

Nuclear governance in the Indo/Asia-Pacific: Building out from Southeast Asia?

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Outline

- 2018 East Asia Summit Leaders' Statement on Nuclear and Radiological Safety and Security
- Nuclear and Radiological Security Capacity-Building
- Nuclear Security Border Exercises
- Enhancing Emergency Preparedness and Response
- Challenges
- Future Nuclear Governance Landscape

2018 East Asia Summit

- East Asia Summit **LEADERS' STATEMENT ON THE SAFE AND SECURE USE, STORAGE, AND TRANSPORT OF NUCLEAR AND OTHER RADIOACTIVE MATERIALS**, 13th East Asia Summit (EAS) in Singapore, on 15 November 2018
- First joint statement on nuclear governance by Asia-Pacific leaders from ASEAN Member States, Australia, China, India, Japan, South Korea, New Zealand, Russian, and the United States
- Safety and security of nuclear and radiological materials becoming a regional concern in the Asia-Pacific
- 25 recommendations for EAS member states on improving both nuclear safety and security
- ASEANTOM- the only regional network mentioned in the joint statement; recognized by EAS leaders for driving cooperation, facilitating information exchange in ASEAN and complementing the work of existing national, regional and international mechanisms



FINAL

EAS LEADERS' STATEMENT ON THE SAFE AND SECURE USE, STORAGE, AND TRANSPORT OF NUCLEAR AND OTHER RADIOACTIVE MATERIALS

WE, the Heads of State and Government of the Member States of the Association of Southeast Asian Nations (ASEAN), Australia, People's Republic of China, Republic of India, Japan, Republic of Korea, New Zealand, Russian Federation, and the United States of America on the occasion of the 13th East Asia Summit (EAS) in Singapore, on 15 November 2018;

RECALLING the EAS Statement on Non-Proliferation adopted at the 11th EAS in 2016, wherein EAS Leaders reaffirmed their support for efforts at the national, regional and international levels to promote nuclear disarmament, nuclear non-proliferation and peaceful uses of nuclear energy, and the importance of nuclear security to combating nuclear terrorism, and encouraging EAS participating countries to accelerate work on nuclear security objectives;

NOTING commitments in the field of nuclear safety and security, and recognising the importance of turning these commitments into actions;

EMPHASISING the need for the involvement of all States, where appropriate in nuclear safety and security-related activities and initiatives in an inclusive manner;

UNDERLINING the enduring need to raise awareness of nuclear safety and security among all stakeholders, including individuals and competent authorities involved in the use and management of nuclear and other radioactive materials;

RECOGNISING the need to strengthen and improve cooperation in, and the coordination of, international efforts in the field of nuclear safety and security in order to avoid duplication and overlap, and acknowledging the International Atomic Energy Agency (IAEA)'s central role in this respect;

RECOGNISING that nuclear security and safety measures have the common aim of protecting human health, society and the environment, while acknowledging the distinctions between the two areas, and affirming the importance of coordination in this regard, and underlining the importance that, at the national level, both these areas are dealt with appropriately, by governments and their competent authorities according to their respective competencies;

RECOGNISING the benefits of the peaceful uses of nuclear energy and technology and their importance in medicine and healthcare, agriculture, scientific research, energy, environment and industry;

- How can the work in Southeast Asia on nuclear governance be expanded to the broader Asia-Pacific?
 - Through regional networks such as ASEANTOM
- The need for a Regional Plan of Action to implement the EAS' Leaders Statement

- **EAS Joint Statement Recommendation No. 7:** ENCOURAGE all States to continue exchanging safety and security relevant findings and lessons learned among regulators, technical and scientific support organisations, **regional networks such as ASEANTOM**, operators and industry, as appropriate and on a voluntary basis;

Nuclear and radiological security capacity-building

EAS Recommendation No. 5. ENCOURAGE all States to maintain and improve their nuclear security infrastructure, and **encourage States in a position to do so to assist others** in this regard;

No. 15 ENCOURAGE all States to **promote international exchanges of experience, knowledge and good practices** as regards ways to develop, foster and maintain a robust nuclear safety and security culture compatible with States' nuclear safety and security regimes

Southeast Asia

- South-South cooperation: Thai-Lao PDR Technical Cooperation: (2017); Thai-Cambodia Technical Cooperation (2018); 2. Thai-Malaysia Technical Cooperation (fully supported by IAEA, 2019)
- ASEANTOM-IAEA Regional Project on Enhancing Regulatory Capacity for Radiological Security
- Southeast Asia Regional Radiological Security Partnership
- Regional workshops on RAD security and nuclear forensics

Expanding to the Asia-Pacific

- **A Regional Roadmap/Action Plan for Nuclear/Radiological Security**
 1. Institutionalise South-South/bilateral cooperation on knowledge transfer, emulating Southeast Asia's examples
 2. Leverage on existing Asia-wide regional networks (Forum for Nuclear Cooperation in Asia; Asian Nuclear Safety Network; Asia-Pacific Safeguards Network); Increase the number of their participating Asia-Pacific states, including ASEANTOM members
 3. Convene Asia-Pacific Regional Workshops and Projects on RAD Security

Recommendation No. 16. ENCOURAGE all States to strengthen national nuclear safety and security through capacity building efforts, including through training and education, and through regional or international networks, and to **include nuclear security centers of excellence**;

Centres of Excellence on Nuclear Security in East Asia

COUNTRY	COE	SUPERVISING AGENCY	YEAR OF ESTABLISHMENT	PRIMARY ACTIVITIES
China	State Nuclear Security Technology Center (SNSTC)	China Atomic Energy Agency	2015	nuclear security education, training and certification activities
Indonesia	Centre for Security Culture and Assessment	National Nuclear Energy Agency (BATAN)	2014	security culture promotion and awareness
	Indonesia Center of Excellence on Nuclear Security and Emergency Preparedness (I-CoNSEP)	Nuclear Energy Regulatory Agency (BAPETEN)	2014	Policy, technical and scientific support, emergency response coordination, capacity-building, collaboration with other COEs in the region
Japan	Integrated Support Center for Nuclear Nonproliferation and Nuclear Security (ISCN)	Japan Atomic Energy Agency (JAEA)	2010	Capacity-building assistance, technical support to government, policy research, provides platform for sharing best practices among regional experts
Malaysia	Nuclear Security Support Centre (NSSC)	Atomic Energy Licensing Board	Recognised by the IAEA in 2012	Trainings for law enforcers, shares experiences and best practices with countries in the region
South Korea	International Nuclear Security Academy (INSA)	Korea Institute of Nuclear Nonproliferation and Control (KINAC)	2014	Education and training programmes, R&D activities, assistance to emerging countries in Asia through sharing of best practices

Nuclear and radiological security capacity-building

- Enhancing the Role of COEs in the Asia-Pacific
 1. Regional collaboration may start with East Asian COEs: [An ASEAN-Northeast Asia Regional Network of COEs/Nuclear Security Support Centres](#)
 2. A network of COEs can facilitate knowledge transfer, capacity-building, cost-sharing, and workshops that bring together international and regional experts.
 3. They can cooperate on education and training through sharing of training plans and curricula, exchanging lecturers, sharing of good practices, and having observers sit in on each other's courses.
 4. They can share best practices on engaging industry and civil society through constant dialogue on the importance of nuclear security and on promoting public confidence in nuclear and radiological security.

Nuclear security border exercises

EAS Recommendation No. 19: ENCOURAGE States to conduct **exercises** to strengthen national capabilities to prepare and respond to a nuclear safety and security event involving nuclear or other radioactive materials;

Southeast Asia



- Cross Border Nuclear Security Exercise between Malaysia and Thailand (2016)
- Malaysia-Philippines-Indonesia joint nuclear security tabletop exercises – shared maritime borders (2018)

Expanding to the Asia-Pacific

1. Leverage on the PROLIFERATION SECURITY INITIATIVE ASIA-PACIFIC EXERCISE ROTATION
2. Conduct maritime-nuclear security exercises in the Asia-Pacific (to bring together experts in the fields of maritime security, defence, foreign affairs, border control, law enforcement, counter-proliferation and export control.
3. ASEANTOM-led cross border exercises with countries near Southeast Asia (Northeast Asia, South Asia, Australia)

Enhancing Emergency Preparedness and Response (EP&R)

EAS Recommendation No. 2: ENCOURAGE all States to implement measures nationally, regionally and internationally to ensure nuclear, radiation, transport and waste safety, **as well as emergency preparedness and response**, taking into account IAEA Safety Standards

Southeast Asia

- ASEANTOM-IAEA: A Review of the Nuclear and Radiological Hazard Assessment in ASEAN
- ASEANTOM-EU: ASEAN Strategy for Regional Cooperation on Radiological and Nuclear EP&R; Technical Support for Decision Making (2018-2020); Proposed ASEANTOM Projects: ASEAN Early Warning Radiation Monitoring Network (expected to be implemented in 2020); ASEAN Radiation Data Exchange Platform
- ASEANTOM-AHA Centre Draft ASEAN Protocol for Preparedness and Response to a Nuclear or Radiological Emergency

Expanding to the Asia-Pacific

1. Expand the regional review of the hazard assessment to include all Asia-Pacific countries
2. Formulate an East Asia Summit (EAS) Strategy on Radiological and Nuclear EP&R; building on ASEAN strategy
3. Establish an integrated early warning radiation monitoring network and an EAS radiation data exchange platform spearheaded by ASEAN
4. Institutionalise ASEANTOM's collaboration with Northeast and South Asian states on joint nuclear EP&R: an agreement or protocol
5. **Recommendations from the Economic Research Institute for ASEAN/East Asia (2014):** Establish a common database for radiation monitoring; Set a model for an EPR program by China, South Korea, Japan; Joint EP&R drill; cooperation with the EU

Challenges

1. Not all states in the region, even several ASEAN member states, are parties to key safety and security conventions

Six of the 25 recommendations in the EAS statement encourage all regional states to be parties to and implement these key conventions and code of conduct (e.g., Amendment to CPPNM, ICSANT, Code of Conduct on Safety and Security of RAD sources)

	Safeguards Additional Protocol	Convention on the Physical Protection of Nuclear Material (CPPNM)		Nuclear Terrorism Convention (ICSANT)	Comprehensive Nuclear Test-Ban Treaty (CTBT)	Convention on Nuclear Safety (CNS)	Joint Convention on Spent Fuel and Radiological Waste	Convention Early Notification of a Nuclear Accident	Nuclear Assistance Convention
		2016 CPPNM Amendment	1980 CPPNM only						
Brunei					✓				
Cambodia	✓		✓	signed	✓	✓		✓	
Indonesia	✓	✓	✓	✓	✓	✓	✓	✓	✓
Laos	signed		✓		✓			✓	✓
Malaysia	signed			signed	✓			✓	✓
Myanmar	signed	✓	✓		✓	✓		✓	
Philippines	✓		✓	signed	✓	signed	signed	✓	✓
Singapore	✓	✓	✓	✓	✓	✓		✓	✓
Thailand	✓	✓	✓	signed	✓	✓	✓	✓	✓
Vietnam	✓	✓	✓	✓	✓	✓	✓	✓	✓

Challenges

2. Regulatory independence and capacity-building issues in regulatory bodies

- **Independent:** China (CAEA), Indonesia (BAPETEN), Japan (NRA), South Korea (NSSC), Mongolia (NEC and General Agency for Specialized Inspections(GASI))
- **Semi-Independent*:** Bangladesh (BAERA), Malaysia (AELB), Thailand (OAP), Vietnam (VARANS)

*The regulatory agency is under a governmental body or ministry to which a nuclear promotion agency belongs

- **No Independence:** Philippines (PNRI)

Recent Development

Philippines: The Comprehensive Nuclear Regulation Act, creating an independent regulatory body, “Philippine Nuclear Regulatory Commission” is being deliberated in the Congress.

Vietnam: Pending legislative proposal to establish an independent regulatory body

Thailand: The Nuclear Energy for Peace Act 2016 established the Thai Nuclear Energy Commission for Peace (Thai NEC) as the regulatory authority. OAP acts as the secretariat of the NEC and the secretary general of OAP is the secretary of the NEC.

Challenges

3. Safety culture and security culture issues still need to be comprehensively addressed

- Weak security culture among licensees and users of radioactive materials; recent incidents of missing radioactive devices in ASEAN
- Fragmented National Policy Frameworks on Safety Culture and Security Culture
- Lack of Nuclear Security Support Centres of Excellence (NSSC-COEs)

(Findings from RSIS Roundtables on Nuclear Security, 2017 and 2018)

Future Nuclear Governance Landscape

- **Greater synergy and collaboration among NSSC/COEs AND other knowledge centres in institutionalising (safety-security) Culture of Excellence in the Asia-Pacific**
 - An ASEAN-Northeast Asia Regional Network of NSSC/COEs as a starting point
 - Informal network of **Asia Group members of the International Nuclear Security Education Network (INSEN)**; (e.g., RSIS has begun collaborating with fellow INSEN-Asia members through its nuclear policy roundtables and information-sharing, 2018)
 - Future network on nuclear power safety and security research
- **ASEAN/TOM as lead driver or facilitator for nuclear governance/cooperation in the Asia-Pacific?**
 - A Regional Plan of Action to implement the EAS' Leaders Statement must be drafted
 - will there be a single regional authority? Should ASEAN/ASEANTOM take the lead? (thru EAS, ARF, ASEAN-led mechanisms)
 - should ASEANTOM invite regulators from all EAS countries to participate in its meetings (as observers) and activities?
 - financing and resource issues: sustainability of current funding, financial and technical assistance mechanisms (e.g., Assistance from the IAEA and EU, bilateral assistance, grants etc)

THANK YOU.