

# **Summary of Country Reports**

## **—Current Status of 12 FNCA Member States\*—**

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15<sup>th</sup> Workshop on Nuclear Security and Safeguards Project  
of Forum for Nuclear Cooperation in Asia (FNCA)

September 23, 2025

# Regulatory Authority

## Independence of Regulatory Agencies

- ◆ **Independent:** China (CAEA), Indonesia (BAPETEN), Japan (NRA), ROK (NSSC), Mongolia (Executive office of the NEC and Ministry of Industry and Mineral Resources, Division of Nuclear and Radiation Inspection) , [Singapore \(National Environment Agency\)](#)
- ◆ **Semi-Independent\*:** Bangladesh (BAERA), Kazakhstan (CAESC ME RK), Malaysia (AELB), Thailand (OAP), Viet Nam (VARANS)  
\*The regulatory agency is under a governmental body or ministry to which a nuclear promotion agency belongs
- ◆ **No Independent:** Philippines (PNRI)

### Recent Development

- Philippines: PhilAtom Bill endorsed to the [Office of the President for Signing of the President into law.](#)
- [The 2025 Atomic Energy Law](#) strengthens the legal status and independence of VARANS as the national regulatory authority for radiation and nuclear safety and security.

\* **Independent:** Australia (ARPANSA, ASNO)

# Safeguards (1)

## Implementation of International Treaties and Agreements

- Member of **NPT** (Nuclear Nonproliferation Treaty): **13/13** states
- **CSA** (Comprehensive Safeguards Agreement) in Force: **13/13** states (VOA is in force in China)
- **AP** (Additional Protocol) in Force: **12/13** states
- **IS** (Integrated Safeguards): **7/13** states

	NPT Member	CSA in Force	AP in Force	Integrated safeguards
Australia	✓	✓	12 Dec.1997	✓
Bangladesh	✓	✓	30 Mar. 2001	✓
China	✓	VOA in force	28 Mar. 2002	n/a
Indonesia	✓	✓	29 Sep. 1999	✓
Japan	✓	✓	16 Dec. 1999	✓
Kazakhstan	✓	✓	9 May 2007	✓
ROK	✓	✓	19 Feb. 2004	✓
Malaysia	✓	✓	(Signed: 22 Nov. 2005)	
Mongolia	✓	✓	12 May 2003	
Philippines	✓	✓	26 Feb. 2010	✓ * 1
Singapore	✓	✓	31 Mar 2008	✓
Thailand	✓	✓	17 Nov. 2017	
Viet Nam	✓	✓	17 Sep. 2012	* 2

\* 1 Philippines got Broader Conclusion from IAEA in May 2013 and implementing IS in 2017.

\* 2 Viet Nam got Broader Conclusion from IAEA in May 2015.

# Safeguards (2)

## Updates on Safeguards Implementation of 2025

### ◆ **Bangladesh** (as of Jan. 2023):

- Design information verification (DIV) and PIV were conducted by the IAEA at Rooppur Nuclear Power Plant (RNPP) Unit 1 & 2.
- IAEA Safeguards and SSAC Advisory services (ISSAS) were hosted by Bangladesh during March 2022.

### ◆ **China:** Submits safeguards reports annually to the IAEA by December each year for the two civilian nuclear facilities, the Shandong Shidao Bay 200MWe High-Temperature Gas-Cooled Reactor Pebble-Bed Module Demonstration Power Plant and Shaanxi Uranium Enrichment Plant that are placed voluntarily under IAEA safeguards. Routine IAEA inspection to Shidao Bay HTGCR Reactor and Shaanxi Uranium Enrichment Plant.

# Safeguards (3)

## Updates on Safeguards Implementation of 2025

- ◆ **Indonesia** (as of 2024): Safeguards routine inspection two times for each MBA (Pre PIV & PIV): RI-A, RI-B, RI-C, RI-D, RI-E, RI-F, RI-G (February to July 2024); Annual Safeguards Review Meeting with IAEA (4 July 2024); Additional Protocol inspection on government sponsored research activities related to nuclear fuel cycle.
- ◆ **Japan**: As a result of cooperation between the Government of Japan and the IAEA, the successful implementation of safeguards has brought the broader conclusion for 2024, first reached for the 2003; For Fukushima Daiichi Nuclear Power Plant, additional safeguards measures such as remote monitoring by surveillance cameras and radiation monitor have been applied to confirm no undeclared removal of nuclear material. The first fuel debris trial retrieval was completed in November 2024 and the second one was completed in April 2025.

# Safeguards (4)

## Updates on Safeguards Implementation of 2025

- ◆ **Kazakhstan:** Kazakhstan has completed the establishment of the Atomic Energy Agency and formed the Atomic Energy Regulatory and Control Committee. Technical meetings were held with the participation of leading experts from Working Group B of the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), a supplementary agreement on cooperation with the Japan Atomic Energy Agency (JAEA) was signed, and work is being carried out within the framework of the Framework Program for Cooperation between Kazakhstan and the IAEA for 2023-2028.

# Safeguards (5)

## Updates on Safeguards Implementation of 2025

- ◆ **ROK** (as of 2024): IAEA conducted a total of 108 inspections in 39 of the 47 MBAs in 2023, with a total of 351 Person-Days of Inspection (PDI). There were a total of 1,168 annual declarations and 4 quarterly declarations submitted in accordance with the Additional Protocol (AP). The IAEA verifies the content of these declarations through Complementary Access (CA) activities when necessary and conducted a total of 8 CA activities with 17 PDI to detect undeclared nuclear material and activities in the ROK in 2023. Additionally, 917 nuclear material accounting reports, including 268 Inventory Change Reports (ICR), 600 Physical Inventory Listings (PIL), and 49 Material Balance Reports (MBR) from 44 MBAs, were processed.

# Safeguards (6)

## Updates on Safeguards Implementation of 2025

### ◆ Malaysia:

- International Verification: Malaysia is committed to international safeguards, as demonstrated by the annual Physical Inventory Verification (PIV) inspections conducted by IAEA inspectors. The most recent inspection is held on 28 - 29 November 2024 confirmed that Malaysia is not misusing nuclear materials and that all materials are accounted for and used for peaceful purposes.
- International Cooperation and Readiness: Malaysia is also preparing for the ratification of the Additional Protocol to the Safeguards Agreement. To this end, a workshop was held with key ministries to address readiness issues. The country is also conducting training programs to build expertise and raise awareness among local stakeholders about the importance of adhering to international commitments.



# Safeguards (7)

## Updates on Safeguards Implementation of 2025

### ◆ Mongolia:

- Mongolia signed the Modified Small Quantity Protocol (mSQP) in December 2024 and officially submitted it to the IAEA. The initial report on nuclear material was submitted to the IAEA within 30 days, in accordance with the requirements of the Safeguards Agreement.
- Mr. Massimo Aparo, IAEA Deputy Director General, visited Mongolia on 26-27 May 2025 to hold consultations with the Ministry of Foreign Affairs and the Nuclear Energy Commission on safeguards implementation and future cooperation. He also visited the National University of Mongolia, delivered a lecture on the IAEA safeguards system, and engaged with students and researchers to promote non-proliferation and youth engagement.
- IAEA inspectors are planning to conduct an inspection in September.

# Safeguards (8)

## Updates on Safeguards Implementation of 2025

### ◆ Philippines:

- PRR1 and PRR1-SATER's Nuclear Material Accounting reports and AP declarations are submitted annually through the SAFEGUARDS DECLARATION PORTAL (SDP). Integration of Safeguards to the Regulatory Process (i.e. Licensing, Enforcement), performs at least six (6) domestic safeguards inspections and development of regulations for Safeguards . Import/Export Control of dual use items in the NSG list are monitored by the Dept of Trade and Industry- Strategic Trade Management Office and coordinates with PNRI in the AP DECLARATION.
- Harmonization of authorization process of the DTI-STMO and PNRI-Nuclear Regulatory Division/PhilATOM on the import requirements on nuclear material.
- Drafting of Safeguards Strategy with US DOE INSEP.
- Active participation in the Nuclear Energy Power-Inter Agency Committee (Sub-Committee 2 – Nuclear Safety, Safeguards, Security and Radiation Protection) alongside with Philippine Dept of Energy.

# Safeguards (9)

## Updates on Safeguards Implementation of 2025

### ◆ Singapore:

- Conducted domestic inspections on sites with nuclear material holdings and submit nuclear material inventory, import/exports to IAEA safeguards through the SDP.
- Engaged relevant stakeholders (e.g. Institutes of Higher Learning) to prepare for AP declarations and submitted annual and quarterly declarations through the SDP.
- Shared safeguards implementation experience at various platforms:
  - a) Webinar for International Safeguards Professionals: National Inspections at Locations Outside Facilities (LOFs) organised by the US DOE/NNSA (4 and 6 Feb 2025)
  - b) Brunei national workshop to raise awareness of safeguards agreements among stakeholder ministries of Brunei and key elements of preparation and implementation of the Additional Protocol, organised by the US DOE/NNSA (3-6 June 2025)
  - c) APSN Best Practices Guide on Domestic Inspections to document the best practices on domestic inspections (20-22 May 2025)
  - d) [Upcoming] IAEA webinar series on Domestic Inspection (30 Sep 2025)

# Safeguards (10)

## Updates on Safeguards Implementation of 2025

### ◆ Thailand:

- In 2024-2025, IAEA conducted 2 PIV/DIV activities at nuclear facilities and location outside facilities (LOF) in Thailand. Moreover, Domestic Inspections and Complementary access (CA) has also been conducted at declared location in Thailand.
- Under safeguards reporting obligations, Thailand has updated with 131 reports of nuclear facilities, 65 LOF reports in total under CSA; and 142 declarations in total under AP. There is also a strong cooperation between OAP, the Department of Foreign Trade and Thai Customs for sharing Safeguards information regarding commodities required to be declared under AP.
- Thailand was honored to serve as the Chair of Asia-Pacific Safeguards Network (APSN) from 2023-2024. The most recent Annual Meeting was held from 5 to 8 November 2024 in Krabi, Thailand, with the participation of 40 representatives from 14 countries. It was a privilege to welcome Mr. Massimo Aparo, the Deputy Director General and Head of the Department of Safeguards of the International Atomic Energy Agency (IAEA) as a distinguished guest at the event.

# Safeguards (11)

## Updates on Safeguards Implementation of 2025

### ◆ Viet Nam:

- In 2023, IAEA performed 2 CAs at locations with NFC related information. Under safeguards reporting obligations, Vietnam has updated with 137 reports of nuclear facilities, 115 LOF reports under CSA (2022); and 201 declarations under AP (2023). Up to 2024, the IAEA and RSA have been actively communicated for information and clarification under AP related activities.
- Continuous NNSA Webinars for International Safeguards Professionals (WISP) (2024);
- IAEA Webinar on safeguards assistance for states (SSAC, COMPASS, SBD); participants from VARANS, VINATOM participated in IAEA/JAEA scheduled training course on NMAC/SSAC;
- The new Law (2025) incorporates Viet Nam's obligations under the NPT, CSA, AP, and CPPNM Amendment, reinforcing the national legal basis for safeguards implementation and compliance with international commitments.

# Nuclear Security (1)

## Implementation of International Treaties and Conventions

- **CPPNM** (Convention on the Physical Protection of Nuclear Material): 12/13 states
- **CPPNM Amendment\***: 9/13 states
  - \*IAEA Recommendation INFCIRC 225/Rev5 consistent with the Amendment
- **Nuclear Terrorism Convention** (International Convention for the Suppression of Acts of Nuclear Terrorism): Ratification: 7 states, Accession: 2 state, Acceptance: 1 state, Signature: 3 states

	CPPNM	CPPNM Amendment	Nuclear Terrorism Convention
<b>Australia</b>	22 Oct 1987 in force	Ratification 17 Jul 2008	Ratification 16 Mar 2012
<b>Bangladesh</b>	10 Jun 2005 in force	Entry into force since 04 Jul 2017	Accession 07 Jul 2007
<b>China</b>	09 Feb 1989 in force	Ratification 14 Se. 2009	Ratification 08 Nov 2010
<b>Indonesia</b>	08 Feb 1987 in force	Ratification 27 May 2010	Ratification 19 March 2014
<b>Japan</b>	27 Nov 1988 in force	Ratification 17 Jun 2014	Acceptance 02 Oct 2007
<b>Kazakhstan</b>	02 Oct 2005 in force	Ratification 26 Apr 2011	Ratification 31 Jul 2008
<b>ROK</b>	08 Feb 1987 in force	Ratification 29 May 2014	Ratification 29 May 2014
<b>Malaysia</b>			Signature 16 Sep 2005
<b>Mongolia</b>	08 Feb 1987 in force	Preparing to join	Ratification 06 Oct 2006
<b>Philippines</b>	08 Feb 1987 in force	Ratified 16 June 2021	Signature 15 Sep 2005
<b>Singapore</b>	22 Oct 2014 in force	Acceptance 22 Oct 2014	Ratification 2 Aug 2017
<b>Thailand</b>	27 Mar 2018 in Force	Ratification 27 Mar 2018	Signature 14 Sep 2005
<b>Viet Nam</b>	03 Nov 2012 in force	Ratification 03 Nov 2012	Accession Sept 2016

# Nuclear Security (2)

## Updates on Nuclear Security Implementation of 2025

### ◆ Bangladesh(as of Jan. 2023):

- Bangladesh hosted an Expert Mission on Nuclear Security Detection Architecture in Dhaka from 24-27 February 2020. This event was organized as a part of scheduled activities under the Integrated Nuclear Security Support Plan (INSSP) for Bangladesh. IAEA expert as well as representatives from different organizations relevant to the implementation of nuclear security activities in the country such as Ministry of Science and Technology, Bangladesh Atomic Energy Regulatory Authority, Bangladesh Atomic Energy Commission, Nuclear Security and Physical Protection System Cell, Border Guards Bangladesh, Bangladesh Coast Guard, Bangladesh Customs, Nuclear Power Plant Company Bangladesh Limited, Bangladesh Police, Intelligent Agencies, etc. participated in the expert mission.
- ‘National Nuclear Security Policy’ is now on the approval process.
- Bangladesh is preparing to request for the International Physical Protection Advisory Service (IPPAS).
- The International Physical Protection Advisory Service (IPPAS) National workshop and IPPAS preparatory meeting were held during August 2022.

# Nuclear Security (3)

## Updates on Nuclear Security Implementation of 2025

### ◆ Bangladesh(cont.) (as of Jan. 2023):

- A research project, 'Factors that can influence culture for safety, organizational culture and human performance at nuclear and other facilities in Bangladesh' is ongoing under the IAEA Coordinated Research Project (CRP) '122004' entitled 'Organizational Culture Basis for Successful Performance in Nuclear Power Plants'. Actively participated all the RCM of this CRP. It is expected that the outcomes of this project will help to enhance the understanding of parameters related to and needed for improvement of organizational factors and human factors in the organization's culture for safety and security in Bangladesh.



# Nuclear Security (4)

## Updates on Nuclear Security Implementation of 2025

- ◆ **China:** Cyber Security Law released in Nov 2016; Nuclear Safety Law released in Aug 2017; Atomic Energy Law as a direct upper-level legislation of nuclear security has passed the approval process in 2025 and is scheduled to be implemented from January 15, 2026; Regulations on Nuclear Security under development; Center of Excellence on Nuclear Security (COE) came into operation in Mar 2016, to provide all-around support to the nuclear security governmental management and capacity building in China; Completed IAEA IPPAS mission in Sep. 2017; Signing the Agreement between the IAEA and CAEA concerning the designation of the CAEA as an IAEA collaborating Center in 2019. Cyber Security Guidance for Nuclear Facility released in 2019; Practical arrangement on cooperation on nuclear forensic with IAEA signed in 2020; Practical arrangement on cooperation on Nuclear Security of Major Public Event with IAEA signed in 2021; The Seminar on Building a Peaceful Home Together: Nuclear Technology Application in Public Security was held during the first China-ASEAN Forum on Peaceful Uses of Nuclear Technology in 2022. In 2024, the "International Atomic Energy Agency Nuclear Security Cooperation Center Annual Meeting" hosted by the International Atomic Energy Agency and organized by the National Nuclear Security Technology Center was held in Beijing.

# Nuclear Security (5)

## Updates on Nuclear Security Implementation of 2025

### ◆ Indonesia (as of 2024):

- Physical protection inspection of nuclear facilities (routine)
- Radioactive source security officers certification (routine)
- National Coordination Meeting on Nuclear Security (5 September 2024)
- Installation of “Indonesia Radiation Data Monitoring System”:
  - Installed at 33 locations;
  - Connected with IAEA’s International Radiation Monitoring Information System (IRMIS).
- Monitoring and maintenance of radiation portal monitors at major harbors:
  - Semarang Harbor (Central Java)
  - Makassar Harbor (South Sulawesi)
  - Bitung Harbor (North Sulawesi)
- BAPETEN also has a response team to be deployed to all over the country to handle a situation of radiation exposure escalation.

# Nuclear Security (6)

## Updates on Nuclear Security Implementation of 2025

### ◆ Indonesia (cont.) (as of 2024):

- Workshop Hosting:
  - US DoE-BRIN Workshop on Insider Threat Mitigation (22-24 July 2024)
  - US DoE-BAPETEN Workshop for Review on Cyber Security Regulation Draft (21-22 August 2024)
  - IAEA Regional Peer-to-Peer Workshop on Nuclear Forensics (26-30 August 2024)
  - WINS-BRIN Regional Workshop on Strengthening Security Culture: Operational Experience and key lessons learned (5-7 November 2024)
- Research Works:
  - Proliferation Resistance and Physical Protection Assessment of Proposed Nuclear Power Plants
  - IAEA Coordinated Research Project on Nuclear Security Implication of Counterfeit, Fraudulent, and Suspect Items (CFSI)
  - IAEA Coordinated Research Project on Nuclear Forensics Science to Bridge the Radiological Crime Scene to the Nuclear Forensics Laboratory

# Nuclear Security (7)

## Updates on Nuclear Security Implementation of 2025

- ◆ **Japan:** The new performance-based inspection system started in April 2020 in which security inspections are more focused on activities with higher security risks. This new inspection system allows for comprehensive oversight of licensees' nuclear security practices. Under this inspection system violations of the security plan of Kashiwazaki-Kariwa Nuclear Power Station were identified. Supplemental inspections were conducted to address these violations. Daily inspections for physical protection system for nuclear power plants started in April 2024 also under this inspection system. Regarding RI security, *Act on the Regulation of Radioisotopes, etc., and Enforcement Regulation of the Act* which took effect in September 2019, established a national framework in Japan for RI security. The NRA required approximately 450 operators to implement security measures and conducted on-site inspections at 450 sites by the end of 2024. ISCN organized an International Workshop on Nuclear Security for New Builds in Tokyo, August 2025. ISCN also received a visiting researcher from FNCA member country (Indonesia) for her research on nuclear forensics in 2024-2025.

# Nuclear Security (8)

## Updates on Nuclear Security Implementation of 2025

- ◆ **Kazakhstan:** NPP construction preparation – On August 8, 2025, initial work began on the nuclear power plant construction project in the village of Ulken (Almaty Region). Technical meeting with the Nuclear Safety and Radiation Protection Agency (ASNR) of France to review France's experience in ensuring nuclear and radiation safety at nuclear power facilities, a meeting with representatives of the United Nations Program on Disarmament, technical meeting with representatives of the Argonne National Laboratory (ANL, USA), as part of the work on the development and testing of low-enriched (LEU) high-temperature graphite fuel for the conversion of the IGRI research reactor, large-scale exercise "Kalkan-2025" — strengthening the civil protection system and preparedness for the introduction of nuclear energy.

# Nuclear Security (9)

## Updates on Nuclear Security Implementation of 2025

- ◆ **ROK** (as of 2024): ROK has steadily improved its Regulatory Standards and systems to enhance the completeness of physical protection regulations for nuclear facilities. . In 2023, the ROK conducted 61 physical protection reviews, including 5 international transportation protection plans, and performed 21 physical protection inspections as well as 99 inspections of nuclear material transport. Additionally, the country reviewed 39 drill plans and conducted 33 drill assessments across 11 nuclear facilities. Furthermore, the ROK strengthened its regulatory standards for access control to vital areas to address explosive threats. Since 2021, the ROK has been making efforts to respond to UAV threats, and in 2023, RF scanners and UAV detection and neutralization equipment were introduced at all headquarters. In 2023, KINAC took a proactive step by establishing the “Direction for Advancement of Drone Threat Protection Systems,” aimed at helping nuclear power plants secure and further strengthen their response systems to UAVs.

# Nuclear Security (10)

## Updates on Nuclear Security Implementation of 2025

### ◆ Malaysia:

- Malaysia is significantly enhancing its nuclear security based on recommendations from the IAEA's International Physical Protection Advisory Service (IPPAS). A key effort is the development of a Design Basis Threat (DBT) document. This document serves as a critical guide for nuclear facilities to establish robust security systems against a wide range of threats, including physical and cyber attacks.
- Workshops and engagement sessions involving multiple government agencies, such as the Ministry of Defense, Royal Malaysia Police, and the National Cyber Security Agency (NACSA), have been instrumental in gathering threat intelligence and finalizing the DBT. These efforts are also helping Malaysia establish its own national framework for nuclear threat assessment, a critical step that was not previously in place. The ultimate goal is to improve nuclear facility security and prevent the theft or sabotage of nuclear materials.

# Nuclear Security (11)

## Updates on Nuclear Security Implementation of 2025

### ◆ Mongolia:

- In November 2024, the State Great Khural of Mongolia approved the ratification of the 2005 Amendment to the Convention on the Physical Protection of Nuclear Material.
- On 25 April 2025, Ambassador Tsengeg Mijiddorj, Resident Representative of Mongolia to the IAEA, presented Mongolia's Instrument of Ratification for the Amendment to the Convention on the Physical Protection of Nuclear Material (CPPNM) to IAEA Director General Rafael Mariano Grossi during his official visit to the Agency headquarters in Vienna, Austria.
- In cooperation with the IAEA and the U.S. Department of Energy, a national training on the development of security plans for radioactive source facilities was held from 16 to 18 July 2024, involving 7 organizations that use radioactive sources and 10 government agencies.



# Nuclear Security (12)

## Updates on Nuclear Security Implementation of 2025

### ◆ Philippines:

- Philippines officially requested for an INSServ Mission in 2027 and accepted by the IAEA. Preparatory meeting schedule in 2026.
- Hosted IAEA Workshops (National Workshop on IPPAS, Regional Workshop on Radiological Crime-Scene Management).
- Deployment of PNRI Mobile Expert Support during the Feast of the Black Nazarene and during Holy Week (Holy Thursday and Holy Friday).
- Participated in the IAEA CRP on the Trade Facilitation.
- Hosted US DOE Workshops (Writeshop on Nuclear Safeguards Strategy, Writeshop on Nuclear Security Policy, NSDD Mobile Detection System Integration and Quality Assurance, ORS on packaging and Transport Security and Transport Security Regulations, Cybersecurity Fundamentals, US DOE Regulations Development for Security (NMAC and NM Transport).

# Nuclear Security (14)

## Updates on Nuclear Security Implementation of 2025

### ◆ Singapore:

- Established INSSP and its implementation plan in May 2024 and currently implementing the activities under the plan
- Assisted in drafting the ASEAN Regional Arrangement for Information Sharing on Transboundary Movement of Radioactive Materials which covers:
  - a) Import / export of radioactive material (IAEA Cat 1 & 2) amongst AMS.
  - b) Unauthorised shipment of radioactive material (IAEA Cat 1 to 5) amongst AMS.
- Regional arrangement tested at 4-country Nuclear Security Detection Exercise (MITSATOM) in July 2025 involving Malaysia, Indonesia, Thailand and Singapore. The exercise tested the effectiveness of national detection capability and response procedures, coordination among the 4 AMS in a nuclear security event (smuggling of radioactive materials across borders).

# Nuclear Security (15)

## Updates on Nuclear Security Implementation of 2025

### ◆ Thailand:

- Joint Training Program to Develop Special Operations Unit Capabilities in High-Threat Environments, including Weapons of Mass Destruction and Improvised Explosive<sup>1</sup>
- The National Crisis Management Exercise (C-MEX) was conducted in collaboration with the Office of the National Security Council, Counter Terrorist Operations Center, and OAP.
- OAP conducted a national training course on nuclear forensics [capability at the national and regional levels](#).
- INTERPOL co-hosted with the OAP co-hosted to conduct the Training Workshop on Radiological Crime Scene Investigators (RCSI).
- WINS conducted information and cybersecurity for nuclear and other radioactive material facilities.
- WINS carried out a National Roundtable on Nuclear Security Competences and Development of a National Training Plan.
- WINS and OAP organized a regional training course on the secure transport of radioactive sources.

# Nuclear Security (16)

## Updates on Nuclear Security Implementation of 2025

- ◆ **Viet Nam:** By 2024, INSServ Mission in Vietnam has been fully completed and final report has been sent to Vietnam with recommendation for enhancement of nuclear security regimes, focusing on detection, response and sustainability. INSSP has been revised since November 2023, the final revised INSSP has been open for Vietnam relevant authorities for comments and to be finalized in 2024. [The 2025 Atomic Energy Law](#) introduces comprehensive provisions on nuclear security, including physical protection of nuclear and radioactive material, transport security, Design Basis Threat (DBT), and inter-agency cooperation among VARANS, MOPS, MOD, and Customs.

# Nuclear Security Culture (1)

## Methods and Plans to Foster Nuclear Security Culture

- ◆ **Bangladesh** (as of Jan. 2023): participation of national/international training courses/workshops/meetings in collaboration with FNCA, IAEA, U.S.DOE, Russia; undertaken nuclear safety and security culture awareness programs through poster display; participation in IAEA CRPs in safety and security culture.
- ◆ **China**: organize/ participate in the national/regional/international training courses/workshops in collaboration with IAEA, U.S.DOE; publish magazine titled “China Nuclear Security”; develop curriculums on nuclear security culture to improve the awareness of nuclear security culture for domestic nuclear-related personals; [conduct online training and workshop](#). product nuclear security science popularizing video.

# Nuclear Security Culture (2)

## Methods and Plans to Foster Nuclear Security Culture

- ◆ **Indonesia** (as of 2024): CSCA/BATAN: conducting self-assessment on nuclear security culture for radioactive source facility in Pasar Jumat (2018-2019), final report has completed in 2020; develop nuclear security culture guidance (in progress), ORTN-BRIN conducting self-assessment on nuclear security culture for entire workforce by using on-line survey cause of pandemic COVID-19; Indonesia shared experience on self assessment of nuclear security culture at research reactor to IAEA member States through IAEA Workshop on Nuclear Security Culture and Self-Assessment such as in Ghana, Zambia and Malaysia. In 2018 the report submitted to the Draft of IAEA-TECDOC CRP on nuclear security culture enhancement solutions. Indonesia accepted the IAEA offered to be the first country to hold a Seminar Nuclear Security Culture for Senior Managers in 2022. On 29 – 30 June 2022, IAEA supported DPK's BRIN in hosting Nuclear Security Culture for Senior Manager workshop attended by respective institution related to nuclear and nuclear security such as BAPETEN, BRIN (ORTN and DPFK), Academia (Universitas Gadjah Mada, Indonesia Nuclear Technology Polytechnic (PTNI/STTN), The Republic of Indonesia Defense University (UNHAN), Indonesian National Police (POLRI). Directorate for Nuclear Facility Management (DPFK-BRN) is planning to conduct nuclear security culture self-assessment in Q1 2024. in the planning will cover the topic of combination of the safety and security culture self-assessment.

# Nuclear Security Culture (3)

## Methods and Plans to Foster Nuclear Security Culture

- ◆ **Japan:** NRA Commissioners regularly hold meetings with executives of licensees and conduct interviews to them to communicate the expectation for their leadership in nuclear security, and if necessary, directly request them to take the lead in fostering nuclear security culture. [ISCN continues supporting domestic stakeholders to foster nuclear security culture by providing special lectures and organizing an annual workshop.](#)
- ◆ **Kazakhstan:** Involvement in the Nuclear Disarmament Verification Initiative and engagement in national and international training programs organized jointly with the IAEA, JAEA, US (DOE and DoD) and other partners.
- ◆ **ROK (as of 2024):** KINAC has developed a questionnaire to measure the nuclear security culture awareness of nuclear facility workers and has been conducting the annual Nuclear Security Culture Awareness Survey from 2011. In 2023, score for overall nuclear security culture awareness was 84.7, representing a 0.5-point increase from the previous year.

# Nuclear Security Culture (4)

## Methods and Plans to Foster Nuclear Security Culture

### ◆ Malaysia:

- A national level committee has been established to plan, implement and monitor related activities.
- **Activities:** National Workshop on Conducting Nuclear Security Culture Self-Assessment: Session II (22-26 April 2024) has been conducted; Seminar for Safety and Security Culture on 1-2 July 2025.

### ◆ Mongolia: A national training course on Nuclear Security Culture is planned for 9–10 September 2025, in cooperation with the IAEA and the U.S. Department of Energy.

### ◆ Philippines: Incorporated nuclear security culture topic in the Three (3) days training course. Strengthening nuclear security culture in the workplace. Inclusion of Security Culture topic in the Nuclear Training Center modules for Licensees and Awareness on Nuclear Security Culture to NEP-IAC.



# Nuclear Security Culture (5)

## Methods and Plans to Foster Nuclear Security Culture

- ◆ **Singapore:** NEA, as the ITDB POC, disseminates ITDB related notifications to local security and emergency response agencies to promote awareness of incidents involving radioactive and nuclear materials. NEA also regularly circulates relevant IAEA security related training events to relevant stakeholders for their interest.
- ◆ **Thailand:** Continuous training, stakeholder communications, and revision of regulations and guidelines under the Nuclear Energy for Peace Act.

# Nuclear Security Culture (6)

## Methods and Plans to Foster Nuclear Security Culture

- ◆ **Viet Nam:** Vietnam is under consideration to advocate 2<sup>nd</sup> Guideline on Code of Conduct on safety & security of radioactive sources. In 2024, Vietnam is implementing development of proposal for amended Law on Atomic Energy, internalizing obligation of relevant international instrument (CPPNM, NPT), integrating regulation of nuclear security culture as mandatory for security requirement of radioactive sources, nuclear material and nuclear facility. [The Law institutionalizes nuclear security culture as a mandatory requirement for all facilities using radioactive sources and nuclear material.](#)

# Capacity Building (1)

## Nuclear Security (and Safeguards) Training Centers

This chart identifies the existing training centers in the FNCA member countries, which provide trainings to practitioners in the areas of nuclear security and safeguards, and training functions of the centers. Educational programs are not included on the chart.

	Training Center/ Training Provider	Status of Training Center	Target	Training Topics			Cooperation with
				Security	SG	Others	
<b>Bangladesh</b>	<b>TBD / BAEC, BAERA</b>	Planned	International/ Domestic	✓	✓	Border control	IAEA, US/DOE, Russia, JAEA, FNCA
<b>China</b>	<b>SNSTC(COE)/ SNSTC(COE)</b>	In operation	International/Do mestic	✓	✓	Border control	IAEA, US/DOE
<b>Indonesia*1</b>	<b>BAPETEN ETC, Directorate of Competency Development (BRIN's Training Center/ BAPETEN, BRIN</b>	In operation	International/ IAEA courses	✓	✓		IAEA, US/DOE, APSN, PNTR, JAEA
<b>Japan</b>	<b>ISCN / ISCN</b>	In operation	International /Domestic/ IAEA courses	✓	✓		IAEA, US/DOE, EC/JRC
<b>Kazakhstan</b>	<b>TC of INP and ACTC of NG/ TC of INP and ACTC of NG</b>	In operation	International /Domestic/ IAEA courses	✓	✓	Radiation Safety and Radiation Monitoring Information Security	US (DOE and DoD), Japan

\*1 Gaja Mada University in Indonesia launched Master's Degree Program in Nuclear Security.

\*2 BRIN's Polytechnic Institute of Nuclear Technology opens an undergraduate program with nuclear security concentration

# Capacity Building (2)

## Nuclear Security (and Safeguards) Training Centers

Cont.

	Training Center/ Training Provider	Status of Training Center	Target	Training Topics			Cooperation with
				Security	SG	Others	
<b>ROK</b>	<b>INSA / INSA</b>	In operation	International /Domestic/ IAEA courses	✓	✓	Export control	IAEA, US/DOE
<b>Malaysia</b>	<b>NSSC / AELB</b>	Training class and Testing Lab in operation		✓		Border control	IAEA, ANSTO, US/DOE
<b>Mongolia</b>	<b>TBD / NEC</b>			✓		Border control	US/DOE, INSEP, IAEA, APSN, FNCA, JAEA
<b>Philippines</b>	<b>PNRI</b>	NSSC- training modules	Licensee, FLO and other government agencies	✓		Border control	IAEA, US/DOE
<b>Thailand</b>	<b>TBD / OAP, CU*1</b>	Under Consideration	Domestic Competence Authorities	✓	✓	Border control	IAEA, ASNO, US/DOE, JAEA, EC
<b>Viet Nam</b>	<b>VARANS / TSC</b>	Planned		✓	✓	Rad Detection	IAEA, US/DOE, JAEA

\*1 Chulalongkorn University in Thailand has master course on nuclear security and safeguards for international/domestic students.

# Capacity Building (3)

## Nuclear Security (and Safeguards) Training Centers

Cont.

### List of the Training Centers

**Bangladesh:** TBD

**China:** State Nuclear Security Technology Center (Center of Excellence on Nuclear Security)  
China Customs Training Center for Radiation Detection (border control)  
Nuclear Safeguards Technical Research Laboratory (Safeguards)

**Indonesia:** BAPETEN coordinates capacity building through its “Indonesia Center of Excellent on Nuclear Security and Emergency Preparedness” (I-CoNSEP)  
BAPETEN’s Education and Training Center & BRIN’s Directorate of Human Resource Development and Competency work together for capacity building

**Japan:** Integrated Support Center for Nuclear Nonproliferation and Nuclear Security (ISCN)

**Kazakhstan:** INP Nuclear Security Training Center (TC of INP), National Guard of RK Anti-Crisis Training Center (ACTC of NG)

**ROK:** International Nuclear Nonproliferation and Security Academy (INSA)

**Malaysia:** Nuclear Security Support Center (NSSC) – accepts technical visits and fellowship.  
Also hosting international/regional workshop by IAEA if required.

**Mongolia:** TBD (Executive Office of the NEC is responsible to strengthening human resources in a nuclear and radiation field.)

# Capacity Building (4)

## Nuclear Security (and Safeguards) Training Centers

Cont.

### List of the Training Centers

**Philippines:** Philippine Nuclear Security Support Center is underway. Developed three (3) modules on Awareness, Basic and Advanced Radiological Detection Workshop.

**Thailand:** Office of Atoms for Peace (OAP), Chulalongkorn University.

**Viet Nam:** The Law assigns VARANS and the Technical Support Centre (TSC) responsibilities for training and capacity building in radiation safety, nuclear safety, and nuclear security.