

REPORT

First International IAEA Conference on Nuclear Law: The Global Debate

Vienna/online, 25-29 April 2022



General information

The first International Conference on Nuclear Law took place from 25 to 29 April 2022 in Vienna. Registered NGOs who were not among [the invited organisations](#) had the possibility to participate virtually as observers.

Question and answer sessions were scheduled after each session. However, due to time restrictions, they partly had to be cut or shortened. Only questions were reviewed before making them visible to all participants. Not all reviewed questions were addressed by the moderators.

Relevant documents can be accessed via the conference webpage:

<https://www.iaea.org/events/icnl-2022>

Agenda

Monday, 25 April (p. 3)

- 10:00-12:00 Opening Plenary Session Nuclear Law: The Vision
- 12:00-12:15 *Book Signing by the DG*
- 12:15-14:00 *DG Reception*
- 14:00-14:15 Conference Introduction and Overview
- 14:15-15:30 Plenary Session No. 1
Nuclear Safety: Issues and Trends
- 15:30-16:00 *Coffee/Tea Break*
- 16:00-17:30 Roundtable No. 1
Social Involvement and Transparency and its Effect on Nuclear Law

Tuesday, 26 April 2022 (p. 6)

- 09:00-10:30 Plenary Session No. 2
Nuclear Security: Issues and Trends
- 10:30-11:00 *Coffee/Tea Break and Side Events*
- 11:00-12:30 Parallel Technical Sessions
 - a. CPPNM and its 2005 Amendment: Theory and Practice
 - b. Topical Issues in Nuclear Safety
 - c. National Legal Frameworks: Regulatory Authorities
- 12:00-12:30 Special Session: Codes of Conduct Evolution and Practical Effects – The Way Forward
- 12:30-14:00 *Lunch Break and Side Events*
- 14:00-15:30 Plenary Session No. 3
Nuclear Liability: Global Regime
- 15:30-16:00 *Coffee/Tea Break*

16:00–17:30 Roundtable No. 2
Role of Nuclear Law in the Broader Context of Other Areas of

Wednesday, 27 April 2022

09:00–10:30 Plenary Session No. 4
Safeguards: Issues and Trends
10:30–11:00 Coffee/Tea Break and Side Events
11:00–12:30 Parallel Technical Sessions
a. Application of Safeguards under NWFZ Treaties
b. Nuclear Liability: National Experiences
c. Safety and Security of Radioactive Sources
d. Radioactive Waste Management and Decommissioning
12:30–14:00 Lunch Break and Side Events
14:00–15:30 Plenary Session No. 5
New Technologies: Issues and Trends (Advanced Reactors)
15:30–16:00 Coffee/Tea Break
16:00–17:30 Roundtable No. 3
Non-proliferation and Peaceful Uses of Nuclear Energy: Strengthening Verification
and Complementarity

Thursday, 28 April 2022

09:00–10:30 Plenary Session No. 6
Nuclear New Build: Issues and Trends
10:30–11:00 Coffee/Tea Break and Side Events
11:00–12:30 Parallel Technical Sessions
a. Nuclear New Build: Economics, Financing, Contracting and Procurement
b. National Experience and Capacity Building: Safeguards
c. Legal Framework for New Nuclear Technologies: Comprehensive Approach for
Advanced Reactors (SMRs)
12:30–14:00 Lunch Break and Side Events
14:00–15:30 Parallel Technical Sessions
a. Legal Framework for New Nuclear Technologies: Fusion
b. Nuclear Liability: Issues and Trends
c. Emerging Threats and Legal Instruments
15:30–16:00 Coffee/Tea Break and Side Events
16:00–17:30 Roundtable No. 4
Legislative Assistance and Capacity Building in Nuclear Law
17:30–18:30 Side Event

Friday, 29 April 2022

09:00–10:30 Young Generation Forum Nuclear Law: Effectiveness and Proactivity
09:00–10:30 Parallel Technical Session
a. Legal Framework for New Nuclear Technologies: Outer Space
10:30–11:00 Coffee/Tea Break
11:00–12:30 Roundtable No. 5
Nuclear Power and Climate Change
12:30–14:00 Lunch Break
14:00–15:00 Closing Session

25 April 2022

The opening Plenary Session on “Nuclear Law: The Vision” on 25 April was moderated by **Hannah Vaughan Jones**.

DG **Rafael Mariano Grossi** held a keynote to highlight the importance of nuclear energy for the future as well as the key role young professionals will play.

Roundtable:

The roundtable highlighted the ambivalence between a world looking for alternate energy sources, and the fear and danger connected to nuclear energy among large parts of civil society.

IAEA DG **Rafael Mariano Grossi** stress that “the problem is not nuclear energy, but the problem is war”; according to him, however, the nuclear community should not plan only around this; a broader concern is that not everywhere countries are in line with the nuclear law; often environmental organisations /CSOs are used to IAEA or nuclear state officials not reacting to their concerns; communication is as important as the substance; besides humanitarian organisations, often only the IAEA as international organisation is in place in crisis areas (e.g., currently in Ukraine).

Vice-Chairman China Atomic Energy Authority (CAEA) **Baotong Dong** introduced the Chinese Energy Strategy. According to him, nuclear legislation is still evolving in China; he followed fellowship training on nuclear safety regulations in France; China translated IAEA safety guidance for application in china.

U.S. Secretary of State for Arms Control and International Security **Bonnie Denise Jenkins Under** talked about the importance of new technologies; existing international nuclear law is already quite inclusive and can be applied also for new technologies; provides a good framework and basis; the biggest challenge for nuclear law to be applied everywhere is the understanding/awareness of its importance, but also getting to know and understanding the process; it is important to understand that each country is different and has its own concerns and challenges which requires bilateral cooperation; U.S. has put a large stock in nuclear energy for facing climate change (to cut CO₂ emissions from energy production in half by 2030 and to zero by 2035); cyber security is an important part of nuclear security.

Ambassador and Resident Representative Permanent Mission of the UAE, HE Mr **Hamad Al-Kaabi** presented his view from UAE, where the high-level strategy highlights importance of nuclear law and international conventions. According to him, international cooperation and benefitting from other experiences is a key.

DG of the World Nuclear Association (WNA) **Sama Bilbao y Leon** addressed the Role of Nuclear Power in addressing the United Nations Sustainable Development Goals. According to her, nuclear energy is not only an opportunity to decarbonize further developed countries but also to provide access to energy in other areas of the world; Nuclear energy has got more visible; emerging nuclear technologies must be applied as fast and as affordable as possible; the decision to apply nuclear energy must be an educated decision, but also the general public should have the right to take this decision; lessons learned and knowledge of experts must be used and communicated throughout the process.

Principal Fellow at the Australian University of Melbourne, Prof. **Trevor Findlay**, talked about safeguards for the future. According to him, existing and most updated legal instruments must be applied; rise of new technologies as a key challenge; international experience should teach us to think through future scenarios, e.g., when it comes to war; monitoring and verification systems must

be as robust as possible; the UN security council is a difficult body because of the veto of the major powers; it is important that the agency stands up for itself when it comes to safeguards in order to avoid the misuse of information.

Question: The Chinese government once released the draft of China's Atomic Energy Law to solicit opinions in 2018. Could you please update us the progress on the legislation of the China Atomic Energy Law?

Dong: The Atomic Energy Law in China is a long story; first suggestion for a draft was in the 1980's; last January the state council has passed the draft and with legislative modification it will be put to the nation congress for approbation

Question: Apart from CO2 reduction – how should climate change aspects be taken into account in nuclear law and safety?

[unanswered]

Question: How do we reach the gap between IAEA experts and parliamentarians that need to be re-elected?

Cooperation and support by IAEA can be provided; transparency and different communication tools for and with the public (schools, municipalities, etc) as the key

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In the afternoon, **Peri Lynne Johnson**, Legal Advisor and Director, Office of Legal Affairs introduced to the conference and provided a programme overview.

IAEA Legislative Assistance Programme Lead **Anthony Wetherall** introduced relevant legal frameworks:

1. Convention on Nuclear Safety
2. Joint Convention on Spent Fuel Management and on the Safety of Radioactive Waste Management
 - parties submit national reports on how they meet their obligations
3. Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency
4. Convention on Early Notification of a nuclear accident

Additionally, there are 2 non-binding codes of conduct on:

1. safety and security of radioactive sources and
2. safety of research reactors

as well as Safety standards for transport of radioactive material

+ UNECE Espoo and Aarhus Convention

Senior Of Counsel Covington and Burling LLP, USA, **Richard Meserve**, held a presentation on strengthening the Global Nuclear Safety Regime. As main factors for the future, he highlighted IAEA authority safety inspections, transparency regarding the results of these inspections, the harmonization of national regulatory standards, and the integration of safety and security through a coordinated system.

Senior Lawyer and Technician, Dept. for International Coordination and R&D, Technical Division of the Spanish Radioactive Waste Management Organization (ENRESA) **Nuria Prieto Serrano** presented

Issues in Radioactive Waste Management. She, inter alia, highlighted the socio-political aspects of site selection procedures.

Gunther Handl, Professor of public International Law Tulane University Law School, USA, talked about “Harmonization of Nuclear Off-Site Emergency Preparedness and Response: New Regulatory Challenges and Opportunities”. He stressed that even extremely unlikely events must be anticipated.

Andrei Ionut Florea, Deputy Head of Unit, Nuclear energy, safety and ITER of the Euratom Policy Coordination, European Atomic Energy Community (EURATOM) presented the EU Law on Nuclear Safety. The amended nuclear safety directive is only in force since 2014; the main secondary law instruments of EURATOM are the nuclear safety directive, the basic safety standards directive, and the nuclear waste directive. Regarding the notification requirements according to Art 41 EURATOM Treaty, the Council Regulation 2587/1999 regulates types of projects and financial thresholds while the Commission Regulation 1209/2000 defined the content of the notification.

Khalil Bukhari, General Counsel of the Nuclear Transport Solutions Ltd., UK, presented Issues in Transport of Radioactive Material and **Zhaohui Li**, General Counsel member of the China National Nuclear Corporation (CNNC) presented Practical Experience in Safety regarding Multiple Types of Reactors.

Due to time restrictions, the Q&A session was cut.

Lisa Thiele, Vice-President, Legal and Commission Affairs & Senior General Counsel, Canadian Nuclear Safety Commission (CNSC), moderated the afternoon roundtable on Social Involvement and Transparency and its Effect on Nuclear Law.

Sam Emmerechts, Legal Advisor of Council of the European Union talked about environmental law, social licensing and nuclear law. According to him, within nuclear law the principal stakeholders are governments and regulators; principle 10 of the Rio Declaration of the UN is soft law; within environmental law, stakeholders include the public at large. Elements for social license are:

- Unwritten, without legal basis
- Implies ongoing societal consent
- Has no definite duration

Stakeholder involvement will probably develop in radioactive waste management, radiation protection, and nuclear regulation.

Fiona Marshall, Secretary to the Compliance Committee UNECE Aarhus Convention Secretariat, talked about the Aarhus Convention and Public Participation in Environmental Decision-Making on Nuclear Activities. Her presentation focussed on (1) adequate and effective notification and the (2) reconsideration or update of nuclear activities. According to the Aarhus Convention, the Party of origin remains responsible for effective notification. In case of update or reconsideration, public participation applies *mutatis mutandis* and where appropriate (including within PSRs every 10 years). As examples she highlighted the cases of NPP Borssele and NPP Dukovany.

Matthew Bunn, Professor of Practice Harvard Kennedy School, Harvard University, USA, talked about Balancing Societal Benefits and Risks in nuclear Law, which, according to him, mostly depends on domestic law.

Lisa Berthelot, Stakeholder Involvement Officer at IAEA-TCPC, presented on “Stakeholder Engagement in Operating and New Nuclear Power Programmes”. According to her it is important to

be inclusive and inspired, but not limited by examples from other states; the IAEA encourages stakeholder engagement at a very early stage in newcomer countries; stakeholders should be engaged, even before a Nuclear Law has been passed.

Sophie Boutaud de la Combe, Director of the IAEA-OPIC Office of Public Information and Communication, talked about “Why informing is not enough: the communication path to being transparent and engaging audiences”. According to her, reaching beyond the core audience of stakeholders is crucial; misinformation and disinformation are difficult to counter.

Lixin Shen Deputy, Director General, Department of Business Development and International Cooperation China National Nuclear Corporation (CNNC), addressed International Cooperation and Marketing: Uniqueness of the Nuclear Industry

Yves Lheureux Director, ANCCLI, France, elaborated How a successful involvement of civil society could influence nuclear law; activities should not only have public acceptance, but public support, therefore it is necessary to foster the positive perception

26 April 2022

Peri Lynne Johnson, Legal Advisor in the Directorate the IAEA Office of Legal Affairs, moderated the morning session on nuclear security. It was opened with a keynote by **Regine Gaucher**, Head of International and Regulatory Affairs in the Nuclear Security Department of the French Ministry of Energy.

Jonathan Herbach, Legal Officer in the IAEA-OLA Nuclear and Treaty Law Section, provided an overview of the legally binding and non-binding instruments.

Chief of the Terrorism Prevention Branch (TPB), UN Office on Drugs and Crime (UNODC) **Masood Karimipour** discussed the prevention and suppression of nuclear terrorism. He referred to the Convention on the Physical Protection of Nuclear Material (CPPNM), the International Convention for the Suppression of Terrorist Bombings, the International Convention for the Suppression of Acts of Nuclear Terrorism, the 2005 Amendment to the CPPNM, the Protocol to the Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation, the Protocol to the Convention for the Suppression of Unlawful Acts against the Safety of Fixed Platforms located on the Continental Shelf, and the Convention on the Suppression of Unlawful Acts relating to International Civil Aviation.

Samantha Neakrase, U.S. Department of Energy, NNSA, talked about the “Global Nuclear Security Architecture: Strengthening Implementation and Assurances”. According to her, nuclear security must be visible to the public; it is crucial to sustain the nuclear security progress.

Advisor at the Pacific Northwest National Laboratory (PNNL), **Frederic Morris**, held a virtual presentation on “Demonstrating Compliance with International Instruments for Nuclear Security: Theory and Practice.” In connection, **Madalina Man** from PNNL discussed gaps and opportunities regarding nuclear material accounting and control for nuclear security in the international legal framework for nuclear energy and in international nuclear security guidance.

Jiabin Bao, Deputy Director General at the Chinese State Nuclear Security Technology Center (SNSTC), addressed the international cooperation in nuclear security, specifically a COE project between China and the United States.

The second morning part included 3 different sessions that were held in parallel:

- a) CPPNM and its 2005 Amendment: Theory and Practice
- b) Topical Issues in Nuclear Safety
- c) National Legal Frameworks: Regulatory Authorities

The plenary session in the afternoon was moderated by **Ben McRae**, Assistant General Counsel for Civilian Nuclear Programs of the U.S. Department of Energy. It focussed on the global regime of nuclear liability.

IAEA-OLA Legislative Assistance Programme Lead **Anthony Wetherall** provided an overview and introduction to recent developments. According to him, not only the IAEA, also suppliers and banks, all stakeholders require that a nuclear state has treaty relations regarding safety, liability and with and with its neighbours.

Jamie Fairchild, Senior Advisor on Nuclear Liability of Natural Resources Canada presented on Friends of the CSC and CSC Meetings.

Roland Dussart-Desart, Chair of the NEA Nuclear Law Committee (NLC) discussed “the entry into force of the revised Paris Convention and of the Brussels Convention: two steps at once, what’s next?”. According to him, damages of war are not covered by the Conventions. The division of competences between EU Member States and national governments causes delay also on international level. However, he does not consider it necessary that the EU becomes party to the Vienna Convention, which would be hard with non-nuclear countries within the EU.

Omer Brown, Legal Counsel of Contractors International Group on Nuclear Liability (CIGNL), talked about “A Global Nuclear Liability Regime is Overdue”.

Claire Portier from the French Center for International and Community Studies and Research discussed whether the international nuclear third-party liability regime can and should be a model for a global and evolutionary liability regime for high-risk activities.

The Tuesday roundtable moderated by **Wolfram Tonhauser**, Head of the IAEA-OLA Nuclear and Treaty Law Section, addressed Role of Nuclear Law in the Broader Context of Other Areas of Law. He introduced the following lead questions:

- What is nuclear law?
- How is it different from other areas of law?
- What are the relationships with these other areas of law?
- How is it currently taught and how should it be taught in the future?
- Nuclear law has been developed on the basis of an alleged speciality, but should it stay this way?

Paul Bowden, Honorary Professor of Law at the Nottingham Trent University, UK, noted that there is some truth to the idea that the connections of nuclear law with other disciplines are slender; it encompasses a large number of international agreements; those who practise nuclear law only start to learn about it on the job, training programmes must thus be revised and universities need respective funding.

David Ong, Professor of International & Environmental Law Nottingham Trent University, UK, noted that university students are also members of the public and when nuclear law comes to the mind, it is perceived as a risk-related topic, academics must lead to the inclusion of nuclear law in energy and

environmental law. Planning and permitting of nuclear installations is the bridge between nuclear and environmental law, therefore nuclear law is also relevant within the energy transition.

Denise Cheong, Head of Nuclear Law and Policy at the University of Singapore, inter alia, talked about the question where nuclear law starts and where it ends. She stressed that nuclear law cannot be taught or researched upon without reference to other areas of law.

Miguel Sousa Ferro, Professor University of Lisbon Law School, Portugal, noted that it is very different to study nuclear law in a nuclear or non-nuclear country. He noted that it is not possible to study nuclear law without understanding EU law, which has broader impact on EURATOM; students should study what they are interested in and what they think can be a benefit for society.

Roland Dussart-Desart, Chair of the NEA Nuclear Law Committee (NLC), referred to the Geneva Convention to prevent damages and attacks. He noted that the EU taxonomy will lead to a gap between the NPPs falling under the taxonomy and other NPPs.