

MNA: Global Interest and Activities

(focus on Geological Disposal)

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Arius Association
Secretariat ERDO-Working Group

Steps to Sharing
ERDO Meeting hosted by IAEA,
Vienna, September 2019

IAEA

Joint Conv.
TECDOCs
T.M. 2016
INPRO

EC

SAPIERR
Waste Directive
EJP - EURAD

ERDO-WG

Meetings
Website

Focus on
Multinational
Approaches

Arius

USA Fdns
ERDO
USDOE

IFNEC
RNFSWG
Meetings
Reports

NTI
AAAS
CSIS
WNA

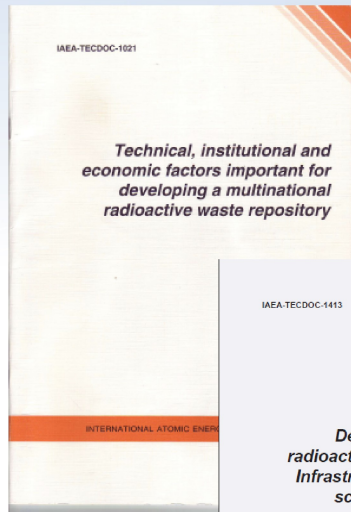
Australia
SA RC report
New Study?

Activities on Multinational Approaches

IAEA

- Series of multinational repository reports (see next slide)
- INPRO initiative; Impediments to the Nuclear Fuel Cycle Back-End
- General Conference 2015 Review Meeting
- Present Workshop

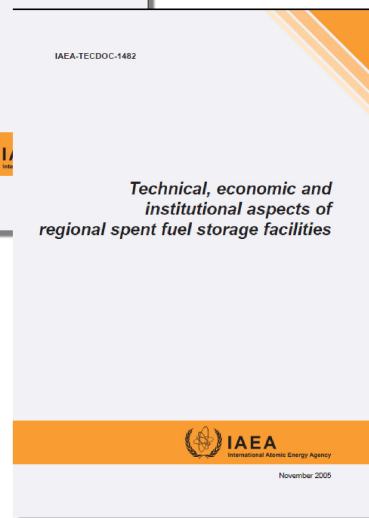
IAEA reports addressing multilateral issues



1998



2004



2005

2005

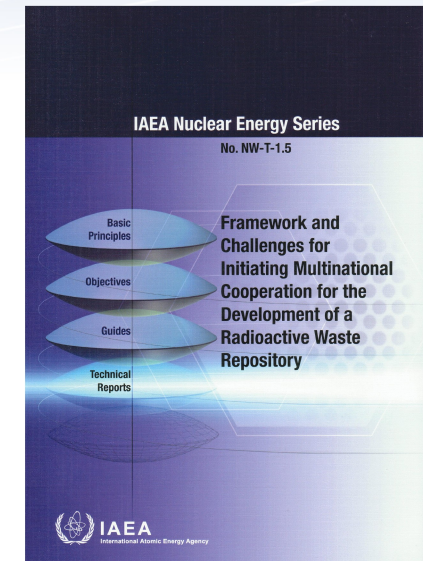


IAEA-TECDOC-1658

Viability of Sharing Facilities for the Disposal of Spent Fuel and Nuclear Waste



2011



2016

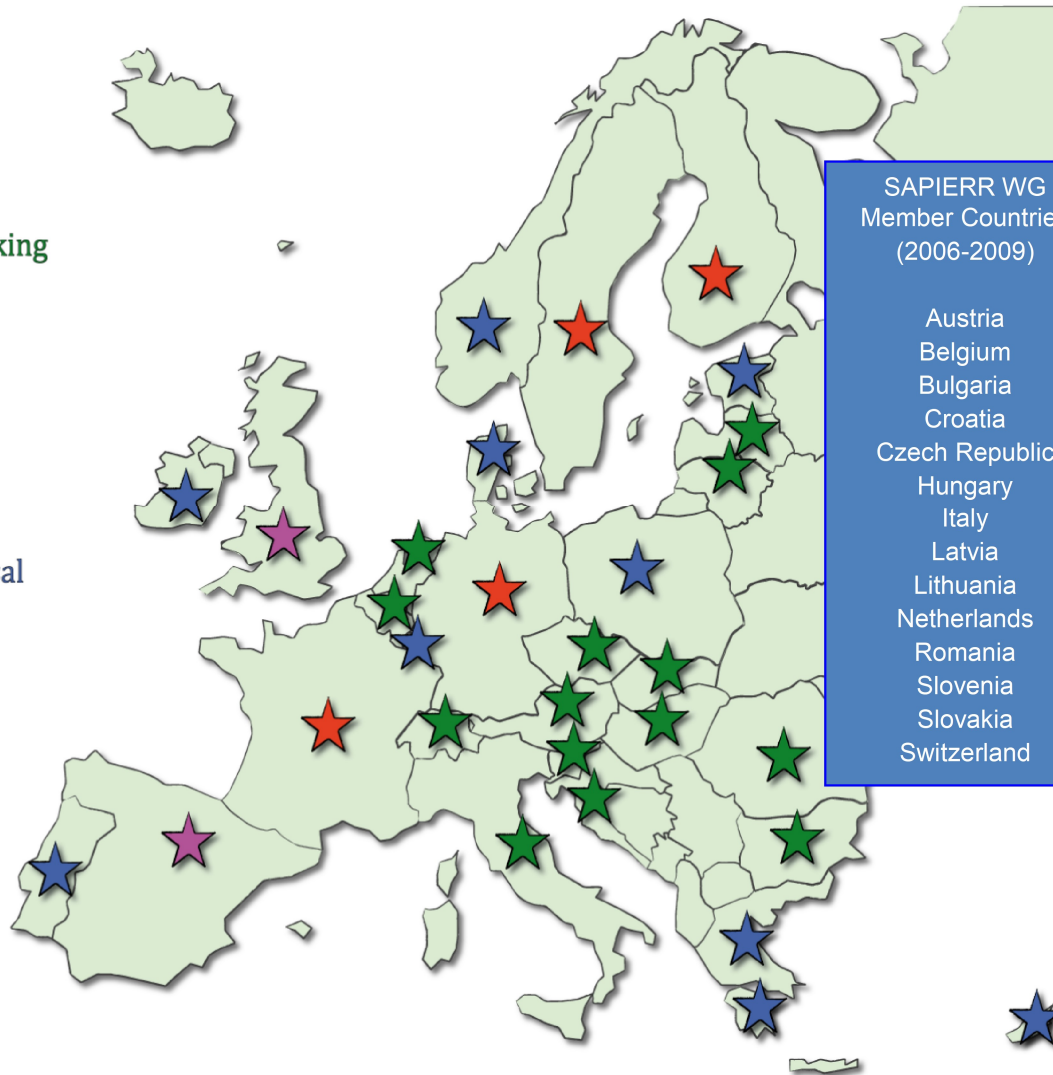
Activities on Multinational Approaches European Commission (EC)

- Earlier support of SAPIERR Projects (see E.V. presentation)
- Resolution 1157 (1998) calls on MS to *“study the technical, economic and political feasibility of the creation of international repositories..”*
- Waste Directive 2011 – confirms feasibility of shared facilities
- Current Request for Proposals H2020 NRFP8:
 - *“Pan-European knowledge sharing and development of competence on radioactive waste management activities”* - Original text – *“should also consider ... the sharing of facilities building on previous projects, such as SAPIERR”*; later omitted
- EURAD – end product from EJP initiative; relatively small effort on strategic approaches to multinational cooperation

-  The 14 SAPIERR working group members
-  National disposal programme only
-  No formal official policy
-  No NPP but some waste for deep disposal

Past and current involvement with ERDO-WG

- Austria
- Bulgaria
- Croatia
- Denmark
- Ireland
- Italy
- Lithuania
- Netherlands
- Norway
- Poland
- Romania
- Slovakia
- Slovenia



SAPIERR WG
Member Countries
(2006-2009)

- Austria
- Belgium
- Bulgaria
- Croatia
- Czech Republic
- Hungary
- Italy
- Latvia
- Lithuania
- Netherlands
- Romania
- Slovenia
- Slovakia
- Switzerland

Activities on Multinational Approaches

Arius Association - 1

- Established 2002
- SAPIERR reports (2005-2008)
 - WP1 – Legal and Business Options
 - WP2 – Responsibilities and Financial Liabilities
 - WP3 – Economic Aspects (including Hosting Benefits)
 - WP4 – Security Aspects
 - WP5 – Public and Political Attitudes
- Advice to IAEA, IFNEC, USDOE, UAE, ROK, etc.
- Co-founder of ERDO-WG

Activities on Multinational Approaches Arius Association - 2

- Contributor to IAEA Reports
 - Multinational Repositories (Tecdoc 1413); Regional Storage (Tecdoc 1482); Viability (Tecdoc 1658); Options for New nuclear nations (NW-T-1.24); Framework and Challenges (NW –TN-1.5)
- South East Asia activities: ASEAN
 - IAEA INPRO Consultancies Sep 2010 and Feb 2011
 - AAAS and NTI Initiatives
- Middle East and North Africa: GCC and MENA
 - Workshops in UAE and Tunisia
 - GCC contacts in Riyadh

European Repository Development Organisation – Working Group

MISSION STATEMENT

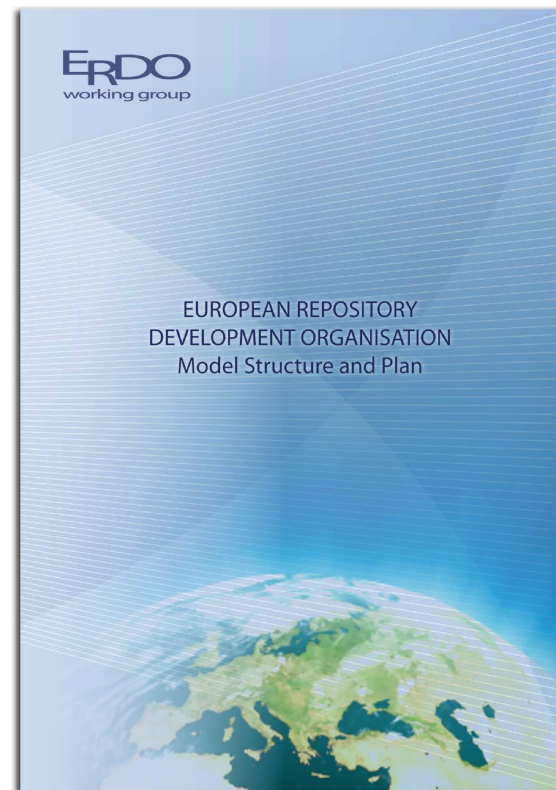
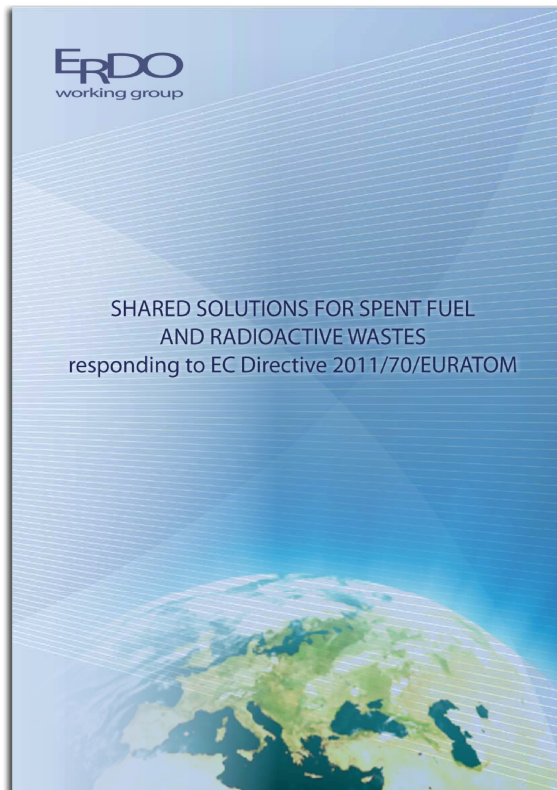
“The ERDO-WG comprises European countries with a potential interest in developing shared radioactive waste management facilities. Our aim is to work together to address the common challenges of safely managing the long-lived radioactive wastes in our countries.

The ERDO-WG will encourage cooperation in all relevant areas; these include maintaining national radioactive waste inventories, dealing with legacy wastes, developing safety cases for disposal facilities, communicating with stakeholders and developing joint projects.

The ultimate objective of the Working Group is to carry out all the necessary groundwork to enable the establishment of a European Repository Development Organisation (ERDO) as a working entity.”

2011: ERDO-WG Submission to Governments of the EU Member States

- ERDO-WG documents (from 2009) – include benefits summaries, organizational forms, financing models
- 7 EU MS are current ERDO-WG Members



Activities on Multinational Approaches AAAS, NTI, CSIS, WNA

- AAAS
 - Meetings in Abu Dhabi, Bali, etc.
 - Multinational Approaches to the Nuclear Fuel cycle (2010)
 - The Back End of the Nuclear Fuel Cycle: An Innovative Storage Concept (2015)
- NTI/CSIS
 - Meetings in Paris, Taipei, Singapore, etc.
 - A New Approach to the Fuel cycle (2015)

Activities on Multinational Approaches IFNEC

- Series of Meetings by Reliable Nuclear Fuel Services Working Group (RNFSWG)
- Discussion paper: Comprehensive Fuel Services: Strategies for the Back-End of the Fuel Cycle
- On-going study: Multinational Repository Concept
- Workshop 2018 in Paris on MNR financing
- Session 2019 in Washington on Financial Risks

Activities on Multinational Approaches South Australian Initiative

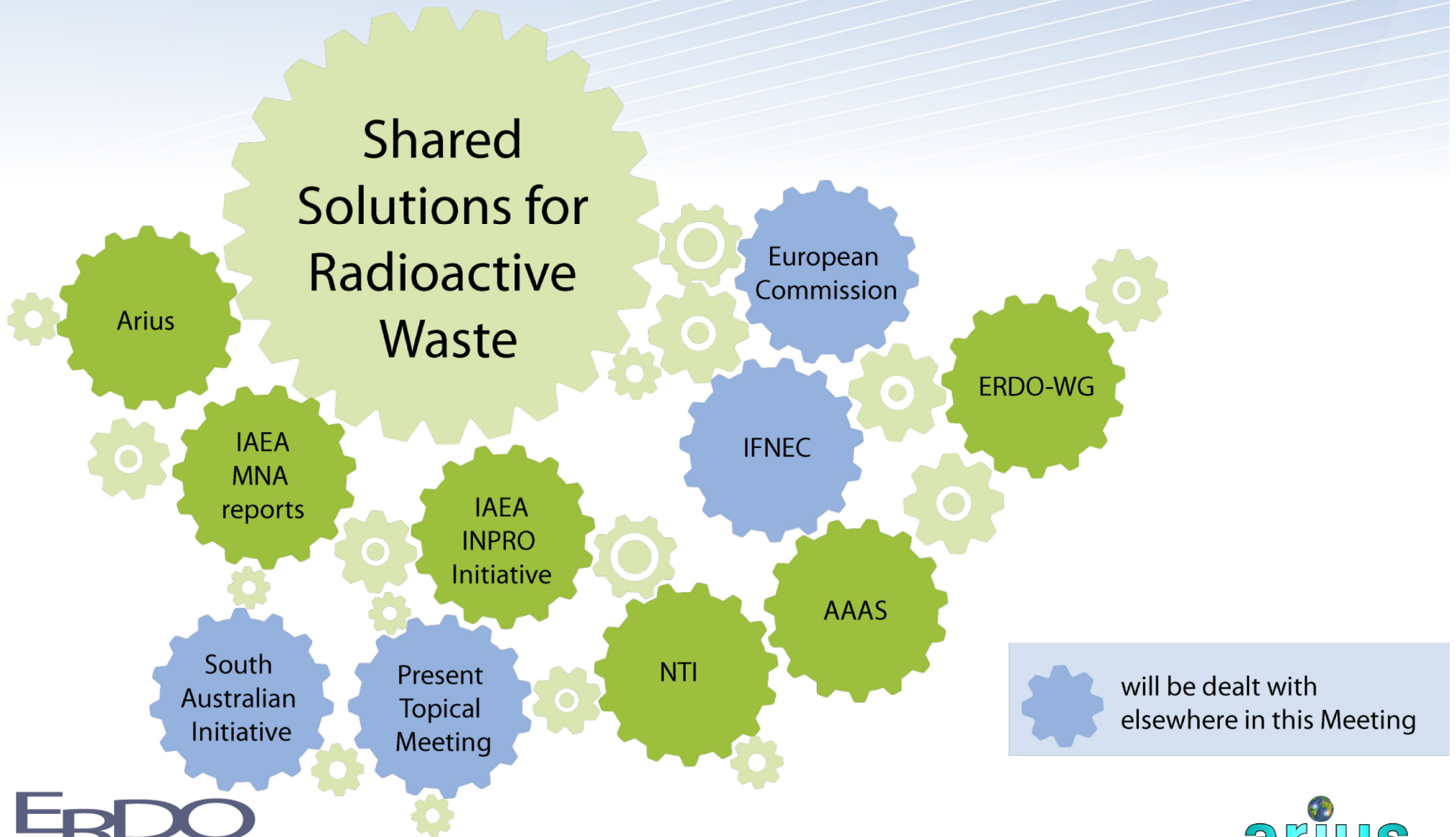
- Royal Commission established; All aspects of nuclear fuel cycle examined
- Business Case for international storage and disposal service
- Positive assessment by Commission
- Public consultation; Political support dropped
- New national interest 2019?

Contributors to Progressing Multinational Repository Initiatives

- Arius and ERDO: active MNR promotion
- IAEA: support fluctuates; INPRO study in progress;
- EC: early support (SAPIERR); conflicting views in MS; focus on R&D rather than policy and strategy
- IFNEC: looking for practical 1st steps
- South Australia: a new “top-down”

The End

Summary of Activities on Multinational Disposal



National Solutions and Potential Regional Solutions

ERDO

working group
Past and current involvement with ERDO-WG (2009 – present)

Austria
Bulgaria
Denmark
Ireland
Italy
Lithuania
Netherlands
Poland
Romania
Slovakia
Slovenia

- ★ 14 SAPIERR working group members
- ☆ National disposal only
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SAPIERR WG Member Countries (2006-2009)

Austria
Belgium
Bulgaria
Croatia
Czech Republic
Hungary
Italy
Latvia
Lithuania
Netherlands
Romania
Slovenia
Slovakia
Switzerland



Past and current involvement with ERDO-WG

Austria*

Bulgaria

Croatia*

Denmark*

Greece*

Ireland*

Italy

Lithuania

Netherlands

Norway*

Poland

Portugal*

Romania

Slovakia

Slovenia