Deconstructing Acceptance - Siting of radioactive waste repository from societal and scientific perspectives - Introduction

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Introduction

- **ENTRIA**

- Research Platform

Disposal options for radioactive residues: Interdisciplinary analyses and development of evaluation bases

- **The bigger picture**

  - national, European and international context

- **Deconstructing “acceptance”**

  - the idea and aim of the workshop
ENTRIA Partners

- 12 institutes from German universities and major research institutions and one partner from Switzerland

- Disciplines represented:
  - Natural sciences
  - Civil engineering
  - Repository research
  - Philosophy
  - Law
  - Social sciences
  - Political sciences
  - Technology assessment
Objectives and Areas of Work

- **Disciplinary** and cross-disciplinary research regarding three waste management options
  - Final disposal in deep geological formations without arrangements for retrieval
  - Emplacement in deep geological formations with arrangements for monitoring and retrievability
  - Prolonged surface (or near-surface) storage

- Development of **evaluation principles** and knowledge about “context structures” for these options (Ethics, Law, Risk, Governance …)

- Disciplinary and cross-disciplinary **education**

- **Communication** with scientific community and interested public
ENTRIA: Organizational Structure

- Transversal Project 1: Synthesis, Coordination and Communication
  - Advisory Board

- Professionals
  - Vertical Project 5: Final Disposal in Deep Geological Formations without any Arrangements for Retrieval
  - Vertical Project 6: Disposal in Deep Geological Formations with Arrangements for Monitoring and Retrieval
  - Vertical Project 7: Surface Storage

- Expert Committees
- Institutions
- Politicians
  - Transversal Project 2: Technology Assessment and Governance
- Interested Public
  - Transversal Project 3: Ethical and Moral Justification, Legal Prerequisites and Implications
  - Transversal Project 4: Interdisciplinary Risk Research

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FFU Contribution

Multi Level Governance-Perspectives on nuclear Waste Storage: A comparative Analysis

- Actors screening and analysis of the actors in Germany
- Acceptance and conflict analysis
- Analysis of Multi Level Governance
- International comparison of nuclear waste disposal approaches and concepts
- Analysis of policy instruments and institutions
FFU ENTRIA Team

- Miranda **Schreurs**, Prof. Dr., Director of the Environmental Policy Research Centre
- Achim **Brunnengräber**, Dr. PD, Political Scientist, Coordinator of the FFU-ENTRIA Project
- Maria Rosaria **Di Nucci**, Dr., Economist, Senior Researcher
- Daniel **Häfner**, MA in Culture and Technology, Researcher
- Karena **Kalmbach**, Dr., Historian, Postdoctoral Researcher
- Ana María **Isidoro Losada**, Researcher, Landscape and Environmental Planning (Diploma) and Sociology, Political Science and History (Magister)
- Lutz **Mez**, Dr. PD, Political Scientist, Associate Professor at the Department of Political and Social Sciences, FU Berlin
A comparative perspective

12 Case studies
- UK
- France
- Belgium
- Switzerland
- Germany
- Sweden
- Finland
- Czech Republic
- USA
- The Netherlands
- Italy
- Spain

Further 12 case studies forthcoming (Volume II)
N-Power/N-Waste

- 436 operational commercial NPPs with a total capacity of 373.5 GW in 31 countries
- Additionally research and experimental reactors
- 270,000 tons of used fuel in temporary storage worldwide
- Increase of 12,000 tons per year worldwide
- 50 countries with SF stored in pools at reactor sites or in central interim sites, awaiting reprocessing or disposal

Pressures to act

- Impacts of Fukushima
- Concerns with interim storage
- Judicial demands
- Regulatory requirements (nationally, EU, EURATOM)
- Nuclear energy industry needs solution
- Ethical concerns (future generations will bear the consequences)
Crisis in Nuclear Waste Governance

- Until today: **no Deep Geological Repository** for high level nuclear waste (HLW)
- governments **unable or unwilling** to take on the nuclear waste challenge
- companies’ strategy: leaving the problem to future generations (**private goods – public bads**)  
- financial calculations that **underestimate actual costs**

**growing pressure** to solve the problem?
At the origin of the problem

- **Belief** that natural sciences and engineering can solve the problem

- civilian use of nuclear energy ignoring **back end NF-cycle**, proliferation and geopolitical power

- Top-down process / **marginalising** citizens concerns and anti-nuclear movements

- companies’ strategy: **leaving the problem to future generations** *(inter-intragenerational equity)*

- Few - if any – models. Limitations of transferability of experiences internationally

   → **acceptance not the only problem**
Changing perceptions & approaches on RWG

- Erosion of the DGD paradigm
- Reversibility and retrievability (R&R) in geological disposal now seen as a “prudent approach” (NEA/OECD)
- R&R in several national waste disposal concepts perceived as a possible way to adjust to progress in S&T and to respond to societal pressures.
- Process leading to a selection host-rock for DGD no longer only technical
- Siting processes affected by:
  - political and legal systems,
  - in-/formal rules and procedures, socio-political constraints
  - country’s nuclear history
- Processes leading to site selection unforeseeable and conflict ridden
  - From the “right to know” to the “right to object”
Deconstructing “acceptance“

- What factors shape the debate on what is an “acceptable solution”?
- Which role do compensation mechanisms and voluntarism play in generating acceptance?
- Which agents and actors are key to enhance “acceptance” for a given option?
- How to satisfy the growing demand for democracy and public participation?
- How to initiate bottom-up policy approaches?
- How to deal with the politicized problem associated with conflicts?
- Is there a room for inclusive participation, right to veto and re-start possibilities at all steps and levels of siting?
Thank you for your attention!

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Lessons learnt

- Interaction between politics and civil society not enough. Citizens want to influence political decisions
- Key conditions for an unambiguous approach: access to information, early involvement of the affected population and stakeholders, openness for unforeseen results, inclusiveness of the process and compensations
- Support of potentially hosting communities cannot be exclusively made dependent on compensations
- Capability of local authorities to negotiate. Size of the municipality and opportunities received for capacity building as a determining factor
- Trust in the institutions and preparedness to delegate negotiation agreements to them – perceived to be in community’s interest
- Local involvement difficult, but necessary. NGOs not the public voice but a resource in the process to enhance transparency.
- Provision of resources to enhance public engagement (capacity building), improve decision-making and increase public confidence.
- Cultural influencing factors (France: mistrust of the political elite; Sweden and Finland: trust and consensual approach)