



Status, responsibilities and missions of ANDRA (France)

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ANDRA - CEO

Technical meeting on RWMO - Paris, 7&8 June 2010

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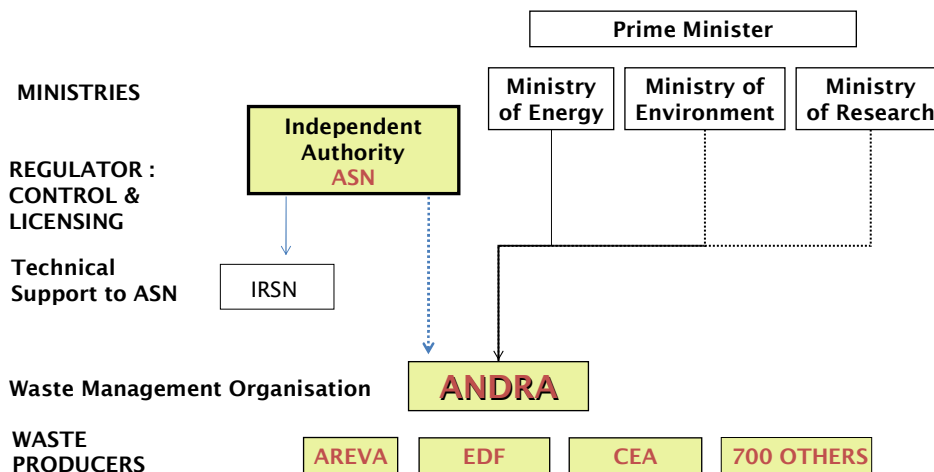
Legal framework, organization and general information

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ANDRA, a Public Agency since 1991



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Andra Missions

Andra uses its expertise and its know-how, as a public body under State supervision, to design, operate and monitor radioactive waste disposal facilities thereby protecting man and the environment from the impact of such waste, over the long term

1. Operate and monitor the existing surface disposal facilities
2. Study and design solutions for the sustainable management of waste for which there is not yet any specific disposal facilities
3. Collect and take-over radioactive waste from the "small-scale" nuclear waste producers (hospitals, research laboratories, universities...) and radioactive objects owned by private individuals
4. Proceed to the clean up and remediation of former sites contaminated by radioactivity
5. establish, update every three years, and publish the Inventory of radioactive materials and waste, existing in France, as well as its location on the national territory
6. Inform the public
7. Disseminate its know-how in France and abroad

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The action framework is defined by the Parliament

- **A first law for 15 years research on High Level waste**
 - 1991 to 2006, geological repository and alternative solutions
- **A new Planning Act passed in 2006 for RW Management**
 - All types of radioactive waste are considered through
 - A National Inventory
 - A Management Plan for Radioactive Materials and Waste (PNGMDR)
- **Both laws define**
 - Clear objectives and schedules
 - Assessment system: CNE, ASN, OPECST
 - Information, transparency, reporting requirements
 - Funding schemes for the Agency
 - Polluter-pays principle: contracts or tax system
 - Subsidies for Public Missions

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The action plan is given by the Government

Principle of the PNGMDR

☐ Protection of nature, of the environment and of public health

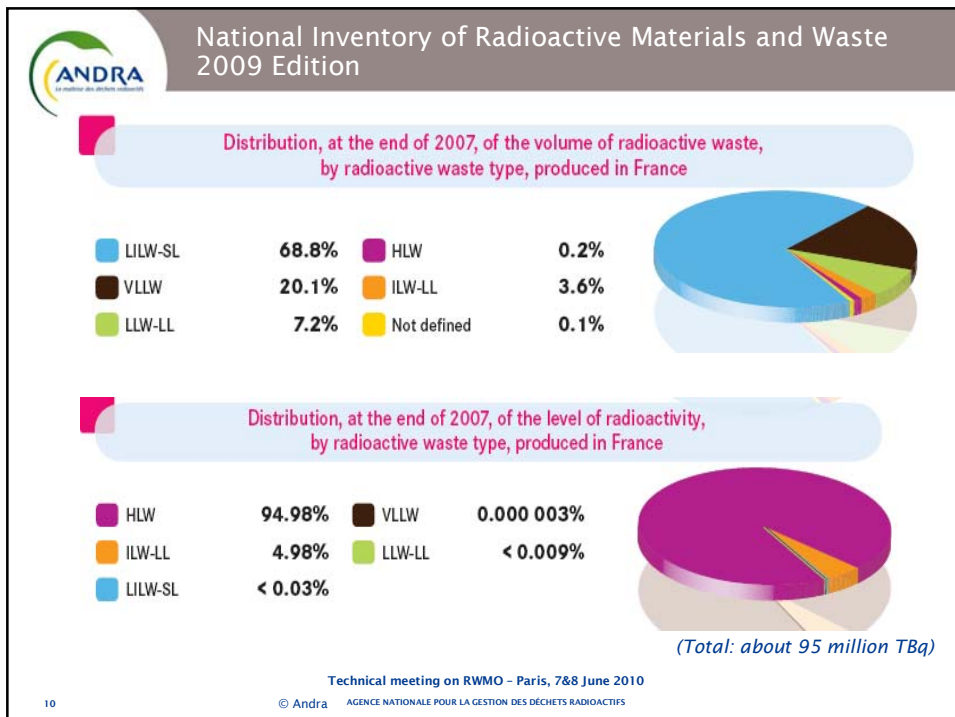
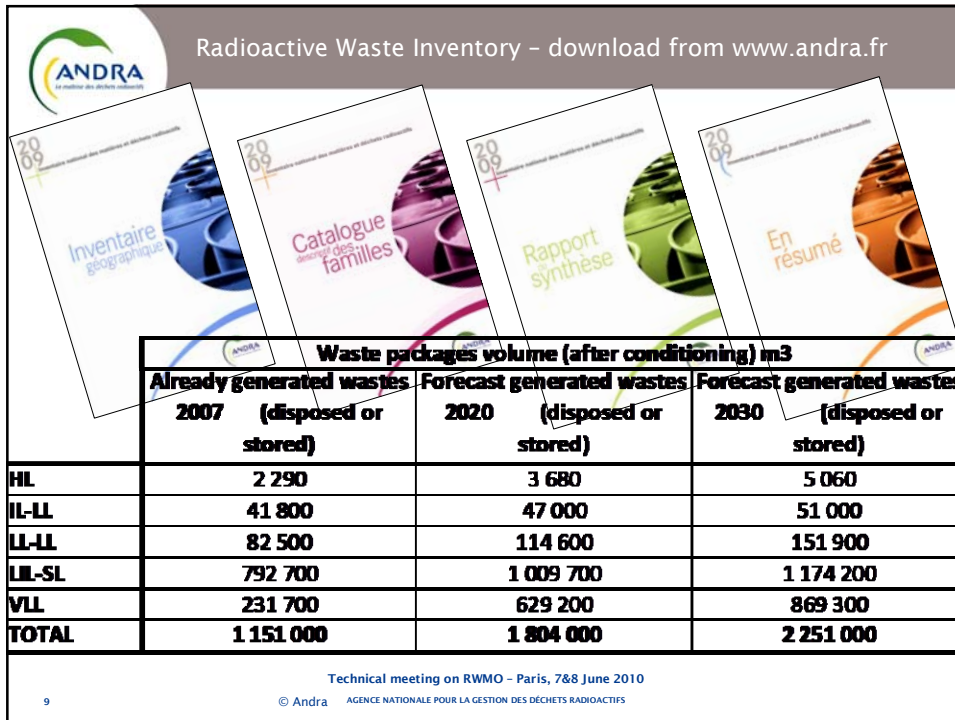
- ↪ Consistency of the management of radioactive waste: *similar safety objectives for all disposal facilities, immediate and long-term protection, performance depending on the nature of the waste and the related disposal facility*
- ↪ Technical and economic optimization
- ↪ Rare resource: better use of disposal facilities of radioactive waste (few and offering a limited capacity)



Classification of Radioactive Waste Intended for Disposal

	Short-lived waste	Long-lived waste
Very low level	Waste from dismantling operations Centre de Morvilliers	
Low level	Operating waste from NPPs Centre Aube + Centre MANCHE	Graphite, radium-bearing waste Studies stage
Intermediate level		
High level	Waste from reprocessing plants Disposal site to be commissioned in 2025	

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ANDRA today

- An Industrial Operator
- An Innovating designer-assembler
- A Public Expert
- A Diffusion and promotion centre



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Andra: Industrial Operator

- Low-level and intermediate-level short-lived waste
- Very-low-level waste

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The Centre de la Manche Disposal Facility

A facility under post-closure monitoring in the Manche District



Shut down in 1994 after reaching its maximum capacity, the **Centre de la Manche Disposal Facility** accommodated about 527,000 m³ of low-level and intermediate-level waste over a period of 25 years.

During several centuries, the facility and its environment will be monitored on a permanent basis.



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The Centre de l'Aube for LIL waste



Operated since 1992
1 million m³ capacity
Planned for 60 years operation
Impact: 0.003 μ Sv/year



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VLL Waste: the Morvilliers Disposal Facility



Commissioned in 2003
630,000 m3 capacity
Planned for 30 years operation
Challenge: recycling to save space

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ANDRA: An Innovating designer-assembler

- High-level and intermediate-level long-lived waste
- Low-level long-lived waste

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The project for a deep geological repository is:

- ❑ feasible from a technical standpoint
- ❑ demonstrable from a scientific standpoint
- ❑ safe (its safety may be demonstrated)

The project is an outstanding industrial installation combining

- ❑ Underground works and nuclear safety

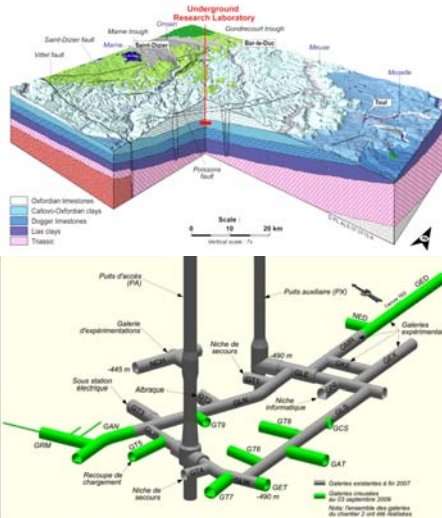
A geological repository is not only a scientific and technical endeavour. *It is also a societal challenge:*

- ❑ It concerns all citizens
 - ❑ It calls for complex decision-making processes with often different stakes and views
- 👉 *It requires a clear legal framework, as well as time.*

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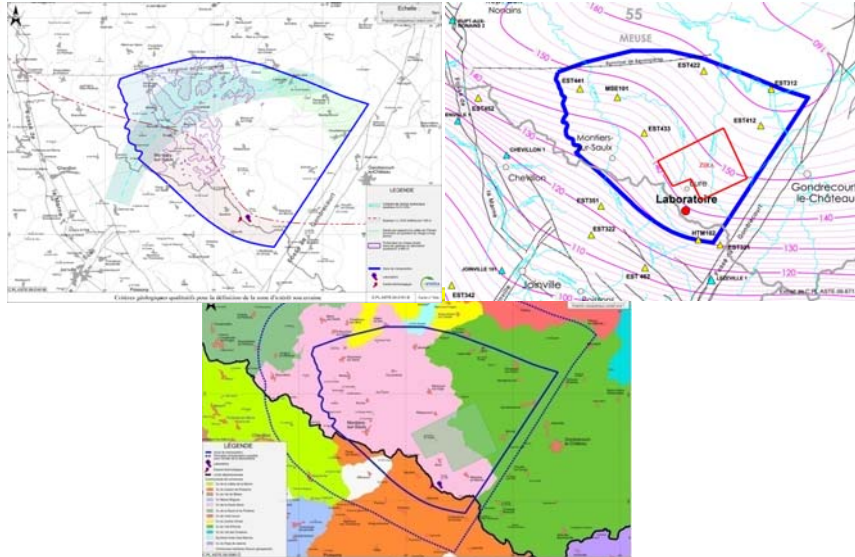
Bure 2009



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Delineation of a More Favourable Geological Zone



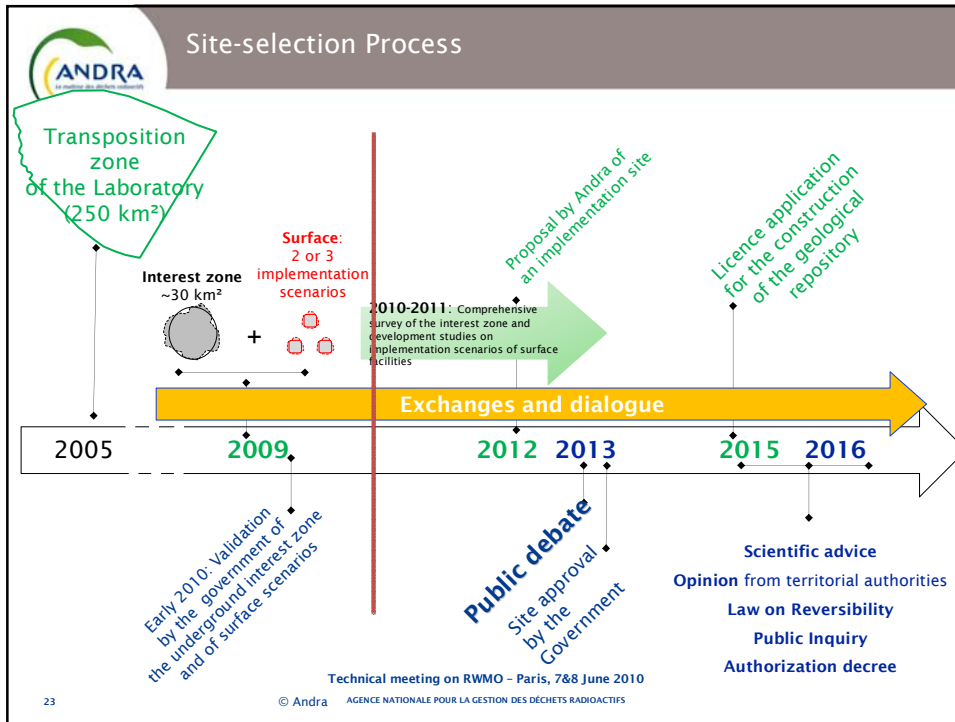
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Geological Disposal: A Project with a High Added Technological Value



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Low-level long-lived radioactive waste

~ 70,000 m³ graphite-waste packages for disposal

Piles (dismantling): 81%

- **Claddings and cores (operation): 8%**
- **Various waste from experimental reactors: 1%**

~48,000 m³ of radium-bearing waste packages for disposal

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ANDRA: a Public Expert

- National Radioactive Waste Inventory
- Recovery of artifacts owned by the public
- Remediation of polluted sites

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Recovery of artifacts owned by the public

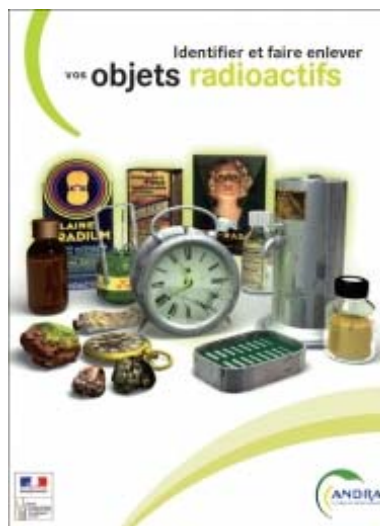
Use of radium to
feed animals



Lightning
Conductors



Radium fountains



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Polluted site remediation

An historical legacy from the discovery of radioactivity
A flexible and realistic approach suited to the level of pollution and to the land use
A commission launched to define priorities



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ANDRA: A Diffusion and promotion centre

- Information and Communication
- Stakeholder involvement

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A diffusion and promotion centre

- To build confidence and to produce sound reference information
- To develop European and international exchanges
- To develop and to promote expert services at the international scale

Tools

Many publications made available www.andra.fr

Visits to the sites, open doors days

Involvement in the local and territorial life

Involvement in international projects, NEA, IAEA, EC

Services to foreign agencies for inventories, waste management strategies, waste specifications, siting, design, safety assessment, scientific and technical reviews

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Conclusion

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ANDRA is responsible for all radioactive waste in France

- From ... radioactive waste inventories
- To ...closure and monitoring and memory keeping of disposal facilities

All radioactive wastes are managed in a consistent framework

- With a technical solution suited for each type of waste

ANDRA is responsible for interacting with local stakeholders

- Communication
- Local Committees

.... with full support from the National level