



Council Directive 2011/70/Euratom

*Community approach for the
Responsible and Safe
Management of Spent Fuel and
Radioactive Waste*

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DG ENER/D.2

JRC-EASAC seminar on "Management of Spent
Nuclear Fuel and its Waste", Brussels, 18 Feb 2013



European Commission

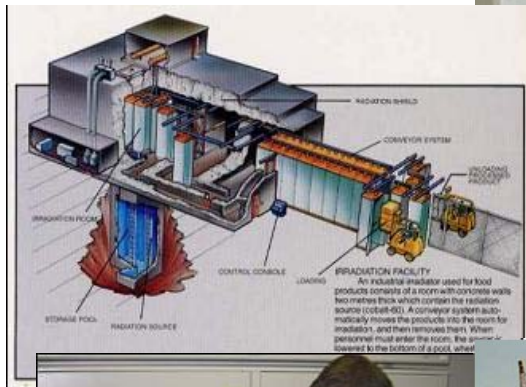
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Context

Medicine



Industry



Nuclear Industry

Research

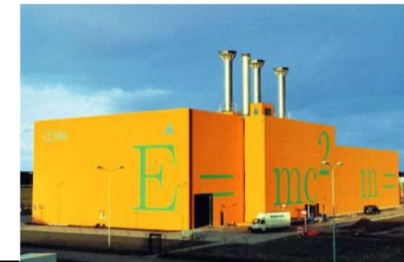


Decommissioning

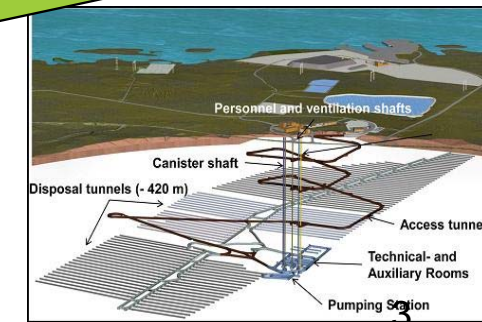
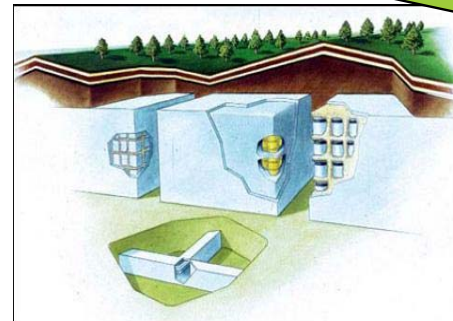
All EU Member States generate RW and have to manage it in the long term:

- The **storage** of RW, including long-term storage, is an **interim solution**, but not an alternative to disposal.
- **In the longer term**, only **disposal** with its inherent passive safety **can guarantee protection** against all potential hazards.

need for human action



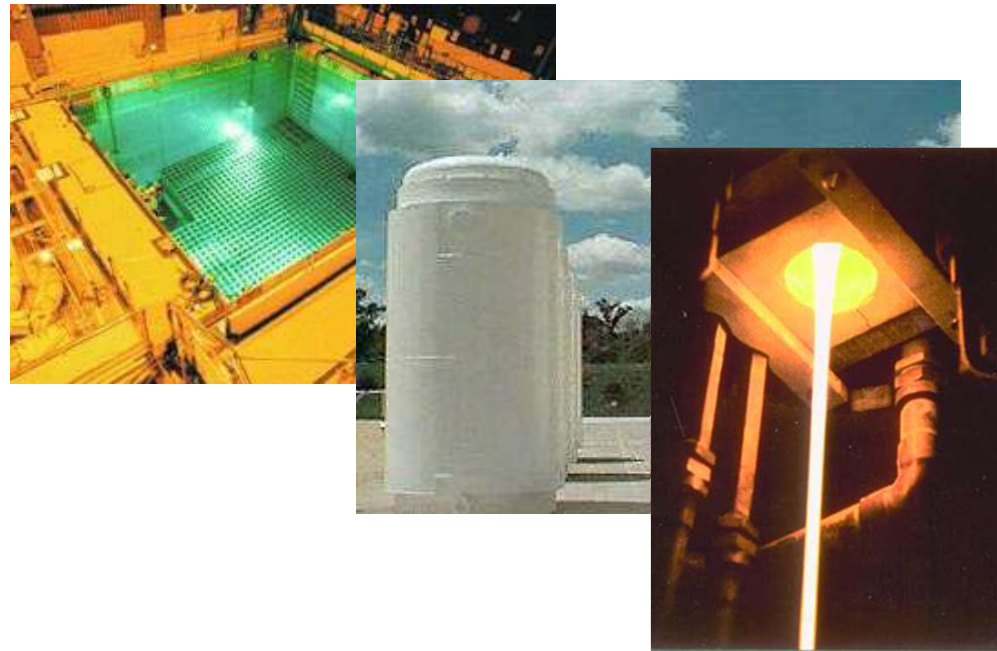
passive
safety



Each EU Member State is free to define its fuel cycle policy:

Spent fuel can be regarded:

- **as a valuable resource** that may be reprocessed
- **as radioactive waste** that is destined for direct disposal.



Whatever option is chosen, the disposal of high-level waste, separated at reprocessing, or of spent fuel regarded as waste should be considered.

LILW disposal – industrial maturity



*Very low level waste repository,
Morvilliers, France*



*Low level waste repository near Drigg,
Cumbria, UK*



El Cabril, Spain

Low and intermediate level waste repository

Geological disposal – the main challenge

- The safest and most sustainable end-point of managing **high level waste and spent fuel considered waste**, as well as **other long-lived waste**
- **Well-defined political decisions and schedules – Finland, Sweden and France**

It is likely that by 2025 these countries will have operational deep geological disposal facilities.

*The activities conducted under the **Implementing Geological Disposal of Radioactive Waste Technology Platform (IGD-TP)** could facilitate access to expertise and technology in this respect.*

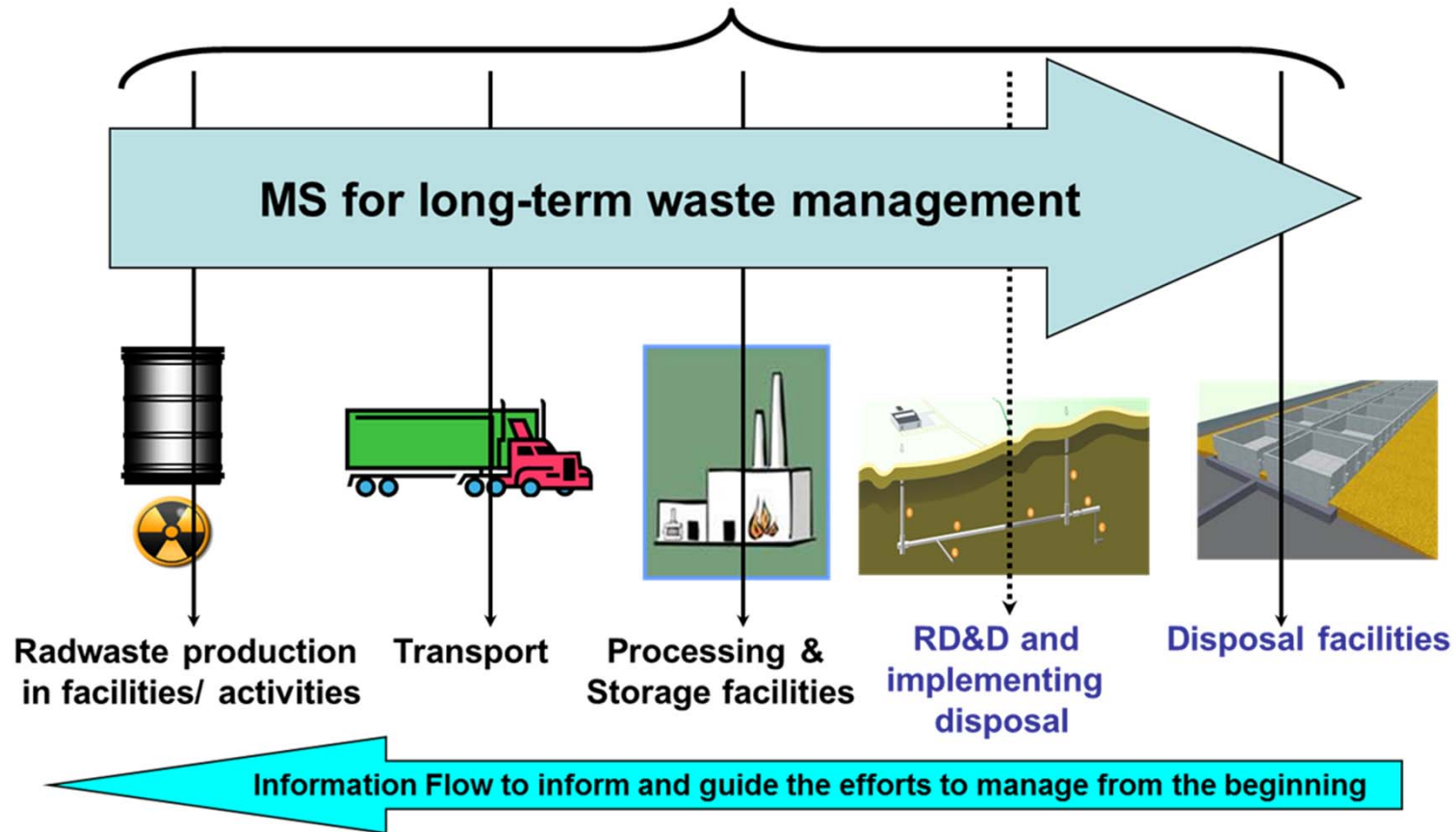


EU Member States, while retaining responsibility for their respective policies in respect of the management of their spent fuel and low, intermediate or high-level radioactive waste, **should include planning and implementation of disposal options in their national policies.**

Member States should establish **national programmes** to ensure the **transposition of political decisions** into clear provisions for the timely implementation of all steps of spent fuel and radioactive waste management from generation to disposal.

The different steps in spent fuel and radioactive waste management **are closely interrelated**. Decisions taken in one individual step may affect a subsequent step. Therefore such **interdependencies** should be taken into account when developing national programmes.

IMS licence holders (facilities and activities)



Interdependencies (all actors, all steps, all RW& SF)

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Main elements

National policy
General principles

National framework
(legislative, regulatory and organisational)

Allocates responsibilities and provides for coordination
between relevant competent bodies

National programme
Covers all types of SF and RW and all stages of their management
from generation to disposal

Art. 1 **Subject matter**

- Community framework ensuring responsible and safe management of SF and RW **to avoid imposing undue burden on the future generations**
- National arrangements for a high level of safety
- Public information and participation

Art. 2 **Scope**

- SF and RW from civilian activities
- All stages of management – from generation to disposal

Art. 3 **Definitions**

Consistent with the existing EU legislation and IAEA Safety Glossary (Joint Convention)



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Art. 4 **General principles**

National policies on SF and RW management

Member States have ultimate responsibility

- The generation of RW is kept to the minimum practicable
- Interdependencies between all steps in SF and RW generation and management
- **SF and RW are safely managed in the long term with passive safety features**
- Graded approach applied
- SF and RW producers cover the costs for their management
- **Evidence-based and documented decision-making process**

Art. 4 **General principles**

Disposal of RW, including SF considered as waste

- In case of SF / RW shipped for reprocessing / processing, the ultimate responsibility for disposal of RW remains with the shipping country
- **Disposal of RW/SF in the MS in which it was generated**
- “Shared” repositories in the EU possible
- Disposal outside the EU possible under very strict conditions, e.g.:
 - Equivalent high level of safety
 - Repository in the country of destination authorised for the RW/SF to be shipped and in operation prior to the shipment

Art. 5 **National framework (legislative, regulatory and organisational)**

Provisions for:

- **national programme** for implementation of the national policy
- **national arrangements for the safety**
- licensing system for activities and facilities
- a system of appropriate control, **a management system**, regulatory inspections, documentation and reporting
- enforcement actions

Art. 5 **National framework (legislative, regulatory and organisational)**

Provisions for:

- **allocation of responsibilities** to the bodies involved in different steps of SF and RW management
- national arrangements for public information and participation
- the financing scheme(s) for SF and RW management

To be improved

operational experience to be taken into account

Art. 6 **Competent regulatory authority**

independent and given legal powers and resources

Art. 7 **Licence holder**

prime responsibility for the safety

Safety demonstration for any activity or facility commensurate with the complexity of the operation and the magnitude of the hazards associated

Art. 8 **Expertise and skills**

education & training, research & development

Art. 9 Financial resources

Adequate financial resources be available when needed for the implementation of the national programmes for SF and RW management, **taking due account of the responsibility of SF and RW generators**

Art. 10 Transparency

- public information
- the public be given the necessary **opportunities to participate effectively in the decision-making process** regarding SF and RW management

Art.11 **National programmes**

- to be implemented, regularly reviewed and updated
- to cover **all types of SF and RW** and all stages of their management **from generation to disposal**

Art.13 **Notification**

- National programmes / subsequent significant changes
- **Commission's opinion or request for a clarification**
- Commission will consider national programmes when deciding on the provision of Community financial or technical assistance for SF and RW management

Art.12 **Contents**

- Overall objectives of the national policy
- **Significant milestones and clear timeframes**
- Inventory - present amounts and future prospects
- **Concepts or plans and technical solutions**
- Concepts or plans for post-closure period of a disposal facility
- **Research, development and demonstration needed**
- Responsibilities and the key performance indicators
- Cost assessment and financial scheme(s) in force
- Transparency policy or process
- Agreement(s) with a MS or a third country on SF and RW management, incl. on the use of disposal facility

Art.14 **Reporting**

- **MS reports** every three years – taking advantage of the review and reporting under the Joint Convention

first reports by 23 August 2015

- **Commission report** to the Council and the European Parliament **on progress made**, inventory of SF and RW and future prospects
- **Self-assessment / International peer review** – arranged / invited by the MS

periodically, at least every 10 years

Art.15 **Transposition**

- Compliance with the Directive by 23 August 2013
- First notification of the content of National Programmes not later than 23 August 2015



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*Facilitating the
implementation*

- **EC initiatives**

- ✓ **Transposition** seminar, 27 June 2012, Luxembourg
- ✓ Workshop on drafting and implementation of the **National Programmes (NP)**, 25-26 September 2012, Brussels
- ✓ Workshop on the drafting and implementation of the **NP** for MS with small nuclear programmes, 17-19 April 2013, Luxembourg

- **ENSREG**

- ✓ Format of and Guidance for **MS Reports**
- ✓ Self-assessment and international **Peer-review**
- ✓ **National (SF and RW) Management Systems**

- **ENEF**

Guidelines for the establishment and notification of **NP**

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Euradwaste '13

Eighth European Commission Conference on the Management of Radioactive Waste

*organised by DG RTD
in cooperation with DG ENER and DG JRC
and Lithuanian partners*

- **Vision - concluding FP7 and future priorities**
policy and research (scientific & technical) sessions
technical visit
- **Date, venue – 14-17 October 2013 in Lithuania**
in parallel with FISA conference



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Thank you for your attention !