INSIDER PROJECT FOLLOW-UP

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[Danièle Roudil - CEA]

[Danielle.roudil@cea.fr]

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INTRODUCTION

Actual challenges to be considered for waste management

- **Drastic waste minimisation (disposal site)**
- **Sharing knowledge**
- **Common methodology establishment at European level**
- **Industrial implementation**

Main results and achievements

Project strengths and assets:

- **Acting on the upstream phase, on contaminated materials**
- **Waste led approach**
- **Common methodology development and refinement on real D&D cases (benchmarking)**
- **Multidisciplinary consortium**

Main achievements :

- **Initial Characterisation** methodology for constrained environments
- Selection of **suitable measurement techniques** depending on constraint types
- In lab analysis methods avalaibility- **Innovative development** needs and contribution
- **Matrix (C)RM** production
- **Uncertainty budget & global performance** assessment approaches
- International standard mapping and **pre-standard guide propositions**

- Other D&D characterisation steps
  - Low level activities
  - Chemical toxics
- Application on legacy wastes, NORM,…

➢ Suitable measurement techniques and methods

- Interface with digital tools

Horizon Europe & EURATOM context

Radioactive waste management and decommissionning

- **2021-2024** European Joint programme on radioactive Waste management EURAD
- **2021-2022:** Research action for harmonised application of the regulatory framework of radioactive waste management

Overview of the main indirect actions in the Euratom Research and Training Programme 2021-2025[16]			
Research areas	**2021-22 Work Programme**	**2023-24 Work Programme**	**2025 Work Programme**
Radioactive waste and spent fuel management *(20% of the fission budget)*	Research actions supplementing EURAD European Joint Programme	**Co-funded European Partnership in radioactive waste management**	
		Supplementary research in areas not covered by the European Partnership in radioactive waste management	

2022: Mid term EURAD review

SHARE roadmap

Euratom 2021-2022 Work programs

HORIZON-EURATOM-2021-NRT-01-08: Towards a harmonised application of the international regulatory framework in waste management and decommissioning

Scope: The objective of this action is to address benefits and advantages of providing solutions for obstacles to a common regulatory framework in waste management and decommissioning, providing a basis for improving harmonisation. This will support implementation of the requirements of a high level of nuclear safety and safe management of spent fuel and radioactive waste

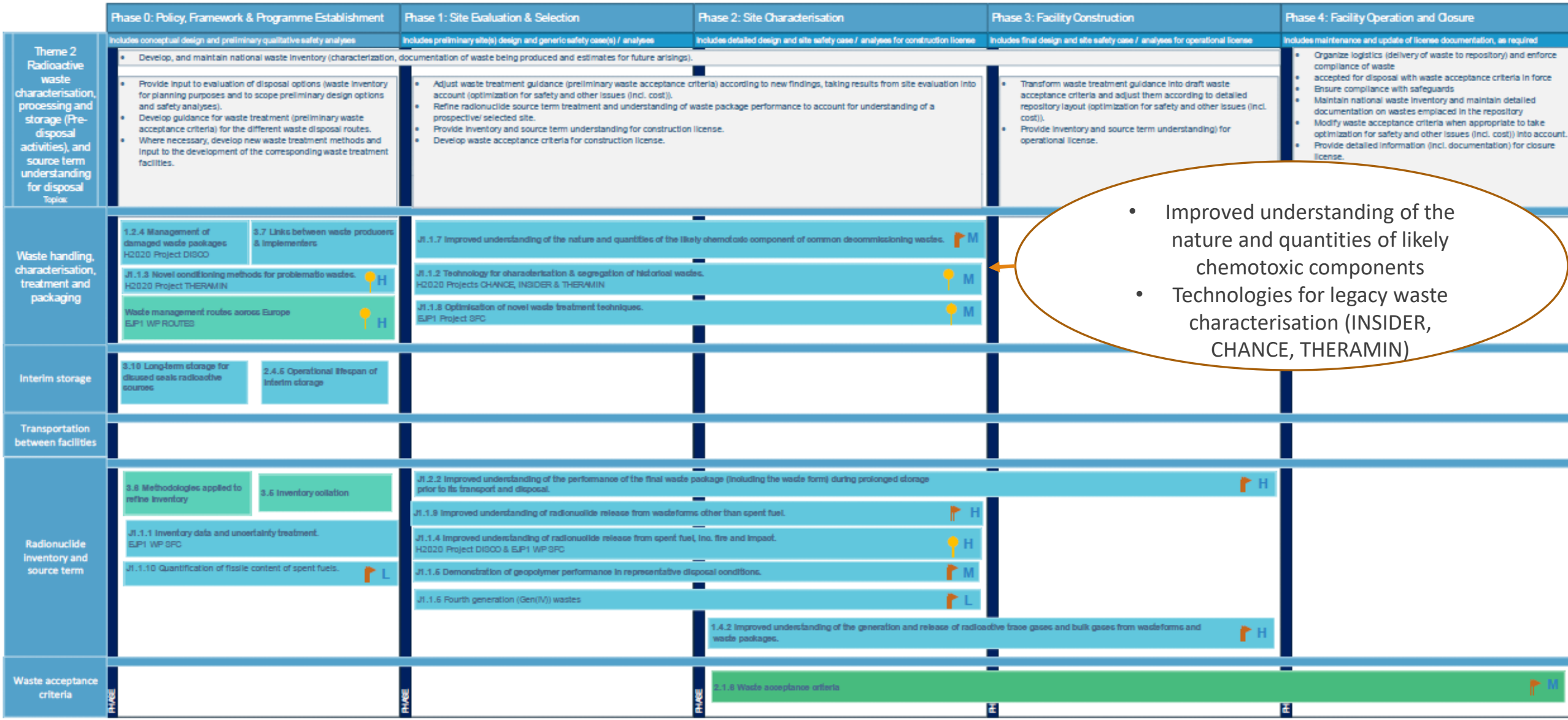
Type of action : CSA

- Main outcomes
  - Deliver science and technology-based robust solution to minimise waste
  - Define the conditions and opportunity of a high-safety circular economy and operational know-how and its benchmarking
  - Foster the characterisation and sorting of disused materials
  - Facilitate the safe reuse and recycling of materials
  - Inventory and dissemination of MS strategies relying on the different steps… of operational minimisation of waste
  - Evaluate the regulatory implications of using advanced manufacturing technologies (robotics, additive manufacturing, digital twin…)

EURAD strategic research: theme 2 RW characterisation

- R&D priorities and activities of common interest:
  - Developping reliable and affordable technologies for the radiological characterisation and segregation of historical preconditionned waste (Medium)
  - Improved unerstanding of the nature and quantities of the likely chemotoxic component of common wastes (Medium)
  - Fourth generation wastes : nature and quantities of waste (Low)

EURAD joint programme roadmap



Conclusion

To summarize:

- EURAD 2021-2022:
  - Extension of INSIDER developments (waste cartography)
    - To legacy waste
    - To chemical species
  - ➢ EURAD mid term review

- EURATOM 2021-2022 work programme
  - Complementary of EURAD
  - In relation to a common legatory framework
  - CSA

- 2023-2025 : SHARE Roadmap (2022)

THANK YOU

https://igdtp.eu/activity/eurad-european-joint-programme-on-radioactive-waste-managment/

https://ec.europa.eu/info/funding-tenders/opportunities/

https://share-h2020.eu/