

The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management

An overview



"The Convention fosters transparency and public confidence, enabling Member States to use nuclear energy and its applications to achieve some of their most important priorities and to address some of their biggest challenges, including in the areas of health, energy, food and the environment."

Rafael Mariano Grossi

Director General, IAEA,
and the Depositary of the Joint Convention

"All countries that utilise nuclear technology and applications have a responsibility to develop and implement integrated radioactive waste management strategies — with disposal as an end point — to protect the public and the environment. In the process of implementation, the Joint Convention will further the countries' efforts to strengthen their national framework, through an effective regulatory system and the establishment of a national waste management programme."

Lydie Evrard

Deputy Director General – Head of the Department
of Nuclear Safety and Security, IAEA, and
Secretary of the Joint Convention

What is the Joint Convention?

The Joint Convention is the only international legally binding instrument to address, on a global scale, the safety of spent fuel and radioactive waste management, from their generation to disposal.

The Joint Convention is relevant not only to States with nuclear power programmes, but also to those implementing other peaceful uses of nuclear applications in medicine, industry, agriculture, research, and education in which radioactive waste is generated.



Safety of spent fuel and radioactive waste management

Nearly all countries generate radioactive waste, either from the production of electricity in nuclear power plants or from practices such as medical diagnosis and treatment, industrial applications like non-destructive testing, agricultural uses of radiation-based techniques for improving yield and pest control, research and education activities in areas such as irradiation of tissue samples in clinical research or irradiation of samples in order to investigate their physical or chemical properties.

Countries operating nuclear reactors generate spent fuel. Some countries consider it a

resource; others consider it as radioactive waste. In either case, its safe management should be ensured.

The Joint Convention contributes significantly to the safety of spent fuel and radioactive waste management. The Contracting Parties demonstrate commitment to apply stringent safety measures, prepare a National Report that is submitted for review by all other Contracting Parties. The active participation of Contracting Parties in the Review Meetings is a testament to their commitment and willingness to collaborate.





Benefits of joining the Joint Convention

- Help to foster an international approach to spent fuel and radioactive waste management and sharing expertise in these areas.
- Assure the public that national arrangements for spent fuel and radioactive waste management conform to international safety standards.
- Increase opportunities to receive assistance, in the case of a country having limited resources to improve its infrastructure to enhance safety of spent fuel and radioactive waste management.

“Being a party to the Joint Convention demonstrates a country’s commitment to highest safety standards and gives a possibility to receive unbiased feedback to the country’s policy and strategy of radioactive waste management. You might not have answers to all of the challenges that country is facing in radioactive waste management issues, but there is a great chance that you will receive good advice during the Joint Convention meetings that might take you several steps forward in finding a solution.”

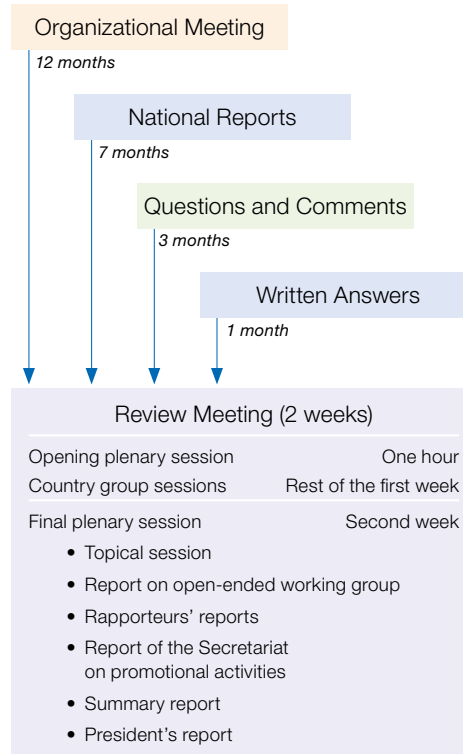
Meelis Münt

Secretary General of the
Estonian Ministry of the Environment

How does it work?

The Joint Convention is an ‘incentive’ convention that seeks to promote a high level of safety for the management of spent fuel and radioactive waste through a peer review process every three years.

- Contracting Parties submit to all other Contracting Parties National Reports on how they meet their obligations under the Convention through the secure and restricted database of the Joint Convention.
- Contracting Parties seek clarification on the National Reports of other Contracting Parties through a system of written questions and answers provided through the secure and restricted database of the Joint Convention.
- Contracting Parties present and discuss their National Reports during the Review Meeting in Country Group sessions.



Information exchange fostered by review meetings can be especially beneficial for countries that have fewer expertise in ensuring safety of spent fuel and radioactive waste management. Countries with major nuclear programmes also benefit from peer reviews, which provide independent and objective assessments of national safety practices.

“The peer review process has provided Ghana with an opportunity to learn from countries with advanced nuclear programmes. It has given important insight into the strengths and weaknesses of our overall radioactive waste management programme.”

Benjamin Nyarko
Director General of
Ghana's Atomic Energy Commission

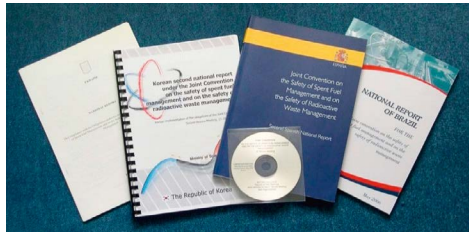
Review Meeting and their outcomes

The Review Meetings provide the opportunity to compare and discuss challenges that arise in implementing the obligations set out in the Joint Convention.

Constructive exchanges and knowledge sharing are conducted in an open and frank manner.

Each Review Meeting contributes further to achieving and maintaining a high level of safety, in spent fuel and radioactive waste management.

The outcome of Review Meetings, including overarching issues and recommendations, are contained in the Summary Report, publicly available on the [Joint Convention website](#).



Have the Joint Convention and its peer review process improved safety?

The Contracting Parties affirm that the review meetings and peer review process facilitate the sharing of regulatory and safety practices among Contracting Parties, leading to increased awareness of spent fuel and radioactive waste management and, in turn, increasing the safety. The main reasons are voiced below:

- The preparation of the National Report contributes to the self-assessment of all involved parties.
- The Contracting Parties take part in the review process, ask and answer questions, and make suggestions for improvements.
- Constructive exchanges and knowledge sharing between Contracting Parties lead to increased awareness of radioactive waste and spent fuel management.
- The peer review process demonstrates a country's commitment to waste safety and helps to gain public confidence.
- Participation in the Joint Convention provides opportunities for technical collaboration and assistance between Contracting Parties.

Status of Contracting Parties

The number of Contracting Parties has been increasing over the years. Notwithstanding, Contracting Parties strongly believe that efforts should be pursued to accelerate this trend in the future, for the purpose of strengthening the safety of spent fuel and radioactive waste management worldwide.

As of February 2024, there were 90 Contracting Parties, with two Signatory States still to ratify the Convention.

The current status can be found at:

www.iaea.org/sites/default/files/22/06/jointconv_status.pdf



“The Joint Convention provides a venue to identify and highlight international best practices. It provides a peer review process every three years that enables Contracting Parties to both assess their spent fuel and radioactive waste management regimes and to learn from the best practices and lessons learned of other countries.”

US Joint Convention Team

The Joint Convention
in more detail

Background and objectives

Background

The Convention was adopted on 5 September 1997 at a diplomatic conference convened by the IAEA in Vienna.

The Convention was opened for signature on 29 September 1997 and entered into force on 18 June 2001.

Objectives

- Achieve and maintain a high level of safety worldwide in spent fuel and radioactive waste management.
- Ensure that there are effective defences against potential hazards in the course of such activities.
- Prevent accidents with radiological consequences and mitigate their consequences should they occur during any stage of spent fuel or radioactive waste management.

Scope of application

- Spent fuel arising from the operation of civilian nuclear reactors
- Radioactive waste arising from civilian applications
- Uranium mining and milling wastes
- Discharges from regulated activities
- Specific provisions on disused sealed sources

Structure of the Convention

The Joint Convention combines two distinct subject matters: (i) the safety of spent fuel management, and (ii) the safety of radioactive waste management, in a joint structure.

The structure of the Convention is as follows:

Objectives, definitions and scope of Application (Articles 1 to 3)

Specific safety provisions:

- Articles 4 to 10:
Safety of Spent Fuel Management
- Articles 11 to 17:
Safety of Radioactive Waste Management

General safety provisions (Articles 18 to 26)

Miscellaneous provisions (Articles 27 and 28)

Peer review process (Articles 29 to 37)

Final clauses and other provisions (Articles 38 to 44)

Main provisions of the Convention

Specific safety provisions

The Convention contains separate articles on spent fuel and radioactive waste management (Articles 4 to 17) in a parallel structure on:

- General safety requirements
- Existing facilities
- Siting of proposed facilities
- Design and construction of facilities
- Assessment of safety of facilities
- Operation of facilities
- Disposal of spent fuel/institutional measures after closure

General safety provisions

The general safety provisions apply to both spent fuel and radioactive waste management (Articles 18 to 26) and contain articles on:

- Legislative and regulatory framework
- Establishment of a regulatory body
- Responsibility of the licence holder
- Human and financial resources
- Quality assurance
- Operational radiation protection
- Emergency preparedness
- Decommissioning

Miscellaneous provisions

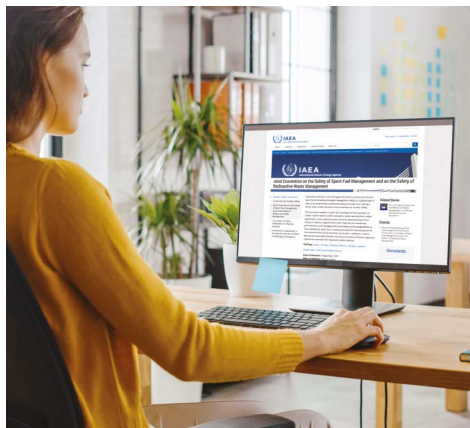
- Transboundary movement (Article 27)
- Disused sealed sources (Article 28)

Peer review process

- Review Meetings (Article 30)
- Extraordinary Meetings (Article 31)
- Reporting (Article 32)
- Attendance (Article 33)
- Summary Reports (Article 34)
- Languages (Article 35)
- Confidentiality (Article 36)
- Secretariat (Article 37)

The procedures governing the conduct of the Review Meetings of the Contracting Parties, the reporting obligations of the Contracting Parties, as well as the duties of the Secretariat of the Convention are supported by guidance prepared by the Parties contained in IAEA information circulars: INFCIRC/602, INFCIRC/603 and INFCIRC/604.

The first of these documents specifies rules of procedure and financial rules, the second gives guidance on how the review process should be managed, and the third describes what should be contained in National Reports.



Are there any costs involved?

Any costs would be related to preparation of the National Report, translation of this report into English, if necessary, and participation in the meetings of Contracting Parties.

Connection to other international legal instruments

- The [Convention on Nuclear Safety](#) also addresses spent fuel and radioactive waste managed at nuclear power plants.
- The [Code of Conduct on the Safety and Security of Radioactive Sources](#) also addresses the management of disused sealed sources.

The IAEA serves as the Secretariat for the Joint Convention

For more information, please contact the Joint Convention Coordinator at:

jointconvention@iaea.org

The Joint Convention home page offers a comprehensive overview of information circulars, past reports and the current status of the Convention on:

goto.iaea.org/JointConvention

In addition, a dedicated secure web page allows Contracting Parties to easily submit their National Reports, exchange questions and answers to their reports, and access a great variety of documents related to all previous meetings organized under the Joint Convention.





