



# Technical Meeting on Strengthening Human and Organizational Resilience in Nuclear Organizations

**IAEA Headquarters, Vienna, Austria**  
and virtual participation via Microsoft Teams

**12-15 December 2023**

**Ref. No.: EVT2103882**

## Information Sheet

### Introduction

A system, regardless of its operating context, is commonly seen as resilient “... *if it can adjust its functioning prior to, during, or following events (changes, disturbances, and opportunities), and thereby sustain required operations under both expected and unexpected conditions.*” Within the system operating within the context of the nuclear operating plant, it can be more specifically defined as “*The ability to effectively respond to every-day, emergent, and emergency conditions to preserve nuclear fundamental safety functions and sustain or advance performance.*”

The concept of resilience is borne out of ever-rigorous pursuit of safety and safety culture, central to nuclear operations since the beginning of the nuclear industry. INSAG 10 ([Pub1013e web.pdf \(iaea.org\)](#)) and INSAG 27 ([P1779 web.pdf \(iaea.org\)](#)), IAEA’s seminal documents on achieving nuclear safety through defence in depth, respectively offer a layered and then a systemic view of managing risk and sustaining nuclear performance. Clearly, these layers of defence that consider the interplay and interrelationships of various systems, achieve a significant level of protection. Yet what remains elusive in the existing defence in depth models are the unexpected and unanticipated events like those experienced at Fukushima a decade ago and more recently with COVID-19, that highlight the powerful role adaptive capacity and resilience play in responding to the unforeseen. Given the ever-increasing levels of volatility, uncertainty, complexity, and ambiguity (VUCA) impacting not only the nuclear

industry but the world, it is necessary that the nuclear operating plant organization be well-equipped with the means and methods to strengthen resilient capability throughout the operating nuclear plant organization.

Resilience, as defined above, offers unique challenges within the nuclear organization particularly since nuclear technology must operate in as stable a state as possible while outside of the machine, humans navigate in dynamic environments comprised of complicated and complex situations. More, resilience is achieved differently depending on whether the context is stable or dynamic or any variations between. Therefore, it is advantageous to build and embed resilience into the nuclear operating plant systemically, so in a way that considers the interplay of the human, technological, and organizational factors that comprise it. Embedding resilience systemically and in a systematic way offers the operating nuclear plant the best chance of sustaining performance. everyday work, in emerging and unexpected situations acute shock- to preserve the fundamental safety functions necessary for sustained plant performance.

## **Objectives**

The purpose of the event is to share practices that effectively strengthen and maintain individual and collective human and organizational performance in both stable and emergent environments, with a focus on the importance of resilience in high-hazard environments.

Though resilient performance is most clearly called upon in acute shock and emergency situations, the focus of this event and the publication to which it links, emphasize the importance of resilience in everyday operations and during both expected and unexpected situations and conditions. Resilient capabilities are emergent. And as such, can be strengthened best in the context of “normal” operations. Therefore, a primary objective of this event, in addition to collecting feedback and input to the draft TECDOC publication titled ‘Strengthening Resilience in the Nuclear Operating Organization’, is to identify the many good practices that strengthen resilience in operating NPPs regularly and systemically.

## **Target Audience**

The target audience for this event include senior and mid-level managers and leaders of NPP owner/operating organizations. It may also be informative for: stakeholders of associated organizations such as manufacturers, vendors, contractors, and national and international industry partners; leaders from government organizations and the regulatory bodies; and organizations that operate other nuclear facilities and installations like waste storage and fuel processing plants.

## **Working Language(s)**

English

## Expected Outputs

The Expected Outputs are:

- Gather feedback on the draft publication titled '*Strengthening Resilience in the Nuclear Operating Organization*';
- Understand and recognize the characteristics and capabilities of resilience;
- Identify the good practices to make resilience work effectively in NPP operating organizations.

## Structure

This Technical Meeting will run five days duration. Days one thru three will be comprised of plenary sessions given by invited industry partners and experts, and selected paper submissions from Member State delegates. And Days 4 and 5 will more actively focus on information gathering and applied working sessions to identify and capture good practices that strengthen resilience within operating NPPs.

Through a mix of didactic and experiential activities, participants will fulfil the goals and objectives of this event. Activities to be applied include:

- Plenary presentations;
- Breakout discussions;
- Facilitated large group discussion;
- Applied working sessions.

## Topics

The IAEA encourages participants to submit their presentation for the following topics:

- Unique demonstrations of resilience within their organizations, what contributed to it and what were the observable and/or measurable outcomes;
- Unique ways their organization is strengthening resilience within their organization, and how it is evaluated, and measured;
- Unique proposals (e.g., approaches, programmes, etc..) of what an operating NPP could do to strengthen resilience.

## 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, participants are requested to send the **Participation Form (Form A)** to their competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) for onward transmission to the IAEA by **20 October 2023**. Participants who are members of an organization invited to attend are requested to send the **Participation Form (Form A)** through their organization to the IAEA by the above deadline.

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.

## Papers and Presentations

The IAEA encourages participants to give presentations on the work of their respective institutions that falls under the topics listed above.

Participants who wish to give presentations are requested to submit the presentation's title along with a very brief (2-3 sentence) description of their work. It will be reviewed as part of the selection process for presentations. It should be sent electronically to Ms Lisa Lande, the Scientific Secretary of the event (see contact details below), not later than **20 October 2023**. Authors will be notified of the acceptance of their proposed presentations by **27 October 2023**.

## Expenditures and Grants

No registration fee is charged to participants.

The IAEA does not generally 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 using the **Grant Application Form (Form C)**, which has to be stamped, signed and submitted by the competent national authority to the IAEA together with the **Participation Form (Form A)** by **20 October 2023**.

The application for financial support should be made, together with the submission of the application, by **20 October 2023**.

## 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:

[www.iaea.org/events](http://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.

## **IAEA Contacts**

### **Scientific Secretary**

#### **Ms Lisa Lande**

Division of Nuclear Power  
Department of Nuclear Energy  
International Atomic Energy Agency  
Vienna International Centre  
PO Box 100  
1400 VIENNA  
AUSTRIA

Tel.: +43 1 2600 26709/22801

Fax: +43 1 26007

Email: [L.Lande@iaea.org](mailto:L.Lande@iaea.org)

### **Co-Scientific Secretary**

#### **Mr Akira Kawano**

Division of Nuclear Power  
Department of Nuclear Energy  
International Atomic Energy Agency  
Vienna International Centre  
PO Box 100  
1400 VIENNA  
AUSTRIA

Tel.: +43 1 2600 22788

Fax: +43 1 26007

Email: [A.Kawano@iaea.org](mailto:A.Kawano@iaea.org)

## **Co-Scientific Secretary**

### **Ms Caroline Pike**

Division of Nuclear Installation 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

Email: [C.Pike@iaea.org](mailto:C.Pike@iaea.org)

## **Administrative Secretary**

### **Ms Inessa Kovalenko**

Division of Nuclear Power  
Department of Nuclear Energy  
International Atomic Energy Agency  
Vienna International Centre  
PO Box 100  
1400 VIENNA  
AUSTRIA

Tel.: +43 1 2600 22801

Fax: +43 1 26007

Email: [I.Kovalenko@iaea.org](mailto:I.Kovalenko@iaea.org)

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

## **Event Web Page**

Please visit the following IAEA web page regularly for new information regarding this event:

[www.iaea.org/events/2103882](http://www.iaea.org/events/2103882)

# Participation Form

## Technical Meeting on Strengthening Human and Organizational Resilience in Nuclear Organizations

**IAEA Headquarters Vienna, Austria, and virtual participation via Microsoft Teams**

**12-15 December 2023**

To be completed by the participant and sent to the competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA, or National Atomic Energy Authority) of his/her country for subsequent transmission to the International Atomic Energy Agency (IAEA) either by email to: [Official.Mail@iaea.org](mailto:Official.Mail@iaea.org) or by fax to: +43 1 26007 (no hard copies needed). Please also send a copy by email to the Scientific Secretaries [L.Lande@iaea.org](mailto:L.Lande@iaea.org), [A.Kawano@iaea.org](mailto:A.Kawano@iaea.org), [C.Pike@iaea.org](mailto:C.Pike@iaea.org) and to the Administrative Secretary [I.Kovalenko@iaea.org](mailto:I.Kovalenko@iaea.org).

Participants who are members of an invited organization can submit this form to their organization for subsequent transmission to the IAEA.

**Deadline for receipt by IAEA through official channels: 20 October 2023**

Family name(s): (same as in passport)		First name(s): (same as in passport)	Mr/Ms
Institution:			
Full address:			
Tel. (Fax):			
Email:			
Nationality:	Representing following Member State/non-Member State/entity or invited organization:		
Do you intend to prepare a presentation? Yes <input type="checkbox"/> No <input type="checkbox"/> Presentation Title:			
I plan to attend virtually: Yes <input type="checkbox"/> No <input type="checkbox"/>			

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.

# Grant Application Form

## Technical Meeting on Strengthening Human and Organizational Resilience in Nuclear Organizations

**IAEA Headquarters Vienna, Austria, and virtual participation via Microsoft Teams**

**12-15 December 2023**

To be completed by the applicant and sent to the competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA, or National Atomic Energy Authority) of his/her country for subsequent transmission to the International Atomic Energy Agency (IAEA) either by email to: [Official.Mail@iaea.org](mailto:Official.Mail@iaea.org) or by fax to: +43 1 26007 (no hard copies needed). Please also send a copy by email to the Scientific Secretaries [L.Lande@iaea.org](mailto:L.Lande@iaea.org), [A.Kawano@iaea.org](mailto:A.Kawano@iaea.org), [C.Pike@iaea.org](mailto:C.Pike@iaea.org) and to the Administrative Secretary [I.Kovalenko@iaea.org](mailto:I.Kovalenko@iaea.org).

**Deadline for receipt by IAEA through official channels: 20 October 2023**

Family name(s): (same as in passport)	First name(s): (same as in passport)	Mr/Ms:
Mailing address:	Tel.:	
	Fax:	
	Email:	
Date of birth (yy/mm/dd):	Nationality:	
I plan to attend virtually:	Yes <input type="checkbox"/> No <input type="checkbox"/>	

### 1. Education (post-secondary):

Name and place of institution	Field of study	Diploma or Degree	Years attended from	to

### 2. Recent employment record (starting with your present post):

Name and place of employer/organization	Title of your position	Type of work	Years worked from	to

### 3. Description of work performed over the last three years:

### 4. Institute's/Member State's programme in field of event:

**Date:**                      **Signature of applicant:** \_\_\_\_\_

**Date:**                      **Name, signature and stamp of Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority**