

Dr Olli Heinonen, S. Rajaratnam Professor of Strategic Studies, on 25 October 2016, in a RSIS seminar at the Nanyang Technological University, Singapore.

Strengthening Regional Cooperation on Nuclear Safety in the Asia-Pacific

The role of nuclear power in reducing greenhouse gas emissions is gaining wider recognition. With 441 reactors operating at the end of 2015, nuclear power is making a sizeable contribution to climate change mitigation by avoiding nearly 2 billion tonnes of carbon dioxide every year. The 21st Conference of the Parties to the United Nations Framework Convention on Climate Change (COP21)'s Paris Agreement neither identifies nor excludes any particular form of energy, recognizing states' prerogative to decide on the mix of their energy portfolio. The Paris agreement concurrently supports energy use that combats climate change and its effects.

According to IAEA projections for 2030, global nuclear energy capacity, which takes into account retirements of older nuclear plants, will grow about 2% in the low case and about 70% in the high case. The pivot of this growth is in Asia. Of the 68 reactors under construction at the end of 2015, 45 were in Asia, as were 39 of the 45 reactors that were connected to the electric grid since 2005.

There is also another change in the nuclear landscape. While thirty countries currently use nuclear power, about the equivalent number of newcomer states are considering, planning or actively working to include it in their energy mix. To ensure safe use of nuclear energy, enhanced international, including regional and bilateral collaboration, cooperation and capacity building is necessary over the course of coming years.

Apart from safety and security issues in the nuclear power for generating electricity, it is also important to pay attention to the increasing use of nuclear technologies in medicine and industry. Good practices here include: radiation protection of patients, workers, the public and the environment, as well as the safe management of disused radiation sources.

World's nuclear order requires states not only to adhere to the latest IAEA legal instruments and the IAEA codes of conduct on safety, security, and safeguards, but also demonstrate their full compliance with their requirements. To this end, the Heads of ASEAN states took in April 2012 in Phnom Penh an important step by agreeing to develop a coordinated ASEAN approach that would contribute to global undertakings to improve nuclear safety, in cooperation with other partners, and uphold IAEA standards of nuclear safety and security in the development of nuclear energy for peaceful use. An integral part of the ASEAN cooperation takes place in the ASEAN Network of Regulatory Bodies on Atomic Energy (ASEANTOM). It is essential

that this cooperation get extended to cover the nuclear industry and the government oversight to ensure cohesive implementation of all commitments

ASEAN states have already taken the advantage of the various IAEA networks established for sharing experiences in nuclear safety and security. But more needs to be done. While each state is responsible for nuclear safety in its territory, they have to be prepared accidents, emergencies and incidents, which impact cross their borders. Safe use of nuclear energy requires not only addressing operational safety of nuclear installations and locations handling radioactive materials, but covers also decommissioning of such facilities, management of nuclear and radioactive materials including their final disposal and remediation of contaminated sites. This will also mean states being prepared to handle emergencies arising from transportation of nuclear and radioactive materials through or near their territories. Preparedness and response capabilities need to cover also incidents and emergencies arising from possible terrorist acts.

The Asia-Pacific region has already felt the ramifications of Fukushima accident. There is a wealth of experience in the region, which best practices, know-how and resources can be shared with the “newcomers”. Beyond this, it is also equally important for all states in the region to demonstrate in an open and transparent way demonstrate their commitments to nuclear safety and security.