

The Elephant in the Room

**The Role of Gorleben in the
German Nuclear Waste Debate**



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**Gorleben is a focal point for local, regional
and nationwide issues of nuclear
developments.**

Why?

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The Role of Gorleben in the German Nuclear Waste Debate

Gorleben represents:

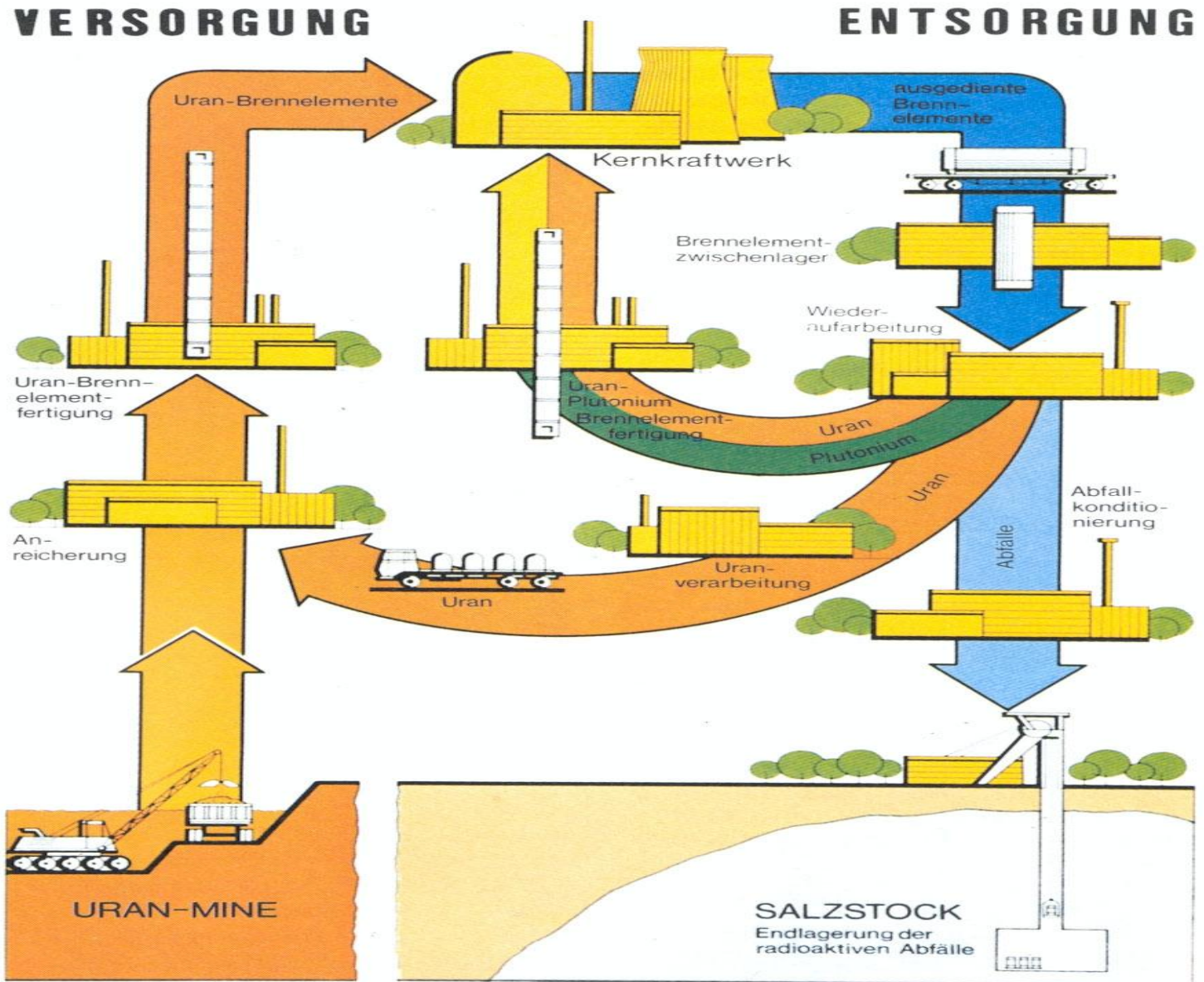
1. the protest movement against nuclear energy and waste disposal since 1977
2. the technical concept of closing the nuclear fuel cycle in Germany
3. German nuclear policy

The Elephant in the Room

The Role of Gorleben in the German Nuclear Waste Debate

- the nuclear fuel cycle
- reprocessing and waste disposal in salt domes as “safe disposal (gesicherte Entsorgung)”
- the nuclear disposal center “Nukleares Entsorgungszentrum”
- the siting procedure of Gorleben
- political decisionmaking and public reactions
- the siting process of Gorleben and the AkEnd (“Arbeitskreis Auswahlverfahren Endlagerstandorte”)
- the siting process of Gorleben and the “Kommission Lagerung hochradioaktiver Abfallstoffe”

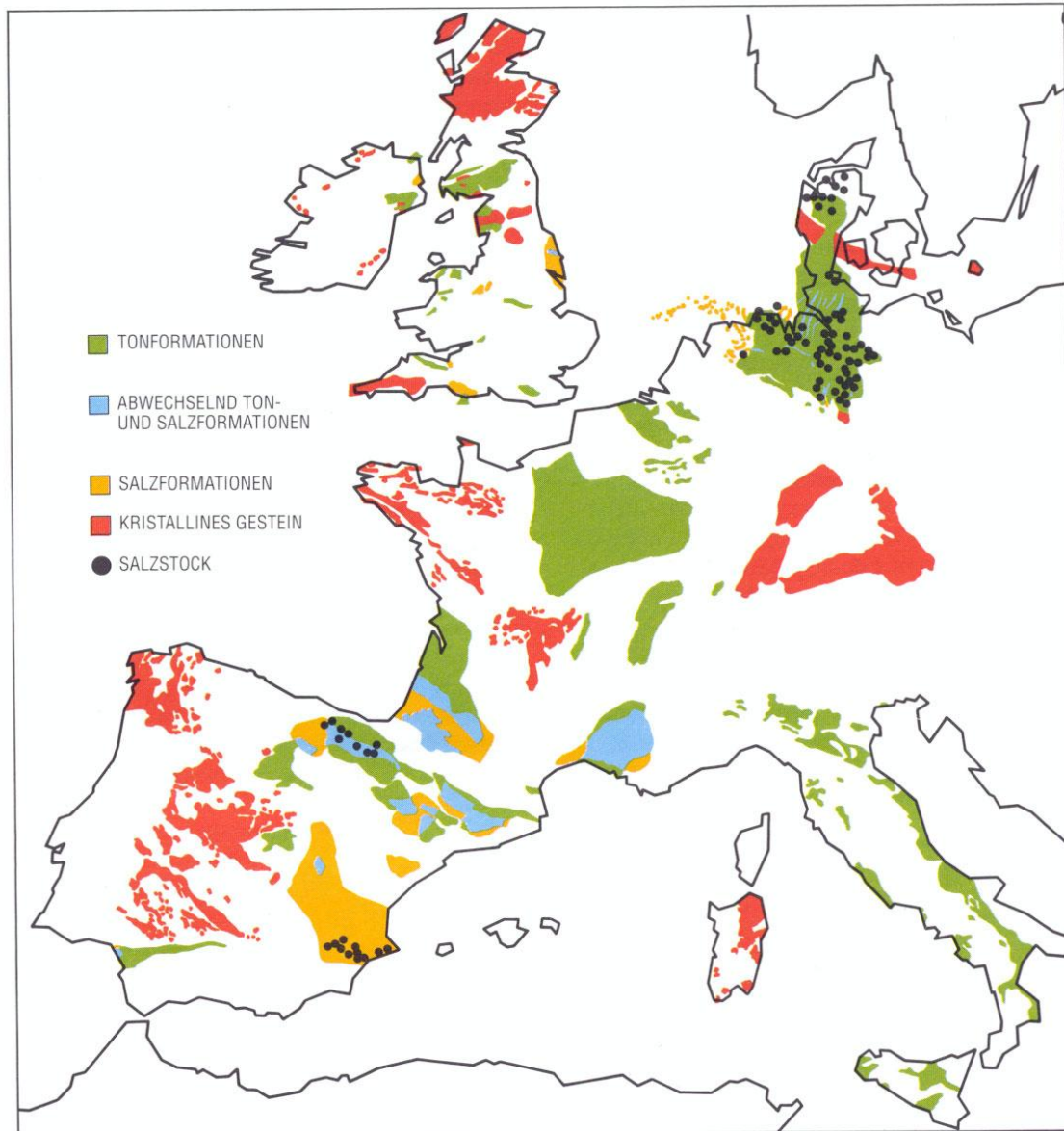
The Nuclear Fuel Cycle



Der Brennstoffkreislauf

Reprocessing and waste disposal in salt domes as “safe disposal (gesicherte Entsorgung)”

PAGIS: geologische Formationen,
die für tiefe unterirdische Endlager
geeignet sind (ohne ehemalige DDR,
Portugal und Griechenland).



Reprocessing and Waste Disposal in Salt Domes as “Safe Disposal (gesicherte Entsorgung)”

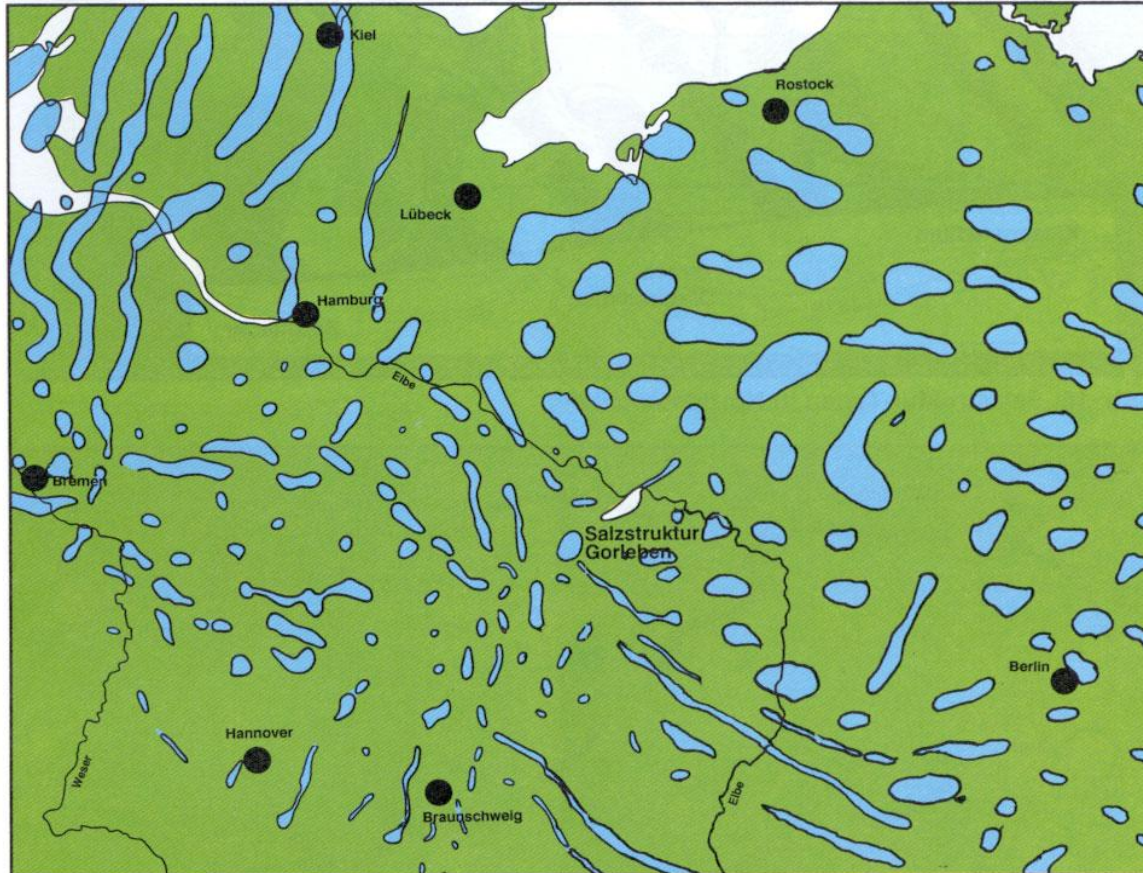


Abb. 13: Salzstrukturen in Norddeutschland

WAK-Wiederaufarbeitungsanlage Karlsruhe 1971-1990- The First and Only German Reprocessing Plant



The salt mine “research mine“Asse:waste disposal of low level and medium level radioactive waste 1967-1978

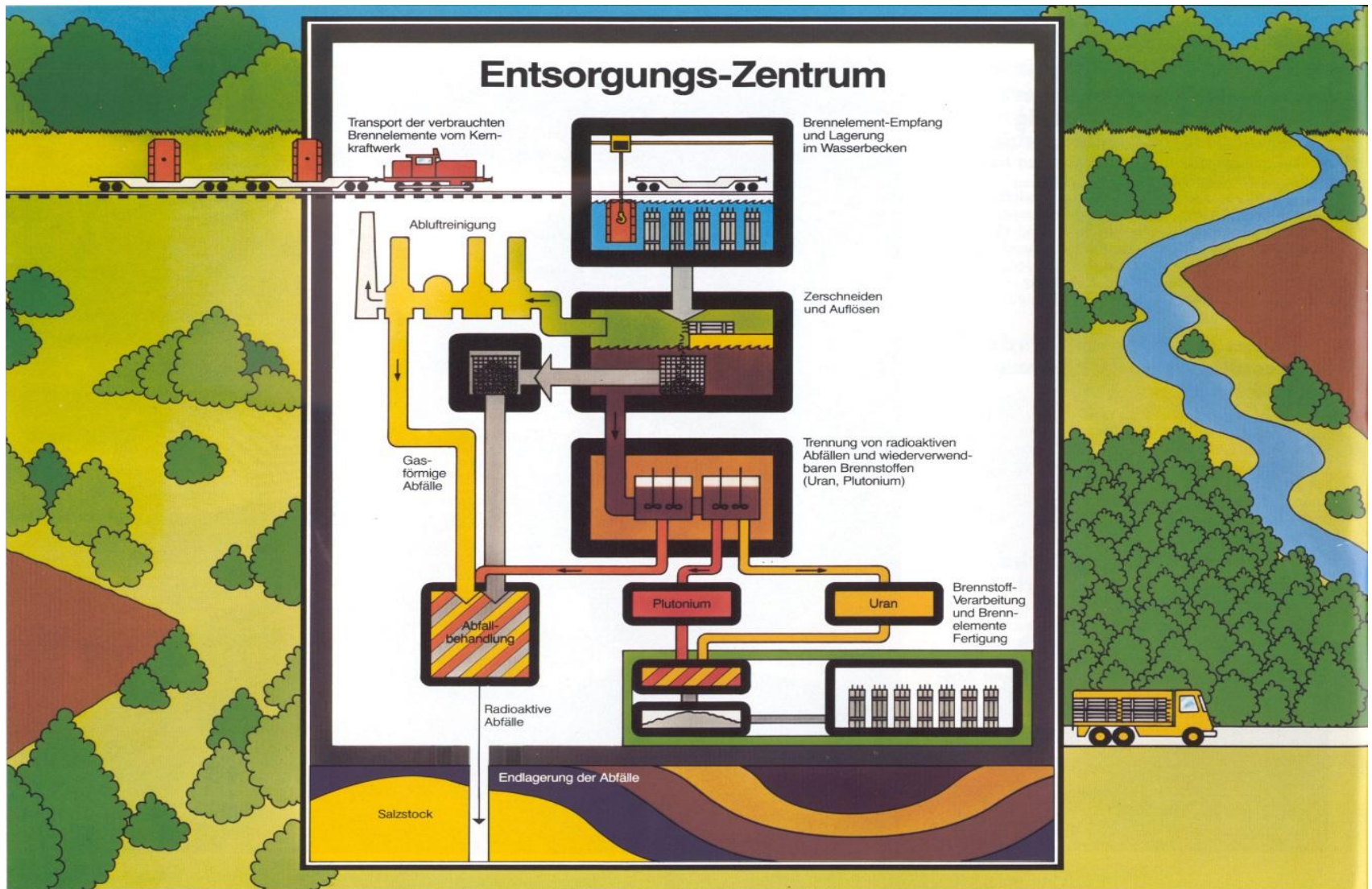


“Entsorgungsvorsorgenachweis“ und “Gesicherte Entsorgung“

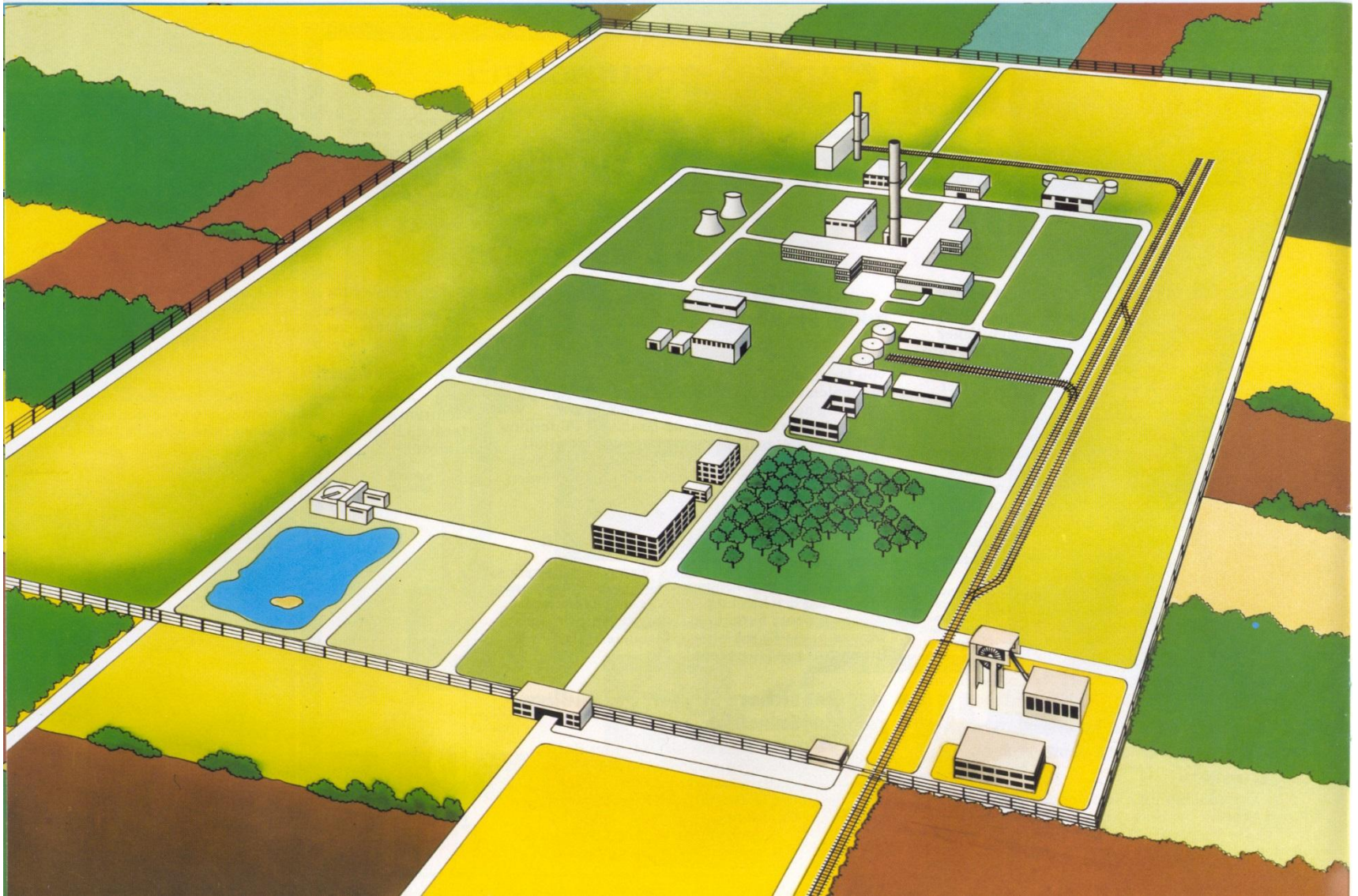
- **Permission to build and run a nuclear power plant were connected to reprocessing and nuclear waste disposal („gesicherte Entsorgung“)**
- **Supporters and opponents of nuclear energy in the governmental parties SPD und F.D.P. in the seventies found a compromise solution**
- **A stop of nuclear disposal center means a stop of permissions for nuclear power plants in Germany**

The Nuclear Disposal Center

„Nukleares Entsorgungszentrum“



The Nuclear Disposal Center „Nukleares Entsorgungszentrum“

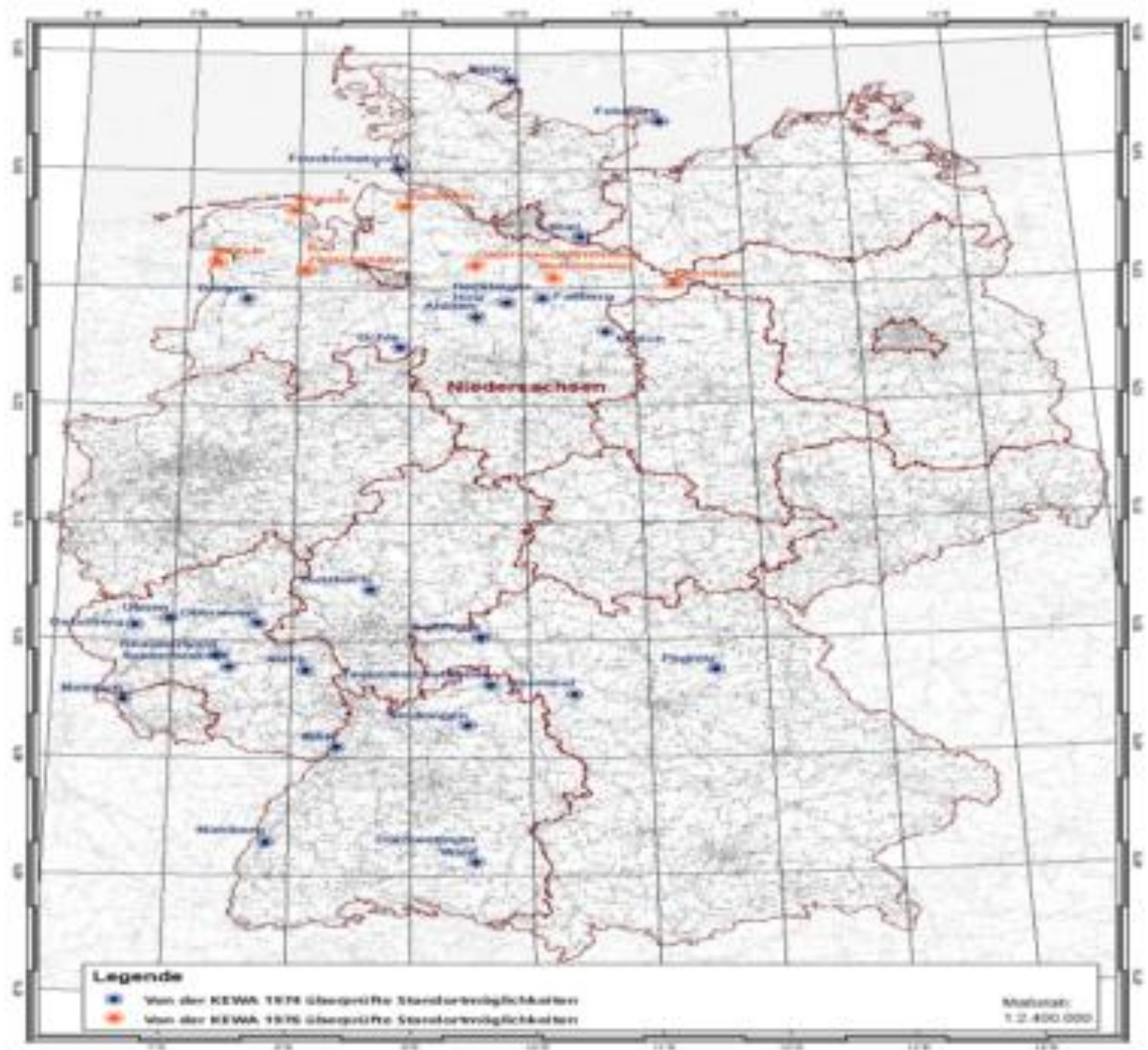


Siting Process of the Disposal Center

- Environmental criteria
- Safety criteria
- Economic criteria

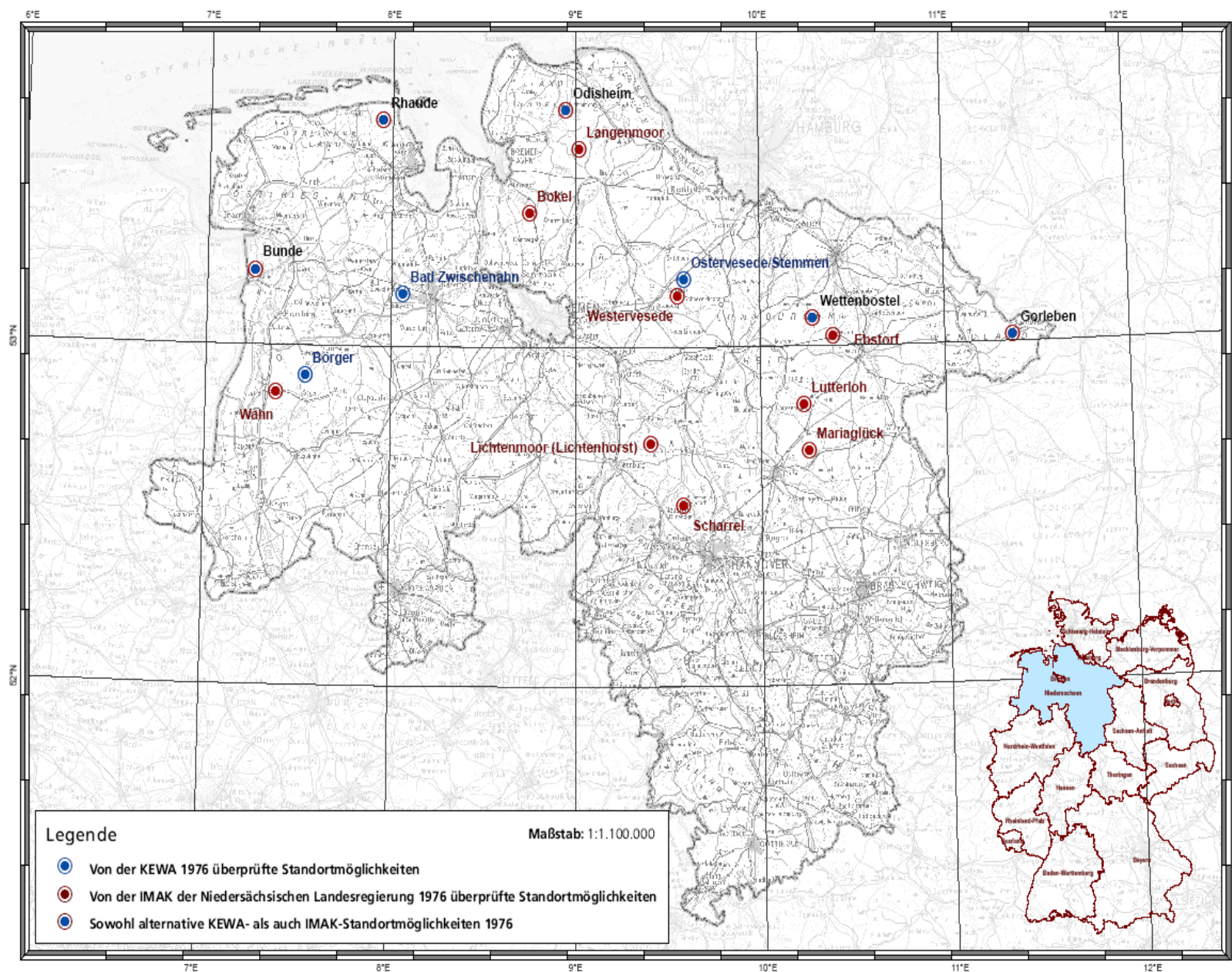
Siting Process of the Disposal Center Federal Government 1974

- **26 possible sites, 10 received the highest rating after weighing**
- **Two of these sites were eliminated**
- **Salt domes and meteorological circumstances showed advantages for the sites in Northern Germany**
- **Best results: Börger-Wahn, Ahlden-Lichtenhorst, Faßberg-Lutterloh**
- **Lütau-Juliusburg was dropped because of the proximity of the East German border**



Siting Process of the Disposal Center Government of Lower Saxony 1976

- **Site selection committee of the government of Lower Saxony (independent of the federal government)**
- **140 salt domes were examined**
- **4 suited sites: Wahn-Börger, Ahlden-Lichtenhorst, Gorleben, Höfer-Mariagluck**
- **Recommendation for Lichtenhorst or Gorleben**
- **Government of Lower Saxony decided in favor of Gorleben**
- **After refusing the decision the federal government accepted Gorleben as site for the nuclear disposal center**



22nd of February 1977, Ernst Albrecht



Political Decisionmaking and Public Reactions

- **Opposition at the potential sites when plans leaked to the public**
- **On the 22nd of February 1977, Prime Minister Ernst Albrecht spoke of Gorleben as the “preliminary” site of the “planned” center**

Political Decisionmaking and Public Reactions

- **Siting process of Gorleben lacked public participation and transparency**
- **Fears and concerns of the affected population were not taken into consideration**
- **Hidden technical site selection process**
- **Information was given *after* the site had been selected**

The Siting of Gorleben

- **The West German political system did not provide a process of public participation before a site was selected**
- **Nomination of one single site was an attempt to minimize the protest**
- **Parallel assessment of more than one site would have exceeded the capacities of the “Physikalisch-Technische Bundesanstalt“**
- **Nuclear waste repository as minor part of the nuclear disposal center: Siting took world largest reprocessing plant more into consideration than nuclear waste disposal**

Political Decisionmaking and Public Reactions

- **Gorleben Hearing and Harrisburg Accident in 1979:**

Prime Minister Albrecht advised the Federal Government not to pursue the plans for a reprocessing plant any further

But: He saw a chance to continue with the research for final storage of nuclear waste in the salt dome Gorleben

- **Spectacular protests against the drillings: “Republik Freies Wendland“ 1980**
- **Geological critics of independent scientists versus official German Geological Institutions (BGR) 1982**
- **Suggestion to conduct research at other salt domes besides Gorleben were refused by government officials in 1983**
- **In 2000 the Federal Government stopped the research at Gorleben „Gorleben-Moratorium“**

Gorleben-Hearing and Harrisburg Accident in 1979

- **criticism against the nuclear disposal center especially against the world largest reprocessing plant:**
- „Gorleben Treck“: protest march from Gorleben to Hannover in march 1979
- A symposium where the news of Harrisburg Accident hits like a bombshell
- Albrecht adviced the federal government not to pursue the reprocessing plant any further

Gorleben-Hearing and Harrisburg Accident in 1979



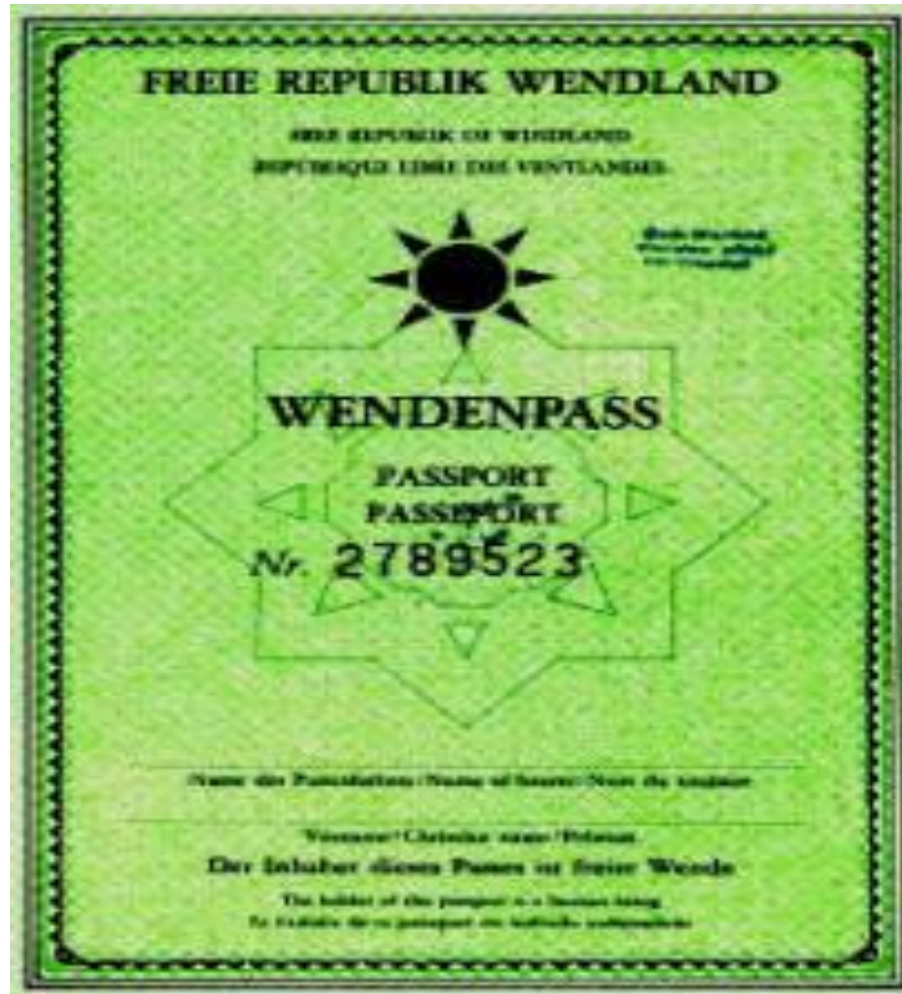
„Republik Freies Wendland“ protest against the drillings 1980

- After a camp weekend a few dozen protesters took place in the drilling preparation zone in May 1980
- Supporters from the Anti-AKW-Movement and the „Juso-Bundeskongress 1980“ join them
- On the 4 th June more than 6.500 police men evacuate the place

„Republik Freies Wendland“ protest against the drillings 1980



„Republik Freies Wendland“ protest against the drillings 1980



„Republik Freies Wendland“ protest against the drillings 1980



Political Decisionmaking and Public Reactions

- **Geological critics (Prof. Klaus Duphorn) versus official German Geological Institutions (BGR) 1982**
- **Prof Klaus Duphorn suggests to conduct research at other salt domes**



Political Decisionmaking and Public Reactions

- **Castor transports in the nineties with mass demonstrations and police operation with more than 10.000 police officers**
- **In 2000 the Federal Government stopped the research at Gorleben „Gorleben-Moratorium“**
- **The AK End gave recommendations for siting in 2002**
- **State of the art: The Report of the “Endlagerkommission” in 2016**

Political Decisionmaking and Public Reactions



Political Decisionmaking and Public Reactions



The Siting of Gorleben and the AkEnd Recommendations

- **AkEnd 1999-2002:**
 - 1. The site selection procedure should be determined prior to the implementation of the site selection**
 - 2. Underground explorations and safety assessments at least at two sites**
 - 3. Favorable overall geological setting**

Siting law and the „Kommission Lagerung hochradioaktiver Abfälle“

- 1. white map-Weisse Landkarte: Not only salt mines are taken into account but also clay and granite formations in other parts of Germany than Lower Saxony**
- 2. Not only an appropriate place should be found but also a transparent process accepted by the public should be enabled.**
- 3. A siting law of Bundestag and Bundesrat gives the most possible political and institutional support**

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Conclusions

- **Site selection is more than a purely technical task.**
- **The current approach tries to avoid the mistakes of the past.**
- **Gorleben „bleibt im Topf“ but independent of the technical suitability the question is whether you can gain acceptance.**
- **In Gorleben the salt mine is one of the world best investigated places for a nuclear waste repository: Therefore it will play an important role in the future.**



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