

PROGRAMME

ICGR

7th International Conference on
Geological Repositories

Empowering Progress in Developing Deep Geological Repositories

27-31 May 2024
Busan, Korea



Ministry of Trade,
Industry and Energy



KORAD
KOREA RADIOACTIVE
WASTE AGENCY



NEA
NUCLEAR ENERGY AGENCY

ICGR-7 General information

Location

BPEX Busan Port International Exhibition and Convention Center

206 Chungjang-daero, Dong-gu
Busan, Korea

Registration

Registration will open at BPEX on Monday, 27 May 2024 from 10h00 to 18h00, and re-open on Tuesday, 28 May 2024 from 7h30 to 18h00. Participants will be met upon arrival by NEA staff on the conference floor and will be requested to register to obtain NEA visitor badges.

Badges are to be worn when attending lectures and all other events.

A passport or another form of photo identification is required to obtain a visitor badge for ICGR-7.

ICGR-7 Programme – Day 1

27 May 2024

Younger generation session

Chair: *Rebecca Tadesse, Head of Division, Radioactive Waste Management and Decommissioning, Nuclear Energy Agency (NEA)*

Session co-ordinator: *Shauryavardhan Sharma, Junior Specialist, NEA*

11:45 Lunch for younger generation session participants

12:45 **Opening remarks**

Rebecca Tadesse, Head of Division, Radioactive Waste Management and Decommissioning, NEA

Jaihak Lee, Vice President of HLW Project Division, KORAD (Korea Radioactive Waste Agency), Korea

13:00 **Keynote remarks for younger generation session**

Sama Bilbao y León, Director General, World Nuclear Association (WNA)

13:25 **Presentation from NEA**

Morgan Packer, Specialist, NEA

13:40 **Presentation from IAEA**

Karina Lange, Radioactive Waste Disposal Specialist, International Atomic Energy Agency (IAEA)

13:55 **Presentation from European Commission (EC)**

Piet Zuidema, Scientific Officer, EURAD (European Joint Programme on Radioactive Waste Management)

Virginie Solans, PhD student (EURAD), Uppsala University, Sweden

14:10 **Setting the stage – breakout session introduction**

Shogo Nishikawa, Specialist, NEA

14:15 **Younger generation breakout session**

All participants

- How can the younger generations in the nuclear sector participate or contribute to knowledge transfer and leadership development in radioactive waste management?
- How can scientific safety arguments be made more accessible for young people? What methods could best bridge the gap between scientifically proven and perceived safety?
- How can young people become more involved in trans-generational projects?
- What methods/approaches are used in various countries to increase the number of young professionals in the nuclear energy sector?

15:30 Coffee break

16:00 **Feedback from breakout session**

Report by each designated group leader

16:30 **Icebreaker session and networking activity**

All participants

17:30 **End of day 1**

18:30 **Dinner for younger generation session participants**

ICGR-7 Programme – Day 2

28 May 2024

ICGR-7 Opening keynote remarks

8:30 **ICGR-7 Opening keynote remarks**

Jin Kim, Director General for Nuclear Power Plant Strategy and Planning, Ministry of Trade, Industry and Energy (MOTIE), Korea

William D. Magwood, IV, Director-General, NEA

Sung Don Cho, CEO, KORAD, Korea

Chang-Lak Kim, Executive Dean, KEPCO International Nuclear Graduate School (KINGS), Korea; ICGR-7 Co-Chair

Tim Vietor, Head of Division, Safety, Geology and Radioactive Materials, NAGRA (National Cooperative for the Disposal of Radioactive Waste), Switzerland; ICGR-7 Co-Chair

9:30 Press conference and coffee break

Session 1: Lessons learnt – experiences in development of DGR facilities

10:00 **Presentations by countries with DGR development experience**

Chair: *Min Hoon Baik, Senior Vice President of Back-end Nuclear Technology Lab, Korea Atomic Energy Research Institute (KAERI), Korea*

Session co-ordinator: *Morgan Packer, Specialist, NEA*

Paul Murray, Deputy Assistant Secretary for Spent Fuel and Waste Disposition, Department of Energy (DOE), United States

Ilkka Poikolainen, President and CEO, Posiva, Finland

Laurie Swami, President and CEO, Nuclear Waste Management Organization (NWMO), Canada

Pierre-Marie Abadie, Director General, ANDRA (National Agency for Radioactive Waste Management), France

Annatina Müller-Germanà, Head of International Affairs, ENSI (Swiss Federal Nuclear Safety Inspectorate), Switzerland

11:00 **Panel discussion: Developing licensing of DGR facilities**

Co-Chairs: *Lukáš Vondrovic*, Director, SÚRAO (Czech Radioactive Waste Repository Authority), Czechia; *Amela Mehic*, Nuclear Fuel Engineer, SKB (Swedish Nuclear Fuel and Waste Management Company), Sweden

Session co-ordinator: *Morgan Packer*, Specialist, NEA

Sok Chul Kim, President, Korea Institute of Nuclear Safety (KINS), Korea

Jochen Ahlswede, Head of Directorate-General, Research and International Cooperation, BASE (Federal Office for the Safety of Nuclear Waste Management), Germany

Eva Andersson, Head of Research, Development and Safety Assessment, SKB, Sweden

Corhyn Parr, Chief Executive Officer, Nuclear Waste Services (NWS), United Kingdom

Shunsuke Kondo, President, Nuclear Waste Management Organization of Japan (NUMO), Japan

12:00 Lunch

Session 2: Setting the foundations for initiating DGR programmes

13:30 **Presentations on national status of DGR development programmes**

Co-Chairs: *Marc Demarche*, Director General, ONDRAF/NIRAS (National Agency for Radioactive Waste and Enriched Fissile Material), Belgium; *Virginie Solans*, PhD student (EURAD), Uppsala University, Sweden

Session co-ordinator: *Soufiane Mekki*, Senior Specialist, NEA

Jaihak Lee, Vice President, HLW, KORAD, Korea

Masaaki Yamaguchi, Deputy Director, Radioactive Waste Management Policy Division, Electricity and Gas Industry Department, Agency for Natural Resources and Energy, Ministry of Economy, Trade and Industry, Japan

Jian Liu, Senior Engineer, Environment Engineering Division, Beijing Research Institute of Uranium Geology, China

Philippe Lalioux, Director, Long-term Radioactive Waste Management, ONDRAF/NIRAS, Belgium

María Victoria Altinier, Project Leader, CNEA (National Atomic Energy Commission), Argentina

14:30 **Establishing legal and regulatory frameworks for DGR development through early interaction between regulators and implementers**

Co-Chairs: *Sylvia Saltzstein*, Senior Manager, Nuclear Fuel Cycle Technologies, Sandia National Laboratories, United States; *Véronique Vasseur*, Vice President, Dutch Young Generation, Netherlands

Session co-ordinator: *Soufiane Mekki*, Senior Specialist, NEA

Philippe Lalieux, Director, Long-term Radioactive Waste Management, ONDRAF/NIRAS, Belgium

John Thelen, Director, Major Projects and Strategic Support, Directorate of Nuclear Cycle and Facilities Regulation, Regulatory Operations Branch, Canadian Safety Nuclear Commission (CNSC), Canada

Jaakko Leino, Director, STUK, Finland

Sana Bilal, Senior Specialist, Health Physicist, Radiation Safety Department (RSD), Federal Authority for Nuclear Regulation (FANR), United Arab Emirates

Peter Bennett, Technical Lead, Spent Fuel Management, Norwegian Nuclear Decommissioning (NND), Norway

15:30 Coffee break

16:00 **Panel discussion: Building a roadmap for DGR development – essential steps and considerations for initiating DGR programmes**

Chair: *Hiroyuki Umeki*, Chair of NEA Radioactive Waste Management Committee (RWMC); Executive Director, Nuclear Waste Management Organization of Japan (NUMO), Japan

Session co-ordinator: *Soufiane Mekki*, Senior Specialist, NEA

Piet Zuidema, Scientific Officer, EURAD

Nina Grube, Group Management – Planning and Permits for Site Selection, BGE (Federal Company for Radioactive Waste Disposal), Germany

Stefan Mayer, Team Leader, Radioactive Waste Disposal, IAEA

Pierre-Marie Abadie, Director General, ANDRA, France

Eva Andersson, Head of Research, Development and Safety Assessment, SKB, Sweden

17:00 **End of day remarks**

Chang-Lak Kim, Executive Dean, KEPCO International Nuclear Graduate School (KINGS), Korea; ICGR-7 Co-Chair

17:15 **ICGR-7 poster session and cocktail hour**

19:15 **End of day 2**

ICGR-7 Programme – Day 3

29 May 2024

ICGR-7 Focal Session

09:00 **ICGR-7 focal session (EDRAM and Korea)**

Chair: *Haeryong Jung, Director of HLW Planning Department, KORAD, Korea*

Laurie Swami, President and CEO, Nuclear Waste Management Organization (NWMO), Canada; Chair of the International Association for Environmentally Safe Disposal of Radioactive Materials (EDRAM)

Jae Hak Cheong, Professor, Kyunghee University; President, Korea Radioactive Waste Society, Korea

10:00 Coffee break

Session 3: Siting approaches for DGRs

10:30 **Panel discussion: Siting approaches for DGRs and lessons learnt**

Co-Chairs: *Tomáš Rosendorf, Head of the Fuel Cycle Back-End Unit, Ministry of Industry and Trade, Czechia; Yuhan Kim, Researcher, Disposal Technology Team, HLW Technology Development Institute, KORAD, Korea*

Session co-ordinator: *Shogo Nishikawa, Specialist, NEA*

Byung Gon Chae, Principal Researcher of Deep Subsurface Storage and Disposal Research Center, KIGAM (Korea Institute of Geoscience and Mineral Resources), Korea

Jacques Delay, Scientific Advisor, ANDRA, France

Sam Usher, CEO, Australian Radioactive Waste Agency (ARWA), Australia

Kenichi Kaku, Senior Manager, Science and Technology Department, NUMO, Japan

Nuria Prieto Serrano, Senior Technician, Department of International Co-operation and R&D, ENRESA (Spanish Radioactive Waste Management Agency), Spain

Lukáš Vondrovic, Director, SÚRAO, Czechia

11:30 **Successful stepwise approaches in stakeholder engagement throughout DGR siting and the safety case**

Chair: *Emily Stein, Manager, Applied Systems Analysis and Research, Sandia National Laboratories, United States*

Session co-ordinator: *Shogo Nishikawa, Specialist, NEA*

Pirjo Hellä, Principal Scientist, VTT (Technical Research Centre of Finland Ltd), Finland

Ulrich Noseck, Head of Department – Safety Case, Site Selection Department, Deep Geological Disposal Division, GRS (Plant and Reactor Safety Company), Germany

Tetsuo Fujiyama, Senior Manager, Science and Technology Department, NUMO, Japan

Lucy Bailey, Chief of Disposal Safety, NWS, United Kingdom

Allan Hedin, Manager, Safety Assessments, SKB (Swedish Nuclear Fuel and Waste Management), Sweden

12:30 **Lunch**

Session 4: Cross-cutting aspects and societal considerations

13:30 **Public engagement strategies and stakeholder involvement: Addressing social, ethical and cultural factors in DGR implementation**

Chair: *Laurie Swami, President and CEO, NWMO, Canada*

Session co-ordinator: *Linda Okpala, Research Officer, NEA*

Philip Senn, Division Head, Communications and Public Affairs, NAGRA, Switzerland

Sigrid Eeckhout, Head of Communication and Participation, ONDRAF/NIRAS, Belgium

Martina Bílá, Head of Communications, SÚRAO, Czechia

Celine Kermisch, Ethics Advisor in Science and Technology; Lecturer, Université libre de Bruxelles, Belgium

Kara S. Colton, Director of Nuclear Policy, Energy Communities Alliance, United States

14:30 **Panel discussion: Capacity building initiatives and knowledge management – ensuring continued competency and expertise**

Co-Chairs: *Yeonhee Hah*, Vice President for Global Activities, Korea Institute of Nuclear Safety (KINS), Korea; *Rachael Clayton*, PhD student (PREDIS), University of Manchester

Session co-ordinator: *Linda Okpala*, Research Officer, NEA

Sungyeol Choi, Associate Professor, Department of Nuclear Engineering, Seoul National University, Korea

Hiroyuki Umeki, Chair of NEA Radioactive Waste Management Committee (RWMC); Executive Director, Nuclear Waste Management Organization of Japan (NUMO), Japan

Sylvia Saltzstein, Senior Manager, Nuclear Fuel Cycle Technologies, Sandia National Laboratories, United States

Abdulla Al Hameli, Senior Radioactive Waste Management Manager, Emirates Nuclear Energy Corporation (ENEC), United Arab Emirates

15:30 Coffee break

16:00 **Rise of new and innovative technologies, future nuclear systems, and impact on the development of DGRs**

Co-Chairs: *Pirjo Hellä*, Principal Scientist, VTT, Finland; *Ursula Carvajal Nunez*, Spent Fuel Management Analyst, Idaho National Laboratory, United States

Session co-ordinator: *Linda Okpala*, Research Officer, NEA

Eef Weetjens, Project Manager, SCK-CEN (Belgian Nuclear Research Centre), Belgium

Laura McManniman, Used Fuel and High-Level Waste Senior Technical Leader, Electric Power Research Institute (EPRI), United States

Masahiko Nakase, Laboratory for Zero-Carbon Energy, Tokyo Institute of Technology, Japan

John Corderoy, Chief Technical Officer, Nuclear Waste Services (NWS), United Kingdom

Antti Ketolainen, Director, Decommissioning and Waste Nuclear Services, Nuclear Generation, Fortum, Finland

17:00 **End of day remarks**

Tim Vietor, Head of Division, Safety, Geology and Radioactive Materials, NAGRA, Switzerland; ICGR-7 Co-Chair

17:15 **End of day 3**

18:30 **ICGR-7 conference dinner**

Grand Ballroom of Commodore Hotel, Busan

- *Shuttle service to be provided from BPEX to Commodore hotel*

- *Registration for conference dinner is on first come, first served basis*

ICGR-7 Programme – Day 4

30 May 2024

Session 5: Fostering the use of existing R&D facilities and international co-operation

09:00 **Role of underground research laboratories (URLs) in DGR advancement and strategies for promoting knowledge sharing**

Chair: *Magnus Holmqvist, President, SKB International, Sweden*

Session co-ordinator: *Soufiane Mekki, Senior Specialist, NEA*

Ingo Blechschmidt, Head of Grimsel Test Site, NAGRA, Switzerland

Kazuhei Aoyagi, HIP Project Manager; JAEA (Japan Atomic Energy Agency), Japan

Jacques Delay, Scientific Advisor, ANDRA, France

Markéta Dohnáľková, Head of DGR Development Department, SÚRAO, Czechia

Tiina Jalonen, Development Director, Posiva Oy, Finland

10:00 Coffee break

10:30 **Panel discussion: International co-operation, relevant initiatives, projects and networks**

Co-Chairs: *Marlone Davis, Senior Transportation and Storage Safety Inspector, Office of Nuclear Material Safety and Safeguards, US Nuclear Regulatory Commission (NRC), United States; Shauryavardhan Sharma, Junior Specialist, NEA*

Session co-ordinator: *Morgan Packer, Specialist, NEA*

Rebecca Tadesse, Head of Division, Radioactive Waste Management and Decommissioning, NEA

Vaidas Matuzas, Scientific Officer, Joint Research Centre (JRC), European Commission (EC)

Stefan Mayer, Team Leader, Radioactive Waste Disposal, IAEA

Jens Birkholzer, Senior Scientist, Lawrence Berkeley National Laboratory (LBNL, Berkeley Lab), United States

Marie Maertens, International Cooperation Manager, ANDRA, France

11:30 **Panel discussion: Exploring potential use of multinational infrastructures for managing radioactive waste**

Co-Chairs: *Rebecca Tadesse*, Head of Division, Radioactive Waste Management and Decommissioning, NEA; *Samuel Park*, Graduate Student, Seoul National University

Session co-ordinator: *Shauryavardhan Sharma*, Junior Specialist, NEA

Ewoud Verhoef, President, ERDO Association for Multinational Radioactive Waste Solutions; COVRA (Central Organisation for Radioactive Waste), Netherlands

Peter Bennett, Technical Lead, Spent Fuel Management, Norwegian Nuclear Decommissioning (NND), Norway

Alice Mariana Dima, Director, ANDR (Nuclear and Radioactive Waste Agency), Romania

Philippe Lalieux, Director, Long-term Radioactive Waste Management, ONDRAF/NIRAS, Belgium

Sandi Viršek, Director and CEO, ARAO (Agency for Radioactive Waste Management), Slovenia

12:30 Lunch

Session 6: ICGR-7 breakout sessions

13:45 **Introduction to breakout sessions**

Chang-Lak Kim, Executive Dean, KEPKO International Nuclear Graduate School (KINGS), Korea; ICGR-7 Co-Chair

14:00 **Separation into breakout groups**

14:15 **Breakout discussion session**

Led by facilitators *Dong Hak Kook*, Senior Researcher of Transportation and Storage, R&D Department, KAERI, Korea (session 1), and *Sylvia Saltzstein*, Senior Manager, Nuclear Fuel Cycle Technologies, Sandia National Laboratories, United States (session 2)

- Breakout session 1: Establishing dialogue between the generators and the implementers in interdependency aspects of radioactive waste management
- Breakout session 2: Future advanced reactors, new technologies, new waste streams – impact on disposal

15:30 Coffee break

16:00 **Feedback from breakout session**

Report-out by facilitator [Dong Hak Kook](#), Senior Researcher of Transportation and Storage, R&D Department, KAERI, Korea, and [Sylvia Saltzstein](#), Senior Manager, Nuclear Fuel Cycle Technologies, Sandia National Laboratories, United States

Session 7: Summary of ICGR-7

16:30 **Key takeaways from ICGR-7 younger generation session**

[Sana Bilal](#), Senior Specialist, Health Physicist Nuclear Facilities Section, Radiation Safety Department, Federal Authority for Nuclear Regulation (FANR), United Arab Emirates

16:45 **Summary of ICGR-7 and closing remarks**

[Chang-Lak Kim](#), Executive Dean, KEPCO International Nuclear Graduate School (KINGS), Korea; ICGR-7 Co-Chair

[Tim Vietor](#), Head of Division, Safety, Geology and Radioactive Materials, NAGRA, Switzerland; ICGR-7 Co-Chair

17:00 **End of day 4**

ICGR-7 Programme – Day 5

31 May 2024

Optional ICGR-7 site visit to Wolsong Low- and Intermediate-Level Radioactive Waste (LILW) Disposal Center

Gyeongju, Korea

08:15 **Site visit – Wolsong LILW Disposal Center**

Participants will be requested to meet in front of the BPEX Conference Center at 8h15 sharp.

Please note that pre-registration is required on a first come, first served basis to participate in the site visit. Capacity is limited to 100 registered ICGR-7 participants. Registration will open on 4 March at 12h00 Paris local time.

If you have not registered in advance for the site visit and provided the necessary documentation to the NEA Secretariat, we will not be able to accommodate your participation in the ICGR-7 site visit.

14:30 **End of day 5**

Notes

Notes

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