



## European Roundtable on Information and Public Participation in the field of Radioactive Waste Management

**Council Directive 2011/70/Euratom**

# **The implementation of the Radioactive Waste Directive**

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# RESPONSIBLE & SAFE MANAGEMENT of SPENT FUEL and RADIOACTIVE WASTE

A unique regional binding legislation aiming at ensuring safety in the backend of nuclear life-cycle without undue burden to future generations and with the necessary public information and participation

HOW DID WE GET THERE?



# PRINCIPLES for a responsible & safe management of SPENT FUEL and RADIOACTIVE WASTE

- ❖ Minimise generation of waste as far as reasonably practicable
- ❖ Comprehensive scope from generation to disposal
- ❖ Long-term passive safety features
- ❖ Costs borne by those who generates radioactive waste
- ❖ Evidence-based and documented decision-making process





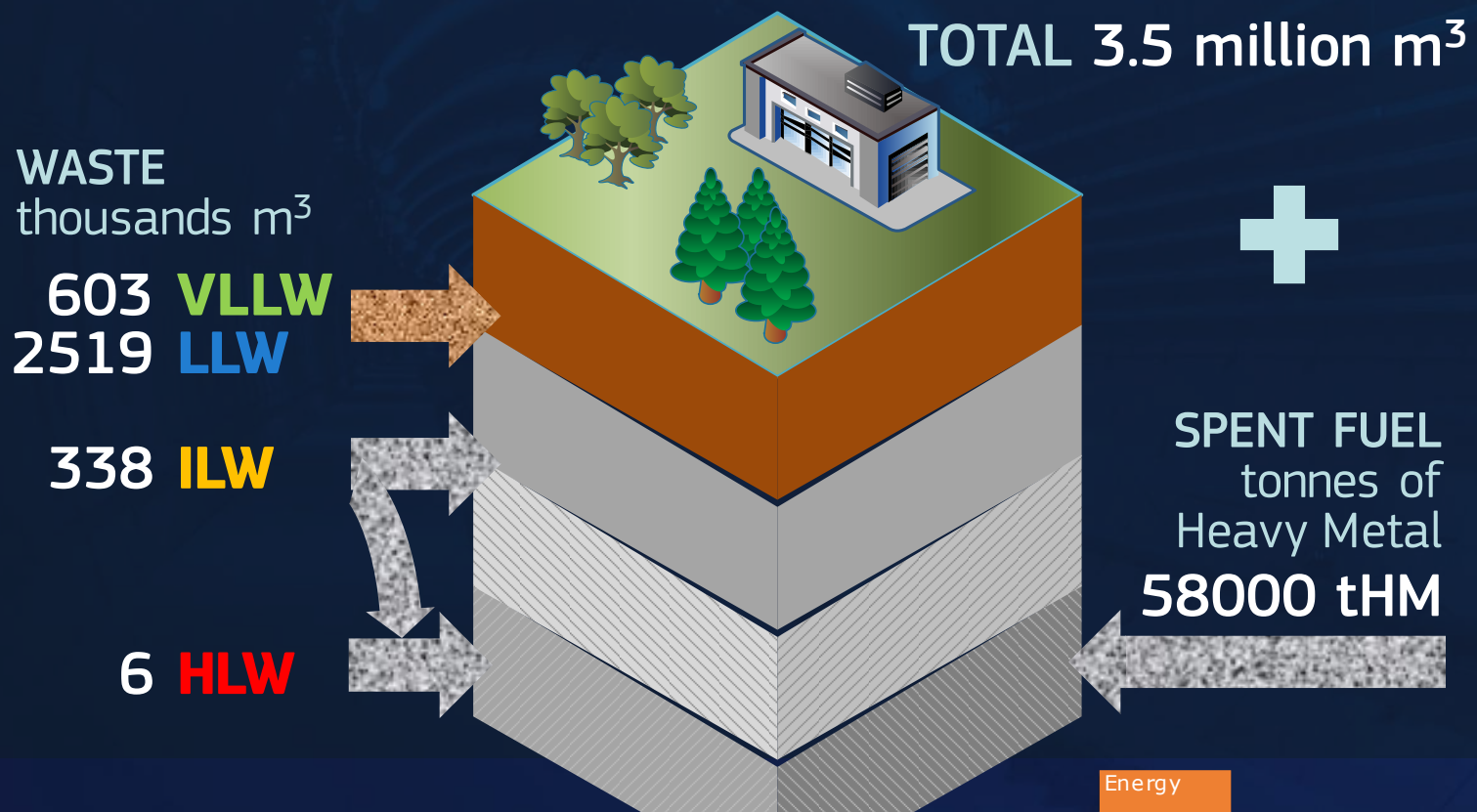
# 2<sup>nd</sup> COMMISSION REPORT

COM(2019) 632 <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=COM:2019:0632:FIN>

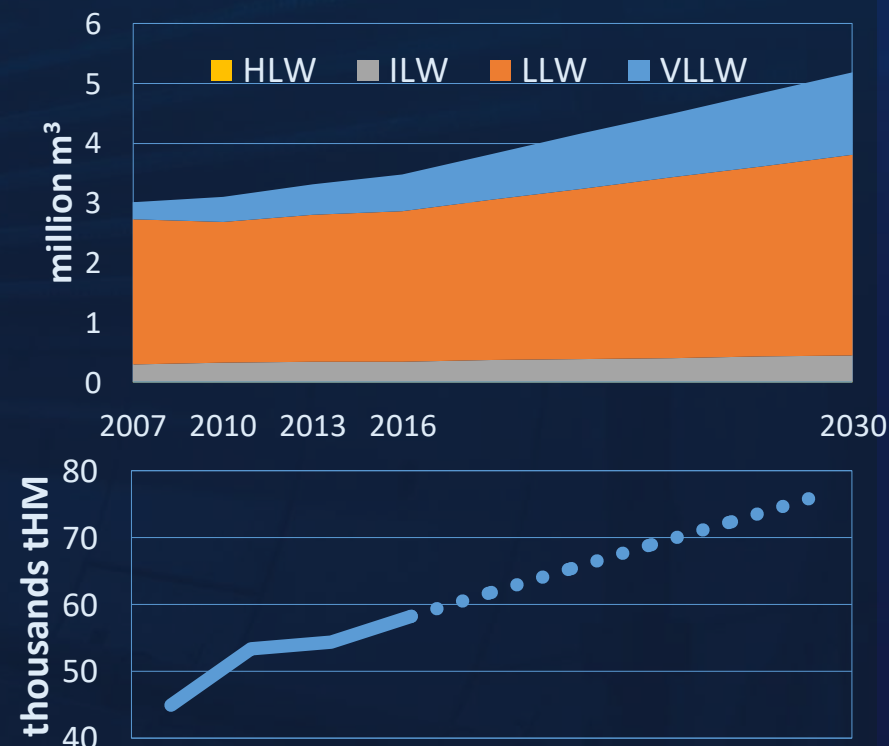
SWD(2019) 435 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52019SC0435>

SWD(2019) 436 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52019SC0436>

## EU28 Inventory 2016



## Projections



# DISPOSAL OF SPENT FUEL & HIGH-LEVEL RADIOACTIVE WASTE

A group of forerunners, also on global scale, precedes by several decades the others

## RESEARCH



CLOSED



OPERATIONAL



PLANNED FACILITIES

### SWEDEN

**Äspö HRL** - North of Oskarshamn  
Research activities on performance of barriers for spent fuel disposal  
**Stripa mine** - Closed in 1991  
Research from 1977 to 1991

### GERMANY

**Gorleben** - Discontinued in 2013  
Salt formation

### BELGIUM

**HADES** - SCK•CEN site at Mol  
Boom clay

### FRANCE

**Bure** - Meuse/Haute-Marne  
Callovo-oxfordian clay  
**Tournemire** - IRSN (TSO)  
Research lab

### FINLAND

**ONKALO** - Eurajoki  
Waste categorization

### POLAND

**PURL** - Planned  
Research for Deep Geological Repository

### CZECH REPUBLIC

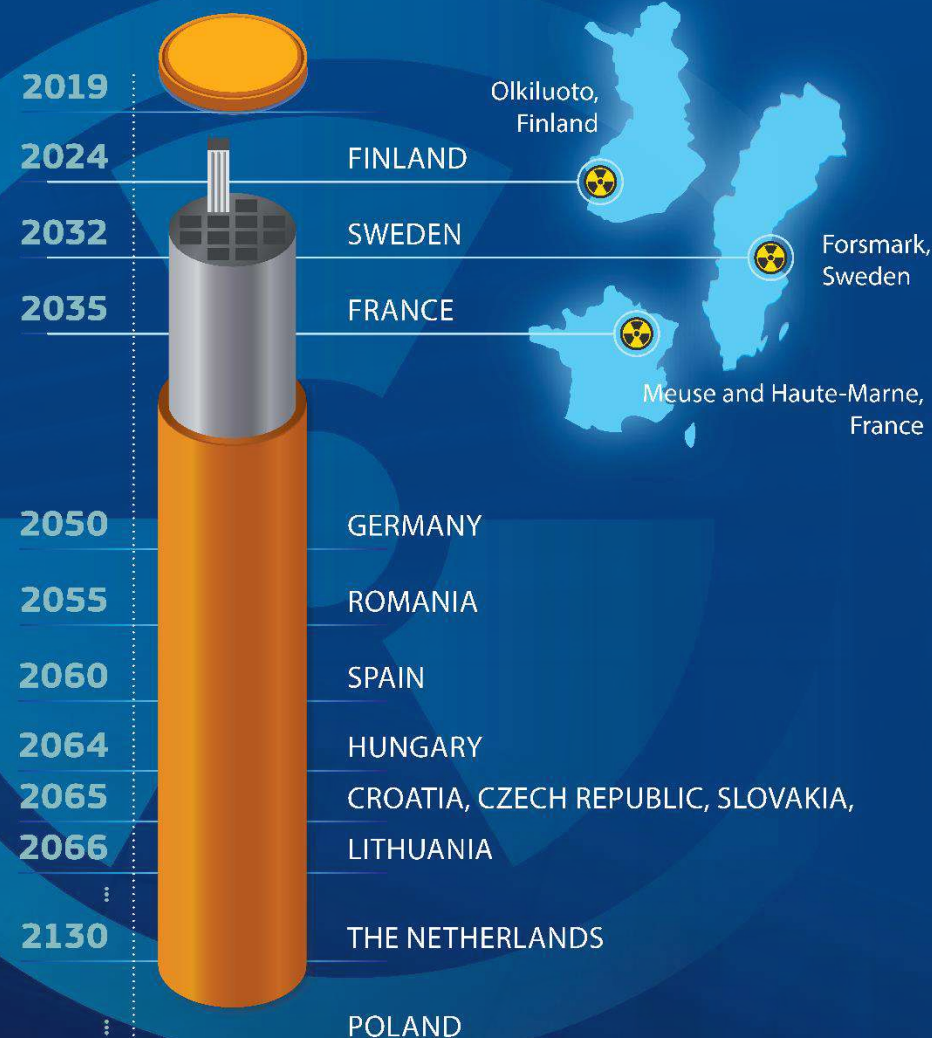
**Planned** - To be selected  
2030 - Long-term site investigations

### HUNGARY

**Planned** - Western Mecsek  
Planned from 2020 to 2055

### ROMANIA

**Planned** - Planned  
2030 - Sustainability of underground conditions



# TRANSPARENCY

Member States to have mechanisms in place to inform workers and public on radioactive waste and spent fuel management



**Member States**

**competent regulatory authority**  
providing regular updates to citizens

**Public**

**to be given necessary opportunities to participate**  
effectively in the decision making process





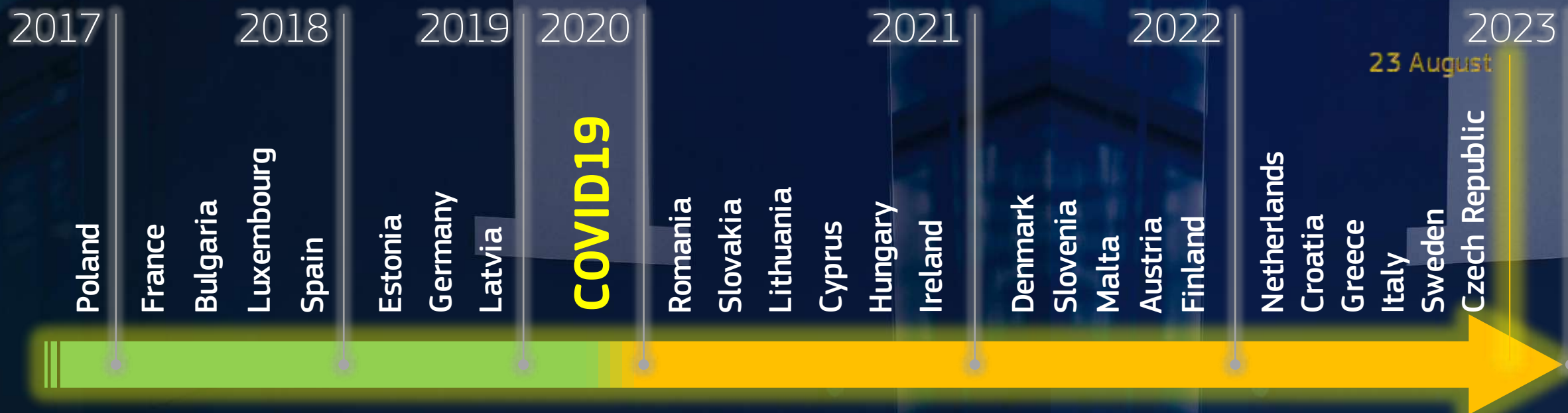
# JOINT EFFORTS

## SELF-ASSESSMENT AND INTERNATIONAL PEER REVIEWS

### ARTEMIS

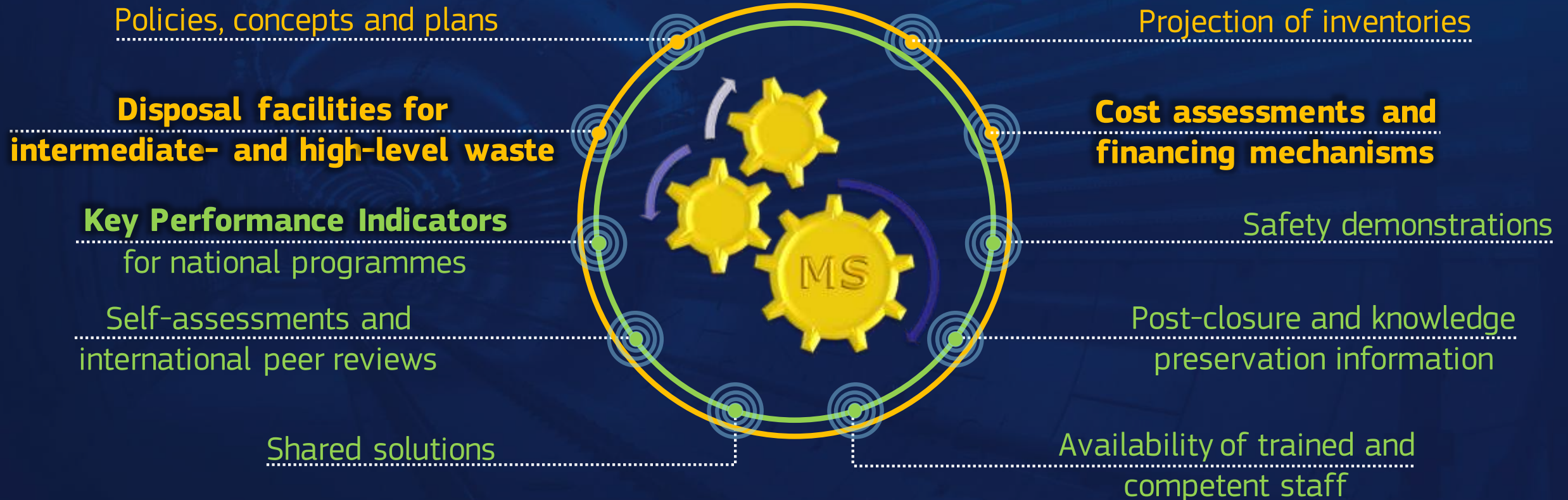
Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation

The IAEA integrated peer review service provides a cross-cutting peer review service for Member States worldwide, as well as in relation to the peer review obligations from the EU Directive on waste management



# THE WAY FORWARD

## ADDITIONAL **EFFORTS** AND SPECIFIC **FOCUS** NEEDED ON







# Summary of latest studies

## ...published

- Study on market for decommissioning nuclear facilities in the European Union  
<https://ec.europa.eu/energy/en/studies/study-market-decommissioning-nuclear-facilities-european-union> ISBN 978-92-76-08711-3
- Study on the risk profile of the funds allocated to finance the back-end activities of the nuclear fuel cycle in the EU  
<https://ec.europa.eu/energy/en/studies/study-risk-profile-funds-allocated-finance-back-end-activities-nuclear-fuel-cycle-eu> ISBN 978-92-76-08713-7
- Support to the mid-term evaluation of the nuclear decommissioning assistance programmes  
[https://ec.europa.eu/energy/studies/support-mid-term-evaluation-nuclear-decommissioning-assistance-programmes\\_en](https://ec.europa.eu/energy/studies/support-mid-term-evaluation-nuclear-decommissioning-assistance-programmes_en) ISBN 978-92-76-08717-5
- Study on the insurance, private and financial markets in the field of nuclear third party liability  
[https://ec.europa.eu/energy/studies\\_main/final\\_studies/study-insurance-private-and-financial-markets-field-nuclear-third-party\\_en](https://ec.europa.eu/energy/studies_main/final_studies/study-insurance-private-and-financial-markets-field-nuclear-third-party_en)
- Methodologies of cost assessment for radioactive waste and spent fuel management  
[https://ec.europa.eu/energy/studies\\_main/final\\_studies/methodologies-cost-assessment-radioactive-waste-and-spent-fuel-management\\_en](https://ec.europa.eu/energy/studies_main/final_studies/methodologies-cost-assessment-radioactive-waste-and-spent-fuel-management_en)
- Benchmarking analysis of member states approaches to definition of national inventories radioactive waste and spent fuel  
[https://ec.europa.eu/energy/studies\\_main/final\\_studies/benchmarking-analysis-member-states-approaches-definition-national\\_en](https://ec.europa.eu/energy/studies_main/final_studies/benchmarking-analysis-member-states-approaches-definition-national_en)

## in preparation (i.a.)...

- Study on Key Performance Indicators for monitoring implementation of national programmes on safe and long-term management of spent fuel and radioactive waste
- Study on radioactive waste classification schemes in the European Union



# THANK YOU

<https://ec.europa.eu/energy/en/home>