

# A STEP CHANGE IN EUROPEAN JOINT COLLABORATION TOWARDS SAFE RADIOACTIVE WASTE MANAGEMENT

07/03/2022 • Louise Théodon (Andra – EURAD Coordinator)



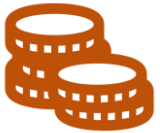
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## OVERVIEW AND OBJECTIVE



5 years  
2019-2024



59,9 M€  
50 %EC  
contribution



116  
organisations



17  
work packages

07/03/2022

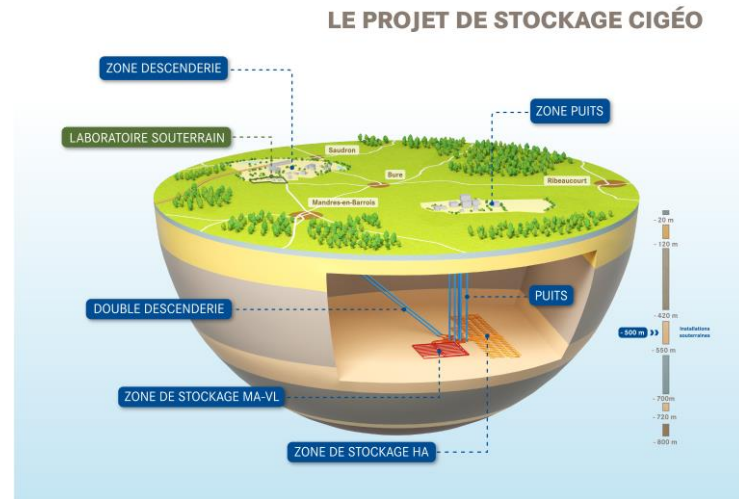
In accordance with the Waste Directive, support Member States in developing and **implementing their national RD&D programmes** for the safe long-term management of their **full range of radioactive waste** taking into account the **various stages of advancement of national programmes**



Small inventories : no  
nuclear power programme  
but medical/research  
reactor-derived wastes



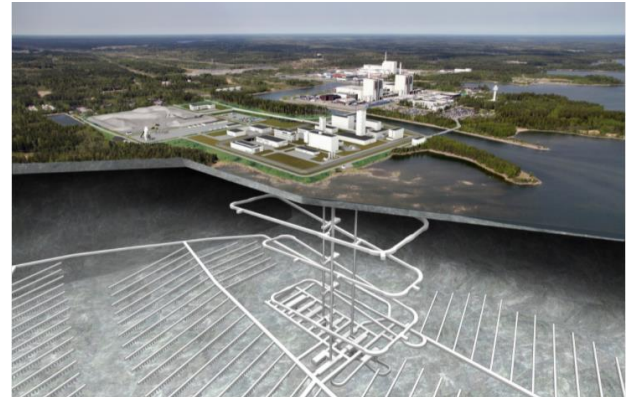
Large, complex inventories:  
large nuclear power and  
defence programmes



France – Public utility declaration - Cigéo project



Finland - Trial Run of Final Disposal

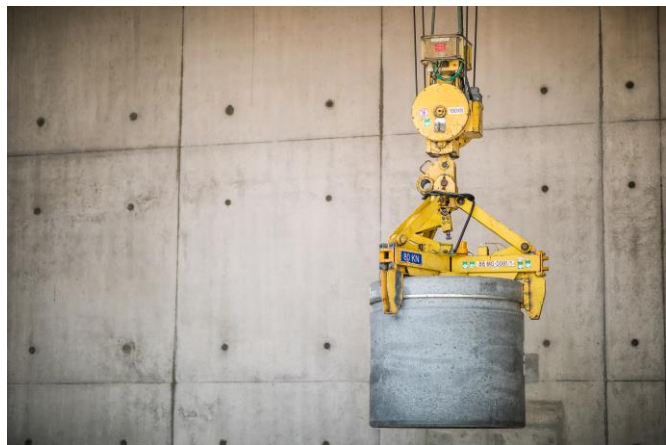


Sweden – Photomontage final repository spent nuclear fuel in Forsmark

UK - Site selection and concertation - UK



Initiation



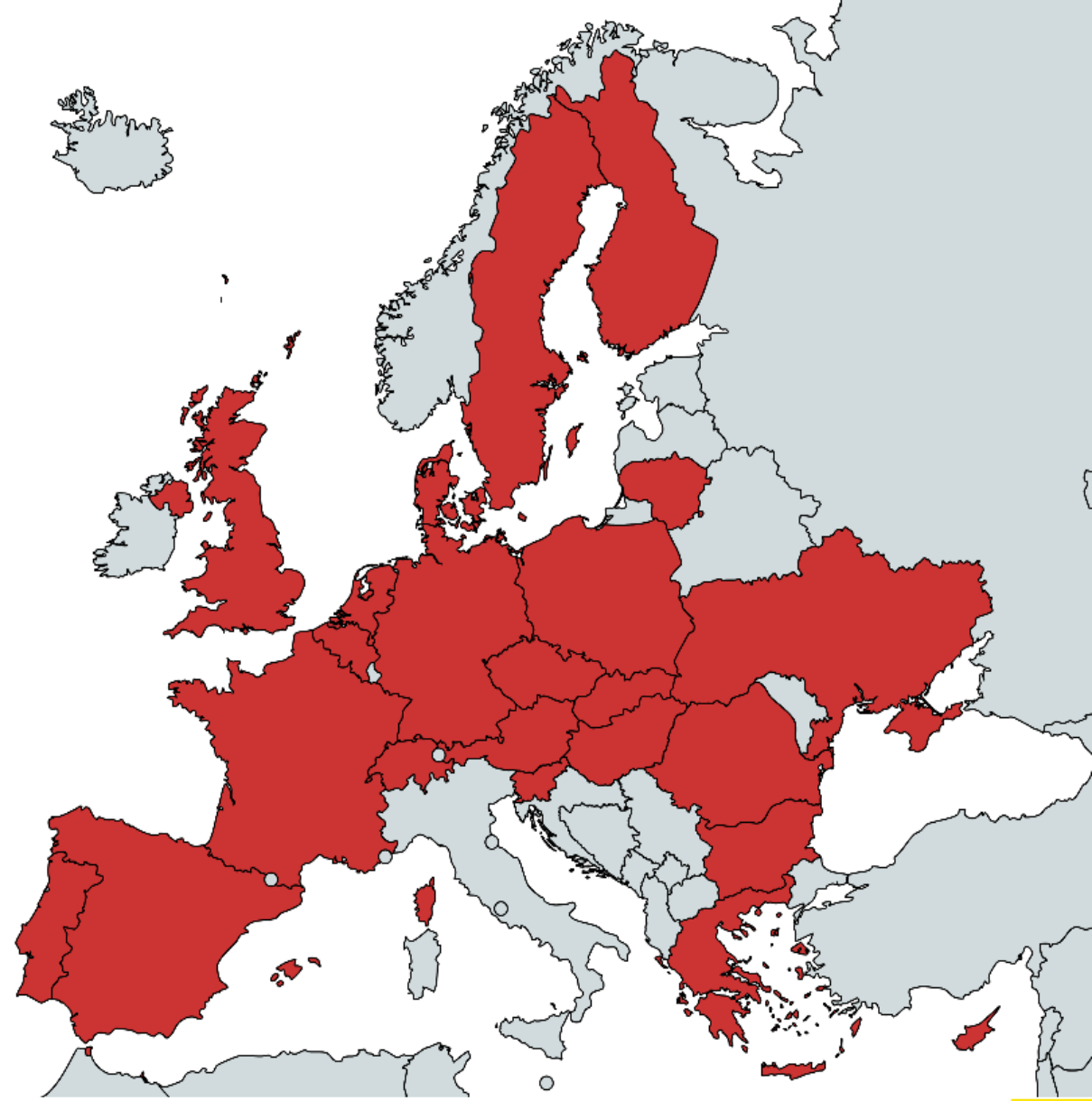
Germany - Interim report on identified sub-areas



Conseil de l'Union européenne - Research (atomic questions) Working Party

## EURAD IS A COMMUNITY

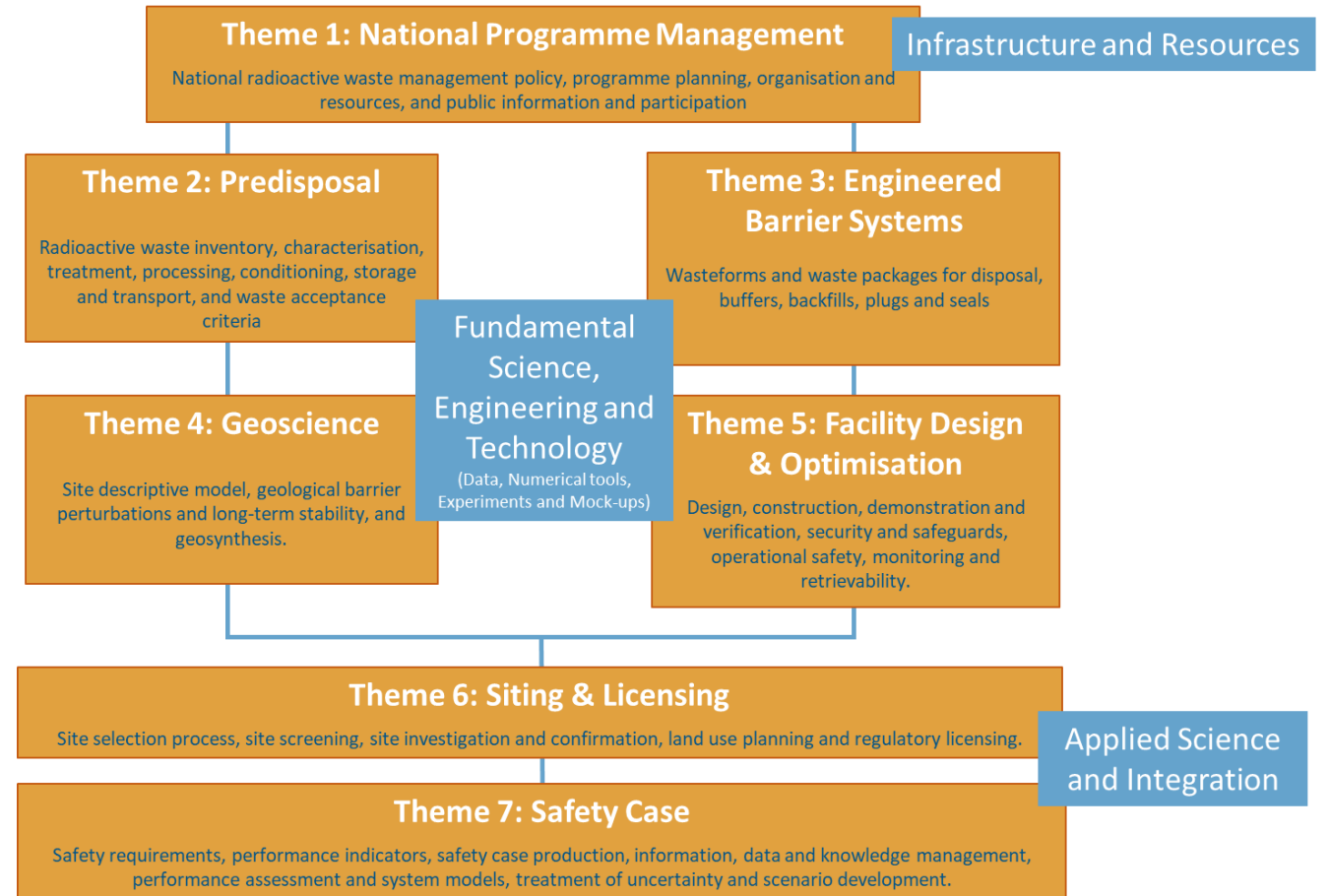
- 51 Mandated actors from 23 European countries representing the following Colleges :
  - Waste Management Organisation (WMO)
  - Technical Support Organisation (TSO)
  - Research Entity (RE)
- 62 Linked Third Parties (mostly universities and research centres) and 3 International Partners (*CSIRO - Australia, NUMO - Japan and NWMO - Canada*)
- Groups of Civil Society organisations : 22 individuals members on the CS larger group





# EURAD STRATEGIC RESEARCH AGENDA

- Shared
- Living and dynamic – Update on-going
- With a broad spectrum
  - Frames research and knowledge management objectives
  - Covers radioactive waste management activities from cradle to grave (**does not cover decommissioning**)



## KEY ACHIEVEMENTS AFTER TWO YEARS

- **Create a community**
  - 116 organisations – 800 people
  - Position papers by the 3 Colleges
  - Creation of the School of RWM
  - Implementation of a mobility programme
- **Implement a robust and sustained S/T programme**
  - Shared Strategic Research Agenda and Roadmap
  - 17 workpackages delivering results
- **Ensure the sustainability of the knowledge**
  - 1<sup>st</sup> State of Knowledge document published
  - Publication of a wide range of KM related documents
- **Foster mutual understanding**
  - First annual event with more than 440 participants
  - Involvement of civil society
  - 109 end-users (21 different countries)
  - Interactions with international organisations and other projects



## APPENDIX: EURAD WORK PACKAGES

- WP1: Programme Management Office (PMO)
- WP2: Assessment of Chemical Evolution of ILW and HLW Disposal cells (ACED)
- WP3: Cement-Organic-Radionuclide Interactions (CORI)
- WP4: Development and improvement Of Numerical methods and Tools for modelling coupled processes (DONUT)
- WP5: Fundamental understanding of radionuclide retention (FUTURE)
- WP6: Mechanistic understanding of gas transport in clay materials (GAS)
- WP7: Influence of temperature on clay-based material behaviour (HITEC)
- WP8: Spent Fuel Characterization and Evolution Until Disposal (SFC)
- WP9: Waste management routes in Europe from cradle to grave (ROUTES)
- WP10: Uncertainty Management multi-Actor Network (UMAN)
- WP11: State-of-Knowledge (KM SoK)
- WP12: Guidance
- WP13: Training & Mobility
- WP14: Ethics
- WP15: Container Corrosion under disposal conditions (CONCORD)
- WP16: Chemo-mechanical aging of cementitious materials (MAGIC)
- WP17: Monitoring equipment and data treatment for safe repository operation and staged closure (MODATS)