

EUROPEAN CODE OF CONDUCT FOR RESEARCH INTEGRITY – REVISED EDITION 2023

FEEDBACK ON OUTCOMES OF THE STAKEHOLDER CONSULTATION

The revision process

In 2017 the ALLEA Permanent Working Group on Science and Ethics (PWGSE) committed to reviewing the ALLEA European Code of Conduct for Research Integrity (ECoC) in three to five years to ensure that it reflected changes and developments in the research landscape and continued to be fit-for-purpose as a framework for self-regulation. In 2020, discussions began on a refresh process, but this was delayed by the pandemic until 2022. Since early 2022, a Drafting Group of the ALLEA PWGSE has been exploring what changes would be needed. This work culminated in November 2022 in a draft refreshed document being sent for consultation to diverse stakeholder groups across Europe. Stakeholders included representative associations and organisations for academia, publishers, industry, policymaking, and broader societal engagement. The response to this stakeholder consultation was exceptional, reflecting a sense of ownership and engagement with the ECoC amongst stakeholders.

All feedback was captured and discussed in detail in February 2023 by the Drafting Group, and the PWG Science and Ethics. This document sets out what changes were accepted and what suggested changes were not actioned (and why).

In making any changes to the 2017 ECoC, the Drafting Group was mindful that this is a foundational document for many other documents, including EC Grant Agreements, many EU projects, national and local RI codes and guidelines, and RI curricular structures. Therefore, making substantial changes could create an unhelpful domino effect across the system. The Drafting Group was clear that the ECoC is a framework document that provides guidance at a high level which can then be translated into more detailed codes and guidelines at the national, regional, institutional, and disciplinary levels, or to address specific research tools or developments.

The Drafting Group applied the following criteria when considering changes requested by stakeholders to existing wording or the inclusion of new points:

- Only necessary changes were made, i.e., that improved clarity or addressed a substantive issue.
- Expansion of lists of specific examples of research developments, changes, tools, and responsible actors are set out in the Preamble instead of repeating them throughout the document. These lists are alluded to in shorter form in individual clauses.
- Where guidance on new research developments was required, the Drafting Group tried, when possible, to accommodate small changes in the wording of an existing clause.
- When it was not possible to modify the wording of an existing clause to address a substantive issue, a new clause was added. However, this was avoided where possible.

General response to stakeholder feedback

A list of stakeholder organisations and associations that responded to the consultation is provided in Annex 1.

In total, 31 stakeholder organisations provided feedback on specific clauses within the ECoC. Of these, 15 stakeholder organisations also provided general feedback on the proposed changes to the ECoC, its function in the research system and so on. Overall, feedback supported the changes proposed by the Drafting Group, although many stakeholders asked for more emphasis on specific elements within the ECoC relevant to their context. While these requests were understandable, they would have required a level of detail that the Drafting Group considered misplaced in a high-level framework and would be better placed in detailed guidelines for that context. Feedback commended:

- The expansion of publications to include any method whereby research results are made publicly available, with specific inclusion of public communication of research, through print and social media (including blogs and podcasts).
- The stronger emphasis on the responsibilities of institutions, funders, and publishers, especially regarding the emerging changes in research assessment, where these organisations are in a unique position to determine standards and move towards developing qualitative indicators.
- The inclusion of citizen science or participatory research projects (although it was acknowledged that bottom-up citizen science projects could not be expected to be aware of or follow the ECoC).

There were also general observations made about:

- The perceived addition of 'ethics' issues in the code, which stakeholders felt should be delineated from integrity and might not be appropriate in the ECoC. This comment was acknowledged and where possible, mention of ethical behaviour is in the context of good research practice.
- The inclusion of research integrity implications of new and emerging technological developments applied in research (such as AI), which is now referenced in the Preamble and in relevant clauses throughout the document.
- Ensuring that the ECoC aligns with the Cape Town Statement, published by the World Conferences on Research Integrity Foundation on 24 March 2023. This comment was actioned throughout the document where that was appropriate. The Cape Town Statement "recognised that unfair and inequitable research practices remain prevalent at all stages of research from proposal development to funding application, data collection, analysis, sharing and access, reporting and translation".
- Explicit mention of research funders, where they have specific responsibilities. This feedback is addressed in the Preamble and in clauses where this is appropriate.
- Greater emphasis on Open Science throughout the ECoC. This feedback is addressed in the Preamble and in clauses where this is appropriate.
- The use of more inclusive language that refers to, and is relevant for, all participants in the research cycle, not just Principal Investigators. This feedback is now addressed in clauses where this is appropriate.

Detailed feedback on each ECoC section

Preamble

The Preamble has been substantially revised to capture many of the concerns raised in stakeholder feedback.

Principles

- Stakeholders noted that the principles are not exhaustive. In response, the principles now 'include' (rather than 'are') reliability, honesty, respect, and accountability. This provides opportunities for policies and guidelines derived from the ECoC to identify other principles relevant to their context.
- Several stakeholders felt that including **independence** and **impartiality** in research would be a valuable addition to the principles. In response, the Preamble was expanded to stress the importance of independence and impartiality, as these underpin all the principles, and impartiality was included in relevant clauses.
- In the principle of Respect (and in several clauses throughout the ECoC) stakeholders encouraged the addition of 'subjects' to reflect research involving animals.
- The importance of wider impacts of research was acknowledged by the addition of 'societal' in the Accountability principle.
- A request to replace Accountability with Transparency was not actioned, as Accountability is a much wider concept. Transparency is captured in the Honesty principle.

Section 2 of the ECoC (good research practices)

This section summarises how the Drafting Group dealt with feedback from stakeholder organisations on specific clauses in the ECoC.

2.1 Research Environment

- The provision of resources to incentivise a culture of RI has been added in response to feedback.
- While many stakeholders welcomed the new Clause 2 on creating a values-driven and respectful research environment, some questioned why this would be included in a code of conduct for research integrity, since it describes more general good behaviour and 'the right thing to do'. However, the Drafting Group felt that it bore iteration because of its importance.
- In response to feedback, a new Clause 3 was added to cover the responsibility of institutions and organisations regarding structural pressures they might put on individual researchers, for example requiring high-impact publications or large amounts of funding to successfully progress in one's career.
- Clause 4 on institutional procedures for investigating misconduct has been amended to reflect feedback on recognising allegations of both 'suspected' misconduct and violations of RI.
- In response to feedback, Clause 5 on the protection of whistle-blowers and researchers receiving threats has been amended for clarity by changing 'defend' to 'actively support', removing 'external' (as threats can also be internal), and changing 'temporarily employed' to 'short-term employed' concerning particularly vulnerable groups. Requests to spell out how that might be done were not actioned, as this is up to individual institutions and is not for the ECoC to define.
- In Clause 6 on the provision of infrastructure, the intentions of this clause were clarified by replacing 'proper' with 'appropriate' and adding 'generation' of data.

- Suggestions for other additional Clauses were considered but not actioned, since the Drafting Group felt that existing Clauses in the section adequately addressed the points raised, or the requests asked for a level of detail that was misplaced in a high-level framework.

2.2 Training, Supervision and Mentoring

- In response to feedback, 'dissemination and communication' have been added to the list of training required in Clause 1.
- In Clause 2 on codes and regulations, 'and develop the necessary skills to apply these to their research' was added to reflect that awareness of rules and codes is not enough, but that researchers must also understand how to comply with those rules and codes.
- Clause 3 on supervision and mentorship has been amended to include 'lead by example' to reflect the responsibility of research leaders and supervisors to also adhere to good research practices. To clarify what this guidance should achieve, 'to develop and structure their research activities' was added. A suggestion to add training in publication and peer review was deemed unnecessary as this is covered in other clauses in the document. Likewise, a suggestion to mention fostering a culture of research integrity is already covered in Section 2.1 on research environment.
- The suggestion to include an additional Clause on predatory publication and conferences is dealt with in Section 2.7 on publication.
- The suggestion to provide definitions of good supervision and mentoring, while important when designing curricula, for example, was considered too detailed for a high-level framework document.
- A suggestion to add a new clause regarding fostering an ethical mindset is already covered in the Preamble.
- In response to feedback, the order of the clauses in this section was changed to provide a clear flow of ideas.

2.3 Research Procedures

- In Clause 1 on considering the state-of-the-art in developing research ideas, 'own and associated fields' was replaced with 'relevant fields' to clarify that researchers in multidisciplinary research should also be aware of the state-of-the-art in other relevant fields, not just their own.
- The request to remove 'transparent' from Clause 2 was not actioned as this is considered in the context of Open Science practices such as registered reports.
- Clause 3 on research protocols has been expanded to include additional participants, aligned with the Cape Town Statement and feedback.
- In response to feedback 'timely' was removed from Clause 5 on sharing results as it was open to misinterpretation.
- Feedback on Clause 6 on reporting was incorporated by replacing 'outputs' with 'results and methods', adding reporting of 'the use of external services or AI and automated tools' and explaining the importance of reporting to 'enhance verification or replication, where applicable'.
- A suggestion to add an additional clause on not doing side projects in secret from supervisors was considered too detailed for a high-level framework and is covered by the concepts of openness and transparency referenced in previous clauses.
- Feedback on adding clauses about seeking consent for research on human participants and reducing the use of animals in research was not actioned as these should be part of the ethics approval process.

- In response to feedback, the order of the clauses in this section was changed to provide a clear flow of ideas.

2.4 Safeguards

- Suggestions to rename this section 'Compliance' or 'Ethical safeguards' or 'Safeguards and Ethical research' were not actioned because they narrowed the scope or made the section more about research ethics than research integrity.
- Likewise, suggestions to include clauses on structures for ethical review and governance, and taking a precautionary approach when providing ethical review of new and emerging areas of research were not considered appropriate in this Framework and were not actioned.
- Clause 1 on compliance was broadened to include the responsibility for compliance with 'relevant' codes, 'guidelines, and regulations, and of 'research institutions and organisations, as well as researchers.
- In response to feedback, Clause 2 on handling research subjects was expanded to include research 'participants'; for clarity, 'sensitive' was removed in reference to 'related data'. Compliance with 'legal provisions and ethical principles' was included in this Clause.
- In response to feedback, 'weigh' and 'mitigate' were added to Clause 4, which covers risks related to research and its applications.
- In response to feedback, a new clause was added on the responsibilities of researchers overseeing projects that cross professional boundaries, such as citizen science or participatory research.

2.5 Data Practices and Management

- In response to feedback, Clause 1 on data management was clarified by the addition of 'curation and preservation', and in both Clause 1 and Clause 5 'data' was expanded to include 'metadata, protocols, code, software and other research materials', and the retention period should be reasonable 'and clearly stated', acknowledging that the retention period may vary in different contexts.
- For conciseness, a request to extend Clause 2 to include the CARE principles was not actioned.
- Clause 3 on how to access data was amended to reflect that not all data is openly available but may be accessed on request and that the means of access must be clear.
- In line with GDPR requirements, a new Clause 4 covers the rights of research participants to know how their data will be used, reused, accessed, stored, and deleted.
- In line with feedback, Clause 5 on equitable and fair management of results was restructured to read more clearly, and the types of research results that should be citable were expanded.
- Suggestions for additional Clauses were considered but not actioned, as they covered the 'how' rather than the 'what' of data practices and management.

2.6 Collaborative Working

- For clarity, 'and its results' was added to Clause 1 on the responsibilities of partners in research collaborations.
- The addition of 'formally agree' to Clauses 2 and 3 on the objectives, expectations and standards in collaborations was in response to feedback and is intended to strengthen the approach to collaborative agreements.
- Clause 4 on agreement on publications 'and other forms of dissemination or exploitation' was amended to require a formal agreement between partners, and 'outputs' was replaced with 'results' as suggested in the feedback.

- The new Clause 5 was removed, as it caused confusion and was not deemed appropriate for this section by stakeholders.

2.7 Publication, Dissemination, and Authorship

This section garnered the most feedback from Stakeholders. As per the criteria for revision, the Drafting Group looked to address points by amending existing Clauses where possible but also added three new Clauses to reflect feedback that could not be accommodated elsewhere.

- This section's title was updated to reflect its content more accurately by adding 'Authorship'.
- In response to feedback, the criteria for authorship were updated in Clause 1 to align with COPE and ICMJE guidelines.
- In response to feedback, regarding responsibility for the content of a publication, 'fully' was deleted and 'unless specified otherwise in the publication' was added to align more closely with the Vancouver Rules. The possibility of specifying individual author responsibilities was added to acknowledge that it is not always possible for all authors to be equally responsible for the content of a publication.
- A new Clause 2 was added regarding the importance of including an Author Contribution Statement in the final publication, and the fact that not all journals allow for this was acknowledged by the addition of 'where this is possible'.
- In response to feedback, Clause 3 also acknowledges 'those who do not meet the criteria' for authorship and those who 'enabled the research'.
- In response to feedback on conflict of interest, 'financial and non-financial' conflicts of interest were added to Clause 4 for clarity.
- Clause 5 on correction or retraction of publications was strengthened with the addition of 'promptly'.
- In response to feedback, the list of actors to whom Clause 6 refers was expanded to include 'research institutions, publishers, funders and the research community', and the relevance of negative results strengthened somewhat with the replacement of 'consider' with 'acknowledge'.
- The new Clause 7 on communication was clarified by the removal of 'timely' and 'traditional and social media', which stakeholders did not feel added value, and 'colleagues' was added as a recipient of communications.
- The new Clause 8 on researcher assumptions and values was clarified to include 'communication, outreach and public engagement', and amended to 'influencing their research'.
- In response to feedback, Clause 9 on publication platforms was expanded to include 'preprint servers'.

2.8 Review and Assessment

- The title of this section was changed to reflect its content more accurately, with 'evaluating and editing' being replaced by 'assessment'.
- Clause 1 was amended following feedback to include 'assessment', 'recognition' and 'reward' to align with the reform of research assessment. Feedback on support for predatory publishers and conferences is now included in Section 3 as a violation.
- In response to feedback, Clause 2 on transparency of assessment was expanded to include 'researchers, institutions and organisations', and 'disclose the use of AI and automated tools' were added.

- Clause 3 on declaring conflicts of interest in assessment was amended, following feedback, to include the responsibility of 'editors', and expanded to include 'perceived' as well as actual conflicts and exclusion from 'discussion' as well as decisions where a conflict exists.
- The new Clause 6 on the principles of assessment practices received considerable support from stakeholders and was amended slightly to reflect the feedback.

Section 3 of the ECoC (violations)

The introduction to Section 3 was essentially left unchanged but 'research participants' were added in response to feedback.

3.1 Research misconduct and other unacceptable practices

- In response to feedback, the definition of Fabrication now includes 'data', the definition of Falsification now includes 'images', and the definition of Plagiarism has been simplified. The importance of other violations in addition to FFP was strengthened in the following sentences.
- The order of the examples of violations was changed to improve their flow. Note that this list avoids presenting the corollary of defying or ignoring clauses in the ECoC but seeks to capture additional violations that might not be obvious when considering violations of the ECoC.
- Several new violations of research integrity were added in response to feedback and reflected changes in the research landscape. These include establishing, using, or supporting predatory journals, conferences, or papers, participating in reviewer cartels, hiding the use of AI or automated writing tools in the creation of content or drafting of publications, citing inaccurately, withholding data or results without justification, and misusing seniority to advance careers.

3.2 Dealing with violations and allegations of misconduct

- Stakeholders generally supported the guidance provided but proposed small changes to add clarity.
- The subheadings of 'Integrity' and 'Fairness' were removed to allow the reordering of the bullet points to provide better flow and clarity.
- A new point was added regarding consideration of the possible role of institutions and individuals in 'contributing to the breach of good research practice' when investigating an allegation.
- In response to feedback, 'vulnerable groups' as a descriptor of whistle-blowers was removed, as several stakeholders felt this was unclear and unhelpful in the context of 'fair' investigations.

Annexes

Annex 1: Key Resources

The reference section was expanded considerably to capture seminal documents relevant to developments in research integrity or research developments/changes. National and local policies and codes of conduct that use the ECoC as a starting point were not included, as these will be liable to change, supplementation etc.

Annex 2: Revision Process

The description of the revision process is set out in detail and, in response to feedback, provides the history of this document, acknowledging all the contributing organisations.

Annex 3: List of Stakeholders

The list of stakeholders who participated in the consultation process and provided generous feedback has been given its own annex in this revision.

Annex 4: ALLEA Permanent Working Group on Science and Ethics

The description of the ALLEA Permanent Working Group on Science and Ethics and its composition have been updated.

Annex 1 – List of Stakeholders

- Association of Learned and Professional Society Publishers (ALPSP)
- Committee on Publication Ethics (COPE)
- Conference of European Schools for Advanced Engineering Education and Research (CESAER)
- EU-LIFE
- European Association of Research and Technology Organisations (EARTO)
- European Association of Research Managers and Administrators (EARMA)
- European Chemical Society (EuChemS)
- European Commission
- European Group on Ethics in Science and New Technologies (EGE)
- European Industrial Research Management Association (EIRMA)
- European Molecular Biology Organization (EMBO)
- European Network of Research Ethics Committees (EUREC)
- European Network of Research Integrity Offices (ENRIO)
- European Physical Society (EPS)
- European University Association (EUA)
- EuroScience
- FoodDrinkEurope
- Global Young Academy (GYA)
- HYBRIDA
- International Association of Scientific, Technical and Medical Publishers (STM)
- League of European Research Universities (LERU)
- Open Access Scholarly Publishers Association (OASPA)
- Path2Integrity
- PRO-Ethics
- Responsible Open Science in Europe (ROSiE)
- Science Europe
- Standard Operating Procedures for Research Integrity (SOPs4RI)
- TechEthos
- The Guild
- UK Publishers Association
- Young European Research Universities Network (YERUN)