



Symposium on International Safeguards: Linking Strategy, Implementation and People

IAEA Headquarters

Vienna, Austria

20–24 October 2014

Organized by the

International Atomic Energy Agency (IAEA)

in cooperation with the

European Safeguards Research and Development Association (ESARDA)

and the

Institute of Nuclear Materials Management (INMM)

Announcement and Call for Papers

A. Introduction

Every four years, the International Atomic Energy Agency's (IAEA's) Department of Safeguards organizes a safeguards symposium. These symposia provide an important forum for interaction between the IAEA and its Member States on a wide variety of international safeguards and non-proliferation issues. The previous such event, the Symposium on International Safeguards: Preparing for Future Verification Challenges, was held in Vienna, Austria, from 1 to 5 November 2010.

Since the 2010 Safeguards Symposium, the IAEA has published the *IAEA Department of Safeguards Long-Term R&D Plan, 2012–2023*. The objective of the 2014 Safeguards Symposium is to foster dialogue, exchange information and to promote cooperation using this research and development plan to make progress towards achieving the Department's strategic objectives of deterring the proliferation of nuclear weapons, and continually improving and optimizing Departmental operations and capabilities.

The 2014 Safeguards Symposium, the twelfth in the series, will address safeguards during a time of change. The nuclear landscape is evolving, and this presents the IAEA and its Member States with both challenges and opportunities. Developments continue to challenge the nuclear non-proliferation regime and have increased general expectations of what IAEA safeguards are meant to achieve. The importance placed on the credible assurances of the peaceful use of nuclear energy provided through the IAEA's safeguards conclusions is likely to increase.

The IAEA needs to continue addressing challenges such as the global expansion of nuclear activities, covert nuclear technology supply networks, the greater availability of proliferation sensitive information through new media, and the need to safeguard new, more advanced and larger scale nuclear fuel cycle facilities. All this is likely to significantly increase the workload of the IAEA's Department of Safeguards.

The IAEA must also take advantage of new opportunities, particularly in the fields of information technologies, improved verification capabilities and proliferation resistant technologies. In addition, the IAEA faces its own organizational challenges. Further opportunities for achieving both improved safeguards implementation and organizational effectiveness and efficiency must be realized as financial resources are not rising in proportion to the workload. All these issues highlight the evolving nature of the IAEA's operating environment and the importance of adapting to ensure that safeguards remain effective and are implemented as efficiently as possible.

B. Objectives of the Symposium

The purpose of the symposium is to foster constructive dialogue and information exchange between the IAEA Secretariat, IAEA Member States, nuclear industry representatives and technical experts (in particular, those involved in nuclear non-proliferation matters), with a view to exploring jointly the strategic issues faced by the IAEA and to discussing the implementation of possible solutions by the safeguards community as a whole.

C. Structure and List of Topics

A preliminary programme will be made available on the symposium web page (see Section M) well in advance of the symposium. The final programme and the Book of Abstracts will be available upon registration at the symposium.

The symposium will consist of approximately eight sessions over five days and will be held in the M Building of the Vienna International Centre. It will begin with an opening plenary session on the first day, continue with parallel topical sessions on days two to four, and conclude with a plenary session on the fifth day.

Opening Plenary Session

This session will include:

- Welcoming addresses;
- A brief review and recap of the 2010 Safeguards Symposium;
- A keynote panel discussion setting out the key issues and objectives of the 2014 Safeguards Symposium; and
- A technical discussion.

Topical Sessions

These will address forward looking safeguards topics (see below) through oral presentations, poster presentations, and discussions.

Session 1: Concepts and Approaches

This session will cover the following topics:

- Strategic planning
- Keeping abreast and making use of scientific and technological innovations
- Further evolution of safeguards implementation
- Developing approaches to fully utilize State/regional authority data
- Further expanding implementation and development support

Session 2: Cooperation with States

This session will cover the following topics:

- Strengthening State and regional systems of accounting and control
- Enhancing IAEA–State cooperation
- Building synergies between safety, security and safeguards regimes

Session 3: Detection of Undeclared Nuclear Material and Activities

This session will cover the following topics:

- Identifying appropriate signatures and indicators
- Increasing the ability to detect undeclared nuclear materials and activities
- Development of instruments and associated techniques to detect the establishment and operation of nuclear fuel cycle activities

Session 4: Safeguards Equipment and Communication

This session will cover the following topics:

- Development and deployment of improved tools for measurements of nuclear material at enrichment and reprocessing plants
- Development and deployment of tools and techniques to enable timely detection of high enriched uranium production in low enriched uranium enrichment facilities
- Development of more sensitive and less intrusive alternatives to existing non-destructive assay (NDA) instruments
- Identification of alternative NDA instruments
- Deployment of secure and authenticated communications for safeguards equipment
- Development of secure and authenticated techniques to enable the use of operator systems

Session 5: Information Technology, Collection, Analysis and Security

This session will cover the following topics:

- Using safeguards information in a fully integrated and secure environment
- Development of software tools for use by State/regional authorities in creating and submitting accountancy reports and additional protocol declarations
- Integration of information sources to detect inconsistencies
- Recovering from an information technology failure

Session 6: Analytical Services

This session will cover the following topics:

- Expanding the use of the Network of Analytical Laboratories
- Development of elemental and isotopic signatures of fuel cycle activities and their application to environmental sampling and nuclear material analysis
- Development of techniques, methods and equipment to detect signatures of nuclear activities in environmental samples
- Improved capabilities to characterize nuclear material and determine its origin

Session 7: Safeguarding Future Nuclear Fuel Cycles

This session will cover the following topics:

- Safeguarding advanced nuclear facilities and innovative fuel cycles
- Encouraging proliferation resistance and safeguards by design
- Taking on further nuclear verification missions

Session 8: Training

This session will cover the following topics:

- Developing and maintaining the expertise of safeguards professionals
- Development of training to reflect new facilities and technologies
- Deployment of new training tools using advanced methods such as virtual reality, immersive learning and web-based training

Closing Plenary Session

To conclude the symposium, the Chairperson and the Chairpersons of the individual sessions will participate in a panel discussion on how strategy, implementation and people have been linked throughout the symposium. Future priorities will be suggested. Closing remarks will also be presented.

D. Contributed Papers and Interactive Presentations

Concise papers on issues falling within the topics outlined in Section C above may be submitted as contributions to the symposium. All papers, other than invited papers, must present original work and should not have been published elsewhere.

D.1 Submission of abstracts

Persons who wish to present a paper at the symposium — either orally or in the form of a poster/interactive presentation — must submit first an abstract of not more than 300 words. The

abstract should give enough information on the contents of the proposed paper to enable the Programme Committee to evaluate it. Authors should state to which of the topics outlined in Section C their contribution relates. Instructions on how to upload the abstract to the symposium's web browser-based file submission system (IAEA-INDICO) will be available on the symposium web page (see Section M) as of December 2013. The abstracts must be submitted through this system by **31 May 2014**. No other form of submission will be accepted.

In addition, the abstracts should be submitted together with a completed Participation Form (Form A) and Form for Submission of a Paper (Form B) to the competent official authority (see Section E) for subsequent electronic transmission to the IAEA (official.mail@iaea.org), to be received by the IAEA by **31 May 2014**.

D.2 Acceptance of papers for oral or interactive presentation

The abstract will be considered only if the Participation Form (Form A) and Form for Submission of a Paper (Form B) have been received by the above-mentioned deadline and through the established official channels.

A limited number of abstracts will be selected for submission of a full paper and, consequently, for either oral or interactive presentation.

The oral presentation should be delivered during the sessions of the symposium.

An interactive presentation should provide concise information related to the proposed paper and its delivery method can take the form of, but is not limited to, multimedia presentations, demonstrations, simulations and models and videos, together with any hand-out material the author may wish to share.

Authors will be notified by **6 July 2014** as to whether their abstracts have been accepted and, if so, whether the full papers should be delivered as oral or interactive presentations.

Authors will be asked to provide their full length paper (a maximum of 8 pages) by **20 October 2014**. Guidelines and a template for the preparation and submission of full papers will be made available on the symposium web page (see Section M).

The papers that have been accepted by the Programme Committee will be reproduced in unedited form in the Book of Abstracts, which will be distributed to all participants at the time of registration.

The Secretariat 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.

D.3 Proceedings

The proceedings of the symposium will be published by the IAEA and made available on its website as soon as possible after the symposium.

E. Participation

The symposium is being organized by the IAEA in cooperation with the European Safeguards Research and Development Association (ESARDA) and the Institute of Nuclear Materials Management (INMM). Participation is solicited from:

- Government officials or staff who establish policies and programmes in areas related to non-proliferation;
- Officials from national and international organizations, regulatory bodies and technical support organizations with interests in non-proliferation;
- Technical experts and researchers in nuclear non-proliferation technologies;
- Technical experts and researchers in surveillance and measurement technologies;
- Trainers from supplier and operator organizations working in the nuclear industry; and
- Representatives of professional and trade organizations that support the nuclear industry.

All persons wishing to participate in the symposium are requested to **register online in advance** through the symposium web page (see Section M). In addition, they are required to send a completed Participation Form (Form A) and, if applicable, the Form for Submission of a Paper (Form B) and the Grant Application Form (Form C) to their competent national authority (e.g. Ministry of Foreign Affairs or National Atomic Energy Authority), or to one of the organizations invited to participate, for subsequent electronic transmission to the IAEA (official.mail@iaea.org).

A participant will be accepted only if the Participation Form is transmitted through the competent national authority 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 from the IAEA further information approximately three months before the opening of the symposium. This information will also be posted on the symposium web page (see Section M).

F. Expenditures

No registration fee is charged to participants.

The IAEA is generally not in a position to bear the travel and other costs of designated participants in the symposium. The IAEA has, however, limited funds at its disposal to help cover the cost of attendance of selected 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 symposium.

If governments wish to apply for a grant on behalf of one of their specialists, they should address specific requests to the IAEA to this effect. Governments should ensure that applications for grants are:

1. Submitted by **31 May 2014**;
2. Accompanied by a completed and signed Grant Application Form (Form C); and

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**.

G. Working Language

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

H. Symposium Venue and Accommodation

The symposium will be held at the IAEA's Headquarters in Vienna, Austria. Detailed information on accommodation and other relevant matters will be sent directly to all designated participants approximately three months before the opening of the symposium. This information will also be made available on the symposium web page (see Section M) as soon as possible.

I. Exhibition

Space will be available for exhibitors' displays and exhibits during the symposium. Interested parties should contact the Scientific Secretariat by email (safeguards2014@iaea.org) before **15 March 2014**.

J. 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 four weeks before they travel to Austria. Since Austria is a Schengen State, persons requiring a visa will have to apply for a Schengen visa. In States where Austria has no diplomatic mission, visas can be obtained from the consular authority of a Schengen Partner State representing Austria in the country in question.

K. Key Deadlines

Submission of Form for Submission of a Paper (Form B) and abstract:	31 May 2014
Submission of Grant Application Form (Form C):	31 May 2014
Notification of acceptance of papers:	6 July 2014
Submission of accepted full paper (8 pages max.):	20 October 2014

L. Symposium Secretariat

General contact details of the Symposium Secretariat:

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

M. Symposium Web Page

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

<http://www-pub.iaea.org/iaeameetings/46090/Symposium-on-International-Safeguards>