SUHF
Association of Swedish
Higher Education Institutions

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Guidance for higher education institutions' efforts to prevent, manage and follow up on suspected deviations from good research practice

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1. Introduction: Purpose of the document

Compliance with good research practice is essential for the reliability and credibility of research. Good research practice refers to "the moral practice that emerges when various actors in research reflect critically on research activities in dialogue with the surrounding community" (SOU 1999:4).

Promotion of good research practice requires both preventive effort and appropriate handling of suspected deviations, as well as follow-up when deviations are identified. This work should take place in accordance with nationally and internationally established principles and practices, and be based on experience both in Sweden and internationally. Key principles and practices for this work are set out in the recommendations of the *European Code of Conduct for Research Integrity* of All European Academies (ALLEA). This code highlights four principles that aim to provide researchers and research institutes with guidance on how to prevent, manage and follow up on practical, ethical and intellectual issues associated with research.

- **Reliability** in ensuring the quality of research, reflected in the design, the methodology, the analysis and the use of resources
- **Honesty** in developing, undertaking, reviewing, reporting and communicating research in a transparent, fair, full and unbiased way
- **Respect** for colleagues, research participants, animals,[1] society, ecosystems, cultural heritage and the environment
- **Accountability** for the research from idea to publication, for its management and organisation, for training, supervision and mentoring, and for its wider impacts

Consideration should also be given to established guidelines in more specific areas, such as the Declaration of Helsinki (in medicine) and what are known as the Vancouver Recommendations for co-authorship.

Swedish higher education institutions (HEIs) also need to comply with applicable national regulations, in particular the Act on Responsibility for Good Research Practice and the Examination of Research Misconduct (lagen om ansvar för god forskningssed och prövning av oredlighet i forskning, SFS 2019:504) and the provisions introduced to the Higher Education Ordinance (SFS 1993:100), according to which one type of deviation from good research practice (research misconduct) is to be investigated by the Swedish National Board for Assessment of Research Misconduct (Nämnden för prövning av oredlighet i forskning, Npof), while HEIs are obliged[2] to examine *other* suspected deviations from good research practice.

[1] The revised version of the ALLEA Code that was published in 2023 added "research subjects" to reflect research involving animals. The term "animals" is used instead here to clarify what is meant.

[2] Note, however, that in cases where another public authority holds responsibility for investigation, such as in the event of a suspected breach of the Ethics Review Act (etikprövningslagen), the matter must be referred to that public authority. Other areas of research may also need to be investigated.

The purpose of this document is to, on the basis of the applicable statutes and the ALLEA Code, provide guidance for preventive work by HEIs, managing suspicions and following up on suspected deviations from good research practice. This document is intended to be updated regularly as interpretations and practices are established, and replaces the earlier document REK 2020:3 *Vägledning för hanteringen av misstankar om avvikelser från god forskningssed* (Guidance for management of suspected deviations from good research practice). The previous document's template for a management procedure for suspected deviations, in a slightly revised version, is presented here as Appendix 1.

2. Prevention work

SUHF members must participate constructively in efforts to prevent deviations from good research practice. HEIs should monitor one another's work and how principles evolve over time, so that a mutual learning process is created in respect of what can contribute to good research practice. Good research practice needs to be discussed regularly and awareness raised among researchers and other research workers. Anyone who has been guilty of serious deviation from good research practice needs to be held responsible for this, but it is every bit as important to ensure that the HEI takes action to prevent the deviations from continuing or recurring. According to the Act on Responsibility for Good Research Practice and the Examination of Research Misconduct, researchers are responsible for compliance with good research practice in their own research (Section 4), while HEIs bear overall responsibility for ensuring that research is conducted in accordance with good research practice (Section 5). One key element of this overall responsibility is to create favourable conditions for research teams and all individuals involved in research to fulfil their responsibilities.

Chapter 1, Section 16 of the Higher Education Ordinance states that HEIs are obliged to ensure that their employees are able to receive advice and support on matters in respect of good research practice. This advice and support can be organised in a variety of ways. The thirteen principles of the PRINTEGER project provide an important starting point as regards how preventive efforts could be implemented in more general terms, alongside the focus areas described by the SOPs4RI project. PRINTEGER (*Promoting Integrity as an Integral Dimension of Excellence in Research*) was a European project that studied issues relating to research integrity and misconduct. SOPs4RI (*Standard Operating Procedures for Research Integrity*) was an EU project that worked on the basis of the literature and interviews with experts to devise nine recommendations for research institutions to consider (see Appendix 2).

The following points 2.1 to 2.4 are partly based on these projects, as well as on knowledge, experience and good examples[3] from Swedish HEIs.

[3] Moreover, the expert group wishes in particular to highlight the following overview of the state of the art as a good starting point for efforts to prevent deviations from good research practice: De Peuter, S. & Conix, S: "Fostering a research integrity culture: Actionable advice for institutions", *Science and Public Policy*, 50(1), February 2023, pp. 133–145.

2.1. Education and mentoring on good research practice

The Government emphasises that HEIs are able to promote good research practice by ensuring that employees undergo relevant training, for instance (cf. Government Bill 2018/19 19:58, p. 34). The PRINTEGER project and the SOPs4RI project also identify courses, continuing professional development and mentoring focused on research ethics issues as essential ways of imparting knowledge, procedures and tools that can promote good research practice. Courses and study programmes should as far as possible be based on realistic situations, be specific to disciplines and include case studies.

The faculties of medicine in Sweden have jointly created an online course for postdocs and senior researchers which focuses on research ethics and good research practice. Some of these HEIs have now made the course mandatory for postdocs and/or for principal supervisors of doctoral students. Similar initiatives are possible in other subject areas as well, not least because some HEIs lack the resources to design such courses themselves and keep them up to date. Another good example involves making research ethics courses mandatory for all doctoral students. If needed, specialised training initiatives can be provided in addition to mandatory courses. HEIs can also benefit from the training initiatives and materials provided by the Swedish Ethical Review Authority and Npof.

The importance of good examples cannot be overestimated. That is why mentoring and leadership training initiatives are important activities for providing younger researchers with good examples to follow; making them aware that it is possible to combine career success with transparent and collaborative research characterised by good research practice. It is important also to target continuing professional development courses at senior researchers: there are no guarantees that they will take on the “good example” role, or see the point of it. Otherwise, there is a risk that even with good training, younger people will be taught a different way of working in practice.

2.2. Support functions

Support functions refer to both information initiatives and support functions that focus on promoting good research practice. Information on good research practice should be readily accessible, not least using contact channels so that researchers can have their questions answered, request support or submit complaints about compliance with good research practice. A number of Swedish HEIs have websites that present good research practice clearly and indicate who to contact if researchers have questions or need support. One good example is the CODEX website, which can be used by researchers from all over the country.

A number of HEIs have introduced specific functions with a view to promoting good research practice. These include a research ethics support function, academic representatives, an advisor to the Vice-Chancellor for good research practice, ethics advisory committees, people in positions of trust and research officers with special responsibility for research ethics issues. What these all have in common is the fact that they assist the organisation with advice, support and distribution of information. It is important for the HEI to ensure that the support staff are in possession of the relevant qualifications,

but also have enough time and opportunity to deal with the matter. Support staff should focus on good research practice as a professional ideal and as a factor enhancing quality.

Smaller HEIs may find it appropriate to join forces; by setting up a joint committee tasked with promoting discussion and training on good research practice, for example. One example of a joint committee of this kind working on closely related issues – reviewing studies that fall outside the Ethics Review Act, disseminating knowledge about research ethics issues and providing a knowledge resource – is the Ethical Advisory Board in South East Sweden, which was created for this purpose by Linnaeus University, Blekinge Institute of Technology, Region Kalmar County, Region Blekinge and Region Kronoberg. This may constitute a model for cooperation in respect of the issues discussed here, too. Such bodies should be such that they do not undermine the autonomy of HEIs (cf. here the management procedure template, Appendix 1).

SWARMA – a cooperation group for research advisors at Swedish HEIs – has a subgroup for research support on ethical issues, where HEIs with different resources and prerequisites are able to participate in experience exchange and joint learning initiatives (see Appendix 2).

2.3. Infrastructure and (technical) support

The ALLEA Code emphasises the importance of infrastructure for the management, documentation and protection of data and research materials. Research data and materials need to be managed properly and stored correctly for a reasonable period of time, which in Sweden is regulated by specific provisions in respect of archiving. An infrastructure that works is a prerequisite for reproducibility, traceability and responsibility. It is important for it to meet both security requirements and the needs of the organisation in terms of storage, processing, sharing and other forms of processing. An infrastructure that works needs to include continuous support, not least in terms of practical handling, as well as clear information about limitations in terms of functionality and security. Discussion is needed to ensure that the needs of the organisation are addressed in full. The solutions need to be scrutinised by experts in IT, law, ethics, data management, information security, etc. All this may take time, but it is important to initiate efforts as soon as possible, and to devise solutions in stages if necessary. It is then important to follow up on the remaining needs and to go on addressing them.

Npof has also highlighted the fact that research principals have an important task in providing researchers with an easy-to-use infrastructure that facilitates the management and storage of research material (Annual Report 2021 and cf. 2022, p. 56), and has also pointed out that technical tools can be used to detect deviations. Such tools are already used for plagiarism checks at present, but software for checking image manipulation will be available in the near future. Some Swedish HEIs subscribe to *Cabell's Predatory Reports*, a database of more than 16,000 predatory journals that are of such low quality that they should be avoided by researchers, as they place their profit interests before scholarly integrity. A number of similar tools can be expected to emerge in the near future, not least because the development of AI means there is an increasing need for them.

These tools are important for checking research already completed; but also as a way for researchers to avoid making mistakes by reviewing their own material. They form part of the "research toolkit", so to

speak, for ensuring compliance with good research practice and should be deployed as a natural element in day-to-day quality assurance of research. Tools of various kinds could certainly be coordinated and shared between HEIs in Sweden so that they reach as many researchers as possible. SUHF can accelerate and promote development in this regard.

2.4. Incentive structures

Researchers' behaviour may reflect the incentives available within the organisation. The ways in which researchers are evaluated and rewarded affect them, resulting in consequences at a systemic level. SUHF and many individual Swedish HEIs have become involved with CoARA, which has created an agreement on reforming research evaluation, which defines a common direction for changes in assessment practices for research, researchers and organisations conducting research, with the overall aim of maximising the quality and impact of research (Appendix 2).

Finally, HEIs should follow up and evaluate their initiatives for promoting good research practice. Similarly, when following up on deviations observed, they should work systematically to identify what aspects of the research environment, procedures or responsibility has contributed to the occurrence of a deviation, so that action is taken to reduce the risk of deviations of the same kind occurring again (section 4 below contains more information on this).

3. Managing suspected deviations from good research practice

Deviations from good research practice involve a departure from any of the principles of the ALLEA Code. Such deviations may take different forms and need to be managed in different ways. Definitions of terms that are key to the Swedish system are presented below, as well as general recommendations related to the management of deviations.

3.1. Research misconduct

Research misconduct refers to what is included in the statutory definition: "A serious deviation from good research practice in the form of fabrication, falsification or plagiarism, committed with intent or gross negligence in the planning, conduct or reporting of research" (SFS 2019:504). The offences of fabrication, falsification and plagiarism (FFP) are not defined in the Act. Npof applies the following definitions (based on Government Bill 2018/19:58), which are taken from the ALLEA Code:

Fabrication means making up results and documenting them as if they were genuine.

Falsification means manipulating research materials, equipment or processes, or altering, omitting or withholding data or results with no academic justification.

Plagiarism means using other people's work or ideas without properly acknowledging the original source.

ALLEA has regarded fabrication, falsification and plagiarism as particularly serious offences as they provide a false indication of the findings of the research, while also recognising that other deviations may be problematic as they harm research processes, impair relations between researchers, undermine trust in and the credibility of the research, waste resources and may expose the subjects of the research,

users, the community and the environment, to unnecessary harm. These aspects provide a starting point for assessment of the seriousness of a deviation from good research practice, whether or not it comes under FFP.[4]

If research misconduct (FFP) is suspected, the matter must be submitted to Npof.[5] The Government has clarified that the initial investigation conducted by the head of research should have a low threshold for referral so that all cases that could constitute research misconduct are investigated by Npof (Government Bill 2018/19:58, p. 54). At this stage, therefore, the HEI's review must focus not on investigating the suspicions, but merely on assessing whether the suspicions as presented in the report could involve research misconduct.

To assist HEIs, Npof has drafted which documentation facilitates the processing of a case.[6] They would like contact details of the notifier/notified party, and of contacts at the HEI. Information on the current employment circumstances and the circumstances at the time of the suspected misconduct must also be enclosed. It is important to explain what is suspected and what has been investigated prior to submission. There is emphasis on the fact that the documentation capable of demonstrating the deviation must be submitted.

As well as HEIs, individuals or other public authorities can also submit a report, and at its own initiative Npof is able to raise the issue of any research misconduct that has come to its attention in some other way.

[4] What does the severity requirement involve? The law and preparatory works provide no clear guidance in this regard. The Government and Npof are of the opinion that essentially, fabrication and falsification are always serious deviations from good research practice (but not necessarily), and that there may be cases of plagiarism that are not so serious that they have to be examined by Npof (Government Bill 2018/19:58, p. 44). Appeals to the Administrative Court of Appeal and the Supreme Administrative Court may provide further practice, and Npof may develop the boundaries (in one instance, fabrication/falsification has been deemed by Npof not to be serious). There are no court rulings as yet, but the ruling of 9 May 2022 of the Administrative Court of Appeal in Stockholm in case 6503-21 is one exception (leave to appeal to a higher court was not granted in this case).

[5] However, in accordance with Section 3 of the Ordinance (2019:1176) on exemption from review of research misconduct in the field of defence and security policy, the case is not to be submitted to Npof if the conditions for exemption in accordance with Section 2 of the same ordinance are deemed to be met. The case must then be handled by the HEI instead.

[6] See https://npof.se/anmala-oredlighet/overlamning-vid-oredlighet/

3.2. Other deviations from good research practice

Suspicions of deviations other than those falling under FFP must be dealt with by the research principals themselves.[7] As a rule, this involves investigating suspicions that individual employees have been guilty – either intentionally or through negligence – of deviating from good research practice other than through FFP. However, this may also apply to deviations observed by Npof, for example, which could not be linked to the actions of an individual, or where intent or gross negligence could not be established. In this and other similar cases, it may be necessary to clarify whether the situation occurring can be explained by organisational factors such as inadequate data management procedures or procedures for obtaining the requisite permissions, lack of peer review of critical elements of the research process, etc. Identifying and addressing such shortcomings is an important element when it comes to promoting good research practice.

The ALLEA Code describes deviations from good research practice that fall outside FFP in terms of *other unacceptable behaviour that distorts research findings or harms the integrity of the research process or researchers*. ALLEA lists examples of deviations that fall outside FFP, but by no means should this list be considered complete. In the preparatory works to the current Act, *obstruction of academic review* is in turn specified as something that the research principals concerned have to deal with (Government Bill 2018/19:58, p. 46). Other deviations may involve *exposing people to a disproportionate risk of harm*, *sabotaging the research of others, conducting research without the necessary permissions or lying about obtaining such permissions*, and *conducting research abroad that does not meet the ethical standards applicable in Sweden*.[8]

Together with these complementary examples, the ALLEA Code serves as a starting point for describing what is to be dealt with by research principals themselves. The diversity and changing nature of research makes it impossible to compile an exhaustive and permanent list. Moreover, further boundaries will be defined as practices develop in Npof or the courts.

Examples of other deviations from good research practice provided by ALLEA:

- Manipulating authorship
- Self-plagiarism
- Selective and biased citation
- Withholding research results
- Allowing sponsors to influence results
- Abusing their power to encourage violations of research integrity
- Ignoring or covering up research misconduct or other violations of research integrity
- Dividing studies into smaller parts in order to produce more publications
- Adding references only to please editors, reviewers or colleagues
- Covering up the use of AI tools to create publications
- Supporting or deliberately using predatory journals or conferences

[7] The Government has also stated that it is of the opinion that there has been insufficient investigation of the applicability of the statutory definition of research misconduct to artistic research, as this differs from academic research in that it is based on artistic practice. For this reason, the Government has judged that artistic research should not be included in Npof's field of expertise, at least initially. However, the Government is of the opinion that whether the board's remit should be extended to include artistic research may be considered in connection with later follow-up. (Government Bill 2018/19:58, p. 40.)

[8] In Government Bill 2018/19:58 (p. 51), the Government has specified violations of the Ethics Review Act as an example of another serious deviation from good research practice. This leads to a potential overlap between the investigative responsibilities of HEIs and the Ethics Review Appeals Board. However, in the same Government Bill (p. 48) the Government has also expressed an intention to avoid overlap between the responsibilities of different public authorities, so there is probably no intention to investigate such deviations twice.

The degree of severity can be assessed on the basis of various parameters. In accordance with the principles set out in the ALLEA Code, the assessment may work on the basis of matters such as whether the deviation has harmed the research process or its reliability, wasted resources, or put any person at risk of harm; as well as the extent of these things. The fact that a deviation has taken place intentionally or in a grossly negligent fashion also means that it is to be regarded as more serious than if it had come about accidentally or due to minor carelessness. Intent and negligence are also required in order to hold a person responsible. According to the ALLEA Code, authors must be given recognition for corrections and withdrawals; and it is reasonable to take this into account in the assessment of intent and severity as well, particularly if the correction/withdrawal is made on the individual's own initiative before the suspected deviation is pointed out by a third party.

One example of what might normally be perceived as a less serious deviation from good research practice is when researchers chiefly refer to works that support their own thesis and do not pay sufficient attention to research that contradicts it; that is to say, citing in a selective and biased fashion. This should, of course, always be criticised by knowledgeable peer reviewers, editors, readers and colleagues. Any such shortcoming may result in a need to revise a manuscript or lead to publication of a correction. The research community should normally be capable of dealing with shortcomings of this kind, and it is hardly a serious situation in the same sense as the misrepresentation of results. However, if researchers agree to systematically exchange citations with a view to enhancing their credentials, this is to be regarded as detrimental to the integrity of the research and researchers. Similarly, disagreements within a research group concerning the appropriate authorship procedure may be kept separate from serious cases such as when someone appropriates or purchases authorship of an academic work.

Investigation of other deviations should initially involve assessment of the report and how it is dealt with. If it then turns out that the suspicion is sufficiently well-founded and relates to an action that, given the above starting points, could be serious (but which otherwise does not fall within the statutory definition of research misconduct), it should be investigated further by the HEI in accordance with a management procedure adopted. If such a preliminary investigation instead reveals that the suspicion relates to an action that is to be regarded as minor, it can be investigated further if there are reasons to do so, dealt with in another way or left unaddressed. The purpose of this procedure is to ensure that serious deviations are actually – and adequately – investigated, while avoiding a situation where all suspected deviations, regardless of their severity, are subject to disproportionately time-consuming and costly investigations.

3.3. Other deviations covered by other regulatory instruments

Compliance with good research practice involves complying with certain regulatory frameworks, such as ethical permissions for research on animals or humans, registration of a biobank, processing of personal data, archiving of research material and exporting sensitive technologies to certain countries. Violations of these and other regulatory frameworks may fall under the supervisory or investigative responsibility of various actors, which may mean that parts of a case that involve suspected deviations from good research practice have to be handled by a supervisory authority (such as the Ethics Review Appeals

Board) or specific bodies within the HEI (such as a local animal welfare body).[9] In such instances, these elements of the matter must be dealt with in accordance with the applicable provisions and referred to the responsible supervisory authority or another responsible body for further investigation. Another example of how other regulations can come into play is that reports of deviations from good research practice can also relate to personnel issues or be related to ongoing personnel matters.

When a number of different bodies with different and perhaps even partially overlapping investigative responsibilities are involved, it is important to ensure that important issues do not fall through the cracks and that they are investigated by the right body with no unnecessary overlapping. It should be ensured that there is good communication between the various bodies involved, with no unnecessary distribution of sensitive information. What emerges in connection with an inspection or other form of investigation by the responsible body may, of course, be of relevance to the issue of deviation from good research practice and what further measures are to be undertaken by the HEI (or other bodies). For instance, a decision indicating that the necessary ethical permission has not been granted or details emerging in a matter involving personnel may constitute grounds for establishing that a deviation has occurred, or trigger further investigation by the appropriate body.

That said, it is important to pay close attention to what the decisions of various bodies involve. Here are a few examples related to ethical review and other deviations:

- The fact that the Ethics Review Appeals Board finds in a decision that the Ethics Review Act has not been contravened does not, per se, rule out the fact that the research may have involved other deviations from good research practice.
- The fact that the Ethics Review Appeals Board reports a case to the Swedish Prosecution Authority does not, per se, mean that a deviation has occurred, as reasonable suspicion of a violation will suffice for this measure.
- The fact that the Swedish Prosecution Authority discontinues the preliminary investigation on the grounds that a criminal offence cannot be proven does not, per se, rule out the fact that a serious deviation from good research practice may have occurred.

These examples illustrate the fact that a body's decision within the scope of its field of responsibility does not necessarily involve making a decision on whether deviations from good research practice have occurred. HEIs must carefully consider the content and impact of decisions so that they can apply them in a responsible manner as a basis for their own management. Should HEIs always await decisions by other bodies, or should investigations be conducted in parallel? It is difficult to set out a general principle: the answer is largely reliant on the nature of the case in question. Unnecessary delays in dealing with cases should be avoided as far as possible, but sometimes the outcome of an investigation conducted by another authority should be awaited; particularly if the second body's decision may be crucial for further handling (see also section 3.4. below).

[9] In some instances, the HEI may even have an obligation to report the matter to the police or a public prosecutor.

3.4. Appropriate management with legal certainty

Any suspicion of a deviation from good research practice should be dealt with promptly and with legal certainty; both to safeguard the interests of the parties involved and to protect the integrity of the research. Discretion should also be applied: the mere fact that a matter has been reported, even if the party accused is later cleared, can harm the interests and reputation of the person(s) concerned. That said, anyone should be able to report a suspicion directly to the specialist body at the HEI that is tasked with dealing with deviations. No intermediary should be required. Requiring a suspicion to be reviewed or assessed by a superior, for example, before being passed on to this body (where applicable) introduces a delay, a potentially problematic incentive, and also risks undermining the opportunity to report matters anonymously. All in all, a procedure of this kind poses a threat to the integrity and trustworthiness of the research. It must be noted that individuals are able to report cases by means of whistleblowing or directly to Npof if it appears that the case is being dealt with in contravention of the above.

In HEIs' work on promoting good research practice, it is important to differentiate between different tasks and roles, such as investigation, providing support, mediating and providing information. Some of these roles are more difficult to reconcile than others. For instance, it is not appropriate for one and the same person to act as an investigator and also provide support. It must be clear that researchers are able to turn to the support function in confidence for advice and support without having to worry that this may disadvantage the researcher in a later investigation. Another important role involves working strategically to promote good research practice at HEIs. The various roles require different skills. While the supportive and investigative roles require expertise in issues relating to good research practice, the role of mediator may also need conflict management skills and a good knowledge of what matters should be dealt with as research issues and what matters involve working environment issues.

Another important issue relates to the handling of old offences. According to the Act on Responsibility, suspected research misconduct does not have to be investigated if it is based on circumstances in excess of ten years ago when the case is initiated, unless there are special reasons for a review. What the latter means is that Npof has to make an assessment, but the preparatory works state that "'[s]pecial reasons' refers, for example, to cases where the alleged misconduct has had, or risks having, major or serious repercussions on research or society at large. This might involve human health or, for example, the design of processes, methods or products. Another special reason may be that Npof wishes to examine previous research conducted by researchers who have been guilty of misconduct" (Government Bill 2018/19:58 104, p. 103).

There is no clear time limit for other deviations from good research practice; but as with the rules on research misconduct, it is appropriate generally to focus on offences suspected to have taken place within the last decade. Importantly, however, deviations from good research practice may be perceived as an "ongoing offence" as long as inaccurate results, fabricated databases, etc. risk undermining further research and the integrity of the research. However, researchers can help to mitigate this risk by requesting correction or withdrawal of inaccurate publications, which, according to the ALLEA Code, should also be encouraged and taken into account in this regard (cf. section 3.2 above).

4. Following up on decisions and cases

When a case has been reviewed in full, either a decision is made by Npof on research misconduct or a decision is made by the HEI on other deviations from good research practice, or both. The HEI is responsible for taking action in all such cases. The measures that are necessary or appropriate are reliant on the nature of the case and the decision made.

When Npof has decided that research misconduct has taken place, or the decision shows that there has been serious deviation from good research practice in the form of fabrication, falsification or plagiarism *without* intent or gross negligence having been established, the HEI must proceed as follows in accordance with Sections 13 and 14 of the Act on Responsibility for Good Research Practice and the Examination of Research Misconduct:

- inform the relevant research funding bodies, public authorities, academic journals and other interested parties of the decision as soon as the decision has been made, and notify them that the decision may be appealed to a general administrative court.
- report to Npof within six months after the decision has gained legal force, indicating what action the HEI has taken or is intending to take as a result of the decision.

The HEI's guidelines should clearly indicate who is responsible for this information and reporting. Such cases are not to be investigated further by the HEI in respect of matters concerning research misconduct, but circumstances may have emerged in the case that mean other deviations from good research practice are also suspected. The HEI must examine these suspicions in such instances.

Even if Npof's decision states there is no research misconduct in the case in question, the case may nevertheless relate to other deviations from good research practice. If Npof deems this to be the case, it must notify the HEI and provide it with the documents relating to the case. Npof's assessment may in some cases form an appropriate starting point for the assessment by the HEI, but the institution also has a responsibility to ensure that any suspicions are examined in accordance with the established guidelines.

Besides the legal requirements above, it is up to the HEI to decide what action to take in response to a decision.

- If the deviation is due to organisational shortcomings, the HEI should review what measures could ideally be implemented to address them. For instance, there may be a need for:
    - Follow-up and support actions in the research environment in question
    - Training activities
    - Review of procedures
    - Organisational changes
    - Documentation or reporting requirements
- Disciplinary action or action under employment law may be implemented in serious cases where one or more individuals can be held responsible.

- There may also be a need to resort to a supervision report or prosecution report in some cases, such as if the Ethics Review Act is breached.

Suspicions that research has been conducted in violation of the Ethics Review Act fall within the framework of the supervisory responsibility of another public authority, the Ethics Review Appeals Board; but that said, such offences are deemed to be other deviations from good research practice.[10] Thus there is a risk of cases either falling through the cracks or being investigated twice. The HEI should submit cases to the Ethics Review Appeals Board in regard of the elements relating to suspected breaches of the Ethics Review Act, and the starting point should be that these *elements* should then be regarded as having been investigated in full. However, a decision made by a supervisory authority or a court may constitute grounds for the HEI to take action of the kind referred to above.

Action may also be required when it is clear from a decision by Npof or the HEI that there is no longer any suspicion of deviation from good research practice. Such measures should aim to minimise any potential harmful impact from the suspicions and investigation process, not least in respect of the reputation of the researcher identified. Depending on the circumstances of the case in question, it may be appropriate – for example – to notify the relevant research funding bodies, public authorities, publishers, etc. of the decision. Restoring confidence in a researcher who has been reported and/or under investigation can be a major undertaking. The management of the HEI bears major responsibility for ensuring that researchers can regain their status after being cleared.

Various forms of harmful impact on staff should also be prevented by the HEI taking responsibility for ensuring that all parties concerned receive the support they need throughout the process. There should be clear procedures in place for this, taking into account the fact that cases of this nature may be sensitive.

According to Section 18 of the Higher Education Ordinance, HEIs are also obliged to report to Npof, no later than 30 March each year, in anonymised form, certain information about deviations from good research practice that have been examined at the University during the previous calendar year (i.e. deviations other than research misconduct). This is normally initiated by Npof via a questionnaire that also includes other questions about the work relating to deviations from good research practice.

[10] Note that artistic research is not covered by the Ethics Review Act, unless the research conducted falls within the definition of research: cf. footnote 7 above.

APPENDIX 1. Starting points for guidelines at higher education institutions

According to the Higher Education Act (högskolelagen), HEIs must work in such a way as to achieve high quality in both education and research (Chapter 1, Section 4). Responsibility for this rests with the top governing bodies at HEIs. It is appropriate for them *to assign a specific body – a board, committee or similar – to deal with suspected deviations from good research practice*. A body of this type – referred to below as "the committee" – can take several forms. It is important for the committee to include representatives of the research domains concerned, and for legal experts – particularly in administrative law – and people with expertise in matters relating to good research practice to be included in the committee or be on hand for consultation purposes. The use of external expertise (experts) in major investigations is recommended; these experts should be respected and established researchers in the relevant research domain, with no links to the suspected research, the HEI or the party reporting the issue. If something specific has be investigated, such as management of personal data, this skill specifically needs to be provided.

The matter should be dealt with quickly and without compromising legal certainty. A management procedure should be formulated so that any suspicion – whether from a staff member or another person – reaches the HEI's senior management and/or the committee, depending on the applicable procedure. It is also important for the committee's area of responsibility to be defined clearly so that it does not risk making decisions that, under current rules, are the responsibility of external public authorities or other functions at the HEI (cf. section 3.3 above).

The following tasks may be assigned to the committee:

Assessment of whether a particular procedure constitutes suspected research misconduct.

This should not be an investigation of the actual suspicion, as the Government clearly states that there is "no reason to allow the research principal in question to conduct an initial investigation in a case involving suspected misconduct" (Government Bill 2018/19:58, p. 59). Rather, it is a matter of assessing whether the suspicion may relate to research misconduct. HEIs should interpret the concept of suspected research misconduct generously so that all cases that could fall within the statutory definition are examined by Npof (Government Bill 2018/19:58, p. 102). The matter should therefore be referred to Npof as soon as possible in cases where the committee is of the opinion that the suspicion may concern research misconduct.

Investigating other deviations from good research practice.

The Higher Education Ordinance states that HEIs must examine suspected deviations from good research practice other than those that are to be examined by Npof. If the HEI establishes as early as its initial assessment that a suspicion clearly concerns types of deviations from good research practice other than those that fall under the statutory definition of research misconduct, the HEI must investigate the suspicion in an appropriate manner and when required to do so. If Npof has received a report or referral but finds that the suspicions do not concern research misconduct, the documents

must be submitted to the research principal for further management. An investigation is warranted when the suspicions relate to other *serious* deviations from good research practice. Whether a deviation is serious has to be assessed on a case-by-case basis, taking into account the principles specified in section 3 above. Deviations that are *not* deemed serious enough to warrant investigation may nevertheless need to be dealt with by other means, such as management, peer debate or publication of a corrigendum. It is important to note that the Government emphasises that deviations from good research practice other than research misconduct may be every bit as serious or as reprehensible as fabrication, falsification and plagiarism (Government Bill 2018/19:58, p. 51).

According to the Higher Education Ordinance, HEIs must establish guidelines for their examination of suspected deviations from good research practice. A model template for the design of a management procedure is presented below. Certain aspects of it may need to be adapted to each HEI's activities (typically activities as indicated in brackets below), but HEIs should endeavour to ensure that cases are managed in as similar a manner as possible. All HEIs should make their management procedures openly available in order to promote equal treatment and common understanding.

Template for Management procedure for suspected deviations from good research practice

All employees at [HEI] are responsible for compliance with good research practice. The following management procedure must be applied if deviations from good research practice are suspected. Management requirements may also be imposed by funding bodies and public authorities in other countries; these must be respected as far as possible.

Definition of research misconduct, etc.

In the Act on Responsibility for Good Research Practice and the Examination of Research Misconduct, *research misconduct* is defined as serious deviations from good research practice in the form of fabrication, falsification or plagiarism that is committed intentionally or through gross negligence when planning, conducting or reporting research (SFS 2019:504).

"Other deviations from good research practice" refers to deviations from good research practice that are not covered by the statutory definition. The assessment of such deviations should primarily be based on the principles of the European Code of Conduct for Research Integrity, published by ALLEA. The seriousness of the misconduct should in particular be taken into account; whether it substantially harms or risks harming the integrity of the research or researchers, and whether it took place intentionally or through gross negligence.

General information on managing deviations from good research practice

Section 1 Deviations from good research practice within the higher education institution's (HEI's) activities shall be recognised and managed in an appropriate manner, given the nature and seriousness of the deviation.

Section 2 Any suspected deviation from good research practice shall be reported to […] without undue delay. Persons suspected of misconduct shall be notified of the allegations within a reasonable time.

Section 3 In deviation from good research practice is suspected, the HEI shall assess whether the suspicion concerns research misconduct or other deviations from good research practice. The Vice-Chancellor may refer the matter to [the committee] (see Section 6 below) for an initial assessment of whether the suspicion relates to research misconduct or other deviations from good research practice within the HEI's activities.

If the suspicion is deemed to relate to research misconduct, the matter shall be submitted to the Swedish National Board for Assessment of Research Misconduct (Npof).

If the suspicion is deemed to relate to acts or omissions that may be subject to public prosecution or supervision by another public authority, the matter shall be referred to the authority that is to investigate the matter. If a specifically regulated procedure is in place for cases of the type in question (such as the management of deviations from animal ethics licences), applicable parts of the case shall be managed in accordance with this procedure.

If the suspicion is deemed to involve other deviations from good research practice, the HEI shall manage the matter in accordance with Sections 4–5.

Insofar as the suspicion relates to both research misconduct and other deviations from good research practice, the HEI shall manage that part of the case relating to other deviations from good research practice, where appropriate, after the Swedish National Board for Assessment of Research Misconduct has submitted the case following a decision.

Section 4 If it is not possible without further investigation to rule out the fact that the suspicion relates to serious deviations from good research practice, the HEI shall investigate the matter in accordance with Sections 12–16.

Section 5 If it can be ruled out, without further investigation, that the suspicion relates to serious deviations from good research practice, the HEI shall manage the case in the manner deemed appropriate given the nature of the suspected deviation. Suspected minor deviations may also be investigated in accordance with Sections 12–16 to the extent deemed appropriate.

[Committee] for the investigation of suspected deviations from good research practice

Section 6 [The committee] is responsible for investigating suspected deviations from good research practice.

Section 7 [The committee] comprises […]. [The committee] may co-opt individuals with the right to attend and speak.

Section 8 Members of [the committee] are appointed for [x] years.

Section 9 [Provisions on how [the committee] is appointed]

Section 10 [Provisions on [any] deputies for [committee] members]

Section 11 [Provisions on administrative support to the committee]

Investigation and decision

Section 12 [The committee] shall conduct its own investigation if other serious deviations from good research practice are suspected.

Section 13 Individuals who are suspected of other serious deviations from good research practice shall be informed of the HEI's investigation within a reasonable time and be offered the opportunity to respond to the allegations.

Section 14 [The committee] may obtain statements from experts if necessary.

Section 15 [The committee] shall document the suspicion, the investigation and its position on the suspicion in an investigation report within a reasonable time. Communications shall be submitted to the parties concerned in accordance with Section 25 of the Administrative Procedure Act before the Vice-Chancellor makes a decision on the matter.

Section 16 The Vice-Chancellor shall make a decision on the matter on the basis of a completed investigation. This decision shall determine whether there have been any other deviations from good research practice, and whether anyone should be held responsible for the deviation. It should also indicate whether the deviations is of a serious nature and whether it was committed intentionally or with gross negligence.

Actions following a decision

Section 17 The Vice-Chancellor will decide on any action to be taken as a result of what has emerged in the case, regardless of whether the case has been decided by the Swedish National Board for Assessment of Research Misconduct or by the HEI. Any action taken must be proportionate to the seriousness of the deviation (Section 5(3) of the Administrative Procedure Act).

Follow-up

Section 18 If a researcher is cleared of any suspicion of misconduct in research or other deviation from good research practice, appropriate action shall be taken to remedy any damage that may have been caused by the suspicion and the handling of the matter.

Section 19 The Vice-Chancellor is responsible for ensuring that research funding bodies, public authorities, journals and other interested parties are informed by the HEI of cases where research misconduct or other serious deviations from good research practice have been identified.

Section 20 The Vice-Chancellor is also responsible for ensuring that action that has been taken or is intended to be taken due to a deviation from good research practice is reported to the Swedish National Board for Assessment of Research Misconduct in accordance with Section 13 of the Act on Responsibility for Good Research Practice and the Examination of Research Misconduct and Chapter 1, Section 18 of the Higher Education Ordinance.

APPENDIX 2. Links to referenced documents and websites

- Cabells Predatory Reports – https://cabells.com/solutions/predatory-reports
- CoARA – Coalition for Advancing Research Assessment – https://coara.eu/
- Codex (Uppsala University) – www.codex.uu.se
- Ethical Advisory Board in South East Sweden – https://lnu.se/mot-linneuniversitetet/samarbeta-med-oss/Projekt-och-natverk/etikkommitten-sydost/
- Ordinance amending the Higher Education Ordinance (1993:100) – SFS 2019:1151
- Good research practice – SOU 1999:4
- Higher Education Ordinance – SFS 1993:100
- Higher Education Act – SFS 1992:1434
- Act on Responsibility for Good Research Practice and the Examination of Research Misconduct – SFS 2019:504
- New procedure to promote good practice and manage research misconduct – Government Bill 2018/19:58
- New procedure to promote good practice and manage research misconduct – SOU 2017:10
- Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly work in Medical Journals, "Vancouver". International Committee of Medical Journal Editors. http://www.icmje.org/index.html
- SOPs4RI – Guideline for Promoting Research Integrity in Research Performing Organisations – https://sops4ri.eu/wp-content/uploads/Guideline-for-Promoting-RI-in-RPOs-FINAL-2.pdf
- SWARMA – https://swarma.groups.io/g/main
- The European Code of Conduct for Research Integrity – Revised Edition 2023. All European Academies, ALLEA, Berlin. https://allea.org/portfolio-item/european-code-of-conduct-2023/
- Working with research integrity – guidance for research performing organisations: The Bonn PRINTEGER Statement – https://printeger.eu/the-bonn-printeger-statement/