



“Key performance indicators” for environmental assessments in nuclear waste management

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Abstract. The planning and licensing processes for nuclear waste management involve a variety of environmental assessments. Their obligatory public participation and the possibility of judicial review place high demands on the quality of these procedures and documents. In contrast to some other countries (see Günther et al., 2017), no adequately formulated quality assurance options for environmental assessments have been applied in Germany to date (ibid.). However, KPIs (“key performance indicators”) for environmental assessment can certainly be presented and operationalised to varying degrees (e.g. Geißler et al., 2019).

On the one hand, this relates to procedural performance, such as how carefully alternative solutions are investigated and how remaining uncertainties are addressed. The other overarching set of KPI criteria relates to substantial performance, i.e. the extent to which improvements are achieved in the course of environmental assessments with a view to a high level of environmental protection and the extent to which actors and stakeholders involved may perceive preferred alternative solutions as fair. Strategic environmental assessments (SEAs) for the search for a final repository site for high-level radioactive waste will have to meet high quality standards (see Rehhausen et al., 2018) because the process and task pose unique challenges. This includes the core question of whether the SEAs can be integrated early enough.

The aim of the panel proposed here is to introduce relevant key performance indicators for environmental assessments, especially at a high international level via short input statements. Secondly, we want to discuss and classify these KPIs provisionally regarding different operationalisation options in the field of nuclear waste disposal. On the one hand, there may be “low hanging fruit” as far as tangible KPIs are concerned, and on the other hand, there may be a need for further research and development which shall be identified in the panel.

References

- Geißler, G., Rehhausen, A., Fischer, T. B., and Hanusch, M.: Effectiveness of strategic environmental assessment in Germany? – meta-review of SEA research in the light of effectiveness dimensions, *Impact Assess. Proj. Apprais.*, 37, 219–232, 2019.
- Günther, M., Geißler, G., and Köppel, J.: Many roads may lead to Rome: Selected features of quality control within environmental assessment systems in the US, NL, CA, and UK, *Environ. Impact Assess. Rev.*, 62, 250–258, 2017.

- Rehhausen, A., Köppel, J., Scholles, F., Stemmer, B., Syrbe, R.-U., Magel, I., Geißler, G., and Wende, W.: Quality of federal level strategic environmental assessment – A case study analysis for transport, transmission grid and maritime spatial planning in Germany, *Environ. Impact Assess. Rev.*, 73, 41–59, 2018.