

# EURAD SCHOOL OF RADIOACTIVE WASTE MANAGEMENT

Niels Belmans (SCK CEN) & Michèle Coeck (SCK CEN)

17 November 2021

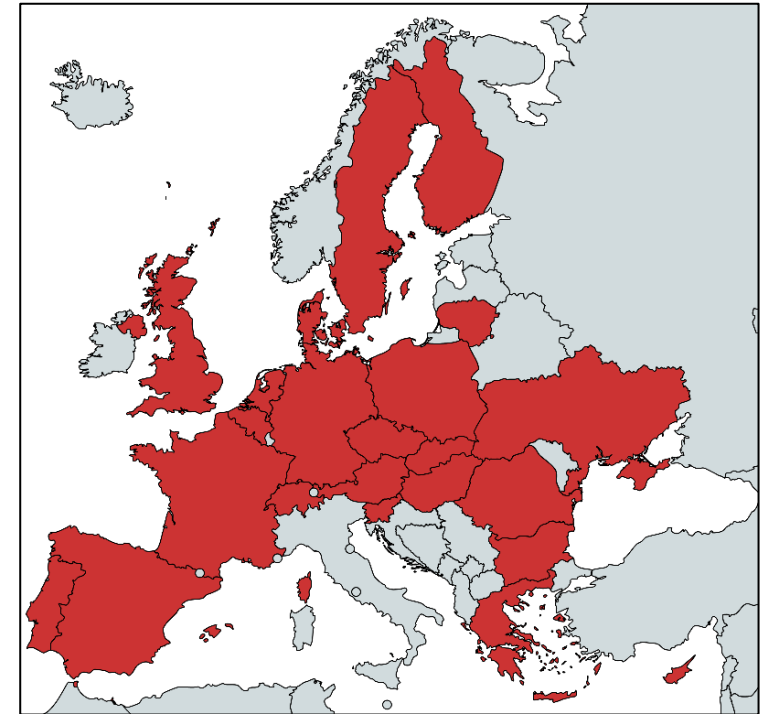


*The project leading to this application has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n° 847593.*

# EURAD - European Joint Programme on Radioactive waste management

Partner organizations:

- 19 Waste Management Organizations
  - 13 Technical Support Organizations
  - 19 (nationally funded) Research Entities
- ➔ Representing ministries of 23 European countries

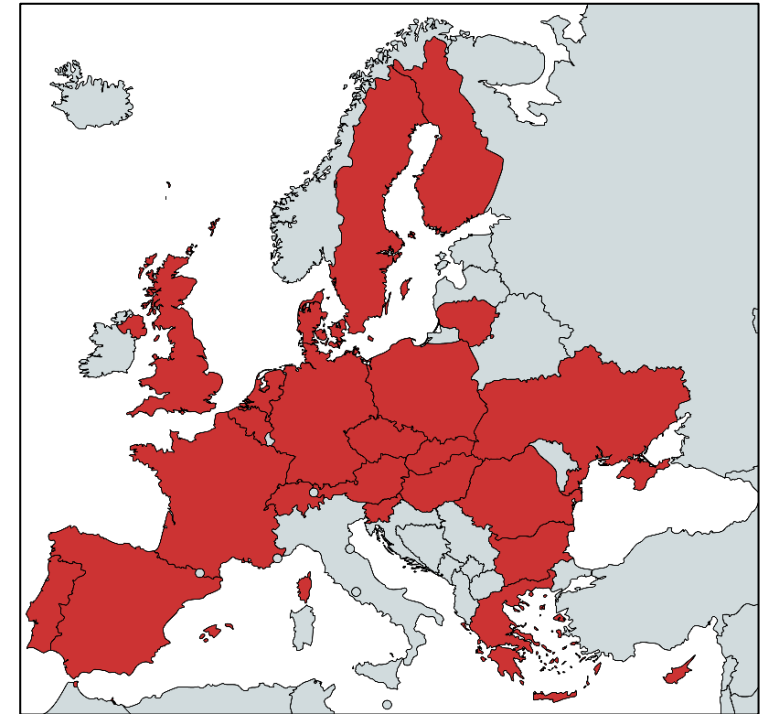


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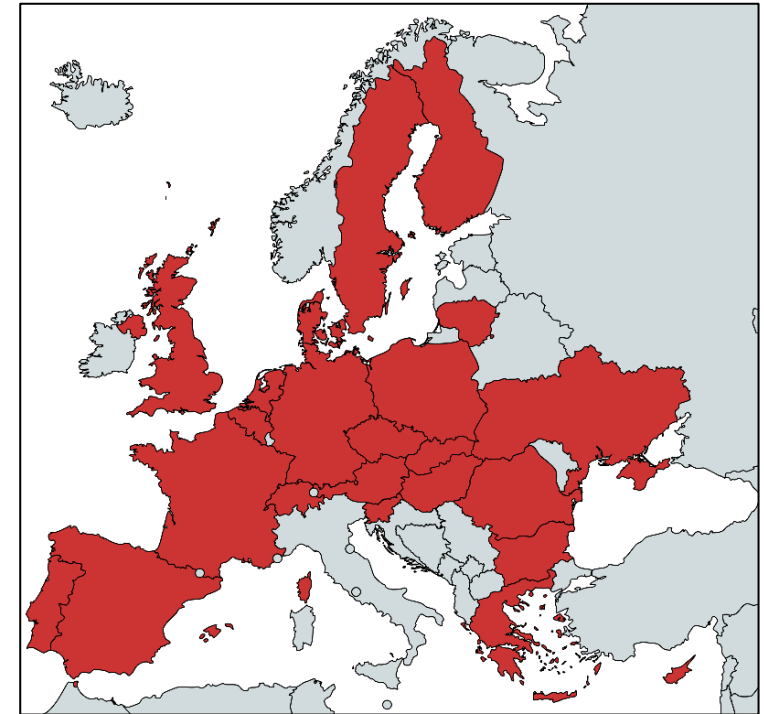
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*A step change in European collaboration towards safe RWM, including disposal, through the development of a robust and sustained science, technology and knowledge management programme that supports timely implementation of RWM activities and serves to foster mutual understanding and trust between Joint Programme participants.*

## EURAD Objectives

- Implement a robust and sustained state-of-the-art science and technology programme
- Consolidate efforts across Member-States, organisations and generations on Knowledge Management
- Elaborate upon complex issues and identify emerging ones by bringing together all interested actors to jointly conduct Strategic Studies
- Foster mutual understanding / trust between participants as well as other stakeholders, incl. from Civil Society





## EURAD Knowledge Management & Networking Programme

IAEA defines knowledge management (KM) as:

*“an integrated, systematic approach to identifying, acquiring, transforming, developing, disseminating, using, sharing and preserving knowledge, relevant to achieving specified objectives”\**



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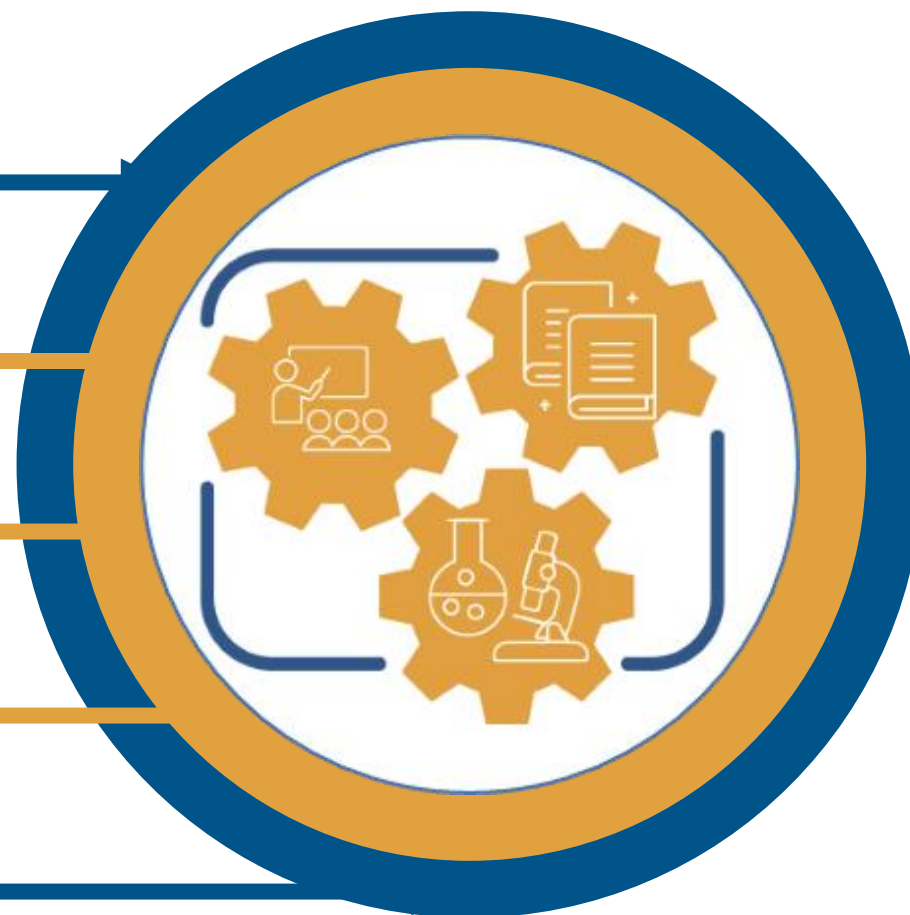
*“an integrated, systematic approach to identifying, acquiring, transforming, developing, disseminating, using, sharing and preserving knowledge, relevant to achieving specified objectives”\**

→ “Enhance knowledge management and transfer” is one of EURAD’s main objectives

→ EURAD Knowledge Management & Networking Programme

# EURAD Knowledge Management & Networking Programme

- 1 Roadmap**  
A common framework to structure knowledge
- 2 State of Knowledge**  
What we know and why its important
- 3 Guidance**  
Best practice and lessons learned
- 4 Training & Mobility**  
Nuclear experience and know-how
- 5 Networking & Tools**  
Connecting people to people, and people to content



# EURAD Knowledge Management & Networking Programme

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## Roadmap

A common framework to structure knowledge

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## State of Knowledge

What we know and why its important

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## Guidance

Best practice and lessons learned

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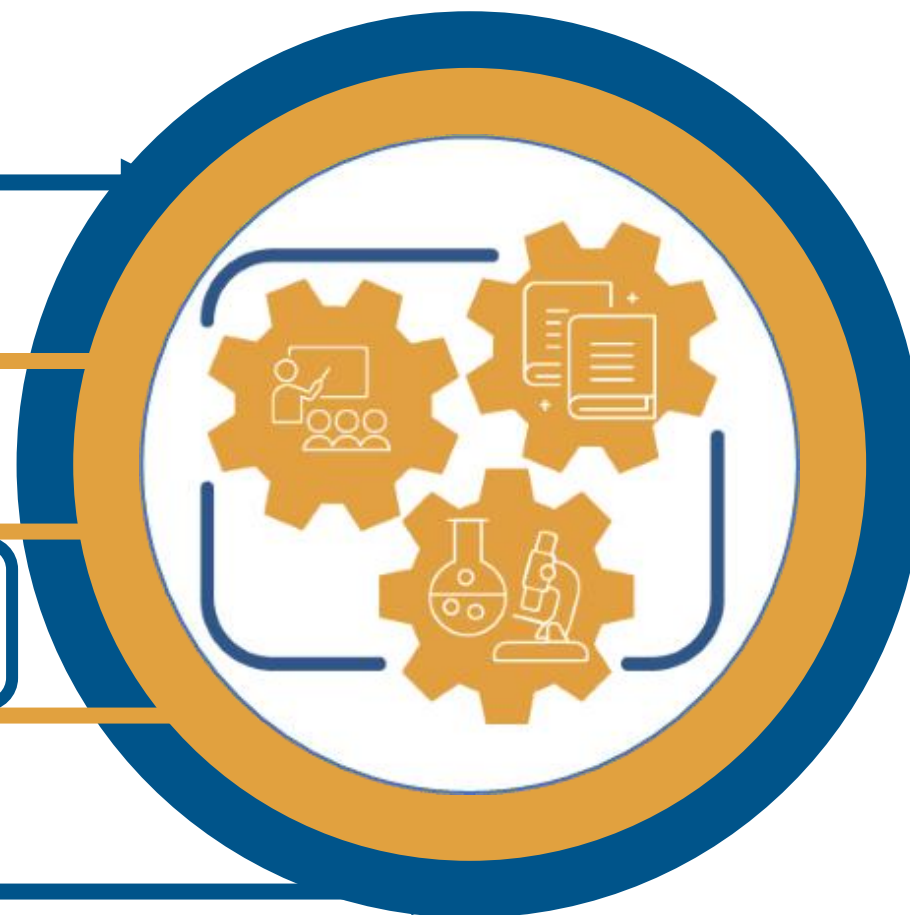
## Training & Mobility

Nuclear experience and know-how

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## Networking & Tools

Connecting people to people, and people to content



# EURAD Training and Mobility Work Package

Work Package Lead:



Partner organizations:



# The EURAD School of Radioactive Waste Management

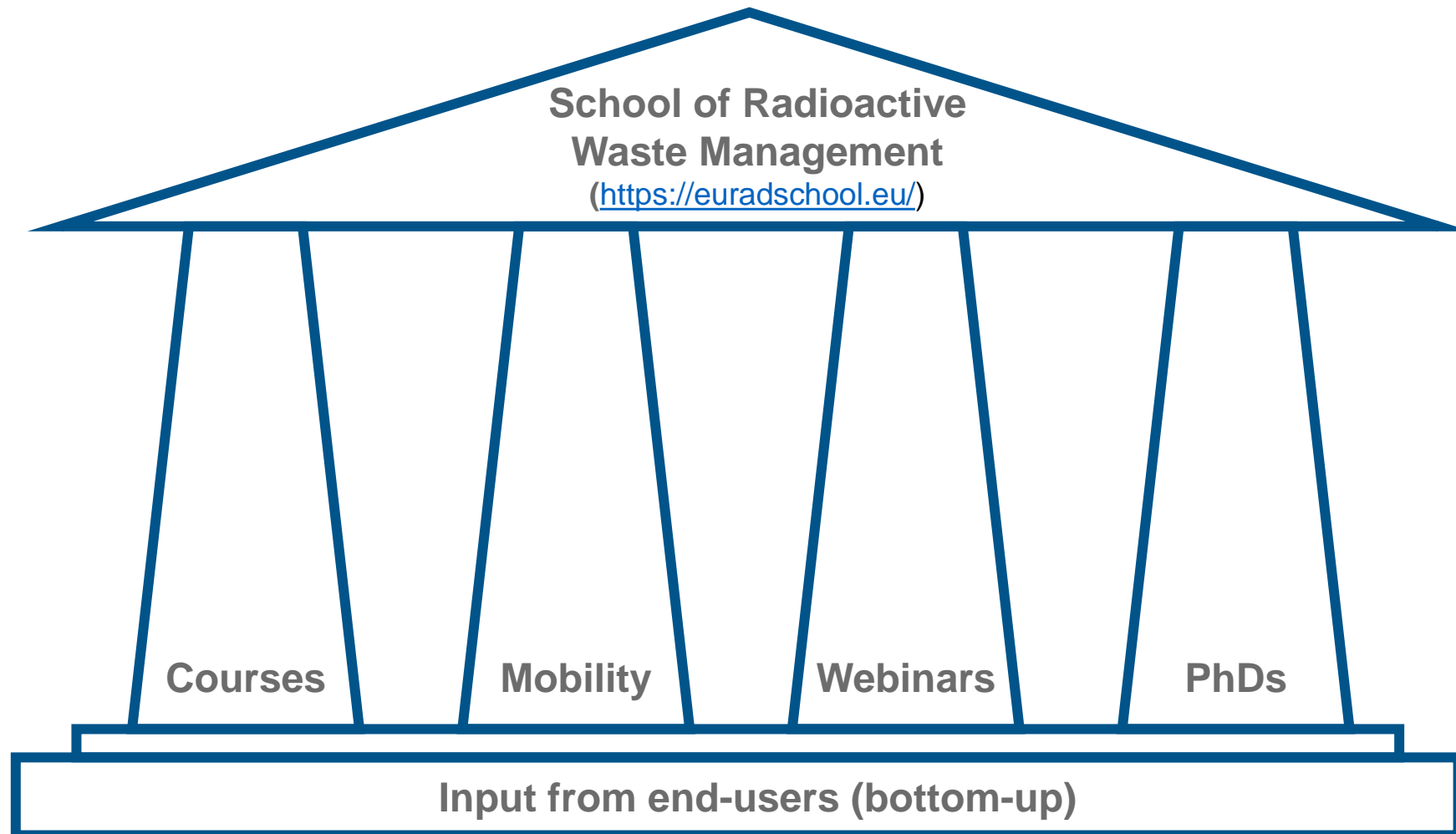
- The School of Radioactive Waste Management (RWM) aims to assist end-users in:
  - *“an integrated, systematic approach to identifying, **acquiring**, transforming, **developing**, **disseminating**, **using**, **sharing and preserving knowledge (and skills)**, relevant to achieving specified objectives”*

# The EURAD School of Radioactive Waste Management

- The School of Radioactive Waste Management (RWM) aims to assist end-users in:
  - *“an integrated, systematic approach to identifying, **acquiring**, transforming, **developing**, **disseminating**, **using**, **sharing** and **preserving knowledge (and skills)**, relevant to achieving specified objectives”*
- To this end, the School supports competence (= knowledge, skills and attitudes) building through:
  - A portfolio of needs-driven(existing and newly developed) training courses
  - A dedicated Mobility Programme
  - Organization of webinars on broad and specific topics by subject-matter experts
  - Maintaining a library of webinar recordings
  - Support for the EURAD PhD community
  - Host a discussion forum to reinforce the idea of ‘one big EURAD family’

➔ Centralized on a dedicated website: <https://euradschool.eu/>

# The EURAD School of Radioactive Waste Management





## EURAD School of RWM – Needs-driven training courses

- **Needs-driven**
  - End-user feedback was gathered (March – May 2020): 80 respondents
  - **Training needs** were identified (April 2021): 363 training needs, 262 of which were identified as difficult to find



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  - In collaboration with RD&D and Strategic Studies WPs
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- **Main goal: effective knowledge transfer and competence building towards end-users**



## Eurad School of RWM – Needs-driven training courses

- Implementation of training courses varies depending on the:
  - Training needs
  - Target audience
  - Type of knowledge to be transferred (explicit vs implicit vs tacit)
  - Desired competences to be acquired
  - Learning outcomes



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- Based on IAEA’s Systematic Approach to Training
  - Analysis
  - Design
  - Development
  - Implementation
  - Evaluation



## EURAD School of RWM – Mobility Programme

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- EURAD partners can offer internships on the School website



## EURAD School of RWM – Webinars

- The School organizes webinars on broad and specific topics by subject-matter experts, e.g.:
  - Nuclear Knowledge Management
  - PREDIS
  - The US Nuclear Waste Management and Disposal Strategy
  - ...

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- ➔ Webinars are open to all
- **Recorded in order to preserve knowledge and facilitate dissemination**  
(<https://www.youtube.com/playlist?list=PLahXOQn-bremN911IEn0w8yAzQyuUR3ky>)

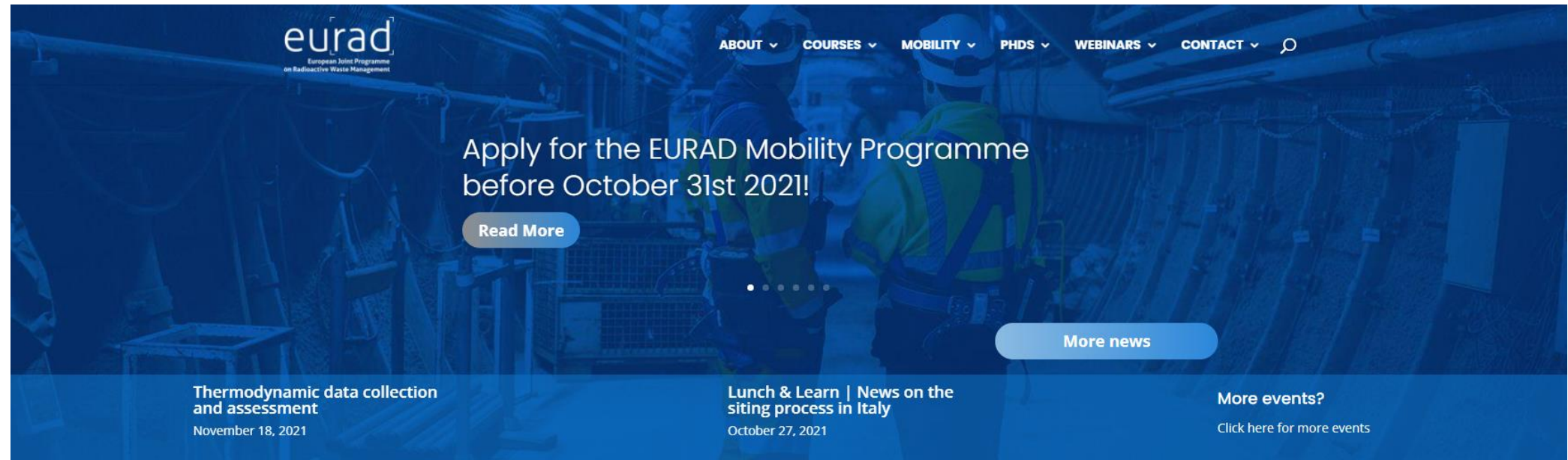
## EURAD School of RWM – Support the PhD community

- **The School wants to support the EURAD PhD community by providing:**
  - Information on available/upcoming courses
  - The possibility to perform mobility actions
  - An overview of all PhD research performed in EURAD (<https://euradschool.eu/overview-of-phds/>)
  - A list of events of interest for PhD students
  - A discussion forum (<https://forum.euradschool.eu/>)
- **The aim is to foster a community between the PhD students, researchers and the Training and Mobility work package**

**➔ PhD students are the future key figures in radioactive waste management!**

# EURAD School of RWM – Achievements – Launch of website and forum

Website was launched on December 21<sup>st</sup> 2020



## EURAD Roadmap and the School of Radioactive Waste Management

The **EURAD Roadmap** is a representation of a generic radioactive waste management programme that shall enable users and programmes to 'click-in', and access existing knowledge and active work or future plans in EURAD and elsewhere. Therefore, activities of the School of Radioactive Waste Management will be linked to the Roadmap.



## **EURAD School of RWM – Achievements – Launch of website and forum**

**Website was launched on December 21<sup>st</sup> 2020**

**= official foundation of the School of Radioactive Waste Management**

**Number of site visits as of November 2021:**

- 1,596 new users
- 5,513 page views

**Discussion forum was launched in June 2021**



## EURAD School of RWM – Achievements – Launch of website and forum

The forum contains the following sub-forums:

- **EURAD School of Radioactive Waste Management**
  - Courses & Events
  - Mobility actions
  - PhD students
  - Publications
- **EURAD Roadmap**
  - Theme 1
  - ...
  - Theme 7
- **General**



## EURAD School of RWM – Achievements – Training courses

Two training courses have been successfully organized:

- ‘Multiphysical couplings in geomechanics’
  - January 22<sup>nd</sup> 2020 – January 24<sup>th</sup> 2020 (face-to-face)
  - 70 participants



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- **‘Introductory course to EURAD and Radioactive Waste Management’**
  - September 14<sup>th</sup> 2020 (online)
  - 260 participants
  - Recording of lectures is publically available and were viewed 537 times (as of September 2021)



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Three courses are currently planned:

- Uncertainty management
- EURAD Roadmap Domain Insights and State of Knowledge
- Safety case production and review



## EURAD School of RWM – Achievements – Mobility Programme

- Launched on April 8<sup>th</sup> 2020
- Guidelines, applications and evaluations via an online platform (Evalato)
  - <https://pro.evalato.com/2185>
- Numbers (as of October 2021)
  - 12 applications (6 complete applications)
  - 4 mobility actions approved (2 still under review)
  - 2 mobility actions completed



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**The Mobility Programme suffered under the travel restrictions due to COVID-19**

→ The situation is expected to improve in the coming months

## EURAD School of RWM – Achievements – Webinars

Title	Date	# attendees	# views (YouTube)*
Synergies of EURAD with the PREDIS project addressing pre-disposal waste treatment; <i>Erika Holt (VTT)</i>	28/10/2020	30	62
News from the German Site Selection Procedure; <i>Astrid Göbel (BGE)</i>	25/11/2020	19	77
Celebrating 20 years of the IGSC; <i>Lucy Bailey (IGSC)</i>	27/01/2021	45	34
Knowledge Management in Nuclear Organizations; <i>Dinara Abbasova (HZDR)</i>	24/02/2021	22	23
The IGD-TP: European waste management organisations coordinating international R&D activities; <i>Irina Gaus (Nagra, IGD-TP)</i>	31/03/2021	19	57
The next-generation scientific research for the safe management of radwaste – EURADSCIENCE; <i>Christophe Bruggeman (SCK CEN)</i>	28/04/2021	75	9
Steps for Sharing (ERDO Association); <i>Ewoud Verhoef (ERDO)</i>	26/05/2021	44	18
The SITEX.Network; <i>D. Pelligrini (IRSN), F. Bernier (FANC), N. Zeleznik (NTW)</i>	30/06/2021	53	16
EC-JRC activities on RWM and decommissioning; <i>Manuel Martin-Ramos (EC-JRC)</i>	29/09/2021	51	11
US Nuclear Waste Management and Disposal Strategies; <i>Rodney Ewing (Stanford University and Spogli Institute)</i>	06/10/2021	107	17

\* Up until October 15<sup>th</sup> 2021



## EURAD School of RWM – Achievements – Support PhD community

Two events were organized specifically aimed at the EURAD PhD Community:

- **EURAD PhD Event N°1**
  - September 15<sup>th</sup> 2020 (online)
  - 22 PhD students presented themselves and their work to the EURAD community
  - 65 EURAD experts attended this event
  - Recording was viewed 163 times (as of October 2021)

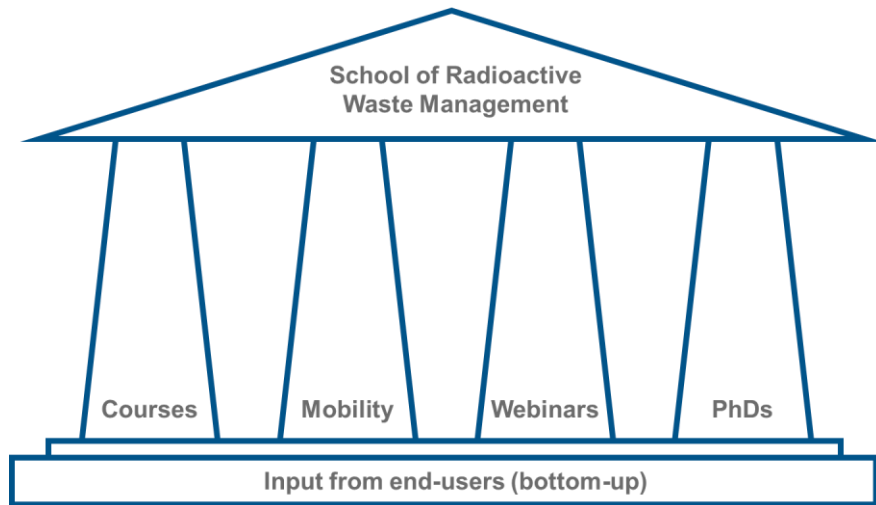


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- **PhD session during EURAD Annual Event N°1**
  - March 17<sup>th</sup> 2021
  - 6 PhD students presented the PhD work being done in each of the RD&D WPs
  - Presentations followed by short debate between PhD students and experts

## Summary



- School of RWM was successfully launched
- Trough its 4 pillars it is an integral part of EURAD's KM programme
- Assists end-users in:
  - Acquiring
  - Developing
  - Disseminating
  - Using
  - Sharing
  - Preserving

**knowledge and skills**

- All initiatives are end-user needs-driven

# QUESTIONS?

Niels Belmans (nbelmans@sckcen.be)



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