IAEA
International Atomic Energy Agency
Atoms for Peace and Development

Commission on Safety Standards
55th Meeting
28 to 30 May 2024

Agenda Item 3.4

End of Term Report by Transport Safety Standards Committee (TRANSSC)

D. Pstrak, Chairperson
S. Fayyaz, Scientific Secretary

TRANSSC Meetings in Ninth Term (2021–2023)

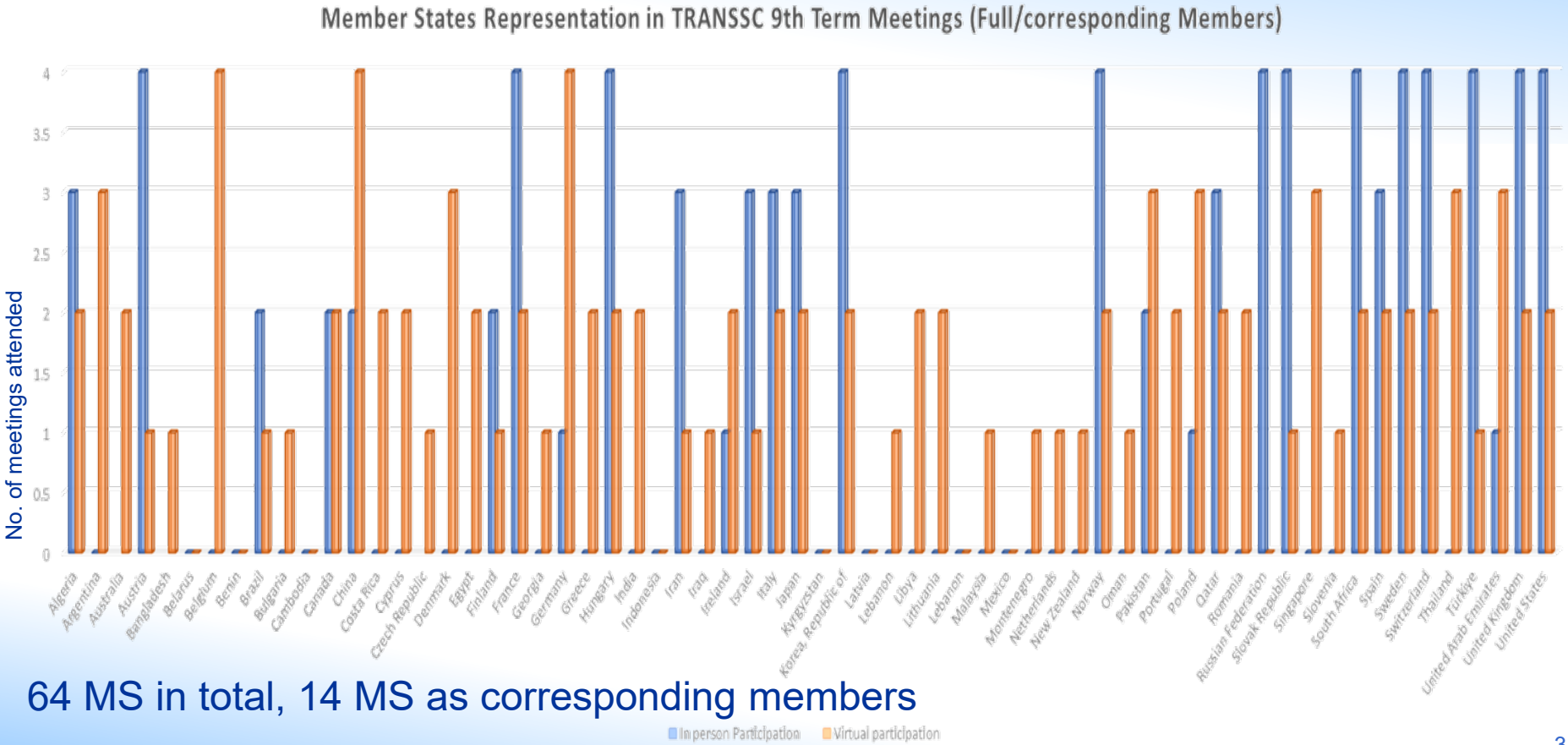
TRANSSC Meetings 2021–2023	Dates
TRANSSC TERM 2021-2023 (Introductory Meeting)	7 June 2021
TRANSSC 42[1]	14-17 June 2021
TRANSSC 43[2]	1-4 November 2021
TRANSSC 44[3]	13-17 June 2022
TRANSSC 45[4]	28 November-2 December 2022
TRANSSC 46[5]	5-9 June 2023
TRANSSC 47[6]	6-10 November 2023

[1, 2] the meetings were held virtually.

[3,4] the meetings were hybrid and a joint session with the Waste Safety Standards Committee (WASSC) was included during TRANSSC-44.

[5, 6] the meetings were held in-person with provision of live streaming.

TRANSSC Members



64 MS in total, 14 MS as corresponding members

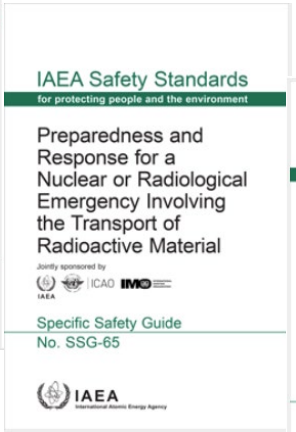
TRANSSC Observers

UN Organizations	NGOs	INDUSTRY
UNECE	EC	ISSPA
IMO	IATA	TIC
ICAO	IFALPA	WNA
ISO	-	WNTI
UPU	-	-

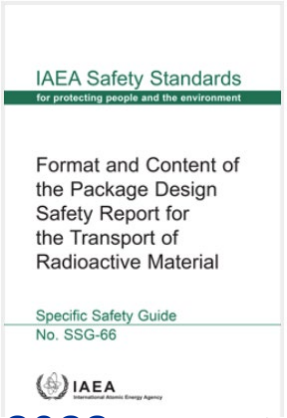
TRANSSC Lead Safety Standards



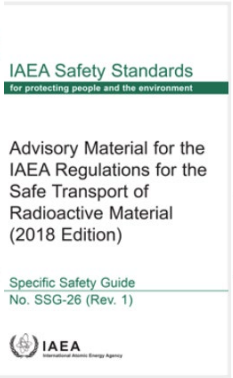
2021



2022



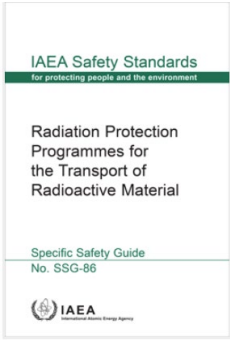
2022



2022



2023



2023

6 Specific Safety Guides published

TRANSSC Lead Safety Standards cont..

Initiated development/revision of new/exiting standards as part of Medium-Term Plan:

1. Regulations for Safe Transport of Radioactive Material (20xx Edition), SSR-6 (Rev. 2)- DS543 (Step-9)
2. Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material (20xx Edition), SSG-26 (Rev. 2)- DS554 (Step-4)
3. Ageing Management and Maintenance of Radioactive Material Transport Package-DS546 (Step-7)
4. Management System for the Safe Transport of Radioactive Material-DS530 (Step-5)

IAEA Safety/Security Standards Reviewed-Lead by Other Committees

Lead Committee	No of documents
NUSSC	10
WASSC	02
RASSC	04
EPReSC	01
NSGC	03

TRANSSC Technical Expert Groups (TTEGs)

TTEG	Chair
Criticality (C)	Mr Andrew Barto, USA
Package Performance and Assessment (PPA)	Mr Frank Koch, Switzerland
Radiation Protection (RP)	Mr Baptiste Louis, France
Operational Matters (OM)	Mr Keith Dessent, Australia (TRANSSC 42-43) Mr Paul Hinrichsen, South Africa (Acting Chair TRANSSC 44-47)

Formal establishment of TTEGs in the start of the Term to support TRANSSC decision-making process with defined ToRs.

Major Tasks Completed by TTEGs

- Evaluated the 300 proposals and advised TRANSSC to initiate the revision of SSR-6
- Assisted to draft input for Long-Term Plan
- Development of initial draft for Safety Basis Document, Ageing and Maintenance Guide, guidelines on transport of NORM.

Recommended Priorities for 10th Term

- Revision of SSR-6 (Rev.1)
- Revision of SSG-26 (Rev.1) and SSG-33 (Rev.1)
- Publication of Ageing Management and Maintenance of Radioactive Material Transport Package-DS546
- Publication of The Management System for the Safe Transport of Radioactive Material-DS530
- Evaluation of existing standards to address:
  - Transport of SMRs
  - Transportable Nuclear Power Plant
- Denial of Shipment
- Review Process for SSR-6
- Revision of A_1/A_2 Values and publication of a TECDOC
- Research work to analyse the impact on safety of means of transport using new fuel technologies

PART-II

LONG-TERM STRATEGIC PLAN-TRANSSC INPUT

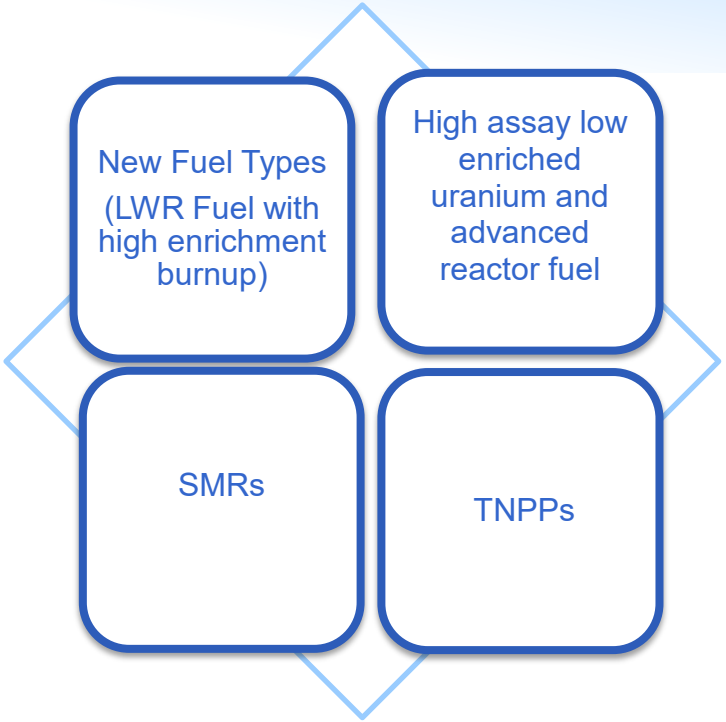
LONG-TERM STRATEGIC PLAN- TRANSSC INPUT

General:

- Urgent need to address the safety/security interface and more harmonised regulatory approach, particularly for international transport.
- Recommendation on rather structured approach to identify future challenges in the transport of radioactive materials, instead of just brainstorming, consideration of research projects etc.

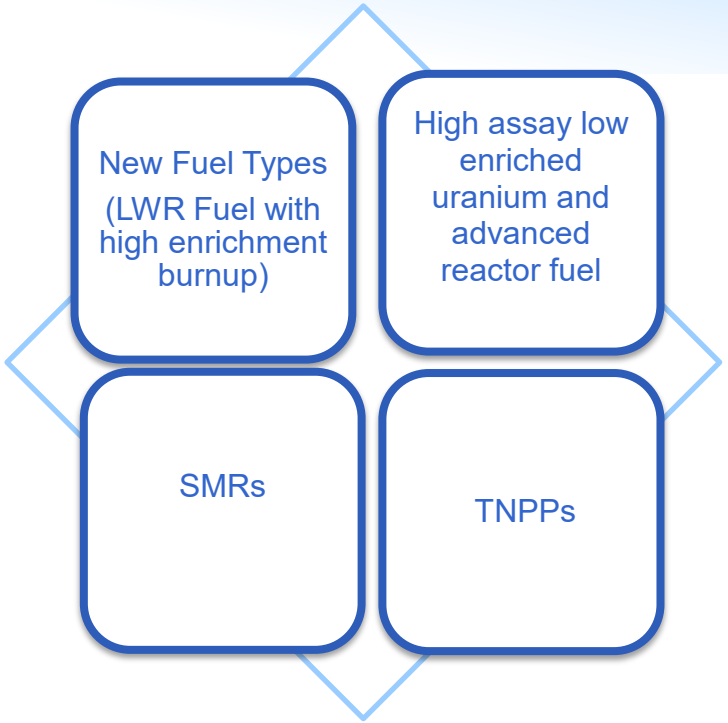
1. ADVANCED NUCLEAR TECHNOLOGIES - CHALLENGES RELATED TO TRANSPORT SAFETY:

- Not covered by the existing set of requirements i.e. SSR-6.
- Transport/mobility of nuclear power plants or reactors is a new concept for TRANSSC.
- “Nuclear propulsion” which was out of discussion due to one of transport safety principles i.e. “prevention of criticality.” However, there are considerations by IMO as an alternative fuel for merchant ships.
- MS have little experience with nuclear propulsion as the current use is primarily related to military applications.



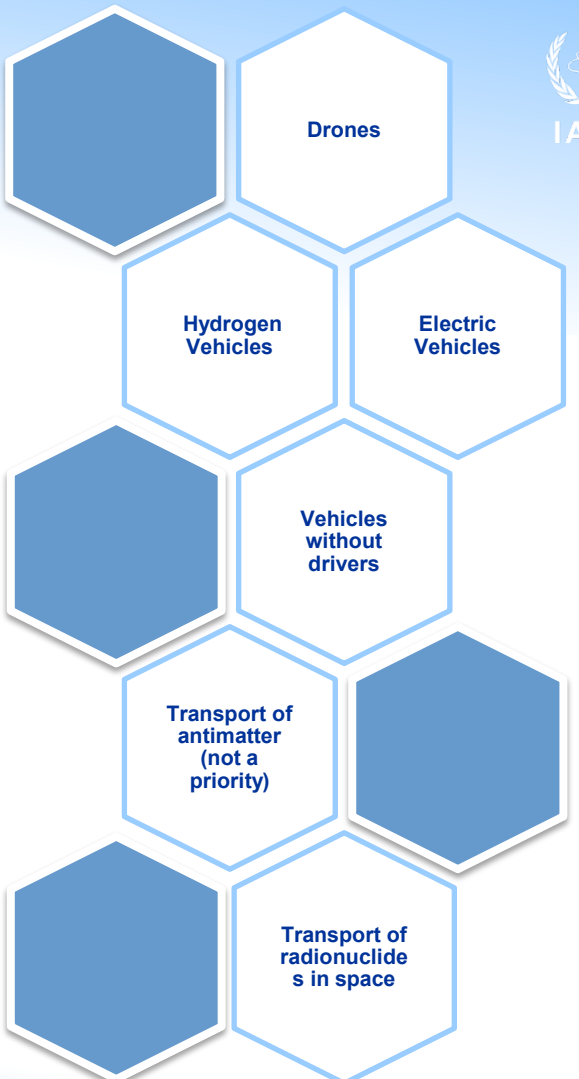
1. ADVANCED NUCLEAR TECHNOLOGIES - CHALLENGES RELATED TO TRANSPORT SAFETY: CONT..

- Which SSC is the lead Review Committee (RC) for TNPP and Nuclear propulsion?
- TRANSSC needs feedback from other RCs to analyse and develop safety standards to ensure safe transport of new fuel types and transport of nuclear power plants.
- Discussion on placing in Medium-Term or Long-Term Plans depends on readiness at MS level particularly the readiness of the nuclear regulator.



2. MEANS OF TRANSPORT - CHALLENGES

- Different technologies in use or are being discussed to drive a means of transport or serve as a means of transport.
- Canada has a pilot project on the use of drones for the transport of radioactive material.
- A survey questionnaire is launched to know the interested Member States to participate in a Coordinated Research Project (CRP) on analyzing the impact of new fuels on requirements established in SSR-6.



2. IT TECHNOLOGIES AND INDUSTRIAL CHALLENGES

- Use of web interface to deal with new A_1/A_2 values or any other paragraphs in SSR-6/ concept of E-Schedules (SSG-33 electronic version)
- AI e.g., modelling, design, manufacturing, ChatGPT interpreting paragraphs, Shipment documents
- Battery fires (EVs)
- Additive Manufacturing (3D Printing)

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Thank you!