The basis

**Article 4.1 of the Euratom Treaty**

The EC is in charge of promoting and facilitating nuclear research activities in the MSs and to complement them through of a Community Research & Training programme.

**Article 6d of the Euratom Treaty**

To encourage the implementation of the (national) research programmes the EC can:

- bring financial support to research contracts,
- stimulate joint funding (from MSs, people, enterprises)
Rationale

Strengthen the research and innovation framework in the nuclear field and coordinate Member States' research efforts\(^1\), to avoid duplication, retain critical mass and ensure that public funding is used in an optimal way.

Objective for radioactive waste

Contribute to developing, safe, longer-term solutions for the management of ultimate nuclear waste:

- Joint and/or coordinated research activities on remaining key aspects of geological disposal of spent fuel and long-lived radioactive waste and promote a common Union view on the main issues related to waste management from discharge of fuel to disposal,

- Other waste streams for which industrially mature processes do not exist

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\(^1\) The coordination will, however, not prevent Member States from having programmes to fulfil national needs.
R&D on Management and Disposal of Radioactive Waste and Decommissioning

Low and Intermediate Level Waste

- Characterisation, Treatment, Conditioning, Quality control & Disposal

High Level and Long Lived Waste & Spent Fuel

- Treatment, P&T, Interim storage & Disposal,
Budgets on Radioactive Waste Management and Decommissioning

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EC funding (€million) Radioactive Waste

EC funding (€million) Decommissioning
FP5-FP6 (1998-2006) activities on Geological Disposal

**Public Involvement/Governance**
- COWAM 1 & 2 / CIP
- RISCOM II
- OBRA
- ARGONA

**Performance and Safety Assessment**
- BENCHPAR
- BENIPA
- BIOCLIM
- BioMoSa
- SPIN
- ECOCLAY II
- GASNET
- NANET
- MICADO

**Strategic studies & E&T**
- SAPIERR I & II
- CETRAD
- NET.EXCEL
- CARD
- CATT

**Near field processes - Waste form/Container/EBS/EDZ**
- CONTAINER CORROSION
- COBECOMA
- CORALUS II
- DACAPD
- GLASTAB
- GLAMOR
- IN CAN PROCESSES
- SFS
- TIMODA2

**Far field processes - Flow and transport of RN**
- ACTAF
- ACTINET
- BORIS
- HUPA
- PADAMOT
- TRANCOM
- RETROCK

**Repository Testing and Technology**
- BAMBUS II
- FEBEX II
- PROTOTYPE REPOSITORY RESEAL II
- SELFRAF
- SOMOS
- VE, HE, EB
- CROP
- MONITORING

Based on competition
Gradual integration
Steps in integration / coordination at EU level

- 1998 - 2027

- FP5 (#6)
- FP6 (#7)
- FP7 (#8)
- H2020 (#9)
- Horizon Europe +2

- Net.Excel
- CARD
- IGD-TP
- SITEX I
- SITEX II
- SITEX Network
- EURADSCIENCE

(WMO) (TSO) (RE)

19 years
How to integrate waste producers with GD community

* on open R&D (shared ownership)

* competitive R&D compatible?

Ensure long-term KM plan (SoA, R&D guide, Training)

* Organise effective synergy with IAEA on KM

* How to involve academics not mandated actors

Which tasks for non-technical stakeholders
Conclusions

- “Raison d’être” of EURATOM is to help MSs develop solutions for the management of nuclear waste, jointly for possible common use,
- Together we can ensure synergies and effectiveness between all actors,
- Coordinated (non-competitive) R&D on open science for disposal in EJP seems more effective,
- Also cutting edge science, knowledge transfer between MSs and provisions of next generations of scientists (involving Academics “not mandated”) should be the best way for EURATOM R&T sustainability,
- Contribution of non-technical stakeholders in R&D & EJP need to be defined
1975 + 44 + 44 + = 2063
Dates for radioactive waste geological disposal

Thank you for your attention