

HERCA Side Event

CHALLENGES IN THE PRACTICAL IMPLEMENTATION OF THE INTERNATIONAL RADIATION PROTECTION STANDARDS:

The perspective of the regional networks on Radiological Protection

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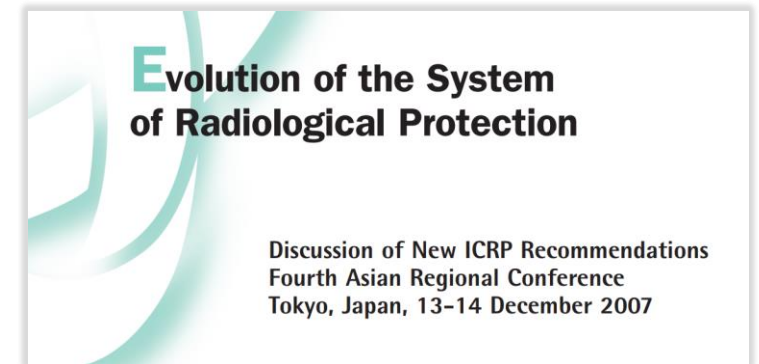
2025 IAEA General Conference
16 September 2025, Conference Room M5, Vienna

Outline

- **NRA's involvement to OECD/NEA activities related to the System of Radiological Protection**
 - Asian Regional Conferences since 2002
 - Expert Group on International Recommendations (EGIR)
- **ICRP 2023 Symposium in Tokyo**
 - **NRA** as one of the cooperating organizations
- **BSS Workshops in Asia and the Pacific region**

Asian Regional Conference on the Evolution of the System of Radiological Protection

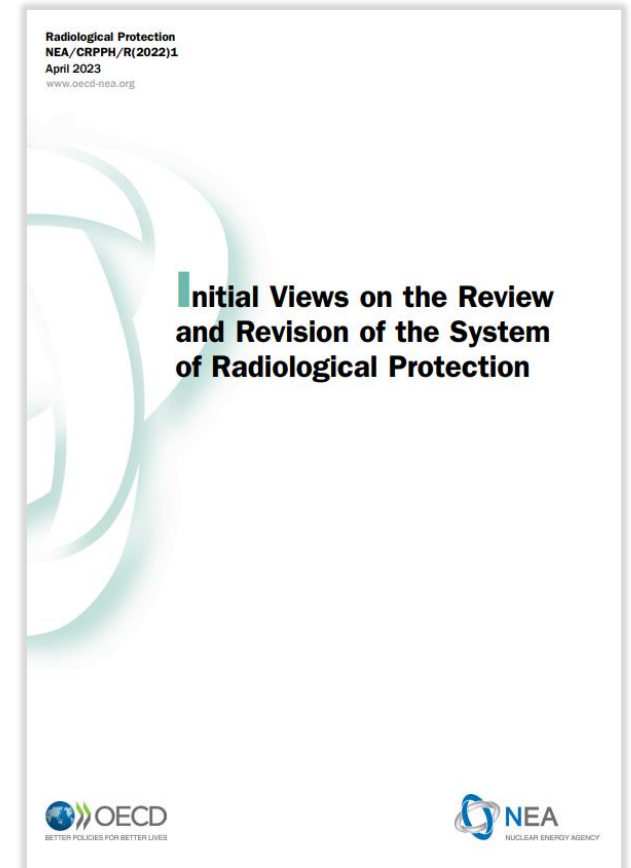
- Organized by the **Committee on Radiological Protection and Public Health (CRPPH)** of the OECD Nuclear Energy Agency
- Series of conferences (2002, 2004, 2006, 2007, 2009, 2012, 2015) in Tokyo
 - The 7th conference co-organized by MEXT, **NRA** and NIRS
 - Overview of Fukushima Daiichi nuclear power plant accident and its consequences
 - Life in an **existing exposure situation**
 - Psychological impact and information sharing
- Development and implementation of the **ICRP 2007 Recommendations** (Pub. 103) and the **International Basic Safety Standards** (GSR Part 3)



(Source) https://www.oecd-nea.org/jcms/pl_27870/seventh-asian-regional-conference-on-the-evolution-of-the-system-of-radiological-protection

CRPPH Expert Group of International Recommendations (EGIR)

- In 2021, EGIR was re-established by the CRPPH to evaluate the ICRP's proposed review of the system of radiological protection and its subsequent publications.
- **Initial Views**
 - ✓ *Current system of radiological protection has contributed substantially to the provision of radiation safety and protection.*
 - ✓ *The process of reviewing and revising the system should be seen as **an effort to enhance it and adapt to changes in the prevailing circumstances** rather than a significant overhaul.*
- Currently as Phase 2, EGIR discusses (1) optimization and stakeholder involvement and (2) primary aim of the system of radiological protection.



(Source) https://www.oecd-nea.org/jcms/pl_81152/initial-views-on-the-review-and-revision-of-the-system-of-radiological-protection

NRA's Review Paper on the EGIR Initial Views

Jpn. J. Health Phys., 59 (2), 48 ~ 62 (2024)

DOI: 10.5453/jhps.59.48

解説

OECD/NEA CRPPH 専門家グループ報告書 「放射線防護体系のレビューと改定に関する初期見解」： 報告書の概要及び最近の関連動向

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OECD/NEA CRPPH Expert Group Report “Initial Views on the Review and Revision of the System of Radiological Protection”: Overview of the Report and Recent Developments

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In December 2021, the International Commission on Radiological Protection (ICRP) called for transparent engagement of stakeholders in the review and revision of the ICRP 2007 General Recommendations by publishing the paper “Keeping the ICRP Recommendations Fit for Purpose” to present the main points at issue. Subsequently, the Expert Group on International Recommendations (EGIR) of the OECD Nuclear Energy Agency (NEA), one of the ICRP’s Special Liaison Organizations (SLOs), issued the report entitled “Initial Views on the Review and Revision of the System of Radiological Protection” in April 2023. The EGIR’s report summarizes the views of radiation protection experts on five priority themes: (1) The system of radiological protection, (2) optimization, (3) environmental protection, (4) radiation detriment and risk, and (5) exposure situations. This review paper provides an overview of the five priority themes extracted by the EGIR and presents a summary of recent international developments towards the next ICRP General Recommendations scheduled for the 2030s.

KEY WORDS: NEA, CRPPH, EGIR, ICRP, General Recommendations, system of radiological protection, optimization, environmental protection, detriment and risk, exposure situations.

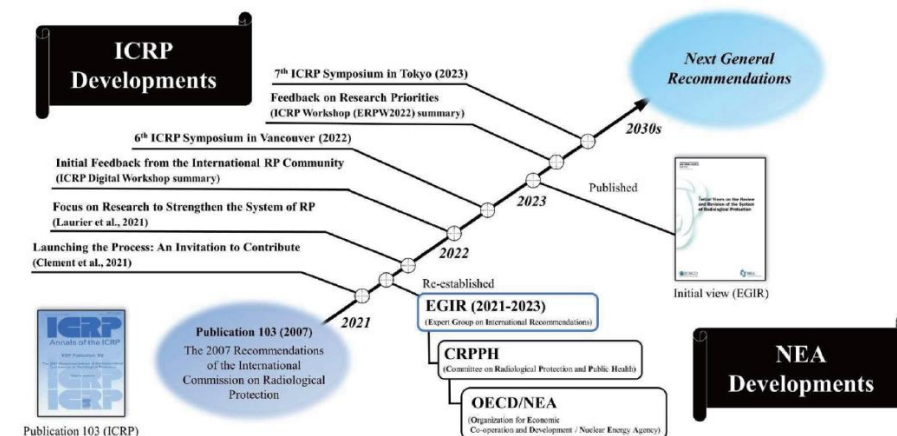


Fig. 1 Overview of ICRP developments for the next General Recommendations and related NEA/CRPPH EGIR activities.

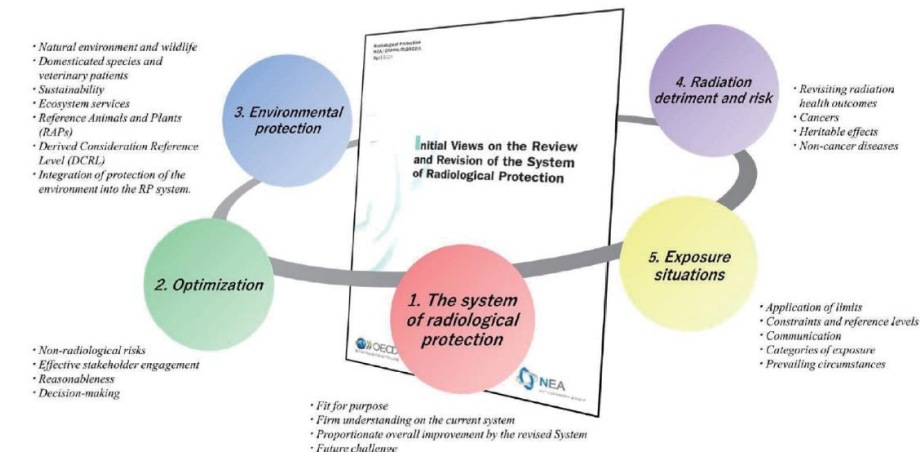


Fig. 2 Five priority themes extracted by NEA/CRPPH EGIR for discussions on the ICRP next General Recommendations.

ICRP 2023 Symposium in Tokyo



ICRP 2023 attracted over 700 delegates from over 50 countries who attended in-person, both **a new record** for an ICRP symposium.

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• **jhps** Japan Health Physics Society



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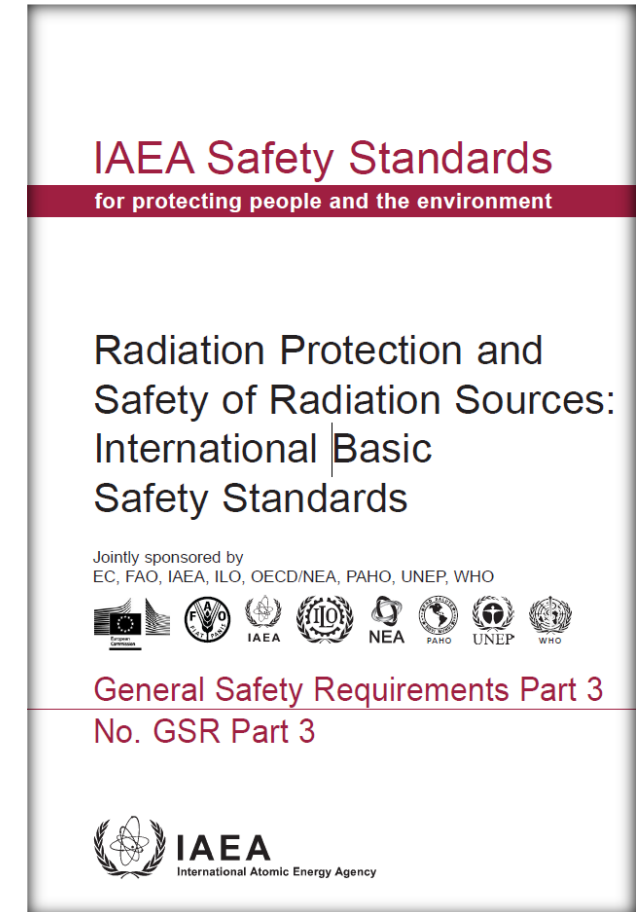
Welcome Remarks from NRA Chairman Yamanaka

- One of the important lessons we learned in the aftermath of the TEPCO's Fukushima Daiichi NPS accident is **“one size doesn't fit all”**. Taking a single, uniform approach is of little help in the real world.
- What is desired is not a prescriptive framework based solely on dose criteria, but **a more flexible and adaptable guide** for addressing real-life problems.
- Development of such a guide requires a solid foundation that is based on the three pillars: **science, ethics and experience**.
- The ICRP is expected to play a crucial role in this regard, and I hope the lessons we learned will be reflected in the discussions on formulating **the next General Recommendations**, leading to further improvement of the System of Radiological Protection.



BSS Workshops in Asia and the Pacific

- **Regional Workshops**
 - 29 August – 2 September 2022, Thailand
 - 14-17 October 2019, China
 - 15-18 April 2019, Singapore
- **National Workshops**
 - 14-18 November 2022, Republic of Korea
 - November 2021, Mongolia
 - 9-11 August 2021, Thailand (virtual)
 - 1-5 September 2019, Saudi Arabia
 - 9-13 December 2018, Bahrain
 - 9-12 April 2018, Oman



(Source) RASSC54 (Nov 2023), <https://www-ns.iaea.org/committees/files/RASSC/2292/R.2.5BSSWorkshopsdocumentRASSC-55.pdf>

Summary of the BSS Regional Workshop in 2022 (Thailand)

- **Key Discussion Topics**

- ✓ Prioritization of evaluation EES
- ✓ Compliance and enforcement
- ✓ Public and worker doses in EES
- ✓ Post-remediation monitoring
- ✓ Managing contaminated scrap metal
- ✓ Oil and gas industry
- ✓ Passive radon measurements in workplaces
- ✓ Radon from building materials
- ✓ Food – Mixed diet sampling
- ✓ Managing radon concentration above 1,000 Bq/m³ in workplaces

- **General Issues**

- Many Member States **do not have legislation** covering EES. In the intern, the dose limits for planned exposure situations are often used as a “fall back” position.
- **Setting and using reference levels** and the optimization process in general are considered difficult and complicated.
- Need for **guidance on the practical application** of justification and optimization.

(Source) H. Pappiniseri, RASSC53, <https://www-ns.iaea.org/committees/files/RASSC/2238/R.4.2RASSC53R4.2Hari.pdf>

RASSC Activities

- **Development of Safety Guides**
 - 5 Safety Standards under development at Step 5
 - DS544 (new), Safety Guide on Radiation Protection and Safety in Existing Exposure Situations.
 - DS545 (update), SSG-8 Radiation Safety of Gamma, Electron and X-irradiation Facilities (2010)
 - DS540 (update), SSG-11 Radiation Safety in Industrial Radiography (2011)
 - DS549 (update), SSG-17 Control of Orphan Sources and other Radioactive Material in the Metal Recycling and Production Industries (2012)
 - DS556 (new), Safety Use of Unsealed Sources. Revision of IAEA Safety Series No. 1 (1973).

(Source) L. Urso, RASSC58 (June 2025)

<https://nucleus.iaea.org/sites/committees/RASSC%20Documents/R.1.8.1%20Status%20of%20RASSC-led%20guidance.pdf>

RASSC 10th Term (2024-2026)

	Key topics
RASSC-56 (Jun 2024)	- Priorities for the 10th term (2024-2026) - Use of ICRP's new dose coefficients for internal exposures including the EC Recommendation (Euratom) 2024/440 for the purpose of Council Directive 2013/59 Euratom.
RASSC-57 (Dec 2024)	- Approval of RASSC-led Safety Guide DPP DS556 on Safe Use of Unsealed Sources (Step 3) - Topical Session on “Impacts at national level of new ICRP dose coefficients for intake”
RASSC-58 (Jun 2025)	- Approval of EPRESC-led Safety Requirement DPP DS558 on Preparedness and Response for a Nuclear or Radiological Emergency, revision of GSR Part 7 (Step 3) - Topical session on “Second Primary Cancer after Radiotherapy” following the UNSCEAR Report
RASSC-59 (Nov 2025)	- Feedback from national discussions with interested parties in Member States on the impact of potential adoption of new operational quantities for external exposure (ICRU Report 95) Joint RASSC/ICRP Topical Session on next set of General Recommendations
RASSC-60 (Jun 2026)	Collection of potential topics that could influence GSR Part 3 and other Safety Standards - Possible priorities for the 11th term roadmap (2027-2029)
RASSC-61 (Nov 2026)	- End-of-term report and priorities for the 11th term - Topical session on health effects at low radiation doses

Conclusions

- The Nuclear Regulation Authority (NRA) of Japan continues to align with internationally recognized frameworks for radiation protection.
- Through active engagement with organizations such as IAEA, OECD/NEA and ICRP, and in collaboration with stakeholders, the NRA has contributed to the ongoing advancement of the radiation protection system.
- While progress has been made, the implementation of the GSR Part 3 remains a challenge in many Member States, particularly in addressing Existing Exposure Situations. Ongoing work in RASSC, including new Safety Guides, is so important—ensuring practical, actionable guidance reaches those who need it most.