

# International Conference on Radioactive Waste Management: Solutions for a Sustainable Future (CN-294)



## International Conference on Radioactive Waste Management: Solutions for a Sustainable Future

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## Deep borehole disposal as an avenue for multinational collaboration

Deep borehole disposal has received increased attention in recent years as a potential method for safe disposal of high-level radioactive waste, including spent fuel. Borehole disposal is of particular interest to small-inventory States, because the economies of scale are different than for deep geological repositories that involve access tunnels, shafts, and tunnel galleries (mined repositories). The driver for countries to combine their waste inventories in a shared multinational repository (MNR) is thus not as strong for borehole repositories, but large benefits can still result from multinational cooperation.

The ERDO Association is conducting a project that assesses the strategic potential of borehole disposal for several European countries, based on their existing and projected national waste inventories. The project has identified a basic design that could enable disposal of both spent fuel and high-level waste from reprocessing, thereby enabling disposal of a significant portion of the combined waste inventory. Strategic implications, such as required support facilities, implementation time, risks, and costs have been assessed. The generic process for concept development has been described. The concept is in an early, generic stage. Central uncertainties have been assessed, and topics for continued research and development have been identified.

The differences between fixed and variable costs for borehole disposal and mined repositories may enable a multinational approach that focuses on sharing R&D-resources, encapsulation facilities, tools, and methods, rather than constructing one shared repository. This may open attractive opportunities for national and international organizations, as well as commercial companies with relevant competence.

### Do you wish to participate as a Young Professional?

Yes

### Speaker's title

Mr

### Affiliation

NND and ERDO

### Do you wish to be considered for a Young Professional grant?

No

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