7th term of the Commission on Safety Standards: mid term report

1. INTRODUCTION

The Commission on Safety Standards (CSS) is a standing body of senior government officials holding national responsibilities for establishing standards and other regulatory documents relevant to emergency preparedness and response, nuclear, radiation, transport and waste safety.

The CSS has a special overview role with regard to the Agency's safety standards and provides advice to the Director General on the overall programme on regulatory aspects of safety.

The functions of the CSS are:

- To provide guidance on the approach and strategy for establishing the Agency's safety standards, particularly in order to ensure coherence and consistency between standards;
- To resolve outstanding issues referred to it by the committees involved in the Agency's preparation and review process for safety standards;
- To endorse, in accordance with the Agency's preparation and review process for safety standards, the texts of the Safety Fundamentals and Safety Requirements to be submitted to the Board of Governors for approval and to determine the suitability of Safety Guides to be issued under the authority of the Director General;
- To provide general advice and guidance on safety standards issues, relevant regulatory issues and the Agency's safety standards activities and related programmes, including those for promoting the worldwide application of the standards.

The CSS was established in 1996 and is now in its 7th term, which covers the period 2020–2023. This report summarizes the main outputs of the CSS from the first half of this 7th term.

2. CSS MEMBERSHIP AND MEETINGS

Ms Rumina Velshi was appointed as the new Chair of the CSS for its 7th term. New members of the CSS since the start of the 7th terms are as follows:

- Australia: Ms G Hirth
- Belarus: Ms Olga Lugovskaya
- Brazil: Mr R. F. Gutterres
- Canada: Ms R. Velshi
- Finland: Ms K. Alm-Lytz
- Israel: Mr F. Gov
- Korea: Mr J. Lee
- Morocco: Mr K. Mrabit
- Pakistan: Mr F. Mansoor
- Sweden: Ms N. Cromnier
- Switzerland: Mr M. Kenzelmann.
- Turkey: Mr S. Alten
- UK: Mr S. Vinton.
- USA: Mr D. Roberts

In addition, Ms B. Batandjieva-Metcalf is a new observer from UNSCEAR.

In the first half of its 7th term, the CSS has held four meetings, as listed below.

— CSS 47: 4 June 2020

— CSS 48: 17 and 19 November 2020

— CSS 49: 7 and 8 April 2021

— CSS 50: 16–18 November 2021

Due to the Covid-19 pandemic, the first three of these meetings were virtual (remote participation only). The fourth meeting was in person but with the opportunity for remote participation.

3. SUMMARY OF KEY OUTCOMES

3.1. CSS recommendations for the 7th term

Eight recommendations for the 7th term of the CSS were discussed at CSS 47 and 48, and agreed as follows:

- Recommendation 1 is for the Secretariat to develop and implement an action plan that will aim to both clear the backlog of endorsed drafts waiting to be published and find sustainable solution going forward for the publications and their translations.
- Recommendation 2 is to identify users' needs, collect feedback in a systematic manner and perform gap analyses.
- Recommendation 3 is to develop publications on how to address the safety security interfaces.
- Recommendation 4 is to develop publications on the application of safety standards to emerging and innovative technologies.
- Recommendation 5 is to continue to promote the revision of safety standards by amendment and by batch (and to adjust the process as necessary) and to develop guidance on the application of the graded approach concept.
- Recommendation 6 is to continue developing supporting publications, such as Safety Reports, Technical reports, EPR manuals, TECDOCs or similar informational publications.
- Recommendation 7 is to promote the use of NSS-OUI.
- Recommendation 8 is to further strengthen the Document Preparation Profiles (DPPs) for a new publication or the revision of existing publications. Robust feedback analyses, gap analyses and analyses of existing challenges should be systematically included, as well as an identification of the expected outcomes of the proposed new publication or revision. The in-depth review of the proposed DPP with input from the Safety Standards Committees is crucial for ensuring the quality and justification of the final DPP submitted to the CSS.

These recommendations have been translated into actions in the CSS working plan (see 3.4).

3.2. Draft Safety Standards and DPPs endorsed and approved by the CSS during the first half of the 7th term

The CSS endorsed a total of 19 safety standards during the first half of the 7th term. To date, six of these have also been through the CSS silent approval for publication. In addition, a total of eight DPPs were approved. The individual drafts and DPPs are listed in Annex I.

3.3. Creation of the CSS Strategic Planning Working Group and terms of reference

At CSS 49, the CSS supported the creation of a Strategic Planning Working Group: terms of reference for this Group were established, and subsequently refined and approved at CSS 50.

The CSS Strategic Planning Working Group met in April and October 2021 to discuss the CSS working plan (see 3.4), the medium term plan for the review and revision of the safety standards, and the initiation of the establishment of a long term plan.

3.4. CSS working plan for the 7th term of the CSS

The Working Plan for the 7th term of the CSS (formerly named CSS Strategic Plan) was discussed at CSS 49 and formally adopted at CSS 50. Progress on the implementation of each of the actions in the CSS Working Plan is reported in Annex II.

3.5. Draft medium term plan for the review and revision of the safety standards

A draft medium term plan was discussed at CSS 49, and also by the Strategic Planing Working Group (see 3.3). The plan was revised based on these inputs, and the new draft plan was discussed and further refined at CSS 50.

3.6. Improvement of the publication process

The delays in the publication of safety standards after they had been endorsed by the CSS were noted at CSS 47, 48 and 49, and the CSS requested that an Action Plan be developed to address this issue (see 3.3, Recommendation 1). At CSS 50, the Secretariat reported on the actions taken to address the current backlog of publications and to avoid delays in the publication process in future (see Annex II, Action 4.1).

3.7. Covid-19 feedback

At CSS 47, 48 and 49, CSS members provided feedback on their national experience from maintaining nuclear safety and nuclear security during the Covid-19 pandemic. At CSS 48, considering that the pandemic is not over, the CSS recommended that the Secretariat should continue with a phased approach to considering the impact on the safety standards and keep the focus on the collection of information.

At CSS 50, it was agreed that feedback from the Covid-19 pandemic will no longer be a standing agenda item for future meetings. Instead, such feedback will be submitted to the Secretariat using NSS-OUI, and will be considered when individual safety standards are reviewed and revised in future.

3.8. UNSCEAR-ICRP-IAEA cooperation

Bilateral meetings were organized in June 2021 and a trilateral meeting in November 2021. During the meetings with both organizations, it was confirmed that the existing arrangements are working very well, with active participation from all involved. This is part of a broader framework, the IACRS

incolving several other organization that ensures scientific consensus at the highest level that is also demonstrated by the cosponsorship of the IAEA safety standards.

3.9. Other policy discussions

At CSS 50, the CSS noted the importance of discussing topical policy issues relevant to the future development of the safety standards. As a result, time will be specifically allocated in the agenda of future CSS meetings for such policy issues and possible implications for the long term plan for the safety standards. The need for the CSS to discuss these issues was included in the CSS Working Plan.

Annex I of CSS 7th term: mid term report

Draft Safety Guides endorsed by the CSS

Drafts marked with * have also been subject to the CSS silent approval for publication

Number	Title
DS468*	Remediation Strategy and Process for Areas Affected by Past Activities or Events
DS507*	Seismic Hazards in Site Evaluation for Nuclear Installations
DS490*	Seismic Design of Nuclear Installations
DS498*	Design of Nuclear Installations Against External Events Excluding Earthquakes
DS477*	Leadership, Management and Culture for Safety in Radioactive Waste Management
DS493	Format and Content of the Package Design Safety Report for the Transport of Radioactive Material
DS510A	Safety Assessment for Research Reactors and Preparation of the Safety Analysis Report
DS510B	Safety in the Utilization and Modification of Research Reactors
DS514*	Equipment Qualification for Nuclear Installations.
DS497A	Operational Limits and Conditions for Nuclear Power Plants
DS497B	Modifications to Nuclear Power Plants
DS497C	The Operating Organization for Nuclear Power Plants
DS497D	Core Management and Fuel Handling for Nuclear Power Plants
DS497E	Maintenance, Testing, Surveillance and Inspection in Nuclear Power Plants
DS497F	Recruitment, Qualification and Training of Personnel for Nuclear Power Plants
DS497G	Conduct of Operations at Nuclear Power Plants
DS516	Criticality Safety in the Handling of Fissile Material
DS503	Protection against Internal and External Hazards in the Operation of Nuclear Power Plants
DS515	Compliance Assurance for the Safe Transport of Radioactive Material.

DPPs approved by the CSS

Number	Title
DS521	Radiation Protection Programmes for the Transport of Radioactive Material
DS525	Chemistry Programme for Water Cooled Nuclear Power Plants
DS526	National Policies and Strategies for the Safety of Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation
DS527	Criteria for Use in Preparedness and Response for a Nuclear or Radiological Emergency
DS528	Development and Application of Level 2 Probabilistic Safety Assessment for Nuclear Power Plants
DS529	Investigation of Site Characteristics and Evaluation of Radiation Risks to the Public and the Environment in Site Evaluation for Nuclear Installations
DS530	The Management System for the Safe Transport of Radioactive Material
DS531	Site Geotechnical Aspects for Design Basis of Nuclear Installations

Annex II of CSS 7th term: mid term report

Progress with the CSS Working Plan for the 7th term

Number	Action	Progress
1.1.	Organize discussion at the CSS meeting on important topical policy issues to provide guidance on the future development and direction of the safety standards.	A folder was created to offer the option for CSS members to initiate such policy issues discussion and upload contribution papers.
1.2.	Conduct a review on the existing set of safety guides to identify where improvements or additions are necessary by 31 December 2022. This will include considerations for SMRs, TNPPS and novel technologies, possible implications of Covid-19 and other situations with similar safety related challenges as well as identified needs for additional guidance, i.e. essentially the contents of the medium term plan.	A draft medium-term plan was prepared and submitted to the CSS and the Safety Standards Committees. It will be regularly updated and include further considerations, including on implications of the Covid-19 pandemics and applicability of the safety standards to SMRs, TNPPS and novel technologies.
1.3.	When preparing the update of the medium term plan with the holistic approach, determine which safety standards can be revised by amendments and by batch.	Still to be considered in the second half of the term.
1.4.	Determine a roadmap for publications on how to address the safety security interfaces by December 2024.	Work has begun on a joint publication at a guide level for which a draft DPP was developed for submission to the Committees. A publication on the safety and security interface is being developed in parallel by INSAG and AdSec. These initial documents will assist in identifying additional joint publications. In parallel, a combined safety and security glossary is under development.
1.5.	Improve the preparation of Document Preparation Profiles (DPPs) for new publications or the revision of existing publications to better document the expected content of the publications. The approval of the DPP, with consensus on the expected content of the publication could result in a faster preparation of the first draft with an expected reduction of the step 5 duration on average measured by trend analysis.	On-going work for each DPP.

Number	Action	Progress
4.1.	Develop and implement an action plan to clear the backlog of endorsed drafts waiting to be published and find a sustainable solution going forward for the publications by 30 October 2021. This will be measured by continuing to update the trend curve of the timing from CSS endorsement to publication.	An action plan has been implemented by the Secretariat (see CSS 50). This includes: a significant increase in editing staff resources; development of parallel publication streams to prioritize publications; and the use of a pre-print repository. The aim is now to assign an editor to a draft safety standard within three months of it being approved by the Publications Committee and endorsed by the CSS. Further process improvements will continue.
4.2.	Find a sustainable solution going forward for the translation of the safety standards by 30 October 2021. This will be measured by continuing updating the trend curve of the translation issued per year. Several initiatives are taken with extra-budgetary contributions.	Good progress is being made for ensuring the translation of safety standards, with a prioritization mechanism, in Arabic, Chinese, French, Russianh and Spanish. This is supported by efforts towards the translation of the Safety Glossary
4.3.	Develop publications on the application of safety standards to SMR technologies by 31 December 2022.	NS are currently developing publications in collaboration with NE. A draft safety report is being finalized and will be discussed at a dedicated meeting of the Chairs early in 2022. This will also be disussed with the Safety Standards Committees and the CSS early in 2022.
4.4.	Review existing guidance and recommendations on the graded approach concept and identify areas where additional guidance is required, or where a gap exists, by 31 December 2022.	This is currently under consideration in the draft safety guide DS513 being prepared.

4.5.	Continue to develop supporting publications, such as Safety Reports, Technical reports, EPR Manuals, TECDOCs or similar informational publications.	This is an ongoing effort based on the needs expressed by MS. Some recent examples: - TECDOC 1985: Assessment of Prospective Cancer Risks from Occupational Exposure to Ionizing Radiation - TECDOC 1938: Methodology for a Safety Case of a Dual Purpose Cask for Storage and Transport of Spent Fuel, Report of a WASSC/TRANSSC Joint Working Group - TECDOC 1937: Probabilistic Safety Assessment for Seismic Events - Safety Report No. 104 Radiation Protection in Veterinary Medicine - Safety Report No. 102 on Safety Analysis and Licensing Documentation for Nuclear Fuel Cycle Facilities - EPR-Protection Strategy: Considerations in the Development of a Protection Strategy for a Nuclear or Radiological Emergency - EPR-Combined Emergencies: Preparedness and Response for a Nuclear or Radiological Emergency Combined with Other Incidents or Emergencies - Safety Report on Attribution of radiation health effects and inference of radiation risks: Considerations for application of the IAEA safety standards (in preparation) - Considerations for application of the IAEA safety standards

4.6.	Increase the amount of feedback on existing publications received through the NSS-OUI comment interface and stored for future revisions. This will be measured by trend analysis.	TRANSSC are planning such a project for SSR-6 (Rev. 1). EPReSC is also considering using NSS-OUI to comment on EPR Series publications and to support the preparation of a Safety Guide on protection strategy. A new interface is being developed with MTCD to facilitate access to the feedback collection database.
4.7.	Organize internal and external webinars on the use of NSS-OUI. Two webinars per year.	A training session on using NSS-OUI was provided for the in-person attendees at CSS 50. Systematic training of new Technical Officers in NS. NSS-OUI dedicated session at the training course on safety at the Tokai University in Japan.