



Association for Multinational  
Radioactive Waste Solutions

# An Adaptive, Staged Siting Strategy for a Multinational Repository

*Based on an article in Nuclear  
Engineering International, May  
2008, 53(646):26-31*

**RADWASTE MANAGEMENT**

## Staged siting strategy

*Multinational siting strategies can be modelled directly on successful, modern, national siting approaches since both approaches face very similar challenges.*

*By Neil Chapman and Charles McCombie*

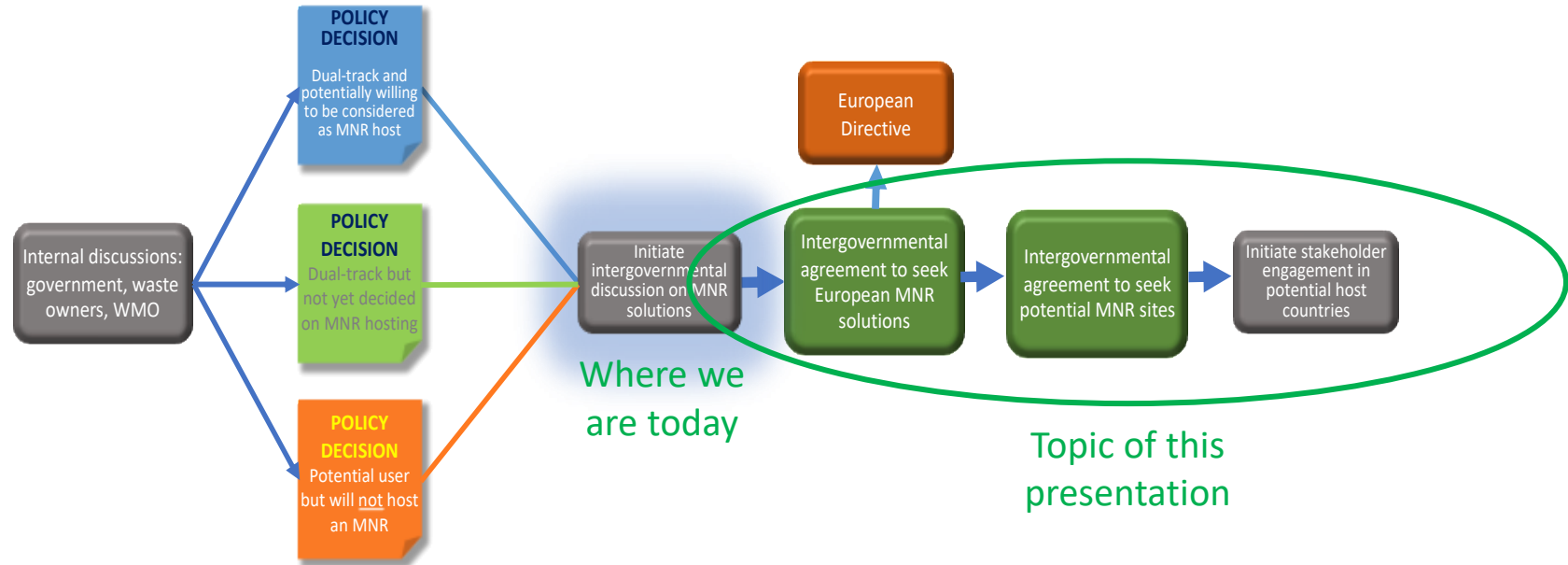
# Introductory Remarks

- Only the initial siting strategy and critical multinational issues are described in this presentation
- The focus is on the sociopolitical aspects of identifying an MNR site: the technical aspects are no different to locating a national DGR
- Principles found in *“One Step at a Time”* (US National Academies) and *“Stepwise Approach to Decision Making for Long-term Radioactive Waste Management: Experience, Issues and Guiding Principles”* (OECD Nuclear Energy Agency)
- **The strategy is a volunteer model incorporating stakeholder involvement at all stages.**
  - Technically guided at the outset only insofar that clearly unsuitable regions are excluded at the start
- Recent developments of ERDO thinking on siting are included in the **ERDO Dual Track Roadmap**, which is available at:

<https://www.erdo.org/app/uploads/2021/09/The-ERDO-Association-Roadmap-09-21.pdf>

# ERDO Roadmap

Intergovernmental discussions – the key aim of the Policy and Strategy pathway



# Siting Approach - 1

- A group of countries comes together to explore the possibility of sharing a geological repository
- Having established the way in which they will work together they give wide publicity to the project, explaining all aspects, including **national and community benefits**, and they announce that a volunteer process will be launched
- With the involvement of a wide range of national and international stakeholders, they establish a common set of technically based exclusion criteria to remove from consideration clearly unsuitable land areas within all their countries
- National databases and national agencies (e.g., geological surveys) would be pivotal

## Siting Approach -2

- Communities in non-excluded areas in all the countries are invited to express interest in learning more about the implications of hosting the repository
- National governments would agree not to stand in the way of this process or they may actively encourage it
  - ...and will assure their publics that they will provide proper oversight of the process as well as control on any final decision
- Participating national governments would be free to solicit specific volunteer communities that they considered might have a particular interest in the project or have particularly favourable characteristics for hosting a repository
- Up to a pre-defined 'point of commitment' (probably after several years of site investigations), both interested communities and national governments would be free to withdraw from the process

# Key aspects of the approach

Governments agree to work together and appoint an organisation to take the lead

Establishing how national WMOs and regulators would work together with an 'ERDO' will be critical

The current ERDO would need to change significantly to take on a co-ordination role

Even countries that do not initially see themselves as hosts might be happy to allow a search for MNR volunteer communities

This may lead to policy adaptations: e.g., in a situation where an enthusiastic community emerges in a country with no current intention to be a possible MNR host

Requirement for clear, generous and attractive national, regional and community benefits is paramount

The MNR will be a major item of international infrastructure – a strategic, environmental asset for Europe

The project(s) quickly becomes community-led, once volunteers come forward

The project(s) takes the lead, driven by community enthusiasm

Governments can to some extent uncouple from the siting process until final decisions are required

Governments initially 'let the process run', without micromanagement, under the eyes of their joint regulators, WMOs and international agencies

A key audit or oversight role for the IAEA?

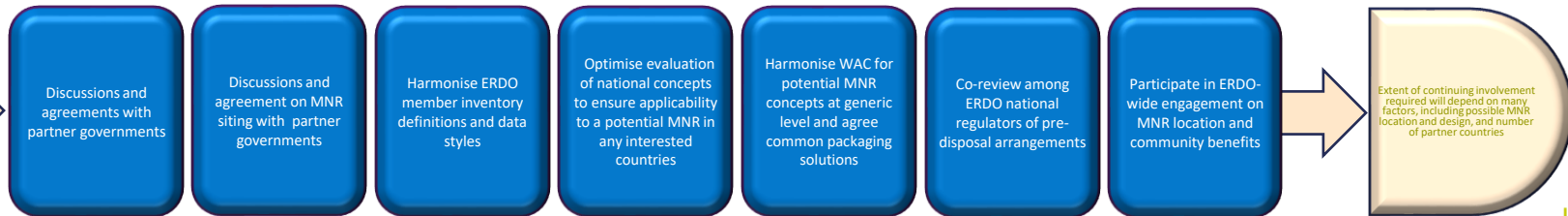
# ERDO Roadmap: dual track activities for collaborating WMOs



## Early activities required to progress national DGR programme



## Additional activities required to assist in development of ERDO MNR options



# Siting Goals

- Deliver, within a 10 to 20-year time window and with an economically justifiable approach, a site or sites that are technically, politically and societally acceptable
- Show that the site(s) meet all nationally and internationally accepted standards with respect to operational and long-term safety and environmental impact
- Pursue a staged and progressive approach to identifying both host communities (sites) and host countries at an appropriate time in the project schedule, while avoiding premature, external pressures to identify hosts at the outset
- Work in harmony with **parallel national siting programmes**, since partner countries will pursue a “dual-track” approach in which they assess both national and multinational options