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# Euratom FP7 (2007-2011/13) in Geological Disposal

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## OVERVIEW

1. European Union Directive on Radioactive Waste
2. Projects funded in 2011
3. Work programme 2012
4. Research in Europe after FP7





# EU Directive – Radioactive waste & spent fuel management

## Key requirements:

- Member States to draw up national programmes by 2015 at the latest.
- The European Commission can require changes.
- National programmes:
  - to include concrete plans & timetable for the construction of disposal facilities,
  - to describe and regularly update the activities for implementation of disposal solutions, costs assessments and the financing schemes.
- Safety standards of the IAEA become legally binding.
- Information to be made available to the general public and workers.
- The public given the opportunities to participate effectively in the decision-making process.
- Member States to perform international peer reviews at least every 10 years.
- Member States (two or more) can agree to use a disposal facility in one of them.
- Exports to countries outside the EU is allowed under conditions incl. need to have a final (deep geological) repository in operation.



(Directive 2011/70/Euratom)  
OJ L 199, 2.8.2011

[http://ec.europa.eu/energy/nuclear/waste\\_management/waste\\_management\\_en.htm](http://ec.europa.eu/energy/nuclear/waste_management/waste_management_en.htm)



# Funded projects in call 2011

## Management of radioactive waste – Geological Disposal

Project acronym and title	Key activities	Coordinator / no. partners	Start date & duration	Total cost / EU funding
<b>BELBAR</b> – Bentonite Erosion: Effects on the long-term performance of the engineered barrier and radionuclide Transport	To increase the knowledge of processes that controls clay colloid stability, generation and ability to transport radio-nuclides.	<u>SKB (SE)</u> 14 partners (6 countries + Russia)	March 2012  48 months	€5.6M / €2.6M R&D
<b>FIRST-NUCLIDES</b> – Fast / Instant Release of Safety Relevant Radionuclides from Spent Nuclear Fuel	To improve understanding of fast instant released radionuclides from disposed high burn-up UO <sub>2</sub> spent fuel	<u>KIT (DE)</u> 10 partners (7 countries)	Jan. 2012  36 months	€4.7M / €2.5M R&D
<b>SITEX</b> – Sustainable network of Independent Technical Expertise for radioactive waste disposal (Support for regulatory functions)	Network regulatory bodies & TSOs for common understanding of the key safety elements to be presented in the safety case in discussion with waste management organisations	<u>IRSN (FR)</u> 15 partners (9 countries + Canada)	Jan. 2012  24 months	€1.34M / €0.95M Coordination

## Support actions – Cross-cutting

<b>NEWLANCER</b> – New MS Linking for an Advanced Cohesion in Euratom Research	To enhance NMS involvement in future Euratom FP and strengthen full NMS R&D potential and cohesion.	<u>INR (RO)</u> 15 partners (12 countries)	Nov. 2011  24 months	€0.94M / €0.9M Coordination
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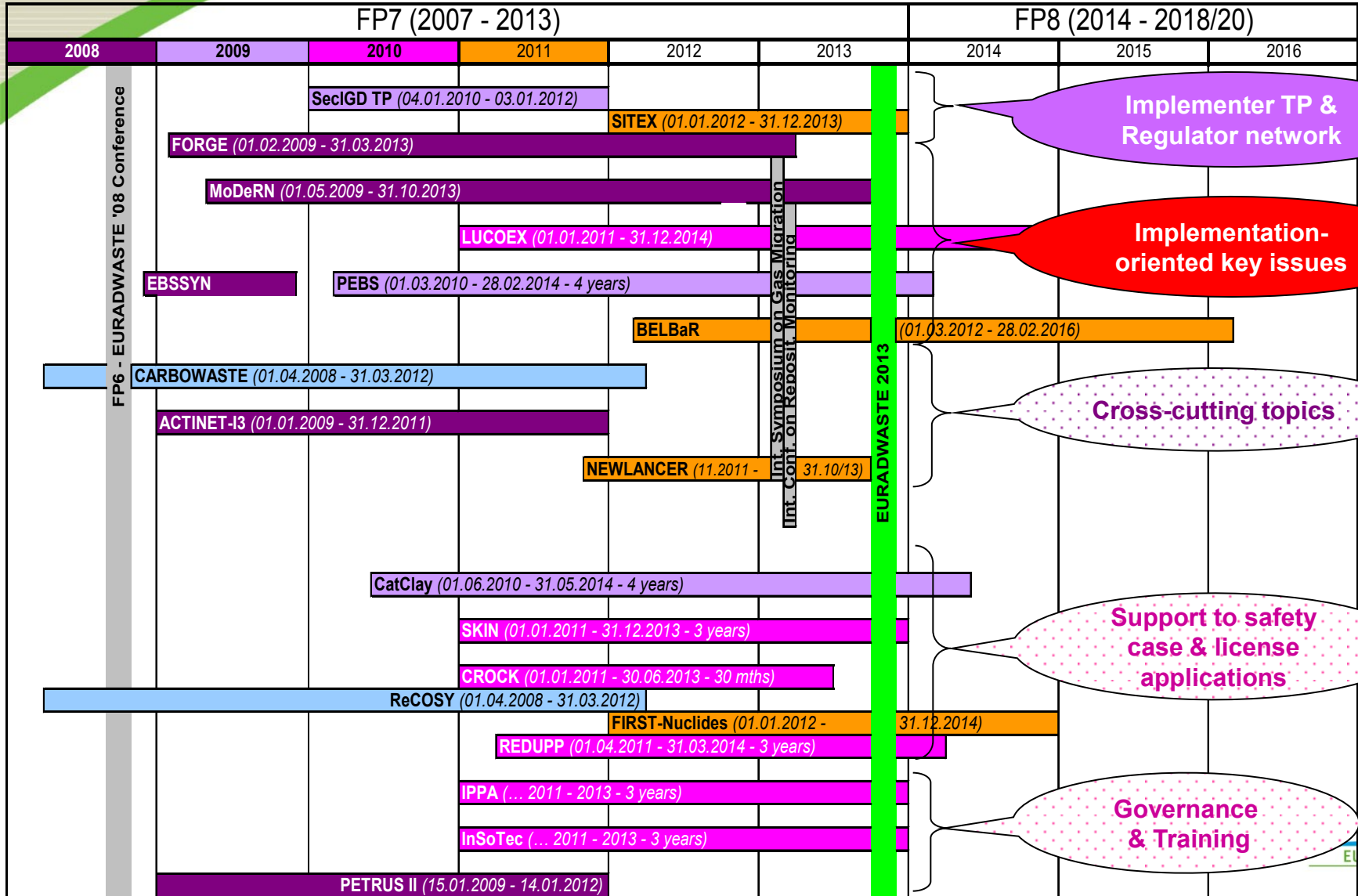
# Euratom FP7 (2007-2011):

## Statistics after 5 calls

Area	# projects	total cost (indicative)	EC contribution (indicative)
<b>Geological disposal</b> + (cross-cutting & E&T)	<b>20</b>	<b>ca. 86 M€</b>	<b>ca. 44.3 M€</b>
<b>P&amp;T</b> + (cross-cutting reactors)	<b>5</b>	<b>49.9 M€</b>	<b>22 M€</b>
Total	25	135.8 M€	64.3 M€



# FP7 Geological disposal & cross-cutting projects (Status Oct. 2011)

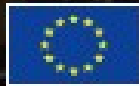


# International Symposium and workshop on

Gas generation and migration:

*“Implications for the performance of geological repositories for radioactive waste disposal”*

5 to 7 February 2013 - Luxembourg



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website: [www.FORGEproject.org/Luxembourg2013](http://www.FORGEproject.org/Luxembourg2013)



MODERN

Monitoring Developments for Safe Repository Operation and Staged Closure

International conference & workshop  
Monitoring in Geological disposal of radioactive waste  
Luxembourg, 19-21 March 2013

[www.modern-fp7.eu](http://www.modern-fp7.eu)





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# Work programme 2012

Publication as working paper in Dec. 2011

Call for proposals end 2011, beg. 2012

**Deadline 27 March 2012**

[http://ec.europa.eu/research/participants/portal/page/fp7\\_calls](http://ec.europa.eu/research/participants/portal/page/fp7_calls)







## Activity area: Management of radioactive Waste – Geological disposal

- Topic: 1.1.1: Technical feasibility and long-term performance of repository components – full-scale demonstration of plugs and seals  
Maximum one large-scale Collaborative Project.  
(maxi EUR 10 million/project)
- Topic 1.1.2: Support to the technical secretariat of the Implementing Geological Disposal Technology Platform  
Maximum one Coordination and Support Action  
(maxi EUR 1.5 million/project & Euratom contribution up to a maximum of 75% of the total cost)

Indicative budget EUR 9 million



# *Horizon 2020*

## the EU Framework Programme for research and innovation

### Reflections in Euratom fission

- Investigate options to move from targeted actions to programmatic activities e.g. integrated programmes
- Support to coordinated European programme (Member States and European Union)

### Method

- Development of framework, legal tools/instruments and programmatic activities jointly with the Member States (authorities, representatives of implementing organisations and the research Community)

### Steps

- Preparatory work in EC services on legal issues and basic EU requirements
- Discussion with stakeholders and national decision makers to start in early 2012
- Start implementing measures with launch of Horizon 2020, in early 2014





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*Thank you for your attention*

