

# Is ASEAN Serious About Nuclear Power?

Denise Cheong and Nivedita S. discuss the prospects of nuclear power and the state of nuclear governance in the region.

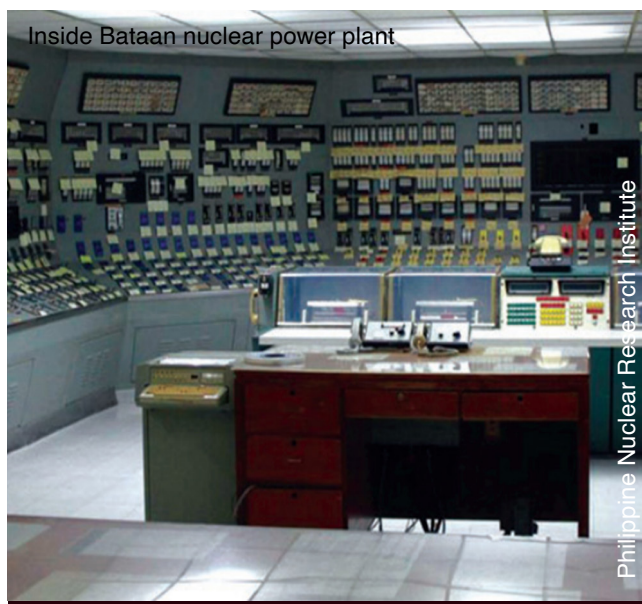
The Treaty on the Southeast Asian Nuclear Weapon-Free Zone (SEANWFZ Treaty), which entered into force in 1997, expressly recognised the right of ASEAN member states to use nuclear energy for peaceful purposes. However, it was not until the 12<sup>th</sup> ASEAN Summit in 2007 that ASEAN Leaders stressed the need for the development of alternative energy sources, including civilian nuclear power, and tasked ASEAN officials to “look into a regional nuclear safety regime.”

Nuclear power was then included as one of the distinct programme areas in the 2010-2015 ASEAN Plan of Action for Energy Cooperation (APAEC), and its subsequent 2016-2025 iteration. Regional cooperation in anticipation of the possibility of ASEAN member states developing nuclear power has largely centred on information exchange and capacity-building in matters related to nuclear safety and, to a lesser extent, nuclear security.

## *Nuclear Power in Southeast Asia by 2040?*

While the door was officially laid open for civilian nuclear power only in the 1990s, nuclear research reactors have been present in Southeast Asia since the 1960s. The Philippines was the first to embark on a nuclear power programme with its construction of the Bataan nuclear power plant in the late 1970s. However, this was subsequently abandoned, due in part to safety concerns following the Chernobyl nuclear accident in 1986. In 2006, Vietnam embarked on its nuclear power programme with the first power plant originally scheduled for completion by 2020 and later postponed to 2025. However, Vietnam's plans were put on hold in 2016. Indonesia, Malaysia, and Thailand have also been referred to as ‘frontrunners’ in this respect due to their steady progress in developing their national infrastructure in accordance with the International Atomic Energy Agency's (IAEA) Milestones Approach (which provides guidance for a sound development process for nuclear power programmes).

Of these so-called ‘frontrunners’, Indonesia and the Philippines have not ruled out the possibility of embarking on a nuclear power programme in the future. Indonesia, having done extensive preparatory work to develop its national nuclear infrastructure, has been considered by the IAEA to be in a position to make an informed decision about introducing nuclear power since 2009. However, to date, Indonesia has yet to make a political decision on this issue. As for the Philippines, the IAEA concluded in December 2018 that the Philippines is following a



systematic approach to finalise its nuclear power strategy and complete the development of associated infrastructure, and has provided recommendations for further actions.

Apart from Vietnam, Malaysia and Thailand appear to have changed their plans or at least put them on hold. The IAEA, in the *Energy, Electricity and Nuclear Power Estimates for the Period up to 2050* (2019 edition, being the latest available projections) anticipates that there will be nuclear power capacity in Southeast Asia by 2040. It is unclear to what extent this estimate considers the impact of new technological innovations such as small modular reactors (SMRs), including transportable nuclear power plants (TNPPs) which can be deployed more quickly.

## *ASEAN's Evolving Approach Towards Nuclear Energy Governance*

Given that nuclear power involves a complex and politically-sensitive policy process, its prospects in this region may wax and wane, even in frontrunner countries. Nonetheless, it seems possible that by 2040 or shortly after, nuclear power could be a reality within Southeast Asia. Meanwhile, ASEAN member states already face a transboundary risk due to nuclear power plants located near their borders. Despite the theoretically low probability of a major nuclear accident, ASEAN member states share similar concerns about incurring damage in the event of an accident from nuclear power plants within

the region. Such concerns may also extend to nuclear power plants near the region. As such, ASEAN needs to seriously consider how best to set its governance priorities in order to effectively protect itself from such risks.

Work in this respect began over 20 years ago when the SEANWFZ Treaty was adopted. While its key objective was to establish a nuclear weapon-free zone within the region, this treaty goes beyond this one objective – it also requires member states planning to embark on a nuclear power programme to undertake a safety assessment according to IAEA “guidelines and standards”. Demonstrating significant foresight, the treaty prescribes established international standards as the benchmark for nuclear safety, setting a firm foundation for the evolution of ASEAN’s approach towards nuclear energy governance in the region. In this regard, all ASEAN member states are members of the IAEA and ASEAN recently formalised its cooperation with the IAEA in the areas of nuclear science, technology, and applications, as well as nuclear safety, security, and safeguards.

An analysis of the relevant ASEAN documents since the adoption of the SEANWFZ Treaty lends strong support for the argument that ASEAN’s approach to nuclear energy governance embodies a commitment to follow international rules, standards, and best practices not only in nuclear safety but also nuclear security. This encompasses a commitment to actively participate in and implement the international legal regime and proactively adopt international best practices. The approach also embodies a firm commitment to abide by the fundamental principles of ASEAN in any engagement between ASEAN member states on nuclear issues. Enshrined in key ASEAN constituent documents such as the ASEAN Charter and the Treaty of Amity and Cooperation in Southeast Asia (TAC), the principles call on ASEAN member states to strengthen good neighbourliness and cooperation; contribute to strength, solidarity, and closer relationships; support regular consultations to coordinate views and actions; and do so in a way that upholds international law and adheres to good governance.

This approach provides a broad conceptual framework within which a common ASEAN approach towards specific issues may be forged – one that prescribes the desired standard of governance as well as the manner of engagement. However, this approach must keep evolving. ASEAN still needs to put flesh on the bare bones of this framework by working out what actions should be taken at the international, regional, and/or national levels for specific issues within the scope of nuclear safety and security. How successfully this is done will be a significant factor influencing public acceptance of nuclear power and, ultimately, the success of new build within the region. These are important considerations for a region that is actively looking to develop alternative energy sources to secure its energy needs.

Over the longer term, a common ASEAN approach towards nuclear issues provides the basis for ASEAN to engage other states in broader Asia with the aim of safeguarding the interests of ASEAN as a community. Furthermore, new technological innovations such as SMRs and TNPPs that require a significantly shorter time to be deployed raise difficult governance issues and challenge the current applicable international legal regime. The possibility of a TNPP deployment in or near the waters of Southeast Asia, including the South China Sea, cannot be ignored. Such potential developments beg the question of whether ASEAN’s current governance efforts to crystallise common approaches should take greater priority and how any competing priorities should be effectively managed. ❧

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