

The logo for IRSN, featuring the letters 'IRSN' in a bold, sans-serif font. The 'I', 'R', and 'S' are red, while the 'N' is blue.

INSTITUT
DE RADIOPROTECTION
ET DE SÛRETÉ NUCLÉAIRE

Franco-British Nuclear Forum

Decommissioning and Waste Disposal Implementation Aspects

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- ❑ **Decommissioning and Waste Management Risk Related Challenges**

- ❑ **The French perspective**

- ❑ **Conclusion**

Decommissioning specific risk related issues

- Workers external exposure and contamination**
- Human and Organisational Factors, in particular related to subcontracting**
- Explosion and fire hazards**
- Availability of appropriate repositories for the resulting waste**

Waste Management risk related issues

- ❑ Long-lived radioactive final waste: the geological disposal option
- ❑ Graphite and radium bearing waste: the subsurface repository option
- ❑ Understand key phenomena that may affect containment, and manage uncertainties inherent to the time frames involved

The French perspective on decommissioning

- ❑ Anticipate decommissioning by preparing the operations before the plant shutdown
- ❑ Decommission as soon as possible after the plant shutdown (avoids the loss of detailed knowledge of the installation, limits the risks induced by ageing)
- ❑ Ensure the staff training (notably subcontractors)
- ❑ Ensure prevention of radiological and non radiological risks to workers
- ❑ Anticipate the complexity, from a radiation protection viewpoint, of having to manage in parallel multiple dismantling works in the same plant
- ❑ Share share experience on safety assessments at international level

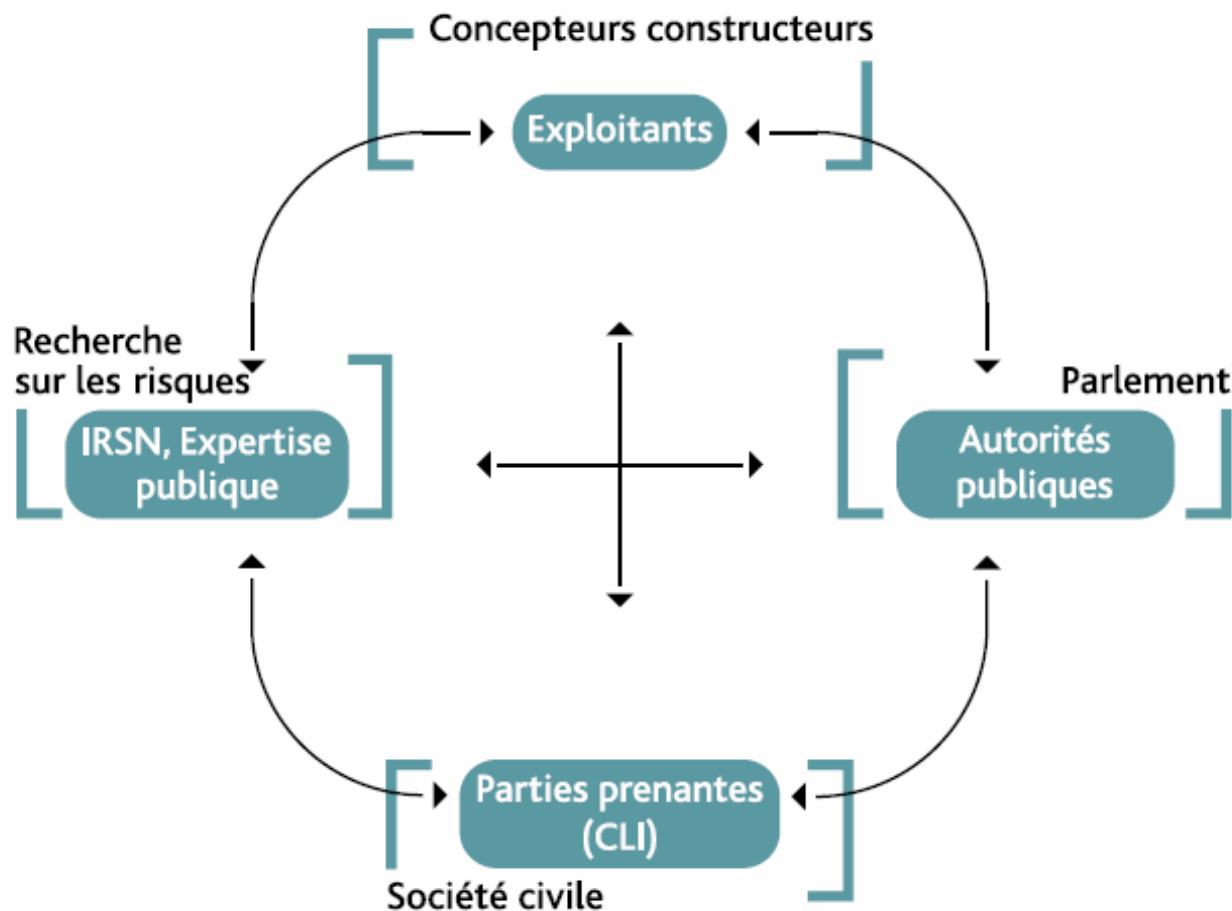
The French perspective on radwaste management

- ❑ Operation as of 2013 of a subsurface repository for graphite and radium waste
 - Site identification process review
 - Safety file analysis, on the basis of existing expertise know how

- ❑ Safety file for the creation of geological a disposal facility for HLW to be completed by 2015
 - **Specific IRSN led R&D to consolidate expertise capacity:**
 - In situ experiments and studies on host rocks and on key phenomena for safety → IRSN Tournemire in situ laboratory
 - Development of modelling capacities on all important aspects
 - Assessment of design options through independent simulations

 - **Scientific cooperation with ANDRA and other agencies and operators**

Conclusion: Safety requires clear rules and responsibilities, transparency and a balanced capacity of expertise.



Thank you for your attention

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