

### 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 of 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.<sup>71</sup>

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”.<sup>72</sup> They consult on issues of data security and foreign trade legislation (export control). The KEFs also assess the security-relevant risks connected to research funding from sponsors with military associations or with military non-disclosure, and security-relevant risks which could arise from cooperation with researchers with military associations or from authoritarian regimes.

The following key questions were developed by the Joint Committee on the basis of the responses received from the KEFs about their work between 2016 and 2019 and the published checklists and guidelines.<sup>73</sup> In the view of the Joint Committee, the answers of the researchers and the KEFs and the consequences drawn for the research in question should always be reached on a case-by-case basis, under consideration of individual framework conditions for research on site and the individual ethical assessment. The Joint Committee 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 science.

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71 Further information on security-relevant research and the work of the KEFs are included in the Progress Report of the Joint Committee, available at: [www.leopoldina.org/en/about-us/cooperations/joint-committee-on-dual-use/dual-use-progress-reports/](http://www.leopoldina.org/en/about-us/cooperations/joint-committee-on-dual-use/dual-use-progress-reports/) (last accessed: 9 September 2020).

72 See “Guidelines for Safeguarding Good Research Practice” (DFG, Stand: 01.08.2019). Available at: [www.dfg.de/download/pdf/foerderung/rechtliche\\_rahmenbedingungen/gute\\_wissenschaftliche\\_praxis/kodex\\_gwp\\_en.pdf](http://www.dfg.de/download/pdf/foerderung/rechtliche_rahmenbedingungen/gute_wissenschaftliche_praxis/kodex_gwp_en.pdf) (last accessed: 9 September 2020).

73 See “Code of Conduct: Working with Highly Pathogenic Microorganisms and Toxins”, (DFG Senate Commission Basic Principles of Genetic Research 2013). available at: [www.dfg.de/download/pdf/dfg\\_im\\_profil/reden\\_stellungnahmen/2013/130313\\_verhaltenscodex\\_dual\\_use\\_en.pdf](http://www.dfg.de/download/pdf/dfg_im_profil/reden_stellungnahmen/2013/130313_verhaltenscodex_dual_use_en.pdf) (last accessed: 9 September 2020); Scientific Freedom and Scientific Responsibility – Recommendations for Handling-Security-Relevant Research (DFG and Leopoldina 2014). Available at: [www.leopoldina.org/en/publications/detailview/publication/wissenschaftsfreiheit-und-wissenschaftsverantwortung-2014/](http://www.leopoldina.org/en/publications/detailview/publication/wissenschaftsfreiheit-und-wissenschaftsverantwortung-2014/) Aid to Fill Out the Civil Clause Checklist of the TU Darmstadt (Version of: 5 November 2014). Available at: [https://www.intern.tu-darmstadt.de/gremien/ethikkommission/formulare\\_8/index.de.jsp#text\\_bild\\_1](https://www.intern.tu-darmstadt.de/gremien/ethikkommission/formulare_8/index.de.jsp#text_bild_1) (last accessed: 9 September 2020); Internal Guidelines of the Paul-Ehrlich-Institut for the Handling of Potentially Security-Relevant Research.

## 1. Key questions for researchers indicating that they need to consult a KEF

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- 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 regulations<sup>74</sup> and thus need to be referred to compliance office alongside a KEF?

## 2. Key questions for processing the query by the KEF

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- 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 direct<sup>75</sup> 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 countermeasures<sup>76</sup> available?
- 2.7 What are the potential harmful consequences<sup>77</sup> of not carrying out the research project?

## 3. Key questions for the conclusive assessment and consultation by the KEF

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- 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 Is 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?

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74 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.

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

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

77 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?