

## **An Institutional Mapping and Stakeholder Analysis of ASEAN's Preparedness for Nuclear Power Disaster**

**Authors :** Nur Azha Putra Abdul Azim, Denise Cheong, S. Nivedita

**Abstract :** Currently, there are no nuclear power reactors among the Association of Southeast Asian Nations (ASEAN) member states (AMS) but there are seven operational nuclear research reactors, and Indonesia is about to construct the region's first experimental power reactor by the end of the decade. If successful, the experimental power reactor will lay the foundation for the country's and region's first nuclear power plant. Despite projecting confidence during the period of nuclear power renaissance in the region in the last decade, none of the AMS has committed to a political decision on the use of nuclear energy and this is largely due to the Fukushima nuclear power accident in 2011. Of the ten AMS, Vietnam, Indonesia and Malaysia have demonstrated the most progress in developing nuclear energy based on the nuclear power infrastructure development assessments made by the International Atomic Energy Agency. Of these three states, Vietnam came closest to building its first nuclear power plant but decided to delay construction further due to safety and security concerns. Meanwhile, Vietnam along with Indonesia and Malaysia continue with their nuclear power infrastructure development and the remaining SEA states, with the exception of Brunei and Singapore, continue to build their expertise and capacity for nuclear power energy. At the current rate of progress, Indonesia is expected to make a national decision on the use of nuclear power by 2023 while Malaysia, the Philippines, and Thailand have included the use of nuclear power in their mid to long-term power development plans. Vietnam remains open to nuclear power but has not placed a timeline. The medium to short-term power development projection in the region suggests that the use of nuclear energy in the region is a matter of 'when' rather than 'if'. In lieu of the prospects for nuclear energy in Southeast Asia (SEA), this presentation will review the literature on ASEAN radiological emergency and preparedness response (EPR) plans and examine ASEAN's disaster management and emergency framework. Through a combination of institutional mapping and stakeholder analysis methods, which we examine in the context of the international EPR, and nuclear safety and security regimes, we will identify the issues and challenges in developing a regional radiological EPR framework in the SEA. We will conclude with the observation that ASEAN faces serious structural, institutional and governance challenges due to the AMS inherent political structures and history of interstate conflicts, and propose that ASEAN should either enlarge the existing scope of its disaster management and response framework or that its radiological EPR framework should exist as a separate entity.

**Keywords :** nuclear power, nuclear accident, ASEAN, Southeast Asia

**Conference Title :** ICDEM 2018 : International Conference on Disaster and Emergency Management

**Conference Location :** Rome, Italy

**Conference Dates :** March 05-06, 2018