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Nuclear waste governance in Belgium – Conflicting principles, political stalemate

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Nuclear waste governance in Belgium – Conflicting principles, political stalemate

Overview

- ❖ NIRAS-ONDRAF's (N/O) new 'waste governance' approach aims for **socially robust** knowledge and integrated solutions to the nuclear waste problem in Belgium.
 - designing a technically safe and economically sound concept based on recognised expertise
 - organising a 'legitimate' decision making process
- ❖ N/O shows clear preference for **geological disposal** in clay layer.
- ❖ However, political decisions are **still pending**.
- ❖ Political hesitation is a sign of lack of **integration of diverse sources of legitimacy**.

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Milestones

- 1944** Belgian uranium for the Manhattan project leads to “memorandum of understanding between USA, UK and Belgium
- 1952** Foundation of Belgian nuclear research centre SCK-CEN
- 1966** ‘Decision in principle’ on start of nuclear power in Belgium
- 1974** SCK-CEN starts it’s R&D programme on HLW, focussed on geological disposal in clay layer
- 1975** First reactors (Doel 1+2, Tihange 1) go into operation
Start of anti-nuclear movement
- 1982-85** Start of Doel 3+4, Tihange 2+3
- 1988** Moratorium on new nuclear build
- 1993** MOX-debate; moratorium on reprocessing
- 1994** N/O proposes potential sites for LILW disposal; all municipalities refuse

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Milestones

- 1999-** Three local partnerships for siting of LILW are established
- 2003**
- 2003** Phase-out law approved
- 2006** Dessel site selected for LILW repository
- 2009** Government proposes to postpone phase-out plan by 10 years but falls before proposal is put into action
N/O launches the debate on HLW management with public consultations on draft waste plan and SEA
- 2010** Government agrees to 40% financing of Myrrha project
- 2011** Waste plan is approved internally by N/O and offered to the government for DiP
- Today** No DiP on waste plan; political agreement on phase out (postponing closure of Tihange 1 by 10 years)

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The democratic principle vs. political expediency

- ❖ Organised in the framework of the SEA directive
 - » mandatory consultation
 - » voluntary initiatives by NIRAS-ONDRAF (*world café, interdisciplinary conference*); later on a *public forum* was added (organised by KBF)
- ❖ Need for an integrated strategy with a clear separation of roles
 - » NIRAS-ONDRAF acts as
 - i) organiser of the decision-making process,
 - ii) provider of expertise and
 - iii) responsible for technically safe & economically sound solution
 - » need for a ‘guardian’ and a ‘stretcher’
 - » need for a clear definition of participative responsibilities in a staged decision-making process

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The democratic principle vs. political expediency

- ❖ ‘Opening up’ the DMP: problems for agenda setting?
 - » RWM strategies decoupled from decisions on future of nuclear power
 - » limits possibilities of nuclear opponents to contribute to the process
- ❖ ‘Opening up’ the DMP: are the options fairly defined?
 - » **options in the ‘waste plan’:**
 - ‘deciding not to decide’
 - ‘deep geological disposal’
 - ‘perennial storage’
 - ‘disposal in deep boreholes’
 - ‘wait and see’
 - ‘multinational repositories’
 - » **clear preference for deep geological disposal** has consistently been expressed by N/O (and nuclear industry), based on principles of **safety, national responsibility** and **intergenerational ethics**.

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The democratic principle vs. long-term safety

❖ Geological disposal =

- » Disposal is **final disposal**, without aim of retrieval
- » Waste is **ultimate waste**, without aim of recycling
- » Safety is **passive safety**, without need for active interventions

❖ Retrievability (in a broad sense)

- » Desirable features from a democratic point of view
- » **Retrievability** only possible in operational phase of putting waste canisters in the repository, hence (technical) difference (as defined by N/O) between:
 - » **Reversibility**: taking back the waste using the same or similar methods that were used to place the waste in the repository
 - » **Retrievability**: taking back the waste after partial or full closure of repository
 - » **Recoverability**: retrieval of waste in far future, when barriers are no longer intact

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National vs. regional/global responsibility

❖ National responsibility for RWM

- » **Weak international institutionalisation** of RWM (in contrast to nuclear safety and security)
- » **Decline of reprocessing** out of proliferation concerns
- » Advocated at first by environmental movement and by now **deeply rooted in popular ‘common sense’**

❖ Other principles are imaginable in the future

- » **Corporate social responsibility:** ‘take-back’ duty for countries housing multinational companies producing nuclear power in other countries
- » **Supplier responsibility:** ‘take back’ duty for countries housing fuel fabrication facilities
- » **Third-party responsibility:** RWM as fully commercial activity based on principles of BAT (‘best available technology’) and BAG (‘best available geography’)

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Voluntariness vs. equity

- ❖ **Voluntary siting of repository is widely accepted**
 - » **LILW management** in Belgium based on ‘partnerships’
 - » **Sacrificing** the BAG-principle, looking for a ‘feasible’ solution
- ❖ **Factors explaining ‘voluntariness’**
 - » **Familiarity** with nuclear facilities creating dependencies
 - » **Politics of the ‘fait accompli’**: presence of underground laboratory in community of Mol
 - » **Compensations** often disguised as ‘added value’ to the region

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Conclusions

- ❖ Political decision making on HLW in Belgium faces a **stalemate**
- ❖ All responsibility is shifted to NIRAS-ONDRAF, having **limited political legitimacy** in the debate
- ❖ As a consequence, NIRAS-ONDRAF seeks legitimacy for its choices in **science** ('knowledge beyond reasonable doubt') and **ethics** ('universal norms/principles')
- ❖ N/O's preferred solution (deep geological disposal) **inherently faces conflicting principles**

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Proposals

- ❖ **Decouple HLW management from nuclear power decisions**, either by firm commitment to phase out, or by limiting HLW policy to legacy waste only

- ❖ Stop talking about deep geological disposal as a **‘solution’** to the nuclear waste issue

- ❖ Start a debate on **more politically feasible options**:
 - » NIRAS-ONDRAF’s preferred solution: in 2010, start up a staged DMP; construction of repository (2035); operation (2040-2100)
 - » Build a centralised intermediary storage facility lasting for up to 50 years + continue research on deep geological disposal and move towards developing a repository site 50 years hence;
 - » Build a centralised intermediary storage facility lasting up to 100 years + continue research and development of a diverse range of options.

Thank you.