



UNIVERSITY  
OF TAMPERE



FACULTY OF MANAGEMENT  
HOST MUNICIPALITY APPROACHES TO  
FINAL DISPOSAL OF SNF  
IN FINLAND AND SWEDEN

*August 27, 2018*

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22nd REFORM Group Meeting, Salzburg

# FINNISH RESEARCH PROGRAMME ON NUCLEAR WASTE MANAGEMENT (KYT)

- KYT 2015-2018
- Run by the Ministry of Employment and the Economy
- The research programme is based on the Nuclear Energy Act
- Aim is high quality research to be used by nuclear authorities
- The funding from the State Nuclear Waste Management Fund (VYR)
- Nationally central research topics
- Results are public
- Topics directly related to the respective duties of waste producers or authorities do not belong to KYT

Aug. 27, 2018



# GOVERNING SAFETY IN FINNISH & SWEDISH NUCLEAR WASTE REGIMES (SAFER)

- Researchers from University of Tampere & University of Jyväskylä
- Objective is to improve the understanding of strengths and weaknesses of the Finnish nuclear waste regime
- Comparison to Sweden, in some cases also to other lands
- Focus on governance
- Continuity and flexibility in changing socio-technical context



# GOVERNING SAFETY IN FINNISH & SWEDISH NUCLEAR WASTE REGIMES (SAFER)

Previous SAFER research topics include:

- The role of Civil Society Organisations in licensing (Fin+Swe)
- Print media attention to licensing (Fin+Swe)
- Ethical questions in print media (Fin+Swe)
- Ethical aspects at community level (Fin)

Ongoing research topics:

- Social license to operate in nuclear waste management (Fin+Swe+Fra)
- **Host community approaches to final disposal** (Fin+Swe)



# WHY FINLAND AND SWEDEN ?

- Repository projects are closest to realisation (Eurajoki, Östhammar)
- Considered success stories and pioneers (e.g. Darst & Dawson 2010)
  - In Finland: Construction application December 2012  
License granted in November 2015
  - In Sweden: Construction applications March 2011  
Amendments required January 2018.
- Share similar traits
  - Same disposal concept (KBS-3)
  - Both Nordic welfare countries



# BACKGROUND: PARTNERSHIP APPROACH

- Top-down, un-consultative, Decide Announce and Defend (DAD) approach failed in 1980's and 1990's (e.g. Sundqvist 2010)
- Technocratic management approach became counterproductive
- Became largely replaced by more communicative and participative governance frame (Bergmans et al. 2008)
- OECD's Nuclear Energy Agency (NEA) suggested the partnership approach as an effective way of achieving:  
a fair representation, competent participation, and community support - to ensure a licensable site (NEA 2010)  
  
- Both Finland and Sweden are mentioned as examples of partnering



# BACKGROUND: COMMUNITY AT THE CENTRE

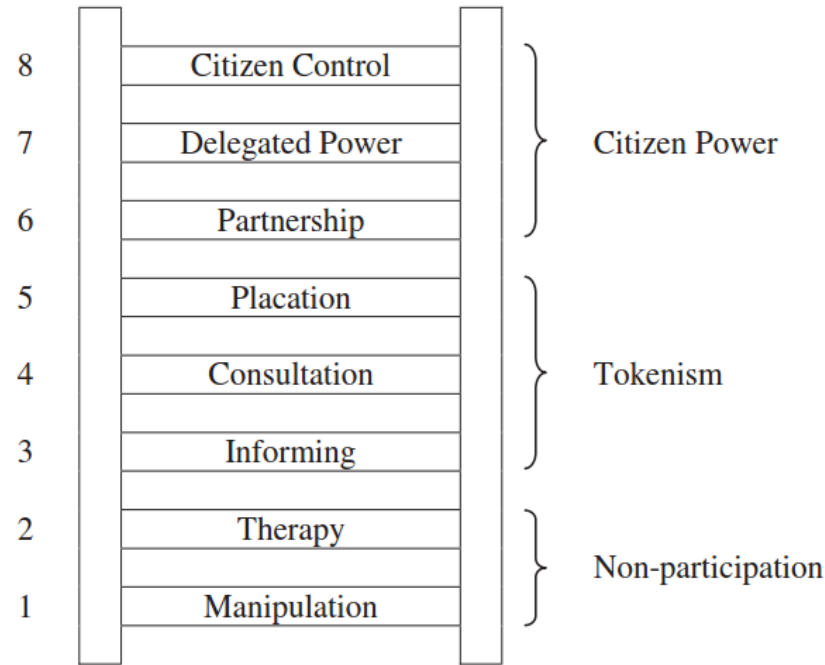
The key components of partnership approach: (NEA 2010)

- Voluntarism
- Community veto (formal or informal)
- Collaboration with local stakeholders
- Provision of community benefits packages
- Places local community firmly at the centre of siting process.
- Already in 1994 Lidskog:  
Municipality, like a spider at the centre of the web,  
interconnects civil society, the state, and the economy  
– and can become central actor in waste management



# ARNSTEIN'S LADDER OF PARTICIPATION

Partnering – a leap from tokenism to real participation (NEA 2010, 2013)



Source:NEA 2010





# GETTING SOCIAL LICENCE TO OPERATE

Partnering is set up as:

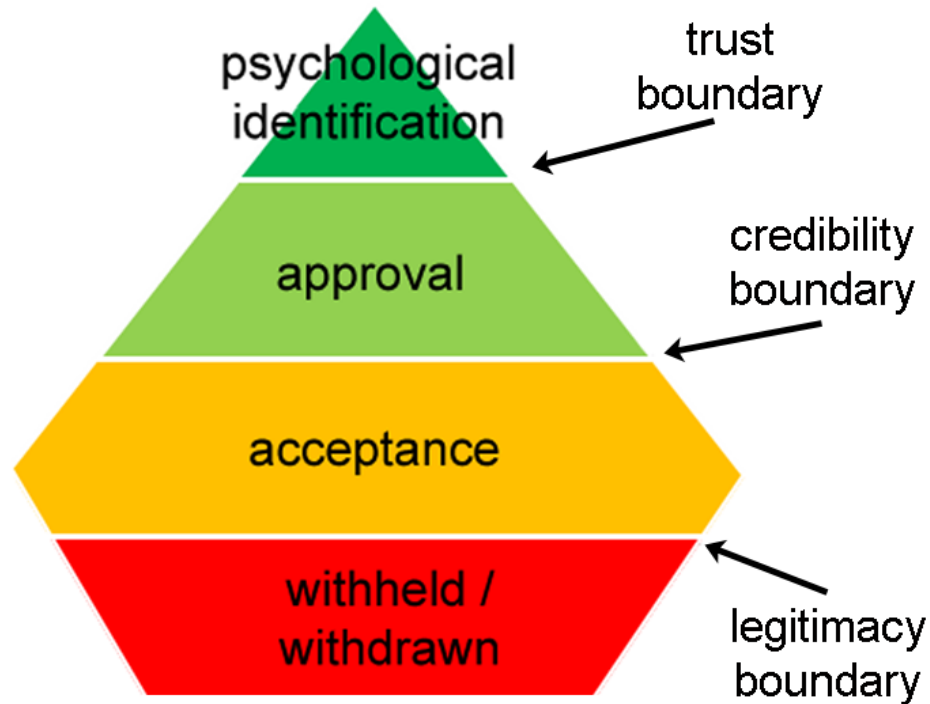
- Engaging local communities
- Developing durable and sustainable relationships

But it can be seen also as an attempt to increase:

- Legitimacy, credibility and trust
- to achieve a social license to operate



# THOMSON & BOUTILIER'S PYRAMID OF SOCIAL LICENCE TO OPERATE

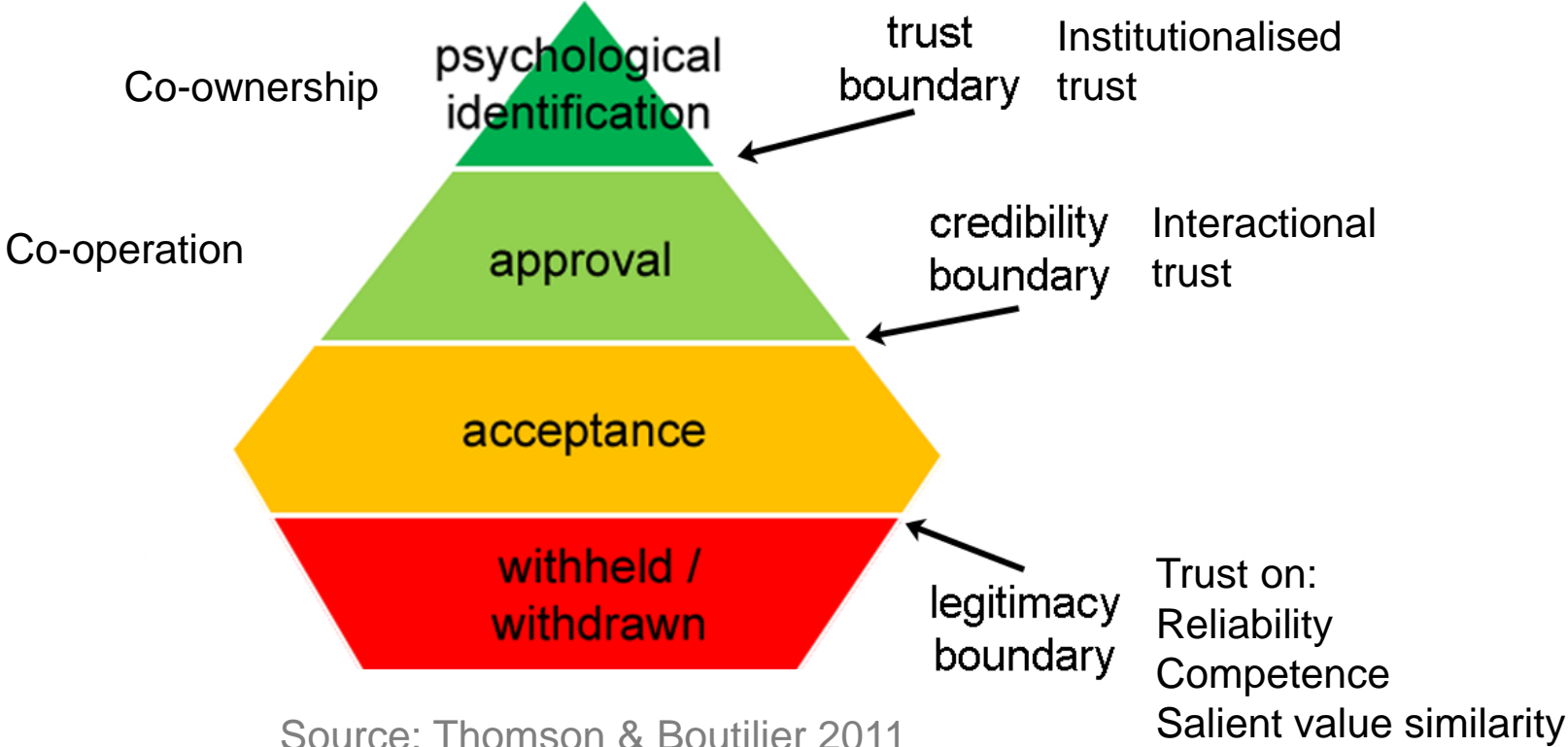


Source: Thomson & Boutilier 2011

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# THOMSON & BOUTILIER'S PYRAMID OF SOCIAL LICENCE TO OPERATE



Source: Thomson & Boutilier 2011



# OBJECTIVE

The purpose here is to look a little bit into the role of communities as actors, and how they have approached final disposal.

What kind of role have they taken in partnerships?



# SWEDEN

## STRETCHING PARTNER

"Stretching" refers to setting up demanding environment to the implementer and authorities, and providing challenge on policies and actions, in the way that lead to changes (cf. Andersson et al. 2003)

- Test drillings halted due local resistance
- SKB forced to consider also social aspects not just geology
- SKB calls forth volunteers for feasibility studies
- Municipality becomes strategic actor with interests
- Only a few remote municipalities interested and in the end only two are willing to start the feasibility studies



# SWEDEN

## STRETCHING PARTNER

- SKB forced to rely on existing nuclear communities which have already accepted temporary storage for long-lived and repository for short-lived nuclear waste
- Nuclear communities had been anticipating this and saw an opportunity to redefine relations with SKB (esp. Oskarshamn)
  - Secure funding to review SKB's work and inform citizens (from the nuclear waste fund)
  - Clarify Veto (Veto valve and when can be used)
  - Enhance importance of environmental legislation and shape environmental impact assessment (EIA) –process (County lead EIA-group for CLAB setting the pattern)



# SWEDEN

## STRETCHING PARTNER

- Attain national coordinator
- Östhammar and Oskarshamn lead allotment of compensation (agreement before negotiations with SKB)

This meant:

- Avoiding bilateral negotiations with SKB
- Resources for credible local waste management organisation and reviewing of SKB's and authorities work
- Stronger Veto standing
- Thus in Sweden communities were able seize the opportunity and to change the process in fundamental way



# FINLAND

## ALMOST SILENT PARTNER

- In Finland bedrock was screened successfully
- Problems started when the first area for preliminary site characterization was singled out
- due to local resistance and Chernobyl related media attention investigations were aborted before they were properly started
- Approach was changed so that:
  - Five sites including Eurajoki as a special case was named candidates at the same time
  - Liaison groups for the bedrock studies were established in all candidate municipalities





# FINLAND

## ALMOST SILENT PARTNER

- Detailed site characterization was started in three areas
- After creation of Posiva also Loviisa was also included as a special case like Eurajoki earlier.
- While community resistance was not overwhelming, there was some
- Posiva forced to acknowledge that main differences arose from the social considerations – nuclear communities were more accommodating

In Eurajoki there had been lot happening since site characterization started.



# FINLAND

## ALMOST SILENT PARTNER

- Next year after site characterization started Eurajoki removed a clause forbidding disposal in the municipality
- Under a year after that municipality made a cooperation agreement
- The company ensured taking into account the municipality's interests and compensating proven costs due its activities
- During Public Sectors' Research Programme on Nuclear Waste (JYT 1997-2001) municipalities were able to get representatives to the steering group of the social studies (but not technical studies)
- In 1998, in its new municipality strategy Eurajoki presented the Olkiluoto vision, which took positive stand towards both to additional nuclear energy and to final disposal of SNF



# FINLAND

## ALMOST SILENT PARTNER

- Compensation negotiations started at the same year as Olkiluoto vision was set.
- Quite modest compensation agreement was negotiated in Vuojoki working group prior the Municipalitys DiP statement in 2000.
  - Eurajoki started negotiations with strong Veto power over DiP and relative advantage of having the SNF storage pool already on the premises.
  - On other hand municipality needed to increase tax revenue and was only option available.



# FINLAND

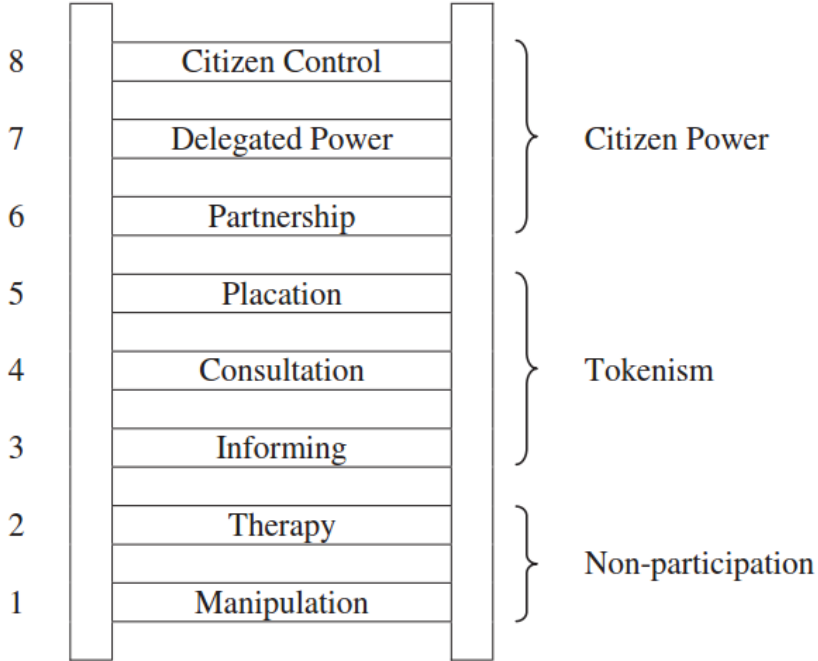
## ALMOST SILENT PARTNER

- After DiP liaison group first set for the bed rock studies have continued as well as liaison group set during nuclear power build – but these are for having discussions, municipality has no power
- Thus in Finland communities have had modest affect to waste management process

Comparing to models presented earlier, partnering done in Finland and Sweden rate differently



# ARNSTEIN'S LADDER OF PARTICIPATION

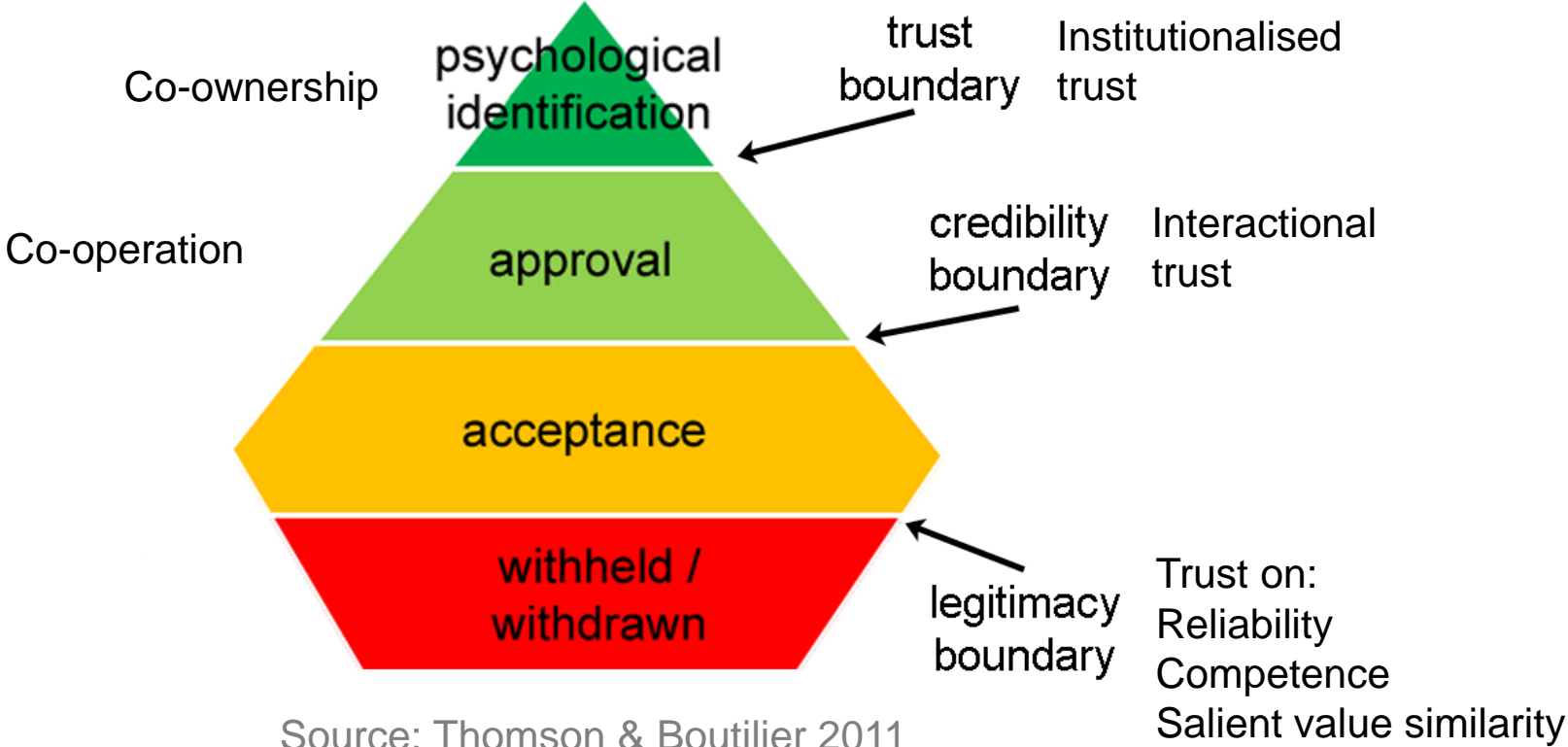


Source:NEA 2010

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# THOMSON & BOUTILIER'S PYRAMID OF SOCIAL LICENCE TO OPERATE



Source: Thomson & Boutilier 2011



# NEXT STEP IN OUR RESEARCH

Next we try to look more closely into municipalities' final disposal organisations and their workings.

Unfortunately we have had difficulties with acquiring material regarding liaison groups in Finland



THANK YOU

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