



HORIZON 2020

Horizon 2020 Euratom Research & Training programme in radioactive waste management

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- . Information on EU Energy & Climate change policy
- . Towards Joint Programming of EU MS RD&D programmes
- . Status WP 2014-2015

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EU Climate & Energy package

EU Climate & Energy package	2020 target (adopted 2008)	results in 2012	Impact in 2020	Impact in 2030	2020-30 period (adopted 24/10/2014)	Energy Roadmap 2050
CO2 emissions	20%	-18%	-24%	-32%	-40%	80-95%
increase share of renewable sources	20%	13%	21%	24%	27%	—
increase energy efficiency	20%	Directive 2012, transposition by 2014	not measured yet	-	27%	—

Rationale for Joint Programming

- 40 yrs of Euratom R&D in RWM, all areas covered
- Knowledge & know-how available: cf. Zuidema keynote at EURADWASTE'13
http://cordis.europa.eu/fp7/euratom-fission/fisa-euradwaste-2013_en.html
- FP6/7 & H2020 R&D in GD: on *"remaining key issues"* & *"implementation oriented R&D"*
- WMOs & TSOs now coordinated in IGD-TP & SITEX

What next: will there still be a "raison d'être" for Euratom RT programme in RWM after GD licenses granted in the most advanced MS (FI, FR & SE)

Rationale for Joint Programming

But Waste Directive 2011 prompts for longer term action and in MS with less-advanced programmes

- RWM based on SoA S/T
- Development of a disposal facility needs many decades
- Requires RD&D and E&T to obtain, maintain and to further develop necessary expertise and skills
- 10yrs peer reviews of national framework & programme

And 35-40yrs of RD&D needed until applications in FI, FR & SE

And in relation to the above, currently little coordination of longer term science oriented R&D at EU level

And knowledge for disposal in some MS is less developed

Rationale for Joint Programming

Still if knowledge and tools are available: Why each nat.l programme would need to develop its own capacity

- Because each repository is "a first of its kind" cf. EURADWASTE'13
- And because of this, implementation of geological disposal is not possible without specific RD+D and implementation of National RD&D programmes are necessary

Rationale for Joint Programming

Continued key role of Euratom:

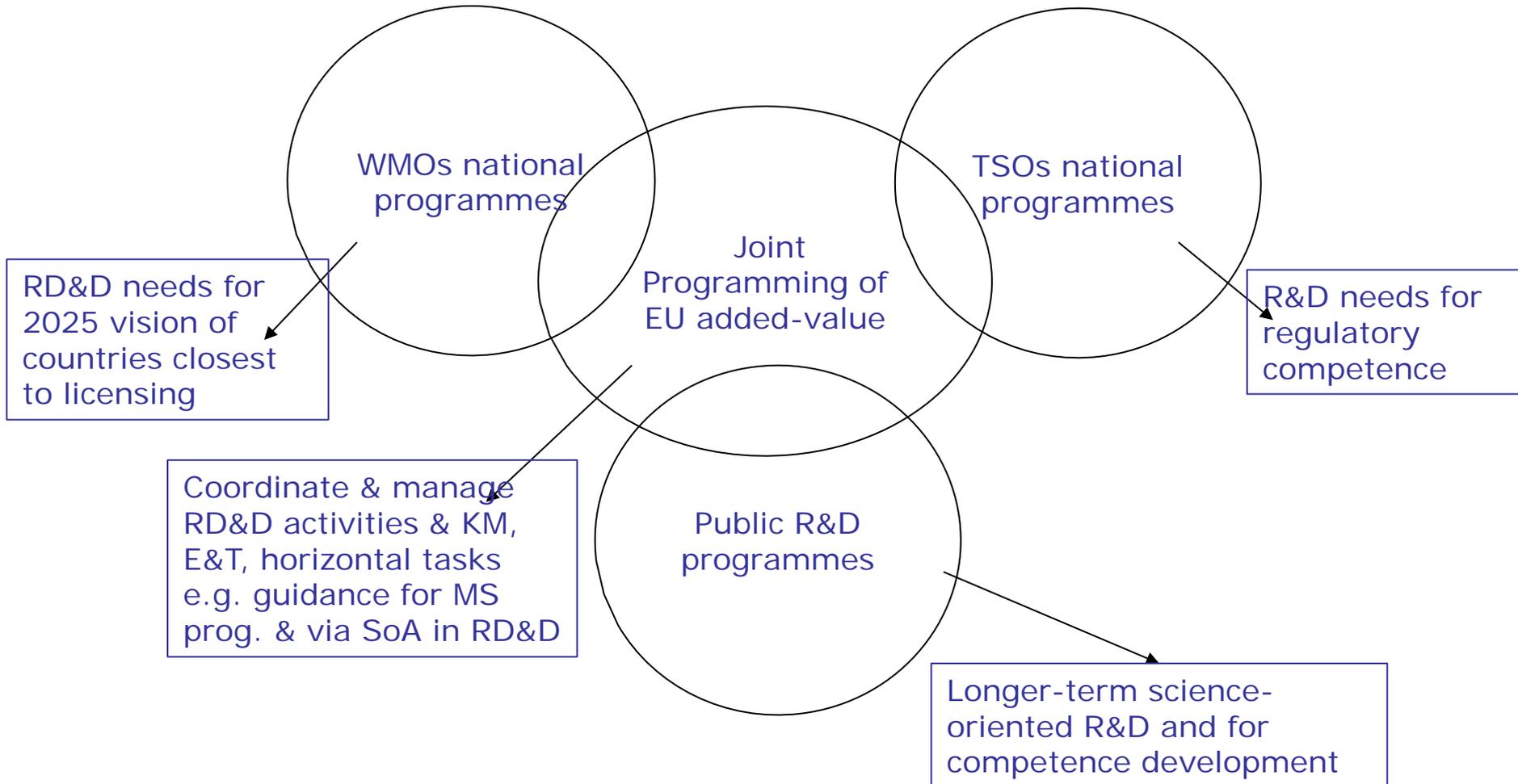
- to help coordinate MS R&D activities and share information and knowledge
- to save time and effort in all countries
- to establish a European common view on the main issues in RWM & disposal

After 40yrs of Euratom programmes, now probably the time to make further steps in implementing these principles

A joint programme rather ad-hoc projects to enable development and execution of activities of EU added-value around needs & priorities defined directly by the MS programmes themselves and to ensure sustainability of the "raison d'être" of EU R&D in RWM



→ Euratom funding of European Joint Programming between





- The broad spectrum of RD&D is needed for each repository development and in each MS to meet the requirements of the Waste Directive
- There are wide differences in the readiness and status of knowledge for the safety case in the MS
- There are also different types of research activities & focus needed to develop and maintain knowledge for the safety case over the 100+ years of expected repository programmes
- This RD&D is currently often carried out within separate programmes by different actors
- There would be strong benefits in coordinating these programmes at EU level to maximise impact for all MS
- The Euratom R&T programme could be a powerful tool help MS meet the long-term requirements of the Directive in respect of RD&D

- Area solutions for the management of ultimate nuclear waste includes final GD & P&T:

- Objective:
 - strengthen the research and innovation **framework**
 - coordinate Member States' research efforts

- Activities:
 - joint and/or coordinated research activities on remaining key aspects of GD of SF and long-lived RW with, as appr., demo. of techn. and safety.
 - Those activities are to promote the development of a common Union view on the main issues related to waste management from discharge of fuel to disposal."
 - Research activities related to management of other radioactive waste streams for which industrially mature processes currently do not exist.



1st EURATOM WP, 2 years (2014-15) (transition towards Joint Programming)

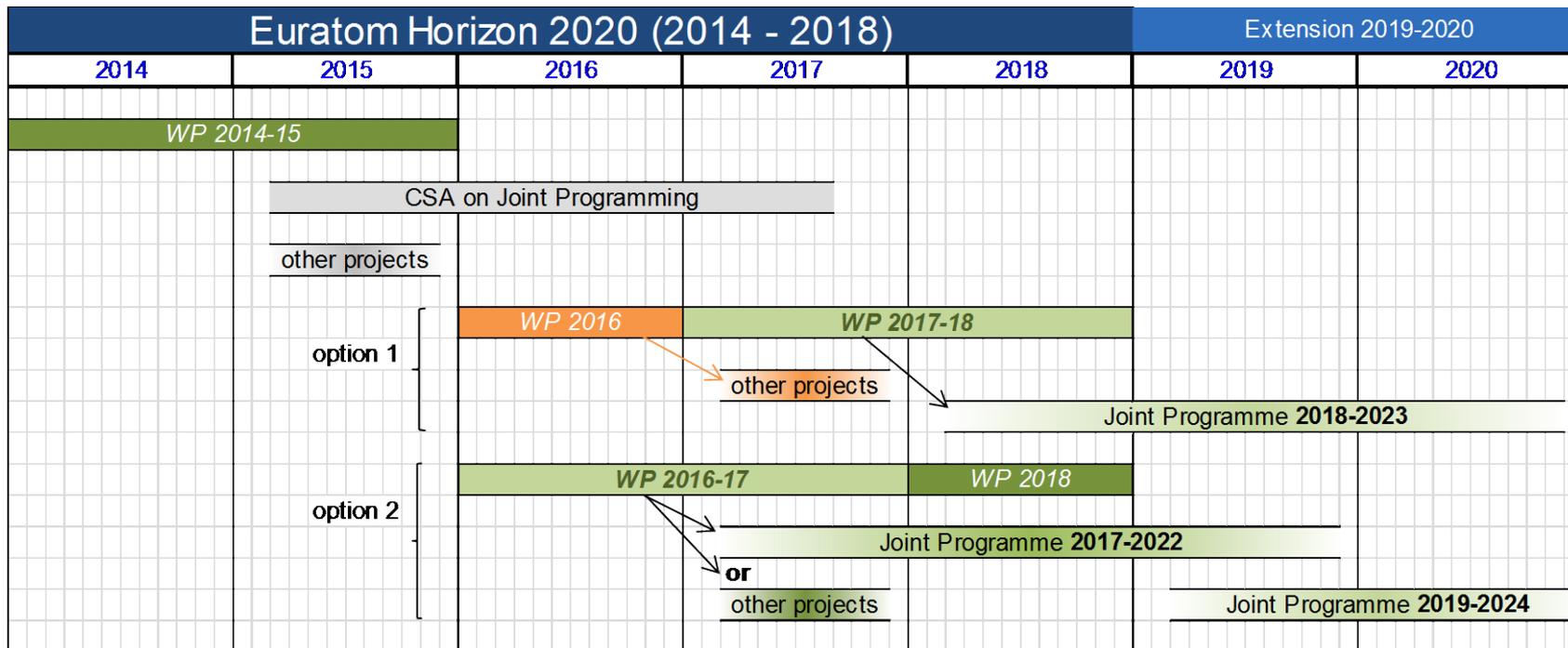
Call for proposals: Deadline 17 September 2014

3 topics in area Management of ultimate Radioactive Waste: (€ 16.7 M +-20%)

1. EU concerted development of MS research on RWM (CSA, budget € 1.1 million)
 - **3 proposals** (2 eligible)
2. Supporting the licensing of geological repositories (CSA, budget € 1 million)
 - **1 proposal**
3. Supporting the implementation of the first-of-the-kind geological repositories (*R&D on IGD-TP priority topics & other public R&D programmes*), (research and innovation actions, budget € 14.6 million)
 - **6 proposals**

Total EU requested grants: € 30.4 million

Project starts: target March 2015



THANK YOU FOR YOUR ATTENTION