

Guidelines for safeguarding good scientific practice

**for the Johann Heinrich von Thünen Institute, Federal Research
Institute for Rural Areas, Forestry and Fisheries**

Annex 1 to the Rules of Procedure of the Thünen Institute

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Preamble

The Johann Heinrich von Thünen Institute, Federal Research Institute for Rural Areas, Forests and Fisheries, hereinafter referred to as the Thünen Institute: Thünen Institute - , as a departmental research institute of the Federal Ministry of Food and Agriculture (BMEL), is responsible for developing scientific decision-making aids for food, agriculture, forestry and fisheries policy as well as consumer protection policy and policy for rural areas and thus at the same time expanding scientific knowledge in these areas for the benefit of the common good. Within the scope of these tasks, the Johann Heinrich von Thünen Institute is scientifically independent.

The Thünen Institute is an institution under public law without legal capacity and an independent higher federal authority within the portfolio of the BMEL. The President represents the Federal Republic of Germany in and out of court in the area of responsibility of the Federal Research Institute, unless otherwise specified (Thünen Statutes, Section 4 (2)).

Since the beginning of modern science, principles of good scientific practice have evolved. They include behaviors that are fundamental to scientific practice, its long-term success and credibility, and are followed by the vast majority of scientists.

This practice is based on the maxims of unrestricted conscientiousness and honesty towards oneself and others. This applies to the investigation and presentation of scientific facts, the unconditional honesty in the attribution of ideas and results to their authors and the most complete possible documentation and presentation for the purpose of an open scientific discourse, which includes verifications and any kind of objectively justified criticism of ideas, procedures and results as well as the authors' right to bona fide errors and mistakes. This also includes the willingness to accept objective criticism with composure and to unreservedly admit proven or self-recognized mistakes and errors and to see them as an objective - and not personally discrediting - part of the scientific discourse.

The guidelines described below are based on the DFG Code of Conduct "Guidelines for Safeguarding Good Scientific Practice" (2019). These guidelines are binding for all employees of the Thünen Institute. The Thünen Institute is responsible for ensuring that the actions of its employees comply with the rules.

1 Principles of good scientific practice

The employees of the Thünen Institute commit themselves to the principles relevant here

(1) the scientific work:

- To work *lege artis*, i.e. in accordance with legal regulations, ethical standards, the recognized rules of the relevant specialist discipline and taking into account the current state of research,
- to comprehensively consider and recognize the current state of research when planning research projects and to reflect on the importance of gender and diversity aspects,
- legal and contractual rights and obligations,
- thoroughly assess the ethical aspects of research and, where necessary, obtain ethics votes and approvals,
- to foster cooperation in working groups,
- ensure the supervision of young scientists,
- to encourage fact-based scientific criticism and diversity of opinion, regardless of the hierarchical position of those involved,
- to publish the results in scientific presentations, publications and specialist articles or similar,

- apply suitable methods to avoid (unconscious) bias in the interpretation of findings, for example blinding of test series, as far as possible,

The roles and responsibilities of the employees involved in a research project are clear at all times. The heads of the specialized institutes appoint a responsible project management for each project. They can delegate this task to department heads. The project managers coordinate the work of the employees involved in the research project. The roles and responsibilities are adjusted if necessary (e.g. in the event of a change in tasks or status).

When developing and applying new methods, the scientists involved attach particular importance to quality assurance and the establishment of standards.

Researchers who assess submitted manuscripts, applications for funding or the eligibility of individuals are obliged to maintain strict confidentiality in this regard. They disclose all facts that could give rise to concerns of bias. These obligations also apply to members of scientific advisory and decision-making bodies. The confidentiality of external content to which reviewers or committee members gain access excludes, in particular, the disclosure to third parties and their own use.

Academics who take on the role of editor should carefully consider the publication organs for which they take on this task.

(2) of the documentation:

- carefully document all experiments, methodical procedures, developed software codes and measurements,
- if the documentation of research results cannot meet the relevant (professional) requirements, the limitations and reasons for this must be clearly explained,
- in accordance with the FAIR principles ("Findable, Accessible, Interoperable, Re-usable"), to make the research data and central materials and information on which the publication is based, the methods used and the software used (self-programmed with indication of the source code) and work processes publicly accessible in recognized archives and repositories, insofar as this is possible, reasonable and appropriate with regard to interpretability, reproducibility and usability by third parties, whereby specially developed research software should be provided with an appropriate license,
- to store primary data as a basis for publications, statements, etc. on durable and secure media for ten years,
- to carefully document the rights of use to the research data and results arising from research projects.

The Thünen Institute has laid down corresponding rules that apply to all Thünen employees in its guidelines for handling research data (Thünen Data Policy) and corresponding guidelines for research data management. These guidelines and policies form a basis for quality assurance as well as the traceability, reproducibility and transparency of research processes and their results and at the same time have the potential to support the diverse reuse of data and related utilization strategies. As a rule, scientists leaving the Thünen Institute may continue to use data they have collected themselves at least until the end of their project. The rights of use are contractually agreed with the departing scientists on a case-by-case basis.

It goes without saying that documentation and research results must not be manipulated.

As a matter of principle, scientists also document individual results that do not support the research hypothesis. All results must be included in the scientific discourse. In principle, the decision to publish research results must not depend on third parties. In individual cases, there may be reasons for not making results publicly accessible.

Scientists agree on who should be the author. As a rule, agreement on the order is reached at the latest when the manuscript is formulated and on the basis of comprehensible criteria, taking into account the conventions of the subject area. Authors choose the publication medium carefully. In addition to publications in books and specialist journals, specialist repositories, data and software repositories are also considered. Every new or

unknown publication medium is checked for reliability. The scientific quality of a contribution does not depend on the publication medium in which it is made publicly accessible. All authors must agree to the publication of the final manuscript version.

The publication of results may not be refused by the management or third parties without sufficient reason. The refusal must be justified with a verifiable criticism of data, methods or results.

In keeping with the idea of "quality over quantity", scientists avoid inappropriately small publications. In the case of original scientific publications, they limit the repetition of the content of their publications as (co-)authors to the extent necessary for understanding the context.

If researchers have made findings publicly available and subsequently become aware of discrepancies or errors, they will correct them. If the discrepancies or errors give rise to the retraction of a publication, the researchers will work with the relevant publisher or infrastructure provider etc. as quickly as possible to ensure that the correction or retraction is made and marked accordingly. The same applies if such discrepancies or errors are pointed out to the researchers by third parties.

(3) the identification of authorship:

- Recognize and correctly cite the priority of others' ideas and results, past and present.
- to make the author clear in publications:

Only those scientists or employees who have made a genuine, comprehensible contribution to the knowledge gained in the publication (text or visual representations) (conception, collection or provision of data and samples; evaluation, analysis, interpretation, conclusion or preparation of the manuscript) are named as authors. Full or partial quotations (content, verbatim, figurative) are clearly marked as such.

- Authors of scientific publications are always jointly responsible for their content. "Honorary authorship" is not permitted. Only those who have made a substantial contribution to the publication may be authors. The following contributions, for example, do not justify co-authorship on their own: Responsibility for obtaining funding,
- Provision of important examination materials,
- Instruction of co-authors in certain methods,
- technical support, e.g. mere provision of equipment, laboratory animals,
- usually the mere provision of data sets or existing research software,
- Carrying out experiments or measurements according to standard practice or under supervision,
- Reading the manuscript without substantially shaping the content,
- Management of an organizational unit in which the publication was created.

Instead, it is recommended that such contributions be listed in the acknowledgements where appropriate

2 Procedures and instruments for implementation

The guidelines to ensure good scientific practice are made known to all employees working at the Thünen Institute when they are hired and immediately after they come into force; they are binding for them.

The President and the heads of institutes and working groups create the framework conditions for scientific work - in accordance with the principles set out in Chapter 1. They are responsible for adhering to and communicating good scientific practice and for providing appropriate career support for all scientists and research support staff. Scientists at all career levels regularly update their knowledge of good scientific practice and support each other in this regard in the continuous learning and further training process. In each specialized institute as well as in

the Coordination Unit Climate, Soil, Biodiversity and the Centre for Information Management, an exchange takes place at least once a year. The management ensures that the scientists are able to comply with legal and ethical standards.

The Thünen Institute has clear and written procedures and principles for personnel selection, appraisals and promotions/upgrading as well as for the promotion of young scientists and equal opportunities. The assessment of performance is primarily based on qualitative standards; quantitative indicators are only included in the overall assessment in a differentiated and reflected manner. Various performance dimensions are included in the assessment. These include publications, lecturing activities, the preparation of scientific statements and expert opinions for policy advice, participation in national and international committees, acquisition of third-party funding, staff management and supervision of junior researchers, commitment to public relations. The willingness to perform and take responsibility, social behavior, independence, initiative and creativity as well as the scientific attitude of the scientists, such as openness to knowledge and willingness to take risks, are also taken into account. Personal, family or health-related absences or extended training or qualification periods, alternative career paths or comparable circumstances are taken into account appropriately.

Gender equality and diversity are taken into account in personnel selection and promotion/upgrading. The relevant processes are transparent and avoid unconscious bias as far as possible.

In performance reviews, managers give their employees honest advice on further career paths and training opportunities.

Academics enjoy a balance of support and personal responsibility appropriate to their career level. They have an appropriate status with corresponding participation rights (in the specialized institute councils and as elected members of the collegium). Increasing independence enables them to shape their careers.

Abuse of power and the exploitation of dependency relationships are prevented through suitable organizational measures (e.g. systematic management feedback process in which all managers are subject to structured feedback from their employees every two years; involvement of the staff council or ombudsperson; social counseling services).

The management of the Thünen Institute ensures that the necessary infrastructure is in place to enable the archiving - generally for a period of ten years from the date of public access - of research data and research software made publicly available in archives and repositories. In justified cases, the period may be shortened. The prerequisite is that the shortened period is appropriate and the reasons are described in a comprehensible manner.

3 Misconduct

Scientific misconduct is always to be assumed when principles of good scientific practice are intentionally or grossly negligently violated or circumvented. The spectrum of possible scientific misconduct can range from criminal acts relevant under criminal law to marginal violations of the principles of scientific ethics. At the same time, it may also involve a breach of contractual obligations. Scientific misconduct may include, in particular

Falsification of scientific facts, for example

- Inventing/faking results,
- Falsifying results, for example by concealing and hiding "undesirable" results
- knowingly ignoring the contrary relevant results of others,
- deliberately distorted interpretation of results,
- deliberately distorted reproduction of other people's research results.

Misleading scientific misrepresentations, for example

- Applications,
- applications for funding and reports on the use of funding,
- Publications, such as multiple publications without corresponding citations.
- Claiming the (co-)authorship of another person without their consent.

Infringement of intellectual property, for example

- unauthorized use under presumption of authorship (plagiarism),
- Presumption or unfounded assumption of scientific authorship or co-authorship,
- Denial of the right of others to co-authorship acquired through appropriate contributions,
- Exploitation, publication or making available to others of third-party, unpublished concrete ideas, methods, research results or approaches without the consent of the authorized party (theft of ideas),
- the unauthorized disclosure of previously unpublished data, works, findings, theories, hypotheses, doctrines or research approaches to third parties and their unauthorized publication,
- knowingly concealing material relevant preparatory work by others.

Sabotage through malicious damage, destruction or

- of work equipment without the consent of the authorized person,
- of devices and experimental setups,
- of documents, data and data processing programs.

Joint responsibility for scientific misconduct can arise, for example, through

- active participation in the misconduct of others,
- Knowing about and tolerating the misconduct of others,
- Co-authorship of falsified publications.

4 Procedure in the event of suspected misconduct

It is part of scientific ethics not to tolerate scientific misconduct by third parties in silence. The procedure in the event of suspected misconduct is to address the possible misconduct with its originators and to request clarification and, if necessary, correction. Investigation procedures are to be carried out swiftly and each individual procedural step is to be completed within a reasonable period of time.

Bias on the part of an investigating person can be asserted both by that person and by the person accused. If necessary, the biased investigating person will be replaced by an unbiased person. The decision on this is made by the President. In the event of bias on the part of the President, the proceedings will be continued by an impartial representative.

The whistleblower must make the report in good faith. A report made anonymously can only be investigated in proceedings if the whistleblower provides the body investigating the suspicion with reliable and sufficiently concrete facts. If the whistleblower is known by name, the investigating body shall treat the name confidentially and shall not disclose it to third parties without the corresponding consent. Anything else shall only apply if there is a legal obligation to do so or if the person affected by the allegations would otherwise not be able to defend him/herself properly because the identity of the whistleblower is exceptionally important for this. Before the

name of the whistleblower is disclosed, he/she will be informed immediately; the whistleblower can decide whether to withdraw the report if it is foreseeable that the name will be disclosed.

Ombudsperson/contact person

- (1) The scientists of the Thünen Institute elect an experienced scientist by secret ballot to advise on conflicts in matters of good scientific practice. This ombudsperson has the task of being available to the parties involved as a confidential and advisory contact person; in this function he/she is independent. The term of office of the ombudsperson is four years. Re-election is permitted for a maximum of one further term of office. In the event that the ombudsperson is biased or unavailable, the ombudsperson is represented by the second elected person. The elected ombudsperson and the deputy will be announced by circular. The contact details are also available at all times on the intranet and on the Thünen website.

All scientists who are employed at the Thünen Institute on a temporary or permanent basis are eligible to vote. All scientists employed on a permanent basis are eligible to stand for election. The ombudsperson may not be the institute director while holding this office.

- (2) In all cases of possible misconduct against the rules of good scientific practice, the ombudsperson is available as a contact person. A complainant can contact this person directly. Those suspected of misconduct can also contact this person directly at with a request for clarification and assistance. There is the option of contacting your own Thünen ombudsperson or the committees "Ombudsman for Science" (<https://ombudsman-fuer-die-wissenschaft.de/>).

Preliminary investigation

- (3) If the ombudsperson receives indications of scientific misconduct, he or she shall examine the facts of the case at his or her own discretion. The person affected by the suspicion must be given the opportunity to comment at the earliest possible stage. The investigation of allegations of academic misconduct shall be conducted expressly in compliance with confidentiality and the basic principle of the presumption of innocence. Deliberately false or willful allegations may themselves constitute scientific misconduct. Neither the whistleblower nor the person affected by the allegations should suffer any disadvantages for their own academic or professional advancement as a result of the report alone. If the ombudsperson comes to the conclusion that there are sufficient grounds for suspicion of academic misconduct, he/she will inform the President. The ombudsperson is not obliged to report beyond this.
- (4) The right of the parties involved to inspect the files is governed by the general provisions. Strict confidentiality must be maintained until an allegation has been clarified. The ombudsperson is committed to protecting both the whistleblower and the person affected by the allegations. The whistleblower must also be protected in the case of unproven scientific misconduct, provided that the allegations were not demonstrably made against better knowledge. The whistleblower has the opportunity to make a statement at every stage of the procedure.
- (5) If the suspicion of scientific misconduct is confirmed in the preliminary investigation, the ombudsperson decides whether to initiate a formal investigation (main proceedings). The President then appoints an investigative commission consisting of three scientists from the Thünen Institute appointed by him or her as full members with voting rights and the ombudsperson in an advisory capacity. In individual cases, the commission may consult up to three other persons as experts in an advisory capacity. If a member of the Commission is unable to attend or is subject to concerns of bias, a deputy shall take over the business.

Main procedure

- (6) The formal investigation is also conducted confidentially. The commission meets in private. It is entitled to obtain the information and opinions necessary to clarify the facts of the case, while safeguarding the interests of the persons concerned that are worthy of protection, and examines whether scientific

misconduct has occurred on the basis of open evidence. The person concerned shall immediately be given the opportunity to give a statement in an appropriate manner, stating the incriminating facts and any evidence. The person concerned shall be heard orally at his/her request; he/she may consult a person of his/her trust as an advisor. This also applies to other persons to be heard.

- (7) The commission of inquiry reports to the President on the results of its work and submits a recommendation for further proceedings.
- (8) The President decides on the basis of the report of the investigation committee whether the proceedings should be discontinued or whether scientific misconduct has been sufficiently proven. In the latter case, the President also decides on the measures to be taken.
- (9) The person affected by the suspicion and the informant must be informed of the President's decision. They must also be informed of the main reasons that led to the decision.
- (10) If scientific misconduct is wrongly suspected, the President shall ensure that the accused persons are rehabilitated.

5 Consequences of scientific misconduct

Depending on the circumstances of the individual case, scientific misconduct may have the following consequences:

- criminal consequences,
- academic consequences in the form of the withdrawal of academic degrees,
- Revocation of scientific publications,
- consequences under labor and employment law,
- consequences under civil law, such as the issuing of a house ban, claims for restitution or damages,
- Informing the public, the cooperation partners and the scientific organizations concerned.

6 Entry into force

This version of the "Guidelines to ensure good scientific practice at the Thünen Institute" replaces the "Guidelines to ensure good scientific practice at the Thünen Institute" in the version dated 05.08.2013 and comes into force with the Institute's internal announcement.

Brunswick, 08.06.2022

Prof. Dr. Folkhard Isermeyer

President

Cited documents

Guidelines for Safeguarding Good Scientific Practice (DFG Code). September 2019.

Guidelines on the handling of research data at the Thünen Institute (Thünen Data Policy) dated 13.12.2019

Guidelines for research data management at the Thünen Institute dated 13.12.2019

Guidelines for the evaluation of senior civil servants at the Johann Heinrich von Thünen Institute, Federal Research Institute for Rural Areas, Forestry and Fisheries dated 04.11.2010

Management feedback at the Thünen Institute (process description 05.12.2016)