



IAEA

International Atomic Energy Agency

Atoms for Peace and Development

International Conference on Effective Nuclear and Radiation Regulatory Systems

Abu Dhabi, United Arab Emirates

13–16 February 2023

Organized by the
International Atomic Energy Agency (IAEA)

Hosted by the
Government of the United Arab Emirates

Through
Federal Authority for Nuclear Regulation

Announcement and Call for Papers

A. Background

This International Conference is being organized by the International Atomic Energy Agency (IAEA) and is the sixth in a series of conferences on effective nuclear and radiation regulatory systems. The five preceding conferences were held in the Hague, the Netherlands in 2019, Vienna, Austria in 2016, Ottawa, Canada in 2013, Cape Town, South Africa in 2009, and Moscow, the Russian Federation in 2006. Building on the conclusions and deliberations of these events, the conference to be held in February 2023 will review issues of importance to the global regulatory community focusing on the importance of the regulators in ensuring a high standard of safety and security. The conference is being hosted by the Government of the United Arab Emirates (UAE).

B. Purpose and Objectives

The objective of the conference is to share regulatory experiences related to improving the effectiveness of nuclear and radiation regulatory systems, taking into account the outcomes of the past conferences in this series, as well as of the International Conference on Nuclear Security: Sustaining and Strengthening Efforts (February 2020); the International Conference on a Decade of Progress after Fukushima-Daiichi: Building on the Lessons Learned to Further Strengthen Nuclear Safety (November 2021); the International Conference on the Safe and Secure Transport of Nuclear and Radioactive Materials (December 2021); the Conference of the Parties to the Amendment to the Convention on the Physical Protection of Nuclear Material (March 2022); and the International Conference on the Safety and Security of Radioactive Sources: Accomplishments and Future Endeavours (June 2022).

Additionally, the significant results from the Seventh Review Meeting of the Contracting Parties to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (June–July 2022), the open-ended meetings of legal and technical experts on implementation of the Code of Conduct on the Safety and Security of Radioactive Sources and its supplementary Guidance, works performed by the Commission on Safety Standards, and related activities, will be covered during the conference.

Furthermore, the conference will address topics such as regulatory experience, resilience, and agility to respond to new and emerging challenges in a rapidly changing environment. It will also address regulatory approaches to innovation, emerging and new technologies, including regulatory harmonisation and international and regional cooperation. Another key topic that will be addressed at this event are the concrete efforts to maintain regulatory credibility and trust as well as capacity building to ensure regulators are prepared for future needs through the use of education, human resources, knowledge management, and knowledge networks.

C. Themes and Topics

The following topical issues and special panel have been identified as subjects for the conference sessions.

Topical Issue No. 1: Leadership through New and Emerging Challenges

This session will provide an opportunity for regulatory bodies to share their experiences on how to ensure regulatory resilience; to better understand strategies, needs and ways to adapt and respond to unexpected challenges; and to share notable practices and lessons learned from regulatory experience.

Topics for discussion include:

- a. Regulatory implications of the COVID-19 pandemic in relation to business continuity: use of on-line applications, remote inspections, approaches to address regulators and operators' staffing challenges, and lessons learned for future regulatory enhancements;
- b. Expect the unexpected: how regulatory programs keep ahead of rapidly changing threats, such as cyber security and unmanned aerial vehicles; and, sustaining human performance under chronic stressors on operations such as military presence, economic uncertainty or civil unrest;
- c. Climate change: regulatory strategies to ensure resilience of existing and new nuclear installations and enhanced efforts to monitor the external environment to be prepared for future demands.

Topical Issue No. 2: Harmonization, Innovation, and New Technologies: Approaches to Enhance Regulatory Agility

This session will provide an opportunity to discuss regulatory strategies and programmes for innovative and advanced technologies in nuclear and radiological applications; international cooperation, harmonization of safety requirements and licensing approaches, and the application of a “graded approach” in regulatory activities.

Topics for discussion include:

- a. Developing or adapting regulatory strategies and programmes – including consideration of the “graded approach” – for nuclear applications, to include small modular reactors, transportable reactors and fusion reactors; and radiological applications, such as medical and industrial technologies;
- b. The role of harmonization in new and advanced technology regulation and the need for enhanced cooperation at regional and international levels;
- c. Use of technology, risk insights and research & development to advance the mission of the regulatory body, inter alia, targeted research activities, data analytics for risk assessment and decision making, information technology for greater connectivity, and the use of artificial intelligence and other technologies.

Topical Issue No. 3: Full Lifecycle Challenges and Strategies

This session will address challenges and strategies related to the full lifecycle of nuclear and radiation facilities, including the establishment of a new programme, managing aging of nuclear and radiation facilities, decommissioning, and radioactive waste storage and disposal.

Topics for discussion include:

- a. Regulatory framework and infrastructure for new or expanding nuclear and radiation facilities;
- b. Supply chain oversight: dynamic challenges for new and aging facilities such as constraints in the supply chain, commercial grade dedication techniques, and counterfeit, fraudulent, and suspect items;
- c. Aging management of power and non-power applications: including design, operation, and extended operation phases;
- d. Decommissioning and waste management of power and research reactors, including interim and long-term storage challenges and strategies for managing spent fuel;
- e. The use of financial assurance instruments for lifecycle confidence, and strategies for radiological and environmental impact and control during the full lifecycle.

Topical Issue No. 4: Trusted Regulator: Cooperative Techniques to Promote Credibility and Resilience

This session will address the importance of building stakeholder and public trust, communication, and the enhancement of stakeholder and public involvement in nuclear and radiation safety and security activities.

Topics for discussion include:

- a. Characteristics of a trusted regulator and processes for building stakeholders and public trust: stakeholder engagement and communication during the regulatory process,; effective relationships between operators and regulators, regulatory independence and vision/mission statements as well as their role in communicating the regulatory body's priorities;
- b. International and regional cooperation for creating more effective partnerships;
- c. Enhancing regulatory programme effectiveness and credibility through self-assessments and peer reviews;
- d. Emergency preparedness and response: how to maintain effective emergency preparedness and response programmes, modernization options for regulators such as use of enabling technologies, coordination with offsite competent authorities and responders, effective coordination with neighbouring countries, international/regional organisations and jurisdictions and communication with the public.

Topical Issue No. 5: Capacity Building for the Future – Holistic Approaches for Nuclear and Radiation Safety and Security

This session will discuss sustainable capacity building strategies and programmes including education and training, knowledge management, human resource development, and knowledge networks. It will focus on the exchange of best practices to prepare the next generation of regulatory professionals and leaders (or decision makers).

Topics for discussion include:

- a. Establishing durable capacity building programmes to align regulatory capabilities with future needs;
- b. Techniques to transfer knowledge to the next generation;
- c. Managing safety/security interface and maintaining safety and security culture;
- d. Cultivating a workforce of regulatory practitioners in nuclear and radiation safety and security;

- e. Attract and sustain technical experts including leveraging educational institutions for recruitment and ensuring competent regulatory staff in phasing out programmes;
- f. Promoting gender balance in the nuclear workforce;
- g. Preparing and empowering a new generation of leadership.

Special Panel Discussion: Regulating a Modern Era of Medical and Radioactive Materials Facilities and Applications - The Journey Continues

This special panel will provide an opportunity to highlight progress made since the previous Regulatory Conference (hosted in 2019); to address current priorities and initiatives; and, to exchange experiences on the implementation of legal instruments including the Code of Conduct on the Safety and Security of Radioactive Sources and the Supplementary Guidance on the Import and Export of Radioactive Sources.

Topics for discussion include:

- a. Progress since the 2019 Regulatory Conference: *Regulatory Systems: Working Together to Enhance Cooperation*;
- b. Current priorities and initiatives:
 - Rays of Hope. IAEA Initiative to support the sustainable introduction or expansion of radiotherapy for cancer treatment and strengthening radiation safety legislation and infrastructure;
 - The role of legally binding and non-legally binding international instruments in strengthening national legislative and regulatory frameworks; and
 - Regulatory measures for the prevention, detection and response to nuclear and other radioactive material outside of regulatory control.
- c. Experiences with the implementation of the Code of Conduct on the Safety and Security of Radioactive Sources and the Supplementary Guidance on the Import and Export of Radioactive Sources and Guidance on the Management of the Disused Radioactive Sources.

D. Structure

The conference will consist of an opening plenary session, several technical sessions, panel discussions, and a closing session.

The **plenary session** will consist of opening addresses/speeches followed by a keynote panel discussion to highlight and prioritize regulatory policy and technical matters in nuclear and radiation safety and nuclear security.

The **topical sessions** will address the topical issues listed in Section C. Following the discussions in the technical sessions, conclusions and recommendations will be drawn up.

Each session will consist of:

- Opening of the session by the Chairperson(s);
- Presentations to cover the topical issues specified; and
- Q&A session.

The panel discussions will address the specific topics from the various technical sessions and will include a keynote panel presentation. The discussion's focus will be on the identified actions needed to enhance the global nuclear and radiation safety and nuclear security framework. Some contributed papers (see Section C) may be selected for inclusion in the panel discussion, if considered important for the information exchange.

These discussions will bring into focus the essence of the various sessions and will be the cornerstone of the conference's activities; it will also provide strong input for the conference's closing session.

In the **closing session**, summaries of the technical sessions and special panel sessions listed in Section C will be provided. The Conference President will present the summary and conclusions of the conference, including the vision and strategies for the future, as well as important issues for consideration by governments, regulatory bodies, and international organizations.

E. Expected Outcomes

The expected outcomes of the conference and subsequent actions are:

- Established strategies to ensure regulatory resilience in a rapidly changing environment;
- Strengthened international cooperation and information sharing to improve regulatory effectiveness, agility and consistency in regulatory approaches related to new technologies;
- Identified strategies to overcome lifecycle challenges of nuclear installations and of activities involving radiation sources;
- Enhanced implementation of methodologies to increase public and stakeholders trust and regulatory credibility;
- Recognition and application of best practices to sustain a competent workforce and develop the next generation of regulatory professionals and leaders; and
- Continued progress on building programmes and strategies for the safe and secure use of radioactive materials.

F. Target Audience

The conference is directed at a broad range of experts in the area of nuclear and radiation safety and nuclear security regulation, bringing together the world's regulators responsible for the areas of nuclear and radiation safety and nuclear security.

G. Call for Papers

Contributions on the topics listed in Section C are welcome as oral or poster presentations. All submissions, apart from invited papers, must present original work, which has not been published elsewhere.

G.1. Submission of Synopses

Synopses (approximately 500 to 600 words on one or a maximum of two printed A4 pages, may contain any charts, graphs, figures and references) should give enough information on the content of the proposed paper to enable the Programme Committee to evaluate it. Anyone wishing to present at the conference must submit a synopsis in electronic format using the conference's file submission system ([IAEA-INDICO](#)), which is accessible from the conference web page (see Section P). The synopsis can be submitted through this system from **[Insert Date]** until **1 August 2022**. Specifications for the layout will be available on IAEA-INDICO. The system for electronic submission of synopsis, IAEA-INDICO, is the sole mechanism for submission of contributed synopsis. Authors are encouraged to submit synopsis as early as possible. The IAEA will not accept submissions via email.

In addition, authors must electronically submit the following two forms to their appropriate governmental authority using the InTouch+ platform (see Section H) for transmission to the IAEA. These forms must be received by the IAEA no later than **1 August 2022**.

IMPORTANT: The Programme Committee will consider uploaded synopses only if these two forms have been received by the IAEA through the established official channels (see Section H).

G.2. Acceptance of Synopses

The Secretariat reserves the right to exclude synopses that do not comply with its technical or scientific quality standards and that do not apply to one of the topics listed in Section C.

Authors will be informed by **1 November 2022** as to whether their submission has been accepted, either orally or as a poster, for presentation at the conference. Accepted synopses will also be reproduced in an unedited electronic compilation of Synopses which will be made available to all registered participants of the conference.

G.3 Submission of Full Papers

Authors of accepted synopses will be requested to submit a full paper in Word format, of about **5 to 7** pages in length. A compilation of full papers (in electronic format) will be made available to participants at registration.

Full papers must also be submitted through the [IAEA-INDICO](#) file submission system in Word format. Submitting the paper in the indicated electronic format is mandatory. Specifications for the layout and electronic format of the contributed papers and for the preparation of posters will be made available on IAEA-INDICO.

The IAEA reserves the right to exclude papers that do not comply with its quality standards and those that do not apply to one of the topics outlined in Section C above and those that do not meet the expectations based on the information in the abstract.

The deadline for electronic submission of the full papers as Word files is **2 December 2022**. The IAEA will not accept papers submitted after the deadline.

IMPORTANT: The system for electronic submission of papers, IAEA-INDICO, is the sole mechanism for submission of contributed papers. Authors are encouraged to submit papers as early as possible. The IAEA will not accept submissions via email.

G.4 Proceedings

Following the conference, the IAEA will publish a summary report. The proceedings will be made available to read online.

H. Participation and Registration

All persons wishing to participate in the event must be designated by an IAEA Member State or should be a member of an organization that has been invited to attend.

Registration through the InTouch+ platform:

1. Access the InTouch+ platform (<https://intouchplus.iaea.org>):

- Persons with an existing NUCLEUS account can [sign in here](#) with their username and password;
- Persons without an existing NUCLEUS account can [register here](#).

2. Once signed in, prospective participants can use the InTouch+ platform to:

- Complete or update their personal details under ‘Basic Profile’ (if no financial support is requested) or under ‘Complete Profile’ (if financial support is requested) and upload the relevant supporting documents;
- Search for the relevant event (**EVT2102332**) under the ‘My Eligible Events’ tab;
- Select the Member State or invited organization they want to represent from the drop-down menu entitled ‘Designating authority’ (if an invited organization is not listed, please contact Conference.Contact-Point@iaea.org);
- If applicable, indicate whether a paper is being submitted and complete the relevant information;
- If applicable, indicate whether financial support is requested and complete the relevant information (this is not applicable to participants from invited organizations);
- Based on the data input, the InTouch+ platform will automatically generate Participation Form (Form A), Form for Submission of a Paper (Form B) and/or Grant Application Form (Form C);
- Submit their application.

Once submitted through the InTouch+ platform, the application together with the auto-generated form(s) will be transmitted automatically to the required authority for approval. If approved, the application together with the form(s) will automatically be sent to the IAEA through the online platform.

NOTE: Should prospective participants wish to submit a paper or request financial support, the application needs to be submitted by the specified deadlines (see section P).

For additional information on how to apply for an event, please refer to the [InTouch+ Help](#) page. Any other issues or queries related to InTouch+ can be sent to InTouchPlus.Contact-Point@iaea.org.

If it is not possible to submit the application through the InTouch+ platform, prospective participants are requested to contact the IAEA’s Conference Services Section via email: Conference.Contact-Point@iaea.org.

Participants are hereby informed that the personal data they submit will be processed in line with the [Agency’s Personal Data and Privacy Policy](#) and is collected solely for the purpose(s) of reviewing and

assessing the application and to complete logistical arrangements where required. Further information can be found in the [Data Processing Notice](#) concerning IAEA InTouch+ platform.

I. Expenditures and Grants

No registration fee is charged to participants.

The IAEA is generally not in a position to bear the travel and other costs of participants in the conference. The IAEA has, however, limited funds at its disposal to help cover the cost of attendance of certain participants. Upon specific request, such assistance may be offered to normally one participant per country, provided that, in the IAEA's view, the participant will make an important contribution to the conference.

If participants wish to apply for a grant, they should submit applications to the IAEA using the InTouch+ platform through their competent national authority (see Section H). Participants should ensure that applications for grants are:

1. Submitted by **1 August 2022**;
2. Accompanied by Grant Application Form (Form C); and
3. Accompanied by Participation Form (Form A).

Applications that do not comply with the above conditions cannot be considered.

Approved grants will be issued in the form of a lump sum payment that usually covers **only part of the cost of attendance**.

J. Distribution of Documents

A preliminary and final programme will be made available on the conference web page (see Section P) prior to the start of the conference. The electronic compilation of synopses will be accessible free of charge to participants registered for the conference.

K. Working Language

The working language of the conference will be English. All communications must be sent to the IAEA in English.

L. Venue and Accommodation

Detailed information on accommodation and other relevant matters will be sent to all designated participants approximately three months before the conference. This information will also be made available on the conference web page.

M. Visas

Designated participants who require a visa to enter the United Arab Emirates should submit the necessary application to the nearest diplomatic or consular representative of the United Arab Emirates as soon as possible. Further advice and instructions will be made available on the IAEA web page for the conference (see Section P).

N. Key Deadlines and Dates

Submission of synopses through IAEA-INDICO	1 August 2022
Submission of Form B (together with Form A) through the InTouch+ platform	1 August 2022
Submission of Form C (together with Form A) through the InTouch+ platform	1 August 2022
Notification of acceptance of synopses for oral presentation	1 November 2022
Electronic submission of full papers through IAEA-INDICO	2 December 2022
Submission of Form A only (no paper submission, no grant request) through the InTouch+ platform	No deadline

O. Conference Secretariat

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Subsequent correspondence on scientific matters should be sent to the Scientific Secretary and correspondence on administrative matters to the IAEA's Conference Services Section.

P. Conference Web Page

Please visit the IAEA conference [web page](#) regularly for new information regarding this conference.