

# The Heidelberg Agreement on Environmental Sustainability in Research Funding

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## Preamble

If we want to provide the basis for future generations to prosper, we need an urgent shift towards a culture of sustainability<sup>a</sup>. At this critical time, the science sector is recognizing its important role in promoting sustainability and the need to understand its own environmental and social impacts.

Funding agencies play a central role in enabling researchers to conduct their work. Funders' strategic decisions can influence which questions are tackled by researchers. By setting conditions for their funding schemes, funders can change research practice towards sustainability. The responsibility of funding agencies to support the United Nations' 2030 Agenda for Sustainable Development was recently highlighted by the Global Research Council's Statement of Principles on Sustainable Research<sup>1</sup>. To explore how funders can incentivise sustainable practices in research, they should align their goals and actions and enter a dialogue with researchers and their institutions.

The Heidelberg Agreement, a multi-stakeholder alignment, is the outcome of discussions at an EMBO workshop on *Funders' Role in Promoting Environmentally Sustainable Lab Research*<sup>2</sup> that took place in Heidelberg in May 2024. For the first time, a group of representatives from funding agencies, research organisations, grassroots initiatives, social scientists and experts from nine different European countries (see Participant list on page 5) worked together to agree on principles and recommendations for research funders on how to embed sustainable practices via research funding. The workshop discussions focused on sustainability in life science laboratory research. However, the outcomes represent general considerations and principles that can be applied more broadly to all research areas. The Heidelberg Agreement is not intended to be, and shall not constitute in any way, a binding or legal agreement, or impose any legal obligation or duty.

## The Heidelberg Agreement was endorsed by the following European organisations attending the workshop:

Austrian Science Fund (FWF), Dutch Research Council (NWO), EMBO, European Molecular Biology Laboratory (EMBL), Foundation for Polish Science (FNP), French National Research Agency (ANR), German Research Foundation (DFG), Green Algorithms Initiative, Green Labs Netherlands (GLN), Institute for Bioengineering of Catalonia (IBEC), Medical Research Council (MRC), National Centre for Scientific Research (CNRS), UK Research and Innovation (UKRI) and Wellcome.

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<sup>a</sup> In future, we, the authors, envision a culture of sustainability that has only a positive impact on people and the planet. This vision is in line with the globally recognized aspirations of the 2030 UN Agenda and its sustainable development goals, which encompass social, environmental and economic considerations.

## Points of agreement

The workshop participants agreed that the following points are necessary to move towards a sustainable research system.

### 1. Funders cannot risk doing nothing.

Funders recognise their key role in promoting sustainability in scientific research. They agree to respond to the sustainability crisis and take proactive steps to explore how they can contribute to sustainable transformation.

### 2. Funders should set ambitious goals.

Funders should develop sustainability strategies with clear, ambitious but realistic objectives that respond to the pressing sustainability crisis. This includes addressing the environmental and social impact of all their activities, including the research they fund.

### 3. Funding agencies should share a set of principles towards sustainability.

Funders should establish a shared set of principles for their sustainability strategies. This strategic alignment will ensure a coherent approach across different countries, sectors and projects. We suggest the following key principles for approaching sustainability in research funding: innovation and experimentation; partnership and diversity; and co-creation.

**Innovation and experimentation:** Funders need to innovate and experiment with sustainability policies and measures to create new knowledge and respond to unexpected developments. These policies and measures need to be designed flexibly, evaluated regularly and revised when necessary to reach their transformative potential.

**Partnership and diversity:** Acknowledging that system change needs multi-level, multi-actor and multi-faceted actions, funders should seek part-

nerships with other stakeholders - including other funders, researchers, research organisations and grassroots initiatives - to identify best practices and define individual and collective contributions to sustainability.

**Co-creation:** Funders should create new policies and measures (points 4 and 5) in collaboration with other stakeholders and in a transparent and open manner to maximise their impact and feasibility. Funders should share and disseminate their knowledge and experience.

### 4. Funders should highlight the importance of sustainability in their funding schemes.

Funders should include sustainability aspects in their funding schemes as an important consideration for decision-making processes on both the direction of research and how it is conducted. The latter could be done through various mechanisms, such as incorporating sustainability requirements in the application forms and the evaluation process. Those requirements can be diverse and range from requesting a self-reflection in applications and reports<sup>3, 4, 5</sup> to setting eligibility criteria<sup>6, 7</sup>. These criteria can involve providing data on the environmental footprint of research projects or third-party or in-house accreditation of research groups<sup>b</sup>. Areas that are responsible for a large share of the research footprint, such as procurement<sup>8</sup>, could also be addressed. See [Box 1](#) for examples of recommendations for implementing sustainability in funding schemes.

### 5. Funders should support the coordinated development and adoption of education, quantification and accreditation tools.

Funders need to support researchers and institutions by providing tools that help researchers address sustainability in their research fields. These should build on and integrate existing tools<sup>9, 10, 11</sup> and follow the requirements listed in [Box 2](#)<sup>c</sup>.

<sup>b</sup> Examples include anchoring sustainability considerations in the German Research Foundation (DFG) funding activities, Horizon Europe, MSCA Green Charter, Wellcome and Cancer Research UK (CRUK) environmental sustainability policies.

<sup>c</sup> Examples of tools are GES 1point5 for quantification, GreenDISC for accreditation, and e-modules from UMC Utrecht and Green Labs Netherlands for education.

### Box 1 Nine recommendations for the implementation of sustainability in funding schemes

- I. Funders should set the implementation of sustainability in funding schemes as a key objective of their sustainability strategies. The goal for implementing individual measures could be varied and include raising awareness about the environmental impact of research projects, inviting discussions, collecting feedback from researchers and minimising the environmental footprint of research.
- II. Funders should evaluate funding schemes for their alignment with sustainability. This could include requirements or established practices which directly or indirectly impact sustainability. For example, the duration of grants or the use of quantitative indicators as evaluation criteria in grant giving could be discussed. Additionally, funders could allow the carry-over of unspent research funds to avoid unnecessary purchases, and strategies such as reduce, reuse, repurpose and recycle should be encouraged. This includes sharing and repairing of equipment and sharing of resources.
- III. Funders should provide financial support to researchers and to institutes, where applicable and appropriate, to address sustainability. This could include new calls to address relevant topics, funding for education and training, and permitting costs associated with complying with sustainability criteria to be requested in budgets.
- IV. Where funders integrate accreditation programmes or other products from third parties into their funding schemes, these should align with their strategies and values. See a list of general requirements for sustainable tools in [Box 2](#) of the agreement.
- V. Funders should build partnerships with other funders and relevant stakeholders to share best practices for developing funding schemes which support sustainable research.
- VI. Funders should assess the possible effects of measures on the different stakeholders, in particular the research communities. For example, funders should seek a dialogue with the research community to discuss freedom of research<sup>d, 12</sup> in the context of the need for sustainability. Funders should also prevent environmental policies from creating excessive bureaucracy for researchers and research organisations.
- VII. Funders should implement considerations or eligibility criteria flexibly. Research community feedback should inform the adaptation and revision of policies, along with other measures.
- VIII. Funders should promote the establishment of formal or institutionalized structures for sustainability and accreditation, such as those developed for research ethics – i.e. handling human and animal subjects in research. This could include specific compliance checks, as well as designated offices or staff to provide the necessary support.
- IX. Funders should consider the greenhouse gas emissions of the research they fund. In the future, emission budgets for funded projects may have to be implemented.

<sup>d</sup> According to the Bonn Declaration, freedom of research stands for openness, exchange, excellence, internationalism, diversity, equality, integrity, curiosity, responsibility and reflexivity.

## 6. Funders should involve researchers and research organizations.

This agreement should provide the impetus for increased European cooperation in multi-stakeholder networks, including individuals and institutions. Alignment could be facilitated by a multi-stakeholder agreement similar to the *UK Concordat for the Environmental Sustainability of Research and Innovation Practice*<sup>e, 13</sup>.

### Box 2 Requirements for sustainable tools for researchers<sup>f</sup>

- › Free to use for the research community
- › Open source
- › User-friendly and scalable for institutions
- › Independently tested and reviewed
- › Regularly evaluated and updated

## Next steps

The Heidelberg agreement marks the beginning of a new European multi-stakeholder effort towards sustainability. It is an invitation to the international research community to work together and is intended to give a direction for action for funding agencies. The next step will be to establish an international sustainable research network, open to other interested organizations, to work on the issues raised in this document. Future meetings of the founding organizations are already planned.

## Endorsement statements

### Austrian Science Fund (FWF)

The Austrian Science Fund (FWF) provides research funding for basic research across all disciplines, allowing researchers to choose their topics through a bottom-up approach. It is committed to contributing to the sustainable development of society and has embedded sustainability as one of its core values. The FWF endorses the Heidelberg agreement and is currently developing a package of sustainability measures in line with the agreement.

<sup>e</sup> The UK research and innovation sector has recently co-developed and published a *UK Concordat for the Environmental Sustainability of Research and Innovation Practice*, which commits its signatories, including some of the main national research funders and research organizations, to integrate environmental sustainability into all aspects of their work.

<sup>f</sup> The starting point for this list was the overarching principles of the Green DiSC certification scheme for computing.

### Deutsche Forschungsgemeinschaft (DFG)

Recommendations and activities on sustainability of the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) are in line with the Heidelberg recommendations, thus DFG supports this initiative. According to DFG's principles of freedom of research and bottom-up approaches of choice of research topics, DFG anchors a reflection on sustainability aspects in applications of all funding programs. By this, the scientific community is encouraged to develop strategies for environmentally compatible and resource-conserving procedures in the research process.

### Foundation for Polish Science (FNP)

The Foundation for Polish Science welcomes the initiative of The European Funders' Agreement on Sustainability. We fully recognize the responsibility of research community and research funders towards environment and society. Many of the principles of the Agreement are already implemented by the Foundation. Others reflect our aspirations for the future. Some of the recommendations included in the Agreement require deep cultural and systemic changes that are beyond an easy reach of a single organization and which require coordinated effort of many stakeholders. Acknowledging that full enactment of the Agreement is a major challenge, the Foundation declares it will pursue this ambitious goal to the best of its means. We strongly believe that promoting sustainable and deliberate science serves primary interest of the society and research community.

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## Participant list

### Workshop: Funders' role in promoting environmentally sustainable lab research

EMBO, Heidelberg, Germany, 14-15 May 2024

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All URLs were accessed on 18 October 2024.