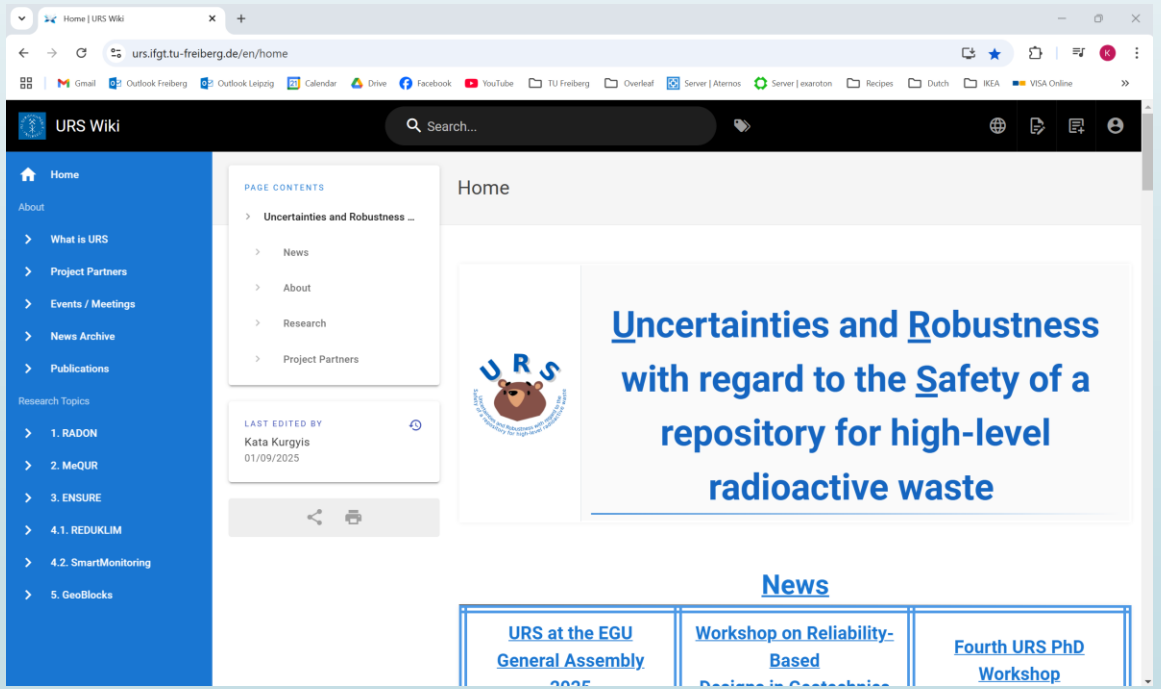
Future of the URS-wiki website and epilogue paper discussion

Presenter: Kata Kurgyis

URS Website – Future plans

- News Archive
  - Past presence of URS projects on any conference/workshop?
- Publication list
  - Please send me an updated list
- Project content updates
  - Currently work-in-progress
- Any further requests?

https://urs.ifgt.tu-Freiberg.de/en/home



Prologue paper performance

- URS-cluster prologue paper published 2024 January in Environmental Earth Sciences
- Part of Deep Geological Disposal (DGD) Special Issue

https://doi.org/10.1007/s12665-023-11346-8

Environmental Earth Sciences (2024) 83:82
https://doi.org/10.1007/s12665-023-11346-8

ORIGINAL ARTICLE

Check for updates

Uncertainties and robustness with regard to the safety of a repository for high-level radioactive waste: introduction of a research initiative

Kata Kurgyis[1] · Peter Achtziger-Zupančič[2,3] · Merle Bjorge[4] · Marc S. Boxberg[5,6] · Matteo Broggi[7] · Jörg Buchwald[1,8] · Oliver G. Ernst[9] · Judith Flügge[10] · Andrey Ganopolski[11] · Thomas Graf[12] · Philipp Kortenbruck[4] · Julia Kowalski[5] · Phillip Kreye[4] · Peter Kukla[13] · Sibylle Mayr[14] · Shorash Miro[4] · Thomas Nagel[1] · Wolfgang Nowak[15] · Sergey Oladyshkin[15] · Alexander Renz[4] · Julia Rienäcker-Burschil[4] · Klaus-Jürgen Röhlig[16] · Oliver Sträter[17] · Jan Thiedau[14] · Florian Wagner[6] · Florian Wellmann[18] · Marc Wengler[4] · Jens Wolf[10] · Wolfram Rühaak[4]

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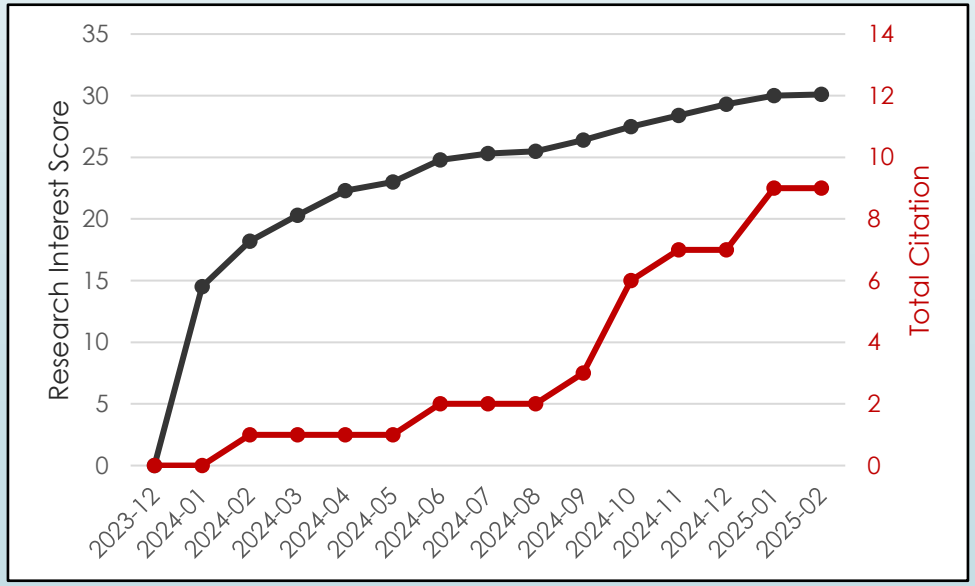
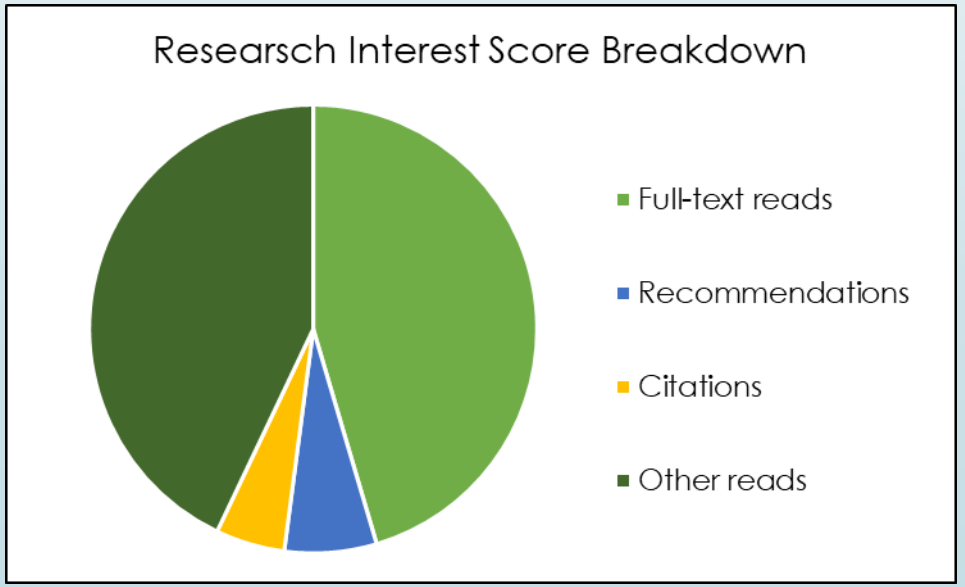
Abstract
The Federal Company for Radioactive Waste Disposal (BGE mbH) is tasked with the selection of a site for a high-level radioactive waste repository in Germany in accordance with the Repository Site Selection Act. In September 2020, 90 areas with favorable geological conditions were identified as part of step 1 in phase 1 of the Site Selection Act. Representative preliminary safety analyses are to be carried out next to support decisions on the question, which siting regions should undergo surface-based exploration. These safety analyses are supported by numerical simulations building on geoscientific and technical data. The models that are taken into account are associated with various sources of uncertainties. Addressing these uncertainties and the robustness of the decisions pertaining to sites and design choices is a central component of the site selection process. In that context, important research objectives are associated with the question of how uncertainty should be treated through the various data collection, modeling and decision-making processes of the site selection procedure, and how the robustness of the repository system should be improved. BGE, therefore, established an interdisciplinary research cluster to identify open questions and to address the gaps in knowledge in six complementary research projects. In this paper, we introduce the overall purpose and the five thematic groups that constitute this research cluster. We discuss the specific questions addressed as well as the proposed methodologies in the context of the challenges of the site selection process in Germany. Finally, some conclusions are drawn on the potential benefits of a large method-centered research cluster in terms of simulation data management.

Keywords Nuclear waste disposal · Repository research · Uncertainty management · Safety investigations · Radionuclide

Prologue paper performance

- URS-cluster prologue paper published 2024 January in Environmental Earth Sciences
- Over 2500 access on Springer Nature
- Research-gate: currently 30.1 Research Interest Score





Epilogue paper

- Concluding paper to summarize key findings, insights and reflections from the collective work of the projects
- Preparation work: URS-wiki project content update
  - Everyone can get familiar with the primary research output from the other projects
- Planned publication timeline:
  - Project content update on URS-wiki: end of March 2025
  - Epilogue paper draft: June 2025
  - Publication: end of 2025
- Journal: Environmental Earth Science (?)

Table of Content

1. Introduction:
   - Brief intro of the URS-Cluster: global research purpose, participating members/projects
2. Summary of key contributions: (from Projects)
   - Structured overview of project outcomes (highlight significant advancements)
   - Project publications
3. Integrating findings/Research impact: (from BGE)
   - Collaborative works/interdisciplinary connections
   - How URS-cluster research results incorporated into the site-selection process for BGE
4. Conclusion:
   - Identifying gaps/future directions: limitations/unanswered questions -> future research topics?
   - Legacy of the research cluster: accessibility of databases/tools, URS-wiki