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A step change in European collaboration towards safe radioactive waste management (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 participants

5 Years
2019-2024

59,9 M€
50 % EC contribution

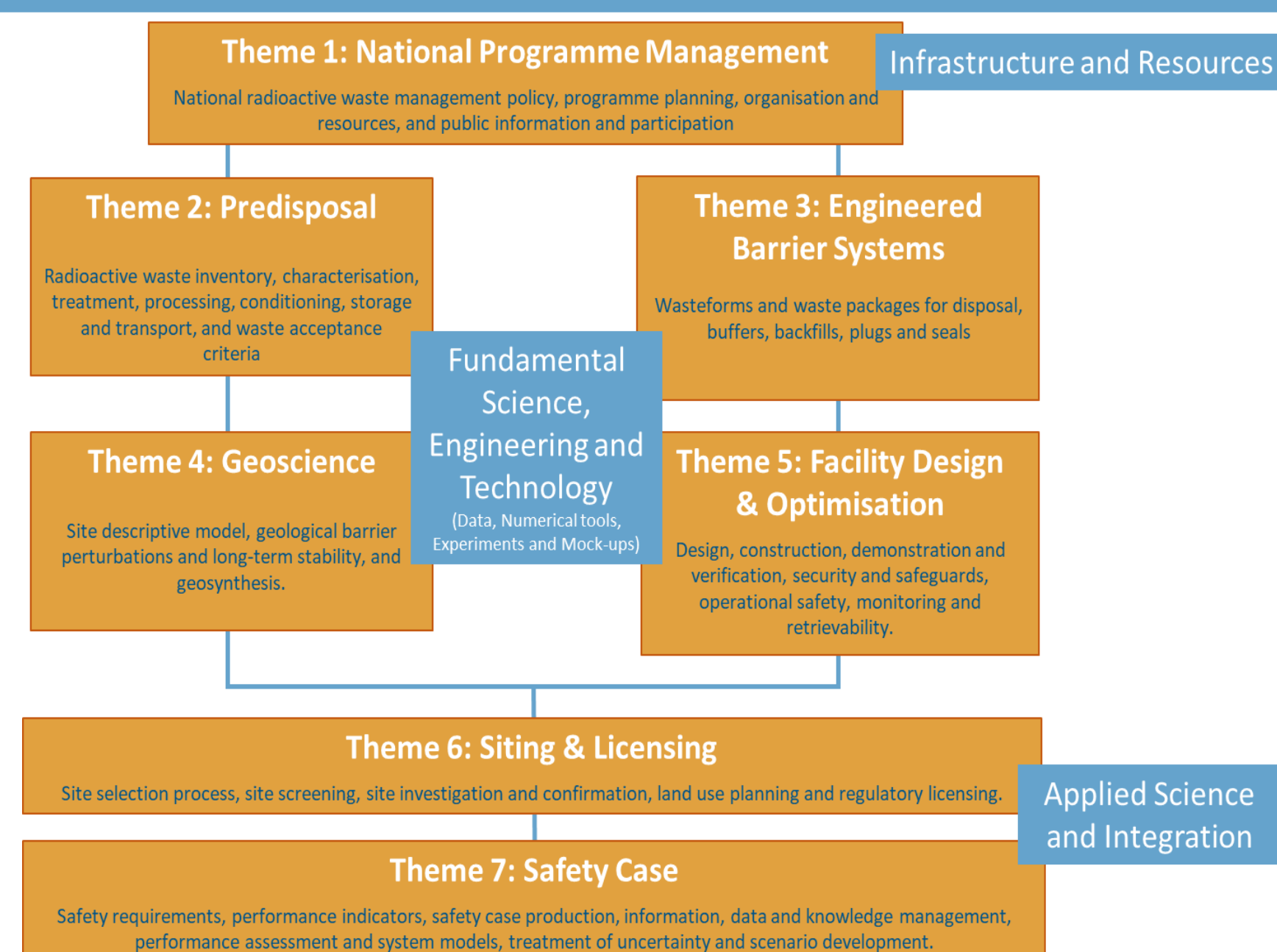
116
Organisations

17
Work packages

EURAD's Vision

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 and in accordance with the [Waste Directive](#).

A shared and dynamic Strategic Research Agenda



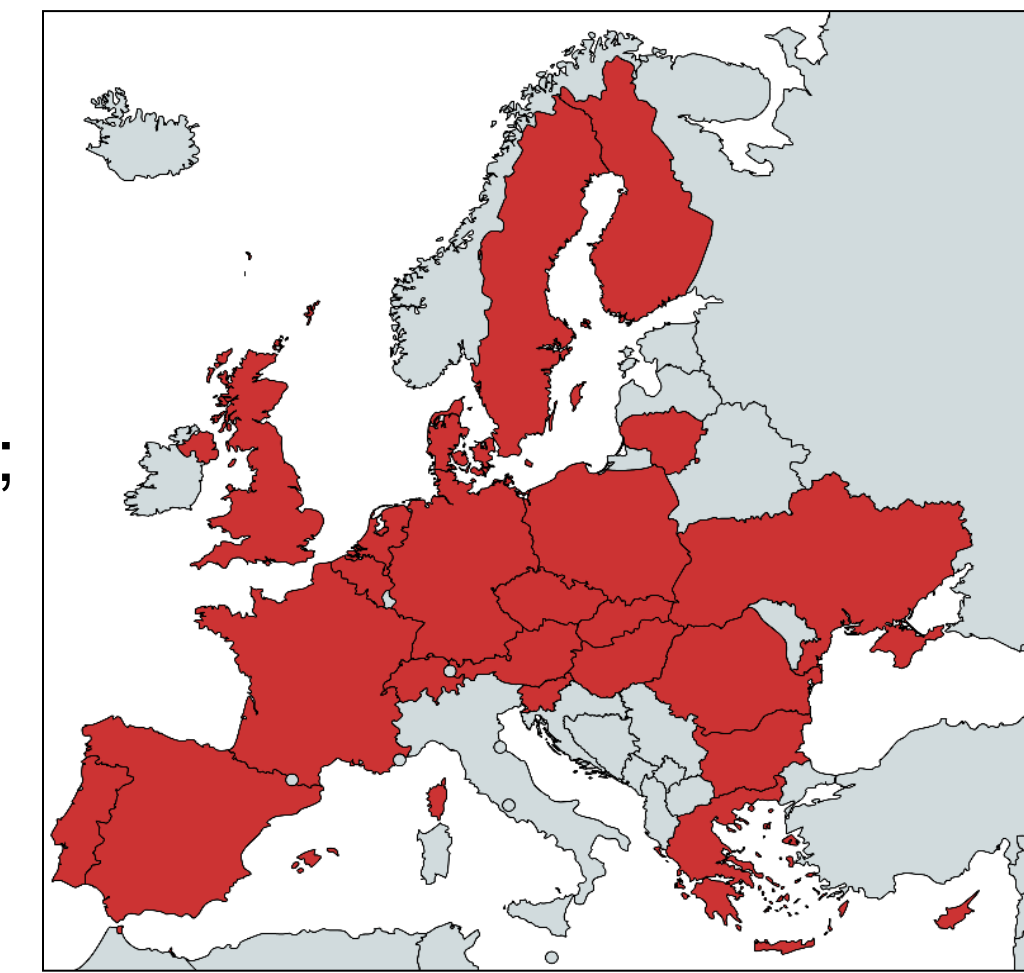
EURAD Strategic Research Agenda (SRA) covers

- **all waste types;**
- **pre-disposal** - waste characterisation and processing (incl. treatment, conditioning and packaging) and interim storage
- **disposal** - primarily geological disposal, and also other types of disposal).

The EURAD community

51 Beneficiaries: Ministries from **23 European countries** provided mandates to organisations recognising their role of directing RD&D at national level, as:

- Waste Management Organisation (**WMO**);
- Regulatory Technical Support Organisation (**TSO**);
- Nationally funded Research Entity (**RE**).



Broad spectrum of development in RWM programmes in Europe depending on:

- National waste inventory
 - Small inventories (medical/research reactor-derived wastes)
 - Large, complex inventories (large nuclear power and defence programmes)
- National policy and socio-political landscape with respect to long-term RWM
 - particularly with respect to plans and national policy towards implementing geological disposal for Spent Fuel, HLW and LL-ILW

62 Linked Third Parties mostly universities and research centres are implementing tasks and **3 International Partners** (self-financed) are participating to the Programme.

Civil Society Organisations are also taking part in interactions activities within EURAD.

EURAD's Roadmap



7 Themes

20 Sub-themes

~70 Domain Insights

A generic RWM Programme framework based on **goal-oriented breakdown** ...

- to transfer existing information & knowledge
- to assess existing information & knowledge
- to identify needs for additional RD&D (→ SRA)
- to identify issues to be collectively explored
- to help achieving clarity on scope definition
- to collect knowledge, related guidance and training in one site

Deployment Mechanisms

Research and Development that supports the generation of new knowledge to advance RWM across Europe with a balance between operational / implementation / safety driven and prospective R&D.

| | |
|----------------|--|
| ACED | Assessment of Chemical Evolution of ILW and HLW Disposal Cells |
| CORI | Cement-Organic-Radionuclide interactions |
| DONUT | Development and Improvement Of Numerical methods and Tools for modelling coupled processes |
| FUTURE | Fundamental understanding of radionuclide retention |
| GAS | Mechanistic understanding of gas transport in clay materials |
| HITEC | Influence of temperature on clay-based material behaviour |
| SFC | Spent Fuel characterisation and evolution until disposal |
| CONCORD | Container Corrosion under disposal conditions |
| MAGIC | Chemo-mechanical aging of cementitious materials |
| MODATS | Monitoring equipment and data treatment for safe repository operation and staged closure |

Strategic Studies: Think-tank activities enabling experts to network on methodological/strategical issues and advance significant challenges that are common to various national programmes and in direct link with S/T issues.

| | |
|---------------|--|
| ROUTES | Waste Management routes in Europe from cradle to grave |
| UMAN | Understanding of uncertainty, risk and safety |

Knowledge Management (KM) : Enhancement and transfer of knowledge between generations, member states and organisations.

| | |
|----------------------------|--------------------------------------|
| State of Knowledge | What we know and why it is important |
| Guidance | Best practices and lessons learned |
| Training / Mobility | Transfer of experience and know-how |



Main achievements

- **Creation of a community and fostering mutual understanding** : first annual event with more than 440 participants, creation of the School of RWM, ...
- **Implementation of a robust and sustained S/T Programme** : shared SRA and Roadmap, 17 work packages running well and delivering results!
- **Sustainability of the knowledge** : integrated shared KM Programme and networking strategy, production of a wide range of KM documents, mobility actions.