



**International Conference  
on  
Effective Nuclear Regulatory Systems:  
Further Enhancing the Global Nuclear Safety and Security Regime**

**14–18 DECEMBER 2009  
CAPE TOWN, SOUTH AFRICA**

*Organized by the*  
International Atomic Energy Agency

*Hosted by the*  
Government of South Africa through the National Nuclear Regulator of  
South Africa

**ANNOUNCEMENT AND CALL FOR PAPERS**

**1. INTRODUCTION**

In 2006, the first International Conference on Effective Nuclear Regulatory Systems was held in Moscow, with a focus on Facing Safety and Security Challenges. This conference brought together senior nuclear safety, radiation safety and security regulators from around the world to discuss how to improve regulatory effectiveness to assure protection of the public and the environment. During the Moscow conference, senior regulators decided that a forum dedicated to discussing regulatory effectiveness was needed every three years. On 14–18 December 2009, a second International Conference on Effective Nuclear Regulatory Systems will be held in Cape Town, with a focus on Further Enhancing the Global Nuclear Safety and Security Regime.

The concept of an international conference of senior regulators on the effectiveness of the regulatory systems originated during a meeting between IAEA Director General Mohamed ElBaradei, then Chairman of the US Nuclear Regulatory Commission Nils Diaz, and then Deputy Head and Acting Chairman of Rostekhnadzor Andrey Malyshev. This meeting recognized that other multinational forums in which senior regulators participated were often constrained by time, membership or subject matter. Consequently, there was a need for regulators to collaborate more broadly at a high level on matters of mutual interest. The Moscow conference, chaired by Laurence Williams, then Director for Safety and Security at the Nuclear Decommissioning Authority in the United Kingdom, was the first of its kind in achieving this sort of broad participation.

Since the 2006 Moscow conference, regulatory bodies and the nuclear industry have continued to face challenges, such as:

- The renewed global interest in the use of nuclear energy for electricity generation and, consequently, the likely global expansion of its use;
- The need to maintain focus on continuous improvement of the safety and security of existing facilities in a rapidly changing world;
- The consequent need for safety and security to be more closely integrated;
- The increased global use of radioactive materials and radiation applications, and the need to ensure adequate safety and security infrastructure and awareness.

Ensuring the safety and security of nuclear power and radiation applications is the primary responsibility of the operator and national government. At the same time, it is a global responsibility, since the consequences of a nuclear or radiological accident can be widespread. Therefore, the international nuclear community has a responsibility to engage in open communication; to share best practices, experience and lessons learned; and to maintain strong, robust domestic programmes. As more countries become involved in the nuclear industry, the need to maintain high levels of safety and security worldwide becomes more imperative.

The purpose of this conference is to stress the responsibility shared by all nuclear regulators, operators and vendors to maintain a strong, effective and efficient global nuclear safety and security focus. This conference is a vital part of the global effort by senior nuclear safety and security regulators to review the effectiveness and performance of this regime, focusing on the important role regulators play in the delivery of safety and security. A regulatory body is effective when it ensures that an acceptable level of safety and security is being maintained by licensees/operators; when it takes appropriate actions to prevent the degradation of safety and security; when it takes actions to promote safety and security improvements; when it performs its regulatory functions in a timely and cost effective way; and when it strives for the continuous improvement of itself and the industry.

This conference will take stock of the five decades long effort by Member States, the IAEA and other international organizations to strengthen safety and security in the use of nuclear and radioactive materials through strong national infrastructures. This strengthening results from the application of implicit or explicit principles, standards, rules and decision making procedures to achieve shared goals in nuclear safety and security while preserving and complementing the sovereignty, authority and ultimate responsibilities of States. The IAEA supports the development and enhancement of a global nuclear safety and security regime based on five principal elements:

- (1) The widespread subscription to international instruments such as conventions and codes of conduct;
- (2) A comprehensive suite of nuclear safety standards and security guidance to serve as a reference point to the high level of safety required for all nuclear activities and facilities;
- (3) A suite of international safety and security reviews and services, based on safety standards and security guidance;
- (4) The need to ensure strong, independent national infrastructures;
- (5) A global knowledge network and community of experts.

The President's summary and conclusions from the Moscow conference highlighted some of the key elements needed to deliver effective nuclear safety and security regulation in the global environment. The conclusions stated that governments, regulatory bodies and the IAEA should do more to: encourage adherence to binding and non-binding treaties and conventions; ensure the effective independence and adequate financing of regulators; improve international cooperation; increase communication and knowledge and experience sharing; engage stakeholders; and demonstrate openness and transparency in the process. The full summary of the President's report can be found on the IAEA's web site:

<http://www-pub.iaea.org/MTCD/Meetings/Announcements.asp?ConfID=150>

Many of the issues highlighted in the President's report have been discussed at international events and activities held since 2006. The IAEA has also developed many tools to assist in addressing the issues, such as developing safety standards and security guidance, and performing various types of peer review such as the Integrated Regulatory Review Service (IRRS) and the International Nuclear Security Advisory Service (INSServ). These events and activities have been compiled and can be found on the IAEA conference web page (*will be available in a separate document "entitled background material" on the conference web page*).

In addition, the IAEA and other international organizations such as the OECD/NEA regularly prepare reports presenting major issues and trends that impact the nuclear community generally and nuclear safety and security in particular. Input for these reports comes from meetings, conferences, workshops, safety or security related missions and services, and discussions between regulators. In its annual Nuclear Safety Review and

Nuclear Security Report, the IAEA presents an overview of major worldwide trends and issues in nuclear, radiation, transport and radioactive waste safety, and emergency preparedness, as well as related security issues and trends. Ongoing international activities as well as future challenges are highlighted under main topical areas. These reports can be found on the IAEA web site.

This systematic reporting allows for an overall review and assessment of the status of nuclear safety and security worldwide, which in turn enables regulators to identify challenges for the future. Regular international conferences on effective nuclear regulatory systems are the most effective forums for senior regulators to share information among a broad and diverse group of countries to address potential challenges and to optimize safety and security at the international level.

Within this context, a special focus of this conference will be to highlight and prioritize urgent policy and technical challenges in nuclear safety and security that can be addressed primarily through international cooperation between governments, regulatory bodies and international organizations.

The conference will also review achievements since the Moscow conference and identify future challenges and measures to address them.

## **2. OBJECTIVES AND EXPECTED OUTCOMES**

The objectives of this second International Conference on Effective Nuclear Regulatory Systems are to review and assess the effectiveness of the global nuclear safety and security regime, and to propose future actions to further enhance it. It is expected that the conference will give recommendations and guidance on the following issues:

- Establishing and maintaining independent and effective national regulatory systems, given the challenges of:
  - Launching new nuclear power programmes;
  - Undertaking new builds after a long time interval in those countries with existing nuclear power programmes;
  - Addressing the increase in radioactive materials and radiation applications;
- Prioritizing and addressing emerging issues concerning multinational and national responsibility for nuclear safety and security;
- Fostering effective international cooperation among regulators for the sharing of regulatory knowledge, practices and information.

### **3. AUDIENCE**

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

### **4. TOPICS**

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

#### **Topical Issue No. 1: Emerging regulatory challenges**

This session will address a wide scope of issues associated with regulating new and existing nuclear power programmes and radiation applications. This includes the challenges of launching new nuclear power programmes; the challenges of undertaking new builds after a long time interval in those countries with existing nuclear power programmes; and the challenges associated with the increase in radioactive materials and radiation applications.

Topics for discussion could include:

- Regulatory challenges for countries launching new nuclear programmes;
- Regulatory challenges associated with new builds for countries with existing nuclear programmes;
- Emergency preparedness and response;
- National strategies for waste management and decommissioning;
- Threat assessment and response;
- Review of the safety case for disposal facilities;
- Regulation of medical facilities and activities;
- Denials of shipment;
- Regulation of the mining industry;
- Regulation of research reactors.

#### **Topical Issue No. 2: Regulatory independence and effectiveness**

This session will address recent developments within government and regulatory frameworks and regulatory management systems with respect to effective independence. The session will also focus on issues related to establishing, maintaining, measuring and continuously improving regulatory effectiveness.

Topics for discussion could include:

- Leadership and management systems;
- Balanced integrated regulatory oversight;
- Attributes of effective independence;
- Openness and transparency, stakeholder involvement;
- Self-assessment and peer review missions such as IRRS;
- Competence and knowledge management;
- Inspection and enforcement, and operating experience feedback.

### **Topical Issue No. 3: Impact of multinational activities on national responsibility for nuclear safety and security**

This session will address emerging issues related to multinational activities and their impact on national responsibility for nuclear safety and security.

Topics for discussion could include:

- The role and responsibility of the national regulator;
- Industry challenges of working in a multinational environment;
- The transfer of regulatory practices and methods;
- The interface between nuclear safety and security, safety and security culture;
- The Multinational Design Evaluation Program (MDEP);
- The European Council Directive (Euratom) setting up a Community framework for nuclear safety;
- The safety and security of transboundary transport;
- A regulatory approach to the use of standards from globalized industries;
- The production and international distribution of radioactive sources and medical isotopes.

### **Topical Issue No. 4: Enhancing international safety and security communication and cooperation**

This session will review the effectiveness of existing mechanisms for international regulatory cooperation and provide guidance on streamlining them and increasing their efficiency. It will also focus on encouraging wider participation in international cooperation activities. In addition, the session will look at the extended use of IT and

networking tools, which can be cost effective and can contribute significantly to easier and wider sharing of regulatory knowledge, practices and information.

Topics for discussion could include:

- Application of IAEA safety standards and security guidance, and operating experience feedback;
- Global, regional or thematic knowledge networks for regulators;
- Feedback from implementing international instruments, both legally binding (e.g. conventions) and non-binding (e.g. codes of conduct) instruments;
- Resolution of generic safety issues in the global context;
- Enhancing international regulatory feedback systems;
- International lessons learned from national IRRS missions.

## 5. PROGRAMME STRUCTURE

This conference will consist of an opening session, four technical sessions, a panel discussion and a concluding session.

The **opening session** will consist of opening addresses followed by a keynote panel discussion to highlight and prioritize urgent policy and technical challenges in nuclear safety and security that can be addressed primarily through international cooperation between governments, regulatory bodies and international organizations.

The **four technical sessions** will address the topical issues listed in Section 4. 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 paper(s);
- Open discussion.

The **panel discussion** will address the challenges resulting from the keynote panel discussion as well as from the topical sessions, and will focus on actions needed to enhance the global nuclear safety and security regime.

This discussion will bring into focus the essence of the various sessions and will be the capstone of the week's activities; it will also provide strong input for the conference's concluding session.

Participants will include senior executives from regulatory bodies and technical support organizations.

In the **concluding session**, 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.

## **6. CONTRIBUTED PAPERS**

Concise papers on issues falling within the topics of the conference (see Section 4 above) may be submitted as contributions to the conference. These will be made available on the conference web page. Contributors are expected to present these papers in poster sessions. The **contributed papers** should not exceed **four pages in length** and must be submitted in English. Each contributed paper must be preceded by an abstract not exceeding 300 words. Authors should state to which of the above technical topics their contribution relates. Authors must use the IAEA's Proceedings Paper Template in Word 2000 (user instructions are available on the conference web page (see Section 16)). Guidelines on the preparation of a contributed paper are given in the attached IAEA Guidelines for Authors on the Preparation of Manuscripts for Proceedings (this will be attached). The contributed papers should be submitted via email to:

[G.Philip@iaea.org](mailto:G.Philip@iaea.org)

or sent on CD-ROM to the Scientific Secretariat (see Section 15). The CD-ROM should be labelled with the author's name, the title of the paper, the proposed session topic and the software application used (the use of Microsoft Word is encouraged). To permit selection and review, the electronic version of the contributed paper must be received by the Scientific Secretariat not later than **29 May 2009**.

In addition to the electronic submission, a copy of the contributed paper(s) must also be submitted through one of the competent official authorities (see Section 14). The paper should be sent with a completed Form for Submission of a Paper (**Form B**), the Participation Form (**Form A**) and, if applicable, the Grant Application Form (**Form C**) to reach the IAEA not later than **29 May 2009**.

Only papers that have been received by the above deadline(s) and through the appropriate official governmental authorities will be considered and made available on the conference web site.

Final acceptance will occur after a peer review process. Furthermore, the Secretariat reserves the right to exclude papers that do not comply with its quality standards and/or do not apply to one of the topics in Section 4 above. Papers that are not sent through the official channels and papers arriving after the deadline will not be considered.

Authors will be informed by July 2009 whether their papers have been accepted for inclusion in the contributed papers and for presentation as a poster.

## 7. PARTICIPATION

All persons wishing to participate in the conference are requested to **register online in advance**. In addition, they must send a completed Participation Form (Form A) and, if relevant, the Form for Submission of a Paper (Form B) and the Grant Application Form (Form C) as soon as possible to the competent official authority (Ministry of Foreign Affairs or national atomic energy authority) for subsequent transmission to the IAEA. **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 approximately three months before the conference. This information will also be available on the conference web page:

<http://www-pub.iaea.org/MTCD/Meetings/Meetings.asp>

## 8. EXPENDITURES/GRANTS

No registration fee is charged to participants.

As a general rule, the IAEA does not pay the cost of attendance (i.e. travel and living expenses) of participants. However, limited funds are available to help meet the cost of attendance of selected specialists, mainly from **developing countries with limited economic resources**. The grants awarded will be in the form of lump sums usually covering only part of the cost of attendance. Generally, not more than one grant will be awarded to any one country.

Governments wishing to apply for a grant on behalf of one of their specialists should address specific requests to the IAEA to this effect. Governments should ensure that applications for grants are submitted by **29 May 2009** and are accompanied by a duly completed and signed Grant Application Form attached. Applications that do not comply with these conditions cannot be considered.

## 9. EXHIBITS

A limited amount of space will be offered by the host, the National Nuclear Regulator of South Africa, for company displays/exhibits during the conference. Interested parties should contact the local organizers:

Ms Rozaan Swanepoel,  
Strategy Office, National Nuclear Regulator of South Africa,  
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## **10. WORKING LANGUAGE**

The working language of the conference is English.

## **11. DISTRIBUTION OF DOCUMENTS AND PROCEEDINGS**

A preliminary programme of the conference will be sent to all officially designated participants well in advance of the conference and will also be available on the IAEA conference web page (see Section 16).

The proceedings of the conference will be published by the IAEA as soon as possible after the conference. They will contain welcoming addresses, overview presentations, rapporteur reports, invited keynote papers, session summaries, the conclusions presented by the President of the conference on the last day and the records of the discussions. The contributed papers will be included on a CD-ROM. The proceedings can be ordered, at a special discounted price, during the conference.

## **12. ACCOMMODATION**

Detailed information on accommodation and other conference related information will be made available on the conference web page before the conference, as soon as possible.

Please note that the December is peak holiday season in South Africa, and all flight and accommodation arrangements should preferably be made before August 2009 to ensure a good rate.

## **13. VISAS**

Officially designated participants who require a visa for South Africa should submit the necessary applications to the nearest diplomatic or consular representative of South Africa as early as possible (please note that it could take up to three weeks to obtain a visa).

## **14. CHANNELS OF COMMUNICATION**

The Participation Form (Form A), the Form for Submission of a Paper (Form B) and, if applicable, the Grant Application Form (Form C) must be sent through one of the competent official authorities (Ministry of Foreign Affairs or national atomic energy authority) for subsequent transmission to the IAEA.

Subsequent communications concerning technical matters should be sent to the Scientific Secretary, and communications on administrative/logistical matters should be sent to the Conference Secretariat (see Section 15).

## **15. CONFERENCE SECRETARIAT**

### **(a) Scientific issues – Scientific Secretariat (IAEA)**

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### **(b) Administration and Organization:**

#### **Ms Ellen Fraser**

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## **16. CONFERENCE WEB PAGE**

Please visit the IAEA conference web page regularly for new information regarding this conference:

<http://www-pub.iaea.org/MTCD/Meetings/Announcements.asp?ConfID=35791>