Science Europe Response to the Public Consultation on the European Research Area (ERA) Act

Introduction

Despite significant progress since the early 2000s, some challenges remain and still hinder the full realisation of the European Research Area (ERA) – that is, a single, borderless market for research and innovation that fosters excellent science across Europe. EU Member States, the European Commission, and other stakeholders have developed and implemented numerous policies and initiatives, which have not sufficiently addressed all structural issues. Some issues are particularly salient: under-investment in research and innovation, which falls short of the European Council's targets, and challenges to the cardinal values of the European Union. The ERA Act offers an opportunity to support and further develop a coherent, holistic framework for European research, building on the achievements of current ERA governance.

To respond to the public consultation in a way that reflects the collective views of the research funding and performing organisations belonging to Science Europe, the unabridged contributions to the various questions and proposals put forward by the European Commission have been included. These are complemented by other essential considerations, summarised below:

1. Science Europe considers that the ERA Act should focus on a series of core objectives:

- **Promoting core values**: The ERA Act should prioritise implementing and monitoring the cardinal values that are key to a thriving research ecosystem. These efforts should, above all, reinforce research excellence, protect the freedom of scientific research and support equality, diversity, and inclusion. However, Science Europe cautions against introducing additional rules in areas that are already codified by the EU acquis and international law, or those that are subject to academic self-governance.
- **Supporting advancements in positive and open research culture**: The ERA Act should aim to establish and support adequate framework conditions for research, particularly in open science and research careers, rather than set the content, objectives, or even legal mechanisms for implementing changes in research culture. It should remove technical and legal obstacles to career progression and mobility, including for third-country researchers, through promoting the portability of social rights and facilitating mobility and migration.
- **Incentivising investments in research**: the ERA Act should further incentivise national governments to advance towards the target of dedicating 3% of GDP to R&I, with 1.25%

Science Europe
Rue de la Science 14, 1040 Brussels, Belgium
Tel: +32 (0)2 226 03 00 | Fax: +32 (0)2 226 03 01 | Email: office@scienceeurope.org | www.scienceeurope.org

from public funding. It should also support underperforming countries in building their capacity to invest in research and innovation and to reduce their dependence on EU funds.

2. Science Europe suggests that the following considerations will be crucial to the success of the ERA Act.

- Adopt **a 'minimum standards' approach**, allowing national governments and stakeholders to maintain or develop legislation, policies, and initiatives that provide stronger protections for core values or more ambitious reforms of research culture than the ERA Act. In this context, Science Europe considers that a Directive would be the most appropriate legislative instrument for the Act.
- Follow an **evidence- and needs-based approach to avoid mis- or over-regulation**. Where progress is being achieved through existing bottom-up and/or policy initiatives, as is the case for the reform of research assessment and open science, there may be no need for further legislation.
- Maintain an **inclusive and participative approach to developing the ERA Act**, including through dedicated dialogues with the scientific community and its representative organisations. The ERA Forum has been successful in promoting open and inclusive exchanges between EU Member States, Associated Countries, the European Commission, and stakeholders. It would be a constructive forum to hold these discussions.
- Uphold **environmental sustainability considerations in research** as one of the key areas of relevance and urgency for the rational use and preservation of the environment and natural resources.

The ERA Act offers a significant opportunity to harmonise and further strengthen key framework conditions for excellent research and innovation in Europe. To achieve this, it must adopt a minimum standards approach that protects core values and drives advancements towards a positive research culture. The EU should legislate only where necessary and avoid introducing rules in areas that are subject to academic self-governance, where progress is being made through existing initiatives.

The complete Science Europe response to the consultation addresses seven areas: strengthening R&D investment; improving alignment of research and innovation policies and funding across the EU; upholding the fundamental values of the European Research Area; enhancing the conditions for research and researchers, ensuring the free circulation of researchers and scientific knowledge; aligning approaches to artificial intelligence in research; developing co-ordinated approaches to international collaboration and research security; and consideration of the appropriate scope of ERA Act-level measures on research security. Collectively, these areas outline a coherent and values-driven approach to shaping the proposed European Research Area Act.

1.Strengthen R&D investment and bring it up to the 3% GDP target to address the current lack of investment

The EU's research and development (R&D) effort falls short of the 3% of GDP target, with public spending at just 2.22 % in 2023. Closing the gap by 2030 would require stronger public and private investment, supported by tax incentives, risk-sharing instruments, and coordinated policy at both EU and national levels. While under-investment is seen as a key obstacle to competitiveness, it is not the only factor. Other challenges include insufficient private funding compared with global competitors; public spending alone cannot close the gap.

Member States should aim to sustain an investment rate of at least 3% to maintain robust national research systems that feed into EU programmes. However, tying these targets to short-term political priorities could undermine research autonomy. Embedding the 3 % ambition in legislation, such as proposed for the ERA Act, could improve predictability and encourage coherent national R&I strategies. However, differing fiscal capacities and political goals might lead to superficial compliance - relabelling existing spending rather than generating new funds - and make monitoring complex.

Science Europe considers that the ERA Act should aim to set a common EU ambition while allowing flexible national pathways, with transparent reporting on additional, long-term investments. Reducing disparities in R&D intensity across Member States is desirable, but strict homogeneity should not be a priority. Instead, fostering a minimum investment level in lagging countries and leveraging each country's competitive advantages would be preferable. Flexibility in targets is essential, recognising that some nations currently spend far below 3% and cannot achieve the goal overnight. Overall, strengthening R&D financing, improving coordination, and creating favourable conditions for private research are crucial steps toward closing the EU's innovation gap.

2.Greater alignment of R&I investments, policies and programmes between the EU and Member States, and between Member States

2.1 Partnership characteristics

Partnership implementation should be included in the regulation. Partnerships should be predictable and transparent. However, a respondent noted that while transparency issues are present in a certain type of partnership, overarching reforms should not come at the expense of other partnership types. Any reforms should remain feasible and be communicated clearly.

Caution should be exercised against 'drastically reducing' the number of partnerships, as this would not necessarily solve issues such as too many activities/stakeholders and a lack of clarity. Meanwhile, such reductions may result in oversized partnerships that risk losing strategic investments and a decrease in the portfolio.

In addition, the potential of continuing the operation of partnerships after the cessation of EU funding should be explored. The 7-year funding cycles may be limiting, while continuity is essential for long-term research. Therefore, ongoing partnerships & ERA-NETs should be evaluated to develop means to ensure that partnerships remain self-standing.

2.2 Steering of, and involvement in, partnerships

Some concerns remain about the European Commission's overt influence, which could reduce stakeholder and Member-State influence. For example, introducing a single type of MoU-based partnership may bring some benefits; however, it leaves the opportunities for national authorities to be involved, unclear. Meanwhile, a respondent argued that reducing administrative complexity would allow institutions across all Member States to participate meaningfully and plan for the long-term.

Industry involvement should be encouraged in cases where it is relevant. Research integrity, openness, and transparency should be ensured across all European partnerships to prevent scientific malpractice and vested interests from impacting research.

The role of partnerships in the ERA Act is not clear, and the added value of their inclusion is not well established. Respondents expressed the view that the upcoming Horizon Europe programme is better equipped to steer policy related to partnerships. The ERA Act should facilitate connections, but not act as a steering mechanism.

2.3 Coordination methodology and priorities

A dedicated coordination tool may be useful. Similar to partnerships, the means of coordination and the development of priorities must remain transparent. In developing these priorities, it is crucial to involve Member States and R&I stakeholders, including research funding and performing organisations (RFOs and RPOs). There may well be several forums for such discussions, whose roles could be more significant.

In addition, coordination efforts should not reduce funding towards other areas, especially bottom-up R&I. In this vein, a respondent noted that coordination should enable better bottom-up interaction, rather than strict alignment to political priorities. However, another respondent noted that there is space to better link R&I with some policy areas – highlighting sectoral/regional policies & EU coordination in environmental challenges.

3.Improve the general conditions for research and researchers in Europe.

3.1 Upholding the fundamental values of the European Research Area

3.1.1 Freedom of scientific research

Science Europe supports stronger, more uniform legal safeguards for the freedom of scientific research, including institutional autonomy, across Europe. The European Research Area must urgently protect scientific freedom, ethics, and equality to preserve a fair, high-quality, and globally competitive research ecosystem. Existing disparities among Member States, uneven legal protections, and limited opportunities limit Europe’s capacity to attract talent, drive innovation,

and retain public trust. Harmonised legal frameworks, enforceable ethical standards, and inclusive policies are presented as essential not only for safeguarding researchers but also for boosting innovation, economic competitiveness, and Europe's leadership in science and technology.

The freedom of scientific research underpins independent inquiry and the free flow of knowledge, and EU-level legislation is a worthwhile ambition given worldwide challenges to research freedom. However, many Member States already guarantee academic freedom constitutionally or legally, so EU provisions could be redundant. Particular attention should be given to how to monitor compliance across diverse national systems and whether EU legislation can curb public criticism, online harassment, or media backlash- major threats to scientific freedom today.

Science Europe proposes that the ERA Act's academic freedom provisions should set minimum EU-wide principles rather than detailed regulations. The rights and obligations associated with the freedom of scientific research are also already well established in international law at the levels of the United Nations, European Union, and Council of Europe. Therefore, the ERA Act should not seek to create a separate legal framework that could conflict with existing legislation. Countries with strong existing safeguards could demonstrate compliance through their current laws, avoiding duplication, while monitoring should particularly focus on jurisdictions where protections are weak.

3.1.2 Gender equality and equal opportunities

European countries and research organisations have usually put in place, to varying degrees, legislative frameworks, policies, and rules that protect gender equality, combat discrimination, and promote equal opportunities. However, the implementation of EU- and national-level legislation and policies remains fragmented and incomplete. Similarly, political and administrative pressures are endangering the progress made so far and further challenge the further promotion of equality, diversity, and inclusion. In this respect, Science Europe considers it essential to safeguard EU-level policies and tools, such as Gender Action Plans, in legislation.

In addition, Science Europe considers that a strong focus should be placed on combatting discrimination and inequality related to characteristics other than gender (such as race, religion, or disability), where progress has been more limited, and on promoting an intersectional approach to advancing equality and inclusion in research and innovation.

It is also essential to consider the safety of people involved in the research enterprise when developing, implementing, and monitoring Equality, Diversity and Inclusion policies. To that end, focus should also be placed on addressing gender-based and sexual violence, as well as any form of misconduct targeted at individuals from minority and protected groups.

4. Ensuring the free circulation of researchers and scientific knowledge

4.1 Research Assessment

"Public RFOs and RPOs that receive public funding should create mechanisms to ensure that assessments of research, researchers and research organisations recognise the diverse outputs, practices and activities that help maximise the quality and impact of research."

While we support the general principle of the statement, especially as it aligns fully with the first commitment of the Coalition for Advancing Research Assessment (CoARA), this is not deemed an appropriate area for EU-level legislation. This action is being addressed through various mechanisms within CoARA, and it is vital that solutions to reform research assessment are developed, implemented, and supported by the research community and institutions that conduct assessments, thereby ensuring institutional and national autonomy whilst providing the necessary flexibility for discipline- and career-stage-specificities.

The ERA Act can support the research assessment reform movement without direct EU Legislation, by ensuring that legislation in related areas (open science, research careers, equality, diversity, and inclusion, etc.) is aligned with and supportive of the principles of reform laid out in the CoARA Agreement.

4.2 Research Careers and Mobility

Science Europe broadly agrees that many of the problems identified in the consultation documentation make research careers in the EU less attractive. Researchers' careers and mobility are a key area where the ERA Act can have a large positive impact on both the European and respective national research systems, for the benefit of researchers and in enabling research quality and impact.

Science Europe would like to highlight intervention areas that it deems most critical to address through EU legislation. In each case, justification is provided for the selection.

- Ensure that national laws do not impede or overly complicate the ability of public sector employers to offer open-ended, indefinite, or permanent contracts to researchers. Research precarity (especially, but not limited to, early-career stages) remains a key factor limiting the attractiveness of research careers. Although this a complex and multifaceted challenge, there are many examples within the EU where national laws impede or restrict the ability of organisations and institutions to offer long-term, open-ended, or permanent contracts to talented research professionals. The ERA Act is well placed to target these barriers.
- Ensure that researchers at all career stages, including PhD candidates, have the same level of social security benefits. With increasing international collaboration and research professional mobility across the European Research Area, it is important to establish a set of common minimum standards for social security benefits. In recognition of current and often large differences between Member State provisions, a country-specific correction factor could be applied, but it remains vital that a common set of social security provisions is provided to research professionals across the European Research Area. Further, it is important that clear, transparent processes and guidance are provided to all research professionals regarding the provisions available to them.
- Facilitate the automatic recognition (for work purposes) of the academic qualifications that a researcher has gained in an EU Member State. Research professionals should not have their mobility within the European Research Area restricted by a lack of measures, or arduous processes to gain recognition of existing and legitimate academic qualifications. An automated procedure at the EU level would greatly improve the efficiency of the technical burden imposed on the research community.

- Facilitate the visa application process for researchers from non-EU countries and reduce the obstacles to their mobility within the EU. A diversity of individuals and ideas is a cornerstone of both the quality and attractiveness of the European Research Area, as is their ability to move freely within the EU. In this way, it is important that talented research professionals from around the globe are enabled to enter and move within the EU without unnecessary obstacles. The ERA Act can address existing obstacles for the benefit of the entire European Research Area.

4.3 Free circulation of scientific knowledge

Science Europe agrees with the statements describing the current situation and with the suggestions for possible ways forward. However, it is not considered that EU-level legislation is the way forward for all the suggestions.

Regarding the current situation, Science Europe agrees with most statements describing possible obstacles to ensuring access to and sharing of scientific knowledge. A survey published in October 2024 shows that Science Europe members face a broad range of challenges when developing and implementing open science policies and practices.

Regarding the possible ways forward, Science Europe agrees with the suggestions made. However, it considers that further discussion is needed to assess whether EU-level legislation is an appropriate method to achieve free circulation of scientific knowledge, including on how such legislation would support the work of public research actors and strengthen the existing policy framework.

Free circulation of scientific knowledge is a key strategic priority for research funding and performing organisations. The same survey, published in October 2024, shows that nearly all Science Europe members have adopted a strategic approach to open science at the organisational level, and that these approaches are often embedded in policies that extend across organisational, regional, national, and international levels.

It must be emphasised that the transition to open science is a joint effort and a shared responsibility between public research actors. For this reason, EU-level legislation should take into account the existing policy framework and, where possible, support and strengthen existing policies. One example where EU-level legislation can add value in this regard is researchers retaining intellectual property rights to provide immediate open access.

5. Aligning guidance on artificial intelligence (AI) in research

5.1 Alignment of guidelines and codes of conduct and their role for collaboration across borders and disciplines

Among research funding and performing organisations, both researchers and evaluators face uncertainties when it comes to the use of AI in research, particularly in data mining and implementation of the General Data Protection Regulation (GDPR), interpretation of the AI Act, transparency and disclosure practices (e.g. if and how the use of AI should be declared in research activities and funding applications). Clearer guidance on what constitutes a reasonable, ethically sound and research-integrity-compliant use of AI in research is also required and a space for ongoing discussion and exchange.

The ERA Act faces the challenge of aligning existing frameworks (e.g. AI Act, GDPR, research integrity codes, and the Living Guidelines on Generative AI in Research) and the need to focus on aligning AI-related standards to improve applicability for researchers, ensure consistency and simplify compliance for RPOs and RFOs. The concept of AI governance should also be further defined.

As a matter of scientific freedom, researchers and research organisations are the key stakeholders to develop new guidelines and best practices when it comes to the ethical and responsible use of AI in research. National/institution-specific guidelines of good scientific practice should provide a well-established and sufficient framework for AI-related practices in research, and do not require EU-level legislation.

Several European guidelines focus on transparency and the responsible use of Generative AI (GenAI). Implementation differs around questions of disclosure of GenAI use. There is, however, need for more guidelines concerning AI in science (AI for science and science for AI), as existing ones focus on intellectual property and (FAIR) data (management).

Fragmentation of guidelines does not seem to critically undermine cross-border scientific collaboration. Research security should be considered, given the risks around confidentiality, e.g. information leakage associated with AI use. Current frameworks must move beyond general ethical discourse to provide researchers with specific, practical instructions regarding transparency, reproducibility, and the management of dual-use risks.

5.2 Uncertainties and administrative burdens around AI use for researchers and how to manage risks.

RPOs and RFOs perceive some uncertainty mainly concerning the consequences of the AI Act for scientific development of AI. Researchers are often unaware of existing guidelines, which adds to this uncertainty. Clear, actionable guidance on the interpretation of legal texts is required ("dos and don'ts").

Funding organisations require operational clarity, for example, through a clear distinction between the use of AI by applicants, the use of AI in evaluation processes, and the use of AI for aggregated analyses of the research system. Risks encountered in these processes include, among others, unintended biases introduced by AI models during selection processes.

A risk-management approach is needed, as existing guidance is either lacking or insufficiently developed and articulated to enable researchers to apply it to their everyday research practices. Disciplinary diversity requires nuanced explanations and risk management approaches, increasing the complexity of handling such issues for RPOs and RFOs.

Beyond harmonisation, enhanced exchanges of good practices at the EU level would be highly beneficial. Ongoing initiatives led by organisations such as Science Europe may play an important role in supporting both harmonisation efforts and capacity-building, as well as facilitating coordinated approaches and peer learning within the European research ecosystem. It is essential to invest in capacity-building, including targeted training, trusted reference points, the exchange of good practices, and shared tools to implement AI governance within funding organisations.

5.3 AI misuse whistleblowing mechanism

5.3.1 Further clarification is needed on what constitutes a 'misuse of AI'

A 'misuse of AI' should be specified more clearly by listing representative examples. A lack of clear definitions and useful, relatable examples increases the risk that harmful or unethical applications of AI go undetected.

5.3.2 Scientific integrity is the main framework for research misconduct

Research is governed by codes of conduct for scientific integrity, defining principles of acceptable and unacceptable practices. These principles do apply to all research activities, including the use of AI. This use should therefore be subsumed under scientific integrity considerations, general whistleblowing mechanisms, and existing peer-review and evaluation processes, which already contribute to identifying potential cases of misuse. Existing research ethics and research integrity bodies can adequately fulfil this role, provided that appropriate awareness-raising and targeted training on AI-related risks and challenges are further developed.

Mechanisms to address scientific misconduct are well established, and there is clearly no need for additional EU-wide structures. In most cases, responsibility lies with decentralised offices, and the representatives are well known and trusted. As part of academic autonomy and self-governance, this should remain exclusively in the hands of the research community. In this context, a European Code of Conduct on Research Integrity could be helpful, but adding bureaucratic burdens on researchers should be avoided.

An advisory contact point could be beneficial in supporting national integrity committees when they have questions about how to manage certain situations, staffed by scientists (both technical and ethical, legal, and social). The use of AI-based research outputs beyond the research system and specific AI-related risks is an evolving field of research, as well as a concern. Whistleblowing mechanisms by themselves will not be sufficient to counter such risks. Mitigating actions must involve actors beyond academia.

6. Improving consistency in approaches to international cooperation and research security across the EU

6.1 Current situation

Research security in the ERA Act must be guided by the principles of academic freedom, institutional autonomy, research integrity, and should safeguard international co-operation at a global scale. In addition it should take into account any initiatives aligned with the Council Recommendation on enhancing research security, as well as take into account national research security concerns.

Initiatives aligned with the Council Recommendation at a European level should aim to integrate general national security considerations into the development, evaluation, and funding of research partnerships. This could be done through awareness-raising, promotion of best practices, and setting of minimum baselines, when possible.

National RPOs and RFOs are dealing with different domestic contexts and are exposed to different levels of risks. Therefore, there is a range of positions and national contexts that drive their existing

policies and capabilities. To mitigate the risk of unilateral protectionist measures by national governments, or leaving risks unaddressed, RPOs and RFOs advocate the need for a proactive 'due diligence' research security culture to be adopted across the research ecosystem.

Research security is a collective responsibility and should therefore be approached in a collaborative manner, involving RPOs, RFOs, industry, and national governments. This requires proportionate measures such as risk appraisals, investment in capacity building and information-sharing amongst all involved stakeholders. Setting standards for research security towards a level playing field requires collaboration between all stakeholders, including RPOs, RFOs, industry, and governments.

In this context, the ERA Act, or any approach adopted, should support a trust-based framework of measures, promote institutional autonomy of RPOs and RFOs, and leave space for adaptation to national contexts, existing legal frameworks (where those exist), in accordance with the Council Recommendation on enhancing research security. All other relevant initiatives at EU level should be considered, as already laid out under the ERA Action in the ERA Policy Agenda 2025–2027, under the priority for "a truly functioning internal market for knowledge," towards an efficient and inclusive European R&I system.

6.2 Needs and responsibilities of research funding and research performing organisations – possible way forward

The main challenges that RPOs face in research security include the absence of a central information repository, training programmes, up-to-date and fit-for-purpose protocols, limited institutional capacity, and a need for better training and guidance. From their perspective , the areas closely linked to research security measures include (but are not limited to): international collaboration (funding, agreements, contracts, intellectual property, as well as ownership rights, institutional affiliation, export control guidelines, critical technologies' restrictions), research data and infrastructure (cyber security, access control, purchase and use of equipment/software, protocols for FAIR data management), outgoing activities (travel, secondments), and incoming activities (recruitment, foreign delegations) – e.g. unwanted influence, misinformation. Additional needs for RPOs in implementing research security approaches include securing dedicated resources and funding (e.g., specialised staff), managing administrative burden, and recognising internal diversity across scientific domains, which would require tailor-made responses to different disciplinary profiles.

For RFOs, challenges relate to how requirements on research security are communicated and managed through their national systems and within their organisational remits and contexts. Key considerations include ensuring that measures are applied in a proportionate, consistent, transparent, and effective in manner, as well as clarifying the role and responsibilities of RFOs in relation to RPOs, national governments, and other actors within their system (such as technical agencies or other regulatory bodies).

7. Considerations towards ERA Act-level measures on research security

It has been proposed that the forthcoming ERA Act could provide a legislative basis for research security. RPOs and RFOs call for strong justification and careful consideration before legislation is considered, as other levers and approaches are available to drive this fast-evolving agenda.

The European approach to research security should aim to provide a general framework for European research and economic security considerations into all stages of research partnerships (e.g. call development, proposal evaluation, and funding). This could be achieved through awareness-raising, the promotion of best practices, and, when possible, the setting of minimum baselines.

In advancing the research security agenda, the focus should be on supportive measures and guidelines, avoiding restrictive measures for RPOs and RFOs. In this process, the following aspects should be considered, and do not require an ERA-Act level legislation in order to be achieved:

- Aim to establish clear guidance on research security considerations for research partnerships that will allow the R&I sector to adopt a 'due diligence' and early warning approach, based on trust, openness and awareness-raising, rather than enforcement of mandatory procedures ('compliance-based').
- Avoid over-securitising the R&I system, essential to safeguard academic freedom and encourage international collaboration.
- A collaborative approach of all involved actors is necessary in the case of developing legal frameworks and defining roles and responsibilities for RPOs and RFOs. National governments should support the research ecosystem in developing and implementing research security policies. Clearly allocating responsibilities among national governments, RFOs, RPOs and other agencies is essential.
- Establish what is considered 'good practice' in secure international collaboration, through an agreement on common principles, as already outlined in the Council Recommendation.