



The catch 22 of nuclear communities: How to create room for technical democracy if opting out is not an option?

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Observation n°1

Prevailing discourse: participation of all stakeholders as the standard



BUT

I. Remaining ambiguity / lack of shared norms about

- Who to participate?
- When to participate?
- What to participate about?
- How to organise participation?

II. Tendency to focus on siting



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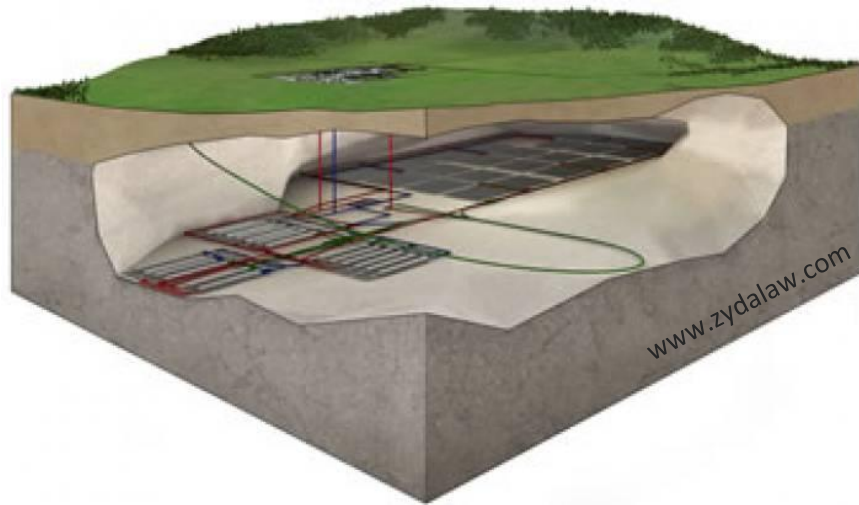
Voluntary siting
Consent-based siting
...

➡ Who wants the stuff ?

When nimby conspirators start questioning theoretically ideal locations and long since studied solutions

Observation n°2

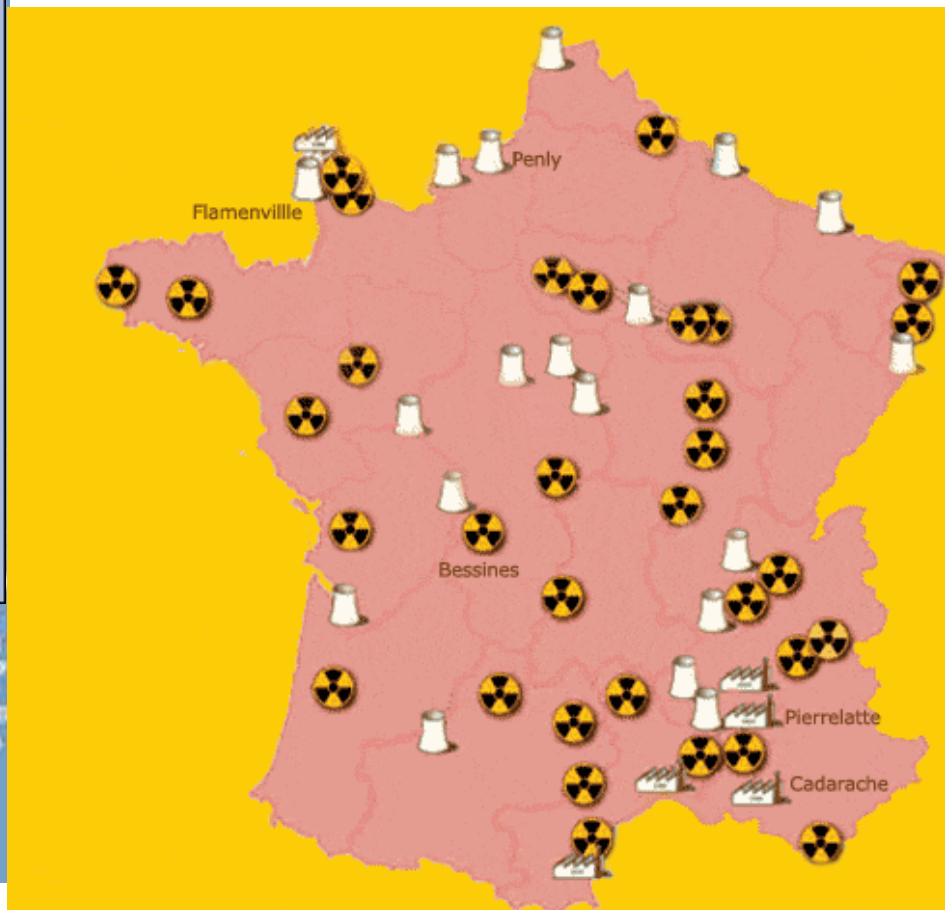
Siting means ... finding a place for final disposal or central interim storage (CIS)



Observation n°3

(part of) The waste is already out there





Centrales nucléaires



Usines de fabrication de combustibles, usines de retraitement



Sites de stockage, centrales de démantèlement, sites industriels ou militaires, anciennes mines

Waste is a dynamic category

NORM

Social construct

Legacy waste

- Does not exist in itself
- Defined in relation to its context

Waste from reprocessing

Matter out of place (Douglas 1966)

Future waste

- No longer wanted/needed
- Loss of function or discarded

Spent fuel

Spent MOX fuel

...

Military waste

Waste from research reactors

Ownership of the problem

Problem = nuclear material 'out there' in need of safe long term management

➡ **First and foremost problem of nuclear communities**

- ➡ Who has the stuff ?
- ➡ What are the options ?

How (if at all) are nuclear communities being engaged in DM on LT management ?

In “pre-siting” stage: indirectly or as part of broader consultation

e.g. Canada: Seaborn panel, NWMO’s ‘study phase’

UK: CoRWM

In siting discussions: when targeted as (potential) final disposal or CIS site

➡ What about the others?

e.g. Sweden: Oskarshamn and Östhammar

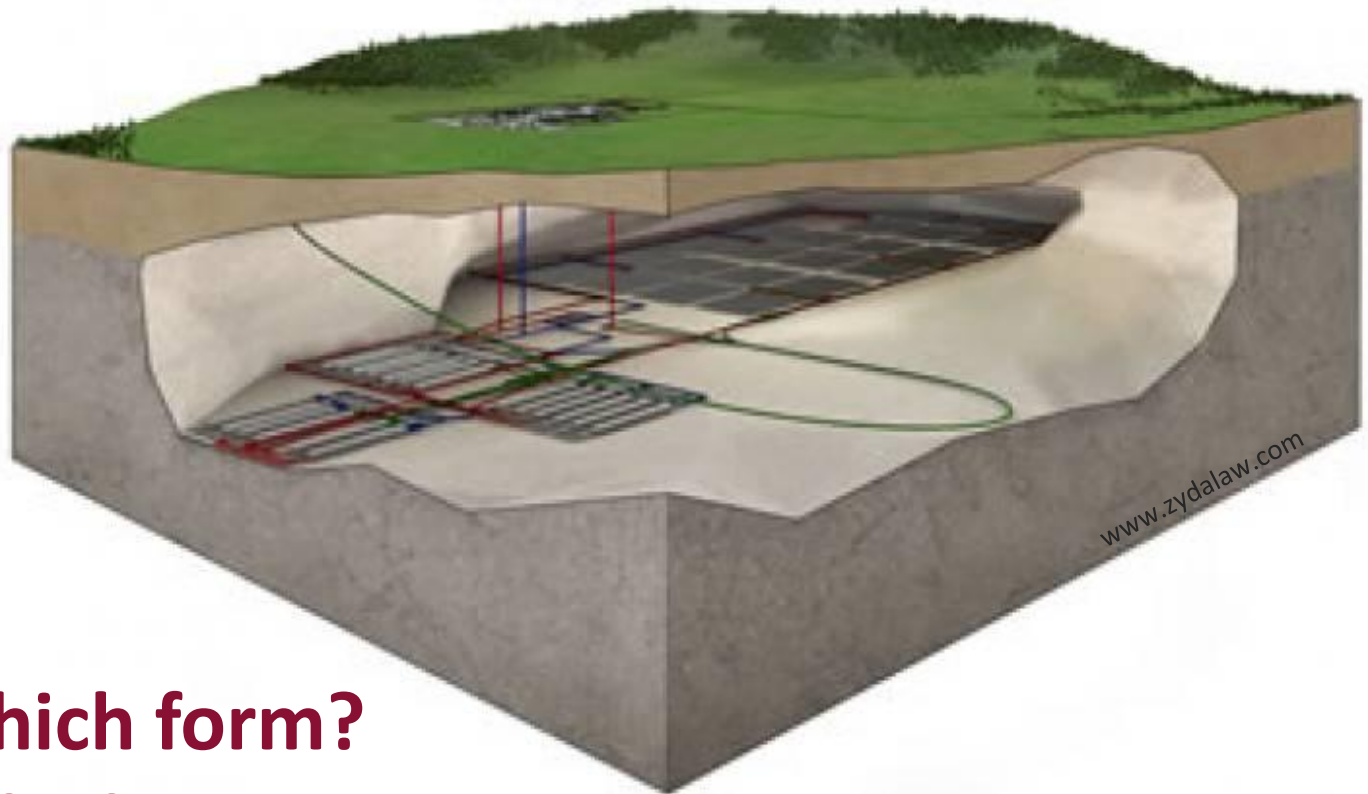
Finland: Eurajoki ; UK: Sellafield ; Ned: Borsele

In case of decommissioning

➡ Moving the waste elsewhere ?

Observation n°4

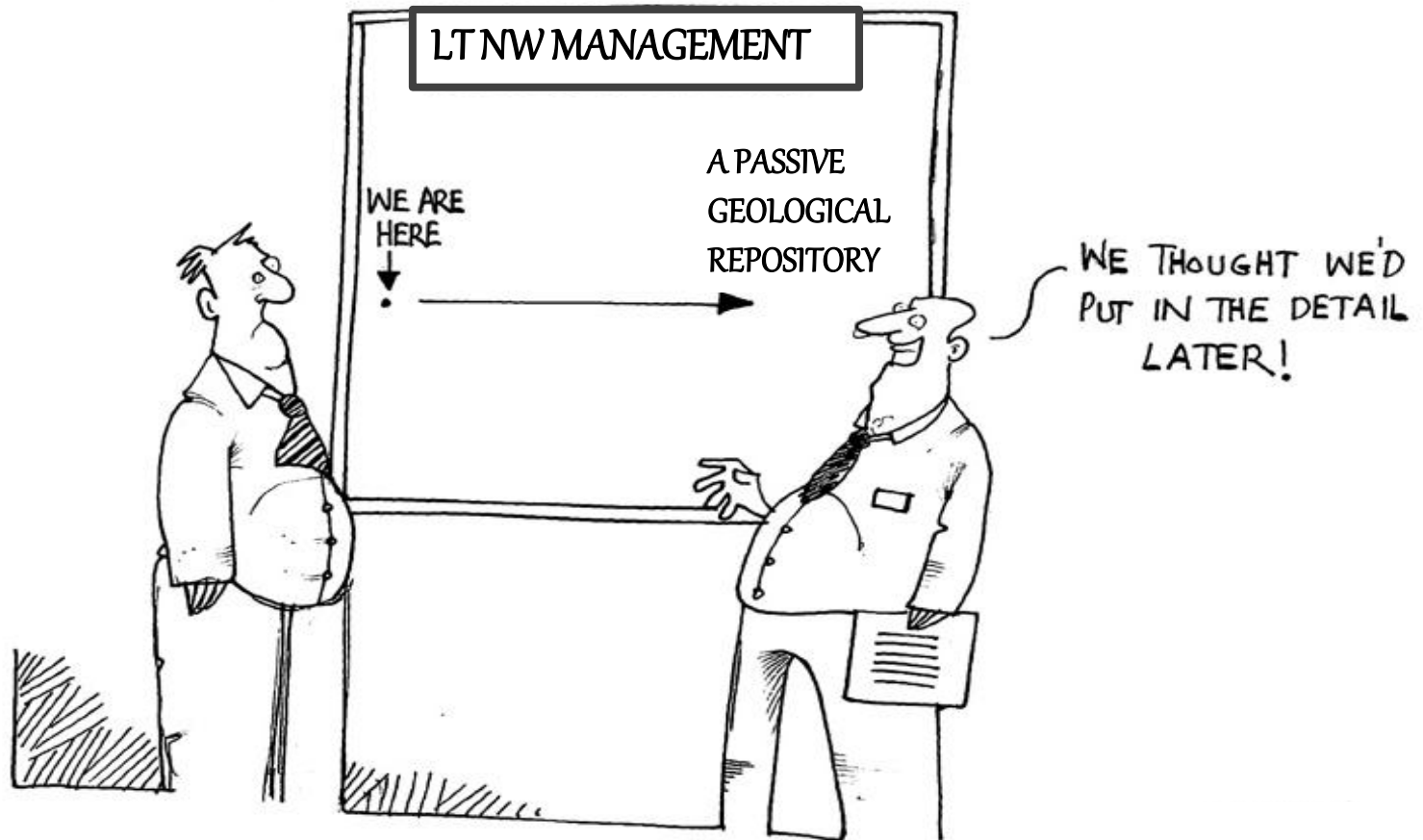
Geological disposal: the ineluctable fate ?!



But in which form?
Under which circumstances?

Observation n°5

Geological disposal is not a solution, it is a technology in the making



A sociotechnical imaginary ?

cf. Jasanoff & Kim (2009)

GD: an imagined (distant) future

- Vision of a good and desirable future
- Portrayed as feasible
- Portrayed as the only possible future

A global sociotechnical imaginary with national variations

Reversible GD: Emergence of a new ST imaginary?
challenging the concept from within
imagining an **open ended** instead of a closed **future**

GD as an ongoing sociotechnical experiment

[cf. Taebi en Van de Poel]

A (scientifically) controlled, open-ended exploration towards a possible solution

- Final goal of passive safety cannot be guaranteed
- ⇒ Implies a long-term relationship between the surface and the underground, between the facility and its host community (near long-term governance)
- ⇒ Existing nuclear sites inevitably affected

'Near long-term' governance

Siting now

- Concerns
 - Repository design
 - Barriers
 - Environmental processes
 - Local participation

**Easily 150 years
of active
hosting
construction,
operations and
monitoring**

Post-closure safety

- Concerns
 - Loss of containment
 - Preserving memory
 - Preserving knowledge

Ownership of the 'solution'

Creating room for technical democracy

LT NW governance as a continuous process of (P)TA

Existing nuclear communities as central and most concerned 'stakeholders'

- Site stakeholder groups (cf. UK)
- Potential for tangible engagement in R&D

Some crucial issues

GD as part of a process, not a product

Maximum possible 'promise' = unfinished GD facility

Acknowledge and foster complexity



THANK YOU !

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