# IAEA Technical and Scientific Support Organizations Forum (TSOF)



16th Steering committee Meeting in 2021 (virtual)

Exercising regulatory functions in nuclear safety and security requires technical and scientific expertise. Making this expertise available is the purpose of the technical support which has been identified as a key pillar of the framework for nuclear safety and security. The TSOF of the IAEA helps countries to develop, organize and sustain the technical support to the regulatory body.

## Background and goals

The TSOF, established in 2010 by IAEA, provides a platform to encourage open dialogue and sharing of scientific and technical information among TSOs worldwide.

The TSOF collaborates closely with the other GNSSN Regional Networks such as EuCAS and Regulatory Cooperation Forum (RCF).

The TSOF works to:

- Strengthen the role and sustain the technical and scientific capabilities in countries, for all applications of nuclear science and technology;
- Support technical and scientific capabilities in countries expanding or embarking on nuclear power programme to meet growing energy demands;

- Promote coordination and collaboration among the TSOF members to foster scientific and technical capacity building;
- Share safety and security research, development and experiences including lessons learned;
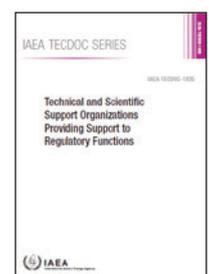- Share feedback on the use of the IAEA safety standards and other publications.

The TSOF Steering Committee oversees the Forum's activities and provides advice on policies and strategies for the Forum. It is headed by a Chairperson, who is appointed by the Forum for a two-year period. The IAEA Secretariat supports the activities of the TSOF and maintains its website https://gnssn.iaea.org/main/tsof.

## TSOF key activities

- Promoting activities that include the preparation of TSO-specific documents (TecDoc)
- Support efforts to develop, enhance and sustain TSO capabilities supporting regulatory functions through the TSO Self Assessment of Capabilities (TOSCA) methodology developed by the IAEA TSO Forum
- Conducting and organizing TSO conferences
- Research and development that involves state-of-the-art technology to enhance safety
- Conducting activities at regional and national level to widen awareness of TSO Forum and its activities

## IAEA TECDOC-1835

This TECDOC is intended to serve as a reference publication on TSO and describes the core characteristics, organizational aspects and types of services provided by a TSO to support regulatory functions and infrastructure in countries.



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## Development of TSO capabilities

The TSO self-assessment methodology (TOSCA) and its corresponding web-based tool will support the assessment of scientific and technical capabilities within the regulatory system, focusing on the core TSO technical areas (based on TECDOC-1835) and will address the following:
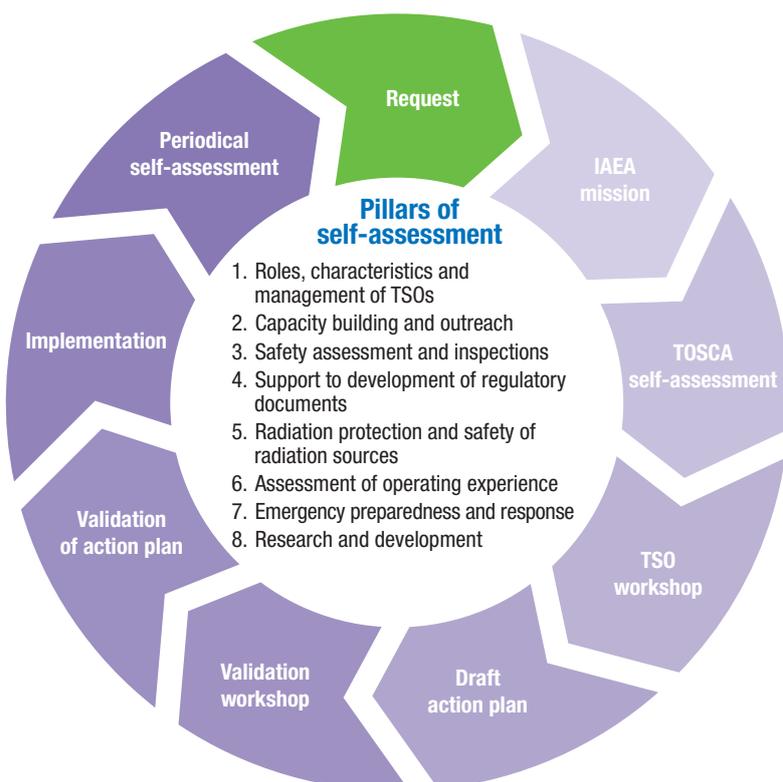
- What are the scientific and technical capabilities of the TSO?
- How are these capabilities developed, managed and sustained?
- How are these capabilities applied in regulatory functions, particularly in reviews and assessments?

## National self-assessment process

This process has nine actions and covers eight technical pillars for self-assessment. It provides guidance on how a country can apply the TOSCA methodology for establishing and maintaining technical and scientific capabilities, both internal and/or external, for supporting regulatory functions.

Through the IAEA TSO National Workshops, an analysis of the results of the self-assessment is carried out by the TSO entities in the country and corresponding action plan is drafted. One such first national workshop was successfully carried out in South Africa in 2019.

Any member of the TSOF and GNSSN may request the TOSCA self-assessment and national workshop through the IAEA.

## TSO conferences

These conferences are organized to highlight initiatives as well as discussing challenges and issues in developing and strengthening scientific and technical capabilities for the regulatory decision-making. These conferences are held regularly every four to five years.

## Safety research and development

The TSOF provides an opportunity to the TSOs worldwide to participate in international collaborative R&D projects to optimize their use of resources, share expertise and facilitate the building of a common understanding at the international level.

## Members and partners (2022)

**Member States:** Belgium, Canada, China, Czech Republic, Finland, France, Germany, Italy, Japan, Lithuania, Pakistan, Poland, Republic of Korea, Russian Federation, Slovakia, Slovenia, South Africa, Türkiye, Ukraine, United Kingdom, United States of America.

**Partner organizations and observers:** European Commission with its Joint Research Centre (JRC) and European Technical Safety Organizations Network (ETSON).

## How to join TSO Forum?

The TSOF membership is open to independent TSOs and organizational units carrying out TSO functions from all IAEA Member States.

**For membership, please contact:** TSOF.Contact-Point@iaea.org.

**Visit:** https://gnssn.iaea.org/main/tsof



### Pillars of self-assessment

1. Roles, characteristics and management of TSOs
2. Capacity building and outreach
3. Safety assessment and inspections
4. Support to development of regulatory documents
5. Radiation protection and safety of radiation sources
6. Assessment of operating experience
7. Emergency preparedness and response
8. Research and development

Request · IAEA mission · TOSCA self-assessment · TSO workshop · Draft action plan · Validation workshop · Validation of action plan · Implementation · Periodical self-assessment