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FÜR ENDLAGERUNG

# German Status of DGR program

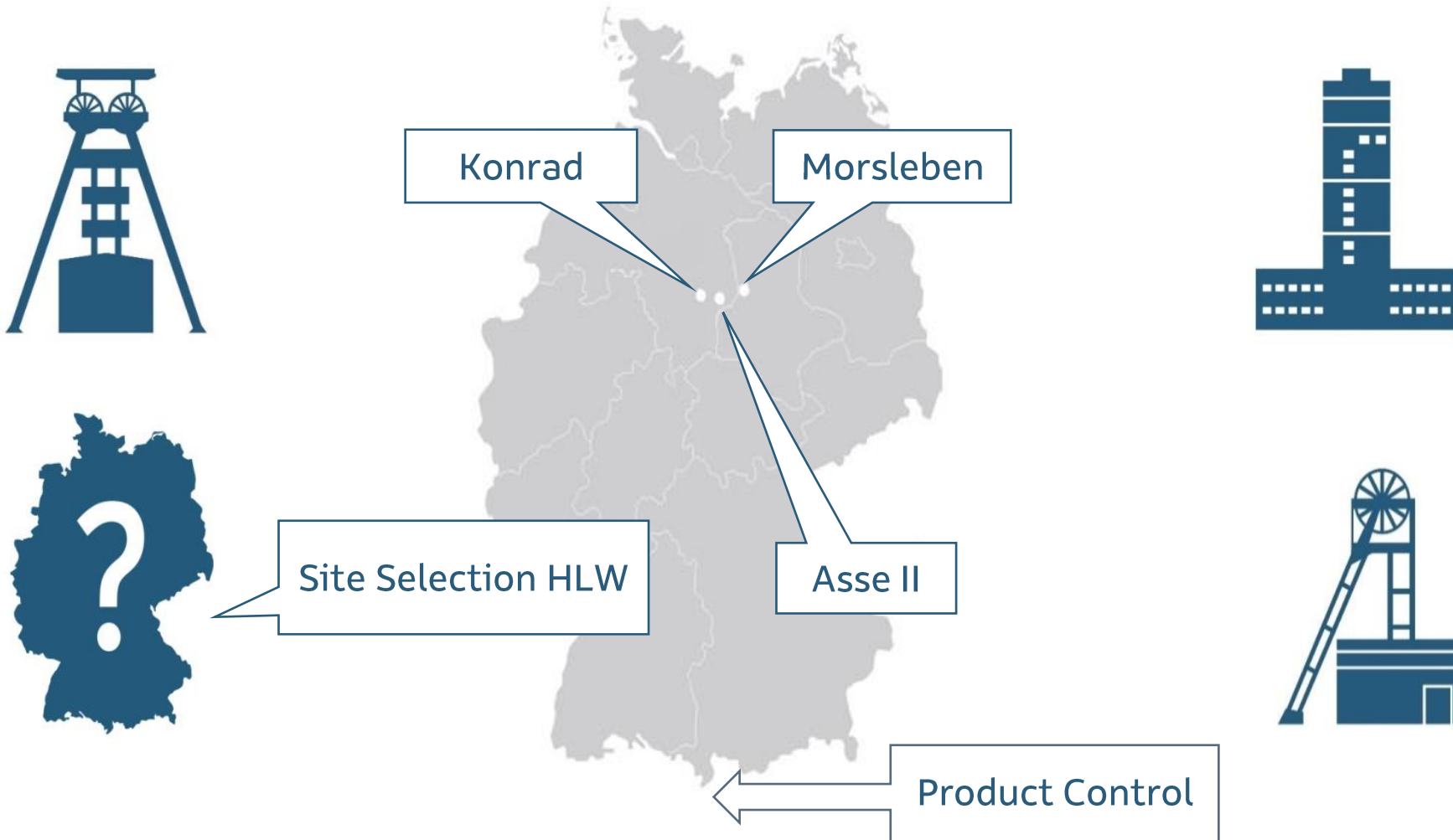
Andree Lommerzheim

BGE-TECHNOLOGY GmbH, Germany

IAEA URF Network, Technical Meeting (virtual), February 22-March 4 2021



# Federal Company for Radioactive Waste Disposal (BGE) – Tasks & Projects



# Asse Mine (former URL): main issues of current work

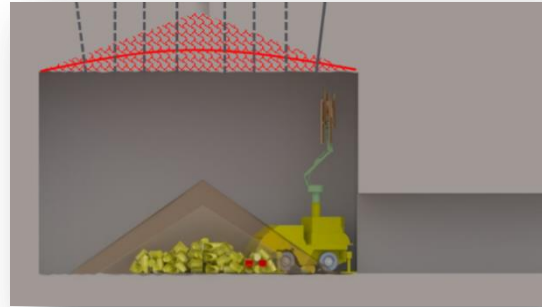
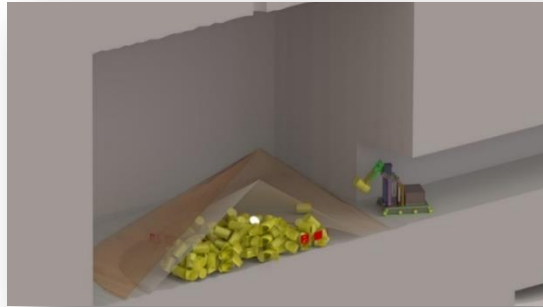
Preventive Measures to stabilize the mine (backfilling) and to avoid water intrusion into the disposal fields (construction of drift seals)

Preparatory work for retrieval of waste package:

- planning of the infrastructure for retrieval:
  - Analysis of boundary conditions in the disposal chambers
  - site investigations for a new shaft and technical planning
  - new infrastructure underground (drifts, chambers, installations)
  - conceptual planning of retrieval work
  - Development of adequate equipment for retrieval work
  - Planning for surface installations (Conditioning plant, Interim Storage Facilities)

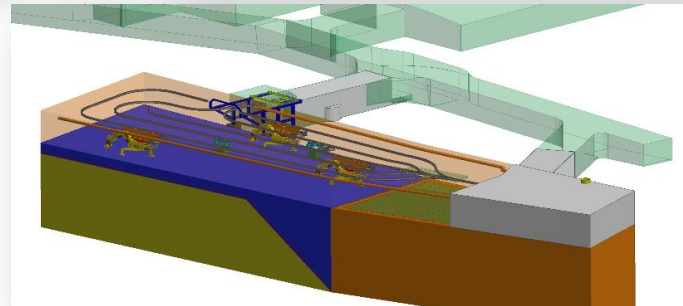
# Asse Mine: Strategies for Waste Retrieval

## Conceptual strategies

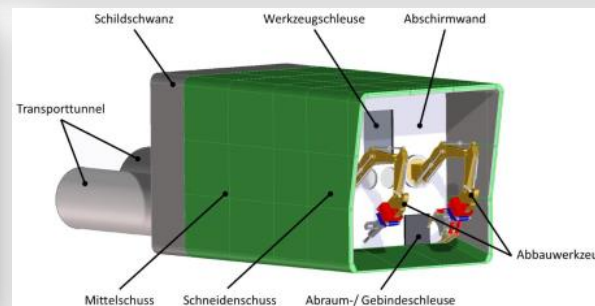


511 m-level  
MAW-chamber

Procurement by tender for development of technologies has been started



725 m-level  
LAW-chambers



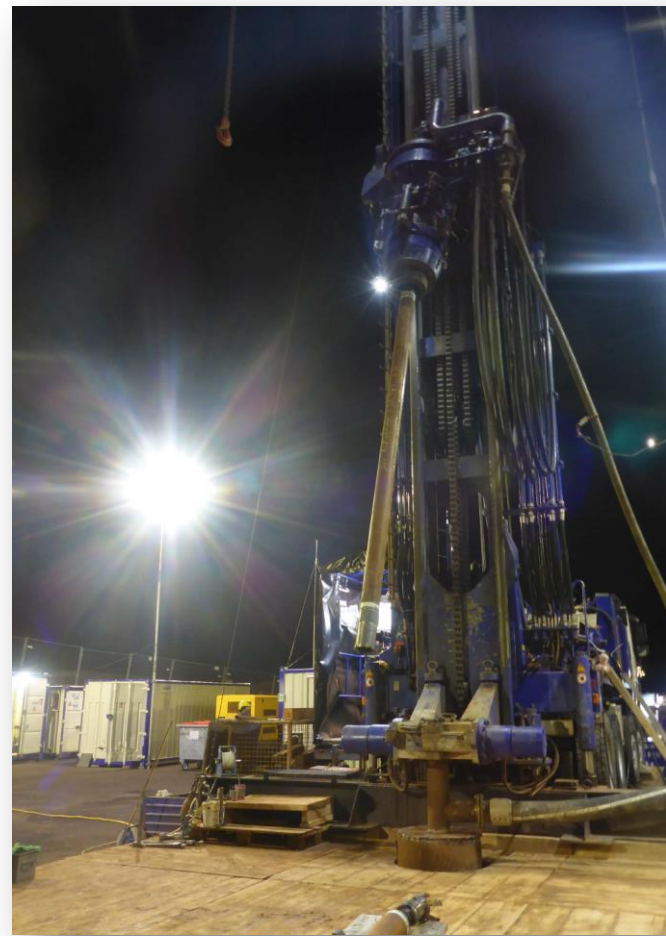
750 m-level  
LAW-chambers

# Asse Mine, Building infrastructure for retrieval (Shaft)

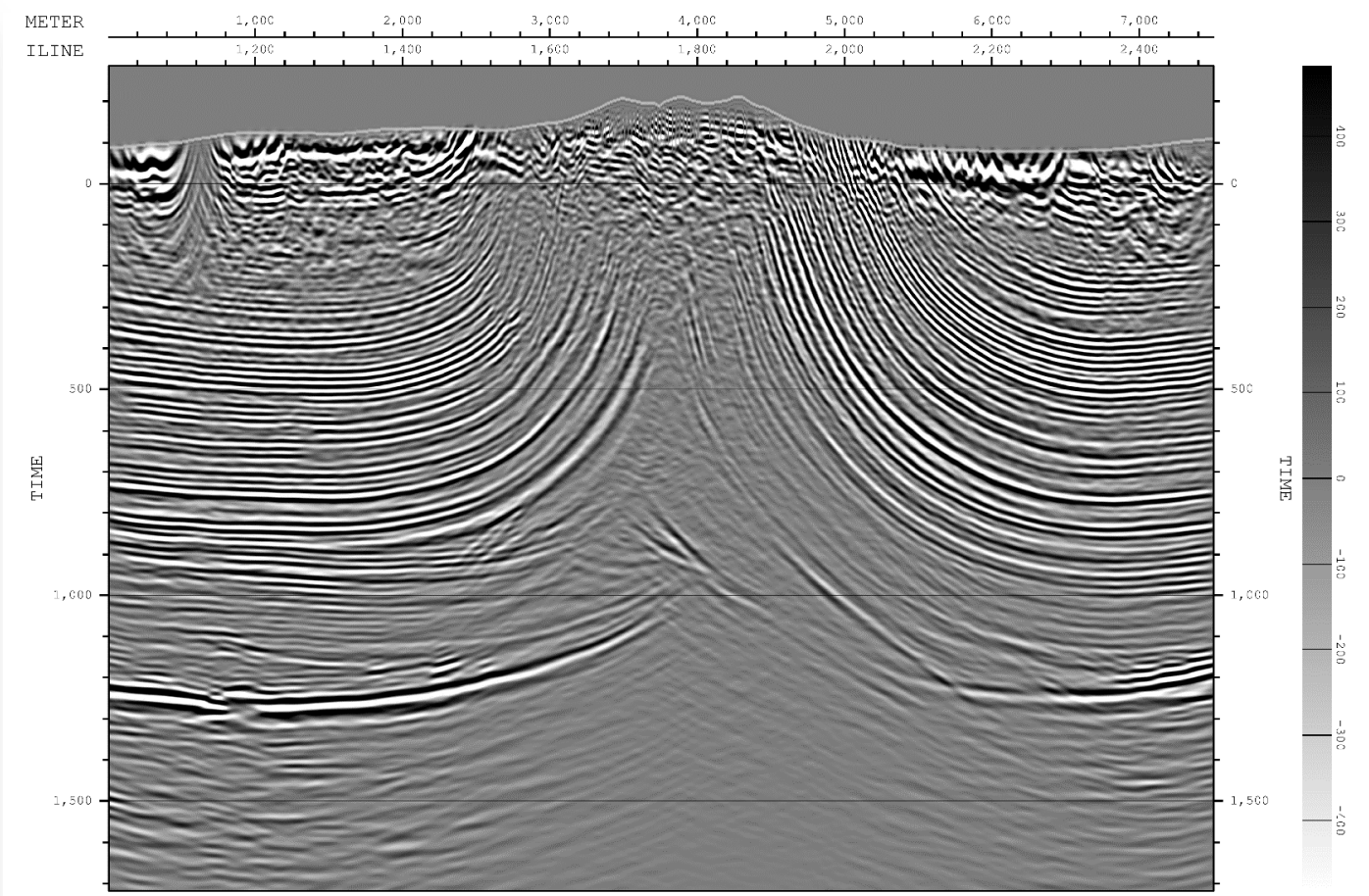


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Exploration drilling



Seismic investigations



# Asse Mine

Conceptual planning for surface facilities at shaft 5 and conditioning plant / interim storage facilities



# Konrad Repository: Main issues of current work

**BGE**

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## Surface Facilities:

- New hoisting tower und machine building shaft 1 (conventional site)
  - Renewal of shaft lining and shaft installations at shaft 1 and shaft 2
  - New ventilation installations
  - Infrastructure buildings (Workshops, stores, social buildings, safety installations etc.)
- Licensing of technical equipment for repository operation (e.g. vehicles for transport, waste handling, backfilling)

## Underground Facilities:

- Excavation and stabilization of shaft landing 2
- Excavation and stabilization of infrastructure mine openings
- Excavation of disposal drifts

**Planned commissioning: 2027**



# Konrad Repository: Surface Facilities Nuclear Site

- Modell of future surface facilities (shaft 2)



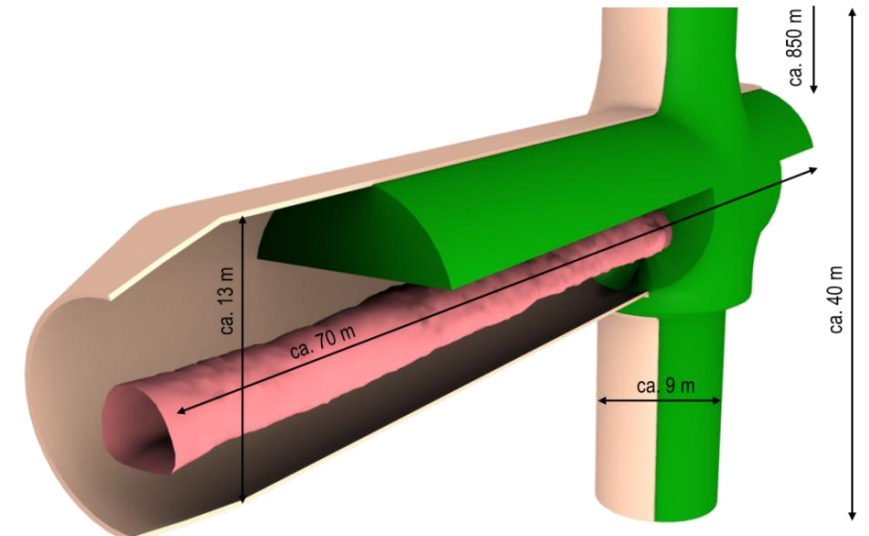
## Construction work at shaft building and infrastructure buildings





# Konrad Repository: Underground Construction Work

## Installation of concrete lining at landing station shaft 2



# Morsleben Repository: Main issues of current work

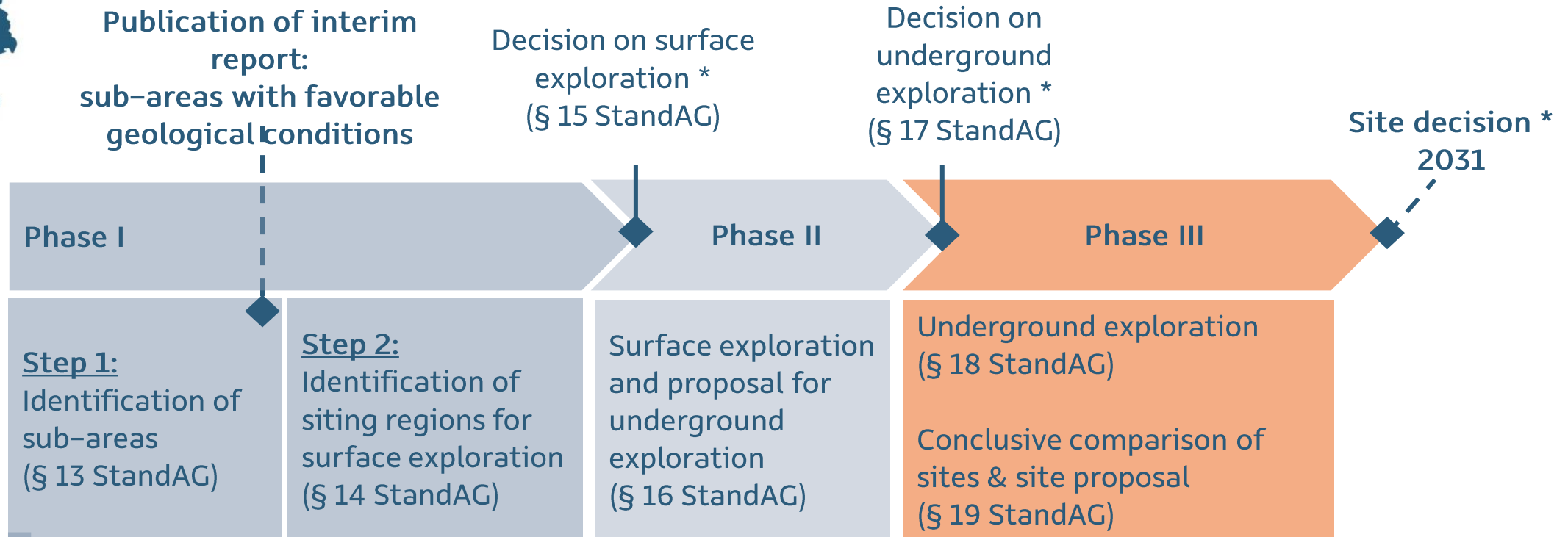
## Licensing procedure for closure of the repository

- Development/optimization of adequate construction and backfilling materials
- Optimization of EBS design
- In situ tests for provided EBS
- Numerical modelling for longterm safety assessment

- **Expected License: 2026**



# Site Selection Procedure

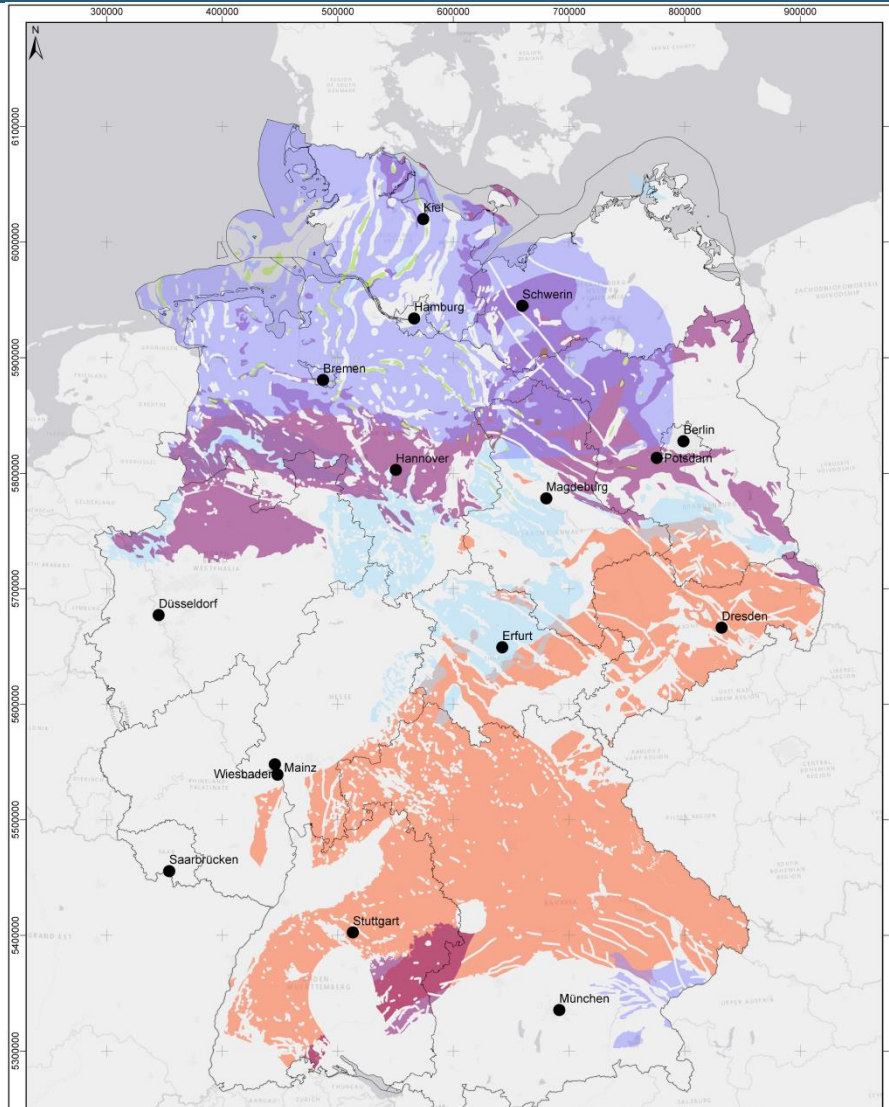


- 1.1 Application of exclusion criteria
- 1.2 Application of minimum requirements
- 1.3 Application of geo-scientific weighing criteria

\* Adoption of national legal act (Bundestag & Bundesrat)



# Site Selection Procedure for a HLW Repository



## Results of the first step of Site Selection Procedure (Sub-area – Report)

dark blue	-	Tertiary Clay
purple	-	Pre-tertiary Clay
light blue	-	stratiform Salt
green	-	salt dome
orange	-	crystalline rock



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Thanks for your attention !

