



Radioactive Waste Management and dismantling Provisions in France

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ASN duties

On behalf of the French State, ASN regulates **nuclear safety and radiation protection** in order to protect **workers, patients, the public and the environment** against the risks related to nuclear activities.

ASN contributes **also to informing the public.**

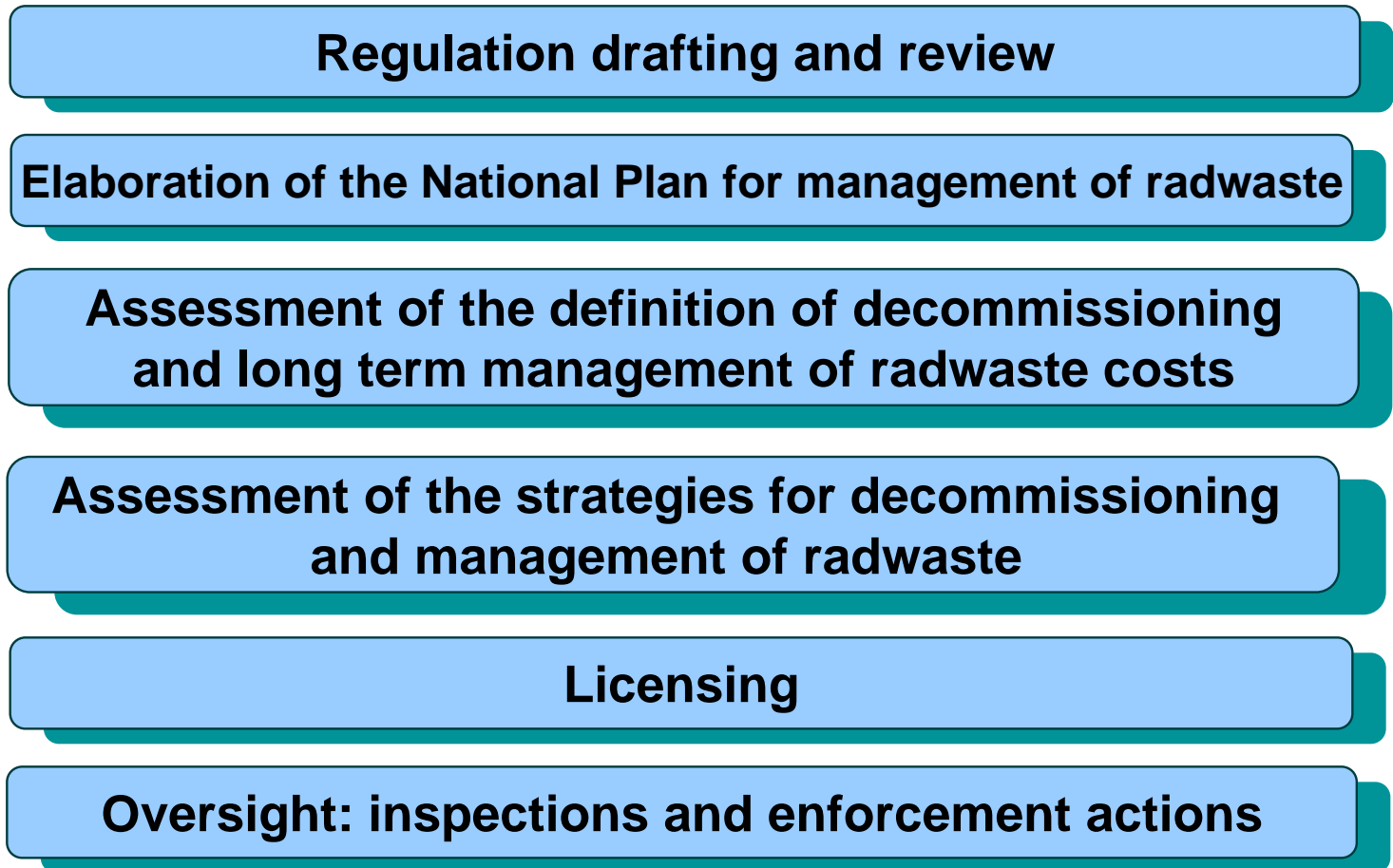
ASN is independent from the **Government.**

ASN reports to the **Parliament**



ASN duties related to waste management

Global approach



Approach by installation



Principles 1/3

- Producers of radioactive waste are tasked to manage safely their waste during production, treatment, conditioning and storage;
- ANDRA, the French national agency for radioactive waste management is tasked by law with designing, sitting, managing storage and disposal facilities for radioactive waste;
- ASN is responsible for the control of installation during all phases: design, construction, operation, decommissioning, monitoring phase.



Principles 2/3

- ASN considers that long term management of radioactive waste is a nuclear safety stake. The safe management routes have to be developed for every type of waste;
- ASN considers as an obligation to avoid any undue burden on future generations related to radioactive waste management;
- ASN considers that involvement of all stakeholders is necessary for a transparent and efficient management of radioactive waste.

Principles 3/3

- ASN doesn't favour establishment of clearance level for radioactive waste:
 - Avoid associated risks of dilution,
 - Requirement of traceability of radioactive waste;
- ASN requires immediate dismantling of nuclear facilities after their final shutdown;
- ASN requires complete clean-out of sites.



3 pillars for a safe management of radioactive waste

- A dedicated regulatory framework:
 - The “Waste act” of 28th June 2006 as a cornerstone;
- A national agency for management of radioactive waste : ANDRA, independent from waste producers;
- A national plan for management of radioactive materials and waste (PNGMDR);
 - Roadmap for a comprehensive, transparent, integrated and sustainable management of radioactive material and waste;
 - Establishment in the framework of a pluralistic working group.

asn Management routes for radwaste

	Very short lived (half-life < 100 days)	Short lived (half-life ≤ 31 years)	Long lived (half-life > 31 years)
Very low level (VLL)	<i>Management by radioactive decay on the production site</i> <i>then elimination in the conventional management solutions</i>	<i>Surface Disposal</i> <i>The Aube disposal centre for VLL waste</i> <i>Recycling management route</i>	
Low level (LL)		<i>Surface Disposal</i> <i>The Aube disposal centre for LL/IL-SL waste)</i>	<i>Low depth disposal</i> <i>Under study in compliance with the law of 28th June 2006</i>
Intermediate level (IL)			
High level (HL)		Not applicable ¹	<i>Deep geological disposal</i> <i>Under study in compliance with the law of 28th June 2006</i>

In the end, routes are defined by **Waste acceptance criteria** of the disposal facility that can encompass other criteria (e.g. physical, mechanical or chemical properties)



Need for an integrated view

Decommissioning plan

Use of appropriate design and materials to **enable and optimize** decommissioning and waste management

Decommission taking into account waste management

Update of the waste zoning;
Use of techniques that **minimize** waste quantity and toxicity.

Disposal design

Design disposal **taking into account** quantities and characteristics of waste to be produced



Records of operation to be kept

- Operating procedures;
- Events that lead to contamination of soils/structures;
- Changes in the installations.

Optimize waste route

Waste sorting, treatment, characterization, packaging and storage **compatible** with transport and disposal