



EUROPEAN PLATFORM ON PREPAREDNESS FOR
NUCLEAR AND RADIOLOGICAL EMERGENCY RESPONSE
AND RECOVERY

Upcoming events

30th August - 1st September 2023

RICOMET 2023, Dessel, Belgium

9th October 2023

7th NERIS Workshop, Dublin, Ireland

10-13 October 2023

ERPW, Dublin, Ireland

EDITORIAL

NERIS Newsletter Issue 20 – June 2023

Dear NERIS community,

As we move forward in our mission to enhance radiation protection and nuclear emergency preparedness across Europe, we are pleased to bring you the latest issue of the NERIS Newsletter.

The past year has presented unique challenges for the community in the context of war in Ukraine, outlining that collaboration and innovation have become more critical than ever before.

This special issue highlights the various initiatives and programs undertaken by the NERIS platform in the past months from 2022 to 2023, to foster collaboration and innovation in nuclear emergency preparedness, in the context of the preparation of the PIANOFORTE partnership.

The last European Radiation Protection Week (ERPW₂₀₂₂) and NERIS Workshop were the occasion to present the latest developments in radiation protection and emergency preparedness, including new technologies and approaches to response planning and management.

The 2022 NERIS Workshop was successful and gathered, for the first time in 2 years since the COVID-19 pandemic, our community in a face to face meeting.

During our 2022 General Assembly, we had the pleasure to include leading Ukrainian experts in the field of nuclear emergency preparedness by welcoming ISP NPP within our members. We shared their perspectives on the importance of collaboration and innovation in addressing the challenges they face.

As we continue to work together towards a safer and more resilient European collaboration for radiation protection, let us embrace collaboration and innovation as key pillars of our efforts.

We are also pleased to announce in this Newsletter that the next NERIS workshop will take place at the location of the next European Radiation Protection Week in Dublin, Ireland, at University College Dublin.

We hope that this issue of the NERIS Newsletter provides valuable insights and inspiration for all those working in the field of nuclear emergency preparedness.

Sincerely,

The NERIS Management Board



Visit us at : www.eu-neris.net // Contact us at : sec@eu-neris.net

13th General Assembly, 17th June 2022, online

The 13th NERIS General Assembly was held via online-meeting, on June 7th 2022.

NERIS welcomed ENEA as a new Supporting organisation which joined in early 2022. At the end of 2021, 64 organisations were members of NERIS with 27 Supporting Organisations.

The new Management Board was elected, welcoming Pieter de Meutter (SCK CEN) and Angelika Bohnstedt (KIT), also marking the withdrawal of two founding members: Eduardo Gallego (UPM) and Wolfgang Raskob (KIT) who were warmly thanked for their long and fruitful participation in the NERIS Management Board.

For the year 2021, the President noted the main activities since the last General Assembly:

- ▶ The organisation of the 6th NERIS Workshop, on-line, with 24 presentations dedicated to the issue of "Operational and research achievements and needs to further strengthen preparedness in emergency management, recovery and response".
- ▶ The 3 webinars organised by the platform to maintain the link of the NERIS scientific community and work on current and future challenges:
 - Webinar on Nordic Sea Release, on 1st June 2021;
 - Webinar on "the use of unmanned aerial systems ("drones") to characterize the radiological situation in the aftermath of nuclear or radiological accidents", on 23rd September 2021;
 - Webinar on Considerations about offshore release of Fukushima Daiichi treated cooling water, on 20th October 2021.

For 2022, the President highlighted the following points as the main challenges:

- ▶ The renewal of the management board, with the withdrawal of two founding members and welcoming new representatives from Supporting Organisations;
- ▶ The involvement of the platform in the preparation and construction of the PIANOFORTE partnership;
- ▶ Drawing lessons learnt from the 10 years of the Fukushima nuclear accident and the 35 years of Chernobyl accident;
- ▶ The dissemination of NERIS activities in the framework of preparedness actions developed by International Organisations.

Olena Pareniuk (National University of Life and Environmental Sciences of Ukraine) presented the Institute for Safety Problems of Nuclear Power Plants (ISP NPP, Ukraine) and the Chernobyl Radiation and Ecological Biosphere Reserve. ISP NPP is the organization supervising the Chernobyl NPP, which:

- ▶ Contributed to the construction of the New Safe Confinement (NSC),
- ▶ Investigates the lava-like fuel containing materials,
- ▶ Provides radioecological monitoring of the NSC,
- ▶ Designs robotics to study the Shelter since 1992,
- ▶ Assess the Central Storage Facility for Spent Nuclear Fuel and Spent Nuclear Fuel Dry Storage Facility safety.

Participants welcomed the institute as a new member of the platform and proposed to strengthen the scientific partnership with the institute in the coming months.

You can download the Minutes of the General Assembly on the NERIS website (<https://www.eu-neris.net/>).

NEA/CRPPH/EGRM webinar, 23rd May 2022, online

The Nuclear Energy Agency (NEA) held an online event to launch its new report "Building a Framework for Post Nuclear Accident Recovery Preparedness: National-Level Guidance". This report was produced by the NEA Expert Group on Recovery Management (EGRM) created in 2019 by the Committee on Radiological Protection and Public Health (CRPPH). The objective was to assist NEA member countries in planning and improving their preparedness for recovery by producing guidance on how to develop a nuclear or radiological post-accident recovery management framework which can be adapted to national conditions.

This report emphasises the importance of preparedness for long-term recovery along with preparedness arrangements for emergency response to optimise the recovery process and reduce adverse outcomes from the emergency response phase.

During the launch event, a panel of international experts discussed the report and the topic of improving preparedness for post-nuclear accident recovery in general. The audience had the opportunity to participate in the discussion through a Q&A session. The recording of this event is available on the [NEA website](#).

PIANOFORTE Kick-off meeting, 14th June 2022, Fontenay-aux-Roses, France

Launched on June 14, 2022 in Paris, the PIANOFORTE research partnership has the ambition to improve knowledge and promote innovation in the field of radiation protection for the benefit of better protecting the public, patients, workers and the environment in all scenarios of exposure to ionizing radiation.

Through the scientific challenges it will address, this partnership aims to contribute to priority European policies such as the fight against cancer (European Cancer Action Plan), the protection of health from environmental risks (Green Pact for Growth) and finally the improvement of anticipation and resilience in disaster situations (implementation of the Sendai Framework for Disaster Risk Reduction).

Within this partnership, at least three calls for proposals, open to the entire European research community for radiation protection, will be organized between 2023 and 2025. They will focus on the following four themes:

- ▶ Improving patient radiation protection in relation to the use of ionizing radiation in the medical field
- ▶ A better comprehension of variability of individual response to exposure to ionizing radiation
- ▶ The study of mechanisms involved in chronic exposure to low doses of ionizing radiation
- ▶ The improvement of anticipation capacities and resilience in nuclear or radiological crisis situations and post-accident management.

Particular attention will be paid to the involvement of all stakeholders in the priority setting of the scientific topics that will be the subject of calls for tender and with respect to the question of translating this research into actual impact for strengthened radiation protection.

The partnership will build on previous work and on the results of the European joint program CONCERT conducted under the H2020 framework program which ended in 2020. It will also benefit from the achievements of other European projects just completed or in progress such as MEDIRAD, HARMONIC, RadoNorm or SINFONIA.

To date, PIANOFORTE involves 58 partners from 22 EU countries as well as the UK and Norway through public partners but also the six European research platforms in radiation protection (MELODI, EURADOS, EURAMED, NERIS, ALLIANCE and SHARE).

The partnership will last 5 years and is expected to end in 2027. The estimated budget for PIANOFORTE is 46 million euros, 65% of which will be financed by the European Union and the rest by the partner countries. IRSN is the coordinator of the partnership.

RODOS user group small exercises

The purpose of the JRodos decision support system is to provide information to decision makers during the preparation stage and actual nuclear or radiological accidents. It is used for this purpose by several regulatory bodies and operators of nuclear installations. The community is organised through the RODOS User Group (RUG).

To test the system and increase the operational capacities of the JRodos users, the RUG intends to perform small scale exercises about twice per year. The first exercise was performed in June/July 2022. This exercise was organised by BfS, ENCO and KIT. On 20.06.2022 the BfS distributed the exercise material with the description of the exercise to RUG members. The scenario described an accident with a radiation source that was melted in a steel plant, leading to a release of Cs-137 into the environment. This accident was designed with reference to the Acerinox accident in 1998.

The participants had two weeks of time to perform the simulations with the corresponding JRodos models and to provide a list of results and recommendations. All results were stored at KIT and were open to all other participants.

Results were delivered by 25 participating organisations from 24 different countries. This number of participants demonstrated a high interest in the exercise. Staff from KIT summarized the results. During a summary videoconference on 19.07.2022, the exercise participants discussed the results and recommendations. Differences in model results could be traced back to the use of different atmospheric dispersion models and weather data sets. The participants expressed interest in follow up exercises.

Christian Staudt, ITES, Karlsruhe Institute of Technology (KIT)

In the second exercise, performed in November/December 2022, the scenario was a collision between a nuclear icebreaker and a heavy bulk carrier ship in Danish coastal waters. All relevant data (time schedule, release time, release height, reactor inventory etc.) were given and again the participants delivered their results to KIT in advance to the summary workshop. In the respective video conference on 1.12.2022 it was noticed that most results were quite similar. Deviations have been discussed between the more than 40 participants. Some of the variances were due to the use of wrong coordinates but also the different dispersion models and varying weather data sets had an influence.

Angelika Bohnstetd, NUSAFE, Karlsruhe Institute of Technology (KIT)

NERIS Workshop 2022, 10th October 2022, Estoril, Portugal

The NERIS Workshop 2022 was held as a satellite workshop of ERPW for half a day on Monday 10th October 2022 morning (9:00 - 13:00). It gathered around 70 people from the community and from ERPW attendance.

The Workshop was split in two sessions: "Uncertainty quantification, data assimilation, monitoring strategies, and inverse modelling" and "Lessons learned and optimization of management strategies". 13 speakers presented their work linked with these thematic, and time for discussions was used to reflect on these advancements and their use for the NERIS research agenda and the broader Joint Research Agenda.

You can download the programme and the presentations of the Workshop on the [NERIS website](#).

NEA/CRPPH/EGRM Workshop, 27-28 October 2022, Fontenay-aux-Roses, France

The NEA Committee on Radiological Protection and Public Health (CRPPH) through its Expert Group on Recovery Management (EGRM) invited stakeholders to a workshop on "Preparedness for post-nuclear accident recovery". The event took place on 27-28 October 2022 at the Institute of Radiological Protection and Nuclear Safety (IRSN) in Fontenay-aux-Roses, France. You can find more information on the programme and presentations on the [dedicated webpage](#).

NERIS R&D Committee, 9th March 2023

The NERIS R&D Committee met online on 9th March mainly to discuss cooperation within NERIS for participation in the first call of PIANOFORTE.

In this meeting, the NERIS Management Board expressed a preference for smaller projects compared to the previous CONCERT program. It was suggested to propose 4 projects of 18 months or 2 years duration to allow flexibility.

Brainstorming discussions took place regarding various topics of interest for proposals, including management and societal resilience, protective actions, monitoring availability in war situations, modelling challenges, and the impacts of nuclear detonations.

Several organizations expressed their willingness to contribute and lead specific work packages in these proposals. The meeting identified potential areas for proposals, including inverse modelling and uncertainty quantification, protective actions and communications, scenario development, impacts on modelling tools and data, and impacts on civil society. This led to an agreement on the composition of the group to answer the upcoming call and the inputs expected to appear in the proposals.

The preparation for the NERIS Workshop 2023 was also discussed, including the formation of a scientific committee, thematic topics, and the call for abstracts. The meeting closed on an update concerning the status of the NERIS Roadmap paper, which is in the finalization stage and scheduled for publication before the summer.

Launch of the PIANOFORTE first call for projects, May 2023

The European Partnership for Radiation Protection Research, known as PIANOFORTE, is launching its first transnational Open Call for Proposals in 2023. The full call is available with the following link : <https://pianoforte-partnership.eu/calls/open-call-2023/>

The call aims to support innovative research projects in radiation protection, with a focus on multidisciplinary collaboration and integration of education and training activities. The call addresses three main topics: understanding the pathogenesis of radiation-induced cancer, individualized diagnostic and therapeutic procedures, and risk assessment and management in scenarios arising from war, armed conflicts, or natural disasters.

Proposals should demonstrate their potential impact on radiation protection in Europe and emphasize the value of European research collaboration. Additionally, proposals should consider various aspects such as stakeholders, education and training, quality assurance, open access and infrastructures, social science and humanities, and communication, while also establishing links with international initiatives.

The NERIS platform is currently preparing the proposals to be sent on 12th July 2023 at latest. If your organization is part of the Supporting Organizations you can contact us directly to be informed and included in the process at sec@eu-neris.net.

NERIS General Assembly, 15th June 2023

Next General Assembly of the NERIS platform will take place via web-meeting on 15th June at 14:00 Paris Time and will last around 3 hours, with the review of the platform's activities and presentations from members.

RICOMET, Dessel, Belgium, 30th August - 1st September 2023

RICOMET provides a platform for professionals in the field of social sciences and humanities (SSH) to exchange their research findings with the broader technical and scientific community working on ionizing radiation-related topics.

The conference will cover a range of subjects including communication with the general public, risk perception, and ethics in relation to various nuclear applications, natural radioactivity, and radiological protection (such as environmental remediation, decommissioning, nuclear and radiological emergency management, low doses, communicating uncertainty, mass media communication, public understanding of ionizing radiation, and research needs).

You can find more information on the conference at the following link : <https://www.ricomet.eu/>.

European Radiation Protection Week, Dublin, Ireland, 9th – 13th October 2023

Supported by various international organizations and networks, ERPW 2023 is hosted by University College Dublin. The event is organized by the Consortium of European Radiation Research Platforms (MEENAS Group) with the aim of promoting integration, efficiency, and excellence in European research and development in radiation protection. It also focuses on maintaining and developing research capacity, supporting scientific education and training, fostering key research infrastructures, and encouraging international collaboration.

This year, the ERPW will specifically emphasize medical applications of ionizing radiation and radiation protection for patients, staff, and the public. It will also highlight outreach and engagement related to medical and environmental applications in radiation protection research.

You can find more information on the topics and registration modalities with the following links :

- Registration : <https://www.ucd.ie/ERPW2023/registration/>
- Abstracts : <https://www.ucd.ie/ERPW2023/abstracts/>

NERIS Workshop 2023, Dublin, Ireland, 9th October 2023

Next issue of the NERIS Workshop will take place on Monday 9th October 2023 as a satellite Workshop of next ERPW in Dublin, Ireland. The thematic of the Workshop are the following:

- Radiological impact assessment including data, models and techniques
- Protective actions, decision support and disaster informatics
- Holistic and inclusive framework for preparedness for emergency response and recovery.
- New challenges for emergency preparedness, response and recovery

To register to the workshop, please register first to ERPW, and then register with the form for NERIS Workshop with the following link : [NERIS Workshop registration](#). The deadline for registering is 31st July 2023.

For speakers willing to present their work at the Workshop, please note that the deadline for sending your abstract is extended to 30th June. To do so, please use the official template to be downloaded with the following link : [NERIS Workshop abstract template](#).

Your abstract should be sent directly to the NERIS Secretariat (sec@eu-neris.net). The abstract will be evaluated by the programme committee and we'll come back to you as soon as your presentation is validated for the programme.

DSA - NEA International Workshop on RP regulation and operational application in armed conflict, 22-24 November 2023, Oslo, Norway

The Nuclear Energy Agency (NEA) and the Norwegian Radiation Safety Authority (DSA) jointly organize an international workshop on "Improving resilience of radiological protection regulation and operational application in situations related to armed conflict: learning from experience", on 22-24 November 2023 in Oslo, Norway.

The topical session of concern for NERIS community will be "Radiological and nuclear emergencies and recovery while an armed conflict is in progress: Practices in areas where recovery from past events is ongoing", with the following thematic:

How to adapt standards, plans and procedures for agreed protective actions e.g., evacuation, sheltering in place, iodine tablet distribution, as well as when and how to lift them; How to manage occupational radiation safety during other extremely hazardous work (for bomb disposal squads, the transport of radiation sources, etc.)? How to manage radiological protection in territories/areas where recovery from previous events is ongoing (e.g., Chernobyl Exclusion Zone)? How to manage the radiological protection of workers and responders including the responsibility of the employers and their training on radiological protection issues?

A dedicated webpage on the NEA website should be soon published to find more information. Registration for the event is due to open from mid-June 2023 to 30 September 2023 via NEA webpage.

Feel free to contact the NERIS Secretariat if you need further information on participation to this event.