



EURADWASTE'22

30 May - 3 June 2022
Lyon, France



Key activities and upcoming challenges

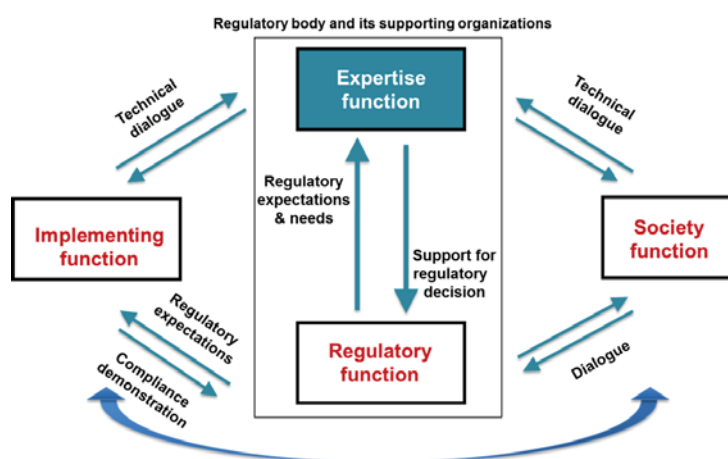
V. Dettleux (Bel V), D. Pellegrini (IRSN), F. Bernier (FANC), A. Geisler (Mutadis),
G. Heriard Dubreuil (Mutadis), N. Železnik (EIMV), J. Miksova (SURO), M. Olin (VTT)



10th European Commission Conference on EURATOM Research and Training in Radioactive Waste Management
30 May - 3 June 2022 | Lyon, France

Context of the SITEX initiative (1/3)

Main functions interacting in the RWM



SITEX.Network focuses on the Expertise Function
and its links with the other Functions.



10th European Commission Conference on EURATOM Research and Training in Radioactive Waste Management
30 May - 3 June 2022 | Lyon, France

Context of the SITEX initiative (2/3)

The role of the Expertise Function

- Key mission of *Expertise Function* is to provide the technical and scientific basis for supporting the decisions made within the *Regulatory Function*.
- Article 6 of EC Directive 2011/70/Euratom (addressing safety of RWM) states notably:
 - Member states shall establish and maintain a competent regulatory authority;
 - Regulatory authority is functionally separate from Waste Management Organizations (WMOs).
- Independence and competence of the *Regulatory Function* calls for the support of a competent *Expertise Function*, independent from the *Implementing Function*.
- Typical activities of the *Expertise Function* include:
 - Contributing to the establishment of regulatory requirements;
 - Developing guidance for meeting these requirements;
 - Evaluating Safety Cases related to RWM facilities;
 - Develop and maintain its knowledge and skills.



Context of the SITEX initiative (3/3)

Develop and maintain the knowledge and skills of the Expertise Function

- For complex issues such as those associated to operational and long-term safety of disposal facilities, following activities are essential:
 - Performing and/or overseeing R&D activities;
 - Exchanging between expertise function organizations on practices;
 - Organize and/or participate in training activities to transfer knowledge;
 - Interacting with the civil *Society Function*.
- These activities are essential to build the expertise and a mutual trust with the stakeholders (e.g. the civil society) of the *Expertise Function*.
- For instance, Article 8 of the EC 2011/70/EURATOM directive requires all parties (i.e. *Expertise Function* included) *to carry out education, training and R&D activities*.
- Concerning R&D, IAEA safety guides stresses that *the Regulatory Body* (and thus its supporting organizations) *may need to conduct or commission R&D in support of regulatory decisions* (see IAEA GS-G-1.1 and IAEA GS-G-1.2).



From SITEX projects to SITEX.Network (1/3)

The born of the SITEX initiative

- In this context, several organizations fulfilling an *Expertise Function* and Civil Society Organizations (CSOs) started the “**SITEX** initiative” in 2012.
- What does SITEX mean ?
 - Sustainable network for **I**ndependent **T**echnical **EX**pertise of Radioactive Waste Management
- What is the overall objective?
 - Enhance and foster cooperation at international level to achieve a high quality *Expertise Function*.
 - Independent from Waste Management Organizations (*Implementing Function*).
 - Aiming at supporting the *Regulatory Function* and the *Society Function*.
 - In the field of radioactive waste management (including disposal).
- The start of this « SITEX initiative » was funded by the European Commission.



From SITEX projects to SITEX.Network (2/3)

SITEX projects paved the way to the SITEX.Network



SITEX project
2012-2013



SITEX-II project
2015-2017



Since January 2018

Preparatory phase

- Define needs and missions of the expertise function.
- Define objectives of the future SITEX.Network.
- Define possible activities and interactions of the network.

Test phase

- Test the practical implementation of activities and interactions.
- Prepare the Terms of References and action plan for establishing SITEX.Network.

Members



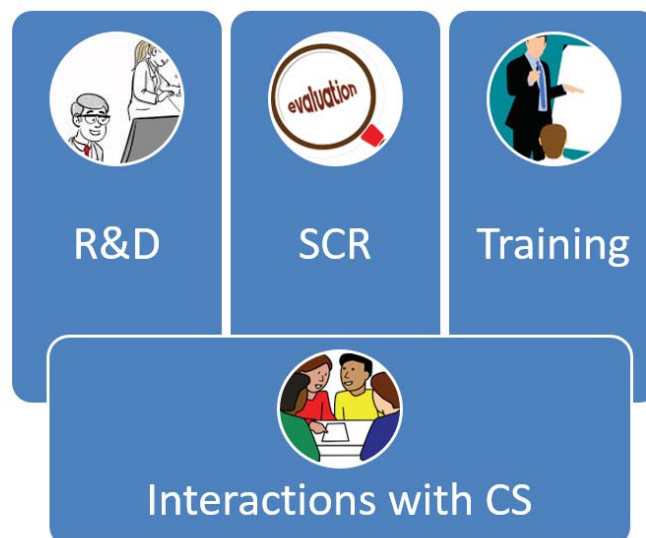

From SITEX projects to SITEX.Network (3/3)

SITEX.Network foundation

- Purpose of the SITEX.Network association:
« Enhance and foster cooperation at international level in order to achieve a **high quality expertise function, independent** from organizations responsible for the implementation of waste management programmes, aiming at **supporting the Nuclear Regulatory Authorities, as well as the Civil Society, in the field of safety of radioactive waste management.** »
- Achieved through a close cooperation between its members with a plurality of actors and views: NRAs, TSOs, REs with an expertise function and Civil Society Organizations.
- This plurality of actors and views is seen as an added value of the network, compared to other existing networks.



SITEX.Network: types of activities



SCR: activities related to Safety Case Review



R&D activities



- Coordination of the EURAD Joint Programme TSO College.
 - « Counterpart » of IGD-TP and EURAD Sciences
 - Connection between the College and the Bureau (EURAD 2nd wave, SRA Update and preparation of EURAD 2 proposal...)
- Exchanges about EURAD results with all network members.
- Management of the SITEX.Network Strategic Research Agenda.
- Integration of « hybrid » Social Sciences & Technical topics in the SRA.
- Development of common modelling activities within the Network.



Safety Case Review (SCR) activities



- Organisation of Topical days:
 - 2019: Governance of radioactive waste management;
 - 2020: Deep Borehole Disposal;
 - 2022 (to be announced soon): Pathway Evaluation Process (PEP).
- Production of a literature survey about Deep Borehole Disposal.
 - Evaluation of pro and cons of DBD compared to the current regulatory framework.
 - Presented at the last EURAD Lunch & Learn and (draft) available at <http://sitex.network>.
- Organisation of a Safety Case review benchmark:
 - A Fictive SC for a Disposal Facility was reviewed by SITEX.Network members.
 - Exchanges about review outcomes and approaches between the members (CS included).
 - Lessons learned from this exercise will be documented and recommendations shared.



Training activities



Training

- A training module for generalist experts was developed and given in 2020.
- Participants from various kinds of actors, as well as CS.
- 2021: no training sessions organized (COVID).
- 2022: new training session will be organised as a contribution to an EURAD Course on « Safety Case development and review ».
 - In collaboration with other EURAD Colleges and NEA.
 - To be announced soon.



CS Interaction activities

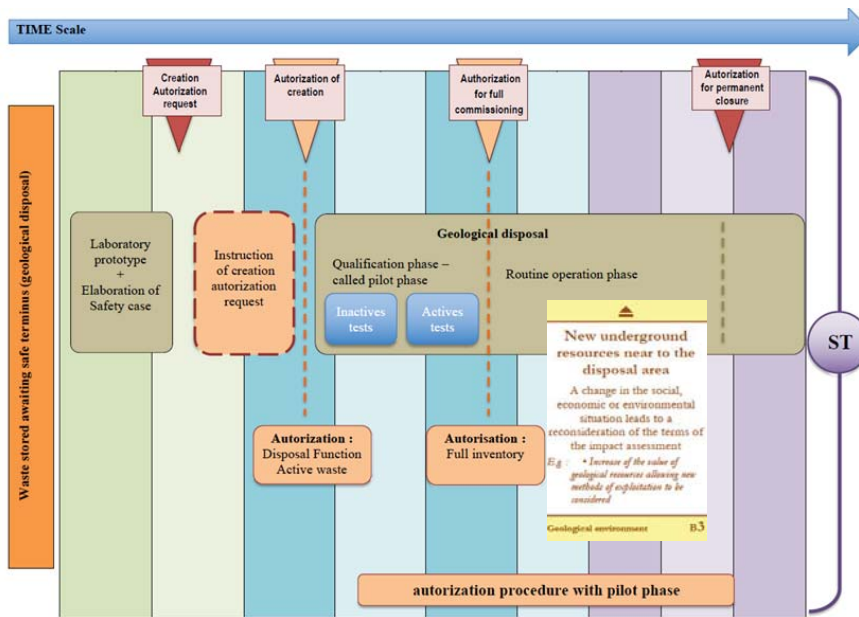
Interactions with CS



- Transversal activity: involvement of and interactions with SITEX.Network CS members in all types of activities.
- Development and management of the PEP.
- PEP is a “serious game” allowing:
 - structured discussions,
 - about possible waste management pathways,
 - between actors and persons with various backgrounds (non « experts » from CS included).



The Pathway Evaluation Process (PEP)



???

Democratic management of choices

Does the PAQ's governance system make it possible to anticipate the steps where important choices will have to be made democratically, in order to put in place the necessary institutional guarantees?

Participation X4



1 game board = 1 pathway towards a Safe Terminus



The PEP is living !

- France: part of the French Public debate about RWM (PNGMDR).
 - 24, 25 May 2019: "L'atelier de la relève" about 40 students.
- Belgium: in collaboration with the University of Liège (ULg)
 - 24 April 2021: more than 80 students.
 - 18 November 2021: about 30 students.
- Online for SITEX.Network members (2021)
- In the framework of SITEX.Network training sessions
- Other uses of PEP are already planned in 2022.

We are developing a « Charter » for the use of the PEP by organisations outside of SITEX.Network.

→ Will be presented at an upcoming SITEX.Network Topical Day !



Some upcoming challenges

- SITEX SRA Update (input to EURAD SRA Update).
- Coordination of TSO & CS views in the development of an EURAD 2 proposal.
- PEP Charter and further development.
- EURAD Safety Case training.



Conclusions

- Since 2012 the SITEX initiative answers to a need for more coordination of the Expertise Function views in RWM. This need is growing since several years, notably with the development of joint programming in RWM (e.g. EURAD).
- SITEX.Network contributes to build a strong Expertise Function, connected with its stakeholders and providing a high quality support to the Regulatory Function.
- SITEX.Network involves a plurality of actors with an Expertise Function and Civil Society Organizations. This plurality of views is seen as an important added value of the network, compared to existing networks.
- It allows notably the development of joint activities between the Expertise Function and Civil Society Organizations, involving the Public (e.g. PEP). Such activities contribute to maintaining a mutual trust between RWM stakeholders.
- SITEX.Network supports EURAD and its multi actors dimension (CSOs included), and looks forward to contribute to the preparation of an EURAD 2 proposal.

