

RSIS Commentary is a platform to provide timely and, where appropriate, policy-relevant commentary and analysis of topical and contemporary issues. The authors' views are their own and do not represent the official position of the S. Rajaratnam School of International Studies (RSIS), NTU. These commentaries may be reproduced with prior permission from RSIS and due credit to the author(s) and RSIS. Please email to Editor RSIS Commentary at RSISPublications@ntu.edu.sg.

ASEAN's Growing Agenda on Nuclear Security

By Julius Cesar Trajano

SYNOPSIS

As nuclear energy and technology play an increasingly important role in achieving Sustainable Development Goals, security measures are essential governing the peaceful uses of nuclear and radiological materials. ASEAN has institutionalised key frameworks and mechanisms to ensure nuclear security in the region but more can be done.

COMMENTARY

Nuclear security is essential in preventing and detecting illicit use, storage and transport of nuclear and radiological materials. It is not only important for states that have nuclear weapons and nuclear power plants, but also for those that do not, as nearly all states use nuclear and radioactive materials for peaceful applications. In recent years, ASEAN member states have looked beyond nuclear disarmament and non-proliferation and moved towards nuclear security cooperation.

ASEAN's Nuclear Concerns

For Southeast Asian states, it is no longer just about freeing the world of nuclear weapons; it is also about enhancing the region's nuclear security capacity and cooperation. All ASEAN member states share a common interest in ensuring the security of future nuclear power plants (including small advanced modular nuclear reactors) constructed in the region, as well as radioactive materials used for peaceful purposes.

Presently, several of these countries are studying the possibility of using [small modular reactors](#) as a source of zero-carbon nuclear energy to strengthen their energy security and to reduce their greenhouse gas emissions. Nuclear security challenges for secure

deployment for small modular reactors should be duly considered by ASEAN member states.

There is already widespread use of nuclear and radiological materials for peaceful and developmental purposes in the region. Nuclear technology is used in industrial facilities, medicine and healthcare, climate adaptation measures, water management, pollution monitoring, and agricultural production in all the ASEAN member states.

There is a need to ensure that radiological materials used for peaceful purposes do not fall into the hands of people with malicious and criminal intentions. Sound security measures, including regulatory oversight on the use, transport, and handling of radioactive materials, and strict security norms and practices for radiological sources, are therefore important for the region.

ASEAN's Nuclear Security Agenda

There have been several concrete initiatives and activities in ASEAN-led forums, such as the ASEAN Regional Forum (ARF) and the East Asia Summit (EAS), that demonstrate the region's burgeoning agenda on nuclear security, which goes beyond the Southeast Asia Nuclear Weapon-Free Zone (SEANWFZ) Treaty and the associated disarmament and non-proliferation agenda.

In recent years, as Southeast Asian countries expand their peaceful applications of nuclear technology, the ARF has introduced regional initiatives to strengthen nuclear security which go beyond discussions on nuclear disarmament. For instance, the annual ARF Inter-Sessional Meeting on Non-Proliferation and Disarmament deliberates over member-states' collaboration on nuclear security issues, such as joint tabletop exercises on chemical, biological, radiological, and nuclear (CBRN) emergencies, and exchanges of good practices on [strategic trade and export control](#).

The ARF Hanoi Plan of Action II (2020-2025) also promotes capacity-building cooperation in nuclear security and knowledge-sharing to prevent illicit trafficking in nuclear and radioactive materials. This, and the ARF's recent initiatives, including regional workshops and joint tabletop exercises on the prevention of such illicit trafficking, demonstrate ASEAN's attention to the establishment of nuclear security norms and the expansion of its nuclear security agenda.

Just like ARF, the EAS has broadened its nuclear governance agenda beyond disarmament and non-proliferation to include nuclear security related to the peaceful uses of nuclear energy and technology. The collective call by EAS leaders (presidents and prime ministers in East Asia Summit) in their [Statement](#) on Safe and Secure Use, Storage, and Transport of Nuclear and Other Radiological Materials, in 2018 highlights the regional concern over the security governance of nuclear and radiological materials.

The EAS Leaders' statement paid particular attention to the ASEAN Network of Regulatory Bodies on Atomic Energy ([ASEANTOM](#)) and its role in advancing regional cooperation in nuclear security.

ASEANTOM and Regional Cooperation in Nuclear Security

ASEANTOM serves as a framework for cooperation amongst nuclear regulatory bodies or relevant authorities within ASEAN, enabling regulators to share nuclear-related information and experiences on best practices, enhancing cooperation, and developing capacities.

Since its inaugural meeting in 2013, ASEANTOM has helped raise the level of knowledge and expertise on the safety and security of nuclear and radioactive materials through expert missions and exchange programmes; technical meetings and workshops; and capacity-building cooperation projects with international organisations such as the International Atomic Energy Agency (IAEA) and the European Union.

Strong regulatory mechanisms on the use and handling of nuclear and radioactive materials are required to minimise the risk of such materials being used by criminals or terrorists. To address this concern, ASEANTOM has conducted regional projects and workshops to boost the capacity and awareness of its members in the field of nuclear security, focusing on inspection, regulation and enforcement mechanisms.

ASEANTOM also collaborates with ASEAN dialogue partners such as South Korea and the United States to enhance the nuclear security regime in Southeast Asia.

In March 2023, the Philippines hosted a regional workshop on radiological incidents and emergency consequence management with experts from the IAEA and the US Department of Energy National Nuclear Security Administration. Participants from Southeast Asia and other Asia-Pacific countries jointly trained on the use of radiation detection equipment, the sharing of best practices on radiation detection, and national arrangements for monitoring, sampling, and assessment during a nuclear or radiological incident.

Furthermore, the US and South Korea simultaneously organised regional workshops with ASEANTOM members to develop nuclear security training courses and a training strategy aimed at enhancing the latter's national capabilities.

The Challenge of Delays

Despite notable progress on nuclear cooperation, several ASEAN states have yet to sign and ratify important global nuclear conventions, including the Amendment to the Convention on the Physical Protection of Nuclear Materials, and to make political commitments to the non-legally binding Code of Conduct on the Safety and Security of Radioactive Sources.

The delays can be attributed to tedious legislative processes as it may take years before a treaty is translated into domestic legislation, and to the limited capacities of relevant state bodies to craft and implement nuclear security frameworks.

Within ASEAN, a broad consensus has formed that a regional approach to nuclear security would complement national frameworks and capabilities. ASEANTOM's work is promising, but there is room to deepen and expand this work.

Julius Cesar Trajano is Research Fellow at the Centre for Non-Traditional Security Studies, S. Rajaratnam School of International Studies (RSIS), Nanyang Technological University (NTU), Singapore. This commentary is based on a presentation he delivered at the International Atomic Energy Agency's International Nuclear Security Education Network conference held in Vienna, Austria, 17-21 June 2023.

S. Rajaratnam School of International Studies, NTU Singapore
Block S4, Level B3, 50 Nanyang Avenue, Singapore 639798
T: +65 6790 6982 | E: rsispublications@ntu.edu.sg | W: www.rsis.edu.sg