



Call for Papers: *GAIA* Special Issue 2024

Sustainable Development and Ethics of Science – Mutual Impulses and Challenges

Background and problem

Current interlinked environmental and social challenges – climate and biodiversity crises, anti-science and anti-democratic populist currents, the Corona pandemic – have renewed demands for science taking responsibility and actively contributing to Sustainable Development (SD). Where, how, and to what ends exactly scientists, from all academic disciplines and fields, are responsible and how they can accomplish this responsibility has long been discussed in the field of ethics in science (e.g., Berendes 2007; Ammicht Quinn & Potthast 2015). This not only includes professional codes ("good scientific practice") but also general ethical implications for individual scientists in their socially relevant practices (Ott 1996) as well as questions of institutional responsibility of research and higher education organizations (e.g., O'Mathúna & Iphofen 2022).

Science can be seen in a field of tensions between – and among – three generally accepted strategic guiding principles in terms of SD:

1. *Sufficiency* (and aptness) of the chosen contents and methods, both regarding the moral and legal framework as well as the democratically negotiated decisions on research topics and approaches (especially in publicly funded research).
2. *Efficiency* and effectiveness of the deployed means in relation to the output and other consequences.
3. *Consistency* of research and teaching – and their results and implications – with overarching goals such as scientific excellence and the achievement of contributions to the UN Sustainable Development Goals (SDGs).

In recent years, challenges of SD for the academic system have been discussed widely and controversially, especially regarding the implications for and of transdisciplinary SD research (e.g., Bergmann et al. 2005; Cockburn & Cundill 2018; Lam et al. 2021; for ethical perspectives Ziegler & Ott 2011; Potthast 2015; Vogt 2020).

Two recurring topics weave through the debates on SD-oriented science:

A) *Rethinking and reassessing "solutionism"*: Despite extensive discussions, this issue remains critical from an ethics of science perspective. While influential authors (e.g., Strohschneider 2018) stress that science ought not to merely act in a "solution-oriented" way, Wehling (2022) has pointed out that the meaning of "solution(ism)" needs more in-depth analysis: Science is not "solutionist" when it proceeds according to the scheme of application-oriented problem-solving per se. The critical point is that scientific approaches often do not strive to adequately

GAIA



describe the problem at stake in the first place. Instead, mostly technology-based solutions ('techno-fix') for complex societal problems are being developed and offered. To be sure, this does not apply to well-crafted transformative SD science. Yet, there may be a communication and expectation management problem, when society and/or funding agencies always expect a practical "solution" from SD research. Questions of ethics of science and epistemology arise at the intersections of problem description and analysis, and the search for solution approaches.

B) *Potential ethical issues of top-down and bottom-up approaches to transformation processes in research and research organizations under the paradigm of SD.* Transformation implies a profound change of values and goals, but who may, can and should initiate, demand, and promote this change and how? Such reflections especially concern SD transformation and SD's own normative framing. A further desideratum is how to develop context-sensitive approaches for participation and institution-related democratic and ethical principles, including the recognition of indigenous knowledge.

The challenges that pervade the ethics of research and normative epistemology as well as institutional and policy questions may be summarized as follows: *Do the demands of SD imply the need for a reorientation of research, the science system, and scientists themselves to become (more) transformative? If yes: how, to what extent, and on which ethical grounds?*

Aims and scope: Sustainable Development and Ethics of Science

The special issue aims at a substantial, state-of-the-art contribution to the ethical perspectives of transforming science towards Sustainable Development (SD). It encourages multiple interdisciplinary and international impulses, addressing ethical challenges and multiple views of transforming science and research for Sustainable Development. We are soliciting contributions explicitly connecting SD research and ethics: Which parts of the scientific ethos and the more general ethics in science are – or should be – affected, which not, and why? And vice versa: What kind of ethical perspectives has sustainability research not considered enough so far? To structure and focus the Special Issue, we are looking for contributions addressing the following topics:

A normative epistemology of SD research in practice:

There is a long-standing debate on the question of whether, and if so, how sustainability(-oriented) science(s) could and should make value judgments, moral as well as epistemological. The methodological approach of application-oriented ethics, analyzing ethical implications as well as thoroughly linking descriptive and prescriptive premises ("mixed judgments"), has been proven to be helpful. New contributions from different (multi-)disciplinary backgrounds and fields are welcome. An example from the perspective of educational science: One could state that the above-mentioned discussions about norms and value judgments in the subject area of SD are not structurally new at all. Value questions have occupied educational science



for decades. Hence one would be able to transfer and adapt existing knowledge on treating this issue to SD-related science by presenting exemplary specific cases and look for both well-known critical issues as well as novelty.

Teaching SD science and SD norms while remaining open and pluralist:

Regarding teaching obligations, the general ethical question appears which ethical standards should be conveyed in and for SD research. Along come certain tensions, e.g., between advocating a directionality towards sustainability goals and at the same time initiating emancipatory, non-directive educational and training processes in research and teaching. Again, specific examples can help to illustrate and tackle these issues. Another tension arises from reassessing individual decisions on practices in research ('the private and the political'). What are good reasons to frame topics previously considered private in the context of scientific practice (e.g., nutrition and mobility behavior), as an institutional matter now? Questioning the boundaries between the private and the political case by case is and remains a tightrope walk to be negotiated participatively and with transparent ethical reasons.

The ethics of including or excluding certain groups or positions in SD research:

Who is entitled to participate in a scientific discourse, who is considered an expert and why, who determines the criteria for identifying expertise and how? May or must certain positions and/or knowledge forms be included in or excluded from SD-scientific discourse, and if so, on what basis? A central debate in philosophy of science, namely, what qualitatively distinguishes scientific knowledge from other knowledge/belief systems, must be revisited in facing the participatory and transdisciplinary research approaches in the context of SD, also regarding local and indigenous knowledge. This also bears relevance for validity and relevance criteria of 'good' science (and its transformation). It includes a determination of the relationship between transformative science and transdisciplinary science and what added value exactly is provided in which contexts. Conducting this debate in a methodologically reflected way based on good reasons by taking notions of "epistemic injustice" seriously is a desideratum in the intersection between science ethics and epistemology in general.

Barriers to sustainability transformation in scientific organizations, especially universities, and the ethical quest for 'good' organizations

There is a lack of research literature on the connection between SD and informal organizational structures. These structures, conceptualized as patterns, create a specific "work culture". How can such structures be systematically described, analyzed, and further operationalized? We explicitly look for informal structures that hinder, prevent, or promote SD in scientific organizations, especially universities. Since an overarching "culture of sustainability" necessarily encompasses both informal and formal structures, authors are also encouraged to contribute critical analyses on formal organizational structures under the focus of SD orientation. This leads to necessary evaluative and normative reflections on the concept



of 'good' scientific organizations in the context of SD, and what 'good life' at a university or research institution could look like – from the perspective of all groups of actors involved.

Types of contributions

Authors are encouraged to use the different article formats offered in *GAIA*. Besides regular Research Articles, this includes Forum Contributions as well as Design Reports. For details, please see the Guide for Authors: <https://gaia.oekom.de/index.php/gaia/Authors>.

GAIA Open Access Special Issue

Deadlines, Submissions, and Review Process

Authors are encouraged to submit abstracts to the SI guest editors. Upon acceptance, authors will be invited to submit full manuscripts. Papers will be peer reviewed. Upon acceptance, they will be published Open Access, with no author fees charged. Papers should be written in English with a short summary (if possible) in German and English. However, in exceptional cases, papers in German may also be accepted. The authors are responsible for the linguistic quality. Authors whose first language is not English are kindly asked to have their articles proof-read by a professional editing service. Manuscripts can be rejected due to inadequate linguistic quality.

Please submit your abstract (500 up to 1,000 words) indicating the article type (research article, forum contribution, or design report) via E-Mail to: SD-Ethics@izew.uni-tuebingen.de

The SI guest editors are:

Thomas Potthast, Co-Director of the *International Center for Ethics in the Sciences and Humanities* (IZEW) and Chair for Ethics, Philosophy and History of the Life Sciences, and Cordula Brand, Scientific Coordinator and Executive Manager of the IZEW, University of Tübingen.

Claudia Bieling and Henrik von Wehrden are the responsible *GAIA* co-editors of the SI.

Important Dates

October 15, 2023 (final closing)	Submission of abstracts (500 to 1,000 words)
November 2023	Invitation for full paper submission
January 29, 2024 (rather earlier)	Submission of full papers, followed by reviews, reworking papers, and final decisions on manuscripts
approx. October 2024	Publication of Special Issue



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