

3.2 Key questions for the ethical assessment of security-relevant research

Preamble: The key questions of the Joint Committee on the Handling of Security-Relevant Research are designed to help researchers and committees responsible for the ethics in security-relevant research (KEFs) decide in which instances a further ethical assessment of security-relevant research projects and risk reduction measures is called for. This applies particularly to so-called “security-relevant research of concern”, in other words scientific research that produces knowledge, products or technologies that could be misused directly by third parties to cause significant harm to human dignity, life, health, freedom, property, the environment or peaceful coexistence.⁹¹

In the experience of the Joint Committee, such research projects are rare exceptions in academic research. In practice, the work of the KEFs in advising security-relevant projects generally concerns the compatibility of the research with constitutional principles or the basic rules of the respective research institution and the DFG “Guidelines for Safeguarding Good Research Practice”.⁹² They consult on issues of data security and foreign trade legislation (export control). The KEFs also assess security-relevant risks connected to military non-disclosure and to research funding from sponsors with military associations, and security-relevant risks which could arise from cooperation with researchers with military associations or from authoritarian regimes.

The Joint Committee has therefore compiled the following key questions based on the KEFs’ feedback on their own work from 2016–2019 and published checklists and guides on research risks.⁹³ The Joint Committee believes that the respective responses of researchers and KEFs and the consequences derived from them for the work in question should always be the result of case-by-case considerations under the respective local framework for research and their ethical evaluation. The Joint Committee therefore does not want to prescribe generally valid ethical criteria or “red lines” but primarily aims to sustainably strengthen the independent handling of security-relevant research risks in the sciences.

91 Further information on security-relevant research and the work of the KEFs in the Joint Committee’s activity reports is available at: www.sicherheitsrelevante-forschung.org/en/publications (last accessed: 21 November 2022).

92 See “Guidelines for Safeguarding Good Research Practice” (DFG, as of: 28 September 2022). Available at: <https://doi.org/10.5281/zenodo.6472827> (last accessed: 28 September 2022).

93 See “Code of Conduct: Working with Highly Pathogenic Microorganisms and Toxins (DFG Permanent Senate Commission on Genetic Research 2013). Available at: www.dfg.de/download/pdf/dfg_im_profil/geschaeftsstelle/publikationen/stellungnahmen_papiere/2013/130313_verhaltenscodex_dual_use_en.pdf (last accessed: 28 September 2022); Scientific Freedom and Scientific Responsibility – Recommendations for Handling-Security-Relevant Research (DFG and Leopoldina 2014). Available at: www.sicherheitsrelevante-forschung.org/en/publication-scientificfreedom2022 (last accessed: 21 November 2022); Completion aid for the civil clause checklist of TU Darmstadt (as of: 5 November 2014). Available at: www.intern.tu-darmstadt.de/gremien/ethikkommission/formulare_8/index.en.jsp#text__bild_1 (last accessed: 28 September 2022); Internal Guidelines of the Paul-Ehrlich-Institut for the Handling of Potentially Security-Relevant Research.

Key Questions

1. Key questions for researchers, the answer to which may suggest the need for consultation by KEFs

- 1.1 Is it likely that your research project is security-relevant research according to the above-specified meaning and/or the above-mentioned contexts?
- 1.2 Is it possible that cooperation partners involved in your research project will cause security-relevant risks in the above-mentioned meaning?
- 1.3 Does the research project conflict with legal regulations⁹⁴ and thus need to be referred to a compliance office alongside a KEF?

2. Key questions for processing the query by the KEFs

- 2.1 What concrete objectives and purposes are the researchers and any sponsors involved pursuing with this research project?
- 2.2 Is the required expertise available to make an informed assessment of the research project in regard to its potential risks or does additional expertise need to be brought in?
- 2.3 Is it possible to adequately specify and weigh up the benefits and risks of the known and potential research findings with the information currently available?
- 2.4 Are the security-relevant outcomes and resulting risks of the research project new or could they also arise from previously published work?
- 2.5 How likely is it that the security-relevant findings will be disseminated and that this will lead to a direct⁹⁵ concrete misuse in the above-specified meaning of security-relevant research of concern?
- 2.6 In the event of an intentional harmful application of the findings through third parties, what would be the scale of the potential damage and are any suitable countermeasures⁹⁶ available?
- 2.7 What are the potential harmful consequences⁹⁷ of not carrying out the research project?

3. Key questions for the conclusive assessment and consultation by the KEFs

- 3.1 Can the research project produce knowledge, products or technologies that could very likely be misused directly by third parties to cause significant damage of the above-specified legal interests?
- 3.2 Should the project be reassessed by the KEF at a more advanced stage when the security-relevant risks can be judged more easily?
- 3.3 Are the research project and its objectives and purposes compatible with the constitutional principles and the basic code or guidelines of the research institution?
- 3.4 Can the security-relevant risks be sufficiently reduced by imposing certain conditions on the project (e.g. usage agreement or alternative research strategy) or by adapting the publication?
- 3.5 How can the researchers involved in the research project be made aware of the ethical aspects of security-relevant research so that they consider the direct and future consequences of their work?

94 E.g. regular criminal law, export control legislation and export provisions of the German Federal Office of Economics and Export Control (BAFA), the Biological Weapons Convention and the Chemical Weapons Convention, the protection of human rights, humanitarian international law, rules of war, prohibition of torture and violence, Biodiversity Convention.

95 To be considered here are e.g. the necessary capabilities, specialist knowledge and technical equipment for misuse.

96 E.g. measures of recovery and traceability and damage limitation.

97 Can the absence of certain innovations result in additional damage, for example, in the course of ongoing military conflicts, in the course of climate change, in naturally emerging waves of infection?