

# Possibilities and Challenges of RWM with Regard to Civil Society Interactions

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## 1. Background and goal of the present work

Civil Society (CS) experts involved in the ROUTES (Waste Management routes in Europe from cradle to grave) work package of the EURAD programme, together with Radioactive Waste (RW) technical experts, have investigated how the pillars of the Aarhus Convention together with a broader understanding of Transparency and Public Participation (T&PP) can be transposed into Radioactive Waste Management (RWM) in the establishment of RW facilities, primarily geological disposal repositories, in different national contexts. Criteria for T&PP in the development of RW facilities are proposed, based on the EC Radioactive Waste and Spent Fuel Management Directive, the Aarhus Convention and the CS BEPPER report focusing on Broad Framework for Effective Public Information and Participation in Environmental Decision-making in RWM. In this perspective, the possibilities and challenges of RWM in Large Inventory Member States (LIMS) and Small Inventory Member States (SIMS) are analysed with regard to interactions with CS, drawing on various exchanges between the CS experts and experts from RW management organisations, RW technical support organisations and RW research entities within ROUTES, including the last exchange at a workshop held at Nuclear Engineering Seibersdorf GmbH in Austria in May 2023, where contrasting examples of CS engagement approaches in LIMS and SIMS were compared.

## 2. Differences and similarities between SIMS and LIMS in relation to interaction with civil society

### 2.1. The negatives and positives regarding SIMS

Regarding SIMS, the **negatives** are often the following:

- a less developed nuclear infrastructure
- less factual and technical knowledge
- less political focus on RWM and funding for safe and sustainable solutions
- the general public might not be sufficiently informed
- less NGOs follow RWM and have to rely on international networks for critical insight.

**Positive** is that, because any form of dialogue on RWM might start from scratch, there could be an opportunity of a broad consensus in the decision-making process, involving CS.

### 2.2. Similarities between SIMS and LIMS

Similarities do not only relate to technical, but also to sociological aspects of SIMS and LIMS, cf. *Figure 1*.

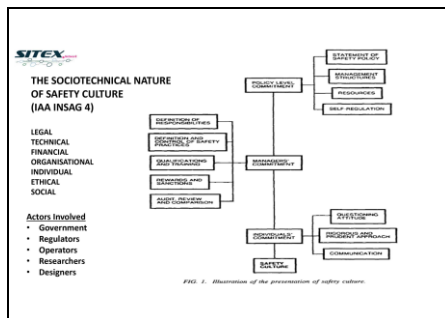


Figure 1: The sociological nature of safety culture, SITEX II<sup>1</sup>

The legal requirements are the same for SIMS and LIMS in relation to interaction with civil society. Here, T&PP are key issues in CS engagement and embedded in European and national law in the EU member states. Of crucial significance is the Aarhus Convention, which aims to link environmental with human rights. These relate to three areas: (a) the public's right of access to environmental information; (b) the public's right to participate in certain environmental decision-making processes; (c) and the public's right of access to courts or tribunals in environmental matters.

Transparency in the nuclear sector includes informing all persons and stakeholders in a way that they can assess the risk of a nuclear activity. Information has to be provided complete and early enough. Participation means that all stakeholders, among those especially environmental NGOs, siting communities and the public, can take part in legal proceedings, hearings and in consultation fora.

Furthermore, the Espoo Convention on Environmental Impact Assessment in a Transboundary Context enables affected countries and their public to participate in SEA and EIA procedures in other countries for projects that may have significant transboundary impacts. Furthermore, the importance of T&PP in the nuclear sector is widely recognized. According to Article 10 in the Spent Fuel and Radioactive Waste Directive,

## 3. Two Examples of effective interaction with civil society in SIMS and LIMS

Both Denmark and Sweden have implemented institutional mechanisms to facilitate effective interaction with civil society.

### 3.1 The Danish example

In 2016, a national contact forum for RW was established under the Ministry of Higher Education and Science. The idea is to bring all the stakeholders together in one room and have them address each other directly.

The national forum has approximately twenty members (representatives from the union of citizens groups and Roskilde, green NGOs, Local Government Denmark, Danish Regions, the regulating agencies - Danish Health Authorities (Radiation Protection) and Danish Emergency Management Agency - Danish Decommissioning, Geological Survey of Denmark and Greenland and the Danish Agency for Higher Education).

Any representative can bring anything to the agenda for future meetings and the minutes are public.

The national contact forum is supplemented by a regional contact forum in the municipality, where an interim storage facility is built, with potentially more contact fora to follow, when possible, host sites for the final repository are designated.

Furthermore, access to resources for the public is provided, not least by making second expert opinions on all RWM decisions possible: Affiliated with the contact fora is a panel of scholars from Danish universities, which provides second opinions in the RWM process and replies to questions from the general public. The panel members have been selected by The Danish Council for Independent Research, which provides independent scientific counselling to the Danish Government. The Danish model might serve as a model for ICS in SIMS.

### 3.2 The Swedish example

The Swedish government provides funding of interaction with civil society– e.g. for The Swedish NGO Office for Nuclear Waste Review, MKG - a cooperative effort between among others the Swedish Society for Nature Conservation and Nature & Youth Sweden. It is mainly financed by The Nuclear Waste Fund, a government authority with the primary task of administering fees that have been collected from NPP owners.

MKG is tasked with monitoring and reviewing the nuclear power industry's planning for identification of methods for repositories RW from NPPs and the industry's plans on siting of repositories, and participated in the legal proceedings regarding the proposed Swedish repository for spent nuclear fuel near the Forsmark NPP. The Swedish environmental courts also represent a positive example of access to justice.

The Swedish model might serve as a model for interaction with civil society in LIMS.

## 4. Interaction with civil society in relation to shared solutions and shared facilities

Interaction between SIMS and LIMS might result in cooperation on shared solutions and shared facilities.

In regard to ICS, first and foremost the objective is to achieve a level playing field for the collaborators, particularly in regard to the shared facilities. The idea of a level playing field is among others supported by the principle of a high level of environmental protection and the polluter-pays principle - both pillars of EU environmental law.

**Preliminary definition of a level playing field:** *In regard to the planning, constructing, operating and closing of shared facilities, a process where all or most of a set of relevant criteria are met. These pertain to best practices concerning emission, environmental quality, safety and security standards, procedural rules, including rules on permit schemes, environmental impact assessment and public hearings, liability, citizens' rights, including access to information and resources, participation in decision-making and access to justice, and monitoring rules.*

**The overriding principle:** *Any bilateral, multilateral, European and international cooperation on planning, constructing, operating and closing of shared nuclear facilities, must involve partners that follow the same technical, legal and ethical standards in their home countries.*

If they do not have the same standards, they should follow the highest standards among the parties that are involved in the cooperation.

The standards must apply to all phases of the development and functioning of the shared facilities, including policy, framework and program establishment, site evaluation, selection and characterisation, and facility construction, operation, closure and post-closure – and obviously ICS<sup>1</sup>.

## 5. Conclusions

There are many similarities between SIMS and LIMS, particularly regarding their sociological character and the legal requirements for T&PP, but also differences in terms of interaction with civil society. Both could benefit from solid institutional mechanism to facilitate engagement of civil society. Here, the Danish example could serve as model for SIMS and the Swedish example as model for LIMS. Interaction between SIMS and LIMS might result in cooperation on shared solutions and shared facilities. In regard to interaction with civil society, first and foremost the objective is to achieve a level playing field for the collaborators, particularly in regard to the shared facilities.

<sup>1</sup> Dubreuil G.H., Presentation, Socio-technical dimensions of Safety Culture in the context of Very Long Term RWM, Mutadis, April 16th, 2021.

<sup>2</sup> Zeleznik N., Swahn J., Haverkamp J., Hooge N.H., Rey H., Daniska M. (2021): Implementation of ROUTES action plan first phase. Final version as of 04/05/2022 of deliverable D9.16 of the HORIZON 2020 project EURAD. EC Grant agreement no: 847593..