# Dealing with Uncertainties in the Decision-Making Process for the Long-Term Management of Radioactive Waste.

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Spiral Research Center, RU Cité Liège University

Sitex Network Topical Day, November 20, 2019 Slovenia

# Past NW Experiences


2009-2010


May 13

Socio-Political Processes and Plan Management in Controversial Settings

Applied to the Plan for Long-Term Management of Type B & C Waste

Summary Report

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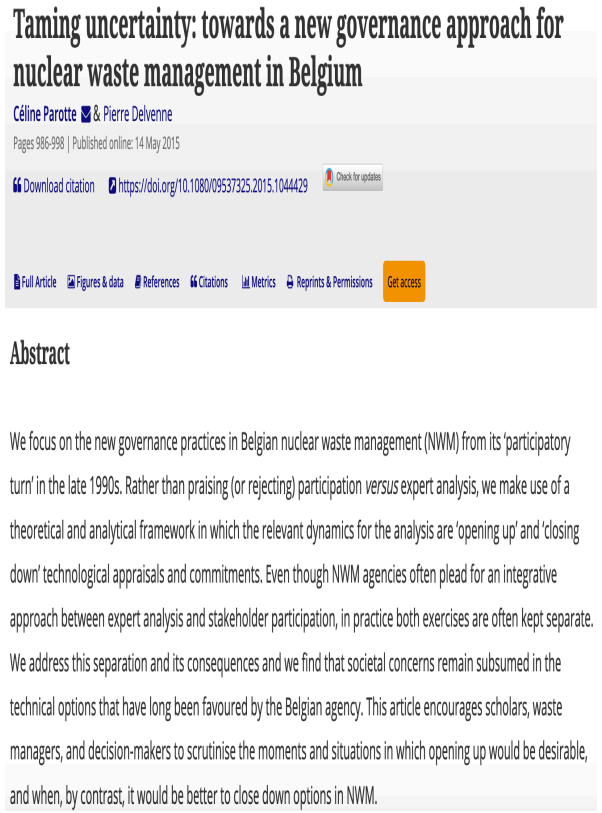
2011-2013



Taming uncertainty: towards a new governance approach for nuclear waste management in Belgium

Céline Parotte & Pierre Delvenne

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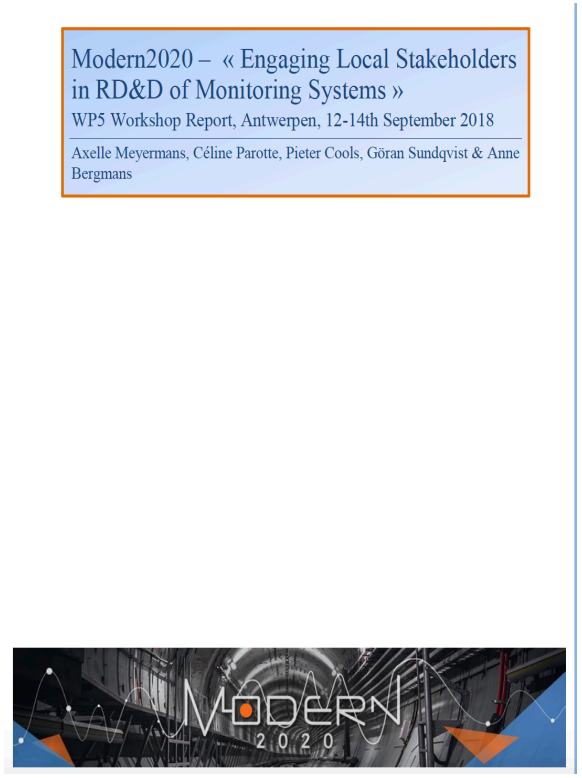
Abstract

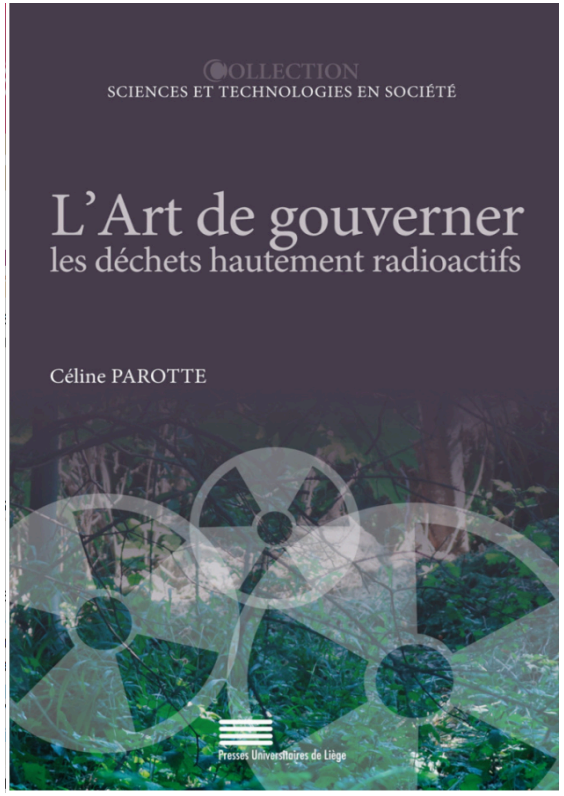
We focus on the new governance practices in Belgian nuclear waste management (NWM) from its 'participatory turn' in the late 1990s. Rather than praising (or rejecting) participation *versus* expert analysis, we make use of a theoretical and analytical framework in which the relevant dynamics for the analysis are 'opening up' and 'closing down' technological appraisals and commitments. Even though NWM agencies often plead for an integrative approach between expert analysis and stakeholder participation, in practice both exercises are often kept separate. We address this separation and its consequences and we find that societal concerns remain subsumed in the technical options that have long been favoured by the Belgian agency. This article encourages scholars, waste managers, and decision-makers to scrutinise the moments and situations in which opening up would be desirable, and when, by contrast, it would be better to close down options in NWM.

2015

# Past NW Experiences




2018

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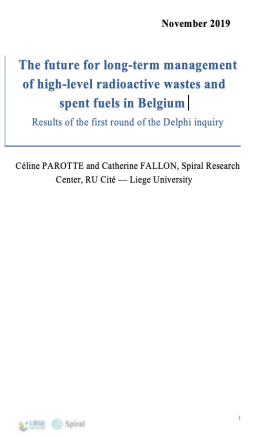


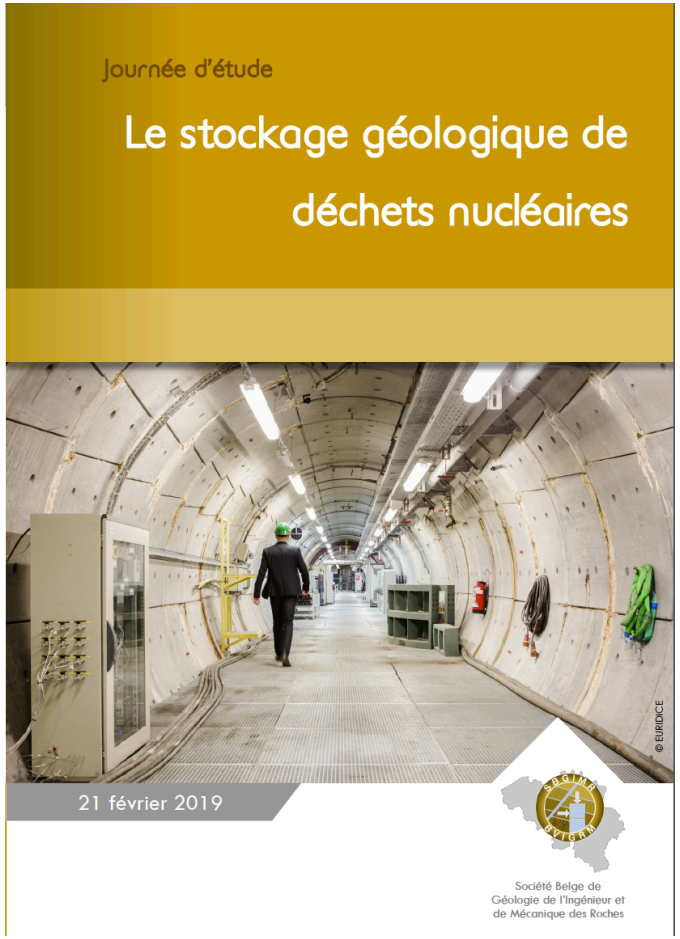

2019 (work-in-progress)

# Outline

1. Governing in uncertain worlds (Callon, Lascoumes, Barthe 2009)
2. Facing critics (Topçu 2013, Wynne 2007, Stirling 2006)
3. Organizing participation (Johnson 2009, Barthe 2006, Parotte 2018a, Parotte forthcoming)
4. Integrating the effects of (non) publics participation (Parotte 2018a, Meyermans et al. 2018)
5. Future(s) of regulatory bodies' roles? (Parotte 2018b, Parotte and Fallon forthcoming)

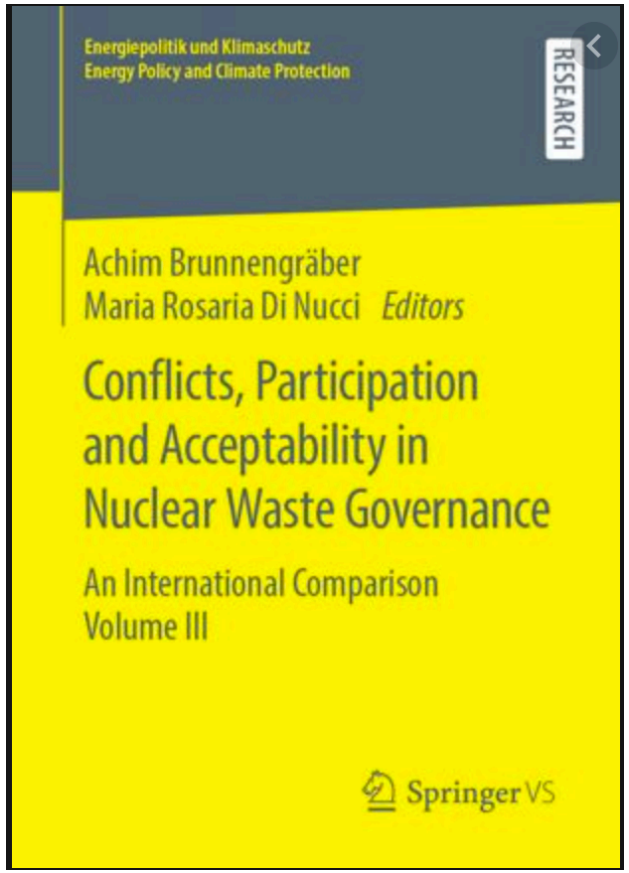
# 1. Governing in uncertain worlds

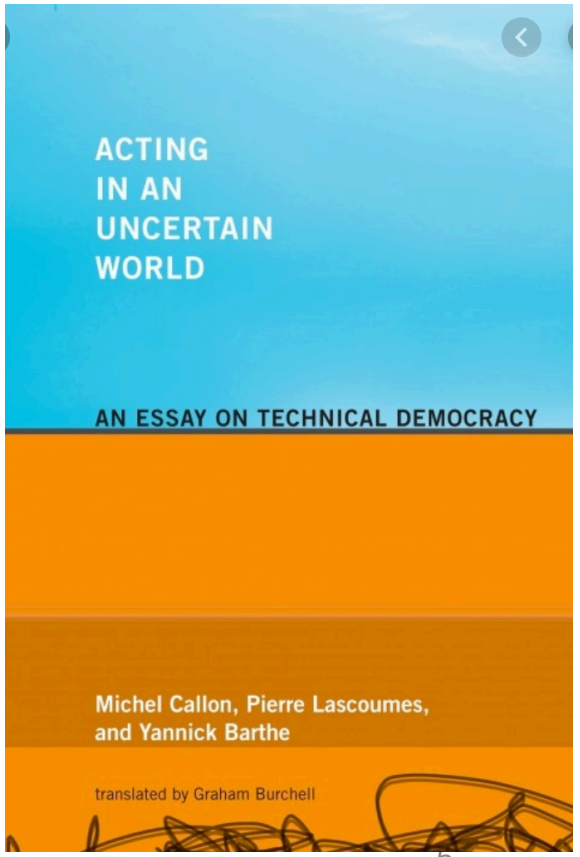
Onkalo - Posiva



# 1. Governing in uncertain worlds


Bure Neighborhood – Parotte 2018

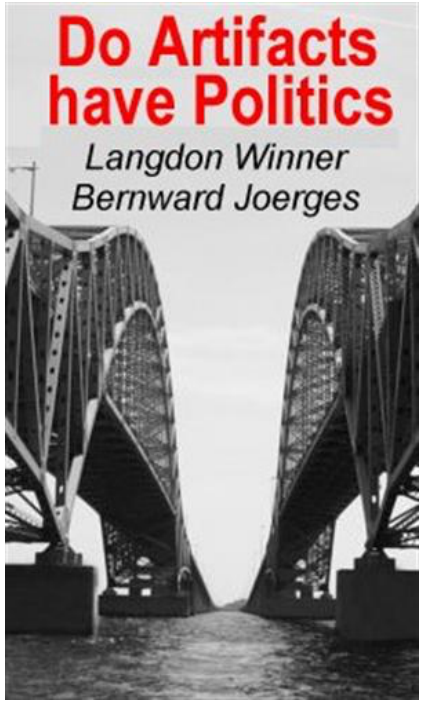


- Dealing with multiple uncertainties, business as usual?

« Dealing on daily basis with the *sociotechnical* unknown and unexpected » (Chalas, Gilbert and Vinck 2009).

« Technologies [such as nuclear power plant] are inherenlty political. (…) Man-made systems appear to require or to be strongly compatible with particular kinds of political relationships » (Winner, 1987, p.22).



# 1. Governing in uncertain worlds

**INSOTEC – International Socio-Technical Challenges for Implementing Geological Disposal**


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

# 2. Facing critics: uninvited critics

 Belgium : local oppositions (1988-1994)

 Canada : local oppositions (1978-1981)

 France : local oppositions (1987-1990)

> « Uninvited public engagements usually arise in response to expert-led, expert-justified interventions and misrepresentations, exacerbated by further expert-led impositions of provocative and alienating definitions of what the issues and concerns are; thus also, by misrepresentation and lack of recognition of those publics themselves » (Wynne 2007, p. 107)

# 2. Facing critics: invited critics

« Invited public involvement nearly always imposes a frame which already implicity imposes normative commitments ». (Wynne 2007,p.107)

## The participatory turn of NWMOs

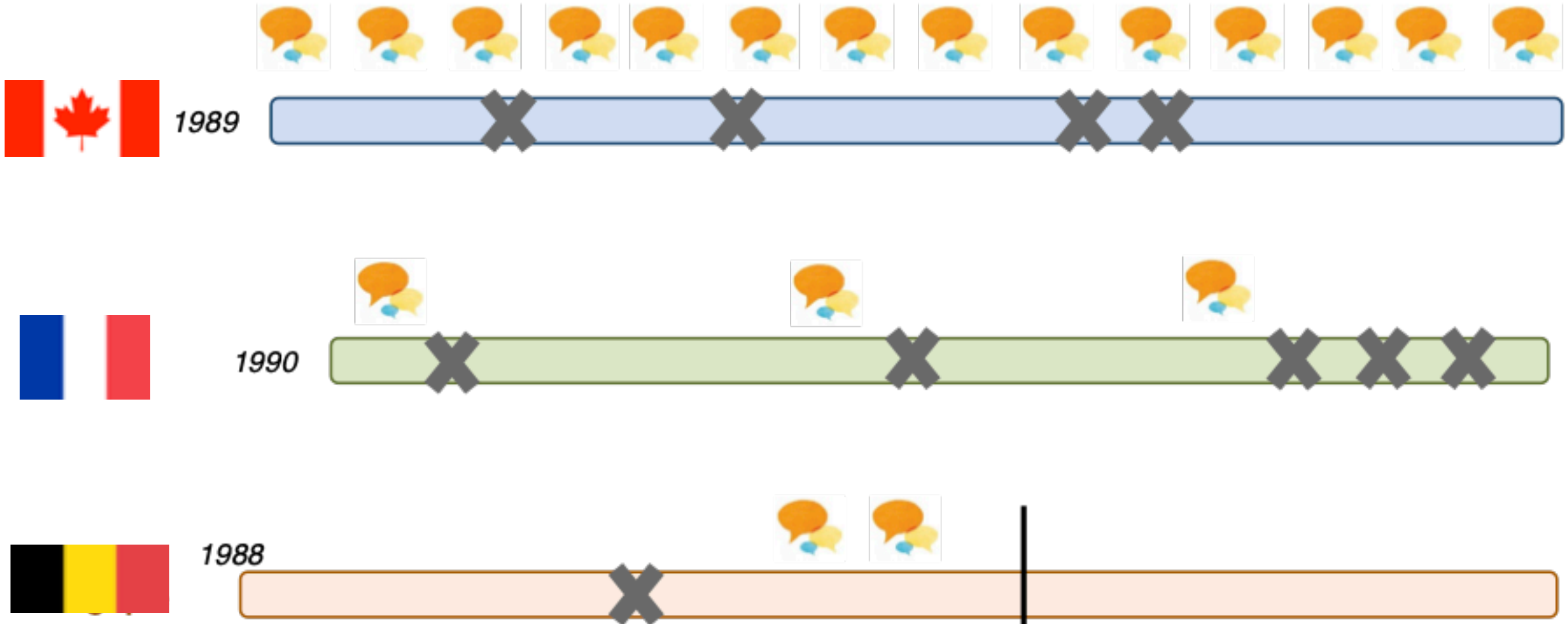
Pictures of Belgian Consensus Conference (2009-2010)

# • Dealing with multiple critics

On what ground is participation in NWM justified? (Stirling 2006)

1. **Normative** rationale « democratically the right thing to do »
2. **Instrumental** rationale « with particular purpose of creating public acceptance »
3. **Substantive** rationale « improving knowledge production »

# 3. Organizing participation on NWM



# 3. Organizing participation on NWM

What do Belgian stakeholders desire in the future? (Parotte, Fallon 2019, Belgian Inquiry, Preliminary Results)

1. **Being informed, receiving quality information and being consulted is a strict minimum.**
2. Over half of respondents consider that an **organisation in the form of a partnership**, where decisions are taken through a negotiation among public authorities and the stakeholders, **is pertinent.**
3. Several participants point out that, in their view '**participating is not the same as deciding' and stress the role of public authorities in decision-making.**

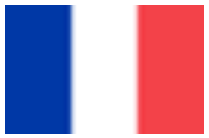
- # Dealing with the organization of participatory events on NWM

1. ***When* to** associate publics and experts?

2. **What should be the role of legislation?**

**In Belgium,** a large number of respondents consider that legislation has **a double role to play**. The law should specify the **minimum level of consultation** for the future, but the initiative should be largely left to the body responsible for consultations (reflecting what is done in Canada). The law can define some of the **key steps of the consultation process** within the overall process (reflecting what is done in France). (Parotte, Fallon 2019, Belgian Inquiry, Preliminary Results)

# 4. The effects of (non) publics'participation



| Selected outputs | ***Reversibility principle*** (supported by Governmental decision in 2006) | ***Adaptive Phase Management principle*** (supported by Governmental decision in 2007) | **/** (No governmental decision) |
|---|---|---|---|
| **(Who)** Audiences reactions | Strong local opposition of concerned audiences | Local Support/ Disinterest of potential concerned audiences | Disinterest of potential concerned audiences |

Parotte, *forthcoming*

- # Dealing with effects of (non) publics' participation

1. How to identify revelant (future) stakeholders? How to deal with inactive audiences?
2. How far could those outcomes *really* affect the design of NWMOs' program?

# 5. Future(s) of regulatory bodies' roles?

For next decision-making steps, national regulatory body will **stand out as key actor**:

- **Assessing** the experimental technology
- **Framing** the regulatory practices (safety guides, …)
- With 'go' or 'no go' for siting decision.

# 5. Future(s) of regulatory bodies?

- The Belgian regulator's current position seems '*opaque', 'too much in the background'.*

- While ensuring the FANC/AFCN's independence, many respondents concur that **this agency should play a more active role** in the decision-making process vis-à-vis the stakeholders.

- # Having an active role?

1. What must be controlled?

**In Belgium,** a large majority of the respondents favour monitoring and control of the programme's **social and technical aspects, which are to be considered jointly.**

2. Regulatory bodies, alone?

# Conclusions

1. Acknowledgment that NWM is a ***socio*technical** problem.
   - "From the best available geological formation for HLW disposal to finding one that is good enough" (Solomon 2010 p.21)

2. Uninvited and invited critics are ***two sides of the same democratic coin***.
   - Controlling or embracing critics?

# Conclusions

3. Progressive participation : types can be ***cumulated*** and ***adapted*** according to the timeline of the decision-making process.

- “when the final outcomes are unknown, procedural settings remain the key.”

4. Effects of (non) publics’ participation as ***additional outputs*** in the NW program.

- Controlling other dimensions than safety/technical ones?

# Conclusions

## 5. Active role(s) of regulatory bodies?

Being active doesn't necessarily mean losing its independency

> "Because sensitive and controversial NWM programs are experimental, the credibility of regulatory bodies is expected to be challenged in the coming years" (Parotte, 2018, 4S Meeting).

# Thank you for your attention

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# A journey with the ladder of participation:

- “A Swedish stakeholder gave the remark that they find themselves at **a journey throughout the participation ladder**. She mentioned that they started out almost at the level of ‘manipulation’, but that this had radically changed over time when the municipality (the main institution for local stakeholder engagement in the Swedish radioactive waste disposal project) started to delegate control to the citizens. As such, they would say that they are now almost on the spot of ‘citizen control’” (Meyermans et al. 2018, p. 5).

# Deficit Model as the minimum:

- “This discussion [at the Modern 2020 workshop] underlines how the deficit model, which promotes top-down information, remains the main discussion topic for local stakeholders. They did not suggest changing the way nuclear experts should communicate or inform local stakeholders. Rather, local stakeholders **insist on how the quality of information,** provided by nuclear and technological experts, **should be improved.** In order to increase this quality, local stakeholders stress that technical experts should take the local stakeholders’ perspectives into account and be open-minded to other perspectives. Then, both parties would be able to mutually learn adequate ways of communication.” (Meyermans et al. 2018, p. 7)