

Sixth International Conference on Geological Repositories (ICGR)

Advancing Geological Repositories from Concept to Operation

Draft Agenda

04-08 April 2022

Venue: Sirkus Hall, Helsinki Congress Paasitorni
Helsinki, Finland

Monday, 04 April 2022	
8:00 – 17:30	Registration and badge pick-up
13:30 – 15:00	<p>Ice breaker for the younger generation</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> Kateřina Ptáčková, Project Officer, DG RTD D.4 (Euratom Research), European Commission (EC) – <i>EC Activities to Support Education and Career Development in 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 • Shogo Nishikawa, Technology Integration Group (International Coordination), Science and Technology Department, Nuclear Waste Management Organization of Japan (NUMO), Japan • Ville Rinta-Hiio, Research Scientist, VTT Technical Research Centre of Finland Ltd, Finland <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) 	
18:00 – 23:00	Tentative reception/dinner	
Tuesday, 05 April 2022		
08:30 – 09:00	Registration and badge pick-up	
09:00 – 09:45	<p>Opening session</p> <ul style="list-style-type: none"> • Master of Ceremonies, Linda Kumpula, Senior Specialist, Ministry of Economic Affairs and Employment; and Erika Holt, Customer Account Lead, VTT <p>Welcome address and introductory remarks</p> <ul style="list-style-type: none"> • Liisa Heikinheimo, Deputy Director General, Energy Department, Ministry of Economic Affairs and Employment, Finland • William Magwood, IV, NEA Director General – <i>Impact of Geological Repositories Development on Supporting for Nuclear Energy Policy</i> 	
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"> • Hiroyuki Umeki, Chair of NEA Radioactive Waste Management Committee (RWMC); Executive Director, Nuclear Waste Management Organization of Japan (NUMO) <p><u>Speakers</u> (15 min ppt each + 10 min Q&A)</p> <ol style="list-style-type: none"> 1. Janne Mokka, President, Posiva Oy, Finland 2. Kimberly J. Petry, Acting Deputy Assistant Secretary, Office of Spent 	

	<p>Fuel & Waste Disposition, United States Department of Energy (DOE)</p> <ol style="list-style-type: none"> 3. Pierre-Marie Abadie, CEO, French National Radioactive Waste Management Agency (Andra), Chair of International Association for Environmentally Safe Disposal of Radioactive Materials (EDRAM) 4. Johan Dasht, Managing Director, Swedish Nuclear Fuel and Waste Management Company (SKB), Sweden 5. Karen Wheeler CBE, Deputy CEO / Major Capital Programmes Director, Nuclear Waste Services, United Kingdom 6. Laurie Swami, President and CEO, Nuclear Waste Management Organisation (NWMO), Canada 7. Thomas Lautsch, Technical Managing Director, Federal Company for Radioactive Waste Disposal (BGE), Germany 8. Håvard Kristiansen, Senior Advisor, Norwegian Nuclear Decommissioning (NND), Norway <p><u>Co-ordinator</u></p> <ul style="list-style-type: none"> • Vladimir Lebedev, Deputy Head, NEA Division of Radioactive Waste Management and Decommissioning (Vladimir.Lebedev@oecd-nea.org)
<p>13:00 – 14:30</p>	<p>LUNCH</p>
<p>14:30 – 16:30</p>	<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> <ol style="list-style-type: none"> 1. Janne Mokka, President, Posiva Oy, Finland – <i>Addressing Scientific and Technical Considerations in Preparing for Operation in Finland</i> 2. Jaako Leino, Director General, Radiation and Nuclear Safety Authority (STUK), Finland – <i>Addressing Regulatory Considerations in Preparing for Operation in Finland</i> 3. 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> 4. 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> 5. Maurus Alig, Coordinator Major Project Sectoral Plan Stage 3 / General

	<p>Licences, Member of the Executive Board, National Cooperative for the Disposal of Radioactive Waste (Nagra), Switzerland</p> <p>6. 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></p> <p>7. Tomaz Žagar, Co-Chair, IFNEC Reliable Nuclear Fuel Services Working Group (RNFSWG); Head of Planning and Control, GEN energija d.o.o., Slovenia; or Sean Tyson, Co-Chair, IFNEC RNFSWG; Office of International Nuclear Energy, Office of Nuclear Energy, U.S. Department of Energy (DOE)</p> <p>8. 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> <p><u>Co-ordinator</u></p> <ul style="list-style-type: none"> • Vladimir Lebedev, Deputy Head, NEA Division of Radioactive Waste Management and Decommissioning (Vladimir.Lebedev@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>Speakers (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
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	<p><u>Speakers</u> (15 min ppt each + 10 min Q&A)</p> <ol style="list-style-type: none"> 1. Teruki Iwatsuki, Director, Horonobe Underground Research Department, Horonobe Underground Research Center, Japan Atomic Energy Agency (JAEA), Japan – <i>RD&D at Horonobe URL for Disposal Technology in Geological Environments Affected by Relatively Active Tectonics</i> 2. 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> 3. Jessica Palmqvist, Head of Research and Development, Swedish Nuclear Fuel and Waste Management Company (SKB), Sweden – <i>The Role of Underground Research Laboratory: Perspective from Äspö Hard Rock Laboratory</i> 4. Sergey Utkin, Head of Division of Analysis of Long-term Risks in Nuclear and Radiological Safety, Nuclear Safety Institute of the Russian Academy of Sciences (IBRAE RAS), Russian Federation – <i>Transforming Research Results into Practical and Reliable Technologies for the Long-term Implementation of Geological Repositories</i> 5. 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> 6. Young Professional Representative: Richard S. Jayne, R&D Geosciences Engineer, Applied Systems Analysis & Research Department, Nuclear Energy Fuel Cycle Program, Sandia National Laboratories, United States <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)
11:00 – 11:30	BREAK
11:30 – 12:45	<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> <ol style="list-style-type: none"> 1. 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> <ol style="list-style-type: none"> 2. Shunsuke Kondo, President, Nuclear Waste Management Organization

	<p>of Japan (NUMO), Japan – <i>Demonstrating Technical Reliability in Japan</i></p> <ol style="list-style-type: none"> 3. 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> 4. Emily Stein, Technical Manager, Sandia National Laboratories, United States – <i>Geologic Disposal Systems Analysis (GDSA)</i> 5. Frédéric Plas, Director of Cigéo Programme, French National Radioactive Waste Management Agency (Andra), France – <i>Technical Reliability and Readiness of Cigeo Project</i> 6. 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> 7. 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> 8. Ju Wang, Vice President, Beijing Research Institute of Uranium Geology (BRIUG), China – <i>Achievements and Prospects in Beishan Underground Research Laboratory</i> 9. Pär Graham, Head of Repository Technology, Swedish Nuclear Fuel and Waste Management Company (SKB), Sweden 10. Young Professional Representative: Georgii Neyvazhaev, Junior Researcher, Nuclear Safety Institute of the Russian Academy of Sciences (IBRAE RAS), Russian Federation – <i>Considering uncertainties in the development of a hydrogeological model to safety assessment of Deep Geological Disposal Facility</i> <p><u>Co-ordinator</u></p> <ol style="list-style-type: none"> 11. 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> <ol style="list-style-type: none"> 1. 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> <ol style="list-style-type: none"> 2. Haidy Tadros, Chair of NEA Committee on Decommissioning of Nuclear Installations and Legacy Management (CDLM); Director General, Canadian Nuclear Safety Commission (CNSC) 3. Janette Meacham, NWM Licensing & Knowledge Management Lead, Nuclear Energy Fuel Cycle Program, Sandia National Laboratories, United States – <i>NEFC Knowledge Management Pilot Project</i> 4. 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 DGRs²: observations from Implementers</i> 5. Felix Altorfer, Director, Radioactive Waste Management Division, Swiss Federal Nuclear Safety Inspectorate (ENSI), Switzerland – <i>Competency Management of Regulators</i> 6. Joaquín Farias Seifert, Head of Department of International Relations and R&D, Spanish Radioactive Waste Management Organization (ENRESA), Spain 7. 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> 8. Young Professional Representative: Mark Gobien, Section Manager, Safety Assessment Models, Nuclear Waste Management Organization (NWMO), Canada <p><u>Co-ordinator</u></p> <ol style="list-style-type: none"> 9. Vladimir Lebedev, Deputy Head, NEA Division of Radioactive Waste Management and Decommissioning (Vladimir.Lebedev@oecd-nea.org)
<p>16:40 – 16:50</p>	<p>BREAK</p>
<p>16:50 – 18:00</p>	<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> <ol style="list-style-type: none"> 1. Vincenzo Rondinella, Head of Department, DG JRC G.III (Nuclear Decommissioning), Joint Research Centre, European Commission (EC) 2. Christophe Xerri, Director, Division of Nuclear Fuel Cycle and Waste

	<p>Technology, Department of Nuclear Energy, International Atomic Energy Agency (IAEA)</p> <ol style="list-style-type: none"> 3. Klaus-Jürgen Röhlig, Professor, Clausthal University of Technology (TUC), Germany – <i>Building and Maintaining Competence in Germany</i> 4. Anastasiia Maksimushkina, Assistant Professor, Head of the Master Program in Decommissioning Technologies of Nuclear Facilities, National Research Nuclear University MEPhI (Moscow Engineering Physics Institute), Russian Federation 5. Jiejuan Tong, Professor, Deputy Director of Institute of Nuclear and New Energy Technology (INET), Tsinghua University, China – <i>Nuclear Education System in China</i> 6. Graduate Student Representative: Evgeny Kolodin, PhD Student, National Research Nuclear University MEPhI (Moscow Engineering Physics Institute), Russian Federation – <i>What does the Younger Generation Needs</i> 7. 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> <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 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> <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, Communications Manager, 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
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	<p>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></p> <ul style="list-style-type: none"> • 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> • Gianfranco Brunetti, Deputy 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> • Iloa 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"> • Piia Kajanto, Head of Communications, 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> <ol style="list-style-type: none"> 1. Ramzi Jammal, Executive Vice-President, Canadian Nuclear Safety Commission (CNSC), Canada – Regulator representative 2. 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; – Experts supporting the choice of using geological repositories to manage radioactive waste 3. Gaston Meskens, Centre for Ethics and Value Inquiry, University of Ghent, Belgium 4. Philip Matthews, Executive Director, Nuclear Legacy Advisory Forum (Nuleaf), United Kingdom; Penny Lucas, Mayor for the Township of Ignace, Canada – Local government and community perspectives on the

	<p>geological disposal siting process</p> <p>5. Graduate Student Representative: Emma Perry, PhD student, Department of Earth Sciences, University of Cambridge – <i>Online Engagement</i></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)
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"> • Roger Garbil, Head of Section Fission, DG RTD D.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> <ol style="list-style-type: none"> 1. Younger Generation Session: Rebecca Tadesse, Head of NEA Division of Radioactive Waste Management and Decommissioning 2. 1A: Hiroyuki Umeki, Chair of NEA Radioactive Waste Management Committee (RWMC); Executive Director, Nuclear Waste Management Organization of Japan (NUMO) 3. 1B: Johan Dasht, Managing Director, Swedish Nuclear Fuel and Waste Management Company (SKB), Sweden 4. 2A: Geoff Freeze, Technical Manager, Sandia National Laboratories, United States 5. 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 6. 3A: Piet Zuidema, Chief Scientific Officer, European Joint Programme on Radioactive Waste Management (EURAD) 7. 3B: Kai Hämäläinen, Section Head, Regulation of Nuclear Waste Facilities, Radiation and Nuclear Safety Authority (STUK), Finland 8. 4A: Pascale Künzi, Chair of NEA Forum on Stakeholder Confidence (FSC); Regional Participation Specialist (Stakeholder Involvement Specialist), Swiss Federal Office of Energy (SFOE), Switzerland 9. 4B: Piia Kajanto, Head of Communications, Radiation and Nuclear Safety Authority (STUK), Finland
16:00 – 16:30	BREAK

16:30 – 16:45	Session 6: Summary and Closing Session Closing addresses <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.