

# ENTRIA

DISPOSAL OPTIONS FOR RADIOACTIVE RESIDUES:  
INTERDISCIPLINARY ANALYSES AND  
DEVELOPMENT OF EVALUATION PRINCIPLES

## **In whose Backyard? Voluntarism, Compensation and Participation in Siting of Nuclear Waste Repositories**

21st REFORM Group Meeting

Salzburg, August 28 – September 1, 2017

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# The problem's dimensions

- Socio-technical and political complexities and challenges
- Civilian use of N-power neglected the back end of nuclear fuel cycle
- In the past positivistic belief that science / engineering can solve the problem and top-down policy approaches
- Socially strongly politicized problem associated with conflicts
- Growing demand for democracy and public participation
- Few - if any - models
- Limitations of transferability of experiences internationally
- Uncertainties (e.g. re. costs, safety, public response..)
- Search for a solution influenced by a country's political, cultural, **historical** and geological factors

## Siting waste repositories: a typical NIMBY case?

- Processes leading to site selection unforeseeable and conflict ridden
  - Technical, geological and socio-economic issues are interlocked
  - Diverging preferences & values and protection of self-interests
  - Everything seems to speak against such facilities:
    - ✓ **Residents** – health concerns, real estate prices, stigma as a N dump, etc. (from the “right to know” to the “right to object”)
    - ✓ **Energy companies** – costs and financial burden (public bads/ private goods)
    - ✓ **Local authorities, Administration/ Ministries / Parties** – conflict ridden political procedures / difficult political solutions / elections
    - ✓ **Civil society** – ethical grounds/ intra and intergenerational equity
- .....but

local opposition should not be equated with NIMBY

## A quick look at the NIMBY literature

A plethora of scholarly articles

- defining and classifying various forms of NIMBYism
- or providing a critique of the NIMBY syndrome or even the term NIMBY
- focused on the psychological, social, territorial origins of NIMBY
- using another lens to understand NIMBY behaviors, e.g. “place attachment” and “place identity” (Devine-Wright, 2009).
- Strand of literature (in the 1990s) specifically engaged with NIMBY opposition to nuclear power and the siting of toxic or nuclear waste repositories, esp. in the USA and the UK.

## NIMBY or IMBY?

- Many authors use the term NIMBY without a clear definition, empirical support or conceptual understanding (critique of Luloff et al., 1998 and Wolsink, 2006 )
- in the media and politics: NIMBY as a label used regularly and falsely regardless of the reasons for the rejection of large-scale projects or for locally unwanted land use (LULU)
- Role of socio-cultural values
  - ✓ Mistrust (in technology, institutions, nuclear industry, etc.)
  - ✓ Participation
  - ✓ Low transparency
- Legacy of past decisions; nuclear history of a country
- **IMBY** (Yes,) In my back yard: Voluntarist approaches

## In whose backyard?

- IMBY attitude: willingness to host new facilities or even the desire for housing them (expression of interest)
- Such an attitude relates to:
  - ✓ real or perceived tangible or intangible external effects of new facilities
  - ✓ possible spill over into the community
  - ✓ benefits for a group of individuals or for a locality
- Voluntarism buttressed through compensation (cash incentives, social benefit measures and community empowerment measures)
- Some voluntary processes include the right of veto and to withdraw from the process within a certain period of time.
- In some countries, right of veto ensured by law or agreements between communities and the N-industry or the respective governments
- Trust as significant factor → preparedness of the host communities to delegate negotiation

# From volunteering to partnering

- Different forms of voluntarism, based on:
  - ✓ so-called staged volunteer process leading to partnership arrangements with hosting communities with right of withdrawal (UK - Cumbria; 2013) and veto rights (Sweden)
  - ✓ decisions with strong local community support with veto rights for municipalities till the EIA (Finland)
  - ✓ final top down decision making after consultative processes (débat public) with the affected communities without veto rights (France)
- Partnership based on “empowering” approach, which contributes to transparency and enhances accountability in decision-making (CoRWM).

Partnership includes :

- ✓ right to veto
- ✓ collaboration with municipalities
- ✓ community empowerment measures
- ✓ community benefits (rewards, grants, community benefits, etc.)

NEA rhetoric: Partners interact (directly or indirectly) without feeling excluded by a national process over which they have little control

## Siting, public opinion and participation in comparison

### ■ **SE: Consensus democracy**

- Siting process for a repository in the mid-1970s
- It met local resistance with a collapse in 1986. Restart on a voluntary process.
- Two communities in North SWE did not proceed after rejection in local referenda in the 1990s.
- Search ended in two volunteering N communities, Oskarshamn (NPP) and Östhammar (Forsmark NPP).

### ■ **FI: Trust in the authorities and technology**

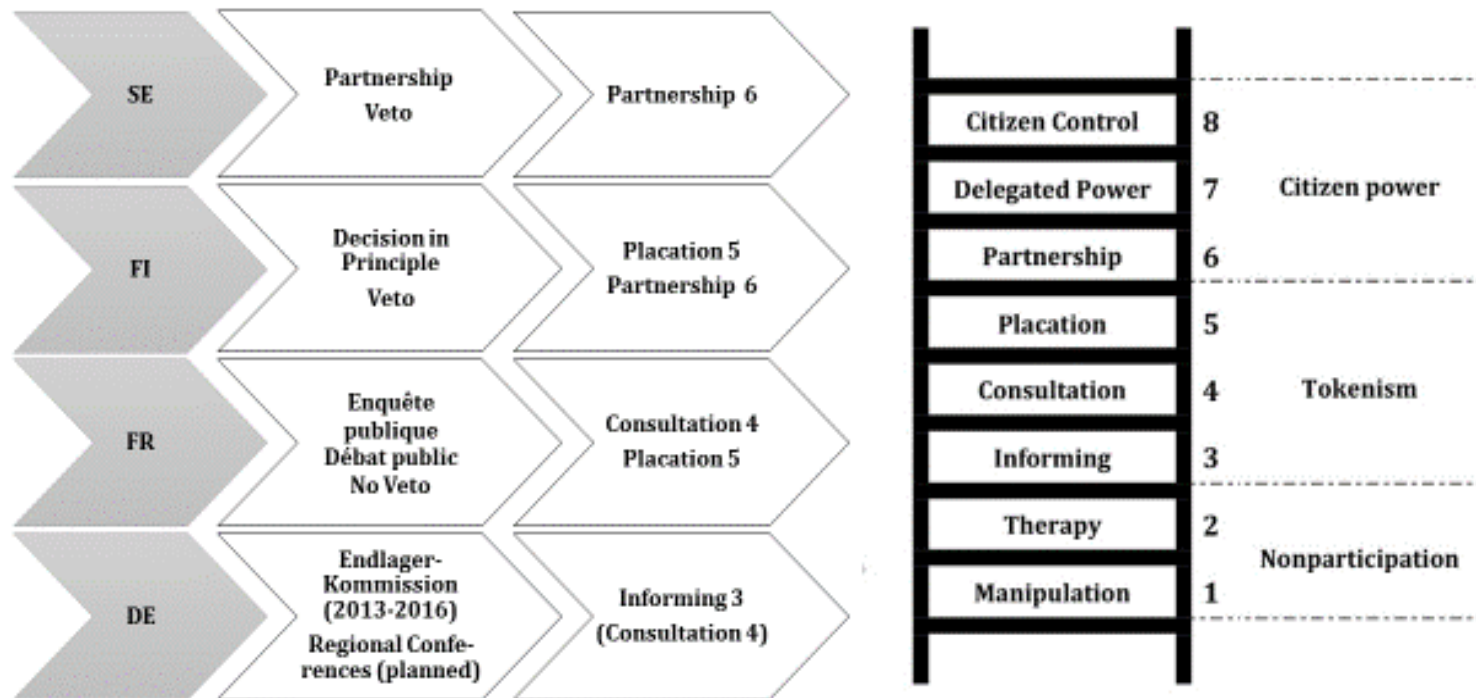
- Investigations on three sites and interim reports released in 1996
- EIA 1997-1999
- strong municipal consensus and support
- no tradition of radical NGOs; limited demand for participation
- strong trust in STUK, experts and nuclear industry

### ■ **FR: Tradition of centralism**

- ...but also of grassroots activism
- Local information and monitoring committee (CLIS)
- National Commission of Public Debate (debates 2005-06; 2013)
- Consensus conference 2014

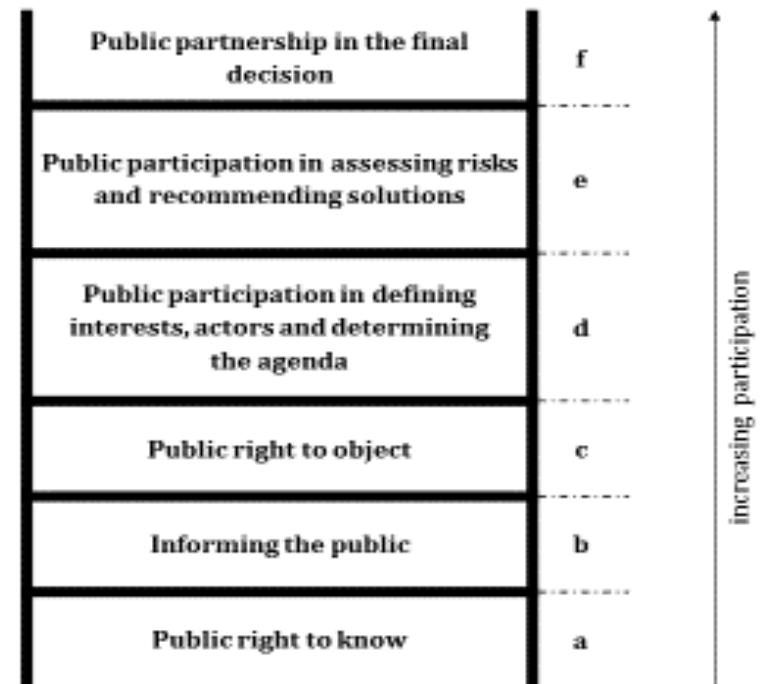
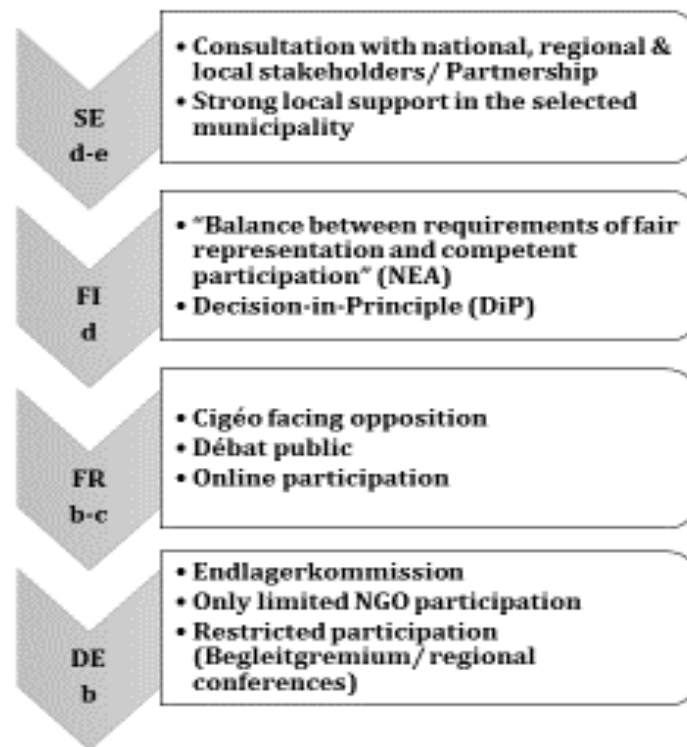


# Inter-country comparison of forms of participation according to Arnstein's Ladder



Source: Di Nucci/Brunnengräber/Isidoro Losada: From the “right to know” to the “right to object” and “decide”. PNUCENE 2017 (100). 316-325.

# Inter-country comparison of forms of participation according to Wiedmann and Femers' ladder



Source: Di Nucci/Brunnengräber/Isidoro Losada: From the "right to know" to the "right to object" and "decide". PNUCENE 2017, 100 (c.) 316-325.

## Behind IMBY

- Is the promise of economic benefits an incentive for an IMBY response by local communities?
- How far can concern about the potential risks connected with repositories be neutralized by the prospect of economic incentives and side benefits (e.g. infrastructure, jobs...) offered to host communities?
- How do potential host communities cope with the “bribe effect”?
- Is this always an obstacle to successful siting procedures or can compensation be considered legitimate?
- What role is played by trust in institutions and in the nuclear industry?
- What are the characteristics of the communities willing to accept a repository in their vicinity?

# The hosting communities

- **SE:** Östhammar (4,500 inhabitants)  
Population density: 1,205/km<sup>2</sup>
- “nuclearised” community (NPP Forsmark and Storage facility SFR Forsmark) major employers of the area
- **FI:** Eurajoki/Olkiluoto (5,924 inhabitants)  
Population density: 17.15/km<sup>2</sup>
- nuclearised and prosperous
- **FR:** Bure (82 inhabitants). Population density :5.1 inhabitants/km<sup>2</sup>
- ✓ rural, isolated and neglected.
- ✓ €60m /year to support local community projects
- **UK:** Sellafield/West Cumbria; heart of the UK N industry (c 12,000 direct jobs).  
Highest radioactivity concentration. Stigma also for reprocessing foreign waste
- ✓ Allerdale 97,000 inhabitants. Population density: 78/ km<sup>2</sup>
- ✓ District Copeland: 71,500 inhabitants.  
Population density: 97 / km<sup>2</sup>

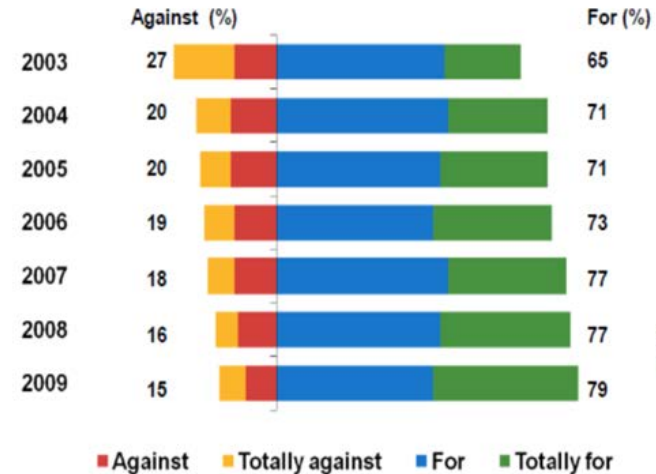


# Behind IMBY: a taxonomy of the hosting communities

- “Nuclear communities“
- “Nuclear Oases” (Blowers 1999; 2016)
- “Communities with industry awareness“ (NEA)
- “Springfield Communities“



## Strong local support for the final repository in Östhammar municipality



The poll 2009 was taken in April and May, i.e. before SKB announced its site selection on June 3





## Factors that may have led to decisions based on voluntarism

- a. unequal power relations, economic marginalization and geographic isolation of the region, processes of "peripheralization" (Blowers' "**nuclear oases**"),
- b. economic interests and dependencies from the nuclear industry and the resulting value chain (**nuclear communities**),
- c. Nuclear activities as an integral part of community identity. Strong identification with N (NEA "**communities with industry awareness**")
- d. As in c) plus pragmatic acceptance, "cultural adaptation" to the nuclear industry, characterized by a sort of shared understanding that has gradually evolved over decades ("**Springfield communities**").
- c), d) Residents have developed a close relationship with N industry and trust them. Shared understanding and support for N as an integral source of local development. This support is a prerequisite for their social (and cultural) integration.

## "Pure", "bought" or "blackmailed" voluntarism?

- **FL** and **SE** sites: “internally grown, progressively built up” voluntarism.

based on:

- ✓ the characteristics of the "Nuclear Communities" / "Springfield Communities" (SE: SKB and stakeholders interaction, local office with SKB-staff)
- ✓ trust in S&T, institutions and local nuclear industry (FL)
- **Bure**, **West Cumbria** and the **Konrad** mine (DE): “blackmailed voluntarism”

based on:

- ✓ the characteristics of Blowers’ nuclear oases
- ✓ physical and political–economic peripherality
- ✓ paramount cases of environmental injustice and economic blackmail
- **Cumbria**: “political alienation intensified by the reprocessing of not only UK but also foreign spent nuclear fuel at Sellafield” (Bickerstaff 2012).

- Voluntary processes do **not always** provide the silver bullet.
- **Fundamental rejection** of the principle of voluntarism is as unjustified as a fundamental rejection of compensation
- Interaction between politics and civil society not enough. Citizens want to **influence political decisions**
- Support of potentially hosting communities (IMBY) cannot be exclusively made dependent on **compensation**
- 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?)
- **Transparent procedures** may offset the perception of compensations as an immoral offer or bribery
- **Trust** in the institutions and preparedness to **delegate negotiation agreements** to them – perceived to be in community's interest
- Provision of **resources** to enhance public engagement (**capacity building**), improve decision-making and increase public confidence
- **Local involvement** difficult, but necessary. NGOs not the public voice but a resource in the process to enhance transparency.



## References

- Bickerstaff, K.(2012). “Because we’ve got history here”: nuclear waste, cooperative siting, and the relational geography of a complex issue. *Environment and Planning* 44: 2611 – 2628.
- Blowers, A. (1999). “Nuclear waste and landscapes of risk.” *Landscape Research* 24 (3): 241-265.
- Blowers, A. (2016). *The legacy of nuclear waste*. London: Routledge.
- Devine-Wright, P. (2009). “Rethinking NIMBYism: The Role of Place Attachment and Place Identity in Explaining Place-Protective Action”. *Journal of Community & Applied Social Psychology*, 19(6), 426–441.
- Di Nucci, M. R.; Brunnengräber, A.; Isidoro Losada, A. M. (2017) “From the "right to know" to the "right to object". A comparative Perspective on Participation and Acceptance in Siting Procedures for HLW Repositories.” *Progress in Nuclear Energy* 100 (c) :316-325.●
- Luloff, A. E.; Albrecht, S. L.; Bourke, L. (1998). “NIMBY and the hazardous and toxic waste siting dilemma: The need for concept clarification”. *Society & Natural Resources* 11 (1): 81-89.
- Wolsink, M. (2006) “Invalid theory impedes our understanding: A critique on the persistence of the language of NIMBY.” *Transactions of the Institute of British Geographers* 31(1): 85 - 91

# Thank you for your attention!

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