

TSO Forum Activities and Development

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IAEA
International Atomic Energy Agency





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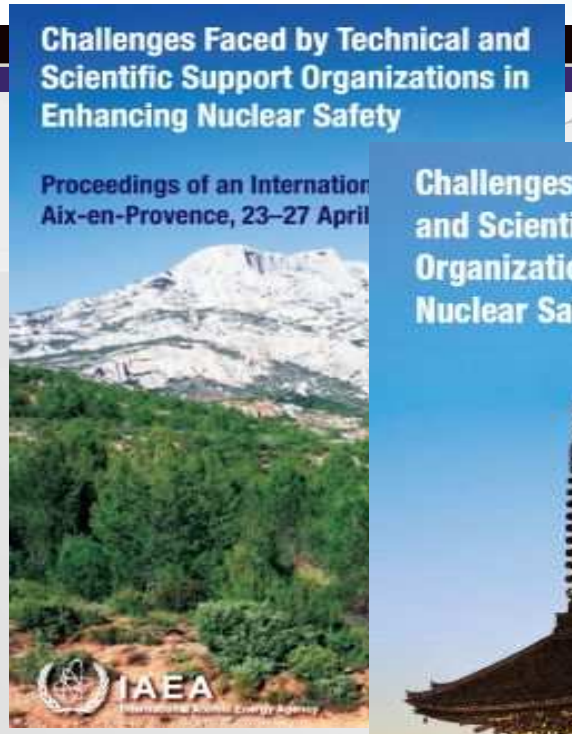
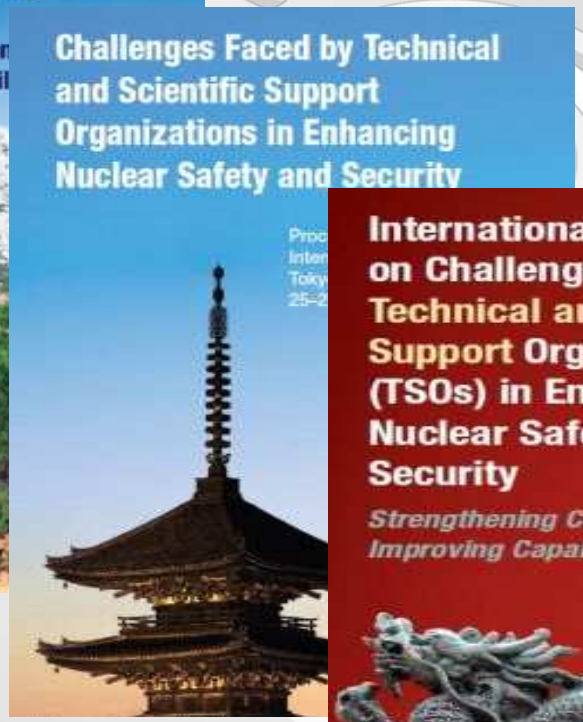
1. Background

The Milestones of TSOF Development

- **2007** 1st TSO Conf.: TSOs from different countries joint effort to develop a common understanding.
- **2010**: 2nd TSO Conf.: Regulatory functions need to be science based. **Creation of TSO Forum (TSOF) as a platform for networking between support organizations**.
- **2011**: Fukushima Daiichi accident: the "need for appropriate technical and scientific support" is one of the area of improvement for strengthening the effectiveness of national regulatory bodies.



2007



2010



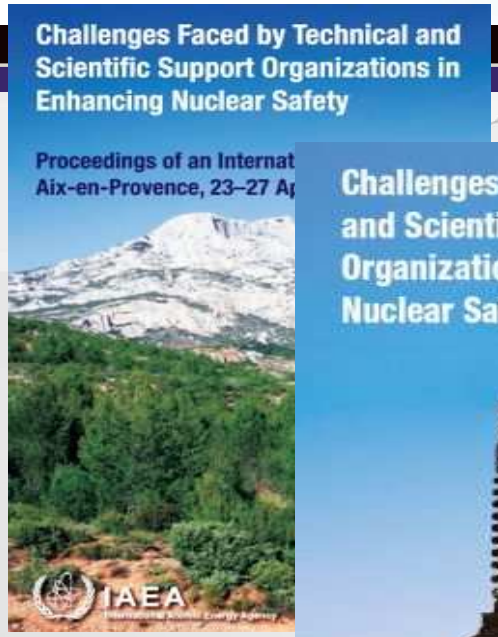
2014

The Milestones of TSOF Development

- **2014**, 3rd TSO Conference.

About 250 participants from 42 Member States and 5 organizations:

- Lessons from Fukushima Daiichi accident,
- Acknowledge the role of TSO on research and development (R&D)
- TSOs to support building nuclear safety and security capacity in embarking countries.



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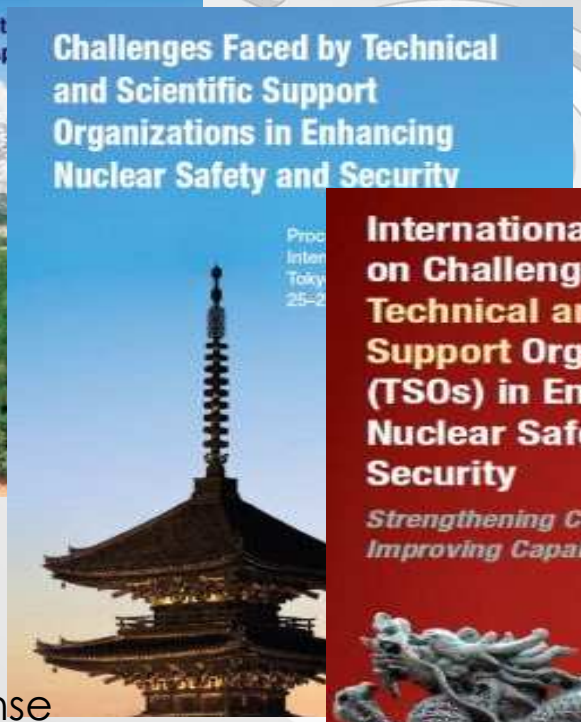


2010

- **2015**, IEM 8 on Strengthening Research and Development Effectiveness and IEM 9 on Assessment and Prognosis in Response to a Nuclear or Radiological Emergency – Highlighted the role of TSOs



2014

TSOF Steering Committee meetings

- **March 2015: 7th TSOF SC meeting** in Vienna – 25 participants from 15 Member States and the European Commission. Adoption of an action plan.
- **October 2015: 8Th TSOF SC meeting** in Vienna - 23 participants from 14 Member States and from the European Commission.
- **March 2016: 9Th TSOF SC meeting** in Vienna - 17 participants from 12 Member States and from the European Commission

  - Exchange of experience and information among TSO representatives, thematic session.
  - Review of progress on planned actions.
  - Discussion of future objectives



TSOF Steering Committee members

Country	Organization
Belgium	Bel V
Canada	CNSC
China	NSC
Czech Republic	CVREZ
EC	JRC
Finland	VTT
France	IRSN
Germany	GRS
Italy	Iter Consult
Italy	ENEA
Japan	NRA
Republic of Korea	KINS
Lithuania	LEI
Poland	NCNR
Russian Federation	SEC-NRS
Slovakia	VUJE
Ukrain	SSTC-NRS
UK	LR
USA	US-NRC

IAEA technical secretariat:
Lingquan Guo
Karim Ben Ouaghrem

2. New TSO Forum initiatives

Development of a TECDOC on TSOs

TECDOC titled "**Technical and Scientific Support Organizations (TSOs) and their Services provided in Support to Regulatory Functions**" in preparation since March 2015.

- First CS 23-25 March (in parallel with a meeting organized by NE Department of a Draft for TSO in support to nuclear power project, to review and expand the existing TECDOC-1078).
- 2nd CS on 25-28 August for Drafting of a TECDOC on Technical and Scientific Support Organizations.
- DPP approved on 1 October 2015.
- 3rd CS on 14-16 October 2015.
- 4th CS on 30 March 2016.
- Last CS end of August 2016 → Publication expected beginning of 2017.

TECDOC on TSOs

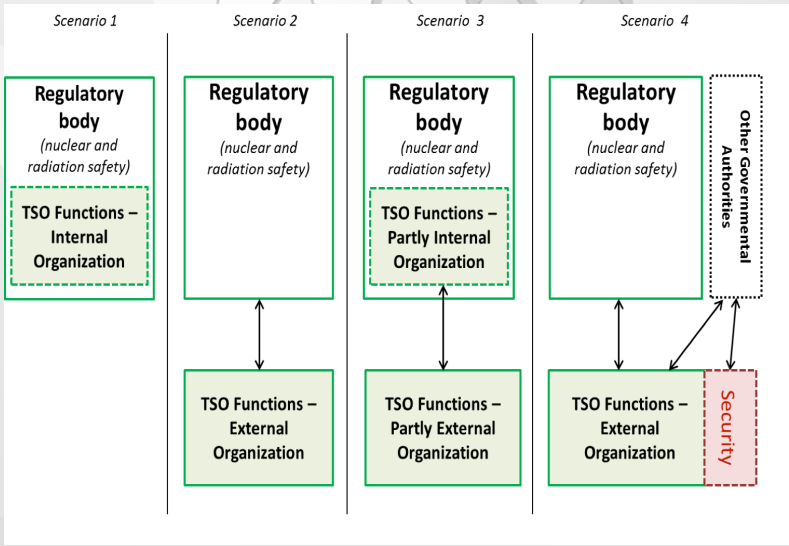
Definition from the TECDOC/GSR Part 1:

"A Technical and Scientific Support Organization (TSO) is an organization designated or otherwise recognized by a regulatory body and/or a government to provide expertise and services, to support nuclear and radiation safety and related scientific and technical issues, to the regulatory body.

In most cases, the activities of a TSO also include support to nuclear security and safeguards."

Common characteristics and core values:
Safety culture, Independency, Transparency,
Conflict of interest, technical topics of expertise, research,
Recognition by the Regulatory Body

But several different models
Internal, external TSO, TSO working for both sides



Develop TSO activities related to Capacity Building

" The Steering Committee supported the idea and decided to develop such services with a specific focus on the TSO with at least two different levels of actions:

- ***The development of TSO experts missions for embarking countries intending to develop their TSO capabilities***
- ***The development of TSO specific modules to be added in existing peer review missions such as IRRS and INIR.***

The Steering Committee also ***suggested to evaluate the need within embarking countries."***

In coordination with RCF, ANSN, FNRBA, ANNuR=> CS June 2016

Technical Meeting 2017

Research and Development to support expertise in safety

"Main TSOs of the TSOF are already involved in regional or international initiatives and/or activities of mapping (NUGENIA at European level, OECD/NEA). In order to emphasize the importance of the research to support a science based expertise, it was then suggested to give more visibility to research activities through the website:

- To provide a better description of the activities related to R&D within the description of each TSO. The Secretariat will provide a template.

- To create a new page entirely dedicated to Research activities to highlight TOSs activities and to promote/announce relevant up-coming events in R&D (workshops, seminars, forum, etc.). In particular, the workshop on In-vessel retention organised by IRSN in June 2016 in Cadarache and the final workshop of NUGENIA_PLUS leaded by E.-K. Puska (VTT) in August 2016 in Helsinki.

The Steering Committee approved the two proposals as a start phase and requested the secretariat ***to evaluate the need for R&D subjects that may interest embarking countries."***

New initiatives listed in the TSOF Action Plan

- Develop a list of technical topics where TSO can bring experts when needed.
- Compile a list of basic TSO data per country.
- Organize a TSO side event (i.e. TSOF Plenary Meeting) during the 2016 IAEA General Conference.
- Include TSOs from Latin America in the Steering Committee
- Prepare: **4th TSO Conference i**n 2018



Proposed TSO Conference:
- **in Brussels, Belgium (to be hosted and co-organized with BEL V)**
- **in October 2018**

Thank you for your attention....

