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IAEA

International Atomic Energy Agency

International Conference on the
Challenges Faced by
Technical and Scientific Support Organizations in
Enhancing Nuclear Safety and Security:
Ensuring Effective and Sustainable Expertise

Brussels, Belgium
15–18 October 2018

Organized by the
International Atomic Energy Agency (IAEA)
Hosted by the
Government of Belgium
through
Bel V

Announcement and Call for Papers

A. Background

The International Conference on the Challenges Faced by Technical and Scientific Support Organizations in Enhancing Nuclear Safety and Security: Ensuring Effective and Sustainable Expertise to be held in Brussels, Belgium, from 15 to 18 October 2018 will continue the tradition established by the three preceding conferences on this subject, which were held, respectively, in Beijing, China (2014), in Tokyo, Japan (2010) and in Aix-en-Provence, France (2007). Like these earlier conferences, the forthcoming one will play a vital part in the national and international efforts made to ensure the effectiveness of nuclear and radiation safety and security regulatory systems and will focus, in particular, on prerequisites and ways for maintaining and strengthening the actions of technical and scientific support organizations (TSOs) in supporting the enhancement of nuclear and radiation safety and security worldwide.

It was already recognized that nuclear safety and security are to a great extent scientific in nature and that a regulatory body with responsibilities for nuclear facilities and other licensed activities involving radioactive material needs to have permanent access to supporting expertise. One of the main conclusions of the last conference in 2014 concerned the need to assist Member States especially with the development and strengthening, in an effective and sustainable way, of the scientific and technical capabilities that TSOs can draw upon in order to support regulatory bodies. This fourth conference on TSOs will, in particular, present achievements that address the recommendations from the previous TSO conferences.

This conference is being organized by the International Atomic Energy Agency (IAEA) and will be hosted by the Government of Belgium through Bel V in cooperation/and co-organized by the European Technical Safety Organisations Network (ETSON).

B. Objectives

The conference will highlight the importance of scientific and technical capabilities to support regulatory decision-making for enhanced nuclear and radiation safety and security. While addressing challenges to the development, maintenance and enhancement of such capacities, the conference will:

- Evaluate actions undertaken to address the recommendations from previous TSO conferences;
- Promote understanding of the roles, functions and value of TSOs in enhancing nuclear and radiation safety and security and, in particular, addressing challenges related to embarking, existing or expanding nuclear power programmes, with a particular focus on capacity building;
- Discuss the role and achievements of the Technical and Scientific Support Organization Forum (TSO Forum) and address the key components of a draft IAEA Technical Document (TECDOC) provisionally entitled *Technical and Scientific Support Organizations (TSOs) and Their Services Provided in Support of Regulatory Functions*;

- Present the need for, and benefits of, self-assessment for TSOs to maintain and enhance their technical and scientific capabilities to support regulatory bodies' decision-making process;
- Discuss the significant contribution of the TSOs' safety assessment work to the continuous updating and revision of the IAEA safety standards;
- Address the role of TSOs in enhancing nuclear and radiation safety in applications other than nuclear power;
- Highlight the main methods for supporting the development of scientific and technical expertise, including research and development;
- Facilitate the exchange of experience and good practices in capacity building activities, and in the recipient countries' arrangements for identifying areas in which they require assistance;
- Discuss ways to enhance international cooperation through IAEA safety and security networks, bilateral cooperation, and Nuclear Security Training and Support Centres (NSSCs) or centres of excellence.

C. Format and Topics

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

The conference will consist of an opening plenary session, six topical sessions, and a closing plenary session.

To meet the conference's objectives, the conference will include:

- Presentations by the invited keynote speakers
- Presentations to highlight specific areas within each topical session and stimulate discussion among conference participants
- Posters and interactive presentations that present state-of-the-art information and knowledge in the subject area.

Opening Session

This session will include:

- A recap and review of the 2014 TSO conference, recommendations, actions and significant key outcomes;
- A review of progress in the implementation of the conclusions from all previous TSO conferences;
- An update on the revision of the IAEA Safety Standards Series and IAEA Nuclear Security Series publications.

Session 1: General Role of Technical and Scientific Support Organizations

This session will cover the following topics:

- 1.1 Experiences of regulatory bodies receiving support from TSOs
- 1.2 Experiences of TSOs supporting regulatory bodies

Session 2: Technical and Scientific Challenges Faced by Technical and Scientific Support Organizations

This session will cover the following topics:

2.1 Nuclear safety assessment:

- New-builds, small and medium sized or modular reactors
- Long term operation (ageing, life management, safety upgrades, design life extension)
- Decommissioning and dismantling
- Current challenges in nuclear safety related research and development (R&D), including severe accident related research
- The use of research for developing regulations
- Challenges met by embarking countries

2.2 Radiation safety:

- Advanced techniques and associated challenges in medical and industrial applications
- Shielding design assessment in medical and industrial applications
- Quality management systems for radiation measurements, calibration and monitoring
- Environmental monitoring
- Current challenges in radiation safety related R&D

2.3 Waste management safety:

- Long term and interim storage and final disposal

2.4 International cooperation among TSOs:

- Developing codes and simulation tools
- Joint assessment
- The OECD/NEA's Multinational Design Evaluation Programme
- Interaction between recipient country TSOs and vendor country TSOs

- Interaction through the Nuclear Energy Agency of the Organisation for Economic Co-operation and Development (OECD/NEA) and IAEA safety and security networks

Session 3: Role of Technical and Scientific Support Organizations in Emergency Preparedness and Response

This session will cover the following topics:

- 3.1 Challenges faced by the TSOs when providing support in preparedness for and response to nuclear and radiological emergencies
- 3.2 Challenges in the development of assessment tools for emergency preparedness and response (EPR) and lessons learned from their practical use while testing them, conducting exercises or using them in a real emergency
- 3.3 Demonstration of existing assessment tools
- 3.4 International cooperation and assistance in EPR

Session 4: Other Challenges Faced by Technical and Scientific Support Organizations

This session will cover the following topics:

- 4.1 Conflicts of interest
- 4.2 Civil society and public communication
- 4.3 Synergies between safety and security (including interaction between TSOs and NSSCs)

Session 5: Key Components Needed to Develop and Maintain Technical Expertise

This session will cover the following topics:

- 5.1 Education, training and tutoring
- 5.2 Knowledge management
- 5.2 Human resources

Session 6: Initiatives to Develop and Maintain Technical and Scientific Capabilities

This session will cover the following topics:

- 6.1 Examples of implementation of a national strategic policy
- 6.2 IAEA peer review and advisory services such as Integrated Nuclear Infrastructure Review (INIR) and Integrated Regulatory Review Service (IRRS) missions
- 6.3 TSO Forum-developed case studies and self-assessment methodologies
- 6.4 School of leadership

6.5 Networking

Closing Session

The closing session will include short presentations followed by a panel discussion during which the Chairperson of the conference and the session chairs will present summaries and highlight key issues related to ensuring effective and sustainable expertise.

D. Contributed Papers and Interactive Presentations

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

(a) Submission of abstracts

Anyone wishing to present a paper at the conference is requested to 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 conference's web browser-based file submission system (IAEA-INDICO) will be available on the conference web page (see Section M) as of **1 January 2018**. The abstract **must** be submitted through this system by **17 March 2018**. No other form of submission will be accepted. The abstracts should also 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 **17 March 2018**. In addition, the abstracts must be sent electronically to: TSO-Conference-2018.Contact-Point@iaea.org. Introductory and general matters should not be included.

(b) 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 conference.

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 handout material the author may wish to share.

Authors will be notified by **27 April 2018** 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 draft paper (a maximum of four pages) by **29 June 2018**. Guidelines and a template for the preparation and submission of full papers will be made available on the conference web page.

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

The Secretariat reserves the right to exclude papers that do not comply with its quality standards or that do not apply to one of the topics outlined in Section C above.

(c) Proceedings

The proceedings of the conference will be published by the IAEA and made available on the IAEA website soon after the conference.

E. Participation and Registration

The conference is directed at a broad range of experts in the areas of nuclear safety and security, and aims to bring together the world's senior representatives from TSOs, regulatory bodies, industry/operators, research organizations and other relevant stakeholders.

All persons wishing to participate in the conference are requested to send a completed Participation Form (Form A) 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 conference. This information will also be posted on the conference web page (see Section M).

Persons wishing to participate in the conference may also pre-register online in advance through the conference web page (see Section M). Please note that in 2018 it will become possible to manage the entire designation process electronically, when the new InTouch+ facility (<https://intouchplus.iaea.org>) currently used for the IAEA's technical cooperation events will also become available for regular programme meetings. Using InTouch+, prospective participants will be able to apply for meetings and submit all required documents online. National authorities will be able to use InTouch+ to review and approve these applications. Interested parties that would like to use this new facility should write to InTouchPlus.Contact-Point@iaea.org.

F. Expenditures and Grants

Participants will not be charged any registration fee.

The IAEA is generally not in a position to bear the travel and other costs of designated participants in the conference. The IAEA has, however, limited funds at its disposal to help cover the cost of attendance of selected specialists from Member States eligible to receive technical assistance under the IAEA's technical cooperation programme. 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 specialists, they should address specific requests to the IAEA to this effect. Governments should ensure that applications for grants are:

1. Submitted by **17 March 2018**;
2. Accompanied by a completed and signed Grant Application Form (Form C);
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 conference will be English. All communications and papers must be sent to the IAEA in English.

H. Conference Venue and Accommodation

The conference will be held at:

[The Hotel, Brussels](#)

Boulevard de Waterloo 38, 1000 Brussels, Belgium

Detailed information on accommodation and other relevant matters will be sent directly to all designated participants approximately three months before the opening of the conference. This information will also be made available on the conference web page (see Section M) as soon as possible.

I. Exhibition

A limited amount of space will be available for commercial vendors' displays/exhibits during the conference. Further information will be posted in due course on the conference web page (see Section M).

J. Visas

Designated participants who require a visa to enter Belgium should submit the necessary application to the nearest diplomatic or consular representative of Belgium at least four weeks before they travel to Belgium. Since Belgium is a Schengen State, persons requiring a visa will have to apply for a Schengen visa. In States where Belgium has no diplomatic mission, visas can be obtained from the consular authority of a Schengen Partner State representing Belgium in the country in question.

K. Key Deadlines

Submission of Form for Submission of a Paper (Form B) and abstract:	17 March 2018
Submission of Grant Application Form (Form C):	17 March 2018
Notification of acceptance of synopses:	27 April 2018
Submission of accepted draft paper (4 pages max.):	29 June 2018
Submission of accepted final paper (4 pages max.):	14 September 2018

L. Conference Secretariat

General contact details of the Conference Secretariat:

International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA
Tel.: +43 1 2600 0
Fax: +43 1 2600 2007
Email: Official.Mail@iaea.org

Scientific Secretaries of the Conference:

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Section Head

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Department of Nuclear Safety and Security

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Mr Karim Ben Ouaghrem

Safety Officer

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Administration and organization:

Ms Martina Neuhold

Conference Services Section

Division of Conference and Document Services

IAEA-CN-266; EVT1703329

Tel.: +43 1 2600 21314

Email: M.Neuhold@iaea.org

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

M. Conference Web Page

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

<https://www.iaea.org/events/challenges-faced-by-technical-and-scientific-support-organizations-conference-2018>

Participation Form

International Conference on the Challenges Faced by Technical and Scientific Support Organizations in Enhancing Nuclear Safety and Security: Ensuring Effective and Sustainable Expertise

Brussels, Belgium

15–18 October 2018

To be completed by the participant and sent to the competent official authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA, or National Atomic Energy Authority) of his/her country for subsequent transmission to the International Atomic Energy Agency (IAEA), Vienna International Centre, PO Box 100, 1400 Vienna, Austria, either electronically by email to: Official.Mail@iaea.org or by fax to: +43 1 26007 (no hard copies needed).

Participants who are members of an invited organization can submit this form to their organization for subsequent transmission to the IAEA.

Family name: (e.g. Smith)		First name(s): (e.g. John)	Mr/Ms
Institution:			
Full address:			
For urgent communications please indicate:	Tel.:		
	Fax:		
	Email:		
Nationality:	Designating Government or organization:		
Mailing address (if different from address indicated above):			
Do you intend to submit a paper?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
Would you prefer to present your paper as a poster?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
Title:			

Form for Submission of a Paper

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Participants who are members of an invited organization can submit this form to their organization for subsequent transmission to the IAEA.

Deadline for receipt by IAEA through official channels: 17 March 2018

Title of the paper:		
Abstract id (INDICO):		
Family name(s) and first name(s) of all author(s): e.g. Smith, John	Scientific establishment(s) in which the work has been carried out	City/Country
1.		
2.		
3.		
Family name and first name(s) of author presenting the paper: e.g. Smith, John	Mailing address:	
Mr/Ms:		
For urgent communications please indicate	Tel.:	
Email:	Fax:	

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- that the material submitted to the IAEA does not contain any libellous or other unlawful statements and does not contain any materials that violate any personal or proprietary rights of any person or entity.

Date:

Signature of main author:

Grant Application Form

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Deadline for receipt by IAEA through official channels: 17 March 2018

Family name: (e.g. Smith)	First name(s): (e.g. John)	Mr/Ms:
Mailing address:	Tel.:	
	Fax:	
	Email:	
Date of birth (yy/mm/dd):	Nationality:	

1. Education (post-secondary):

Name and place of institution	Field of study	Diploma or Degree	Years attended from	to

2. Recent employment record (Starting with your present post):

Name and place of employer/ organization	Title of your position	Type of work	Years worked from	to

3. Description of work performed over the last three years:

4. Institute's/Member State's programme in field of conference:

Date: **Signature of applicant:** _____

Date: **Name, signature and stamp of Ministry of Foreign Affairs, Permanent Mission to the IAEA or the National Atomic Energy Authority** _____