

Framing of safety and social license to operate (SLO) in nuclear waste management

Workshop on social license to operate and nuclear waste management

VTT, Espoo, 7 October 2019

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Introduction

The objective is to compare risk and safety related argumentation, and the framing of final disposal, in debates in leading newspapers in Finland and France, with particular focus on social license to operate (SLO) and trust in NWM institutions.

In the Finnish ‘high-trust society’, the disposal concept is based on the idea of passive safety, i.e. no monitoring is required in the future after the closure of the repository.

By contrast, in France – called sometimes a ‘society of distrust’– legislation stipulates that the project must be reversible, and the repository and its environment remain under constant monitoring for a period of several centuries.

These countries have therefore adopted different means of building trust in the waste disposal solution and trust in the organisations responsible for RWM.

Introduction

Finland

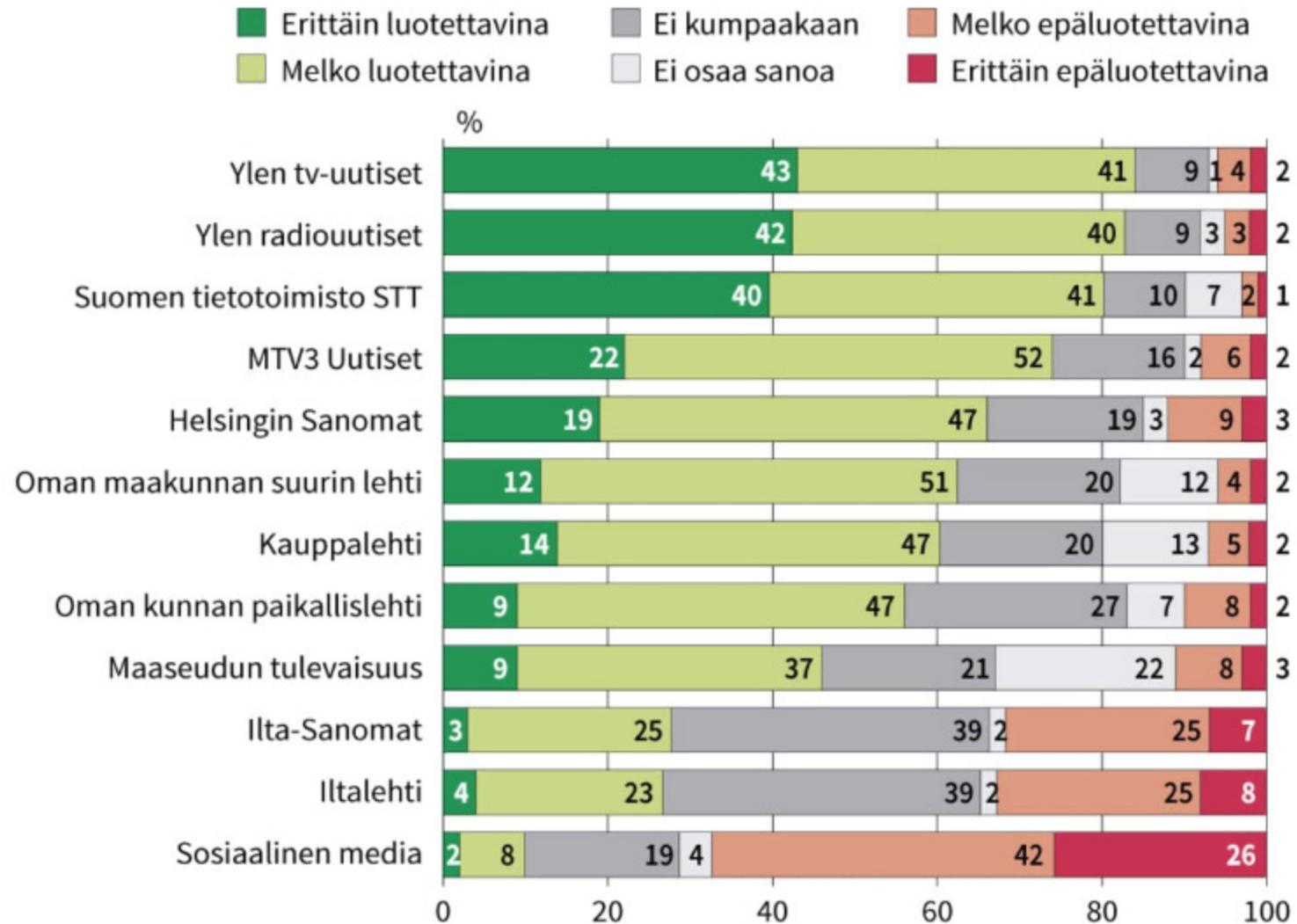
- The country with the most trusted news media
- Overall trust in the news 59%
- Trust in 'news I use' 70%

France

- Weak trust in the news media
- Overall trust in the news 24% (2018 35%, Yellow vest –protest)
- Trust in 'news I use' 34% (2018 41%)
- 22% have high or relatively high trust in the media (35% have no trust at all, and 38% only little trust the media)

(Sources: Reuters Institute Digital News Report 2019; CEVIPOF 2019, p. 34)

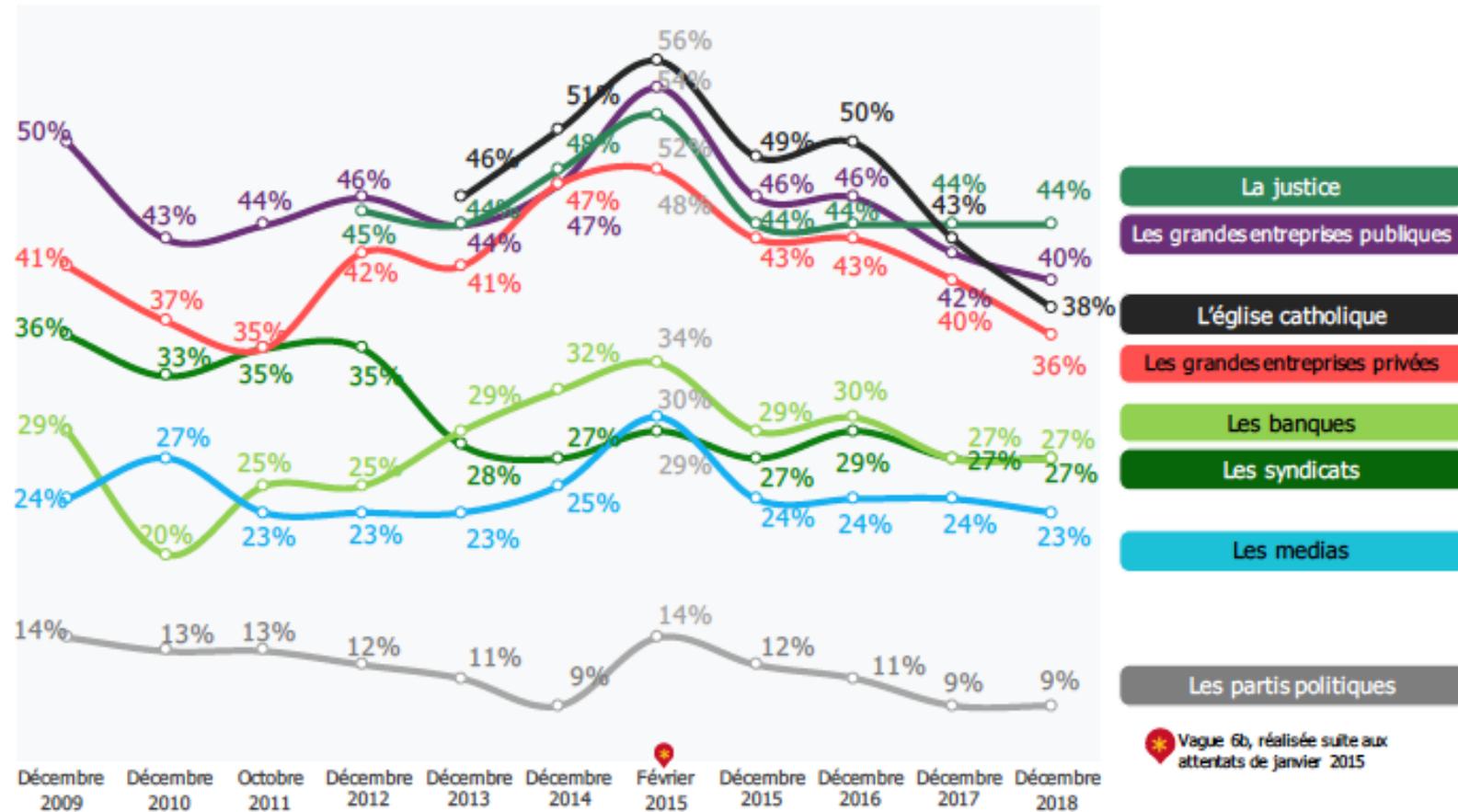
Kuinka luotettavina pidät eri tiedotusvälineiden uutisointeja?



Trust in institutions - France

2116
individus

Q25. Avez-vous très confiance, plutôt confiance, plutôt pas confiance ou pas confiance du tout dans chacune des organisations suivantes... ? Réponse 'Très confiance' + 'Plutôt confiance'

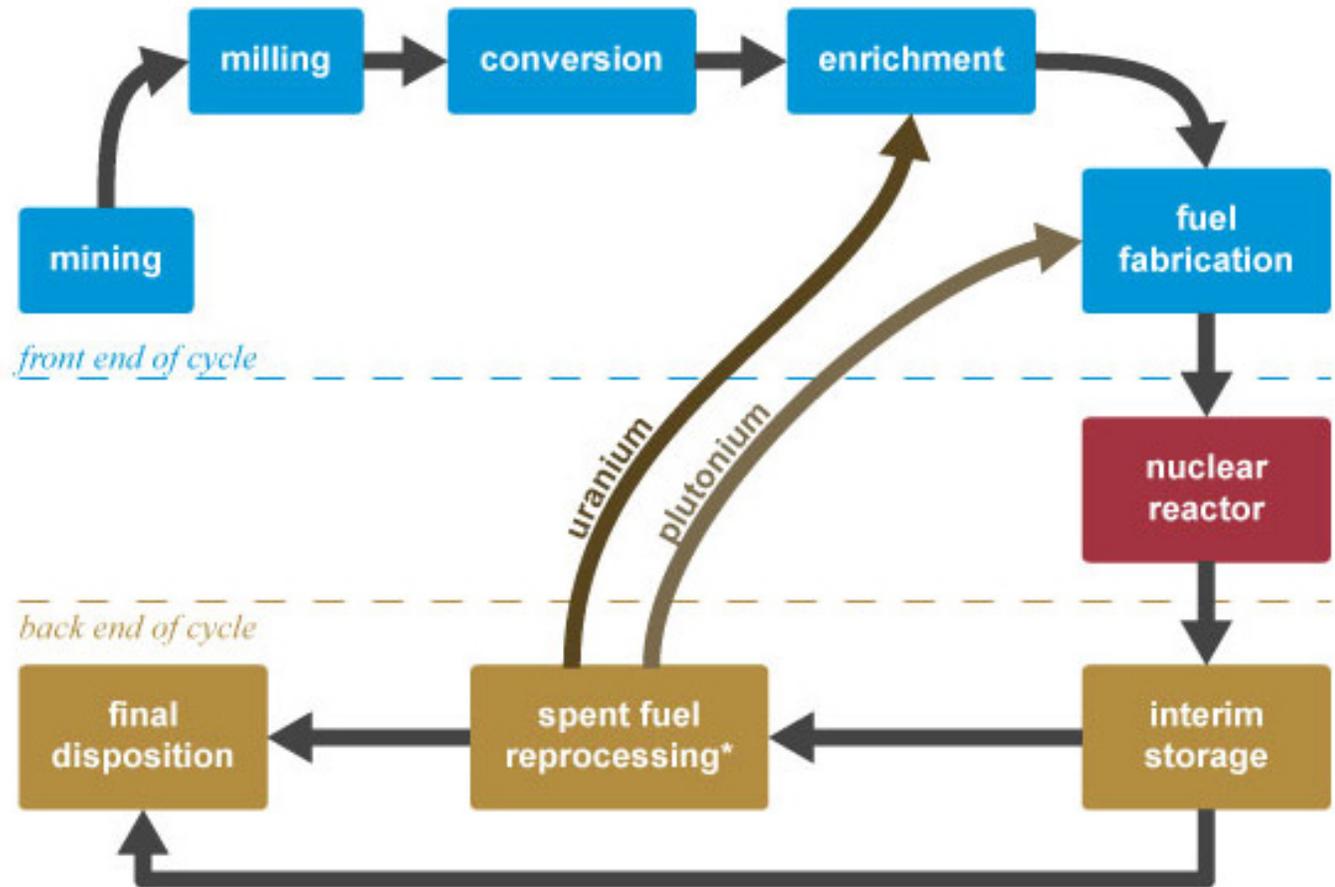


Nuclear waste management in Finland and France

France:
reprocessing +
final disposal

Finland:
direct final disposal

Nuclear fuel cycle



*Spent fuel reprocessing is omitted from the cycle in most countries, including the United States.

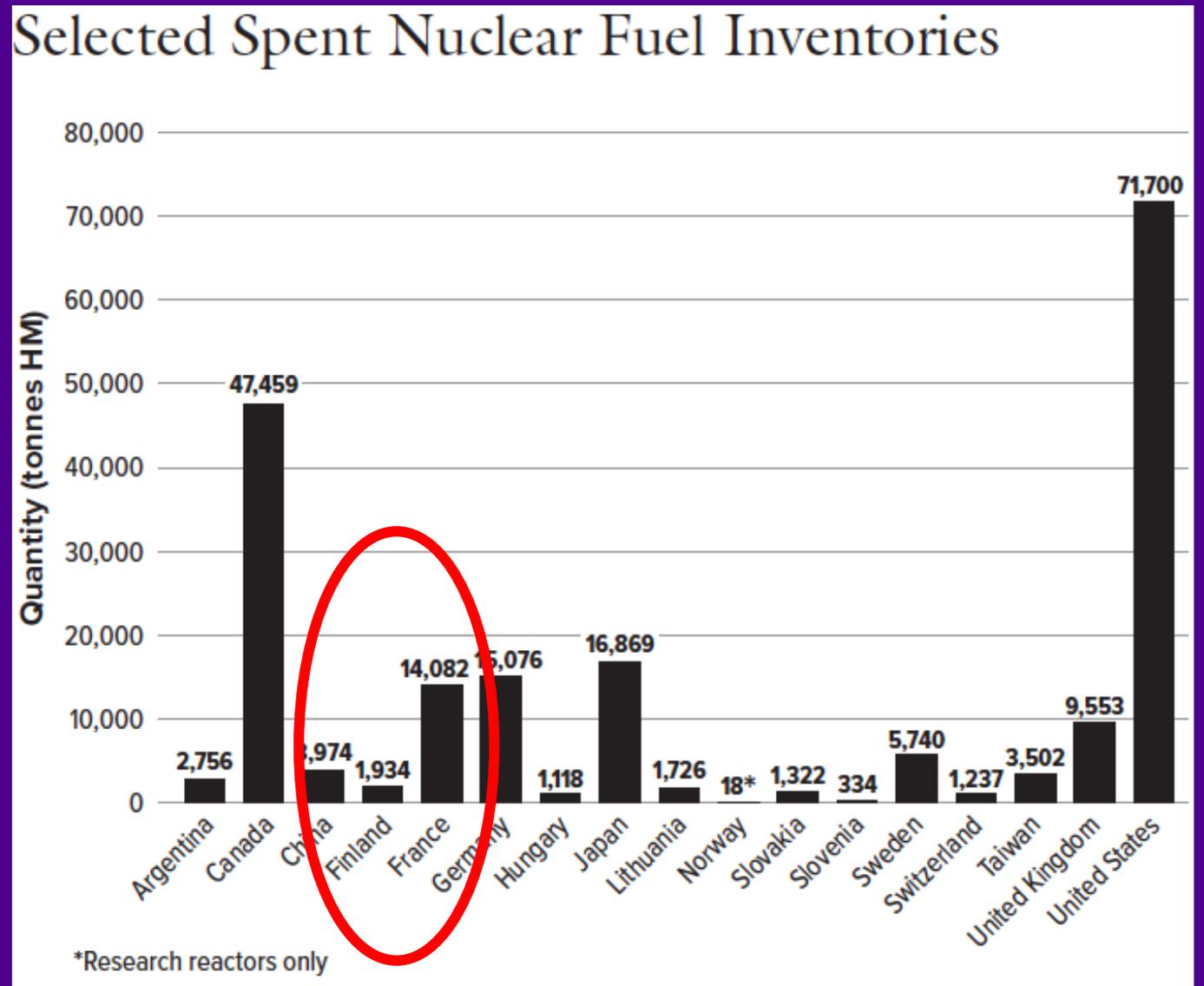
Nuclear waste management in Finland and France

France:

58 nuclear reactors
> 70% of electricity

Finland:

4 nuclear reactors
~ 30% of electricity



Source: Sloan 2017

Frames and framing

'Frame' is a schema of interpreting reality

- Terms of the organization of experience (Goffman)
- Tools we use to make sense of 'raw' information regarding the situation, giving them meaning and coherence (Kendall)

'Framing' stresses agency:

- Refers to active construction and articulation of frames
- Selecting some aspects of a reality and making them more salient in a communication, in effect, promoting a specific interpretation, definition, evaluation, and/or recommendation (Entman)

Frames and framing (cont.)

- **how an issue is characterized i.e. framed in the media shapes the way in which it is understood by audiences** (e.g. Scheufele and Tewskbury)

Media frames

- Organize information both for journalists and those who rely on them (Gitlin)
- "the text contains frames [...] that provide thematically reinforcing clusters of facts or judgments" which have certain functions (Entman)

Our approach to analyzing frames

- Based on Entman's frame functions – but is less problem oriented
- Frame can apply to various kinds of situations, events, undertakings and occurrences (Triandafyllidou & Fotiou; Vliegenthart & van Zoonen; Goffman)

Frames and framing (cont.)

Frame functions / Framing processes (Entman; Benford and Snow)

- Define problems
- Diagnose causes
- Entail moral judgement
- Suggest remedies

Frames from news items identified by: looking for combinations of either explicit or implicit expressions of

- Definition of a situation, an issue or a problem
- Diagnosis of causes or reasons
- Evaluation or judgement of a situation or actors
- Suggested course of action

The Newspapers



HS



Le Monde

Helsingin Sanomat

- the only major national daily newspaper
- 17% of Finns read the paper, and 27% HS.fi online weekly
- Country's second-most trusted news producer (1st = public broadcaster YLE)

Le Monde

- The most read daily newspaper in France (8% of French read the paper, and 13% the online version weekly)
- The most trusted news producer in France
- Independent – but often qualified as politically centre-left (64% left-wing readers according to a reader poll in 2014)

(Sources: Reuters Institute Digital News Report 2019; Wikipedia)

Data gathering **(work in progress)**

The research period: 1 January 2005 – 31 December 2018

Helsingin Sanomat, Finland:

Keywords

- ydinjät,
- loppusij,
- Posiva,
- STUK,
- radioaktiiv

Total of 1624 articles

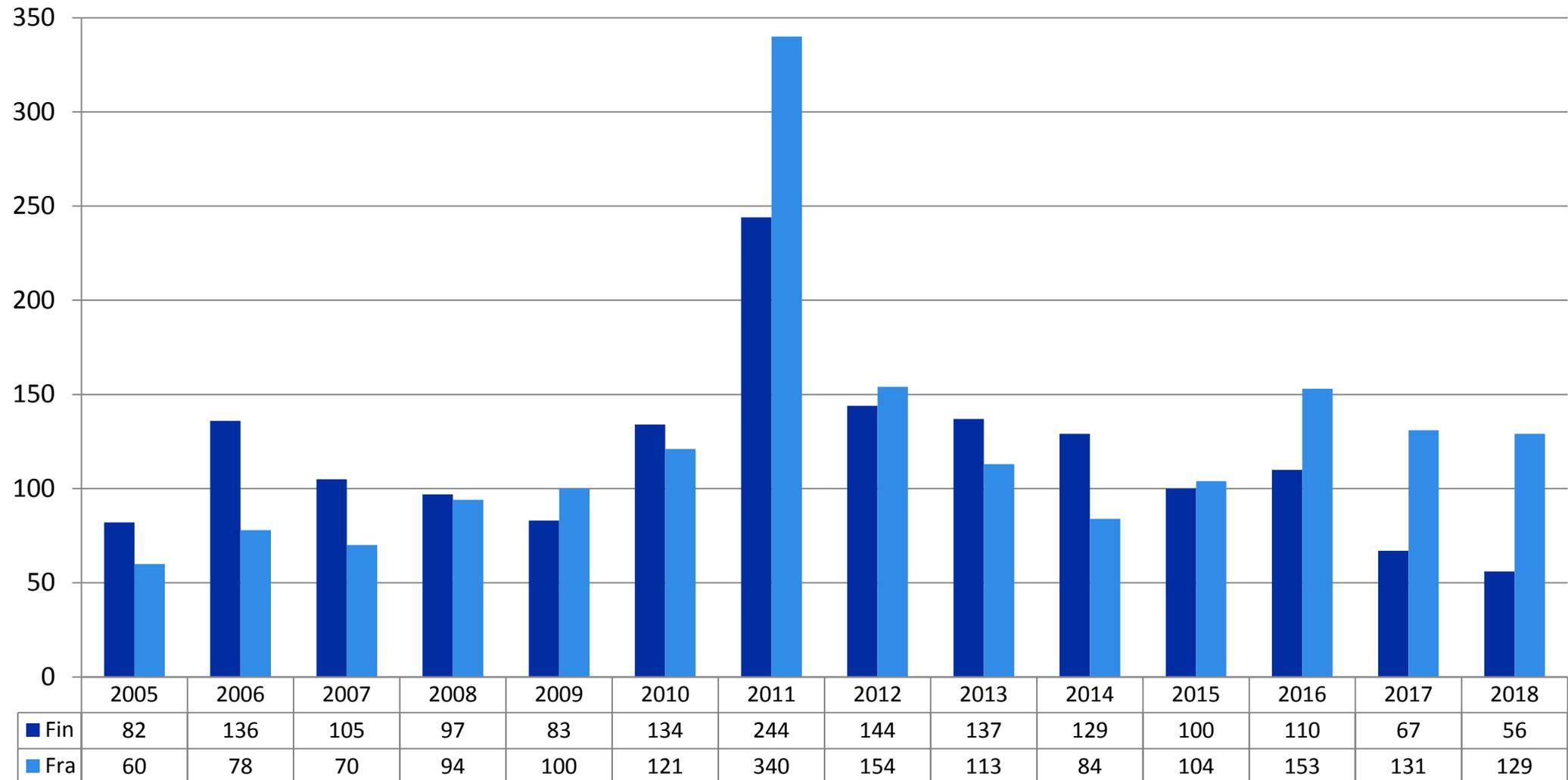
Le Monde, France:

Keywords

- Déchets radioactifs OR
- Déchets nucléaires OR
- Andra OR
- stockage géologique OR
- Enfouissement des déchets AND
- (ASN OR IRSN)

Total of 1731 articles

Fig. 1: Annual number of news items in corpus in 2005-2018



Narrowing down: *HS*

1st Stage – the following items were removed from the data set:

- Items which were not really news items (referrals to actual news items, columns etc.)
- Items not referring to wastes or referring to wastes not under consideration (military wastes, low and intermediate wastes, contaminated materials etc.)
- Items referring to moving, storing, reprocessing or dumping the wastes unless item itself referred to final disposal in Finland

2nd Stage – remaining news items were divided into two categories

- One with Final disposal of SNF/HLW in Finland in significant role (n= 147)
 - Frame analysis is conducted on these
- Second with Final disposal of SNF/HLW in Finland in cursory role
 - Will be categorised and examined at a later stage (n=90)

Narrowing down: *Le Monde*

Selection via the Prospéro software, from the initial corpus of 1731 articles

All articles in which "principal actors" included RADIOACTIVE-WASTE@, ANDRA@ or Cigéo

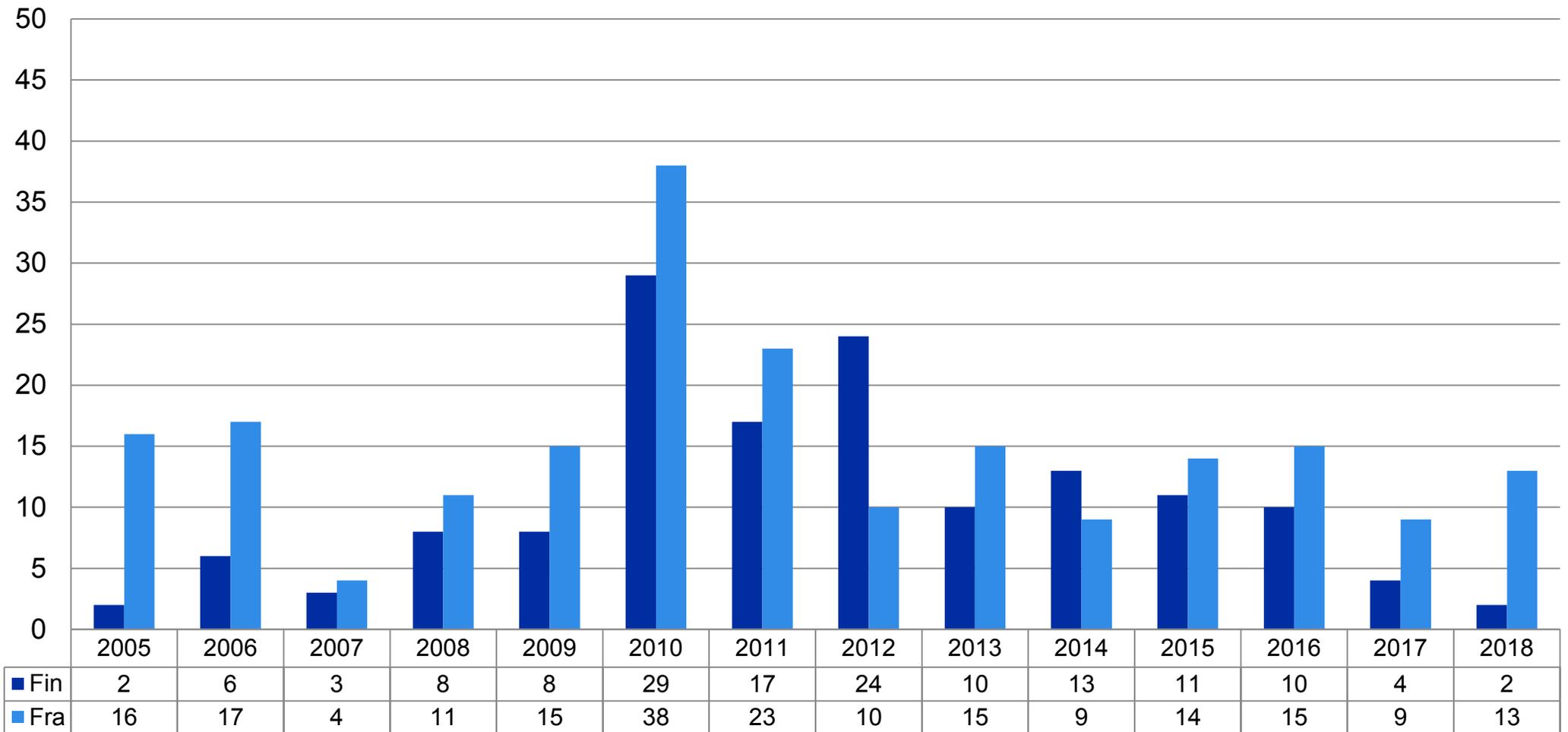
Articles in which the following actors were simultaneously present:

- Safety authority (ASN-DSIN@) and RADIOACTIVE-WASTE@
- Technical support organisation (IRSN@) and RADIOACTIVE-WASTE@
- Technical support organisation (IRSN@) and ANDRA@

Result = 434 articles

In this corpus, **209 articles** had RADIOACTIVE-WASTE@ as a principal actor

Fig, 2: Narrowed data sets



Preliminary analysis of *Helsingin Sanomat*: issues associated with nuclear waste

- **Attention to licences to build new nuclear power**
 - Especially SNF management of the nuclear power company Fennovoima
- **A number of news depicting**
 - What the underground rock characterisation facility ONKALO is like and what has been done there and
 - What *will be done* in the future (rather than what the future plans are)
- **Finland's position as a forerunner country is often brought up**

Preliminary results from analysis of domestic news in *Helsingin Sanomat*

The main themes

- Progress of final disposal (Onkalo / licensing / whole project)
- Fennovoima's wastes
- Frames
 - Things are going forward more or less within the schedule / there is plenty of time to deal with hindrances / complications
 - Collaboration between companies is recommended (even demanded) but not considered necessity

Some safety issues raised connected to the frames from preliminary analysis (*HS*)

Frames

- Things are going forward more or less within the schedule / there is plenty of time to deal with hindrances / complications
 - Safety is attainable. There is time to 'iron out the wrinkles' and even technology has time to develop
- Collaboration between companies is recommended (even demanded) but not considered necessity
 - There is no reason why two repositories would be less safe than one. (Additionally Onkalo could reach its safe limits.)

Preliminary analysis of *Le Monde*: issues associated with nuclear waste

Enduring controversy over nuclear policy and (lack of) transparency

The French choice of reprocessing => use of MOX fuel in some reactors; SNF transports; uncertain waste inventory; definitions of “waste”, “material”, “substance” ...

Controversies over the costs of the repository project: rival estimates by Andra and waste producers (EDF, Areva, CEA) – possible discontinuation of reprocessing?

Opponents, Greenpeace, the Green Party (in government 2012-14)

Safety: desire by the safety authority (ASN) and its expert arm (IRSN) to demonstrate independence – both the advocates and critics of the project rely on ASN/IRSN in their argumentation

Some preliminary conclusions

- Editorial differences between *Helsingin Sanomat* and *Le Monde* towards nuclear power and nuclear waste management issues
 - *Le Monde*: critical environmental journalism on NWM
 - *Helsingin Sanomat*: more neutral tone towards NWM
- Framing differences between and within the newspapers:
 - *Le Monde*:
Promoters of the project embrace and underline the continuously evolving nature of the repository project (hence, reversibility), whereas the opponents argue against a project they describe as irreversible
 - *Helsingin Sanomat*:
The SNF project is progressing as planned (and therefore there is no need for any extra measures)

Thank you for your attention!

This work was funded by the Finnish Research Programme on Nuclear Waste Management (KYT2022).