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Disposal of high level radioactive waste in Germany - Lessons learned from a federal approach to organize a non-biased site selection process

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Structure of Presentation

- Nuclear heritage and geological disposition
- A new start for a (good) ending
- Public partizipation
- Conclusions

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Lower Saxony‘s nuclear heritage

World‘s first nuclear waste disposal at Asse Salt Mine is damaged (1967-1978)

- LAW/MAW (47.000 m^3)
- Water influx (12 m^3/d)
- Nuclear waste must be removed

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Disposal of high level waste in Germany

More than 40 years of highly controversial conflict after the Stop of the KEWA Process and the following Gorleben Decision (1977)

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Disposal of high level waste in Germany

Three attempts to find a save place and method for storage

- KEWA - Process to compare 254 sites (1974)
- Stop of KEWA Process by the Gorleben Decision (1977)
- New Start with the Commission of High Level Radioactive Waste (2014)

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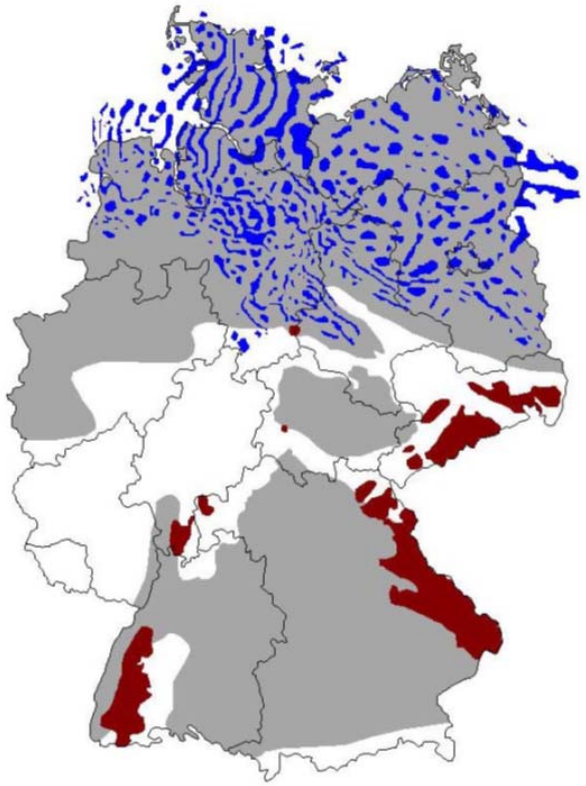
Germany – Geological Disposition



Blue: Saltrock Formation
Grey: Claystone Formation
Red: Crystalline Rock Formation

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A new start – The Repository Site Selection Act of 2013

- Entered into force on 27 July 2013
- Site selection procedure for the best possible repository
- Implementation of a Commission Storage High Level Radioactive Waste

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Commission Storage of High-Level Radioactive Waste

- The Commission has to review the 2013 Repository Site Selection Act
- 32 members, 2 Chairpersons

- 8 representatives from sciences, 2 environmental organisations reps, 2 trade union reps, 2 industry reps and 2 reps from churches
- 8 members of federal parliament
- 8 members of state governments

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Commission Storage of High-Level Radioactive Waste

Basic principles:

- Sustainability for future generations
- Safety First
- Transparent and fair
- Consens approach
- No further use of nuclear energy
- State of the art and science

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Commission Storage of High-Level Radioactive Waste

Proposals:

- Comprehensive exploration and examination of different potential host rocks and sites
- Science-based and Comparative
- One Million years proof of safety
- Reversibility and retrievability
- National responsibility; no export

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Commission Storage of High-Level Radioactive Waste

- Geoscientific criteria for exclusion, minimum requirements and assessment
- New safety requirements
- New method for safety analysis
- Data required for safety analysis, long term documentation and site seeking process
- New goals for research and development

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Public Participation


Source: Deutscher Bundestag

- Right from the start and in all phases of the repository site selection procedure, public participation is an important and integral part
- Operator BGE, Regulator BfE
- National supervisory board with special control rights
- Regional conferences and council of regions
- Legal protection

Conclusions

The commission was appointed to lead one of the most difficult conflicts of the last decades in Germany to a peaceful, democratic and sustainable solution for many generations

- Not only a technical challenge
- Must consider social and cultural dimensions
- Based on trust, science and the reliability of the institutions

Outlook

The 2013 Repository Site Selection Act is currently under revision by the legislator.

The revised Act is expected to be passed by federal parliament at the end of march.

The Report of the German Commission on the Storage of High-Level Radioactive Waste (in German) is available at
http://www.umwelt.niedersachsen.de/aktuelles/abschlussbericht-der-atommuellkommission--144882.html

The English Summary of the report is available at
http://www.umwelt.niedersachsen.de/download/115957