

Highlights on RP Activities at OECD NEA

Presentation to ISOE

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CRPPH-82

82nd Annual Meeting of the Committee on Radiological Protection and Public Health



28-29 March 2024

**OECD Conference Centre, Paris,
France**

The meeting was conducted in a hybrid format, bringing together approximately 70 delegates from 23 countries and 10 international organisations and associations

Key Discussions:

- INEX 6 post exercise evaluation
- HLG-LDR on low dose research
- EGFSF on a post-accident food safety framework
- Future work on RP challenges related to SMRs
- Contribution to ICRP's review and revision of the current RP system
- CRPPH's support for RP-related issues during and after armed conflict

Working Party on Nuclear Emergency Matters (WPNEM)

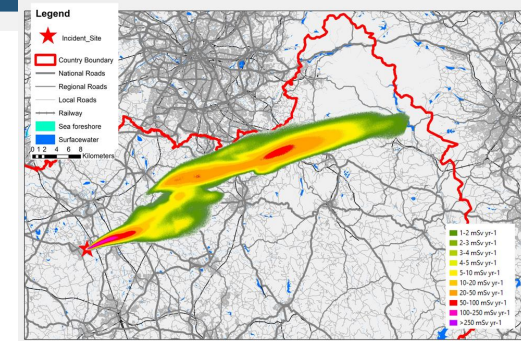
WPNEM has nearly completed its post INEX-5 programme of work.

- Forthcoming publications in 2024:
 - **Practical Guide for Mental Health and Psychosocial Support in Radiological and Nuclear Emergencies**. Publication N°7665, OECD Publishing Paris, forthcoming.
 - **Understanding dose prognosis in nuclear and radiological emergencies**: comparison of national assessment chains and practical guidance for better information exchange and coordination of protective actions. NEA/CRPPH/R(2024)1, OECD Publishing Paris, forthcoming.
 - **Real-time platforms for nuclear and radiological emergencies preparedness and response within countries**: national guidance to enhance cross-border information exchange and coordination of protective actions. NEA/CRPPH/R(2024)2, OECD Publishing Paris, forthcoming.
 - **Updated NEA Protective Measures Handbook**, a preparedness tool enhancing understanding of potential protective actions in nuclear and radiological emergencies; Post-survey drafting is currently in progress.

International Nuclear Emergency Exercises (INEX 6)

INEX-6 concentrates on the long-term recovery phase after a nuclear emergency, addressing complex issues not previously tested at the international level.

Modules were delivered from January to March 2024, with 26 participating countries



1. Health Aspects

(covering issues such as Mental Health and Psychosocial (MHPSS) issues, medical follow-up, medical surveillance)



2. Food Safety

(covering issues such as food monitoring, food restrictions, international and domestic food trade)



3. Remediation and Decontamination

(covering issues such as remediation of natural and built environment, contaminated land, access control)



4. Waste Management

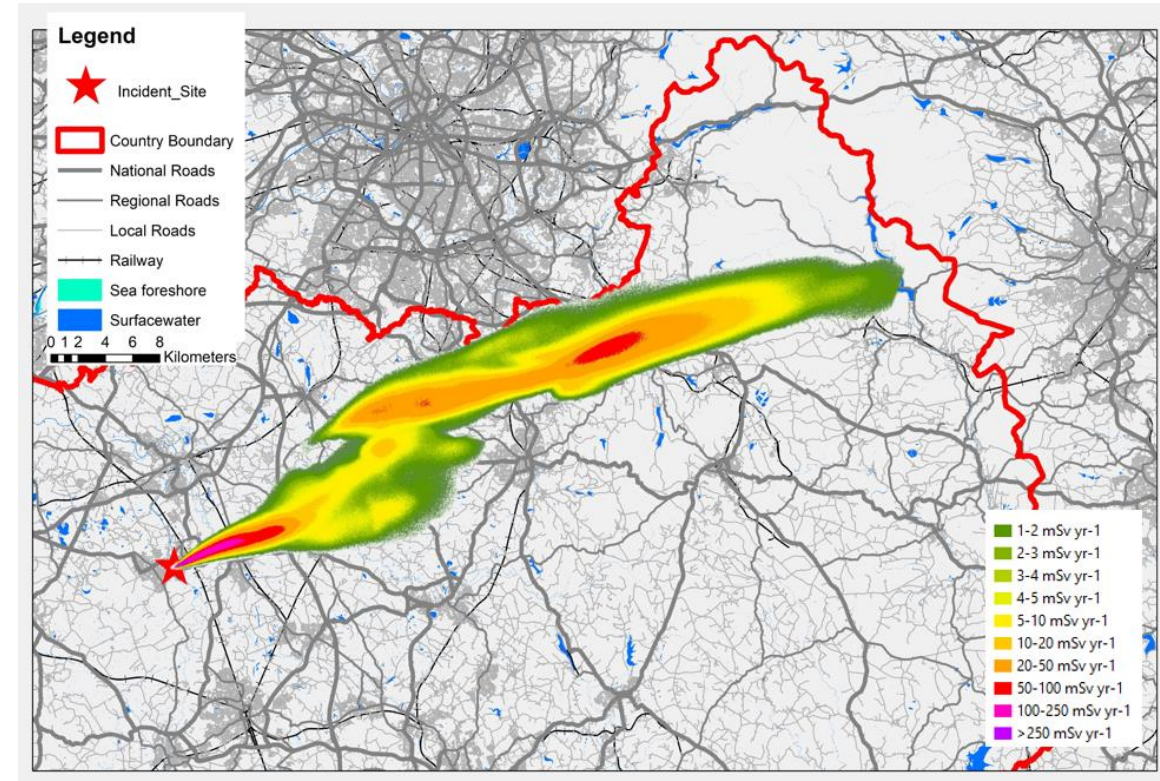
(covering issues such as storage, treatment, characterisation, transport, disposal)

Cross-Cutting Issues: Stakeholder Engagement, Communications, International Cooperation, Socio-Economics.

Images: freevector.com

Approach of INEX-6:

- Table-Top modular exercises conducted individually by participating countries and territories, using a common scenario for comparability.
- Designed as a "question-driven" exercise, challenging participants to apply existing policies and plans.
- Scenario begins 12 months after a radiological or nuclear emergency
- Directly linked with NEA publications:
"Building a Framework for Post-Nuclear Accident Recovery Preparedness";
"Practical guidance for MHPSS in radiological and nuclear emergencies"
- Aims to examine recovery management strategies' similarities and differences, including transboundary issues where possible.



INEX-6 Exercise Evaluation

- 26 Participating countries submitted their responses based on the evaluation questionnaire, documenting their observations and outcomes.
- An **INEX-6 Country feedback Session** will be held alongside the WPNEM annual meeting from **October 15th to 17th, 2024**, hosted by the UK. The main objective will be discussing preliminary results and provide participating countries with the opportunity to exchange experiences regarding conducting the exercise
- A final **INEX6 Evaluation Workshop** will be held in 2025 to summarize the comprehensive evaluation of the questionnaire and the outcomes from the October evaluation session. It will aim to identify strengths, weaknesses, and areas for improvement based on country-specific feedback
- A **summary report**, capturing discussions and recommendations, will be published by late 2025, shaping future CRPPH/WPNEM Programme of Work



The High-Level Group on Low-Dose Research(HLG-LDR)

To better coordinate research initiatives worldwide

Provide tools/approaches for the research-related community (researchers, funders, policy makers) to enhance visibility and facilitate collaboration in the area of low dose risk for human and ecological health, such as:

- the **Global Register**, an open online searchable library for all ongoing or planned research projects (including epidemiology, radiobiology, dosimetry, ecotoxicology, social sciences and humanities...).
- the **OECD Adverse Outcome Pathway (AOP)** development for radiation-related health effects to compile and structure knowledge and understanding of effects of radiation exposure.

Develop mechanisms to:

- **accelerate outreach to the RP community on the importance of coordination in the field of low dose research.**
- **strengthen the development of education and training resources for the next generation** of researchers and radiation risk assessors.
- transpose complex science into **effective risk communication for stakeholders.**
- develop initiatives **to bring together researchers, policy makers and regulators to increase the impact of key research findings.**



7th plenary meeting of the HLG-LDR, 27-28 June 2023, NEA HQ
[Nuclear Energy Agency \(NEA\) - Discussing progress in low-dose research projects \(oecd-nea.org\)](https://www.oecd-nea.org/ldr)

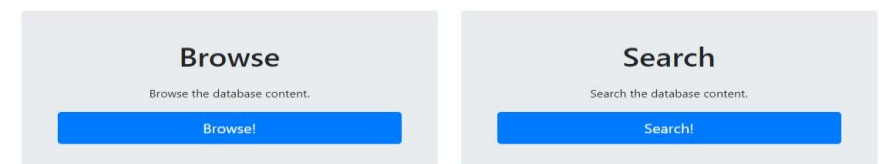


The NEA High-Level Group on Low Dose Research (HLG-LDR) aims to support radiological protection policy, regulation and implementation choices by improving the effectiveness and efficiency of research through global networking for the co-ordination of ongoing and future low dose research projects.

The Global Register of Low Dose Research projects is the reference online register of ongoing and planned low dose research projects worldwide.

Populating and Searching the Global Register help researchers and research funding organisations identify possible collaboration opportunities, avoid unnecessary duplication of research efforts, and encourage international research co-operation in the area of low dose research.

The development of this application was possible thanks to the support of the Institut de Radioprotection et de Sûreté Nucléaire (IRSN), France.



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<https://www.oecd-nea.org/ldr>

Expert Group on a Post-Accident Food Safety Framework (EGFSF)

Recommendations on Food Safety for long-term trade in food and trust in the food supply chain after a nuclear or radiological accident

20 members from 13 countries (ARG; AUT; BGR; CAN; FRA; HUN; IRL; JPN; KOR; NOR; SVK; GBR; USA)
IAEA, *OECD Trade & Agriculture Directorate*, *WTO*

- The Group has finalised [a strategic outline document](#) and is now drafting its recommendations and operational guidance

1

Preamble & General Recommendation

The existing guidance from international bodies concerning the long-term domestic and international trade in food following a nuclear or radiological accident should be supported by operational recommendations with the aim of assisting authorities to build trust in the food supply chain.

2

'Terms of Reference' for Scientific Review Mechanism

An international, scientifically based mechanism should be established and adopted by governments for the independent validation of the approach taken to food monitoring and control by the accident and importing countries with the aim of providing assurance on food safety.

3

Identification of potential legal tools for implementation

Governments should formally adopt the scientific validation mechanism and implement it through an international legal mechanism, e.g. on the OECD level.



Expert Group on a Post-Accident Food Safety Framework (EGFSF)

Adding value to post accident food safety management

The CRPPH Expert Group on Food safety Framework (EGFSF) is developing the following actions:

- Provide recommendations to **promote consumer trust and confidence in food, and to facilitate national and international trade in the medium- to long-term following an accident.**
- **Clarify the available international guidance and standards application**, including practical advice on what to use, when, and where.
- Address **terminology, transparency, risk communication and stakeholder engagement.**
- Provide **operative guidance, with high-level recommendations on how to apply criteria in practice**, and explanation of mechanisms to control trade and when/how these may be phased out.
- Address **how effectiveness of measures taken to prevent “unsafe” food reaching consumers can be demonstrated in practice**, e.g. through monitoring and peer review processes consistent with accepted public health approaches.

In the meantime, consult NEA legal experts for advice on the most appropriate **legal instrument** to promote consent on the approach taken among NEA member countries and other adhering countries.

Expert Group’s draft report to be discussed at the CRPPH level in March 2024.



Task Force on SMR's RP Challenges

CRPPH agreements in response to the recommendations from a dedicated task force on SMRs, e.g.

- Approved the creation of a new expert group under the WPNEM to address graded approaches for emergency preparedness and SMR protective strategies by 2024 to early 2025.
- Recommended to monitor the SMR situation, potentially including workshops and exchanges with other international SMR projects.
- Recommended to prepare two additional working groups for occupational exposure and public communication for the 2025-2026 biennium.

The mandate of the newly created expert group on emergency preparedness for SMRs (EGEPSMR) is currently in the preparation process.

High-level analysis of radiological protection challenges associated with the deployment of SMRs

From October 2022 to March 2023, the Task Force on SMRs, comprised of 15 experts nominated by 6 NEA member countries and one invitee from an international organisation, met several times to discuss the radiological protection aspects of SMRs and the challenges associated with their development, deployment and operation. The Task Force produced a high-level analysis and identified eight challenges, to be considered for further exploration by the CRPPH.

Radiological protection challenges and benefits

Eight radiological protection (RP) challenges^[1] were selected from a preliminary list identified by the Task Force members. A template was used to describe each of these in a standardised manner by answering two questions: *What are the associated RP challenges? What are the benefits of further exploring these challenges?* The following summarises the high-level analysis of the challenges identified.

Small compact design: The compact design and modular construction of SMRs can potentially reduce costs and build times. However, such innovation comes with trade-offs on the range of radiological protection impacts that need to be managed. These may include a potentially higher gamma and neutron flux and higher activation levels of materials, loss of access to areas of the nuclear island, limited working space, issues with control of contamination, reduced shielding, and reduced space and distance for maintenance, all of which could pose challenges for managing worker dose during routine operations and potential emergencies. Addressing the challenges associated with the small compact design of SMRs could reduce worker dose and the generation of radioactive materials. For example, measures could be identified to reduce the neutron activation levels, coolant corrosion, fuel leakage, core inventory, and consequently, radiation risk to workers.

[Nuclear Energy Agency \(NEA\) - Task Force on radiological protection challenges associated with the deployment of small modular reactors \(SMRs\) \(oecd-nea.org\)](https://www.oecd-nea.org).

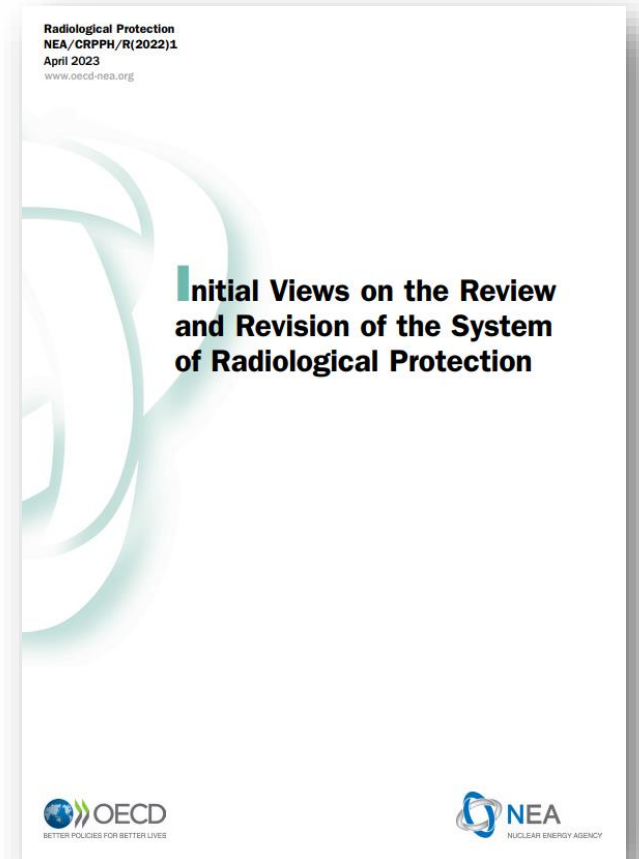
Contribution to ICRP's review and revision of the current RP system

Achievements and Plan for 2024 and beyond:

- ICRP initiated a project to review and revise the System of Radiological Protection (SRP, due for completion ~2030); among all stakeholders (ICRP SLOs), NEA is key to express the views of its member countries on this issue.
- CRPPH re-established the Expert Group on International Recommendations (EGIR) to coordinate NEA's input. EGIR published its initial findings in May 2023 and shared them with ICRP (Phase 1).
- EGIR mandate has been extended to 30 April 2025.

EGIR will now target specific areas for improvement in the next phase of its Programme of Work, notably:

- Environmental Radiological Protection
Creation of an Expert Group to be approved at CRPPH-82 (tasks - review how member countries have applied the recommendations in Publication 103 and companion publications; explore areas for potential improvement within the system, such as sustainability (and use of the UN Sustainable Development Goals), climate change; ...)
- Optimisation of Protection
Put into RP perspectives the main outcomes of the 3rd stakeholder involvement workshop
- Forward Look: Future suitability of the Primary Aim
Develop a short paper to examine whether the primary protection aims of RP are still fit-for-purpose when considering future challenges to the RP System (e.g., climate change, new technologies, war-induced threats, etc.)



Addressing RP during and after armed conflict

A workshop co-organised between the Norwegian Nuclear Safety Authority (DSA) and the Nuclear Energy Agency, in co-operation with the Ukrainian Nuclear safety Authority (SNRIU).

- 120 participants discussed how:
 - (1) to maintain and enhance the capability and capacity to monitor, analyse and manage radiological protection and public health;
 - (2) to anticipate consequences on the implementation of radiological protection regulation and practices.

•**Summary report of the workshop to be published by the end of the year**

•**Task group on RP during armed conflict under the OECD-Ukraine Country Programme to kick-off on September 27, 2024**



[Nuclear Energy Agency \(NEA\) - Radiological protection during armed conflict: Improving regulatory resilience and operational applications \(oecd-nea.org\)](https://www.oecd-nea.org)

Held in Oslo, Norway, 22-24 November 2023

Training Courses

- **3rd edition of Nuclear Risk Communication Training Course, 2024 in Ottawa, Canada**
- Hosted by **CNSC, Canada 28-31 Oct. 2024**
- Foundational learning and development in risk communications for communication professionals and technical specialists

- The **6th edition of the International Radiological Protection School (IRPS)** hosted in person at Stockholm University, Sweden, from **12-16 August 2024**, in co-operation with the Swedish Radiation Safety Authority (SSM) and the Centre for Radiation Protection Research (CRPR) of Stockholm University. 1) 60 participants - early to mid-career RP professionals - from 27 countries together with 30 international lecturers in the RP field. 2) Mix of lectures, interactive case-studies, panel discussions and mini-workshops. 3) NEA has agreed a 5-year arrangement with SSM and SU.





**Thank you for
your attention.**

Questions?

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