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Complementing the ALLEA European Code of Conduct for Research Integrity

Deliverable 5.5

D5.5 Complementing the ALLEA European Code of Conduct for Research Integrity

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CO: Confidential, only for members of the consortium (including the European Commission)	☐

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1.0	30/10/2023	Final draft for uploading to EC portal

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The TechEthos Project

Short project summary

TechEthos is an EU-funded project that deals with the ethics of the new and emerging technologies anticipated to have high socio-economic impact. The project involves ten scientific partners and six science engagement organisations and runs from January 2021 to the end of 2023.

TechEthos aims to facilitate "ethics by design", namely, to bring ethical and societal values into the design and development of new and emerging technologies from the very beginning of the process. The project will produce operational ethics guidelines for three to four technologies for users such as researchers, research ethics committees and policy makers. To reconcile the needs of research and innovation and the concerns of society, the project will explore the awareness, acceptance and aspirations of academia, industry and the general public alike and reflect them in the guidelines.

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Executive Summary

The European Code of Conduct for Research Integrity (hereafter named the "European Code of Conduct"), published by the European Federation of Academies of Sciences and Humanities (ALLEA), serves the European research community as a framework for self-regulation across all scientific and scholarly disciplines and for all research settings. The latest revision of the European Code of Conduct was released in June 2023 and takes account of the latest social, political, and technological developments, as well as trends emerging in the research landscape. These revisions took place in the context of the EU-funded TechEthos project, with the aim to also identify gaps and necessary additions related to the integration of ethics in research protocols and the possible implications of new technologies and their applications.

In addition to extensive input from within the ALLEA community, detailed feedback from 31 stakeholder organisations and projects was considered during the revision of the European Code of Conduct. As part of this stakeholder consultation process, the views of the TechEthos consortium partners were collected both in writing and during an online workshop. In addition to input on broader research integrity issues, the unique expertise within the TechEthos consortium allowed for the collection of critical input on the ethical, legal, and societal aspects related to the development and application of new technologies, as well as on the responsible use of new technologies in collecting, analysing, and publishing research results. This deliverable provides a short history of the European Code of Conduct, details the revision process leading to the recently published edition, summarizes the feedback from the TechEthos consortium and implementation thereof, and describes current and ongoing communication and dissemination activities.

The full version of the European Code of Conduct, as well as a document that summarizes the stakeholder consultation process and its outcomes, can be accessed directly via https://allea.org/code-of-conduct/:

- ALLEA (2023) The European Code of Conduct for Research Integrity – Revised Edition 2023. Berlin. DOI 10.26356/ECOC. (link)
- Summary and Outcomes of the Stakeholder Consultation. (link)

1. Introduction

The ALLEA European Code of Conduct for Research Integrity (hereafter named the "European Code of Conduct") serves the European research community as a framework for self-regulation across all scientific and scholarly disciplines and for all research settings. The European Commission recognises the European Code of Conduct as the reference document for research integrity for all EU-funded research projects and the European Code of Conduct increasingly serves as a model for organisations and researchers across Europe and beyond.

The European Code of Conduct is periodically updated to ensure that it remains fit for purpose and relevant to all disciplines, emerging areas of research, and new research practices. The latest revision of the European Code of Conduct was released in June 2023 and takes account of the latest social, political, and technological developments, as well as trends emerging in the research landscape. These revisions took place in the context of the EU-funded TechEthos project, with the aim to also identify gaps and necessary additions related to the integration of ethics in research protocols and the possible implications of new technologies and their applications.

The below sections are extracted from Annex 2 of the European Code of Conduct and describe the history of the document and the changes made in the current edition. A detailed summary of the stakeholder consultation process and how this informed the 2023 revisions can be found in a publicly available document (link)

1.1 History of the European Code of Conduct

The original European Code of Conduct was developed in 2011 by the European Federation of Academies of Sciences and Humanities (ALLEA) and the European Science Foundation (ESF). From the start, the European Code of Conduct has been conceived as a living document that will be reviewed and revised as necessary to take account of evolving concerns and emerging areas, so that it can continue to serve the research community as a framework for good research practices.

A new version of the European Code of Conduct was developed in 2017 by ALLEA. This revision was motivated by developments in, among others, the European research funding and regulatory landscapes, institutional responsibilities, communication and dissemination, the use of social media, review procedures, open access publishing, the use of repositories, and citizen involvement in research. The revision included extensive consultation among major stakeholders in European research, both public and private, to ensure a sense of shared ownership.

1.2 The 2023 Revised Edition

The newly revised 2023 edition contains revisions to ensure that the European Code of Conduct remains fit for purpose and relevant to all disciplines and emerging areas of research or research practices. It takes account of changes in data management practices, the General Data Protection Regulation (GDPR), and recent developments in Open Science and research assessment. The changes reflect a new awareness of the importance of research culture in enabling research integrity and implementing good research practices. They also reflect greater awareness in the research community of mechanisms of discrimination and exclusion and the responsibility of all actors to promote equity, diversity, and inclusion.

2. The Revision Process

To arrive at the 2023 revised edition, a draft of the European Code of Conduct was subjected to extensive consultation within the ALLEA community and with 31 stakeholder organisations and projects from the research community. A detailed summary of the stakeholder consultation process and how this informed the 2023 revisions can be found in the publicly available document (link), an adapted summary of which is provided in the paragraphs below.

In 2017 the ALLEA Permanent Working Group on Science and Ethics (PWGSE) committed to reviewing the European Code of Conduct in three to five years to ensure that it reflects changes and developments in the research landscape and continues 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 European Code of Conduct amongst stakeholders.

In making any changes to the 2017 edition, the Drafting Group was mindful that this is a foundational document for many other documents, including European Commission Grant Agreements, many EU projects, national and local research integrity codes and guidelines, and research integrity curricular structures. Therefore, making substantial changes could create an unhelpful domino effect across the system. The Drafting Group was clear that the European Code of Conduct 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.

Overall, feedback supported the changes proposed by the Drafting Group, although many stakeholders asked for more emphasis on specific elements within the European Code of Conduct 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.

3. TechEthos Workshop and Feedback

This section summarizes the feedback from the TechEthos consortium and how this was used to complement and inform the 2023 revision of the European Code of Conduct, as part of TechEthos Task 5.4. Feedback was collected from the consortium partners both in writing and during a 1.5-hour online workshop dedicated to the Task on 17 January 2023.

TechEthos' feedback was combined with the written input obtained from other stakeholder organisations from the European research community (see Chapter 2) to collectively contribute to the 2023 revision of the European Code of Conduct. With the European Code of Conduct being a consensus document that reflects the views from the broader scientific community, the ALLEA Drafting Group sometimes had to weigh different interest and viewpoints, and occasionally had to make difficult decisions on which comments to include and which ones not. A detailed explanation of these decisions and the rationale on which these decisions are based can be found in a publicly available document that summarises the stakeholder consultation process and its outcomes (link).

3.1 Summary of Feedback from TechEthos

The unique expertise within the TechEthos consortium allowed for the collection of critical input on the ethical, legal, and societal aspects of the development and application of new technologies, as well as the responsible use of technology in collecting, analysing, and publishing research results. This section collates all feedback received from the TechEthos consortium and summarises how this was incorporated into the revised European Code of Conduct.

Preamble

- Paragraph 4: Rather than "ethical mindset" we would rather say: 'promoting ethical conduct'. the phrase 'ethical mindset' doesn't have a clear meaning - what is a mindset? An attitude?
    - The term 'ethical mindset' was specifically chosen because the European Code of Conduct aims to create broader awareness of ethical issues and an awareness (in individuals and institution) of how and why we approach situations and problem solving the way we do. Rather than strictly defining what is right or wrong, researchers should have the environment, resources, and skills to approach all stages of research with an ethical mindset.

Section 1: Principles

- Honesty: This Clause mentions developing, undertaking, reviewing, reporting, and communicating research should be done in an "unbiased way", but can we be truly unbiased?
    - Although all efforts should be made to be as unbiased as possible, the Drafting Group acknowledges that a truly unbiased state can most likely not be achieved. For clarity and comprehensiveness, it was however decided to keep the existing formulation.
- Accountability: Ethical standards should not only be exogenous. Instead, researchers should be encouraged to be reflective and pro-active.
    - In addition to the earlier note on "promoting an ethical mindset", this recommendation was taken up through an addition to Section 2.2, Clause 2: "*Research institutions and organisations develop appropriate and adequate training in ethics and research integrity to ensure that all concerned are made aware of the relevant codes and regulations <u>and develop the necessary skills to apply these to their research</u>*."

Section 2.1: Research Environment

- Clause 6: Would you want to mention specific EDI practices here?
  - This recommendation was taken up through an addition to Section 2.1, Clause 2 (renumbered): "*Research institutions and organisations create an environment of mutual respect and promote values such as equity, diversity, and inclusion.*"

Section 2.2: Training, Supervision and Mentoring

- Clause 2: Ethics training is more than "making researchers aware of the relevant codes and regulations".
  - In addition to the earlier note on "promoting an ethical mindset", this recommendation was taken up through an addition to Section 2.2, Clause 2: *"Research institutions and organisations develop appropriate and adequate training in ethics and research integrity to ensure that all concerned are made aware of the relevant codes and regulations and develop the necessary skills to apply these to their research."*

Section 2.3: Research Procedures

- Clause 1: Beyond taking account the state-of-the-art, researchers should also consider societal needs and impacts when developing their research ideas/objectives/aims.
  - This recommendation was taken up by adding 'societal impacts' to the Principles (page 5): *"Accountability for the research from idea to publication, for its management and organisation, for training, supervision, and mentoring, and for its wider societal impacts."*
  - This recommendation was also taken up as part of Section 2.4, Clause 5: "*Researchers recognise and weigh potential harms and risks relating to their research and its applications and mitigate possible negative impacts.*"
- Clause 4: Researchers should not just abide the law and publish outputs "when legally required to do so" but should also actively consider possible risks related to sharing potentially dangerous/harmful information (e.g., consider possible dual use).
  - This recommendation was taken up by adding 'ethical principles' in the context of handling of data described in Section 2.4, Clause 2: "*Researchers handle research participants and subjects (be they human, animal, cultural, biological, environmental, or physical) and related data with respect and care, and in accordance with legal provisions and ethical principles.*", and in the existing remarks on responsible sharing of data "as open as possible, as closed as necessary" in Section 2.5, Clause 2: "*Researchers, research institutions, and organisations ensure that access to data is as open as possible, as closed as necessary, and where appropriate in line with the FAIR Principles (Findable, Accessible, Interoperable and Reusable) for data management.*".
- Clause 5: We don't really see the reason for preferring outputs over results. Sticking to "results" seems better and does not apply only to empirical or quantitative disciplines. Outputs seem a more generic phrase for industry rather than for research.
  - This recommendation was taken up as part of Section 2.4, Clause 5 and throughout the document: "*Researchers report their results and methods, including the use of external services or AI and automated tools, in a way that is compatible with the accepted norms of the discipline and facilitates verification or replication, where applicable.*"

o A description of what is meant by 'results' is now provided in the Preamble: "*Research results in this context include, but are not limited to, publications, data, metadata, protocols, code, software, images, artefacts, and other research materials and methods.*"

Section 2.4: Safeguards

- Clause 1: What about guidelines and ethics frameworks?
  o This recommendation was taken up as part of Section 2.4, Clause 1: "*Researchers, research institutions, and organisations comply with <u>relevant codes, guidelines, and regulations</u>.*"
- Clause 2: We suggest changing "in accordance with legal and ethical provisions" to "in accordance with legal provisions and ethical principles", as ethical standards should not only be exogenous – researchers should be encouraged to be reflective and pro-active.
  o In addition to the earlier note on "promoting an ethical mindset", this recommendation was taken up by modifying Section 2.4, Clause 2: "*Researchers handle research participants and subjects (be they human, animal, cultural, biological, environmental, or physical) and related data with respect and care, and in accordance with <u>legal provisions and ethical principles</u>.*"
- Clause 5: It should be clarified and expanded here that both "risks coming from the research itself" and "risks as a result of downstream applications" should be taken into consideration. Also, consider adding second sentence: "They recognise circumstances in which they are not competent to manage risks within their own research group, and in such circumstances seek to establish systems of external oversight before proceeding."
  o This recommendation was taken up as part of Section 2.4, Clause 5: "*Researchers recognise and weigh potential harms and risks relating to their <u>research and its applications</u> and mitigate possible negative impacts.*"
  o The Drafting Group decided not to take up the recommendation of adding a second sentence on external oversight, as this is highly dependent on the research field and national regulations, and could be considered as being part of the process of 'recognising and weighing potential harms'.
- Additional Clause: We suggest discussing "environment" more prominently and separately from "research subjects" (Clause 2), as environmental impacts are often indirect and unrelated to the research subjects itself.
  o This recommendation was taken up by modifying the Principles (page 5): "*Respect for colleagues, research participants, research subjects, society, ecosystems, cultural heritage, <u>and the environment</u>.*"
  o This recommendation was taken up by modifying Section 2.4, Clause 2: "*Researchers handle research participants and subjects (be they human, animal, cultural, biological, <u>environmental</u>, or physical) and related data with respect and care, and in accordance with legal provisions and ethical principles.*"

Section 2.5: Data Practices and Management

- Clause 4: This point is too narrowly framed and should take account of "broad consent", "dynamic consent" and "secondary use". In addition, sometimes seeking consent is not possible, such as in the case of big data / AI research. Generally, we recommend including a clause saying that methods of genuine consent should be adapted to the research objectives.

- o Instead of providing details on all different aspects of personal data regulations, the Drafting Group opted to only include a general clause on GDPR in Section 2.4, Clause 4, as not to oversimplify the information provided in the GDPR itself: "*Researchers inform research participants about how their data will be used, reused, accessed, stored, and deleted, in compliance with GDPR.*" A reference to the full GDPR text is provided in Annex 1 on Key Resources.
- Clause 4: It might be useful to mention timescales here, such as informing research subjects about how long data will be kept for, etc?
  - o Instead of providing details on all different aspects of personal data regulations, the Drafting Group opted to only include a general clause on GDPR in Section 2.4, Clause 4, as not to oversimplify the information provided in the GDPR itself: "*Researchers inform research participants about how their data will be used, reused, accessed, stored, and deleted, in compliance with GDPR.*" A reference to the full GDPR text is provided in Annex 1 on Key Resources.

Section 2.6: Collaborative Working

- Clause 5: This sounds like a watering-down, when I think the intention is that the same standards should continue to apply. Perhaps change to "…take responsibility to ensure the above standards for collaborative working continue to apply despite novel collaborative practices."
  - o In the final version, the Drafting Group has refrained from specifically mentioning new collaborative practices in the individual clauses, as the European Code of Conduct is applicable to all research practices. Instead, we now refer to this in the Preamble: "*It can be the basis for local, national, and discipline specific policies and guidelines, and applies to existing and new research practices such as citizen science or participatory research.*"
  - o A general comment on the standards for collaborative working is now provided in Section 2.6, Clause 3 (renumbered): "*All partners in research collaborations formally agree at the outset, and monitor and adapt as necessary, the expectations and standards concerning research integrity, the laws and regulations that will apply, protection of the intellectual property of collaborators, and procedures for handling conflicts and possible cases of misconduct.*"

Section 2.7: Publication and Dissemination

- Clause 3: This seems overly restrictive. Only some contexts require prior written agreement on authorship. In others, informal arrangements seem to be entirely adequate.
  - o This recommendation was taken up by removing the suggestion from Section 2.7, Clause 3 that agreement on authorship should be reached prior to collaboration: "*Authors formally agree on the sequence of authorship, acknowledging that authorship itself is based on: (1) a significant contribution to the design of the research, relevant data collection, its analysis, and/ or interpretation; (2) drafting and/or critical reviewing the publication; (3) approval of the final publication; and (4) agreeing to be responsible for the content of the publication, unless specified otherwise in the publication.*"
- Clause 4: What are the criteria for authorship? In my experience, this varies considerably between disciplines. One can become an author on a scientific paper by being involved in

conceptual discussions and providing feedback, but in the humanities this would not qualify for authorship. We would suggest removing this reference to criteria and written agreements on authorship, so that we don't end up applying the standards of some disciplines onto all others, whether or not they make sense.

- Section 2.7 Clause 4 was updated in order to reflect the widely adopted authorship guidelines by ICMJE: "*Authors formally agree on the sequence of authorship, acknowledging that authorship itself is based on: (1) a significant contribution to the design of the research, relevant data collection, its analysis, and/ or interpretation; (2) drafting and/or critical reviewing the publication; (3) approval of the final publication; and (4) agreeing to be responsible for the content of the publication, unless specified otherwise in the publication.*"
- Clause 10: Consider changing "are transparent about their assumptions…" to "reflect upon and communicate their assumption…".
    - Section 2.7 Clause 10 was broadened to describe the need for transparency in any communication, outreach, and public engagement activities "*Authors are transparent in their communication, outreach, and public engagement about assumptions and values influencing their research as well as the robustness of the evidence, including remaining uncertainties and knowledge gaps.*"

Section 3.1: Research Misconduct and other Unacceptable Practices

- Clause 4: This practice is unfortunately very widespread. Can we really say doing this is bad science? Moreover, I worry a bit about blaming individual researchers here for a structural problem - the quite ridiculous publish or perish culture, which prioritises quantity over quality. Isn't this then unfair to individual researchers, esp. early career ones?
    - Although slightly modified, Section 3.1 Clause 7 (renumbered) was kept to reflect the broadest accepted view on acceptable publication standards: "*Chopping up research results with the specific aim of increasing the number of research publications ('salami publications').*"
- Additional Clause: Given the recent press around ChatGPT, you could add something here about using an AI to produce work that is then presented as your own?
    - This recommendation was taken up by modifying Section 3.1, Clause 5: "*Hiding the use of AI or automated tools in the creation of content or drafting of publications.*"

Section 3.2: Dealing with Violations and Allegations of Misconduct

- Fairness – Clause 1: Consider expanding "especially vulnerable individuals" to "especially vulnerable individuals and minors".
    - In response to this feedback, as well as from other stakeholders, 'vulnerable individuals' was removed altogether, as fairness should apply to everyone and not especially to some groups or individuals. The modified paragraph reads: "*However, it is always in the interest of society and the research community that violations are handled in a fair, consistent, and transparent fashion.*"

Additional/general comments

- Consider adding a glossary to define the most commonly used terminology.
  - The Drafting Group opted not to include a glossary, as the definition and interpretation of certain terminology continues to be heavily debated and agreeing on a consensus that is acceptable to the wider research community may in some cases be extremely complicated or even impossible.

4. Publication, Communication, Dissemination

This chapter provides a summary of the communication activities that have taken place around the release of the revised European Code of Conduct at the ALLEA General Assembly on 23 June in London. In addition, it provides an overview of future activities that are intended to promote the dissemination of the European Code of Conduct within the research community.

4.1 Publication and Communication

The 2023 revised edition of the European Code of Conduct can be found on the renewed ALLEA webpage. The revised edition was formally released during the Business Meeting of the 2023 ALLEA General Assembly in London (see the ALLEA news feature), where the Chair of the ALLEA Drafting Group, Krista Varantola, presented the revised European Code of Conduct to the delegates of ALLEA Member Academies. A few days in advance, the revised European Code of Conduct was shared under embargo with the 31 stakeholder organisations that provided feedback, the TechEthos consortium, ALLEA Member Academies, and journalists.

Starting the day of the release, ALLEA has been promoting the revised European Code of Conduct via its social media channels and will continue to do so over the next months. The revised European Code of Conduct was further disseminated with the help of stakeholder organisations, the TechEthos consortium, and ALLEA Member Academies, and its release was covered in a special issue of the ALLEA Newsletter.

Since its publication, the revised European Code of Conduct has been featured in several research policy news outlets, including:

- "European research integrity code given greater focus on culture" – *Research Professional News* [link].
- "European research integrity code updated to reflect advances in artificial intelligence" – *Science Business* [link].
- "The new European Code of Scientific Ethics also affects AI" – *Medicalonline.hu* [link].
- "Commission gears up to confront the risks generative artificial intelligence poses to science" – *Science Business* [link].

It was also extensively covered on websites of ALLEA Member Academies and contributing stakeholder organisations, as well as in a TechEthos News Feature [link].

4.2 Dissemination & Translation

Dissemination

ALLEA will continue to actively promote the revised European Code of Conduct via its social media channels, at events, within its membership, and the broader research community. The ALLEA Member Academies playing an important role in further dissemination of the revised European Code of Conduct among their fellowship, local researchers, funders, and policymakers. In addition, members of the ALLEA Drafting Group are regularly being invited to present the revised European Code of Conduct to members of research community. A public event around the revised European Code of Conduct and emerging research integrity issues is in preparation for Spring 2024 in Brussels.

Translations

Translation of the 2017 edition of the European Code of Conduct has greatly contributed to its dissemination and adoption. Translations of the 2017 edition into all official EU languages, as well as Norwegian and Turkish can be found on our dedicated webpage. ALLEA is currently collaborating with research integrity experts at its Member Academies to again provide high-level translations into local languages for researchers in Europe and beyond.

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