



**Dialogue on Nonproliferation and Nuclear
Security Cooperation in Southeast Asia**

A Conference Report

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Pacific Forum CSIS

Based in Honolulu, the Pacific Forum CSIS (www.pacforum.org) operates as the autonomous Asia-Pacific arm of the Center for Strategic and International Studies in Washington, DC. The Forum's programs encompass current and emerging political, security, economic, business, and oceans policy issues through analysis and dialogue undertaken with the region's leaders in the academic, government, and corporate areas. Founded in 1975, it collaborates with a broad network of research institutes from around the Pacific Rim, drawing on Asian perspectives and disseminating project findings and recommendations to opinion leaders, governments, and members of the public throughout the region.

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Key Findings and Recommendations

The Pacific Forum CSIS, with support from the US Department of Energy's National Nuclear Security Administration (DOE/NNSA), held a nonproliferation and nuclear security dialogue in Singapore on May 31-June 1, 2016. Approximately 40 senior scholars and officials as well as Pacific Forum CSIS Young Leaders attended, all in their private capacity. The off-the-record discussions covered US, Chinese, and Southeast Asian perspectives and priorities on nonproliferation and nuclear security, the Nuclear Security Summit process, nuclear security culture, nuclear energy developments in Southeast Asia, strategic trade controls, and UN sanctions implementation. Key findings from this meeting are outlined below.

Nuclear security is one of the most fertile areas for cooperation between the United States, China, and Southeast Asian states. All recognize the urgency to increase investments in this area given growing terrorism concerns. There is also general agreement to cooperate on nonproliferation to address the North Korean nuclear issue. Digital and cyber threats related to nonproliferation were identified as a key area of cooperation; some proposed the establishment of a dedicated track 1.5 working group to address this emerging problem.

The future of nuclear security governance is uncertain following the 2016 Nuclear Security Summit (NSS) and the conclusion of the summit process. It is unclear if progress will continue in the absence of high-level political leadership. This is problematic because despite notable achievements such as the entry into force of the Amendment to the Convention on the Physical Protection of Nuclear Materials, there remain important gaps and limitations. Civil plutonium and military materials, for instance, have remained outside the scope of the NSS process and few improvements have been made to radioactive source management.

Nuclear security governance remains an area of concern in Southeast Asia. Remedies offered included the development of region-wide management standards for radioactive source management and strengthening information-sharing and nuclear forensic cooperation. One suggestion offered in this context was to make ASEAN a highly enriched uranium-free zone.

Building capacity for nuclear security governance in Southeast Asia is paramount. Guidelines provided in the IAEA's Nuclear Security Series remain an important source for states interested in enhancing nuclear security. The United States and China, independently or jointly, as well as other governments and organizations can help build such capacity. The Chinese nuclear security center of excellence, in particular, provides a good platform for these efforts. Given growing interest in nuclear power development in Southeast Asia, focusing efforts on nuclear *safety* is also essential.

Southeast Asian governments have not been inactive in strengthening nuclear security and safety standards. So far, the focus has been norm-building via the Southeast Asian Nuclear Weapon Free Zone (SEANWFZ) and, more recently, the ASEAN Network of Regulatory Bodies on Atomic Energy, or ASEANTOM. While progress has been modest (and regional governments have focused mostly on getting nuclear-weapon states to endorse the SEANWFZ protocols), it has not been insignificant. These efforts have been complemented by the work of the new Indonesian nuclear security center of excellence, which, like similar centers, seeks to enhance

nuclear security and safety culture in the region through human resource development. Work is needed to explore ways to support these mechanisms and better synergize their activities.

Improving nuclear disaster response in Southeast Asia is essential. Regional initiatives such as ASEAN Coordinating Center for Humanitarian Assistance that have so far focused on *natural* disaster response should broaden their mandate to incorporate human-made/nuclear disasters, especially since responding to such disasters would require similar efforts. Alternatively, participants suggested that a separate nuclear crisis center should be created. In an effort to strengthen coordination in the event of a nuclear accident or incident, another recommendation was to map the key agencies likely to be called upon in each of the ten Southeast Asian states.

Combating proliferation in Southeast Asia, like anywhere else, begins with the adoption and thorough implementation of strong strategic trade controls (STC) by regional governments. Although it has been a requirement of United Nations Security Council Resolution (UNSCR) 1540 (2004), many Southeast Asian states still lag behind in this area; so far, only Singapore, Malaysia, and the Philippines have adopted strong STC legislation. Research shows that the primary reason for this lag is the lack of capacity.

The United States, China, and others can help build STC capacity in Southeast Asia. To avoid duplication of efforts or conflicting messages, assistance providers should coordinate their activities. They should also tailor their efforts to the needs of each state, which often differ, especially in a region as diverse as Southeast Asia. From the perspective of Southeast Asian states, this points to the importance of outlining their specific needs in advance and, insofar as possible, of drawing up national action plans and listing intentions on STC development.

While there is no strong rationale to establish a common, region-wide STC system in Southeast Asia given the disparate levels of economic development, greater coordination and/or harmonization is possible under the auspices of the ASEAN Economic Community and Single Window initiative. More information-sharing and better cooperation among governments or the creation of a regional database could serve as a reference tool for governments and industries.

Disagreements persist over the role and effectiveness of UN sanctions. There is general agreement, however, that they should serve a purpose and, in the case of North Korea, that they should act as a lever to bring Pyongyang back to the negotiating table.

Implementation of UN sanctions imposed on North Korea lags behind in Southeast Asia, mostly because of a lack of capacity. The United States, China, and others can help regional governments by mapping sanctions requirements, developing checklists, improving monitoring of the North Korean diaspora in the region, building capacity on cargo inspection, erecting financial barriers, and promoting better open-source exchange and analysis on suspicious trade.

Conference Report

By Carl Baker, David Santoro, and Federica Dall'Arche

The Pacific Forum CSIS, with support from the US Department of Energy's National Nuclear Security Administration (DOE/NNSA) launched the "US-China Nonproliferation and Nuclear Security Dialogue" in 2014. The project has aimed to enhance understanding between the United States and China and identify opportunities to strengthen cooperation in nonproliferation and nuclear security. The dialogue included three workshops. While the first workshop focused on assessing how the United States and China perceive and approach nonproliferation and nuclear security challenges, the second and third focused on how to build cooperation on these issues in Northeast and Southeast Asia, respectively.

The Pacific Forum held the third and last workshop in Singapore on May 31-June 1, 2016. Approximately 40 senior scholars and officials as well as Pacific Forum CSIS Young Leaders attended, all in their private capacity. The off-the-record discussions covered US, Chinese, and Southeast Asian perspectives and priorities on nonproliferation and nuclear security, the Nuclear Security Summit process, nuclear security culture, nuclear energy developments in Southeast Asia, strategic trade controls, and United Nations (UN) sanctions implementation. The following report reflects the views of the authors alone and not necessarily those of the DOE/NNSA or any other US government agency.

Nonproliferation and nuclear security: perspectives and priorities

Erik Quam (*United States Department of State*) described how North Korea is one of the United States' main nonproliferation and nuclear security concerns. North Korea takes advantage of a variety of mechanisms including the creation of front companies, manipulation of cargo manifests, and inconsistent border controls to gain access to technology and advance its nuclear program. This makes it paramount for all countries to implement strong national strategic trade control (STC) programs; it is important even for the least developed countries in Southeast Asia to do so. Our speaker identified STC capacity-building as a critical area for cooperation at the regional level and between the United States and China in particular. The two countries are already cooperating on multiple levels to enhance nuclear nonproliferation and increase capacity; the newly opened Nuclear Security Center of Excellence (COE) in China is evidence of this joint effort. The COE is designed to provide training in nuclear security to Chinese officials, and could/should become a training platform for countries throughout Asia. Quam concluded by stressing that stronger cooperation with Southeast Asian countries is critical because several are contemplating developing nuclear power programs.

Liu Chong (*China Institute of Arms Control and Security Studies*) explained that China views nonproliferation and nuclear security as an area that lends itself well to cooperative action. In this spirit, he suggested the establishment of a dedicated track 1.5 working group to enhance information sharing among China, the United States, and Asian countries. The creation of such a working group could focus on improving nuclear forensic research and cooperation, address North Korean nuclear issues, and discuss emerging digital and cyber threats related to nonproliferation, including additive manufacturing, commonly referred to as 3D printing. Strong

border controls and nuclear security standards throughout Asia are paramount given the rise of terrorist groups, particularly in Southeast Asia. Given the growing interest in developing nuclear power facilities in Southeast Asia, China also attaches great importance to nuclear safety. Our speaker suggested that ministry-level meetings on nuclear safety should take place in Southeast Asia, modeled on the trilateral meetings that have been initiated among China, Japan, and South Korea. Liu also concurred with his US counterpart, stressing that China should provide training courses and use its COE to share good practices on nuclear security and safety and build capacity.

Mely Caballero Anthony (*Center for Non-Traditional Security Studies, Singapore*) concluded the first session by offering broader observations on nonproliferation and nuclear security from a Southeast Asian perspective. The lack of progress at the 2015 Nonproliferation Treaty (NPT) Review Conference has generated high levels of frustration in the region. Southeast Asian countries, however, recognize that there is a need for stronger regimes. Particularly important is the implementation of strong national STC programs and International Atomic Energy Agency (IAEA) safeguards agreements. Stronger support for multilateral treaties such as the Convention on the Physical Protection of Nuclear Material (CPPNM) and the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT) is also critical to ensure high nuclear security standards. Finally, our speaker pointed out that Southeast Asian countries have an opportunity to strengthen nonproliferation and nuclear security rules and norms by investing in regional organizations such as the Association of Southeast Asian Nations (ASEAN), and the Association of Southeast Asian Nations Network of Regulatory Bodies on Atomic Energy (ASEANTOM). The countries' participation in regional and international initiatives on nonproliferation and nuclear security, such as track 1.5 and track 2 meetings and events that allow their engagement with other institutions like the European Union or the Interpol is also important. Such initiatives will help the region build the capacity it needs to implement strong nonproliferation and nuclear security standards.

During the discussion, participants identified nuclear security as one of the most fertile areas of cooperation between the United States, China, and Southeast Asian countries. All participants recognized the urgency to increase investments in this area, especially given growing terrorism and cyber security concerns. Some participants suggested the creation of "cyber defense capabilities" and the adoption of a joint declaration committing states to refrain from conducting cyber-attacks on nuclear facilities. Other participants dismissed the suggestion, noting that digital and cyber-attacks are mostly conducted by non-state actors and, therefore, that a joint declaration would not be helpful in addressing the underlying problem. Some argued that a better option is the development of regional and global norms and rules for key industrial and academic actors.

It was noted that Southeast Asian countries have so far focused on signing and ratifying nuclear safety and security regimes as the primary means of norm-building, but implementation is lacking. There was also a call for stronger cooperation between ASEANTOM and China; it seems to be minimal now. ASEANTOM was established with the aim of creating a network of regulatory bodies that could exchange knowledge and resources to ultimately ensure safe and secure peaceful use of nuclear energy. By providing expertise to ASEAN countries on regulatory

issues via ASEANTOM, China would contribute to the network's knowledge, and strengthen the nuclear safety and security regimes.

The nuclear security summit process

The second session of the workshop focused on ways the United States, China, and Southeast Asian states can advance the nuclear security agenda after the 2016 Nuclear Security Summit (NSS). Miles Pomper (*James Martin Center for Nonproliferation Studies*) assessed the major successes and shortcomings of the NSS process. Despite notable achievements such as the entry into force of the 2005 Amendment to the CPPNM and the gift baskets on the elimination of civil highly enriched uranium (HEU) offered as part of the NSS process, the 2016 Summit failed to develop strong action plans, leaving important gaps and limitations in and an uncertain future for nuclear security governance. Civil plutonium and military materials, for instance, have remained outside the scope of the NSS process and few improvements have been made to manage radioactive sources. In the absence of high-level political leadership, it is unclear whether progress will continue.

Pomper mentioned several areas where progress is possible: universalization of the CPPNM as amended, creation of a Southeast Asian Highly Enriched Uranium Free Zone (SEA-HEUFZ), and broader endorsement of the Joint Statement on Strengthening Nuclear Security Implementation (INFCIRC 869). Governance of radioactive source materials also requires additional attention. The voluntary Code of Conduct on Safety and Security of Radioactive Sources, for instance, does not address key challenges such as alternative sources, liability, disposal, transport, and notification. Our speaker proposed the development of region-wide standards for radioactive source management. Southeast Asian countries have much to gain by signaling their willingness to improve the security of radioactive sources because higher-income countries are likely to help them do so and, in the process, help them enhance their equipment more generally, which could allow them to reap benefits, including, for instance, to improve the quality of cancer treatments. Pomper concluded that no Southeast Asian country has signed the 2014 NSS gift basket on securing Category I Sources, while only three countries (the Philippines, Singapore and Thailand) signed the 2016 NSS radioactive source gift basket. China's signature on both, which has not happened, would be a positive development.

Zhou Chang (*China Arms Control and Disarmament Association*) explained that the NSS process had been helpful in raising international awareness about nuclear security. It has also served as a platform for experience and information sharing, building capacity, and promoting international cooperation. The threat of nuclear terrorism and the launch of new nuclear energy programs in the region, however, are growing international concerns that require stronger nuclear security and safety architectures. China could play an important and leading role to help build these architectures. It could help improve capacity building through the Chinese COE and enhance security monitoring of radioactive sources by sharing Chinese good practices (notably, on inspections and waste management). It could assist by providing radiation detection equipment for gateway ports, and organize training courses, workshops, and exercises for custom service personnel. Finally, China could help strengthen cooperation with international and regional mechanisms such as the IAEA, ASEAN, ASEANTOM, the Forum for Nuclear Cooperation in Asia (FNCA), the Regional Cooperative Agreement for Research, Development

and Training related to Nuclear Science and Technology for Asia and the Pacific (RCA), and help implement the United Nations Security Council Resolution (UNSCR) 1540. Zhou argued that Chinese promotion of nuclear security cooperation in the region would enhance mutual trust between China and Southeast Asian countries.

Sabar Md Hashim (*Tenaga Nasional Berhad, Malaysia*) provided an economic analysis of the Southeast Asian region and assessed the work of ASEAN and of the ASEAN Plan of Action for Energy Cooperation (APAEC). He argued that the region is well aware of the importance of nuclear security and of nuclear-related risks. Southeast Asian governments have been trying to strengthen nuclear security. Malaysia's National Security Support Center (NSSC) was recently recognized by the IAEA for its leading role in developing nuclear security capability in Southeast Asia. Indonesia, for its part, launched its nuclear security COE in September 2014 and recently established the Center for Security Culture and Assessment (CSCA) in Serpong, which focuses on promoting nuclear security culture. Thailand, the Philippines, and Vietnam have installed Environmental Radiological Monitoring Systems (ERMS), systems that measure the radiation dose or radionuclide contamination in the environment in an effort to combat illicit trafficking and inadvertent movements of radioactive and nuclear materials. Despite the commitment demonstrated by most countries, nuclear security capacity building is still strongly needed in the region. In this regard, the baseline for regional governments is the IAEA's Nuclear Security Series (NSS). It was reiterated how the newly opened COE in China could play a critical role in building capacity because, as the largest COE in the Asia-Pacific, it has the capacity to train over 2,000 nuclear security personnel and to become the principal center for international exchanges of advanced technologies and international cooperation on nuclear security. Finally, our speaker stressed that the Global Partnership (GP) against the spread of Weapons of Mass Destruction (WMD) and related materials is an essential initiative to enhance nuclear security. Endorsing the suggestions made by previous participants, he also pointed out that ASEAN had a key role to play to help build capacity.

During the discussion, some participants wondered whether China would be willing to organize and host a major international nuclear security initiative, possibly of the caliber of the NSS. Chinese participants suggested that China may have funds to support more capacity-building and coordination projects. The way these funds and projects should be coordinated, however, will need to be ultimately decided by ASEAN.

Several participants stressed that Southeast Asian countries do not consider proliferation to be a priority. More direct dangers are cyber-attacks and the spread of terrorist organizations.

Nuclear Security Culture

The third session reflected on ways to build a nuclear security culture in Southeast Asia. Khairul (*Center for Security Culture and Assessment, Indonesia*) assessed Indonesia's involvement and commitment to promoting nuclear security. After an overview of the country's regulations and a description of Indonesian nuclear research reactors, our speaker explained that Indonesia and its National Nuclear Energy Agency (BATAN) are actively engaged in promoting a nuclear safety and security culture in the country on the basis of the IAEA standards and

guidance. Indonesia has improved its security performances by organizing workshops, training courses, and emergency scenario exercises for its workforce, including police, army, fire brigades, and radiological first-responder units. Indonesia has also sent personnel to regional and international events and enhanced the physical protection of nuclear facilities. Khairul explained that Indonesia's progress has been self-monitored and self-assessed with questionnaires, interviews, surveys, document reviews, observation, and exercises. These efforts have helped strengthen nuclear security awareness among the workforce. Much more progress is needed, however. To keep promoting a chemical, biological, radiological and nuclear (CBRN) security culture, Indonesia inaugurated the Center for Security Culture and Assessment (CSCA), the first center in the world aimed at promoting a CBRN security culture. .

Nguyen Nhi Dien (*Da Lat Nuclear Research Institute, Vietnam*) assessed Vietnam's efforts in promoting a nuclear security culture by evaluating its planned nuclear power plants (NPP), nuclear and radioactive security in the country, and describing the training exercises on nuclear security conducted by Vietnamese authorities. Vietnam is expected to sign contracts for its first NPP in 2017 and start construction between 2020 and 2022. Therefore, it is critical to conduct a comprehensive assessment of nuclear risks and threats. At present, Vietnam possesses over 3,950 radioactive sources, of which 2,100 are in use and 1,850 are in temporary storage, with the main sources being Co-60, Cs-137, and Sr-90. Our speaker also stressed that to strengthen nuclear and radiological security, Vietnam has set-up several new legal frameworks, joined international treaties and initiatives such as the CPPNM as amended and the NSS, organized training courses for its workforce, and strengthened import and export controls in airports and seaports. The country also established, in 2013, a subcommittee on nuclear safety and security to supervise the implementation of legal documents, guidelines, and international agreements, and developing programs to ensure the physical protection of the nuclear power plants, to guarantee the safety of the personnel, and to evaluate the impact of the NPP on the environment.

Participants welcomed the efforts of Indonesia and Vietnam and suggested that they share their experiences in more depth with other states in and outside the region. A key question was whether IAEA guidelines served a useful purpose in the self-assessment exercise undertaken in each country. Despite being relatively broad and the need to tailor them to fit the country's needs, IAEA guidelines were seen as being helpful. Some participants also inquired about the role of the military in promoting and supervising nuclear security. Such a role seems to be marginal, as the military apparatus of Southeast Asian countries mainly deals with territorial and national defense, whereas nuclear security seems to be outside their responsibilities and scope, even in situations where radioactive materials are missing. Stronger involvement of the police forces, therefore, is needed.

Nuclear energy development in Southeast Asia

The fourth session focused on nuclear energy developments in Southeast Asia. Stephanie Lieggi (*James Martin Center for Nonproliferation Studies*) gave a presentation on regional cooperation efforts in Southeast Asia. Our speaker explored the regional cooperative agreement between ASEAN and the IAEA and provided an overview of the work of the principal regional organizations and initiatives, including ASEANTOM, the Nuclear Energy Cooperation Sub-

Sector Network (NEC-SSN), the Technical Working Group on Nuclear Power Plants (TWG-NPP) under ASEAN, the FNCA, the Asian Network for Nuclear Education and Training (ANENT), the Asia-Pacific Safeguards Network (APSN), and the Asian Nuclear Safety Network. International and regional cooperation on nuclear emergency preparedness and response (EP&R) is vital to ensure safety and security and to help avoid another accident like Fukushima. Given that new nuclear power facilities are being built in Southeast Asia and several countries are considering building more, regional governments should lay the foundations now for an effective regional response capability. The European Commission funded a study to assess EP&R in six ASEAN states and concluded that much work is still needed on early warning systems, radiation monitoring networks, and technical support to decision makers. To this end, ASEAN, ASEANTOM, the Indonesian COE and CSCA, and the Nuclear Security Support Centers in Malaysia and Vietnam can play a significant role in enhancing nuclear security and safety culture through human resource development. A lot of potential also exists for US-China cooperation to develop this capability.

Alistair D. B. Cook (*Center for Non-Traditional Security Studies, Singapore*) focused on ways to enhance regional EP&R. Given states' interest in pursuing nuclear energy, and considering that a major nuclear accident would have severe trans-boundary economic and environmental consequences, including the contamination of water and food sources, adoption of institutionalized emergency responses by all ASEAN countries is a priority. Regional initiatives such as the ASEAN Coordinating Center for Humanitarian Assistance that already focus on natural disaster response should broaden their mandate to incorporate human-made nuclear disasters. A contingent of specifically trained nuclear disaster respondents should be created, together with a set of standard operating procedures that synchronizes the different nuclear emergency protocols used by each country. Alternatively, Cook suggested that these efforts be combined and managed by a separate nuclear crisis center. This center would facilitate information sharing and coordinate regional civil and military responses as well as coordinate post-disaster recovery operations. It could also organize workshops, training courses, and emergency drills. Finally, track 1.5 and track 2 dialogues can play a critical role in improving information sharing and helping strengthen interagency coordination, with the ultimate scope of reducing duplication of efforts.

To strengthen coordination, a participant suggested that the United States' WMD response teams be utilized in the event of a nuclear crisis. These teams, which provide guidance and assistance to civilian responders and civil authorities in the United States in a WMD incident, could share their knowledge and experience with Southeast Asian countries, provide support, and create a framework of best practices. Since most of these teams are part of state National Guard units, it might be possible to integrate them into regular training conducted by these units and the militaries in Southeast Asia.

Other participants suggested that the recent nuclear cooperation agreement between the United States and Vietnam be used as a model for agreements between the United States and other Southeast Asian countries. They also suggested the US Pacific Partnership program include nuclear accidents in its capacity building activities.

Another recommendation was to map all the key agencies likely to be called upon in each of the 10 Southeast Asian countries so that, in the event of a nuclear accident, their intervention would be coordinated and duplication of efforts avoided. Some participants suggested that this work could be done at the track-2 level.

Strategic trade controls

The fifth session explored the potential for enhancing cooperation on strategic trade controls in Southeast Asia. Bryan Early (*University of Albany*) defined strategic trade controls as a tool that allows governments to regulate the trade and/or the transfer of weapons, weapon-related goods, and weapon-related technologies. Since countries face different proliferation risks and considering that ASEAN is not intended to be a robust supranational organization, a universal, harmonized, STC system on the model of the European Union does not appear to be a feasible strategy for Southeast Asia. For the same reasons, the ASEAN Single Window (ASW) Initiative does not appear to be an efficient mechanism for controlling a regional STC regime. Rather, adopting national STC programs tailored to each country's circumstances seems to be a better option. Some ASEAN countries like Singapore and Malaysia have taken the lead in developing national strategic trade controls programs. Their experiences can be used to guide fellow ASEAN members in adopting their own programs. ASEAN, however, can play a constructive role in facilitating regional cooperation on STC related issues, like in information sharing and establishing norms of behavior.

Sunchai Nilswankosit (*Chulalongkorn University*) provided an assessment of Thailand's efforts in implementing nuclear security. The use of radiation portal monitors (RPMS) is one of the major tools the country has used to detect unauthorized movements of radioactive and nuclear materials. Thailand still needs strong improvements in data collection, however, particularly because current methods are not standardized. When asked whether cooperation with the United States and/or China would be helpful in this regard, the presenter explained how the creation of the X-Ray scanning terminal was made possible thanks to a project of the Department of Energy of the United States. China, through a subsidiary company (LUTEC), supported the project. Additional engagement and cooperation with the two countries would be certainly beneficial. Such cooperation could be helpful, for example, in the adoption and implementation of a national STC program.

Karla Mae Pabelina (*Philippines Foreign Service Institute*) focused on strategic trade controls in the Philippines, stressing that it took several years for Manila to adopt its Strategic Trade Management Act (STMA). The adoption, on November 13, 2015, came after the recognition that the Philippines, due to its geographic location and economic situation, could become a proliferation hub. While the STMA is an important first step there remain several challenges associated with implementation. It will, therefore, require considerable political will and active participation of all concerned agencies to implement a comprehensive plan of action. The Philippines needs to conduct a clear assessment of its capabilities to implement the STMA and consider what measures are required to implement the Act.

The discussion highlighted that the primary reason for Southeast Asia's lag in implementing strong STC programs is the lack of capacity. All participants agreed that the

United States and China, as well as other states, can play a crucial role in helping build STC capacity in the region. Their cooperation on issues such as training Customs and law enforcement personnel is one way to build capacity. Duplication of efforts, however, must be avoided. The efforts should also be tailored to the needs of each country, and this requires a prior assessment of specific needs.

Some participants challenged the argument that the ASEAN Single Window Initiative is not an efficient mechanism for developing a regional STC regime. Many see it as essential to greater coordination and harmonization, as it connects and integrates the National Single Window (NSWs) of Member States, ensures compatibility between NSWs and international open communication standards, and ensures secure and reliable exchange of data among member states and trading partners. Instead, it was argued that the underlying problem is a lack of confidence among ASEAN member states in sharing information through the single window system.

United Nations sanctions implementation

The last session looked at United Nations (UN) nonproliferation sanctions and at ways to strengthen cooperation in implementing them. Yongwan Kim (*UN Panel of Experts established pursuant to Resolution 1874/2009*) focused on North Korea, providing an overview of the sanctions imposed on the country: from UNSCR 825 adopted in 1993 following North Korea's withdrawal from the NPT to the most recent resolution, UNSCR 2270, adopted in March 2016 in response to North Korea's fourth nuclear test. The scope of the regime is to counter the proliferation of goods and materials that could be used to improve North Korea's nuclear weapon program. The regime was not adopted to affect the country's economic development. Kim also explained that the Panel of Experts provides recommendation to states on how to implement the sanctions regime. Specifically, the Panel supports the [1718 UN Sanctions Committee](#)'s outreach efforts by providing technical assistance to states and by analyzing their national implementation reports. The Panel also writes mid-term and final reports; the 2014-2016 final report highlighted how North Korea tries to evade the sanctions regime. For example, the country uses diplomats and a small number of foreigners and North Korea's nationals to conduct trade deals. It also exploits the international financial system and container shipping documents for its activities. North Korea still manages to obtain goods manufactured throughout the world, with partners not always aware of the sanctions' requirements. That being said, the latest resolution, UNSCR 2270, is much more stringent and limiting than the previous ones. It includes provisions that, for instance, ban the trade of coal, iron, gold, minerals, and aviation fuel; imposes stricter inspections on all cargo going in and out of the country; enforces stronger financial limitations; and provides the expulsion from countries and international institutions of North Korean nationals who violate the resolution. These provisions, however, need to be understood and implemented by all countries to be effective. International cooperation is also fundamental and, to this day, it has been lacking.

Katsu Furukawa (*former member of the Panel of Experts established pursuant to Resolution 1874/2009*) supplemented Kim's presentation by showing how goods and materials used by North Korea to advance its nuclear weapons program are often obsolete dual-use items that are not included in any "black list" or "list of prohibited items." This is just one of the

challenges. Within ASEAN, which guarantees freedom of movement of people and goods between the ten Southeast Asian countries, only three countries have implemented STC: Singapore, Malaysia, and the Philippines. Other Southeast Asian countries lag in implementing them and are, therefore, often incapable of identifying prohibited items that North Korean and other nationals' trade in violation of the sanctions regime. There are other challenges. North Korean agents use foreign passports to disguise their nationality. Border control authorities of many countries confuse North Korea with South Korea. More generally, there is a lack of cooperation by certain UN member states with the UN Panel's investigations. All of this translates into an urgent need for national STC programs. The development of frameworks for cooperation among countries within and outside the region is also strongly needed, as well as the establishment of cooperative relationships with industries and scientific communities and the creation of information-sharing systems about North Korean agents and companies.

Zhao Tong (*Carnegie-Tsinghua Center for Global Policy*) provided his views on the UN sanctions regime and offered several recommendations to enhance cooperation on nuclear security and nonproliferation. While the work of the UN Panel of Experts is productive, information sharing between countries and with the Panel needs to be improved. UNSC resolutions in reference to North Korea require states to report on the measures they have taken to implement sanctions. Yet so far only a few countries have fulfilled this requirement. Governments need to take implement sanctions and STC programs, and need to share their experiences in identifying North Korea's illegal networks. To this end, a standardized format or a template for reporting should be adopted to help countries understand and fulfill their reporting obligations. Think tanks and non-governmental organizations with expertise, like the Pacific Forum CSIS, should play a substantial role in helping raise awareness of this problem. The United States and the international community should also engage with countries like Russia and China where there is an important North Korean diaspora, which is often used to circumvent sanctions. Such engagement should help uncover North Korean illicit activities. Capacity on inspections, especially of cargo, should be built. Financial barriers should be reinforced to incentivize companies and countries to stop trading with North Korea. The electronic transfer of relatively small amounts of money, which often goes unnoticed, should also be addressed. Finally, an international open-source intelligence data collection center should be considered as a good next step to enhance cooperation among countries.

The debate that followed highlighted that disagreements persist over the role and effectiveness of UN sanctions. For some, sanctions are ineffective because they fail to offer incentives to companies (and individuals) to stop trade with North Korea. These companies, which are either preoccupied by making profits or not aware of the consequences of trading with North Korea, continue their activities in violation of the UN resolutions. Other participants considered the sanctions regime inefficient because it is incapable of addressing North Korea's sense of insecurity. There was general agreement, however, that sanctions should be used to bring Pyongyang back to the negotiating table and serve the specific purpose of stopping or at least slowing North Korea's illicit activities.

APPENDIX A



Dialogue on Nonproliferation and Nuclear Security Cooperation in Southeast Asia Marina Mandarin Singapore | May 31 – June 1, 2016

AGENDA

Tuesday, May 31, 2016

8:30 **Registration**

9:00 **Welcome Remarks**

9:15 **Session 1: Nonproliferation & Nuclear Security – Perspectives & Priorities**

This session will compare and contrast US, Chinese, and Southeast Asian perspectives and priorities on nonproliferation and nuclear security. What are each's assessment of proliferation and nuclear terrorism threats in Southeast Asia? What are the most worrying threats and the most pressing issues to address, both in the nonproliferation and nuclear security areas? What differences are there among the various countries on how best to address these threats? Why?

Presenters: Erik QUAM
 LIU Chong
 Mely CABALLERO-ANTHONY

10:45 **Coffee Break**

11:00 **Session 2: After the 2016 Nuclear Security Summit**

This session will focus on ways the United States, China, and Southeast Asian states can advance the nuclear security agenda following the 2016 Nuclear Security Summit (NSS). What are US, Chinese, and Southeast Asian perceptions regarding nuclear security in Southeast Asia? What can these countries do to promote nuclear security governance beyond the NSS process? [Discussions about nuclear security culture should be withheld to the following session.]

Presenters: Miles POMPER
 ZHOU Chang
 Sabar MD HASHIM

12:30 **Lunch**

13:30 **Session 3: Nuclear Security Culture**
This session will reflect on ways to build nuclear security culture in Southeast Asia. What are the international rules and norms on nuclear security? How are they best implemented in the Southeast Asian context? How can nuclear security culture be strengthened in Southeast Asia? What is the role of Indonesia's nuclear security center of excellence? How can the United States and China assist regional efforts?

Presenters: Khairul
 NGUYEN Nhi Dien

15:15 **Coffee Break**

15:30 **Session 4: Nuclear Energy Development in Southeast Asia**
This session will focus on nuclear energy development in Southeast Asia. What countries in the region plan to develop nuclear energy? What is the status of that development? What mechanisms exist to promote cooperation in nuclear energy? What are the response mechanisms at the regional level in the event of a nuclear accident or incident? How can the United States and China assist?

Speakers: Stephanie LIEGGI
 Alistair COOK

17:00 **Session Adjourns**

18:30 **Dinner**

Wednesday, June 1, 2016

9:00 **Session 5: Strategic Trade Controls**
This session will explore the potential for enhancing cooperation on strategic trade controls in Southeast Asia. What impact does the establishment of the ASEAN Economic Community have on strategic trade controls in the region? What type of cooperation exists between Southeast Asian countries on strategic trade controls? What level of cooperation exists on licensing, detection, and enforcement issues? How can this cooperation be strengthened? Can strategic trade controls principles be integrated into the ASEAN Single Window initiative? Should they be?

Presenters: Bryan EARLY
 Sunchai NILSUWANKOSIT
 Karla Mae PABELINA

10:15 **Coffee Break**

10:30

Session 6: UN Sanctions Implementation

This session will look at ways to strengthen cooperation to implement UN sanctions, in particular sanctions imposed on North Korea. What cooperation exists in Southeast Asia to implement UN sanctions? How can such cooperation be improved? What other instruments or initiatives should Southeast Asian countries utilize?

Presenters: Katsuhisa FURUKAWA
Youngwan KIM
ZHAO Tong

Session 7: Wrap-up and Next Steps

This session will summarize the meeting's key findings and reflect on next steps for future cooperation on nonproliferation and nuclear security. What is the baseline for cooperation? What are the opportunities and challenges to enhance such cooperation? What specific issues should the United States, China, and Southeast Asian countries prioritize in the near-, medium-, and long-terms?

12:00

Lunch

13:00

Meeting Adjourns

APPENDIX B



**Dialogue on Nonproliferation and Nuclear Security Cooperation in Southeast Asia
Marina Mandarin Singapore | May 31 – June 1, 2016**

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