

IAEA-CN-181
Revision 1*



**International Conference
on
Challenges Faced by
Technical and Scientific Support Organizations (TSOs)
in Enhancing Nuclear Safety and Security**

**25–29 OCTOBER 2010
TOKYO, JAPAN**

Organized by the
International Atomic Energy Agency

Hosted by the
Government of Japan
through the
Japan Nuclear Energy Safety Organization (JNES)

ANNOUNCEMENT AND CALL FOR PAPERS

1. INTRODUCTION

Nuclear power generation as an approach to coping with global warming has become an issue throughout the world, and many countries with operating nuclear power plants are trying to expand their nuclear programmes. In particular, ambitious nuclear programmes are being developed or launched in developing countries with high economic growth rates, such as a number of countries in Asia. This presents new opportunities and challenges in designing and incorporating concepts of nuclear safety, nuclear security and nuclear safeguards at the earliest possible stage of development. In this context, technical support services are one of the main pillars of the safe, secure and peaceful use of nuclear energy.

Nuclear and radiation safety is a fundamental prerequisite. Should a serious nuclear accident occur in a country, it could lead to loss of confidence in the safety of nuclear energy and have a global impact, resulting in worldwide stagnation of nuclear development. This would have a crucial influence on the mitigation of global warming. Therefore, it is essential that high levels of nuclear and radiation safety be applied, maintained and further improved all over the world. It is also essential that effective nuclear regulatory systems ensure independent and efficient regulation of the nuclear industry and other users of nuclear technology, so that governments and society can be assured that nuclear activities are safe and consistent with national/international standards. In this respect, the involvement of all countries and expert organizations as active partners in the Global Nuclear Safety and Security Regime (GNSR) is of the utmost importance.

The expansion of nuclear energy implies an increase in the number of nuclear reactors and other nuclear fuel cycle facilities, as well as in the transport of related material worldwide, and therefore an increase in the amount of nuclear material available. Possible acts of terrorism or malicious acts involving radioactive material are of growing concern to, and have been recognized as a real threat by, the international community. The responsibility for nuclear security rests entirely with individual States, and it is imperative that a country embarking on a nuclear power programme establish sustainable national nuclear security measures to protect civil society from nuclear terrorism.

It is the responsibility of all national governments to address nuclear and radiation safety within their nuclear programmes, as an international mission as well as a mission to their people. Such responsibility should be fulfilled by national governments through appropriate and reliable nuclear safety regulations that are trusted by the public as well as the international community.

Nuclear installations integrate a wide range of scientific and technological disciplines, and nuclear and radiation safety is based on technical, managerial, administrative and organizational provisions. Therefore, safety regulation of these installations requires highly professional expertise in broad areas of nuclear technology.

Technical and scientific support is one of the important provisions for maintaining nuclear security systems in States. For this support, expertise in physical protection and accounting of nuclear and other radioactive material in use, storage and transport, and the associated facilities, is required, as well as experience in the maintenance of systems, equipment and associated software used for effective border monitoring and for radiological threat assessment.

As neutral and official organizations, technical and scientific support organizations (TSOs), whether part of the regulatory body or a separate organization, are gaining increased importance by providing the technical and scientific basis for decisions and activities regarding nuclear and radiation safety. In this respect, the role and quality of the technical and scientific expertise provided by TSOs in the nuclear industry and of regulatory systems are of fundamental importance.

The international programmes, such as those of the IAEA and the OECD/Nuclear Energy Agency, depend on the active participation of TSOs. Because of this important role, technical competence, transparency and the observance of ethical principles are essential. In this respect, interaction and cooperation among TSOs, both in particular purpose frameworks and in regional and international networks, should be fostered.

In 2007, the International Conference on the Challenges Faced by Technical and Scientific Support Organizations in Enhancing Nuclear Safety was held in Aix en Provence, France, with a focus on providing TSOs from different countries and other organizations and experts with an opportunity to discuss and develop a common understanding of the responsibilities, needs and opportunities of TSOs, to explore appropriate approaches to addressing current and expected challenges in nuclear and radiation safety, and to discuss the roles, functions and value of TSOs, sharing their knowledge and experience. This conference brought together senior nuclear safety, radiation safety and security regulators from around the world to discuss how to improve regulatory effectiveness to ensure protection of the public and the environment. During the Aix en Provence conference, senior regulators decided that a forum dedicated to discussing TSOs and the enhancement of nuclear safety was needed. Accordingly, a second International Conference on Challenges Faced by Technical and Scientific Support Organizations in Enhancing Nuclear Safety and Security will be held in Tokyo from 25 to 29 October 2010, with a focus on international cooperative activities and networking among TSOs in enhancing nuclear safety and security, especially in terms of regulation, including capacity building in those countries embarking on nuclear programmes.

This conference will focus on developing a global vision for TSOs and recommendations for the future. It is expected to provide a platform for further promoting and strengthening international nuclear and radiation safety cooperation to enhance the GNSR. It will also address, for the first time, technical and scientific support for nuclear security and will discuss the related challenges and opportunities.

2. OBJECTIVE

The objective of this conference is to develop a common understanding of the responsibilities, needs and opportunities of TSOs, to further promote international cooperation and networking between them for enhancing nuclear and radiation safety regulation, including capacity building in countries with extensive or limited experience in nuclear programmes, and in those countries embarking on nuclear power programmes. The conference will develop appropriate approaches for a global vision for TSOs and elaborate recommendations for the

future of TSOs under the framework of the GNSR. The conference is also expected to raise awareness of the need for technical and scientific support, which is one of the main pillars of a sustainable nuclear security system in a State.

In this context, the conference will:

- Discuss the roles, functions and value of TSOs in enhancing nuclear and radiation safety, including capacity building in those countries launching or expanding their nuclear power programmes;
- Share experience and good practices in planning and implementing cooperative activities for capacity building and in identifying needs for assistance activities from the standpoint of recipient countries;
- Discuss appropriate approaches to enhancing cooperation and effective networking among TSOs, including establishment of a virtual TSO and centres of excellence;
- Provide an overview of the technical and scientific support needed for maintaining a sustainable nuclear security system;
- Discuss possible provisions of nuclear security technical and scientific support and the development of human resources carrying out related functions;
- Foster continued dialogue on the technical, scientific, organizational and legal aspects, at the international level.

3. AUDIENCE

The conference is directed at TSOs, regulators, industry/operators, research organizations and other relevant stakeholders.

4. TOPICS

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

Topical Issue 1: Definition, roles, functions and values that guide TSOs

This session will address:

- IAEA guidance for external expert support on safety issues;
- International activities of TSOs in the context of national roles, missions and mode of operation;
- Commonalities and differences in international activities of TSOs;
- The role of TSOs in view of the rapidly increasing number of ambitious nuclear development plans and the lack of the required safety and security infrastructures.

Topical Issue 2: Cooperative activities among TSOs with regard to nuclear safety capacity building and assistance needed in this area

This session will address:

- Experience in and lessons learned from implementing cooperative activities;

- Existing and planned cooperative activities for capacity building in countries intending to launch or expand nuclear power programmes;
- Expected modes of assistance activities for capacity/infrastructure building;
- Possible and desirable modes of assistance activities by TSOs of ‘nuclear-advanced’ countries;
- Areas where assistance from ‘nuclear-advanced’ countries is needed (donors’ and recipients’ viewpoints);
- Specific technical support required for safety management of nuclear research facilities (e.g. research reactors);
- Plans to establish TSOs.

Topical Issue 3: Emerging need for nuclear security technical and scientific support

This session will address:

- Areas in which nuclear security technical and scientific support is needed;
- Requirements for nuclear security technical and scientific support at licensed facilities and activities, and in the public domain;
- Possible modes of establishing nuclear security technical and scientific support in countries intending to launch or expand nuclear power programmes;
- Experience in providing nuclear security technical and scientific support;
- Development of human resources carrying out technical and scientific functions in the area of nuclear security.

Topical Issue 4: Networking and centres of excellence

This session will address:

- Objectives and expected advantages of TSO networking;
- Experience in establishing and operating global and regional networks;
- Concepts/functions of a virtual TSO (network) and experience in operating such a network;
- Possible and desirable networks among TSOs as an instrument for knowledge management and cooperation for capacity building;
- The roles and key functions of centres of excellence in TSOs;
- Consequences of decreasing R&D budgets of regulatory authorities and nuclear industry, and possible countermeasures.

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 the important issues to be addressed in consideration of the major objectives of the conference.

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);
- Contributed paper(s);
- Open discussion.

The **panel discussion** will address the challenges resulting from the keynote panel 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 TSOs.

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. The contributed papers should be submitted via email to:

M.Heitsch@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 technical session 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 **15 April 2010**.

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 **15 April 2010**.

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.

Authors will be informed by June 2010 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/Meetings2010.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 **15 April 2010** 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, Japan Nuclear Energy Safety Organization (JNES) for company displays/exhibits during the conference. Interested parties should contact the local organizers:

Mr. Yoshio Yamamoto
Office of International Programs
Japan Nuclear Energy Safety Organization (JNES)
3-17-1, Toranomom, Minato-ku
Tokyo 105-0001, Japan
TEL :+81-3-4511-1903
FAX :+81-3-4511-1998
E-mail : yamamoto-yoshio@jnes.go.jp

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 the 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 as 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.

13. VISAS

Officially designated participants who require a visa for Japan should submit the necessary applications to the nearest diplomatic or consular representative of Japan 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 scientific issues should be sent to the Scientific Secretary, and communications on administrative/logistical issues should be sent to the Conference Services Section (see below).

15. CONFERENCE SECRETARIAT

(a) Scientific Issues – Scientific Secretary (IAEA)

Mr Matthias Heitsch

Senior Safety Officer
International Atomic Energy Agency
Telephone No.: (+43) 1-2600-22857
Fax No.: (+43) 1-2600-7
Email: M.Heitsch@iaea.org

Mr Khammar Mrabit

Section Head, Safety and Security Coordination
International Atomic Energy Agency
Telephone No.: (+43) 1-2600- 22722
Fax No.: (+43) 1-2600-7
Email: K.Mrabit@iaea.org

(b) Administrative Issues – Conference Services Section (IAEA)

Ms Dagmar Umgeher

Conference Service Assistant
Telephone No.: (+43) 1-2600-21324
Fax No.: (+43) 1-2600-7
Email: D.Umgeher@iaea.org

International Atomic Energy Agency
IAEA-CN-181
PO Box 100, Vienna International Centre
1400 Vienna, Austria
Telephone No.: (+43) 1-2600
Fax No.: (+43) 1-2600-7
Email: official.mail@iaea.org

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/Meetings2010.asp>

* Change of IAEA contact persons and deadlines.