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NEA
NUCLEAR ENERGY AGENCY

Workshop on Preparedness for Post-nuclear Accident Recovery

PROGRAMME

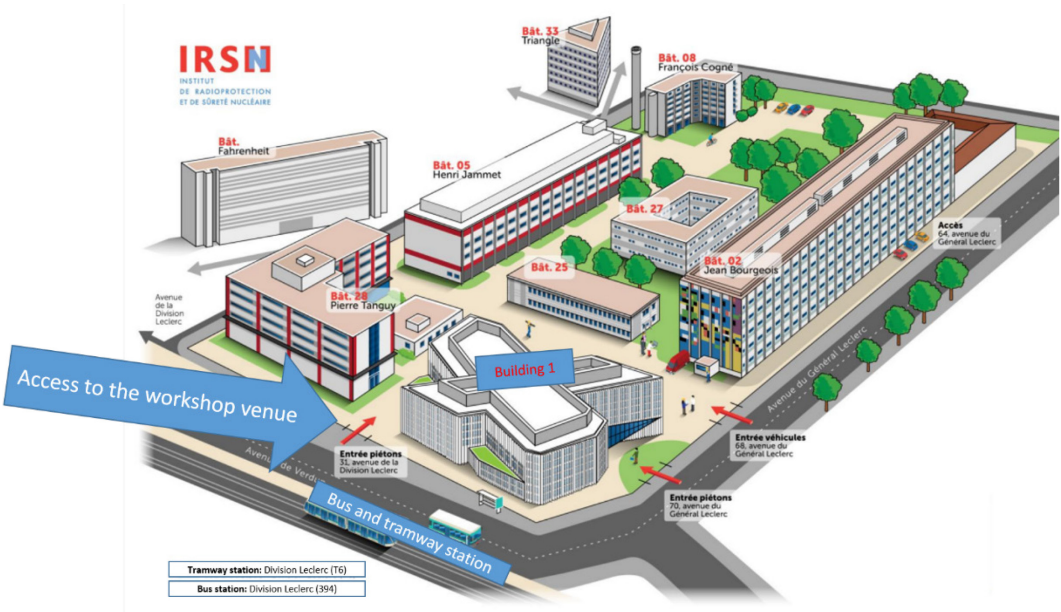
27-28 October 2022

IRSN
Fontenay-aux-Roses
France

Workshop venue

Institute of Radiation Protection and Nuclear Safety (IRSN)
31 avenue de la Division Leclerc, 92260 Fontenay-aux-Roses, France
Building 1 – Auditorium

Please note that a valid passport or identity card will be required to access the venue



For more information about getting to the venue, please visit:
https://bit.ly/3LbLUYx

Background

The OECD Nuclear Energy Agency (NEA) has a long tradition of promoting co-operation and assistance among its member countries on preparedness related to nuclear or radiological emergencies in the short, medium and long term. Under the auspices of the Committee on Radiological Protection and Public Health (CRPPH) and its Working Party on Nuclear Emergency Matters (WPNEM), the NEA serves as a platform for sharing and analysing experience in policy, regulation, and implementation of radiological protection frameworks.

Since the Chernobyl and Fukushima Daiichi nuclear power plant accidents, the notion of sustainable recovery from nuclear or radiological accidents has been at the centre of attention for the international radiological protection community, as well as for policy and decision makers around the world. Experience in this field has helped improve preparedness for nuclear emergencies and awareness of the global risks that such accidents can entail. Some of the main lessons learnt concern the multidimensional impacts of accidents, for example on health, including mental health and psychosocial support (MHPSS), the economy, or the environment, as well as their long duration. It is now widely agreed that post-accident recovery actions should be planned in advance.

While preparedness for a nuclear emergency response is well advanced in most countries and is regularly exercised in accordance with international basic safety standards, preparedness for the long-term recovery from such accidents is less developed. This is why in 2019 the CRPPH created the Expert Group on Recovery Management (EGRM) to develop an operational framework of preparedness for recovery management, which could be easily adapted to national conditions. The group has finalised its report "Building a Framework for Post-Nuclear Accident Recovery Preparedness - National-Level Guidance", which is largely based on experience on long-term recovery issues from the Chernobyl and Fukushima Daiichi accidents. The report is intended to serve as a reference document to assist countries in developing their own national plans and procedures for post-accident recovery preparedness in a harmonised manner.

The framework for recovery preparedness proposed by the EGRM follows a cyclical approach and can be divided into four main phases: i) the development of a framework for recovery, ii) the definition of recovery objectives, iii) the implementation of these recovery objectives through a number of strategies to achieve and assess the recovery objectives, and iv) the evaluation of the success of these strategies and the improvement of the overall framework through feedback from exercises or lessons learnt from real situations (Figure 1).

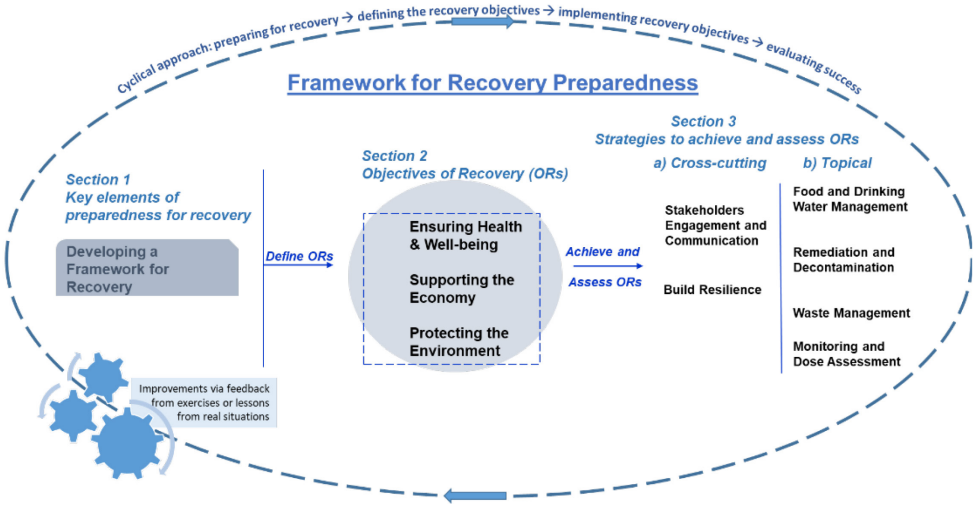


Figure 1: The cyclical process of building a framework for recovery preparedness as proposed in the EGRM publication (NEA [2022], *Building a Framework for Post-Accident Recovery Preparedness: National-Level Guidance*, OECD Publishing, Paris, www.oecd-nea.org/jcms/pl_69605/building-a-framework-for-post-nuclear-accident-recovery-preparedness.)

This workshop was organised under the auspices of the EGRM and will provide an opportunity to discuss and analyse in depth the main points raised in the report. It has three objectives:

1. Enable countries to exchange their knowledge and national experience in the area of post-nuclear accident recovery management, notably related to the topics raised in the report;
2. Allow countries to share and reflect on the status of their national post-nuclear accident recovery management arrangements and regulations, and to discuss best practices and experience in the different areas;
3. Discuss the plans for the sixth NEA International Nuclear Emergency Exercise (INEX-6), which will focus on the planning and preparedness for the recovery phase after a nuclear or radiological accident, and decide how different technical aspects could be exercised.

The NEA, together with the members of the EGRM and the EGINEX-6 (the expert group dedicated to the preparation of INEX-6) would like to warmly thank France's Institute of Radiation Protection and Nuclear Safety (IRSN) for hosting the workshop at their headquarters.

NEA Workshop on preparedness for post-nuclear accident recovery

Hosted by the IRSN

Speaker list

Welcome addresses:

- Jean-Christophe GARIEL, Deputy Director-General, French Institute of Radiation Protection and Nuclear Safety (IRSN)
- Nobuhiro MUROYA, Deputy Director-General, Nuclear Energy Agency (NEA)

Speakers and panellists:

- Holly ARRIGONI, Vice-Chair of the EGINEX-6, Physical Scientist, US Environmental Protection Agency, United States
- Marion COUTURIER, Nuclear Safety Inspector, Nuclear Safety Authority (ASN), France
- Elena de BOISSIEU, Legal Adviser, Nuclear Energy Agency (NEA)
- Sara DeCAIR, Vice-Chair of the EGRM, Health Physicist, US Environmental Protection Agency, United States
- Vanessa DURAND, Head of the Environmental Monitoring Laboratory, Institute of Radiation Protection and Nuclear Safety (IRSN), France
- Adam FYSH, Programme Management Officer, United Nations Office for Disaster Risk Reduction
- Florian GERING, Head of Division, Radiological Emergency Response and Federal Central Office, German Federal Office for Radiation Protection (BfS), Germany
- Fahmy HANNA, Technical Officer, Department of Mental Health and Substance Abuse, World Health Organization (WHO)
- Toshimitsu HOMMA, Technical Advisor, Nuclear Regulatory Authority (NRA), Japan
- Alex JENKINS, Decontamination Expert and Innovations Assessment for Security and Resilience, Sellafield Ltd, United Kingdom
- Carl-Magnus LARSSON, Principal Scientific Adviser, Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), Australia

- Astrid LILAND, Director – Department of Emergency Preparedness and Response, Norwegian Radiation and Nuclear Safety Authority (DSA), Norway
- Jacques LOCHARD, Professor, Institute of Atomic Bomb Diseases, Nagasaki University (NU), Japan
- Daniel MACDONALD, Commission Technical Officer, Canadian Nuclear Safety Commission (CNSC), Canada
- Andy MAYALL, New and Operational Nuclear Sites Manager, Environment Agency, United Kingdom
- Rita MISSAL, Recovery Advisor, Crisis Bureau, United Nations Development Programme
- Masami MIYASHITA, Director, Fukushima Reconstruction Promotion Group, Ministry of Economy, Trade and Industry (METI), Japan
- Anne NISBET, Radiation Recovery Lead, UK Health Security Agency (UKHSA), United Kingdom
- Olivier RIVIERE, Head, Environment and Emergency Division, Nuclear Safety Authority (ASN), France
- Selwyn RUNACRES, Vice-Chair of the EGINEX-6, Emergency Preparedness and Response specialist, Department for Business, Energy and Industrial Strategy, United Kingdom
- Tobias SCHLUMMER, Desk officer, Emergency Preparedness and Response, Environmental Radioactivity Surveillance, Radioecology, Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV), Germany
- Veronica SMITH, Senior Scientist, Environmental Protection Agency (EPA), Ireland
- Thierry SCHNEIDER, Chair of the EGRM and of the CRPPH, Director, Nuclear Protection Evaluation Center (CEPN), France
- Per STRAND, Director General, Norwegian Radiation and Nuclear Safety Authority (DSA), Norway
- Noboru TAKAMURA, Professor and Chairman, Department of Global Health, Medicine and Welfare, Atomic Bomb Disease Institute, Nagasaki University (NU), Japan
- Peter WRIGHT, Chair of the Expert Group on INEX6, Radiation Coordination Specialist, Radiation Protection Bureau, Health Canada, Canada
- Matthias ZAEHRINGER, Head of Division – Emergency Preparedness (retired), German Federal Office for Radiation Protection (BfS), Germany

Workshop programme

Day 1 – Thursday, 27 October 2022

8:15-8:50 **Registration**

Institute of Radiation Protection and Nuclear Safety (IRSN)

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Opening session

9:00-9:30, Auditorium

In-person & broadcast

9:00-9:20 **Opening remarks**

Jean-Christophe GARIEL, Deputy Director General, French Institute of Radiation Protection and Nuclear Safety (IRSN)

Nobuhiro MUROYA, Deputy Director General, Nuclear Energy Agency (NEA)

9:20-9:30 **Highlights of the Report *"Building a Framework for Post-Nuclear Accident Recovery Preparedness – National-Level Guidance"***

Thierry SCHNEIDER, Chair of the EGRM, Director, Nuclear Protection Evaluation Centre (CEPN)

Session I – A national framework for post-accident recovery preparedness

9:30-12:30, Auditorium

In-person & broadcast

9:30-10:15 **Developing a recovery framework**

Veronica SMITH, Environmental Protection Agency (EPA), Ireland

10:00-10:15 Q&A

10:15-10:30 Coffee break

10:30-11:45 **Roundtable with national representatives on national experience and policy aspects**

Moderator: Sara DeCAIR, US Environmental Protection Agency, United States

Toshimitsu HOMMA, Nuclear Regulatory Authority (NRA), Japan

Olivier RIVIERE, Nuclear Safety Authority (ASN), France

Per STRAND, Norwegian Radiation and Nuclear Safety Authority (DSA), Norway

Peter WRIGHT, Health Canada, Canada

11:15-11:45 Q&A

11:45-12:30 **Examples and experience from other sectors/areas**

11:45-12:00 **Preliminary experience from COVID-19 recovery management**

Rita MISSAL, United Nations Development Programme [remotely]

12:00-12:15 **The Sendai Framework for Disaster Risk Reduction**

Adam FYSH, United Nations Office for Disaster Risk Reduction [remotely]

12:15-12:30 Q&A

12:30-13:30 Lunch break

Session II – Recovery objectives

13:30-17:00, Auditorium

In-person & broadcast

13:30-14:15 **Health and Well-being**

13:30-13:45 **Mental health and psychosocial support in emergency settings**

Fahmy HANNA, World Health Organization (WHO) [remotely]

13:45-14:00 **Operational extension of the WHO MHPSS framework – under development by the NEA Expert Group on Non-radiological Public Health Aspects of Radiation Emergency Planning and Response (EGNR)**

Matthias ZAEHRINGER, German Federal Office for Radiation Protection (BfS) (retired), Germany

14:00-14:15 Q&A

14:15-15:00	**Supporting the economy**
14:15-14:30	**Experience from Fukushima on the (ongoing) economic recovery of affected areas** Masami MIYASHITA, Ministry of Economy, Trade and Industry (METI), Japan
14:30-14:45	**Liability and compensation of victims after a nuclear accident** Elena de BOISSIEU, Nuclear Energy Agency (NEA)
14:45-15:00	Q&A
15:00-15:20	Coffee break
15:20-16:05	**Protecting the environment**
15:20-15:35	**Sustainable recovery and protecting the environment** Andy MAYALL, Environment Agency, United Kingdom [remotely]
15:35-15:50	**Environmental recovery after a nuclear accident: what are the risks and what do we protect?** Carl-Magnus LARSSON, Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), Australia [remotely]
15:50-16:05	Q&A
16:05-16:55	**Keynote lecture – The importance of stakeholder involvement and successful communication for recovery preparedness** Jacques LOCHARD, Nagasaki University (NU), Japan Noboru TAKAMURA, Nagasaki University (NU), Japan [remotely]
16:35-16:55	Q&A
16:55-17:00	**Closing remarks – end of day 1** Thierry SCHNEIDER, Nuclear Protection Evaluation Center (CEPN)

Day 2 – Friday, 28 October 2022

9:00-9:10 **Welcome to day 2**

Thierry SCHNEIDER, Nuclear Protection Evaluation Center (CEPN), France

Session III – Preparing for recovery

9:10-14:45, Auditorium

In-person & broadcast

09:10-14:45 **Preparing for recovery – How to use the EGRM publication and other NEA guidance to improve recovery preparedness, e.g. in preparation of INEX-6. What guidelines to test during the exercise?**

09:10-09:25 **Exercising post-accident recovery**

Sara DeCAIR, US Environmental Protection Agency, United States

09:25-09:50 **Presentation of the plans, objectives and status of INEX-6**

Peter WRIGHT, Chair of the EGINEX-6, Health Canada, Canada

09:50-10:30 **INEX-6 Recovery Modules – Interactive session to explore the key recovery issues**

Peter WRIGHT, Chair of the EGINEX-6, Health Canada, Canada

Holly ARRIGONI, Vice-Chair of the EGINEX-6, US Environmental Protection Agency, United States

Selwyn RUNACRES, Vice-Chair of the EGINEX-6, Department for Business, Energy and Industrial Strategy, United Kingdom

10:30-10:45 Coffee break

10:45-11:30 **Food and drinking water management**

10:45-11:00 Setting the scene: EGRM publication topical findings

Vanessa DURAND, Institute of Radiation Protection and Nuclear Safety (IRSN), France

11:00-11:15 National example – Norway

Astrid LILAND, Norwegian Radiation and Nuclear Safety Authority (DSA), Norway [remotely]

11:15-11:30 Q&A

Moderator: Thierry SCHNEIDER, Nuclear Protection Evaluation Center (CEPN)

11:30-12:15 **Remediation and decontamination**

11:30-11:45	Setting the scene: EGRM publication topical findings Anne NISBET, UK Health Security Agency (UKHSA), United Kingdom
11:45-12:00	National example – France Marion COUTURIER, Nuclear Safety Authority (ASN), France
12:00-12:15	Q&A Moderator: Veronica SMITH, Environmental Protection Agency (EPA), Ireland
12:15-13:15	Lunch break
13:15-14:00	**Radioactive waste management**
13:15-13:30	Setting the scene: EGRM publication topical findings Tobias SCHLUMMER, Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMU), Germany [remotely]
13:30-13:45	National example – United Kingdom Alex JENKINS, Sellafield Ltd, United Kingdom
13:45-14:00	Q&A Moderator: Anne NISBET, UK Health Security Agency (UKHSA), United Kingdom
14:00-14:45	**Environmental monitoring and human dose assessment**
14:00-14:15	Setting the scene: EGRM publication topical findings Daniel MACDONALD, Canadian Nuclear Safety Commission (CNSC), Canada
14:15-14:30	National example – Germany Florian GERING, German Federal Office for Radiation Protection (BfS), Germany
14:30-14:45	Q&A Moderator: Sara DeCAIR, US Environmental Protection Agency, United States

End of workshop

14:45-15:00, Auditorium

In-person & broadcast

14:45-15:00	**Workshop closing remarks** Thierry SCHNEIDER, Nuclear Protection Evaluation Center (CEPN)

Notes

Notes


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