

Overview: Opportunities for Sharing

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Areas and drivers for cooperation

- IAEA TECDOC-1658 (Viability of Sharing Facilities for the Disposal of Spent Fuel and Nuclear Waste): **Sharing facilities brings obvious economic, technological, security and environmental benefits if a reliable scheme can be instituted that will weather changes in need, competition, economic wellbeing, environmental concerns and public/political acceptance.**
- R&D – e.g for developing procedures for clearance of waste; avoidance of formation of NORM waste, URLs,
- Services and equipment - nondestructive testing, radiological surveys, containers, waste

Cooperation/sharing benefits

- **Safety and security:** Dose reduction when using shared facilities. It may be easier to maintain safety in the longer term in one facility rather than several smaller facilities. There are benefits associated with security and non-proliferation advantages, institutional requirements and public acceptance and support. Enhanced security against sabotage and terrorism.
- **Economy:** The high ratio of fixed to variable costs for a storage/repository ensures that considerable economies of scale will apply. Needed technology, equipment consultancy services etc is

Means of cooperation

- Commercial – between licensees
- Bilateral cooperation agreements and MoU-s
- Joint financing, leasing
- Direct interaction between specialists of competent authorities/waste management organizations
- IAEA – TC projects, expert missions, education and training, INPRO forum, meetings for experts
- EU – Structural and Investment Funds, Horizon 2020 (EURAD), ENSREG, WENRA, HERCA, EC expert group meetings

Possible areas of cooperation

- Studies, technologies, equipment, facilities, methods, manpower, ...
- Strategies (technical, public participation and stakeholders)
- Regulatory requirements-sharing on licensing, regulations, radioprotection and environmental impact assessment for existing programmes and newcomer countries (WANO, ENSREG, ...)
- Facilities – fixed or mobile, storage and pre/disposal, emergency infrastructure, ...



Services and equipment

- Waste management (melting, incineration, ...) in Sweden, France, ...
- Sharing of nuclear fuel cycle facilities (e.g. reprocessing in regional fuel cycle centres)
- NORM residues:
 - Energy Fuels Resources submitted an application in April to the Utah Division of Waste Management and Radiation Control to allow the White Mesa Uranium



Some examples of cooperation

- Bilateral between Slovenia and Croatia -existing joint RW and SF storage, planned joint disposal of HLW and SF
- Bilateral very good cooperation and knowledge sharing with e.g. the Netherlands, Denmark and Norway – could lead to concrete predisposal activities, possibly involving other countries
- Belgium and Luxemburg-
agreement to store
Luxembourg’s radioactive



Sharing opportunities

- Sharing technical problem solving capability, repository siting experience, facility design know-how, technologies, equipment
- Exchanging staff
- Sharing pre-disposal facilities
- Moving towards shared disposal with small but concrete steps, sharing pre/disposal facilities (storage, T&C, mobile units, encapsulation plant, packaging facilities, ...)
- Deep borehole disposal
- Public procurement directive 2014/24/EU – article 39-Procurement involving contracting

Thank you for your attention!

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ISO 9001 Q-1599
ISO 14001 E-216

