EURAD's Training & Mobility and Interactions with Civil Society

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Introduction

The **European Joint Programme on Radioactive Waste Management** (EURAD) aims to achieve a step change in European collaboration towards a safe implementation of the national RWM programmes through the development of a robust and sustained science, technology and knowledge management (KM) programme. There are more than 50 mandated actors (WMO, TSO, RE) and their link third parties from 23 European countries participating in EURAD.

The main goals of knowledge management within EURAD are to (i) preserve generated knowledge, (ii) transfer knowledge towards Member States with early-stage RWM programmes, (iii) transfer knowledge between generations, and (iv) disseminate knowledge.

There are **three dedicated WPs contributing to the EURAD knowledge management**. **WP11 – State of Knowledge**, representing experts' view of the most relevant knowledge and associated uncertainties in a specific domain of RWM, **WP12 – Guidance**, consisting of developing a comprehensive suite of instructional guidance documents and, **WP13 -Training and Mobility,** focusing on actions supporting competence building and knowledge preservation and extension in the radioactive waste management (RWM). Special emphasis is placed on an interaction with existing networks, including those engaging civil society and its experts. All KM activities are **supervised by EURAD WP1** (**Project Management Office**, PMO and **Chief Scientific Officer**, CSO) and include developing EURAD Roadmap and the managing EURAD Knowledge Management and Networking Programme.

EURAD School of Radioactive Waste Management

The **EURAD School of Radioactive Waste Management** has been established and maintained by EURAD WP 13 – Training & Mobility. The School of RWM aims to assist end-users in acquiring, developing, disseminating, using, sharing and preserving knowledge and skills relevant to achieving specified learning objectives. The School of RWM acts as the executive body for all EURAD-related training and mobility actions.

The School's end-users are students, professionals and experts in RWM, as well as civil society.

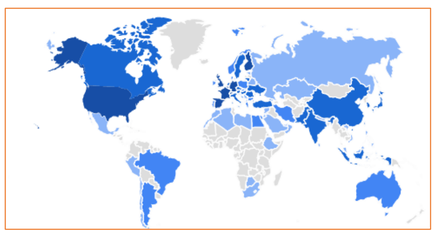
Four main initiatives of the School can be highlighted:

- ***the organization of training courses –*** a portfolio of basic and specialized training courses was set up containing an up-to-date list of existing training initiatives, newly developed trainings are based on a gap analysis performed in frame of priorities and end-user needs.

- ***the organisation and coordination of a mobility programme - EURAD*** Mobility Programme allows its beneficiaries to perform mobility actions in order to improve necessary practical skills and also sharing and obtaining tacit and implicit knowledge in the EURAD community. The list of the infrastructures available for mobility actions is published on the School's webpage.
- ***the hosting of webinars -*** webinars are organised on a regular basis. These are short, informal online get-togethers, which are open to all via registration. The topics discussed range from very specialized scientific matters to more general and overarching themes. Recordings are publically available on the School's webpage in order to preserve knowledge and facilitate dissemination.
- actions to ***support the EURAD PhD community -*** as future key actors in the field of RWM, EURAD PhD community (>100) can benefit from early networking with established experts and is strongly supported by providing: (i) Information on available/upcoming courses, (ii) the possibility to perform mobility actions, (iii) an overview of all PhD research performed in EURAD, (iv) a list of events of interest for PhD students, (v) a discussion forum.

In order to structure and centralize all information regarding the **School of RWM** and its activities, WP13 launched a dedicated EURAD **webpage** to serve as a hub for all of the School's activities: **https://euradschool.eu/.**

To strengthen the connection to the rest of EURAD, but also to increase its visibility, the website is linked to the **general EURAD website https://www.ejp-eurad.eu/.**



Overview of countries from which new users interacted with the School of Radioactive Waste Management's website in 2021

Interaction with Civil Society

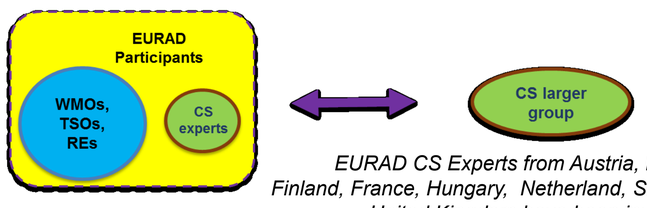
Why interaction with civil society?

- Civil Society (CS) participants, are not research partners, but have specific concern on RWM safety,
- They are involved from the perspective of Aarhus Convention (Access to information, public participation and access to justice) implementation,
- One important objective of EURAD is to allow interactions between all categories of actors: WMOs, TSOs, REs and Civil Society (through a "3+1 Dialogue"),
- The interaction between all categories of actors involved in RWM research and Civil Society aim at improving mutual understanding of how and to what extent RD&D activities on RWM make sense and contribute to improved decisions-making process and safe RWM,
- It shall also contribute to developing ideas, propositions and methodologies on (i) how to interact with Civil Society on scientific and technical result, (ii) how to deal with uncertainties, and (iii) how to interact with Civil Society in order to promote mutual benefit of available knowledge.

How does CS interact? - Double wing model:

Model of pluralistic interactions was developed and tested in previous EC projects (SITEX-II, JOPRAD):

- CS experts with technical and socio-technical background or/and experience on the involvement of CS in scientific and technical issues,
- Participation in EURAD activities through Nuclear Transparency Watch (NTW), translating scientific/technical results for exchanging with a larger group of CS representatives (Civil Society Organisations, representatives of local communities, individual experts).



EURAD CS Experts from Austria, Denmark, Finland, France, Hungary, Netherland, Slovenia, Sweden, United Kingdom have been involved

15 countries are currently represented in the **Civil Society larger group**: Belgium, France, Germany, Italy, Norway, Sweden, United Kingdom, Bosnia and Herzegovina, Bulgaria, Czech Republic, Hungary, Poland, Slovakia, Slovenia, Ukraine.

Methodology for elaborating the seminars (Example of interaction with Civil Society within Strategic Study WP10 – Understanding of uncertainty, risk and safety (UMAN):

- ***Pluralistic teams for organising the seminars -*** inclusion of different views in the elaboration of seminars' frame.
- ***Material for discussions -*** based on results achieved by UMAN in other tasks (on uncertainties characterisation, management options, etc.). There are four Seminars enabling a large discussion of UMAN results with a pluralistic stakeholder group including EURAD researchers, Civil Society actors, regulators and international organisations (e.g. IAEA, Forum on Stakeholder Confidence, NEA, etc.):
  - Elaboration of Keynotes presenting views of different types of actors (Seminar 1)
  - Selection of three topics of interest for pluralistic discussion related to Site of Geosphere (Seminar 2)
  - Focus on Human Aspects related uncertainties (Seminar 3)
  - Methods that can be used for discussing and organising pluralistic assessments of uncertainties throughout a disposal programme (Seminar 4, planned)
- ***CS experts involved in UMAN work:***
  - Review of the work performed by UMAN partners,
  - Elaboration and administration of a questionnaire to CS larger group on uncertainties,
  - Identification of key CS priorities regarding the contribution to UMAN,
  - Discussion with CS larger group during UMAN session of the ICS workshops.
- ***« Scenarios » & « Key questions » are used as starting points*** to initiate exchanges & views based on concrete cases, e.g. concrete cases on uncertainties discussed within UMAN Seminar 3 dedicated to human aspects related uncertainties: (i) Construction problem due to a failure in the quality management system, (ii) Accident due to a lack of safety culture, (iii) New uncertainty arising through R&D, (iv) Safety issues due to a tight schedule of disposal facility implementation, (v) Consequences of postponement of the beginning of the disposal facility operation on safety, etc.

Conclusion

- Training and mobility actions are developed and further implemented under the **cooperation** with (i) PMO, (ii) all KM WPs, (iii) scientific/technical WPs, (iv) Strategic Studies WPs and (v) actors outside EURAD, all activities are organised in compliance with EURAD basic documents, Quality Assurance Plan and EURAD KM and Networking Programme.
- **Special emphasis is done on**: (i) interaction with all stakeholders, (ii) networking, (ii) interaction with international institutions (IAEA, NEA), (iii) exchange with other EC projects; the interaction is performed in particular through seminars, workshops, webinars.
- **The training topics of high priority were identified within WP13 Survey**: (i) Safety strategy, (ii) Safety case production, (iii) Treatment of uncertainty, (iv) Waste acceptance criteria, (v) Confirm waste form compositions, properties and behaviour under storage and disposal conditions, including impact on the disposal environment.
- **Based on priority list 3 EURAD new trainings are currently developed**: (i) Training Course on Safety Case Development and Review (WP13, NEA, IGD TP, SITEX.Network), (ii) Training on Uncertainty Management (WP UMAN), (iii) Training Course on Geochemical & Reactive Transport Modelling for Geological Disposal (WP13, WP ACED, WP DONUT, WP FUTURE).
- 20 supported **mobility actions** have been performed: internships, technical visits, training courses, conferences, WSs.
- The School is strongly engaged in the **EURAD PhD community establishment and work** in order to contribute to the improvement of expertise and professional growth of its participants
- The School is supporting the necessity of **translation of scientific/technical results for exchanging with CS representatives** and improving the necessary understanding on RD&D performed to support the development of safe solutions for RWM.
- **The School is aiming at innovative ways for close exchange between experts and Civil Society based on a model of pluralistic interactions in order to foster mutual understanding and trust between stakeholders involved in the RWM, incl. those from Civil Society.**

For more information

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