

Legal

International Legal Framework for Nuclear Safety

SUMMARY

- The fundamental safety objective is to protect people and the environment from the harmful effects of ionizing radiation.
- Nuclear safety aims to achieve proper operating conditions, to prevent accidents and to mitigate consequences if an accident occurs.
- The international legal framework for nuclear safety was put into place following the Chernobyl accident and consists of both legally and non-legally binding instruments. The framework was further strengthened after the Fukushima-Daiichi accident through, inter alia enhancing the peer review process in the safety related conventions, including the practical arrangements underpinning the emergency conventions (the Convention on the Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency).
- The IAEA assists Member States in adhering to and implementing the relevant international legal instruments, including in the area of nuclear safety.

INTRODUCTION

The fundamental safety objective to protect people and the environment has to be achieved without unduly limiting the operation of facilities or the conduct of activities. Nuclear safety measures aim to ensure that facilities are in operation and that activities are conducted to achieve the highest standards of safety. The global nuclear safety regime provides a framework for conducting activities related to the peaceful uses of nuclear energy and ionizing radiation.

MULTILATERAL TREATIES

Convention on Early Notification of a Nuclear Accident

In 1986, following the Chernobyl nuclear power plant accident, a mechanism for rapid information exchange was established under the IAEA auspices by way of the Convention on Early Notification of a Nuclear Accident



Rafael Mariano Grossi, IAEA Director General, hosts an annual Treaty Event for Member States to deposit instruments of ratification or accession to international treaties under the auspices of the IAEA.

(Photo: D. Calma/IAEA)

(Early Notification Convention). The Early Notification Convention applies in the event of an accident in a State Party from which a release of radioactive material occurs or is likely to occur and which has resulted or may result in an international transboundary release that could be of radiological safety significance to another State. The State Party must directly or through the IAEA notify States, which are or may be physically affected, of the accident, its nature, the time of its occurrence and its exact location. In addition, States Parties may voluntarily report any type of nuclear accident to minimize its radiological consequences.

Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency

The Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (Assistance Convention), was also adopted in 1986. The Assistance Convention strengthens the international response to a nuclear accident or radiological emergency, irrespective of its cause, by establishing an international framework to facilitate prompt requests for and provision

of assistance in the event of a nuclear accident or radiological emergency and by promoting, facilitating and supporting cooperation between States Parties to that end. When assistance is requested, the State Party must promptly decide and notify the requesting State Party, directly or through the IAEA, whether it is able to render the assistance requested and regarding the scope and terms of the assistance that might be rendered.

The aforementioned conventions are supplemented by relevant IAEA Safety Standards, most importantly the Safety Requirements on Preparedness and Response for a Nuclear or Radiological Emergency (GSR Part 7), as well as by a number of additional mechanisms and arrangements, including the Operations Manual for Incident and Emergency Communication (EPR-IEComm 2019), Response and Assistance Network (EPR-RANET 2018) and the Joint Radiation Emergency Management Plan (EPR-JPLAN 2017).

Convention on Nuclear Safety

The cornerstone of the international nuclear safety framework is the Convention on Nuclear Safety (CNS), which was adopted in 1994. It is the first legally binding international treaty to address the safety of nuclear installations, and it seeks to ensure that such installations are operated in a safe, regulated and environmentally sound manner. The CNS applies to the safety of nuclear installations, meaning land-based civil nuclear power plants, under a Contracting Party's jurisdiction. It also

covers such storage, handling and treatment facilities for radioactive materials that are on the same site and directly related to the operation of a nuclear power plant. The CNS is based on the common interest to achieve higher levels of nuclear safety, developed and promoted through "review meetings" held every three years, where Contracting Parties submit reports on the implementation of their obligations for "peer review." In addition, Contracting Parties may ask questions and provide comments on other Parties' reports in writing before the review meeting.

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

The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (Joint Convention), which was adopted in 1997, is the first legally binding international treaty on the safety of spent fuel management and radioactive waste management. It represents a commitment by Contracting Parties to achieve and maintain a high level of safety in these areas. The Joint Convention applies to (i) the safety of spent fuel management when the spent fuel results from the operation of civilian nuclear reactors, (ii) the safety of radioactive waste management when the radioactive waste results from civilian applications and (iii) certain discharges. The Joint Convention has a similar structure as the CNS and also applies the "peer review" mechanism.

THE EARLY NOTIFICATION CONVENTION AND THE ASSISTANCE CONVENTION

By joining these conventions, States may benefit from the rapid provision of information and a system of prompt assistance in the event of a nuclear or radiological emergency, which enables them to implement appropriate national emergency measures and to mitigate the consequences of such nuclear or radiological emergency.

Joining these conventions also contributes to a broader and stronger international emergency response capability, which may minimize the consequences of nuclear and radiological emergencies and protect life, property and the environment against the effects of radioactive releases.

BENEFITS 0

THE CONVENTION ON NUCLEAR SAFETY

All States, including those who do not have or are not planning nuclear power programs, have an interest in ensuring that those in the vicinity of their territory, are implemented. This Convention affords all Contracting Parties the opportunity to submit reports submitted by Contracting Parties with nuclear power plants. Non-nuclear countries may learn about nuclear power plant safety discussions at the review meetings.

As the review process creates an opportunity for peer review, it is especially beneficial to the Contracting Parties with limited resources. Additionally, by adhering to the CNS, it may increase the political and public level of the safety measures. This leads to increased political and public support for the development

STRENGTHENING THE GLOBAL NUCLEAR SAFETY REGIME FOLLOWING THE FUKUSHIMA-DAIICHI ACCIDENT

The ultimate responsibility for nuclear safety within a State rests entirely with that State, however, international cooperation plays a vital role. Following the Fukushima-Daiichi accident in 2011, important steps were taken, in accordance with the IAEA Action Plan on Nuclear Safety, to enhance the IAEA's preparedness capabilities, emergency communication, international assistance, and inter-agency response coordination and peer reviews of national emergency preparedness and response. The IAEA's role was effectively strengthened with regard to notification, public information, including analysis of available information and prognosis of possible scenarios, provision of assistance and coordination for the inter-agency response.

LEGALLY NON-BINDING INSTRUMENTS

The Code of Conduct on the Safety and Security of Radioactive Sources, which was published in 2001 and revised in 2003, aims to help States achieve and maintain a high level of safety and security of radioactive sources throughout their life cycle. It provides guidance on the development and implementation of national policies, laws and regulations, and on fostering international cooperation, with respect to radioactive sources that may pose a significant risk to individuals, society and the environment. States are encouraged to express political



The global nuclear safety regime provides a framework for the peaceful uses of nuclear energy and ionizing radiation. Nuclear safety measures ensure that activities are conducted to achieve the highest standards of safety.

(Photo: D. Calma/IAEA)

commitment to follow the guidance set forth in the Code of Conduct in writing to the Director General of the IAEA. The Code of Conduct is supplemented by two guidance documents: one on the Import and Export of Radioactive Sources, which was published 2005 and revised in 2012, and one on the Management of Disused Radioactive Sources, which was published in 2018.

F JOINING...

ETY

re not considering the development of nuclear at States with nuclear power programs, particularly nenting a high level of nuclear safety. The CNS o review the national implementation reports ower programs and assures that national ants conform to international standards. In addition, programmes and emergency preparedness through

r experience sharing and collective learning, it is lanning to embark on a nuclear power programme. ease assistance opportunities for those Contracting cture development needs, as well as awareness at res applied to nuclear installations and to gain t of a nuclear power programme.

THE JOINT CONVENTION

It is in the interest of all States that sound policies and practices are implemented to ensure the safety of spent fuel and radioactive waste management.

Similar to the CNS, information exchange fostered by peer review meetings can be especially beneficial for countries that have less expertise in ensuring safety of spent fuel and radioactive waste management. Contracting Parties with major nuclear programmes also benefit from peer reviews, which promote transparency and provide independent and objective assessments of national safety practices. Additionally, the peer review meetings contribute to the sharing of regulatory and safety practices, leading to increased awareness of spent fuel and radioactive waste management.

In addition, the objective of the Code of Conduct on the Safety of Research Reactors, which was adopted in 2004, is to achieve and maintain a high level of safety in research reactors by strengthening the international nuclear safety arrangements for civil research reactors. It sets parameters for the management of research reactor safety and provides guidance to governments, regulatory bodies and operating organizations for the development and harmonization of the relevant policies, laws and regulations.

The IAEA's Statute authorizes the IAEA to adopt the IAEA Safety Standards for protection of health and minimization of danger to life and property. These are standards that the IAEA must apply to its own operations and that States can apply through their national regulations. The IAEA Safety Standards Series comprises Safety Fundamentals, General and Specific Safety Requirements, as well as a collection of Safety Guides. The IAEA also plays a central role in helping countries to ensure that radioactive material is transported safely, both nationally and internationally. In 1961, the IAEA published its first Regulations for the Safe Transport of Radioactive Material, which have been reviewed and regularly updated over the past 60 years and which form the basis of international modal regulations established by other United Nations bodies, e.g. the International Maritime Organization and the International Civil Aviation Organization.

IAEA LEGAL AND TECHNICAL ASSISTANCE

The IAEA's legislative assistance programme supports its Member States in assessing and revising their national legislation to comply with the obligations arising from the international instruments to which they are party or which they intend to join. When providing legislative assistance, the Agency promotes a comprehensive approach, covering all aspects of nuclear law, including nuclear safety, security, safeguards and liability for nuclear damage. For nuclear safety, support is provided in drafting and revising national legal provisions on

facilities and activities related to the nuclear fuel cycle and other elements of an adequate national legal framework for nuclear safety.

The IAEA also facilitates Member States' adherence to and implementation of international instruments in the area of nuclear safety through advisory services, such as the Integrated Regulatory Review Service (IRRS), Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation (ARTEMIS) and Emergency Preparedness Review (EPREV) Service.

AREAS WHERE MEMBER STATES MAY BENEFIT FROM IAEA SUPPORT

1. Enhancing their knowledge of the legal framework for nuclear safety, including raising awareness of the benefits of joining the key international legal instruments, through participation in IAEA legislative assistance activities.
2. Availing themselves of the IAEA legislative assistance programme to gain a better understanding of the elements of an adequate national nuclear legal framework, including in the area of nuclear safety.

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