

Conference on Geological Repositories (ICGR)

Advancing Geological Repositories from Concept to Operation

Agenda

04-08 April 2022

Venue: Congress Hall, Helsinki Congress Paasitorni
Helsinki, Finland

Monday, 04 April 2022	
10:00 – 17:30	Registration and badge pick-up
12:00 – 13:00	Younger Generation Lunch (Restaurant Graniittilinna, Paasitorni)
13:30 – 15:00	<p>Ice breaker for the Younger Generation Session</p> <p><u>Co-ordinator</u></p> <ul style="list-style-type: none"> • Minori Kato, Senior Specialist, NEA Division of Radiological Protection and Human Aspects of Nuclear Safety (Minori.Kato@oecd-nea.org)
15:00 – 15:20	BREAK
15:20 – 17:30	<p>Younger Generation Session</p> <p><u>Chair</u> (5 min session introduction + 1 min intro./speaker + 5 min summary)</p> <ul style="list-style-type: none"> • Rebecca Tadesse, Head of NEA Division of Radioactive Waste Management and Decommissioning <p><u>Speakers</u> (12 min ppt each + 5 min Q&A)</p> <ul style="list-style-type: none"> • Gerald Nieder-Westermann, Waste Technology Specialist, Waste Technology Section, Division of Nuclear Fuel Cycle and Waste Technology, International Atomic Energy Agency (IAEA) – <i>IAEA Activities to Support Education and Career Development in Nuclear Field</i> • Roger Garbil, Head of Section Fission, DG RTD C.4 (Euratom Research), European Commission (EC) – <i>EC Activities to Support Education and Career Development in the Nuclear Field</i>

	<p><u>Group Discussion</u> (80 min)</p> <ul style="list-style-type: none"> • Participants: University students and young professionals with 0-5 years' work experience and under 30 years old <p><u>Facilitators</u></p> <ul style="list-style-type: none"> • Richard S. Jayne, R&D Geosciences Engineer, Applied Systems Analysis & Research Department, Nuclear Energy Fuel Cycle Program, Sandia National Laboratories, United States • Heidar Gharbieh, Senior Advisor, Section for Nuclear Safety, Norwegian Radiation and Nuclear Safety Authority, Norway • Ville Rinta-Hiio, Research Scientist, VTT Technical Research Centre of Finland Ltd, Finland • Shogo Nishikawa, Technology Integration Group (International Coordination), Science and Technology Department, Nuclear Waste Management Organization of Japan (NUMO), Japan <p><u>Closing remarks and Q&A</u></p> <ul style="list-style-type: none"> • William D. Magwood, IV, Director General, Nuclear Energy Agency <p><u>Co-ordinator</u></p> <ul style="list-style-type: none"> • Minori Kato, Senior Specialist, NEA Division of Radiological Protection and Human Aspects of Nuclear Safety (Minori.Kato@oecd-nea.org)
<p>19:30 – 23:00</p>	<p>ICGR-6 Conference Dinner at Meripaviljonki <i>Saastopankinranta 3 00530 Helsinki</i></p>
<p>Tuesday, 05 April 2022</p>	
<p>08:30 – 09:00</p>	<p>Registration and badge pick-up</p>
<p>09:00 – 09:45</p>	<p>Welcome address and introductory remarks</p> <ul style="list-style-type: none"> • William D. Magwood, IV, Director General, Nuclear Energy Agency • Liisa Heikinheimo, Deputy Director General, Energy Department, Ministry of Economic Affairs and Employment, Finland <p>Master of Ceremonies:</p> <ul style="list-style-type: none"> • Linda Kumpula, Senior Specialist, Ministry of Economic Affairs and Employment • Erika Holt, Customer Account Lead, VTT

09:45 – 10:30	Press conference	BREAK
10:30 – 13:00	<p>Session 1: Present status of national geological disposal projects</p> <p>1A. Status of national geological repository projects</p> <p><u>Chair</u> (10 min session introduction + 1 min intro./speaker + 5 min summary)</p> <ul style="list-style-type: none"> • Jussi Heinonen, Director, Regulatory Oversight Strategic Development, Radiation and Nuclear Safety Authority (STUK), Finland <p><u>Speakers</u> (15 min ppt each + 10 min Q&A)</p> <ul style="list-style-type: none"> • Janne Mokka, President, Posiva Oy, Finland • Kimberly J. Petry, Acting Deputy Assistant Secretary, Office of Spent Fuel & Waste Disposition, United States Department of Energy (DOE) • Pierre-Marie Abadie, CEO, French National Radioactive Waste Management Agency (Andra), Chair of International Association for Environmentally Safe Disposal of Radioactive Materials (EDRAM) • Johan Dasht, Managing Director, Swedish Nuclear Fuel and Waste Management Company (SKB), Sweden • Karen Wheeler CBE, Deputy CEO / Major Capital Programmes Director, Nuclear Waste Services, United Kingdom • Laurie Swami, President and CEO, Nuclear Waste Management Organisation (NWMO), Canada • Thomas Lautsch, Technical Managing Director, Federal Company for Radioactive Waste Disposal (BGE), Germany • Håvard Kristiansen, Senior Advisor, Norwegian Nuclear Decommissioning (NND), Norway; Antti Ikonen, Project Manager, (Fennovoima Oy,) Co-Author; Timo Saanio, Vice President, AINS Group, Finland, Co-Author <p><u>Co-ordinator</u></p> <ul style="list-style-type: none"> • Martin Brandauer, Specialist on Decommissioning and Legacy Management, NEA Division of Radioactive Waste Management and Decommissioning (Martin.Brandauer@oecd-nea.org) 	
13:00 – 14:30	LUNCH	
14:30 – 16:30	<p>1B. Panel debate on progress achieved</p> <p><u>Co-Chairs</u> (5 min session introduction + 1 min intro./speaker + 5 min summary)</p> <ul style="list-style-type: none"> • Johan Dasht, Managing Director, Swedish Nuclear Fuel and Waste Management Company (SKB), Sweden • Patrick Landais, High Commissioner for Atomic Energy, French Alternative Energies and Atomic Energy Commission (CEA), France <p><u>Panellists</u> (5 min ppt each + 40 min panel + 20 min Q&A w/ audience)</p> <ul style="list-style-type: none"> • Janne Mokka, President, Posiva Oy, Finland – <i>Addressing Scientific and</i> 	

	<p><i>Technical Considerations in Preparing for Operation in Finland</i></p> <ul style="list-style-type: none"> • Jaakko Leino, Director, Department of Nuclear Waste Regulation and Safeguards, Radiation and Nuclear Safety Authority (STUK), Finland- <i>Key elements supporting the progress in repository development – Regulator’s view</i> • Frédéric Plas, Director of Cigéo Programme, French National Radioactive Waste Management Agency (Andra), France – <i>Success factors and lessons learnt from recent achievements on Cigéo’s licensing process</i> • Tomokazu Shimohori, Director, Radioactive Waste Management Policy Division, Electricity and Gas Industry Department, Agency for Natural Resources and Energy (ANRE), Ministry of Economy, Trade and Industry (METI), Japan – <i>The Role of Government and Public Acceptance – Outcomes from International Roundtable</i> • Maurus Alig, Coordinator Major Project Sectoral Plan Stage 3 / General Licences, Member of the Executive Board, National Cooperative for the Disposal of Radioactive Waste (Nagra), Switzerland – <i>The Rock Will Speak Soon</i> • Lukáš Vondrovic, Head of RAW Development Department, Radioactive Waste Repository Authority (SÚRAO), Czech Republic – <i>Current challenges in site assessment for deep geological repository: case study from Czech Republic</i> • Sean Tyson, Co-Chair, IFNEC RNFSWG; Office of International Nuclear Energy, Office of Nuclear Energy, U.S. Department of Energy (DOE)- <i>Exploring Opportunities for Multinational Cooperation on Waste Management and Disposal</i> • Zuzana Petrovicova, Head of Unit, DG ENER D.2 (Nuclear Energy, Nuclear Waste and Decommissioning), European Commission (EC) – <i>Overview of EU funded activities and policy on Geological Repositories</i> <p><u>Co-ordinator</u></p> <ul style="list-style-type: none"> • Martin Brandauer, Specialist on Decommissioning and Legacy Management, NEA Division of Radioactive Waste Management and Decommissioning (Martin.Brandauer@oecd-nea.org)
16:30 – 16:50	BREAK
16:50 – 17:40	<p>Outcomes of the Younger Generation Session</p> <p><u>Chair</u> (5 min session introduction + 5 min summary)</p> <ul style="list-style-type: none"> • Rebecca Tadesse, Head of NEA Division of Radioactive Waste Management and Decommissioning <p><u>Speakers</u> (8 min ppt each + 8 min Q&A w/ audience)</p> <ul style="list-style-type: none"> • Representatives of each group

	<p><u>Co-ordinator</u></p> <ul style="list-style-type: none"> • Minori Kato, Senior Specialist, NEA Division of Radiological Protection and Human Aspects of Nuclear Safety (Minori.Kato@oecd-nea.org)
17:40 – 18:00	Master of Ceremonies: End of day remarks

Wednesday, 6 April 2022

09:00 – 11:00	<p>Session 2: Demonstrating technical reliability for operational and long-term safety (including peer-reviews)</p> <p>2A. The role of underground research laboratories and international collaboration</p> <p><u>Chair</u> (10 min session introduction + 1 min intro./speaker + 5 min summary)</p> <ul style="list-style-type: none"> • Kristopher Kuhlman, Principal Technical Staff Hydrologist, Sandia National Laboratories, United States <p><u>Speakers</u> (15 min ppt each + 10 min Q&A)</p> <ul style="list-style-type: none"> • Teruki Iwatsuki, Director, Horonobe Underground Research Department, Horonobe Underground Research Center, Japan Atomic Energy Agency (JAEA), Japan – <i>R&D at Horonobe URL for Disposal Technology in Geological Environments Affected by Relatively Active Tectonics</i> • Frédéric Plas, Director of Cigéo Programme, French National Radioactive Waste Management Agency (Andra), France - <i>Andra's URL in Bure: Major Role in Progressive Development of Cigéo Safety Case and License Application</i> • Jessica Palmqvist, Head of Research and Development, Swedish Nuclear Fuel and Waste Management Company (SKB), Sweden – <i>The Swedish journey to a final repository for spent nuclear fuel – the role of URL in general and Äspö HRL in particular</i> • Stratis Vomvoris, Executive Advisor, International Services and Projects, National Cooperative for the Disposal of Radioactive Waste (Nagra), Switzerland – <i>Grimsel Test Site and Mont Terri Project – The contribution of the 2 URLs in the advancement of geological repositories</i> • Philippe Lalieux, Director, Long Term Waste Management at ONDRAF/NIRAS - <i>Importance of HADES URL in Belgian RD&D program on geological disposal</i> • Young Professional Representative: Richard S. Jayne, R&D Geosciences Engineer, Applied Systems Analysis & Research Department, Nuclear Energy Fuel Cycle Program, Sandia National
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	<p>Laboratories, United States – <i>Nuclear Waste Disposal in Salt: International Collaborations</i></p> <p><u>Co-ordinator</u></p> <ul style="list-style-type: none"> • Haimanot Yilma, Specialist, NEA Division of Radioactive Waste Management and Decommissioning (Haimanot.Yilma@oecd-nea.org)
<p>11:00 – 11:30</p>	<p>BREAK</p>
<p>11:30 – 12:45</p>	<p>2B. Panel debate on demonstrating technical reliability</p> <p><u>Chair</u> (5 min session introduction + 1 min intro./speaker + 5 min summary)</p> <ul style="list-style-type: none"> • Pierre-Marie Abadie, Chair of International Association for Environmentally Safe Disposal of Radioactive Materials (EDRAM); CEO, French National Radioactive Waste Management Agency (Andra), France <p><u>Panellists</u> (5 min ppt each + 20 min panel + 5 min Q&A w/ audience)</p> <ul style="list-style-type: none"> • Shunsuke Kondo, President, Nuclear Waste Management Organization of Japan (NUMO), Japan – <i>Demonstrating Technical Reliability in Japan</i> • Tiina Jalonen, Development Director, Posiva Oy, Finland – <i>Use of Information from Different Types of Facilities to Demonstrate Technical Reliability (e.g. Äspö Hard Rock Laboratory, surface domo facilities, on-site underground research laboratory - ONKALO)</i> • Emily Stein, Technical Manager, Sandia National Laboratories, United States – <i>Geologic Disposal Systems Analysis (GDSA)</i> • Frédéric Plas, Director of Cigéo Programme, French National Radioactive Waste Management Agency (Andra), France – <i>Technical Reliability and Readiness of Cigeo Project</i> • Cherry Tweed, Special Advisor – GDF Programme, Nuclear Waste Services, United Kingdom – <i>Demonstrating Technical Reliability for Operational and Long-term Safety in the UK</i> • Tim Vietor, Division Head of Safety, Geology and Radioactive Materials, Member of the Executive Board, National Cooperative for the Disposal of Radioactive Waste (Nagra), Switzerland – <i>Demonstrating Technical Reliability in Switzerland: Experience from both Grimsel Test Site and Mont Terre Project</i> • Ju Wang, Vice President, Beijing Research Institute of Uranium Geology (BRIUG), China – <i>Achievements and Prospects in Beishan Underground Research Laboratory</i> • Pär Gramm, Head of Repository Technology, Swedish Nuclear Fuel and Waste Management Company (SKB), Sweden

	<p><u>Co-ordinator</u></p> <ul style="list-style-type: none"> • Marie Maertens, International Institutional Relations Officer, International Relations Department, French National Radioactive Waste Management Agency (Andra), France (marie.maertens@andra.fr)
13:00 – 14:00	LUNCH
14:00 – 16:40	<p>Session 3: Elements for building and maintaining competence (from siting to construction to operation)</p> <p>3A. Elements for building and maintaining competence</p> <p><u>Chair</u> (10 min session introduction + 1 min intro./speaker + 5 min summary)</p> <ul style="list-style-type: none"> • Piet Zuidema, Chief Scientific Officer, European Joint Programme on Radioactive Waste Management (EURAD) <p><u>Speakers</u> (15 min ppt each + 20 min Q&A)</p> <ul style="list-style-type: none"> • Haidy Tadros, Chair of NEA Committee on Decommissioning of Nuclear Installations and Legacy Management (CDLM); Director General, Canadian Nuclear Safety Commission (CNSC) - <i>Abilities and Attitudes – A Regulatory Perspective</i> • Janette Meacham, NWM Licensing & Knowledge Management Lead, Nuclear Energy Fuel Cycle Program, Sandia National Laboratories, United States – <i>NEFC Knowledge Management Pilot Project</i> • Irina Gaus, Head of Research and Development, National Cooperative for the Disposal of Radioactive Waste (Nagra), Switzerland; Chair, Implementing Geological Disposal of radioactive waste Technology Platform (IGD-TP) – <i>Building and maintaining technical and scientific competence for DGRs”: observations from Implementers</i> • Felix Altorfer, Director, Radioactive Waste Management Division, Swiss Federal Nuclear Safety Inspectorate (ENSI), Switzerland – <i>Competency Management of Regulators</i> • Joaquín Farias Seifert, Head of Department of International Relations and R&D, Spanish Radioactive Waste Management Organization (ENRESA), Spain - <i>Enresa: the DGR programme</i> • Gerald Nieder-Westermann, Waste Technology Specialist, Waste Technology Section, Division of Nuclear Fuel Cycle and Waste Technology, International Atomic Energy Agency (IAEA) – <i>Roadmap to Implementing Deep Geologic Repositories and the Role of Underground Research Facilities</i> • Young Professional Representative: Mark Gobien, Section Manager, Safety Assessment Models, Nuclear Waste Management Organization

	<p>(NWMO), Canada – <i>Building and Maintaining Competence in Site-Specific Safety Assessments through Iteration</i></p> <p><u>Co-ordinator</u></p> <ul style="list-style-type: none"> • Martin Brandauer, Specialist on Decommissioning and Legacy Management, NEA Division of Radioactive Waste Management and Decommissioning (Martin.Brandauer@oecd-nea.org)
16:40 – 16:50	BREAK
16:50 – 18:00	<p>3B. Panel debate on building and maintaining human capacity</p> <p><u>Chair</u> (5 min session introduction + 1 min intro./speaker + 5 min summary)</p> <ul style="list-style-type: none"> • Kai Hämäläinen, Section Head, Regulation of Nuclear Waste Facilities, Radiation and Nuclear Safety Authority (STUK), Finland <p><u>Panellists</u> (5 min ppt each + 20 min panel + 5 min Q&A w/ audience)</p> <ul style="list-style-type: none"> • Vincenzo Rondinella, Head of Department, DG JRC G.III (Nuclear Decommissioning), Joint Research Centre, European Commission (EC) • Klaus-Jürgen Röhlig, Professor, Clausthal University of Technology (TUC), Germany – <i>Building and Maintaining Competence in Germany</i> • Fabrice Puyade, Director of the Human Resources Division, French National Radioactive Waste Management Agency (Andra), France – <i>Andra’s HR strategy for preparing Cigeo construction</i> • Gerald Nieder-Westermann, Waste Technology Specialist, Waste Technology Section, Division of Nuclear Fuel Cycle and Waste Technology, International Atomic Energy Agency (IAEA) • Kathryn Ann Higley, Interim Director CQLS - Center for Quantitative Life Sciences, Oregon State University <p><u>Co-ordinator</u></p> <ul style="list-style-type: none"> • Marie Maertens, International Institutional Relations Officer, International Relations Department, French National Radioactive Waste Management Agency (Andra), France (marie.maertens@andra.fr)
18:00 – 18:10	Master of Ceremonies: End of day remarks

Thursday, 7 April 2022

09:00 – 11:30	<p>Session 4: Building and maintaining trust</p> <p>4A. Best practices to build and maintain trust</p> <p><u>Chair</u> (10 min session introduction + 1 min intro./speaker + 5 min summary)</p>
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	<ul style="list-style-type: none"> • Pascale Künzi, Chair of NEA Forum on Stakeholder Confidence (FSC); Regional Participation Specialist (Stakeholder Involvement Specialist), Swiss Federal Office of Energy (SFOE), Switzerland <p><u>Speakers</u> (15 min ppt each + 10 min Q&A)</p> <ul style="list-style-type: none"> • Sigrid Eeckhout, Head of Communication and Participation Department, Belgian Agency for Radioactive Waste and Enriched Fissile Materials (ONDRAF/NIRAS), Belgium – <i>Approaches to Youth Engagement</i> • Nuria Prieto Serrano, Lawyer, Technical Division, Department of International Relations, Spanish Radioactive Waste Management Organization (ENRESA), Spain – <i>The importance of the dialogue with the local communities to build trust in the long-term management of radioactive waste</i> • Anna Porelius, Head of Communications and Stakeholder Relations, Swedish Nuclear Fuel and Waste Management Company (SKB), Sweden • Annabelle Quenet, Head of Public Involvement Department, French National Radioactive Waste Management Agency (Andra), France - <i>30 Years' Experience from Public Information to Effective Public Involvement into Cigéo Project</i> • Zuzana Petrovicova, Head of Unit, DG ENER D.2 (Nuclear Energy, Nuclear Waste and Decommissioning), European Commission (EC) – <i>Building and Maintaining Trust in the EU</i> • Ilona Sjöman, Chair of the Municipal Council of Eurajoki – <i>Involvement of Local People in the Development of Geological Repositories</i> • Graduate Student Representative: Jorina Suckow, Graduate Student, Member of Nationales Begleitgremium (National Civil Society Board), Germany <p><u>Co-ordinator</u></p> <ul style="list-style-type: none"> • Minori Kato, Senior Specialist, NEA Division of Radiological Protection and Human Aspects of Nuclear Safety (Minori.Kato@oecd-nea.org)
11:30 – 11:50	BREAK
11:50 – 13:00	<p>4B. Panel debate on communicating uncertainty from the scientist to the community</p> <p><u>Chair</u> (5 min session introduction + 1 min intro./speaker + 5 min summary)</p> <ul style="list-style-type: none"> • Karim Peltonen, Director, Department of Emergency Preparedness, Communications and International Cooperation, Radiation and Nuclear Safety Authority (STUK), Finland <p><u>Panellists</u> (5 min ppt each + 20 min panel + 10 min Q&A w/ audience)</p> <ul style="list-style-type: none"> • Ramzi Jammal, Executive Vice-President, Canadian Nuclear Safety Commission (CNSC), Canada – <i>Regulator representative</i>

	<ul style="list-style-type: none"> • Claire Corkhill, Member of Committee on Radioactive Waste Management (CoRWM), Reader in Nuclear Material Corrosion, EPSRC Early Career Research Fellow, Department of Materials Science and Engineering, The University of Sheffield, United Kingdom; – <i>Experts supporting the choice of using geological repositories to manage radioactive waste</i> • Gaston Meskens, Centre for Ethics and Value Inquiry, University of Ghent, Belgium • Philip Matthews, Executive Director, Nuclear Legacy Advisory Forum (Nuleaf), United Kingdom – <i>Local government and community perspectives on the geological disposal siting process</i> • Penny Lucas, Mayor for the Township of Ignace, Canada – <i>Local government and community perspectives on the geological disposal siting process</i> • Graduate Student Representative: Emma Perry, PhD student, Department of Earth Sciences, University of Cambridge – <i>Online Engagement</i> <p><u>Co-ordinator</u></p> <ul style="list-style-type: none"> • Minori Kato, Senior Specialist, NEA Division of Radiological Protection and Human Aspects of Nuclear Safety (Minori.Kato@oecd-nea.org)
13:00 – 14:00	LUNCH
14:00 – 16:00	<p>Session 5: Outcome Session</p> <p><u>Rapporteur</u> (20 min pre-summary + 10 min final summary)</p> <ul style="list-style-type: none"> • Seif Ben Hadj Hassine, Scientific and Policy Officer, DG RTD C.4 (Euratom Research), European Commission (EC) – <i>Summary of Sixth ICGR</i> <p><u>Session Chairs</u> (5 min ppt each + 25 min panel + 20 min Q&A w/ audience)</p> <ul style="list-style-type: none"> • Younger Generation Session: Rebecca Tadesse, Head of NEA Division of Radioactive Waste Management and Decommissioning • 1A: Jussi Heinonen, Director, Regulatory Oversight Strategic Development, Radiation and Nuclear Safety Authority (STUK), Finland • 1B: Patrick Landais, High Commissioner for Atomic Energy, French Alternative Energies and Atomic Energy Commission (CEA), France • 2A: Kristopher Kuhlman, Principal Technical Staff Hydrologist, Sandia National Laboratories, United States • 2B: Pierre-Marie Abadie, Chair of International Association for Environmentally Safe Disposal of Radioactive Materials (EDRAM); CEO, French National Radioactive Waste Management Agency (Andra), France

	<ul style="list-style-type: none"> • 3A: Piet Zuidema, Chief Scientific Officer, European Joint Programme on Radioactive Waste Management (EURAD) • 3B: Kai Hämäläinen, Section Head, Regulation of Nuclear Waste Facilities, Radiation and Nuclear Safety Authority (STUK), Finland • 4A: Pascale Künzi, Chair of NEA Forum on Stakeholder Confidence (FSC); Regional Participation Specialist (Stakeholder Involvement Specialist), Swiss Federal Office of Energy (SFOE), Switzerland • 4B: Karim Peltonen, Director, Department of Emergency Preparedness, Communications and International Cooperation, Radiation and Nuclear Safety Authority (STUK), Finland
16:00 – 16:30	BREAK
16:30 – 16:45	<p>Session 6: Summary and Closing Session</p> <p>Closing addresses</p> <ul style="list-style-type: none"> • Hiroyuki Umeki, Chair of NEA Radioactive Waste Management Committee (RWMC); Executive Director, Nuclear Waste Management Organization of Japan (NUMO) • Liisa Heikinheimo, Deputy Director General, Energy Department, Ministry of Economic Affairs and Employment, Finland

Friday, 8 April 2022

A site visit has been made available to pre-registered participants to a low and intermediate level waste repository with an exhibition on the underground rock characterisation facility (ONKALO) at Olkiluoto, Finland.

An alternative satellite site visit has also been made available to pre-registered participants that will take place at the Geological Survey of Finland Auditorium, in Otaniemi, Espoo.