

STRATEGIC PLAN

CEPN

A TEAM DEDICATED
TO RADIOLOGICAL
PROTECTION

2026-2030



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PRESENTATION OF CEPN

The CEPN, Nuclear Protection Evaluation Centre, is a non-profit organisation created in 1976 to establish a research and studies centre in the nuclear field on the evaluation of human protection against the dangers of ionising radiations, covering both technical, health related, economic and social aspects.

A Board composed of 6 members manages the CEPN. A multi-disciplinary research group of around ten people performs the research and studies under the responsibility of a director.

A report on the study and research programme is presented annually to a Scientific Council, which formulates recommendations on the direction of the programme.

AS OF 1ST JANUARY 2026, CEPN MEMBERS ARE:

- ◆ ÉLECTRICITÉ DE FRANCE (EDF)
- ◆ FRENCH ALTERNATIVE ENERGIES AND ATOMIC ENERGY COMMISSION (CEA)

EDITORIAL

Developed in consultation with members of the Scientific Council and CEPN members, this strategic plan sets out the key priorities for the team's study and research programme over a five-year period, from 2026 to 2030. The launch of this new strategic plan marks the 50th Anniversary of the CEPN, which was established by EDF and the CEA in 1976.

Among the elements of the current context in the field of radiological protection that have influenced the elaboration of this plan, the following points are worth mentioning:

- The reorganisation of radiological protection control and expertise in France.
 - The structuring of radiological protection research at European level.
 - The design and construction of new nuclear facilities.
 - The concerns related to armed conflict situations and malicious acts.
 - The consideration of sustainable development goals into radiological risk management processes.
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The themes that shaped previous plans are incorporated into this new strategic plan, organized around three axes:



Contribute to the reflections on principles and methods for radiological risk assessment and management.

This research axis is largely based on the involvement of team members in the work of the International Commission on Radiological Protection (ICRP) and the Committee on Radiological Protection and Public Health (CRPPH). While the fundamentals of radiological protection optimisation remain central to the CEPN's insights, this research axis also addresses radiological risk assessment and radiological health detriment calculation, as well as, more broadly, the scientific bases and ethical values of the radiological protection system. It also incorporates consideration on the Sustainable Development Goals. The conceptual approaches conducted within this research axis are part of a complementary dynamic with the work carried out within the other two research axes.



Develop and support radiological protection approaches in nuclear installations.

This axis, dealing with radiological protection of workers, the public, and the environment, constitutes a major part of the team's work in supporting the implementation of radiological protection at nuclear facilities. The CEPN's involvement in ISOE, the International System on Occupational Exposure, provides a significant source of feedback from utilities and authorities in this field. The design and construction of new nuclear facilities and the emergence of new applications for nuclear energy are paving the way for new research and developments for the coming years.



Develop and support radiological protection approaches for emergency and existing exposure situations.

This axis covers several topics, including management of accident and post-accident situations; radon exposure management; and the management of contaminated sites and soils. The CEPN's work is specifically aimed at promoting and enhancing the engagement, preparedness, and awareness of all relevant stakeholders, including members of civil society. The CEPN's involvement in European research networks and projects, as well as its collaborations with Japanese organisations following the Fukushima accident, provide valuable insights for the management of radiological protection in such situations and contribute to training, awareness-raising, and stakeholder engagement initiatives.

The team's involvement in national and international radiological protection bodies, as well as in the national, European and international networks coordinated by the CEPN, plays a key role in the implementation of this plan.

CEPN VALUES

SCIENTIFIC EXCELLENCE

- ◆ Implementation of a scientific excellence regarding research and expertise notably through the publication of the results and the evaluation of the work programme by a Scientific Council.

ETHICAL VALUES

- ◆ Adherence to the ethical values of the radiological protection system: beneficence/non-maleficence, prudence, justice, and dignity.

TRANSPARENCY

- ◆ Transparency on the work programme through the publication of the main achievements.

AUTONOMY

- ◆ Autonomy in the achievement of the missions.

OPENNESS TO SOCIETY

- ◆ Development of the work programme in interaction with stakeholders and dissemination of radiological protection culture.

CEPN STRENGTHS

MULTIDISCIPLINARY TEAM

- ◆ CEPN's staff includes the necessary skills and competences related to the technical, health, environmental, social and economic dimensions for the implementation of radiological protection.

A REACTIVE ORGANISATION

- ◆ The flexibility in the management of CEPN, project-oriented, favours responsiveness of the team for achieving the work programme.

INVOLVEMENT IN PRACTICAL RADIOLOGICAL PROTECTION

- ◆ Involved in the implementation of radiological protection in the various exposure situations, the team has an in-depth knowledge of the issues at stake.

RECOGNISED EXPERTISE AT NATIONAL AND INTERNATIONAL LEVEL, WITH 50 YEARS OF EXPERIENCE

- ◆ The recognition of CEPN's contributions in the field of radiological protection results in the team's participation in the work of national and international radiological protection organisations.

A FAVOURED ACCESS TO INTERNATIONAL FEEDBACK

- ◆ As a result of its involvement in several international networks, the team has the ability to put into perspective the practical and regulatory issues associated with the implementation of radiological protection.

FEATURES OF THE CURRENT CONTEXT OF RADIOLOGICAL PROTECTION

- ◆ Developments in scientific knowledge of the assessment of health and environmental risks associated with exposure to ionising radiation.
- ◆ An increasing emphasis on sustainable development in risk management processes.
- ◆ Debates in several countries and at international level concerning the assessment and management of risks at low doses.
- ◆ On-going review process of the ICRP General Recommendations.
- ◆ Developments in public policy regarding health and environmental risk management.
- ◆ Coordination of European research on radiological protection within the framework of the PIANOFORTE European partnership.
- ◆ The French context, marked by the reorganization of public control and expertise in nuclear safety and radiological protection with the creation of the ASN.
- ◆ Building projects of new nuclear power reactors and new fuel cycle facilities.
- ◆ Development of Small Modular Reactor projects and new applications for nuclear energy.
- ◆ Continuation of nuclear facility decommissioning programs.
- ◆ Developments in radioactive material and waste management programs.
- ◆ The emergence of armed conflicts and malicious acts giving rise to risks of radiological and nuclear incidents and accidents.
- ◆ The growing use of artificial intelligence in radiological risk assessment and management processes, and in the field of radiological protection.
- ◆ Increased use of ionising radiation in the medical field for diagnostic and therapeutic purposes, and the development of new radiopharmaceuticals.
- ◆ A growing need for training and awareness-raising initiatives on radiological protection for professionals and the public.

2026-2030 STRATEGIC GOALS

AXIS 1: CONTRIBUTE TO THE REFLECTIONS ON PRINCIPLES AND METHODS FOR RADIOLOGICAL RISK ASSESSMENT AND MANAGEMENT



Contribute to research on radiological risk assessment:

- Support the integration of new scientific findings into the quantification of radiation risk at low doses and low dose rates.
- Contribute to ensuring the integration of the ethical values of the radiological protection system – and particularly the value of prudence – in the quantification of radiological risk.



Contribute to the reflections on the principles of the radiological protection system for the different exposure situations:

- Contribute to the analysis of the implementation of the principle of justification.
- Continue to explore the concepts of reasonableness and tolerability in relation to the principle of radiological protection optimisation.
- Contribute to reflections on the principle of limitation of individual exposures.
- Support discussions on the approach in terms of different exposure situations.



Compare the methods used to assess and manage radiological and chemical risks:

- Analyse methods for establishing dose-response relationships.
- Putting risk management methods into perspective.



Contribute to reflections on the incorporation of sustainable development goals into radiological risk management processes:

- Contribute to the development of methods and criteria for evaluating decisions.
- Participate in the identification and integration of ethical considerations.



Contribute to the development of a radiological protection culture for the various exposure categories and exposure situations:

- Support information and awareness-raising initiatives.
- Facilitating technical dialogues and training courses.

2026-2030 STRATEGIC GOALS

AXIS 2: DEVELOP AND SUPPORT RADIOLOGICAL PROTECTION APPROACHES IN NUCLEAR INSTALLATIONS



Management and optimisation of radiological protection during the design, operation and decommissioning of nuclear facilities:

- Contribute to the development of methods and tools.
- Collect and analyse feedback from national and international sources.
- Contribute to the identification of radiological protection issues associated with new reactor types and their applications.
- Participate in the development of practical guides and provide support for their implementation.
- Take part in training and awareness-raising activities on radiological protection for professionals.



Contribute to reflections on the management of radioactive materials and waste:

- Examine the management of radioactive materials in the context of the principles of the circular economy.
- Contribute to the implementation of radiological protection for workers and the public associated with the design and operation of radioactive waste storage and disposal facilities.
- Contribute to reflections on the future of sites with nuclear facilities undergoing decommissioning.



Contribute to the feedback analysis on the management of radioactive discharges from nuclear facilities and on environmental monitoring methods:

- Collect and analyse national and international data on radioactive discharges from facilities.
- Review regulatory frameworks and international standards.
- Compare radioactive discharges treatment methods.
- Analyse methods and contribute to the follow-up of developments in environmental radioactivity monitoring.

2026-2030 STRATEGIC GOALS

AXIS 3: DEVELOP AND SUPPORT RADIOLOGICAL PROTECTION APPROACHES FOR EMERGENCY AND EXISTING EXPOSURE SITUATIONS

MANAGEMENT OF EMERGENCY AND POST-ACCIDENT SITUATIONS



Collect and analyse experience:

- Analyse the challenges of managing waste and materials resulting from decontamination actions following the Fukushima accident.
- Analyse the risk management approaches for major industrial accidents.
- Draw lessons learned in terms of resilience and sustainable development.



Support institutional and local stakeholders' preparation for the management of emergency and post-accident situations:

- Raise awareness of the risks among local stakeholders and identify the regional challenges for post-accident management.
- Contribute to the development of tools that meet the socio-economic challenges of the territories.
- Contribute to the reflection on the role and methods of implementing citizen-led measurements.



Contribute to reflections on radiological risk management in the context of armed conflict situations and malicious acts:

- Analyse the specific radiological protection issues associated with these situations.
- Contribute to reflections on the relevance, selection and implementation of protective actions.
- Support training and awareness-raising initiatives to prepare for the management of such situations.

MANAGEMENT OF CONTAMINATED SITES AND SOILS



Contribute to reflections on the implementation of the radiological protection system for the management of contaminated sites and soils.



Analyse the management approaches for sites contaminated with non-radioactive substances.

MANAGEMENT OF RADON EXPOSURES



Support initiatives to raise awareness and develop skills in radon exposure management.



Contribute to reflections on indicators of the effectiveness of corrective actions.

NETWORK COORDINATION

INFORMATION SYSTEM ON OCCUPATIONAL EXPOSURE

ISOE

Created in 1992 by the Nuclear Energy Agency (NEA) of the OECD and co-sponsored by the International Atomic Energy Agency (IAEA) since 1993, ISOE is an international network of nuclear power plants operators and national radiation protection authorities. Its objective is the improvement of occupational radiological protection optimisation. The CEPN is the European Technical Centre of the system.

isoe-network.net

EUROPEAN ALARA NETWORK

EAN

The EAN network, created in 1996, is conducted by a group of twenty experts who represent the European radiation protection authorities, research organizations and nuclear industrial operators. The objective of this network is to share experience and produce recommendations regarding the practical application of radiological protection optimization in all exposure situations of both the workers and the public. The CEPN coordinates the network.

eu-alara.net

FEEDBACK AND EXPERIENCE FROM RADIOLOGICAL INCIDENTS

RELIR

Initiated in 2001 by the CEPN and the French Society of Radiation Protection (SFRP), the RELIR system gathers and make available events analysis relevant to the training of workers and prevention. The CEPN coordinates the network.

reilir.cepn.asso.fr

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

NERIS

Created in 2010, the NERIS Platform gathers about sixties organizations, all involved is the preparation and management of nuclear and radiological accidental situations. Its mission is to conduct a dialog forum and to favour methodological developments in this particular field. The CEPN is in charge of the platform's technical secretariat and leads some working groups.

eu-neris.net

CEPN

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