Concordat for the Environmental Sustainability of Research and Innovation Practice

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Introduction

We are living in a period of unprecedented environmental change and increasing societal pressure to take meaningful climate action. In 2019 the UK legislated on net zero carbon[1] targets, setting a binding target for the UK to reach net zero emissions by 2050[2] and by 2045 in Scotland[3]. The Intergovernmental Panel on Climate Change (IPCC)[4] has reported the extent to which we are already seeing the impacts of climate change today across the globe.

The UN Environment programme[5] and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystems services (IPBES)[6] have both highlighted that over a million species are threatened by extinction and many ecosystems are at risk of collapse. The research is clear that human activity is unequivocally changing the environment and our climate, and this will have a significant impact on human lives, the economy, and the natural world.

Our science also tells us we need to act now – to set a series of measures in place over the next 5 to 10 years – to address the environmental sustainability challenges we face. This includes deep rapid, and sustained reductions in greenhouse gas emissions[7] to address climate change as well as actions to address unsustainable resource consumption, biodiversity loss and resilience to our changing climate.

Research and innovation (R&I) is key to both understanding the impact climate change and biodiversity loss is having on our planet and how to solve these challenges. The UK Research and Innovation sector has been leaders in informing climate science and action and also contribute vital insight on biodiversity and ecosystems to tackle biodiversity loss and wider environmental challenges.

The UK R&I sector is well placed to lead the way in making R&I itself environmentally sustainable, alongside providing the R&I needed to help other sectors and wider society make this much needed transition. Looking ahead, within the UK we will only achieve our net zero targets and biodiversity goals if the R&I sector continues to offer intelligence, insight, and innovative solutions to shift our society to an environmentally sustainable way of living.

By signing this concordat, we recognise the need to change how we conduct R&I as well as promote wider solutions. We agree to take shared action now and into the future to reduce and eliminate our own environmental impacts and emissions and achieve the transition to sustainable practices.

For organisations already taking a lead in this area, this concordat reinforces the importance of this work and offers a framework for working together across the sector, sharing good practice, and helping each organisation find the best pathway for it to reach net zero. This concordat has been produced in collaboration with representatives across the R&I sector (including Universities, Research Institutes, Catapults and Funding Organisations) as we must work together to deliver our shared sector-wide ambition as part of meeting the global challenge.

1 “Carbon” is used as shorthand throughout the document to refer to all greenhouse gases.

2 UK Government Net Zero Strategy: Build Back Greener 2021 net-zero-strategy-beis.pdf

3 The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, The 2009 Climate Change (Scotland) Act and The Climate Change (Duties of Public Bodies: Reporting Requirements) (Scotland) Amendment Order 2020

4 ‘Working Group I Contribution to the IPCC 6th Assessment Report, Climate Change 2021: The Physical Science Basis’, https://www.ipcc.ch/report/ar6/wg1/#SPM

5 UNEP World Environment Situation Room https://wesr.unep.org/article/biodiversity-and-nature-loss

6 IPBES Home page

7 AR6 Synthesis Report: Climate Change 2023 https://www.ipcc.ch/report/ar6/syr/

What this concordat will achieve

Signatories agree to work individually and collectively to ensure the future design and practice of UK R&I is environmentally sustainable. Before we reach 2050 (or 2045 in Scotland) our sector will have in place:

- Visible and credible leadership for environmental sustainability at all levels within institutions and across the R&I sector – from organisational leaders to individual researchers and from those funding the ideas to those delivering impact.
- R&I is carried out in an environmentally sustainable way, aligned to the science of climate change and ecology, and signatories are transparent about environmental impacts of R&I and are open to collaboration and shared learning.
- New ways of working so that institutions, researchers, and innovators continue to achieve a global reach and deliver world-leading impact in R&I using a climate conscious, low carbon approach, taking advantage of new ideas from across all disciplines, wider enterprise, and new technologies
- Net zero or near-net zero carbon infrastructure is being used to deliver R&I (with scientifically robust carbon sequestration where absolute zero carbon is not possible).
- Robust decisions made in resourcing R&I projects and data, based on circular economy principles and life cycle costing, with the need for responsible sourcing demanded all through supply chains.
- A shift to greater use of reusable products, innovative developments in single use materials and to have reduced the use of fossil fuel-based products being used and disposed of by those carrying out R&I to only those areas where there is no viable alternative.

By achieving these aims, the UK will retain its global influence in R&I, continuing and enhancing the strong partnerships and collaborations that exist and aiming to inspire organisations, researchers, and innovators around the world to follow in the UK's footsteps in how we conduct R&I in an environmentally responsible way.

GSK Carbon Neutral Laboratory for Sustainable Chemistry, University of Nottingham.

Image credit: University of Nottingham.

Scope

This concordat covers all aspects of environmental sustainability (including, but not limited to carbon emissions, water, waste, and biodiversity).

By environmental sustainability, we mean ensuring our interactions with the environment avoid depletion or degradation of natural resources, reduce, or eradicate our greenhouse gas emissions and allow for long-term environmental quality; ensuring that the needs of today's population are met without compromising future generations' ability to meet their needs.

The priorities in the concordat have been designed to complement other related policy areas such as the UN-Sustainable Development Goals (SDGs)[8], Equality, Diversity, and Inclusion (EDI)[9], Health and Safety[10], Modern Slavery[11] and Research Ethics and Integrity[12]. 'We', as used in this document, refers to everyone involved in research or innovation activities within the organisations who are signatories to the concordat. This includes but is not limited to Higher Education Institutions (HEIs), Independent Research Organisations, and organisations funding R&I (recognising that some organisations have multiple purposes). The concordat includes commitments and guidance for people across organisations, from those in leadership to individual researchers, innovators, or policy makers.

This concordat has been written in recognition that we must deliver our shared aims in a way that does not add bureaucracy or unnecessary burden on institutions or the people within them[13].

We have sought to avoid duplication, e.g., by use of existing reporting requirements, and we have given regard to other concordats to ensure this does not duplicate existing commitments[14]. Signing this concordat is voluntary; the concordat does not seek to regulate or add in additional requirements. It encourages signatories to deliver the shared commitments in this concordat in the way that is most effective for their organisation. To aid this, signatories will commit to finding the best way for their institution, using existing processes, frameworks, and structures, while ensuring streamlined open reporting.

This concordat recognises the inter-linkages between R&I, teaching and other aspects of higher education and vocational training, including how we run our campuses, infrastructure, and estates. We ask signatories to publish their robust and consistent aggregate data that includes R&I activities with other activities, providing a coherent overall picture of impact, again, using existing reporting frameworks.

Additionally, this concordat recognises that many HEIs, Independent Research Organisations and funders work with businesses, internationally, nationally, and locally to deliver R&I activities. This concordat includes these partnerships, again, in a holistic way, as it does partnerships with wider community organisations.

8 United Nations Sustainable Development Goals https://sdgs.un.org/goals

9 Equality Act 2010: guidance – GOV.UK (www.gov.uk)

10 HSE: Information about health and safety at work

11 Modern Slavery Act 2015 – GOV.UK (www.gov.uk)

12 UK Committee on Research Integrity Home – UKCORI

13 Independent Review of Research Bureaucracy (July 2022) – GOV.UK (www.gov.uk)

14 Research Concordats and Agreements Review – phase 2 (April 2023) https://www.universitiesuk.ac.uk/what-we-do/policy-and-research/publications/research-concordats-and-agreements

Priority areas for delivery

Signatories to this concordat agree to the following six (6) areas where we commit to taking action at an institutional level and collectively across our sector to deliver real change by 2050:

1. Leadership and system change

We will show leadership and ambition, and deliver on the part we must play in addressing environmental sustainability, including the UK reaching net zero by 2050 (and Scotland by 2045); in doing that we commit to ensuring the R&I that we undertake or fund is practiced in an environmentally sustainable way while still delivering the best R&I outcomes. We also recognise that the 2050 (or 2045 in Scotland) timeframe is not the only target for action and so we will encourage rapid and ambitious action in the short term (the next 5-10 years), which the scientific community has highlighted as critical in addressing climate change and biodiversity loss. We will ensure environmental sustainability is embedded into our strategies, referenced in relevant R&I policies, and reflected in our actions/decisions. We commit to supporting, encouraging, and rewarding a holistic sector-wide change that will enable and empower all parts of the system at different levels to increasingly embed environmental sustainability into R&I practice. We will regularly highlight and share examples of best practice and impact, and our learning experiences to support continuous improvement and to help others who are at an earlier stage in exploring solutions.

2. Sustainable infrastructure

Recognising the significant lifetime and environmental impact of buildings, digital infrastructure, laboratories, and large equipment; we commit to ensuring the R&I infrastructure that we create, provide or fund aligns to the ambitions of this concordat and our organisational environmental sustainability goals, including, but not limited to addressing biodiversity and reaching net zero by 2050. We recognise the environmental impacts associated with the construction and manufacture of new infrastructure and will maximise use of existing infrastructure where this is feasible and is robustly assessed as an environmentally sustainable approach. We will also address the sustainable operation of new and existing infrastructure, including digital infrastructure, to ensure researchers and innovators are enabled and encouraged to plan and carry out their activities in an environmentally sustainable manner, for now and allowing for adaptation to future climates.

3. Sustainable procurement

We will ensure that the procurement decisions which are made in relation to all the R&I activities we undertake, or fund, will increasingly prioritise the mitigation or avoidance of environmental impacts including, but not limited to carbon emissions, water, waste, and biodiversity. Through our approach to more sustainable procurement, working with our colleagues, partners, and supply chains, we will encourage a shift to apply the principles of a circular economy. We will reflect our commitment to this principle by ensuring that the role of sustainable procurement decisions in R&I practice is included in our organisation's strategies and policies.

4. Emissions from business and academic travel

For R&I to have global reach and benefit, we recognise that we must address carbon emissions associated with travel, and will promote 'climate conscious' travel in our R&I endeavours. Where travel is deemed essential in the context of the initiative, we will actively seek to travel less frequently, consider hybrid options for those travelling from further afield and prioritise to accommodate low carbon modes of travel (while also ensuring inclusivity and being mindful of the needs of attendees).

5. Collaborations and partnerships

We understand we must play a leadership role with regards to environmental sustainability when collaborating with the partners to carry out R&I, both in the UK and internationally. We will advocate for embedding environmentally sustainable practices in the R&I activities we co-produce or collaboratively undertake or fund. We will share and encourage others to share where we find solutions to lower carbon emissions and other environmental challenges associated with carrying out our R&I activities.

6. Environmental impact and reporting data

The above priorities generate positive environmental impact through effective delivery. We agree to providing transparent and consistent reporting to deliver this change.

Signatories agree that:

a. At an institutional level we will report headline data on environmental impact and performance on an annual basis on our website.

b. We will collect and report environmental data using standardised reporting frameworks and mechanisms, and existing internal processes so we avoid duplicating effort. The scope of reporting will include the R&I endeavours that we undertake and/or fund. Guidance based on existing reporting frameworks is set out in Annex 1.

c. We recognise that although carbon mitigation should be prioritised before sequestration, for our organisation to reach net zero, we may need to offset a proportion of carbon emissions through carbon sequestration. We will work collaboratively with other concordat signatories to agree acceptable approaches for offsetting that are linked to scientifically robust, permanent carbon sequestration. We will be transparent and report any carbon offsetting as part of our environmental reporting.

d. We recognise that the cumulative effect of all signatories reporting across the sector will contribute to overall concordat delivery and impact, and promote sharing of good practice.

Delivery of the concordat

Organisations can show their support for the concordat at two levels: as a signatory or as a supporter. A list of signatories and supporters will be published and regularly maintained.

Signatories

Signatory organisations agree to all six priority areas that are outlined in this concordat. Guidance (Annex 1) is provided to assist signatory organisations in considering how they will deliver against the concordat. Where an organisation has multiple purposes, signatories will need to judge how to apply the guidance as relevant to their organisation.

Supporters

Supporters of the concordat agree with the aims and many of the priority areas included in the concordat, however they are not able to commit to being a full signatory at this time. Supporters can become signatories at any time, as and when they can agree to the commitments in the concordat.

Signatories to this concordat agree that:

a. We concur with all six priority areas outlined in this concordat and will consider the guidance provided in determining how we will deliver against the concordat.

b. At a strategic level we will provide a public commitment to the concordat including how our organisation will deliver its shared aims by publishing a letter endorsed by the head of the organisation on our website within six months of becoming a signatory.

c. We will ensure that we include reference to the concordat and its commitments in at least one appropriate and prominent organisational strategy/policy document to assist joined up implementation.

d. We will use our organisation's existing internal processes and publish an annual summary of our progress on the commitments of the concordat along with priority actions for the year ahead.

e. We will nominate an appropriate board member or senior leader within our organisation to be responsible for signing off our annual summary and plans as needed.

Good practice guidance can be found in Annex 1. The guidance sets out a range of enablers for the different areas of responsibilities across the R&I sector and is designed to assist everyone in playing their role in embedding environmental sustainability into R&I practice.

Annex 1

Good practice guidance notes on concordat delivery

All concordat signatories will be invited to join task and finish groups, focusing on areas where there is agreement that cross-sector coordination will assist faster progress. Outcomes of these groups could be to develop appropriate tools, mechanisms, and guidance and/or to agree common definitions, common minimum standards, and shared reporting principles.

The concordat will be published online and be available to the whole R&I sector along with signposting to appropriate guidance and frameworks, and include a list of verified signatories and supporters.

An independent organisation will be contracted to run the concordat sign-up process and maintain the list of signatories and supporters.

Reporting overall progress of the concordat

To measure collective progress, an initial mapping exercise will be commissioned in 2024 to capture the current landscape of environmental sustainability in UK R&I practice to share with the sector.

Within 18 months of publication, a progress review will be commissioned and published that will include an overview of examples and case studies of good practice in delivering the concordat, highlighting progress/new outcomes which have come about from the concordat working groups.

A more in-depth sector-wide 5-year review of impact of the concordat will be commissioned (from 2029) to allow us to collectively understand shared progress. We recognise the need for continuous improvement and, after five years of operation will review the wording of the concordat priorities and guidance. The content review will ensure that the wording reflects the current landscape, appetite for change and capabilities of the sector, factoring in any developments in good practice, technology and approaches that are likely to emerge at pace through this transition, for example nature-based solutions.

Guidance on roles and responsibilities in delivering the concordat

This section provides guidance on the delivery of each of the priority areas to recognise the different roles and responsibilities of researchers/innovators, their employers and leaders, and organisations funding R&I. By providing a breakdown of the different responsibilities, we wish to help signatories and supporters understand the different roles we all must play in embedding environmental sustainability into R&I practice across the sector. In recognition of the wide variety of organisations in the sector, the guidance includes a range of enablers that organisations could include in their approach to delivering against the concordat's priorities.

1. Leadership and system change

The following guidance indicates ways to approach the leadership priority at different levels.

a. Enablers for employers/leaders of researchers and innovators:

- at a leadership team level, ensure that the organisation's strategic ambition to increase the environmental sustainability of all R&I practice is specifically addressed and published as part of the organisation's environmental sustainability commitments.
- at management level, ensure that the organisation's environmental sustainability ambitions are effectively embedded into strategic decision-making processes and communicated to colleagues throughout the organisation.
- take action to empower and enable ownership and leadership of the issues to be exercised at all levels, recognising that successful delivery will require any cultural change, appropriate resourcing and training and development opportunities.
- put in place mechanisms to capture and publicly report progress against the commitments and to maintain and develop the concordat.
- regularly look for opportunities to implement, reward, and share ideas, good practice and learning experiences inside and outside their organisation.

b. Enablers for researchers, innovators and professionals supporting research and innovation:

- show leadership in their work/field by designing, carrying out and disseminating R&I in an environmentally sustainable manner that reflects the policies, commitments, and expectations of both their host organisation and their funder(s).
- take ownership of decisions within their gift to ensure environmental sustainability impacts are included in plans for carrying out R&I activities.
- clearly identify and communicate resourcing requirements to deliver and seek opportunities for environmental sustainability training and development.
- actively encourage those they work, collaborate, and communicate with to design, carry out and disseminate R&I in an environmentally sustainable manner, encouraging sector-wide change.
- develop, implement, and share ideas, good practice and learning experiences with the R&I community.

c. Enablers for funders of research and innovation:

- show leadership by establishing and communicating expectations to increase the environmental sustainability of the R&I activities they fund.
- recognise differing responsibilities, at an organisation level e.g., infrastructure and grant applicant level in the expectations that are set (as outlined above).
- encourage and enable those who they fund to share R&I outcomes, good practice and learning experiences where it addresses or solves environmental sustainability challenges of how R&I is practiced.

2. Sustainable infrastructure

The following guidance indicates how to approach the infrastructure priority at different levels.

a. Enablers for employers/leaders of researchers and innovators:

- commit to creating and publishing strategic commitments that will ensure both new and existing infrastructure is aligned to the ambitions of this concordat and the organisation's net zero pathway and biodiversity goals.
- adopt best practice wherever infrastructure is being updated or designed/scoped, to ensure researchers and innovators that use the infrastructure can carry out their activities in an environmentally sustainable way (now and in the future).
- ensure guidance is being shared with all researchers and innovators on how to use the infrastructure efficiently and on any accredited sustainability programmes which are being followed, to aid R&I activities to be practiced in an environmentally sustainable way.
- maximise the use of existing infrastructure where feasible and encourage researchers and innovators to explore leasing/sharing options before buying new.
- seek and follow accredited environmental sustainability standards and programmes for construction/manufacture and for efficient operation and decommissioning of infrastructure, wherever standards are available.

b. Enablers for researchers, innovators and professionals supporting research and innovation:

- design and carry out R&I endeavours in a way that optimises the sustainable operation or efficiency of building and equipment infrastructure.
- follow guidance on how to efficiently use the infrastructure provided and guidance related to accredited sustainability programmes being followed, to aid R&I activities to be practiced in an environmentally sustainable way.
- explore opportunities for leasing/sharing infrastructure and existing equipment from within the organisation or from other parts of the R&I sector prior to making the case for new investments.

c. Enablers for funders of research and innovation:

- ensure decision making processes seek high standards of environmental sustainability in the R&I infrastructure they fund from procurement and construction to operation and end-of-life.
- ensure the design of building infrastructure that is being funded includes planning for future climate adaptation and resilience.

- recognise in funding policies and when reviewing business cases that the UK government "value for money[15]" definition accounts for making more environmentally sustainable decisions, which may come at a higher upfront cost.

3. Sustainable procurement

The following guidance indicates how to approach the procurement priority at different levels.

a. Enablers for employers/leaders of researchers and innovators:

- establish and communicate sustainable procurement policy, guidance and budget decisions that prioritise more environmentally sustainable options being purchased.
- encourage and explore opportunities for equipment sharing/leasing for R&I activities.
- seek opportunities to influence procurement decisions in organisation-wide procurement activities and in large R&I infrastructure projects, to apply of the principles of a circular economy and to influence key suppliers/supply chains for greater inclusion of environmental sustainability, recognising that greater sustainability may come at a higher upfront financial cost.

b. Enablers for researchers, innovators and professionals supporting research and innovation:

- increasingly ensure design of R&I activities seeks to reduce the environmental impact of the entire supply chain.
- increasingly over time, include environmental sustainability impacts and mitigations in procurement decision making processes (including life cycle analysis and costing where information is available).
- seek to prioritise purchasing environmentally sustainable options for R&I activities and apply the principles of a circular economy when making procurement decisions (while ensuring procurement processes meet legal requirements), recognising that greater sustainability may come at a higher upfront financial cost.

c. Enablers for funders of research and innovation:

- ensure funding policies and guidance are updated to enable and endorse researchers and innovators to take procurement decisions that allow more environmentally sustainable purchases, advocate life cycle analysis and costing in addition to consideration of purchase costs and actively encourage applicants to apply the principles of a circular economy.
- recognise in their funding decision making processes that "value for money"[16] considerations should account for making sustainable procurement decisions, recognising that greater sustainability may come at a higher upfront financial cost. We acknowledge that this can be complex and that funders may approach this in different ways; we will share learning over time between funders in this area.

4. Emissions from business and academic travel

The following guidance indicates how to approach the travel priority at different levels.

a. Enablers for employers/leaders of researchers and innovators:

- commit to implementing and advocating an organisation-wide policy which addresses reducing travel required for R&I activities in a clear and measurable way that will, over a specified period, reduce environmental impacts, including carbon emissions (while also ensuring inclusivity and being mindful of the needs of those travelling).
- prioritise holding a greater number of virtual or hybrid conferences, events, and meetings which their organisation is involved in for R&I activities using sustainable systems.

b. Enablers for researchers, innovators and professionals supporting research and innovation:

- adopt a climate conscious approach to travel; increase and encourage virtual or hybrid opportunities to meet, collaborate, disseminate, and adapt to carry out R&I activities.
- prioritise enabling capacity building with international partners; setting up collaborations

15 As outlined in guidance from HM Treasury's Green Book, updated 2022 https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-govenent/the-green-book-2020.

16 The Green Book (2022) – GOV.UK (www.gov.uk)

and leveraging existing local skills or if necessary, upskill researchers and innovators who are already located in the field where global fieldwork or research is required, in place of travelling out from the UK.

- for travel which is essential for R&I activities, actively seek to optimise journeys to require less frequent travel and prioritise low carbon modes of travel (while also ensuring inclusivity and the needs of those travelling).

c. Enablers for funders of research and innovation:

- ensure funding policies allow for climate conscious travel, encouraging virtual connections, hybrid meeting solutions and sustainable travel associated with the R&I activities they fund, while also ensuring inclusivity in how these decisions are made.
- hold a proportion of meetings virtually or as hybrid appointments where they are tied to decision making or reviews of the R&I activities they fund (ensuring that the inclusivity is considered, for example cybersecurity and connectivity capabilities of attendees, especially for international connections).

5. Collaborations and partnerships

The following guidance indicates how to approach the collaborations and partnerships priority at different levels.

a. Enablers for employers/leaders of researchers and innovators:

- through the organisation's strategic commitments, highlight the expectation for researchers and innovators to play their part in helping to work with and learn from the partners they collaborate.
- encourage and enable researchers and innovators to seek opportunities to collaborate and partnerships to solve the challenges of delivering environmentally sustainable R&I.
- advocate for greater inclusion of environmentally sustainable practices in the collaborative and partnership R&I activities they undertake or fund.

b. Enablers for researchers, innovators and professionals supporting research and innovation:

- actively seek interdisciplinary and cross-sector partners to address the environmental sustainability challenges of how R&I is practiced.
- play their part in sharing and encouraging sharing of good practice and learning about environmentally sustainable practices from the partnerships and collaborations they are involved with.
- play a key role in advocating for greater inclusion of environmentally sustainable practices in R&I activities across the UK and wider world through the existing and new collaborations and partnerships they are part of.

c. Enablers for funders of research and innovation:

- ensure funding polices allow and encourage interdisciplinary and cross-sector collaborations and partnerships to be created or maintained where they can help solve environmental sustainability challenges associated with the R&I activities they undertake or fund.
- encourage and enable sharing and learning about environmentally sustainable practices from R&I partnerships and collaborations undertaken or funded.

6. Environmental impact and reporting data

Recognising that the cumulative effect of all signatories reporting across the sector will also contribute to overall concordat delivery and impact, suggested annual reporting for all signatories is summarised below.

Performance information or environmental data provided for DfE[17], Greening Government Commitment (GGC)[18], HMT sustainability reporting[19] or following the HE Standardised Carbon Emissions Reporting framework[20] can be used to contribute to concordat reporting requirements.

At the point of publication of this concordat, there are no existing frameworks equivalent to the HE Standardised Carbon Emissions Reporting framework

17 Department for Education
Sustainability and climate change: a strategy for the education and children's services systems – GOV.UK (www.gov.uk)

18 Greening Government Commitments: reporting requirements for 2021 to 2025 – GOV.UK (www.gov.uk)

19 Public sector annual reports: sustainability reporting guidance – GOV.UK (www.gov.uk)

20 Standardised Carbon Emissions Framework (SCEF) | EAUC

for Independent Research Organisations or funders and we would ask these signatories to use the above frameworks to guide their reporting. Additional guidance for Independent Research & Innovation Organisations and organisations funding R&I about how this may work has been published alongside this concordat. The additional guidance has been created in collaboration with Independent Research & Innovation Organisations and organisations funding R&I and is tailored to the activities and impacts of these organisations.

We recognise that many actions are difficult to capture numerically, and that the concordat is designed to address environmental sustainability of R&I practice, not just carbon emissions. Therefore, in addition to quantitative data reporting, to ensure transparency and to help share learning and good practice, all types of organisations might also augment their reporting qualitatively. It is expected that reporting will be proportionate to the scale of the organisations and its R&I activities and its maturity in environmental reporting. If an organisation does develop an accompanying narrative report, we suggest this is published on the signatory organisation's website and includes reference to areas of environmental sustainability covered in this concordat e.g., biodiversity, water, waste and recycling, pollution, and single use materials.

Organisations following accredited standards or programmes (including, but not limited to 'LEAF'[21] 'My Green Lab'[22], ISO standards[23]) are encouraged to cross-reference or refer to any associated and relevant reporting when considering the narrative reporting outlined above.

6.1 Guidance on carbon reporting

The following guidance on reporting data is divided up into 3 areas: Higher Education Providers, Independent Research Organisations and Funding Organisations. To ensure transparency in understanding how the sector is meeting net zero targets, we ask all signatories to also report total annual carbon emissions offset (CO2e) if offsetting is used. We note that this is not a current requirement but if possible, adding this reporting element would add confidence in data.

6.1.1 Enablers for Higher Education Providers

As outlined in the HE Standardised Carbon Emissions Framework, HE organisations could publicly report annual carbon emissions on the following basis:

– Total annual carbon emissions (CO2e) arising from your direct operations. Data split by scope 1 and scope 2[24].

– Scope 3 emissions (CO2e).

The Scope 3 categories most relevant to the concordat are likely to be 'business travel', 'waste generated in operations', 'supply chain' and 'investments' categories, but other scope 3 categories might be reported too if material to the organisation's R&I activities.

– Total annual carbon emissions offset (CO2e) (if offsetting is used).

HE organisations following the Standardised Carbon Emissions Framework and reporting via the Higher Education Statistics Authority (HESA) through the Estates Management Record (EMR)[25] (and in future the environmental sustainability data reporting mechanisms designed to replace the EMR) and reporting to the Department for Education (DfE) with regard to their Climate Change Strategy for Education would satisfy the reporting commitments of this concordat.

HE organisations located in Scotland following the Scottish Government statutory requirement for comprehensive reporting of climate change issues under the Climate Change (Scotland) Act 2009 would satisfy the reporting commitments of this concordat.

6.1.2 Enablers for Independent Research and Innovation Organisations

As outlined in the accompanying additional guidance for Independent Research & Innovation Organisations and organisations funding R&I, Independent Research & Innovation Organisations could publicly report the following on an annual basis:

21 LEAF – Laboratory Efficiency Assessment Framework

22 My Green Lab

23 ISO – International Organization for Standardization

24 Scope 1, 2 and 3 are internationally recognised standards created by the Greenhouse Gas Protocol to measure and manage emissions https://ghgprotocol.org/

25 Estates Management | HESA

– Total annual carbon emissions (CO2e) arising from your direct operations. Data split by scope 1 and scope 2.

– Scope 3 emissions (CO2e).

The Scope 3 categories most relevant to the concordat are likely to be 'business travel', 'waste generated in operations', 'supply chain' and 'investments' categories, but other scope 3 categories might be reported too if material to the organisation's R&I activities.

– Total annual carbon emissions offset (CO2e) (if offsetting is used).

All Scope 1,2 and 3 carbon emissions data presented to should align to GHG protocol methodology[26].

6.1.3 Enablers for Funding Organisations

As outlined in the accompanying guidance for Independent Research & Innovation Organisations and organisations funding R&I, organisations funding R&I could publicly report the following on an annual basis:

– Total annual carbon emissions (CO2e) arising from your direct operations. Data split by scope 1 and scope 2.

– The total actual or estimated annual scope 3 impact from your funded activities (CO2e), recorded in the scope 3 'investments' category.

– Total annual carbon emissions offset (CO2e) (if offsetting is used).

We recognise that some data on the impact of R&I activities may not be easily gathered due to the complexity of organisations. The accompanying guidance suggests how funders can develop ways of reporting this (for instance, at a basic level this could be calculated on an apportioned basis, using headline data from the R&I community). If more data becomes available on the impact of R&I activities, more accurate calculation methods could be sought. Funders will work together to share good practice about how to approach reporting over time.

All Scope 1,2 and 3 carbon emissions data presented to should align to GHG protocol methodology[27].

Delivery of the concordat

Leaders signing this concordat on behalf of their organisation should:

- ensure that a letter is generated and published on their website to make a public commitment to the concordat within 6 months of becoming a signatory. This should be signed by the head of organisation e.g, Chief Executive, Head Director, or Vice Chancellor.
- include concordat references in appropriate and prominent organisational strategies and documents. This may include environmental/ climate change strategy, corporate responsibility reports or your annual report.
- ensure the annual reporting referred to in priority 6 of the concordat is published and is open and transparent.
- nominate an appropriate senior lead to sign off their concordat annual report and forward plan who is in a position to challenge progress if necessary. This may be an existing leader with responsibility for performance reporting.

26 https://ghgprotocol.org/
27 https://ghgprotocol.org/