

# **Symposium on International Safeguards 2026**

**Monday 9 November 2026 - Thursday 12 November 2026**

**VIC**

## **Scientific Programme**

The Symposium themes will be aligned with the objectives listed on the conference main page: innovation, build resilience and converge.

The 2026 Symposium will follow a similar format to 2022, emphasizing interaction and dialogue, the exchange of practical experience, the generation of new ideas, and the meaningful involvement of industry and experts from emerging and adjacent domains with growing relevance to safeguards.

## **Theme 1: Innovation**

**Innovation** refers to the opportunities for leveraging new and still emerging technologies for verification approaches, methods and tools for increased effectiveness and efficiency of safeguards. The IAEA Department of Safeguards monitors and explores potential for scientific and technological advancements to enhance its capabilities. Most recently, its 2025 Emerging Technologies Workshop focused on artificial intelligence and in early 2026, the Agency is releasing updates to its Enhancing Capabilities for Nuclear Verification – Resource Mobilization Priorities and the Development and Implementation Programme 2026-2027 to mobilize support from Member State Support Programmes (MSSPs) and other partners for the advancement of its capabilities and strategic initiatives. In line with the most recent updates to departmental strategy as outlined in these documents, related topics of interest include:

Safeguards approaches and regulatory frameworks for novel nuclear technologies, including mobile, micro, small and /or modular reactors, nuclear propulsion, and fusion systems

Safeguards approaches and instrumentation for safeguarding enrichment plants and spent fuel

Innovative safeguards methods and techniques

Deployment of artificial intelligence, machine learning and advanced analytics

Approaches to data integration, management and governance

Robotics and other intelligent automation technologies

Advancements in geospatial, space-borne and other sensors

Untapped technologies not yet leveraged to safeguards purposes

Mechanisms for generating innovation in the safeguards' community

### **1.1 Safeguards approaches and regulatory frameworks for novel nuclear technologies, including mobile, micro, small and /or modular reactors, nuclear propulsion, and fusion systems**

### **1.2 Safeguards approaches and instrumentation for safeguarding enrichment plants and spent fuel**

### **1.3 Innovative safeguards methods and techniques**

### **1.4 Deployment of artificial intelligence, machine learning and advanced analytics**

### **1.5 Approaches to data integration, management and governance**

## **1.6 Robotics and other intelligent automation technologies**

## **1.7 Advancements in geospatial, space-borne and other sensors**

## **1.8 Untapped technologies not yet leveraged to safeguards purposes**

## **1.9 Mechanisms for generating innovation in the safeguards' community.**

# **Theme 2: Resilience**

**Resilience** refers to the capacity of the safeguards system to anticipate, adapt to and withstand emerging challenges while continuing to deliver credible and timely verification. In an era characterized by rapid technological change, expanding nuclear activities and associated verification workloads, and increasing geopolitical uncertainty, strengthening organizational resilience has become essential. The Symposium will explore innovative institutional approaches, advanced technologies and adaptive governance practices that support business continuity, agility and long-term organizational capacity. Related topics include:

Strategies for managing surges in verification activities in light of the growing interest in nuclear power and other applications

Strengthening organizational agility and resilience through effective change management

Fostering an anticipatory and responsive organizational culture to prepare for and adapt to changing demands and expectations

Remote data transmission, process monitoring and other technologies enabling continuity of safeguards in disruptions

Applying lessons learnt and best practices in risk management and continuity planning to overcome disruptions

Information security approaches that improve system resilience

Effective and efficient operational oversight and lifecycle management of AI tools

## **2.1 Strategies for managing surges in verification activities in light of the growing interest in nuclear power and other applications**

## **2.2 Strengthening organizational agility and resilience through effective change management**

## **2.3 Fostering an anticipatory and responsive organizational culture to prepare for and adapt to changing demands and expectations**

## **2.4 Remote data transmission, process monitoring and other technologies enabling continuity of safeguards in disruptions**

## **2.5 Applying lessons learnt and best practices in risk management and continuity planning to overcome disruptions**

## **2.6 Information security approaches that improve system resilience**

## **2.7 Effective and efficient operational oversight and lifecycle management of AI tools**

# **Theme 3: Shared Responsibility**

**Safeguards as a Shared Responsibility** reflects the cooperative nature of safeguards implementation. While the Agency holds the mandate and operational responsibility for safeguards, both effectiveness and efficiency of implementation depend on the active engagement of all stakeholders from facility designers and technology developers to operators, regulators and States. As new and emerging technologies reshape nuclear activities, they also challenge existing technical and regulatory frameworks, requiring greater cooperation and adaptability to ensure continued effectiveness of the safeguards system. Related topics of interest include:

Alignment of training and other capacity building support with State-identified priorities

Embedding sustainable training approaches within evolving institutional and human capacity contexts

Engaging the nuclear industry early in the design and planning phase ('safeguards by design')

Role of traditional and non-traditional partnerships

Adaptive governance and regulatory frameworks for managing disruptive technologies that could undermine safeguards (e.g., additive manufacturing, AI)

Frameworks for joint development and deployment of safeguards technologies.

Addressing stakeholder perceptions of IAEA safeguards

## **3.1 Alignment of training and other capacity building support with State-identified priorities**

## **3.2 Embedding sustainable training approaches within evolving institutional and human capacity contexts**

## **3.3 Engaging the nuclear industry early in the design and planning phase ('safeguards by design')**

## **3.4 Role of traditional and non-traditional partnerships**

**3.5 Adaptive governance and regulatory frameworks for managing disruptive technologies that could undermine safeguards (e.g., additive manufacturing, AI)**

**3.6 Frameworks for joint development and deployment of safeguards technologies**

**3.7 Addressing stakeholder perceptions of IAEA safeguards**