

# Technical Meeting on the Safety Case for All Radioactive Waste Management Activities and Facilities

IAEA Headquarters Vienna, Austria

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## **Information Sheet**

### Introduction

The International Atomic Energy Agency (IAEA) has a long history of successful projects focused on the safety of predisposal management of radioactive waste and the disposal of radioactive waste in boreholes, shallow land burial, and geologic disposal. Historically, the need was perceived to standardize the steps and methods for conducting safety assessments. Subsequent projects flushed out details of the safety assessment methodology. Recognizing that safety is not merely a numerical value or a quantity, as one of the outcomes of safety assessment, led to the development of the Safety Case concept. However, this concept required further definition, including the identification of its components, its link to safety assessment, the context in which it should be used throughout the siting and development of disposal facilities, and how it can guide programmes and facilitate communication with stakeholders.

Safety cases must be tailored to meet the specific needs of different radioactive waste management facilities and activities. Previous projects have identified common elements that enhance confidence and support decision-making, such as:

- The evolution of a safety case to support critical decision-making throughout the lifecycle of a facility,
- The roles of the regulator, implementer and government in effectively building confidence and implementing a safe system for radioactive waste management,

• The importance of safety margins, defence in depth, potential exposure and optimisation for building confidence.

The previous projects have independently made significant advances in the development of safety cases for different types of radioactive waste management facilities; however, they have typically considered these facilities separately (e.g., storage, near surface, borehole and geological disposal). The new goal is to integrate these experiences and establish a forum for continuous dialogue and exchange. This forum will emphasise the integration across different facilities and activities while focusing on using the safety case to build confidence and inform decision-making.

The IAEA has set out a framework of internationally agreed standards for nuclear safety, radiation protection, transport and radioactive waste management. As stated in SSG-23 and GSG-3, a safety case includes: a safety case context, the safety strategy, the system description, safety assessment, limits, controls and conditions, iteration and design optimization, management of uncertainty, and integration of safety arguments. The additional aim is to review and discuss the current general content of a safety case and safety assessment to ensure their ongoing validity.

The project will help inform the application of the IAEA safety standards by providing foundational material that clarifies requirements and explores practical considerations common to safety cases for predisposal and near-surface, geological, and borehole disposal facilities. A key focus will be on how to utilise the safety case to build confidence among all stakeholders and support decision-making throughout the lifecycle of waste management and disposal facilities.

## **Objectives**

The purpose of this meeting is to launch the new Forum on the Safety Case for All Radioactive Waste Management Activities and Facilities, to identify and confirm in more detail Member States' interests in this area, to finalize the terms of reference, and to define a programme of work and working methodology (e.g. working groups, sequence and forms of meetings, etc.) for the forum for the next three years (2026–2028).

Radioactive waste management is an activity that attracts a lot of attention and is often associated with high levels of concern for members of the public. This high level of attention has led to high expectations and a strict focus on compliance to protect human health and the environment. The safety case plays a critical role in building confidence in the safety of activities related to the management of radioactive waste. This project will explore how the safety case can be utilized more effectively to build confidence among all decision-makers and stakeholders, including the public and its involvement, in the safety of radioactive waste management, while highlighting the robust levels of protection that are expected and implemented in radioactive waste management activities.

Safety cases evaluate a range of different scenarios to build confidence in the safety of conceptualisation, construction, operations, closure and post-closure. These scenarios do not aim to predict the future but rather to illustrate possibilities that may, or may not, occur in the future, in normal, or non-normal conditions, as well as in extreme conditions (e.g. "what-if" scenarios).

Some scenarios may have a higher likelihood of occurring than others. Pre-disposal facilities are focused on events in real time during construction and operations (i.e., the near future), while disposal facilities need to address events both during construction and operations in the near future, as well as time frames after closure hundreds and thousands of years into the far future.

Safety cases must be adapted to the specific needs of different radioactive waste management facilities and activities, but many common elements that contribute to confidence building and decision-making can be explored. The project will also consider such potential common elements.

The specific objectives of the meeting are to enable participants to discuss and finalize the existing draft Terms of Reference for the new project including the establishment of Working Groups, make presentations on topics relevant to the current status of safety cases for different radioactive waste management activities and facilities, and to identify topics and themes that require discussion and potentially further work within the Forum's Working Groups.

The Forum will provide support to IAEA Member States according to their level of advancement in developing safety cases for their own facilities and activities. For example, some countries may seek assistance in developing safety cases for early phases of disposal, while others may be more interested in the later phases. Other Member States could benefit from sharing experience in the development of safety cases for storage facilities. Therefore, by establishing a forum where demonstration of safety is addressed for all facilities and activities at all steps of their development, all Member States will be offered comprehensive support ensuring they can meet the needs for their respective programmes, regardless of their current status in radioactive waste management development.

# **Target Audience**

Member States are invited to designate suitably qualified and experienced participants for the meeting. Participants should be drawn from organizations responsible for the management of radioactive waste, from regulatory bodies, or from technical support, or other organizations, including non-governmental organizations, involved in activities related to the management of radioactive waste and the development, use and review of safety cases and safety assessments for radioactive waste in predisposal activities and all types of disposal facilities. Member States are strongly encouraged to identify suitable women participants.

## Working Language(s)

English

## Participation and Registration

All persons wishing to participate in the event have to be designated by an IAEA Member State or should be members of organizations that have been invited to attend.

In order to be designated by an IAEA Member State or invited organization, participants are requested to submit their application via the InTouch+ platform (<a href="https://intouchplus.iaea.org">https://intouchplus.iaea.org</a>) to the competent national authority (Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or organization for onward transmission to the IAEA by 1 August 2025, following the registration procedure in InTouch+:

- 1. Access the InTouch+ platform (https://intouchplus.iaea.org):
  - Persons with an existing NUCLEUS account can sign in to the platform with their username and password;
  - Persons without an existing NUCLEUS account can register here.
- 2. Once signed in, prospective participants can use the InTouch+ platform to:
  - Complete or update their personal details under 'Complete Profile' and upload the relevant supporting documents;
  - Search for the relevant event under the 'My Eligible Events' tab;
  - Select the Member State or invited organization they want to represent from the drop-down menu entitled 'Designating Authority' (if an invited organization is not listed, please contact InTouchPlus.Contact-Point@iaea.org);
  - If applicable, indicate whether a paper is being submitted and complete the relevant information;
  - If applicable, indicate whether financial support is requested and complete the relevant information (this is not applicable to participants from invited organizations);
  - Based on the data input, the InTouch+ platform will automatically generate the Participation Form (Form A) and/or the Grant Application Form (Form C);
  - Submit their application.

Once submitted through the InTouch+ platform, the application, together with the auto-generated form(s), will be transmitted automatically to the required authority for approval. If approved, the application, together with the applicable form(s), will automatically be sent to the IAEA through the online platform.

NOTE: The application for financial support should be made, together with the submission of the application, by 1 August 2025.

For additional information on how to apply for an event, please refer to the <u>InTouch+ Help</u> page. Any other issues or queries related to InTouch+ can be sent to <u>InTouchPlus.Contact-Point@iaea.org</u>.

Selected participants will be informed in due course on the procedures to be followed with regard to administrative and financial matters.

Participants are hereby informed that the personal data they submit will be processed in line with the Agency's Personal Data and Privacy Policy and is collected solely for the purpose(s) of reviewing and assessing the application and to complete logistical arrangements where required. The IAEA may also use the contact details of Applicants to inform them of the IAEA's scientific and technical publications, or the latest employment opportunities and current open vacancies at the IAEA. These secondary purposes are consistent with the IAEA's mandate. Further information can be found in the Data Processing Notice concerning the IAEA InTouch+ platform.

In addition to the registration already submitted through the InTouch+ platform, participants have to submit the abstract, together with the Form for Submission of a Paper (Form B), to the competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or organization for onward transmission to the IAEA not later than .

Submission of a paper should be confirmed, together with the submission of the main application via the InTouch+ platform, by .

## **Expenditures and Grants**

No registration fee is charged to participants.

The IAEA is generally not in a position to bear the travel and other costs of participants in the event. The IAEA has, however, limited funds at its disposal to help meet the cost of attendance of certain participants. Upon specific request, such assistance may be offered to normally one participant per country, provided that, in the IAEA's view, the participant will make an important contribution to the event.

The application for financial support should be made, together with the submission of the application, by 1 August 2025.

#### Venue

The event will be held at the Vienna International Centre (VIC) where the IAEA's Headquarters are located. Participants must make their own travel and accommodation arrangements.

General information on the VIC and other practical details, such as a list of hotels offering a reduced rate for IAEA participants, are listed on the following IAEA web page: https://www.iaea.org/events.

Participants are advised to arrive at Checkpoint 1/Gate 1 of the VIC one hour before the start of the event on the first day in order to allow for timely registration. Participants will need to present an official photo identification document in order to be admitted to the VIC premises.

#### Visas

Participants who require a visa to enter Austria should submit the necessary application to the nearest diplomatic or consular representative of Austria at least four weeks before they travel to Austria. Since Austria is a Schengen State, persons requiring a visa will have to apply for a Schengen visa. In States where Austria has no diplomatic mission, visas can be obtained from the consular authority of a Schengen Partner State representing Austria in the country in question.

## **Organization**

#### **Scientific Secretary**

#### Mr Armin Lagumdzija

Division of Radiation, Transport and Waste Safety Department of Nuclear Safety and Security International Atomic Energy Agency Vienna International Centre PO Box 100 1400 VIENNA AUSTRIA

Tel.: +43 1 2600 26770 Fax: +43 1 26007

Email: A.Lagumdzija@iaea.org

#### **Administrative Secretary**

#### Ms Dunja Kostadinovic

Division of Radiation, Transport and Waste Safety Department of Nuclear Safety and Security International Atomic Energy Agency Vienna International Centre PO Box 100 1400 VIENNA AUSTRIA

Tel.: +43 1 2600 Fax: +43 1 26007

Email: D.Kostadinovic@iaea.org

Subsequent correspondence on scientific matters should be sent to the Scientific Secretary/Secretaries and correspondence on other matters related to the event to the Administrative Secretary.