

Nuclear Energy Experts Group Key Findings and Recommendations

The Nuclear Energy Experts Group (NEEG) of the Council for Security Cooperation in the Asia Pacific (CSCAP) met at the Saigon Da Lat Hotel in Da Lat, Vietnam on November 11-12, 2013, under the auspices of the CSCAP Study Group on Countering the Proliferation of Weapons of Mass Destruction in the Asia Pacific (the WMD Study Group). It brought together 36 specialists from 18 countries from throughout the Asia Pacific region and beyond, all attending in their private capacity. They joined two days of off-the-record discussions on the nuclear safety and security regimes, the Nuclear Security Summit process, the Northeast Asian nuclear security centers of excellence, and the role of regional organizations to address nuclear safety and security. Participants also visited the Da Lat Nuclear Research Reactor, where they received briefings from various scientists and technical staff from the facility.

Key findings and recommendations from the meeting include:

Nuclear safety and security are in the interests of all countries, not just those operating or planning to operate nuclear power plants. However, awareness and perceptions of risk and threats vary among Asia Pacific countries. As a result, the priority attached to the issues at the policy and implementation levels is uneven.

Joint risk/threat assessments and peer reviews of safety/security standards could help raise awareness of problems. This remains controversial, however, because there are concerns in some states that exposing nuclear safety and/or security gaps or limitations can be detrimental or subject to penalty. Enhancing mutual confidence through an exchange of views and good practices is generally accepted as a preferred approach. Regardless, tailored incentives should be integrated to ensure effective implementation of nuclear safety and security standards.

Although nuclear safety and nuclear security are fundamentally distinct issues, they are increasingly seen and approached as a whole by experts and policymakers. Countries pursuing new nuclear power programs or expanding existing ones will have to remain alert on both fronts. Since the requirements of enhancing nuclear safety (such as through greater transparency) can sometimes come into conflict with nuclear security (which requires a measure of secrecy), a thorough examination of their similarities and differences is needed.

Prevention has been a major focus of nuclear safety and security. Yet detection and response preparedness are also key pieces of the puzzle which have so far remained on the back burner, at least in the Asia Pacific. More research is needed to understand the benefits, risks, and costs of investing in detection and response preparedness capabilities to address nuclear safety and security issues. In this regard, table top exercises could prove useful.

Maintaining a comprehensive and current nuclear forensics library, i.e., an inventory of all fissile materials in use within a country or jurisdiction, is important. In the case of a nuclear accident or incident, it will help confirm (or debunk) the origin of the material involved. A thorough needs assessment for nuclear forensics capability in the Asia Pacific should be conducted.

Training nuclear safety and security experts, including first responders to nuclear accidents or incidents, is an essential part of a comprehensive nuclear energy program. More work is needed to determine the specific types of training required, how it should be conducted, and by

whom, in the Asia Pacific. The three centers of excellence on nuclear security in Northeast Asia, one planned in Indonesia, one in India, and other emerging ones in the region could play a role on the nonproliferation and nuclear security side.

The Nuclear Security Summit process has helped raise awareness of the threat of nuclear terrorism and the need for enhanced nuclear security at the global level. It has also helped synergize the previously fragmented nuclear security regime. However the nuclear security regime remains weak and underdeveloped and its future is uncertain without sustaining high-level political support over the long term, i.e., even after the fourth Nuclear Security Summit, scheduled to take place in Washington in 2016.

As a technical organization (with a clearly defined statute which allows primarily for promotion of the peaceful uses of nuclear technology and implementation of safeguards), the International Atomic Energy Agency (IAEA) is not well suited to take over from the Nuclear Security Summit process in the development of an effective nuclear security regime. However, in the absence of a legally binding framework convention that would unite the current nuclear security conventions, rules, and standards, the IAEA may be the default organization. At a minimum, its budget would need to be increased and regularized for nuclear security. In any case, the development of a comprehensive systematic approach to nuclear governance is necessary. The next iterations of this dialogue should reflect on how the countries in the Asia-Pacific region can contribute to this effort.

The nuclear security centers of excellence in Northeast Asia (and others being developed throughout the Asia Pacific) are promising organizations to elevate understanding of nuclear security issues and provide education and training to professionals in the field. They are particularly useful to complement efforts of the IAEA. Work is urgently needed to improve coordination among the centers to avoid duplication of efforts and take advantage of economies of scale and comparative advantages of each.

Efforts to strengthen the nuclear security (and safety) regimes must be undertaken in the context of broader nonproliferation and disarmament considerations. While they are distinct issues conducted in different diplomatic processes, they are also mutually reinforcing components of the global nuclear governance architecture. More synergy among these elements is needed and future iterations of this dialogue should focus on where Asia Pacific countries fit in this architecture and how they can help reinforce and strengthen it.

Preliminary discussions suggest that both top-down and bottom-up approaches are needed to improve nuclear governance in the Asia Pacific. While there is widespread agreement that the nuclear security centers of excellence can provide excellent bottom-up support, it is unclear which regional organization is best suited to offer top-down leadership. ASEAN Plus One and/or ASEAN Plus Three may offer the most conducive mechanisms. Linkages to the Southeast Asian Nuclear-Weapon-Free Zone Treaty should be established to reach out to the P-5. In-depth work on these questions should be a focus of the next iterations of this dialogue.

The recent establishment of the ASEAN Network of Regulatory Bodies on Atomic Energy (ASEANTOM) to promote the safe, secure, and peaceful uses of nuclear energy in the region is a positive development. While it is fundamentally different from the European Atomic Energy Community (EURATOM), in part because it is a network rather than a treaty-based governance mechanism, it could help play a key role in enhancing regional nuclear governance. This dialogue should provide specific recommendations on the goals and objectives that ASEANTOM should prioritize and how it should implement them.