

Modern2020

Welcome address

Frédéric PLAS

Andra/Head of R&D Division



Modern2020 Final Conference
April 9-11, 2019
Paris, France



*This project has received funding from the Euratom research and training programme 2014-2018
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Welcome to all participants of Modern2020 Final Conference in Paris

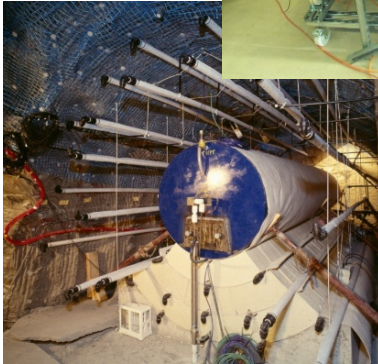


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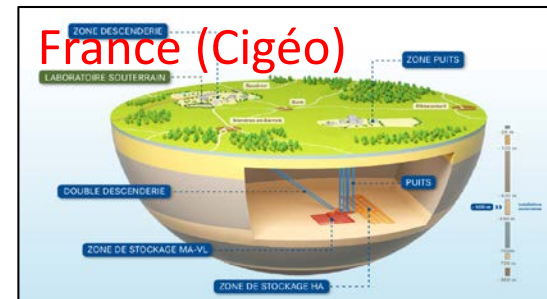
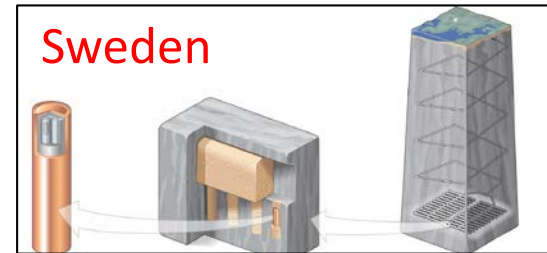
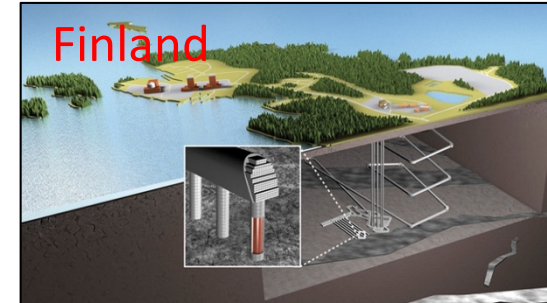
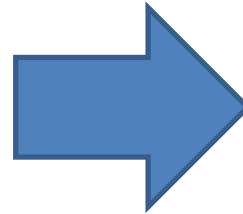
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Monitoring: From Laboratory and URL studies to Deep Geological Disposal

Last 40 years



At that time to next 5/10 years first disposals of SF, HLW, IL-LLW



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Objectives of Monitoring for a Deep Geological Disposal

- To support the construction and the operational safety
- To support the achievement of the post-closure safety functions during operating period
- To support the assessment of the technical conditions for retrievability
- To contribute to the dialogue with the Public
- “To contribute to the knowledge management”



- **Strategy/Program**

- ✓ **Operating and from operating to post closure**
 - **Safety of Operating processes** (incl. retrievability)
 - (May) including incidental situations
 - Behaviour of **Post closure system** ⇨ **Post closure functions**
 - ⇨ **components and relevant THMCR parameters to be monitored**
- ✓ **Governance and progressive development of the disposal**
 - **Role of pilot (phase) in many projects**
 - **Monitoring Strategy/Program: a input and a output**
 - **Several decades of development allowing:**
 - **dialogue**
 - **progress and innovation**
 - **flexibility and evolution**

• Technics

- ✓ Devices: sensors, transmission, energy supply...
- ✓ QA: components, devices, emplacement of components and sensors...
- ✓ Data Management...

• High level technical Requirements



• High level Safety Requirements (Safety functions...)

- **Non invasive (not to disrupt Safety functions),**
- **Robustness (Durable as much as possible and reasonable),** THMCR disposal conditions
- **Simplicity, Flexibility, Redundancy and Complementarity...**
- To assess overall view of components...
 - » **To take into account the certain evolution of technologies over several decades**

In close link with

- Host rock
- Radwaste inventory
- Design concept
- +
- Constraints of a nuclear facility
- Constraint of a underground facility



**Being pragmatic answering questioning:
why, what, how many, where, when, how long... to monitor ?**

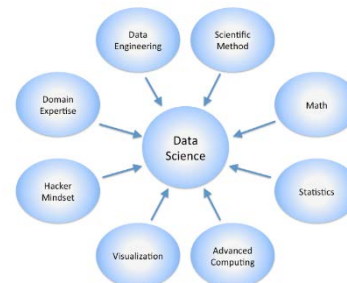
Monitoring: many areas concerned

- **Specificities of a Radwaste deep geological disposal**

- ✓ Several decades to more than a century of operating
- ✓ Designed for Post closure (passive long term safety)
- ✓ Progressive development over time...

- **But common aspects with other areas from which Radwaste deep geological disposal could benefit and share**

- ✓ Nuclear power plants/facilities (incl. decommissioning)
- ✓ Dams
- ✓ Railway and road tunnels, bridges...
- ✓ Petroleum Industry/engineering (Reservoir Geoscience and Engineering)
- ✓ CO₂/H₂ geological storage
- ✓
- ✓ Data sciences (Big data, AI...)
- ✓ ...



I wish you a fruitful Modern2020 Final
Conference

And

I hope you will enjoy your stay in Paris



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