research careers are rare or are not clearly outlined.

Precarity and lack of career prospects

The drive to increase the proportion of women in research is challenged by the fact that there are not enough academic positions to accommodate the people with PhDs interested in them. According to the European Commission, *'the EU remains the world leader for the number of researchers, with a 23.5% share. However, there has not been a similar increase in the number of academic positions and the reality is that only a tiny percentage of PhD graduates will find a job in the academic or public research sector. Therefore, they must look for employment outside these sectors.'*³ In fact, given the small number of researchers that progress to become academics, it is academia that is the alternative career' (European Union, 2023a).

The resulting precariousness of researchers is certainly an obstacle to gender+ inclusive research careers. In fact, women currently make up the majority of PhD students in many countries, but the top positions/professors in academia are predominantly occupied by men, so precarity is experienced much more by women. In this context, the assessment

3 | According to Eurostat, in 2021 in the EU most researchers worked in the business enterprise sector (56%) and the higher education sector (32%), followed by the government sector (11%). See <https://ec.europa.eu/eurostat/web/products-eurostat-news/w/ddn-20221206-1>.

criteria of research proposals (and curricula vitae) are recognised as crucial, but the eligibility criteria to apply for funding must also be a focus of attention, in most cases because of the possibility of access to funding application instruments being blocked for administrative reasons (such as 'age'). In principle, no one should be excluded, from the outset, from a research career for reasons other than a lack of talent, motivation, or scientific merit. The situation is so disruptive that a new vision for doctoral education is emerging: *'Doctoral education and postdoctoral training need to be geared not only for careers in academic research but increasingly for research careers beyond academia, or in non-research careers that can benefit from the advanced skills of doctorate holder'* (OECD, 2021: 11).

This new vision could serve as a useful way of mitigating the aforementioned excessive competition at the national, European, and global levels. Indeed, the major issue with the severe underrepresentation of women compared to men is in the Business Enterprise Sector (BES), and not in the Government (GOV) and Higher Education Institutions (HEI) sectors. Within OECD countries, the share of women among total researchers in the BES is very low: there is at most only 1 woman for every 5 researchers.

The BES has a huge role to play in absorbing highly qualified employees, in particular women, while also maintaining competitiveness levels within and across systems. The current discussion on the new concept of the Single Market (SM) and the '5th freedom' – putting research and innovation drivers at the core of the SM and fostering an ecosystem where knowledge diffusion propels economic vitality, societal advancement, and cultural enlightenment⁴ – is certainly a favourable context in which to enhance this role.

GENDERACTIONplus policy analysis: the failure to address critical issues relating to inclusive and sustainable research careers

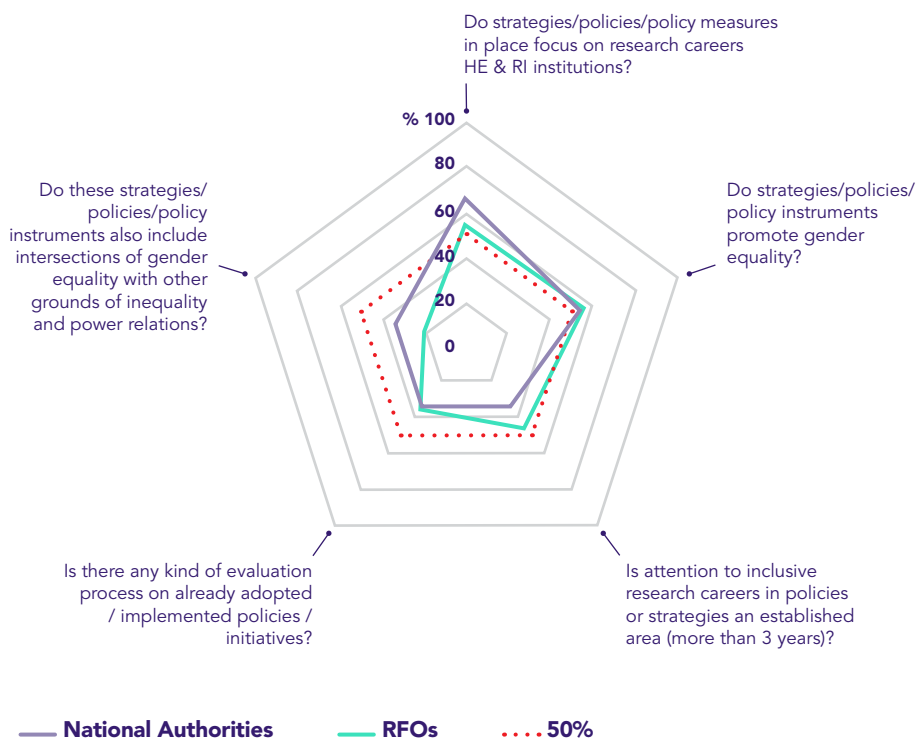
The GENDERACTIONplus report on inclusive research careers presents the state of the art of research careers in several European countries from the point of view of related national authorities and RFOs and a summary of the findings. All in all, the report highlights the political/policy failure to address critical issues connected with inclusive and sustainable careers.

Globally, these results show that the progress has been insufficient, with barely half of all national authorities and RFOs having guiding strategies, policies, or specific actions on research careers and even fewer having ones on inclusive research careers. A less favourable pattern can be observed at the national and institutional levels in terms of the robustness of the policies already in place, particularly with respect to monitoring mechanisms of national policies (which are found in less than 50% of cases). A more disparate and on the whole adverse pattern is observed when it comes to measures addressing the intersection of gender equality with other grounds of inequality. In short, there is still a long way to go to achieve a gender+ approach (Figure 1).

⁴ | [Much more than a market](#) (Letta, E., 2024).

Figure 1.

The main features of national and RFO strategies, policies, and measures on gender+ research careers



National policies addressing research careers from a gender+ perspective

The benchmarking analysis on national policies identified eight countries among the fifteen participating in the GENDERACTIONplus survey that in some way address the issue of inclusive research careers. Only four countries had established policies on inclusive research careers (in place for at least three years). The policies that do exist tend to address mostly R&I as a whole, with varying degrees of focus and/or reference to other policies. The landscape of current policies on research career inclusiveness is heterogeneous and varies depending on national contexts and priorities. Concerns with gender equality, diversity, and inclusion are seldom addressed in relation to research careers, even when they are approached in the same policy documents. In the latter case, the report suggests that there is a greater focus on policies dealing with work-life balance

and working conditions and with career development and progression issues, which is reflected in the terminology used.

Some measures and terminology specifically focused on inclusive research careers deal with the compatibility of (child)care with an academic career; the general representation of women, especially in relation to leadership or top academic positions; gender balance in recruitment committees; diversity in assessment processes; and women's innovation and entrepreneurial skills. The use of an intersectional approach is still too recent and is not yet established in the policy narrative.

The policies of Research Funding Organisations addressing research careers from a gender perspective

Regarding RFOs, out of the twenty-one organisations responding to the benchmark survey, eleven have some strategy, policy, or measure in place addressing research careers and promoting gender equality. Inclusive research careers are an established focus area for nine RFOs, primarily supported by the principle of equality, which is rooted in the ethical imperative of non-discrimination. Only four RFOs consider other dimensions of inequality besides gender, and the most prominent is age. However, to achieve gender+ inclusiveness in research careers, attention must be paid to several elements of diversity and an intersectional approach should be adopted (only one RFO has measures addressing this approach).

Signs of progress on the topic

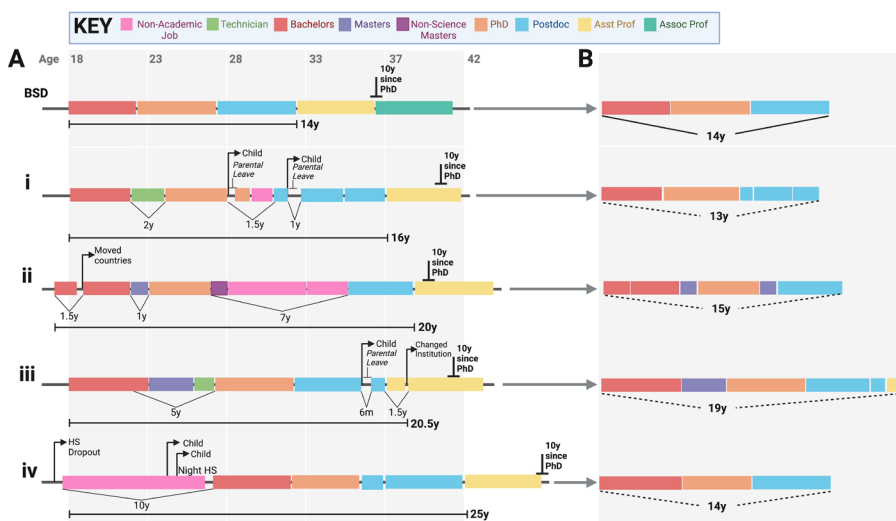
Despite the policy landscape described above, emerging signs of positive progress on inclusive research careers can be identified in several strands: i) new knowledge on the topic that is advancing aspects of gender equality & inclusiveness, including intersectionality; ii) policymaking based on scientific evidence; and iii) awareness – implicit or explicit – of the topic by key actors in the R&I and HE systems in anticipation of new practices.

Many RFOs acknowledged the need to continuously improve the impact of policies towards greater inclusiveness as a shared imperative (through mutual learning, discussing topics, raising awareness, and involving a broad spectrum of stakeholders) and the need to design strategies and set priorities for equality dimensions along phased plans in order to achieve maximum diversity, and these are signs that showcase an awareness that may trigger new practices.

'Supporting nonlinear careers to diversify science' (Vlasits et al., 2023) is a significant example of knowledge advancement in addressing these critical issues, as mentioned above in bullet i). Based on the authors' life experiences, the paper provides scientific evidence that can be used to advise public policy. Through a comparative exercise, each author's individual research career path is contrasted with a theoretical and linear model of a research career path (Figure 2). This theoretical model ignores non-academic jobs or technician work and thereby neglects their value as factors for increased relevant experience and resilience of researchers. This highlights, for example, the unfairness of an eligibility requirement based on chronological age in the scope of funding instruments, which moreover contradicts the current EU recommendations: *Member States are recommended*

Figure 2.

Reproduced from Vlasits et al. (2023) – Academic trajectory comparisons to a model linear career. (A) The trajectory for fictional Big Shining Doctor (BSD) is compared to each author’s career trajectory (i–iv), including nonlinear academic and non-academic time periods. (B) Each individual career progression is shown with the nonlinear components “spliced out.” Note how timelines for i–iv are almost equivalent to BSD in panel B. Age is marked at the top and careers are color-coded by stage (see key). The 10-year mark from PhD conferral is also marked for each career. Boxes are drawn to scale with respect to time. HS, high school’ [secondary school].



to promote and support open, transparent and merit-based selection and recruitment of candidates, without penalisation for career breaks or non-linear, multi-career, and hybrid paths (European Union, 2023b: 10). Note that the career breaks mentioned by the EC are the non-academic jobs or technical employment referred to in Figure 2.

This is an insightful contribution to understanding how inequalities, mainly those based on gender, can jeopardise the success of researchers and research. This study underlines the need for policies and measures to promote gender-inclusive research careers for the benefit of science.

'In summary, those who have taken nonlinear paths through their academic careers are currently disadvantaged by limits to funding eligibility and negative bias for their choices. Because nonlinear paths are more likely to be taken by women, caregivers, and those from underrepresented or low socioeconomic backgrounds, many funding eligibility requirements are in conflict with the goals of the scientific community to improve

representation of people from a wide variety of backgrounds in science. We believe that people who have taken nonlinear paths enrich the scientific community, bringing creativity and resourcefulness as well as job skills and life experiences that benefit the lab.' (Vlasits et al., 2023: 4).

This academic article demonstrates how research careers, particularly women's careers, are negatively impacted when the importance of non-linear paths is neglected in policymaking.⁵

Identified Gaps

According to the [Policy Report on Inclusive Research Careers](#), the following gaps need to be addressed to achieve more inclusiveness in careers:

National authorities

- The established ERA priorities on research careers and on gender equality and inclusiveness are not yet translated into national policies, despite the longstanding European debate.
- Policies very seldom define 'research careers' and 'inclusive research careers'.
- Some inclusive research career policies have been established, but not all of them have yet been monitored or evaluated.
- Approximately one-half of the countries that responded to the survey have specific or broad strategies and policies on research careers that promote or focus on gender equality and inclusiveness. However, these policies often address these two topics separately.
- There is a fragmented policy approach in which careers are not structured in conformity with their intrinsically continual and coherent character which should include non-linear paths; there is also an exclusive focus on gender and inclusiveness topics in 'recruitment and working conditions' and 'career development and progress'.

5 | 'Nonlinear research careers involve transitions to a different path, sometimes more than once. These transitions may reflect the researcher freedom of choice, as mobility options (international, intersectoral, interdisciplinary, other), or negative constraints (as job precarity)'. Source: Types of Non-linear Career Paths, Maryville University (Adapted) (GENDERACTIONplus Glossary).

*'Employers and funders should encourage and support **non-linear and multi-career paths**, to be understood as paths characterised by geographical, disciplinary, inter-sectoral, and inter-organisational mobility – e.g. secondments. They should also encourage hybrid paths combining simultaneously different sectors, which should be considered on a par with linear career path (European Union, 2023b: 20).'*

The debate at the Stakeholder Engagement Consultation Workshop (30 September 2024) showed that the term 'non-linear careers' is not consensual as it reproduces an artificial norm (linear careers): much more variety in career patterns is often a reality, which means that linearity is not typical.

We are using the term 'non-linear' research careers with the breadth implicit in the first two quotes and without penalising career breaks, as mentioned above (European Union, 2023b: 10).

- Current policies on research career inclusiveness are heterogeneous and depend on national contexts and priorities.
- Broad-based national strategies and policies on research careers addressing the HE and R&I systems tend not to address gender equality and inclusiveness explicitly.
- Cultural obstacles to inclusive research careers persist across countries, regardless of whether they have specific or broad-based policies.
- Very few national authorities discussed the topic of assessment before (the introduction of) the [Agreement on Reforming Research Assessment](#) and the [CoARA](#), and it is therefore very unlikely that these concerns will have already been translated into policies.
- Advancing national legal frameworks is needed to raise the issue of inclusive research careers in national contexts (as a first priority among others).
- The implementation of policies on research careers does not necessarily mean that they are also reflected in the social security systems for researchers.

Research Funding Organisations

- RFOs are contributing at a different pace to bringing about greater inclusiveness in research careers and some are more active than others.
- A lack of coordination between national authorities and RFOs means greater difficulties in making progress on gender+ inclusive research careers. In particular, the lack of available resources in RFOs to achieve minimally acceptable success rates in their funding instruments tends to exacerbate the excellence discourse and further increases excessive competitiveness. This in turn increases the precariousness and women's vulnerability.
- Gender parity in peer review panels has shown progress in some RFOs. They are aware of the relevance of assessment (and the need to improve it) and many of them are joining the [CoARA](#).
- For RFOs in less favourable national and political environments, the difficulty lies in effectively getting the debate on research careers onto the agenda.
- There is a risk of the gap between RFOs growing wider, with the more advanced ones becoming even more advanced and the others falling further behind, if international guidelines remain mainly recommendations and are not made mandatory.
- A lack of sufficient human, financial, and structural resources for inclusive research careers is a major challenge that must be overcome to ensure progress.
- There is a lack of statistical information and knowledge about inequalities at the institutional, national, and international levels.
- Other forms of inequality besides gender have yet to be sufficiently addressed.

Recommendations

The recommendations are based on the main conclusions and gaps identified in the analysis of the benchmarking Report on [Inclusive Research Careers](#). They also reflect the debate in the national policies and RFOs' CoPs, as well as in the Stakeholder Engagement Consultation Workshop mentioned above.

At the European level

Higher levels of policy coordination:

The European Commission and Member States, through policy recommendations and legislation, should:

- Support closer interactions between the **ERA** (European Research Area) and the **EHEA** (European Higher Education Area) in order to improve the cultural acceptance of gender+ inclusiveness concepts and issues in the HE system and facilitate their uptake in knowledge development by researchers and by policymakers when addressing the R&I system.
- Systematically promote discussion forums on research careers and inclusiveness, in particular by liaising and creating stronger synergy between the **ERA** Forum Subgroups / ERA Policy Agenda actions, especially those on research careers, gender equality, and assessment.
- Establish mechanisms to further encourage MS to properly translate and make visible the **ERA** priorities adopted at the EU level into their policies on research careers and on gender equality and inclusiveness, countering political resistance and increasing the overall level of accountability.
- Develop new actions and funding for more inclusive research careers in the Reforming and Enhancing the European Union R&I System part of the WIDERA Work Programme, in particular by seizing the opportunity offered by the discussions of **FP 10**.
- Stimulate a stronger alignment with the **new Charter & Code principles** among R&I and HE institutions at the national level through a new generation of European incentives (e.g. the European Commission's acknowledgement of customised institutional action plans/HR strategies, using the [Human Resources Strategy for Researchers \(HRS4R\)](#) and the [HRS4R Award](#)).
- Involve [CoARA](#) working groups, in particular the Towards an Inclusive Evaluation of Research group, in the formulation of policies at the European and national levels that take into account non-gender+ bias and a change in paradigms in **research assessment** – and do so by valuing diversity (in researcher's profiles, roles, paths, research outputs, research outcomes, activities...).
- Address the problems of excessive **competitiveness** and the overly restrictive concept of **excellence** at the European and global levels, which affect the optimal allocation of resources by leaving high-level scientific projects and diversity in science (e.g. researchers, researchers' profiles, research careers, research questions, research outputs) outside the scope of funding.
- Improve the European legal **framework on data protection**, which also has an impact on the national level, and allow for a more refined collection of data on individuals in order to deepen knowledge about society and social groups. This is essential for more accurate policies that combat discrimination and ensure gender+ equality in research careers.
- Promote knowledge on **responsible data collection** and research methods on research careers for vulnerable and underrepresented minorities, given the great complexity and difficulty of this issue.
- Promote the mission of the OECD and EC **ReICO Observatory** – Research and Innovation Careers Observatory, which actively contributes to making gender equality and

inclusiveness an integral part of research careers, thereby allowing for the long-term monitoring of the full range of related issues.

- Provide funding to develop a pilot study on methodologies for the comprehensive and overall monitoring and impact evaluation of Gender Equality Plans (**GEPs**) along research careers at the national level.
- Further develop, under the European Pillar of Social Rights, an effective European Tracking Service (ETS) on Pensions and the RESAVER⁶ in order to address the **social protection** issues of mobile researchers and to integrate all gender sensitive aspects.
- Develop policies that stimulate **BES** to play its crucial role in absorbing highly qualified employees, in particular women PhDs and researchers, in an effort to counteract the current severe underrepresentation of women, avoid the waste of resources, and fight inequality, and thereby to safeguard competitiveness and sustainability within and across systems.
- Extend a new generation of European incentives to the **BES**, including the implementation of GEPs as an eligibility criterion for European funding, and develop necessary awareness-raising actions. A transition period, similar to the Horizon Europe model for the public sector (HEIs, RPOs, RFOs), should be considered to ensure effective implementation.
- Strengthen the focus of European policies on the participation of women in the **STEM** field of science (through new generation programmes) and foster women's entrepreneurship.

At the national level

The governments and policymakers of Member States should:

- Use the current discussion on the **ERA** Policy Agenda 2025-27 to guarantee that gender+ equality is sufficiently addressed as a structural and transversal priority across actions and seize the opportunities arising from the discussions of **FP10**.
- Incentivise the effective implementation of the principles on gender balance and non-discrimination of the revised **Charter and Code for Researchers** to respond to the current challenges faced by researchers, research institutions, and higher education institutions, and foster the overall level of accountability.
- Improve/create high-level **national policy coordinating structures** to create an integrated action on the development of inclusive research careers. This structure should be tasked with translating the ERA priorities on research careers and on gender equality and inclusiveness into national policies in order to counter national policy resistance.
- A **national vision of gender+ inclusive research careers** should be elaborated that includes a clear definition of research careers and an outline⁷ that considers the whole career continuum, while incorporating the principle of diversity and valuing multi-career paths.

⁶ | A European mechanism supported by the EC, a component of the future ERA Platform for Talents.

⁷ | By drawing inspiration from the [European Union \(2023b\)](#).

- Inclusive research careers should be translated into a suitable set of strategies/policies or a policy mix or into legal frameworks, depending on the specific national context, in order to create the necessary conditions to build a true national **policy 'ownership'**.
- **Embed gender equality** and inclusiveness as an **integral part of national research careers**, and not as separate issues, while mainstreaming a gender perspective wherever appropriate, and not necessarily confining it to recruitment and working conditions or career development and progression, and adopt the whole cycle approach along the research career *continuum* (European Union, 2023b).
- Value all dimensions of **diversity** in career paths and researchers' profiles, and accept this as the new Europe-wide paradigm for inclusive research careers.
- Actively participate in the **CoARA** as a way of implementing more transformative practices in research recruitment and **research assessment** across national policies.
- To facilitate the transition between different professional choices/career paths and to ensure its valorisation, **training programmes** are instrumental – especially for peer reviewers, RFO staff, PhD coordinators, directors of R&D institutions, and PIs of funded grants. Gender+ Training certificates should be required where appropriate.
- Advocate at the European and national levels the need to adjust and improve the legal framework on **data protection** in order to allow for more detailed knowledge of societies and accurate policies that effectively combat all forms of discrimination. Ethical and fair use of this information is to be clearly safeguarded along with respect for differences in national legal frameworks.
- Address in national policies the problems of excessive **competitiveness** and of the overly restrictive concept of **excellence**, which affect the optimal allocation of resources by leaving high-level scientific projects and diversity in science (researchers, researchers' profiles, research careers, research questions, research outputs) outside the scope of funding.
- Invest in research career policies aimed at the **professionalisation of research activities** based on the regular legal form of contracts in order to avoid/eliminate from the outset precarity in early and in all positions of a career, so that all researchers are consistently covered by social security systems (across illness, retirement, unemployment, and maternity/parental and post-maternity leaves; as PhD students and post docs).
- Develop policies that stimulate **BES** to play its crucial role in absorbing highly qualified employees, in particular women PhDs and researchers, in order to counteract the current severe underrepresentation of women.
- Create or strengthen **national** and institutional **structures** to build competences on inclusion, structural discrimination, and the principles of intersectionality in HEIs, RPOs, and RFOs.
- Optimise Gender Equality Plans (**GEPs**) as a catalyst for gender equality and inclusiveness along research careers, mainly through comprehensive and overall monitoring and evaluation at the national level, with possible coordination in the remit of national observatories on research careers.
- Establish **mechanisms** in the remit of research career policies to complement general social security benefits in order to better even out any gender imbalances among researchers (e.g. additional benefits, compensations in parental leaves).
- Create **national observatories** to follow the careers of researchers, focusing on gender equality and inclusiveness and tracking the main obstacles observed, while involv-

ing RFOs, RPOs, and other relevant stakeholders. Investigate the **overall opportunity costs**⁸ of PhDs, especially young women, dropping out of a research career.

- Adopt or adapt the research career indicators developed by the OECD and the EC **ReICO Observatory** in order to monitor over the long term the full range of related issues (e.g. progression, diversity of disciplines, funding).
- **Collect data and produce national statistics** to support the formulation and monitoring of policies on gender+ inclusiveness in research careers, and systematically provide them to the national and international organisations responsible for statistics and analytical studies (e.g. OECD, She Figures).
- Strengthen the policy focus on the participation of women in the STEM field of science and foster women's entrepreneurship.

Research Funding Organisations (RFOs)

RFOs should:

- Continuously improve their ability to anticipate and respond to the multiple challenges of inclusive research careers, working and **learning** together in **national and international** fora, by creating **CoPs**, for example. A special issue is to identify and implement measures to overcome gender+ cultural resistance.
- Align RFOs with the new **European Charter & Code for Researchers**, effectively implementing its principles, regularly planning and monitoring the progress.
- Advocate common European standards for the national contexts of research careers, ensuring the same professional conditions for researchers in **international mobility**, particularly with respect to the portability of social security entitlements. International mobility should not be a determining factor for progression and its duration should be as flexible as possible.
- Promote an effective **policy dialogue** with governments and national authorities, whose activity impacts the (sectoral) policies underpinning research careers, and increase policy coherence, inscribing this as framework conditions in action plans and/or translating them into legislation. In this dialogue, researchers and their representatives, including scientific and professional associations and learned societies, should be engaged as a success factor.
- Work closely with HEIs and require them to support underrepresented and underinvested groups in the HE sector (attracting, opening the doors to, and retaining students), broadening the pool of potential researchers and ensuring greater **inclusiveness and diversity** in the two systems.
- **Increase awareness**, accountability, and knowledge on inclusive research careers internally and among all stakeholders (e.g. policymakers, social security authorities, re-

8 | Opportunity costs: the loss of other alternatives when one alternative is chosen. In this case, this means the loss to the whole system of dropouts, by jeopardising the accumulated investment in advanced education and previous research funding for those who leave vis à vis the theoretical gains in resources saved by not funding them.

searchers, peer reviewers, R&D managers, etc.). In particular, RFOs should fund studies on the subject, and promote the wide dissemination of results.

- Expand **professionalisation opportunities** and tackle precarity to achieve more inclusiveness. Encourage researchers to (re)think their careers and consider all the alternatives, offering doctoral researchers support (such as funding mentoring programs) in preparing for a career inside or outside academia, both with equal value, always adjusted to the field of knowledge.
- Develop funding mechanisms that stimulate **BES** to play its crucial role in absorbing highly qualified employees, in particular women PhDs and researchers, to overcome the current severe underrepresentation of women and avoid the waste of resources - and thereby to ensure competitiveness and sustainability within and across systems.
- Disseminate and promote a new generation of Gender Equality Actions to the **BES** and extend the implementation of GEPs as an eligibility criterion for national funding to this sector. A transition period, similar to the Horizon Europe model for the public sector (HEIs, RPOs, RFOs), should be considered to ensure effective implementation.
- Reward **Business Enterprises** that implement new scientific employment contracts ensuring gender equality and inclusiveness, and include this requirement as a tie break criterion in assessment across funding instruments.
- Change the **research assessment criteria** to value less conventional and more diversified career paths (non-linear careers), in particular due to intersectoral mobility, non-R&D work and care breaks. In this way, gender equality and inclusion will be better taken into account, beyond the basic concern for parity in the chairmanship and membership of peer review panels.
- Promote **awareness raising and capacity building** among reviewers so that they can properly apply revised criteria, with a full understanding of why they should be used. Actively participate in the [CoARA](#) for more transformative practices in research recruitment and research assessment.
- Check for **bias** in call documents and procedures, especially in the first editions of the programmes, and monitor applications and success rates. For each programme implemented, RFOs should check for any possible collateral effects that could trigger new forms of inequality.
- Provide funding schemes to boost the participation of **women in the STEM** field of science and foster women's entrepreneurship.
- Establish national [positive actions](#)⁹ or [disruptive measures](#) within the remit of research career policies to complement general **social security benefits** and better neutralise any gender imbalances among researchers.
- Consider ways to broaden the scope of **GEPs**, in RFOs and in Higher Education Institutions, towards more inclusiveness beyond gender. Attention should also be paid to

9 | 'Positive action is defined in the EU Equal Treatment Directives as specific measures to prevent or compensate for disadvantages linked to specified personal characteristics, with a view to ensuring full equality in practice. Under EU law, positive action has traditionally been seen as an exception to the principle of non-discrimination with the aim to achieve substantive equality through measures designed with the purpose to provide equal opportunities'.

Disruptive measures: can take the form of temporary special measures addressing gender imbalances and of ambitious measures addressing structures.

gender-based violence, occurring in careers in general and in international mobility, and to the gender domain in research content.

- Acknowledge the need to develop **GEP monitoring systems** and contribute to an overarching perspective on GEP impact at the national level, and widen the scope of their gender+ inclusiveness for funding purposes.
- Improve awareness and increase the **capacity of NCPs** for a more effective role and participation on GA+ issues and actions (e.g. through training programmes under GEPs).
- Ensure the production and availability of **statistics** on their activities in a timely, systematic, complete, comparable, and reliable manner so that it is possible to monitor multiple gender+ aspects in research careers.

Higher Education Institutions (HEIs) and Research Performing Organisations (RPOs)

HEIs and RPOs should:

- Align with the **new Charter & Code**, incentivising the effective implementation of its principles, so that they can respond to the current challenges faced by researchers, as well as the institutions themselves, and better integrate gender+ equality and inclusiveness.
- Value all dimensions of **diversity** across the whole ecosystem - students, researchers, and academics - in recruitment and in career progression, as a new Europe-wide paradigm for inclusive research careers.
- Actively participate in the **CoARA** for more transformative practices in research recruitment and research assessment.
- Be an active part of the policy **dialogue** on gender+ inclusive research careers with **national** authorities and RFOs.
- Incentivise the creation of **CoPs** and networking, where good practices can be shared, improving the implementation of policy guidelines in conformity with institutional diversity (overcoming the bureaucratic burden).
- Create or strengthen **institutional structures** to build competences on inclusion, structural discrimination, and the principles of intersectionality, and overcome knowledge and practice gaps on the issue among students, researchers, academics, and staff. PhD programmes should include a module on the Gender+ perspective in R&I.
- Invest in research career measures to **professionalise research activities**, based on researcher contracts as the regular legal form of employment, to avoid/remove from the outset precarity in early and all positions of a career. So that all researchers are consistently covered by social security systems (for sickness, retirement, unemployment, maternity/parental and post-maternity leave; as PhD students and post-docs).
- Acknowledge **non-linear careers** and multi-career paths as a pattern for inclusive research careers and promote training for diverse professional paths outside academia by introducing new approaches and new skills in accredited courses and programmes, always adjusted to each field of knowledge.
- Establish **mechanisms** within the remit of research career policies to complement general social security benefits and better neutralise any gender imbalances among

researchers, and increase flexibility in work-life balance, support for care, and working conditions in general.

- Introduce mechanisms to effectively enforce a **zero-tolerance strategy** on gender-based violence.
- Collect **data** and produce institutional statistics to support the formulation and monitoring of policies on gender equality and inclusiveness in research careers in a timely, systematic, complete, comparable, and reliable manner.
- Collaborate with national **observatories** (or other structures that monitor careers) to follow up on the careers of researchers by focusing on gender equality and inclusiveness and tracking on observed main obstacles.

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