



# International Conference on Effective Nuclear Regulatory Systems: Sustaining Improvements Globally

**Vienna, Austria**

**11–15 April 2016**

*Organized by the*  
International Atomic Energy Agency

## **Announcement and Call for Papers**

### **A. Background**

This conference is being organized by the International Atomic Energy Agency (IAEA) and will be the fourth in a series of conferences on Effective Nuclear Regulatory Systems. The three preceding conferences were held in Ottawa, Canada, in 2013, in Cape Town, South Africa, in 2009 and in Moscow, Russian Federation, in 2006. Building on the conclusions and deliberations of these events, the conference to be held in April 2016 will play a vital part in the global efforts by senior nuclear safety and nuclear security regulators to review issues that are important to the global nuclear regulatory community, and will focus, in particular, on their key role in ensuring safety and security.

Participants at the Sixth Review Meeting of the Contracting Parties to the Convention on Nuclear Safety (CNS) in April 2014 discussed a number of cross-cutting issues, as well as the proposal by Switzerland to amend the CNS. A Diplomatic Conference to discuss the Swiss proposal was held in Vienna, Austria, in February 2015 and adopted principles to guide Contracting Parties in the implementation of the objective of the CNS to prevent accidents with radiological consequences and mitigate such consequences should they occur.

The Amendment to the Convention on Physical Protection of Nuclear Material (CPPNM) calls on States Parties to establish and maintain legislative and regulatory frameworks,

designate competent authorities, and take appropriate measures necessary for the security of nuclear material and nuclear facilities.

This issue has also been addressed at a number of other conferences and meetings, including the international experts' meetings organized and conducted within the framework of the IAEA Action Plan on Nuclear Safety. The IAEA report on the Fukushima Daiichi accident, due to be published in September 2015, includes observations and lessons learned in relation to regulatory effectiveness in the light of the accident.

The importance of maintaining strong control over radiation sources was the focus of the International Conference on the Safety and Security of Radioactive Sources: Maintaining the Continuous Global Control of Sources throughout their Life Cycle held in October 2013 in Abu Dhabi, United Arab Emirates.

A further significant milestone since the conference in Ottawa has been the Ministerial Declaration at the International Conference on Nuclear Security in July 2013, which affirmed the central role of the IAEA in strengthening the nuclear security framework globally and in leading the coordination of international activities in the field of nuclear security, while avoiding duplication and overlaps. The Ministerial Declaration also highlighted the importance of IAEA guidance in improving and strengthening regulatory effectiveness.

The conference coincides with the 10th anniversary of the launch of the IAEA Integrated Regulatory Review Service (IRRS) and provides an opportunity to focus on the experiences of Member States in implementation of lessons learned. The International Nuclear Safety Advisory Group (INSAG) has re-emphasized the importance of the IAEA peer review services and the role they can play in ensuring the development of competent regulators. The Ministerial Declaration at the International Conference on Nuclear Security in July 2013 also encouraged States to use, on a voluntary basis, the IAEA's nuclear security advisory services and peer reviews. The 2016 conference provides an opportunity to take stock of all the IAEA peer review services, which help in building regulatory competence as well as enhancing international cooperation and result in enhanced regulatory effectiveness.

The conference is intended to be of interest to a broad range of experts in the area of nuclear safety and nuclear security regulation. Bringing together the world's senior regulators responsible for nuclear and radiation safety and nuclear security will assist in strengthening regulatory systems worldwide.

The focus of the conference will be the application of lessons learned from the Fukushima Daiichi accident with a view to enhancing regulatory effectiveness within the framework of the CNS and the principles outlined in the Vienna Declaration on Nuclear Safety. It will be an opportunity for regulators to examine the current challenges in regulating nuclear installations, radiation sources and radioactive waste. The conference will also provide a forum to discuss measures for strengthening international cooperation and regulatory competence, which help to sustain improvement of regulatory systems.

## **B. Objectives and Expected Outcomes**

The objective of this conference is to review and assess ways of further improving the effectiveness of regulatory systems for nuclear facilities and activities for both nuclear safety and nuclear security. The action items in the summary presented by the President of the conference held in 2013 in Ottawa, the lessons of the Fukushima Daiichi accident, the discussions at other international conferences and at international experts' meetings conducted within the framework of the IAEA Action Plan on Nuclear Safety, as well as the CNS and the principles outlined in the Vienna Declaration on Nuclear Safety, will continue to have a significant impact on regulatory systems. All the aforementioned need to be taken into account to sustain improvements to regulatory systems.

The expected outcomes of the conference are:

- Enhanced safety and security of nuclear installations worldwide;
- Challenges in regulating radiation sources and radioactive waste addressed;
- Enhanced international cooperation for sustaining regulatory effectiveness;
- Strengthened and sustained regulatory competence for nuclear safety and security; and
- Strategies and actions for the future identified, as well as issues for consideration by governments, regulatory bodies and international organizations.

## **C. Topics**

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

### **Topical Issue No. 1: Regulatory Lessons Learned and Actions Taken**

This session will provide an opportunity for regulatory bodies to provide feedback concerning the action items from the 2013 conference in Ottawa and lessons learned from the IAEA report on the Fukushima Daiichi accident and international experts' meetings. This session will also provide an opportunity to discuss the effect of the Vienna Declaration on Nuclear Safety on IAEA safety standards.

Topics for discussion include:

- Feedback on activities undertaken by Member States' regulatory bodies in response to the action items resulting from the 2013 conference in Ottawa;
- Results and updates arising from international conferences and from the international experts' meetings held within the framework of the IAEA Action Plan on Nuclear Safety relevant to regulatory bodies; and
- Results and updates from the IAEA report on the Fukushima Daiichi accident and the regulatory challenges identified in it, including the effect of the accident and the Vienna Declaration on Nuclear Safety on IAEA safety standards.

## **Topical Issue No. 2: Challenges in Regulating Nuclear Installations**

Member States continue to report issues related to the regulatory oversight of licensees' vendors and contractors, acceptance of first-of-a-kind nuclear power plants (NPPs) and systems, and construction of new NPPs. Many regulatory bodies are also faced with issues of life extension, end of commercial operation and preparation for decommissioning.

Topics for discussion include:

- Regulatory issues related to new NPPs, including design, siting, construction and commissioning:
  - Regulatory oversight of licensees' vendors and contractors;
  - Acceptance of first-of-a-kind systems; and
  - Construction experience feedback.
- Regulatory issues relating to operation of ageing facilities, including:
  - life extension, end of commercial operation and preparation for decommissioning.
- Effectiveness of international instruments and initiatives (e.g. CNS, Vienna Declaration, Amendment to the CPPNM).
- Challenges in establishing national requirements and technical criteria for ensuring that new NPPs are designed, sited, constructed and operated in a manner consistent with security objectives.

## **Topical Issue No. 3: Challenges in Regulating Radiation Sources and Radioactive Waste**

The need to have sufficient regulatory infrastructure to ensure the safety and security of radiation sources and radioactive waste poses challenges to a number of Member States. These challenges are particularly evident in the regulation of emerging technologies in industrial and medical applications.

This session will address the challenges faced in regulating radiation sources and radioactive waste.

Topics for discussion include:

- Challenges faced by Member States in establishing/strengthening their regulatory infrastructure, including regulating emerging medical and industrial technologies;
- Maintaining regulatory control of spent and disused sources;
- Challenges in regulating the transboundary shipment of radioactive sources; and
- Regulatory challenges associated with radioactive waste management.

## **Topical Issue No. 4: Strengthening International Cooperation**

International cooperation is an important part of the global nuclear safety and security framework. The IAEA Action Plan on Nuclear Safety stresses the need to strengthen capacity building, knowledge networks and IAEA peer reviews, and to disseminate the results, in order to maximize the benefits to Member States.

Topics for discussion include:

- Regional regulatory cooperation forums;
- The Global Nuclear Safety and Security Network;
- Capacity building in Member States, including for countries embarking on a nuclear power programme; and
- IAEA regulatory peer reviews and regulatory networks.

## **Topical Issue No. 5: Strengthening Regulatory Competence**

The IAEA Safety Fundamentals state that a regulatory body must have adequate technical and managerial competence and human resources to fulfil its responsibilities. The General Safety Requirements publication *Governmental, Legal and Regulatory Framework for Safety* (IAEA Safety Standards Series No. GSR Part 1, Vienna, 2010) states that the regulatory body shall employ a sufficient number of qualified and competent staff, commensurate with the nature and the number of facilities and activities to be regulated, to perform its functions and to discharge its responsibilities. The IAEA Nuclear Security Fundamentals also require the regulatory body to have competent human resources.

This session will provide the opportunity for representatives of regulatory bodies to discuss how building the knowledge and skills of their staff helps to ensure that they work in an effective, independent and transparent way, with a view to enhancing the safety and security culture of the regulated community. The session will also address the key role that relevant IAEA peer reviews play in strengthening regulatory competence.

Topics for discussion include:

- Safety and security culture within the regulatory body and the need for self-assessment;
- Systemic approach to safety: an important lesson from the Fukushima Daiichi accident;
- Independence, openness and transparency of the regulatory body;
- Human factors, capacity building and knowledge management;
- The regulatory operating experience programme;
- Challenges in harmonizing safety and security requirements; and
- IAEA peer review services.

## **D. Target Audience**

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

## E. Programme Structure

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

The **opening plenary** will consist of opening addresses followed by a keynote panel discussion to highlight and prioritize regulatory policy and technical challenges in nuclear safety and nuclear security that need to be addressed to sustain improvements globally.

The **five technical sessions** will address the topical issues listed in Section C. After 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;
- Invited papers to cover the topical issues specified; and
- A panel discussion.

**Panel discussions** in each of the five technical sessions will address the challenges resulting from the plenary keynote panel discussion, as well as from the papers presented at the technical sessions, and will focus on actions needed to enhance the global nuclear safety and security framework. Some contributed papers (see Section F) may be selected, if considered to significantly contribute to the topics of the sessions, to become part of the panel discussions. These discussions will bring into focus the essence of the various sessions and will be the cornerstone of the conference's activities; they will also provide strong input to the conference's closing session. Members of the panels in these discussions will include senior executives from regulatory bodies and, for example, from technical and scientific support organizations.

In the **closing session**, summaries of the sessions according to the topical issues listed in Section C will be provided. The President of the conference will present the summary and conclusions of the conference, including visions, strategies and actions for the future, as well as issues for consideration by governments, regulatory bodies and international organizations.

## F. Synopses, Papers and Proceedings

Concise papers on topics falling within the scope of the conference (see Section C) may be submitted as contributions to the conference. All papers, apart from invited papers, must present original work and must not have been published elsewhere.

Authors of accepted papers are expected to present the substance of their papers in the form of posters, which will be exhibited in a designated area. It is expected that at least one author of each poster will attend the conference in order to be available to discuss the poster.

## F.1. Submission of Synopses

Anyone wishing to present a paper at the conference must submit a synopsis of **two pages (800 words)** maximum in electronic format through the conference's web browser-based file submission system (IAEA-INDICO). Paper copies cannot be accepted.

Instructions on how to upload the synopsis to IAEA-INDICO will be available on the conference web page (see Section O) as of 1 September 2015. The synopses must be submitted through this system between **1 September and 30 October 2015**. No other form of submission will be accepted.

In addition, authors must electronically submit the following two forms to their appropriate governmental authority (see Section G) for transmission to the IAEA. These forms must be received by the IAEA no later than **30 October 2015**.

- Participation Form (Form A)
- Form for Submission of a Paper (Form B)

**IMPORTANT:** The electronically received synopses will be considered by the Programme Committee only if the above two forms have been received by the IAEA through the established official channels (see Section G).

## F.2. Acceptance of Synopses

Authors will be notified by email by **16 November 2015** as to whether, on the basis of the synopses uploaded to IAEA-INDICO, their papers have been accepted for submission as a contributed paper as well as for a poster presentation during the conference.

## F.3. Submission of Contributed Papers

Authors of accepted synopses will be requested to submit a contributed paper not exceeding **seven pages in length**. A book of contributed papers (in electronic form) will be made available to participants at registration.

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

Contributed papers must also be submitted through the IAEA-INDICO file submission system. Specifications for the layout and electronic format of the contributed papers and for the preparation of posters will be available on the conference web page.

The deadline for electronic submission of the contributed papers as PDF files is **18 January 2016**. The IAEA will not accept papers submitted after the deadline, and any subsequent submission by email will not be accepted either.

**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.

## F.4. Conference Proceedings

The proceedings will be published by the IAEA as soon as possible after the conference on a CD-ROM.

## G. Participation and Registration

All persons wishing to participate in the conference are requested to register **online in advance** through the conference web page (see Section O). **In addition**, they must send a completed

- Participation Form (Form A),
- Form for Submission of a Paper (Form B) (if applicable), and
- Grant Application Form (Form C) (if applicable),

as soon as possible to a competent official authority:

- Ministry of Foreign Affairs,
- Permanent Mission to the IAEA, or
- National Atomic Energy Authority,

or to one of the organizations invited to participate for subsequent transmission to the IAEA, via email to: [Official.Mail@iaea.org](mailto:Official.Mail@iaea.org).

A participant will be accepted only if the Participation Form is transmitted through the Government of a Member State of the IAEA or by an organization invited to participate.

Participants whose official designations have been received by the IAEA will receive further information on the conference at least three months before the start of the conference. This information will also be made available on the conference web page (see Section O).

## H. Expenditures and Grants

No registration fee will be 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 meet the cost of attendance of certain participants. Such assistance may be offered upon specific request to normally one participant per country provided that, in the IAEA's view, the participant on whose behalf assistance is requested will make an important contribution to the conference. If governments wish to apply for a grant on behalf of one of their participants, they should address specific requests to the IAEA to this effect. Governments should ensure that applications for grants are:

1. Submitted by **30 October 2015**;
2. Accompanied by a duly completed Grant Application Form (Form C) signed and stamped by the Ministry of Foreign Affairs or the National Atomic Energy Authority;
3. Accompanied by a completed 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**.

## **I. Distribution of Documents**

A preliminary programme of the conference will be made available on the conference web page (see Section O) before the start of the conference. The final programme and the book of contributed papers (in electronic form) will be available free of charge upon registration at the conference.

## **J. Working Language**

The working language of the conference will be English.

## **K. Venue and Accommodation**

The conference will be held at the IAEA's Headquarters in Vienna, Austria. Participants must make their own travel and accommodation arrangements. Hotels which are offering a reduced rate for conference participants will be listed on the conference web page (see Section O). Please note that the IAEA is not in a position to assist participants with hotel bookings, nor can the IAEA assume responsibility for paying cancellation fees or for re-bookings and no shows.

Detailed information on accommodation and other administrative details will be made available on the conference web page as soon as possible.

## **L. Visas**

Designated participants who require a visa to enter Austria should submit the necessary application to the nearest diplomatic or consular representative of Austria at least eight weeks before they travel to Austria. Designated participants will be required to submit a letter of invitation in support of their visa application.

## **M. Key Deadlines**

Electronic submission of extended synopsis including submission of Forms A and B through official channels:	<b>30 October 2015</b>
Submission of Grant Application (Form C) and Participation Form (Form A) through official channels:	<b>30 October 2015</b>
Notification of acceptance of paper:	<b>16 November 2015</b>
Electronic submission of contributed paper:	<b>18 January 2016</b>

## **N. Conference Secretariat**

### **General postal address and contact details of the IAEA:**

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Subsequent correspondence on scientific matters should be sent to the Scientific Secretariat, and correspondence on administrative matters to the Conference Services Section.

**O. Conference Web Page**

The IAEA web page for the conference is as follows:

<http://www-pub.iaea.org/iaeametings/50799/International-Conference-on-Effective-Nuclear-Regulatory-Systems-Need-for-Continuous-Improvement>

It will be updated regularly with new information, and participants are encouraged to check it on a regular basis.