The first meeting of the Study Group on Nonproliferation and Disarmament (NPD) of the Council for Security Cooperation in the Asia-Pacific (CSCAP) was held in Kuala Lumpur on April 6-7, 2015. The approximately 45 participants included representatives from 13 CSCAP member committees and 12 Pacific Forum CSIS Young Leaders. All attended in their private capacities. The group examined recent developments in nonproliferation and disarmament, the impact of proliferation financing, biological threats, and recent Korean Peninsula developments. It also looked at the ASEAN Regional Forum (ARF) Work Plan on NPD and discussed future study group priorities, focusing on capacity building to strengthen the nonproliferation regime. The following is a summary of the proceedings.

Session 1: Recent Developments in Nonproliferation and Disarmament

The first session focused on developments in promoting nonproliferation and disarmament. Nikita Perfilyev (*Comprehensive Test Ban Treaty Organization*) began with an overview of the 2015 Nuclear Nonproliferation Treaty (NPT) Review Conference (RevCon) and recent progress in the development of the Comprehensive Test Ban Treaty (CTBT) verification regime. After highlighting key challenges for the RevCon – lack of progress on the Middle East Weapons of Mass Destruction (WMD)-free Zone, the Humanitarian Initiative, North Korea's expanding nuclear weapons program, and India's Nuclear Suppliers Group (NSG) waiver – he shifted to a discussion of the CTBT and its contribution to nonproliferation.

The CTBT is, according to Perfilyev, a platform for nonproliferation cooperation. It serves simultaneously as a confidence-building measure and a verification tool. While the CTBT has not yet entered into force, it continues to gain support. There are now 183 signatures and 164 ratifications. There has also been progress in improving the verification regime. First, the permanent five members of the United Nations Security Council (P5) remain committed to CTBT verification. They met on the sidelines of CTBT Working Group B to discuss the issue and, on March 2, 2015, issued a joint statement on limiting Xenon emissions in medical isotope production. Second, the International Monitoring System (IMS) continues to grow and improve. Of 281 certified stations, 94 detected North Korea's 2013 nuclear test. Third, the CTBTO conducted a large field exercise in Jordan that tested 15 out of 17 on-site inspection techniques. There is, however, still work to do. The CTBT has not yet entered into force, and, in Southeast Asia, neither Thailand nor Myanmar has ratified the treaty. In closing, Perfilyev asked: who leads Southeast Asia on nonproliferation and disarmament? Japan and South Korea have tried, but there is an opportunity for a country in the region.

In the second presentation, Natasha Barnes (*Public Advisory Committee for Disarmament and Arms Control, New Zealand*) took a closer look at the 2015 NPT RevCon and the Humanitarian Initiative. Barnes began by noting that of the 64 action points from the 2010 RevCon, less than half have been fully implemented, a third have been partially implemented, and on one quarter there has been no progress. For the most part, there has been good progress on upholding treaty commitments, but little movement on action items related to disarmament. Nonetheless, the most likely outcome for the 2015 RevCon is a minimally acceptable consensus statement. The Preparatory Committee meetings have set the groundwork and the Iran framework agreement should provide positive momentum. Major barriers to a more robust outcome are tensions resulting from the situation in Ukraine and continued frustration by non-nuclear-weapon states,

in particular due to the lack of progress in convening a conference on establishing a Middle East WMD-free zone.

The presentation also addressed the Humanitarian Initiative. Barnes noted that frustration with lack of progress in the NPT and the Conference on Disarmament has led likeminded states and nongovernmental organizations (NGOs) to seek another avenue to pursue disarmament. Some 155 states now support an initiative that seeks to stigmatize nuclear weapons by emphasizing the humanitarian consequences of their use. The NPT nuclear-weapon states initially refused to participate, but both the United States and the United Kingdom attended the Humanitarian Initiative's third conference in December 2014. Their attendance, however, is seen as a goodwill gesture, not as a sign they are genuinely moving in that direction. The Humanitarian Initiative will be discussed extensively at the RevCon, but, according to Barnes, its advocates should not take the counterproductive step of blocking consensus.

In the third presentation, Robert Finch (*Sandia National Laboratories*) presented a numerical model for conceptualizing a WMD free zone in the Middle East. The model includes key political and technical tendencies that can facilitate or detract from the creation of the zone such as ratification of treaties, cooperation between countries, and levels of military expenditure. It could be, according to Finch, useful in both tracking progress toward and promoting the eventual creation of a WMD free zone in the Middle East.

In the discussion following the presentations, some participants were optimistic about the NPT. One noted that many of the action items from the 2010 NPT RevCon were envisioned as long-term goals that no one expected to be achieved in five years. Another noted that Iran, as the current chair of the Non-Aligned Movement (NAM), is likely to have a positive influence on the RevCon. Others, however, were more pessimistic, with one participant arguing that the NPT bargain is broken and that analysts and states would do better to focus on the management of nuclear weapons rather than nonproliferation and disarmament.

Session 2: Proliferation Financing in the Asia-Pacific

The second session focused on proliferation financing. The speaker for the session, Stephanie Klein-Ahlbrandt (*UN Panel of Experts established Pursuant to UNSCR 1874, UN Security Council*), began by defining the problem. Proliferation financing is the act of providing funds or financial services for proliferation activities. There are a number of UN sanctions that aim to limit these activities and conventional wisdom is that sanctions have gone a long way in limiting proliferation activities, but overall there are serious challenges. Sanctions are only as strong as the weakest link, and actors such as North Korea often find and exploit weaknesses in national and international legal authorities. Tactics used by proliferators include front companies, cover names and aliases, layered transactions, third party banks, personal bank accounts, and cash couriers. For shipping, proliferating states will often alter shipping documents, use layered transactions, and include instructions to have vessel names omitted. The 2014 report of the UN Panel of Experts on North Korea reveals an increasingly sophisticated effort by the DPRK to circumvent UN sanctions under UNSCR 1718, 1874, 2087, and 2094. There is specific evidence that foreign financial intermediaries have been used by North Korea in various countries in Southeast Asia.

The Financial Action Task Force's (FATF), the premier international policy-making and standard-setting body in the international effort against terrorist financing and money laundering, now also addresses the financing of proliferation. FATF focuses on implementation, assessing countries' compliance with financial standards. In February 2010, FATF recently issued revised recommendations for states that were endorsed by the UN Security Council. In order to comply with FATF standards and strengthen the regime to counter proliferation financing, there are, according to Klein-Ahlbrandt, a number of important steps that states can take. States should freeze the funds of designated entities without delay, identify additional targets and assets, improve information sharing with financial institutions and export control organizations, and provide more frequent and improved reporting to the UN.

One issue addressed in the discussion was the role of the United States. Several participants noted the important role of US penalties in getting companies to pay attention to implementation. Others, however, noted that the US benefits by deferring to the UN. If enforcement activities are seen as driven by the United States, they will be viewed as political. If they come from the UN, countries in Southeast Asia are more likely to respond. On the topic of industry support, one participant noted that a key step is to create a legal framework that gives companies incentives to create internal compliance programs.

Session 3: Bio-Threats in the Asia-Pacific

The third session examined biosafety and biosecurity in the Asia-Pacific. In the first presentation Muhammad Qasim (*Guro Hospital, Korea University*) outlined the major bio-threats in the Asia-Pacific. The growing importance of biological research and the threat of pandemic diseases have created an urgent biosafety and biosecurity challenge. The primary threat comes from naturally occurring diseases, but there remains concern with dual-use research and biological weapons. The likely economic growth in the Asia-Pacific over the coming years will bring about advances in biotechnology that will make these challenges even more acute.

There has been important progress in implementing the Biological and Toxins Weapons Convention (BTWC) and improving the global health security regime in the Asia-Pacific, but many challenges remain. There remains a huge gap between developed and lesser-developed countries in the region, and there is no established mechanism for collective action because of inconsistent coordination between World Health Organization (WHO) regional offices. The ASEAN Secretariat is well positioned to coordinate between different stakeholders, but has no legal authority and must address competing economic and political interests in the region. The priorities for the international community should be, according to Qasim, establishing a code of conduct for scientists, increasing ethical training, providing assistance for national legislation and implementation, and establishing international standards for biosecurity.

In the second presentation, Zalini Yunus (*Institute for Defence (STRIDE), Ministry of Defence, Malaysia*) addressed both the threat environment and Malaysia's efforts to improve its own biosafety and biosecurity. Yunus noted that biological threats exist along a spectrum from a natural disease outbreak to the deliberate use of biological weapons, with other threats such as accidents and negligence in between. Oversight and precautionary measures are needed to

prevent agents from being release either intentionally or unintentionally, but it remain essential to find a balance between preventing biological threats and maintaining scientific openness.

Fully implementing the BTWC, UN Security Council Resolution 1540, and the WHO's International Health Regulation (IHR) 2005 is difficult. To fully comply, states must take steps such as adopting controlled agents lists and establishing an effective system for disease surveillance and notification. States such as Malaysia lack both the budget and expertise to implement international standards. Because the threat is considered to be minimal, there is little political will. And without indigenous expertise, lesser-developed countries are forced to rely on developed countries for implementation of inspections.

In the discussion, participants noted that most countries in Southeast Asia in particular are more focused on biosafety than biosecurity. These countries are more concerned with leaks that might get laboratory workers infected than with theft by nonstate actors. Overall participants identified the following priorities for implementation: establishing a code of conduct for researchers, improving domestic legislation, training to conduct bio-risk assessments, and developing comprehensive incident response plans.

Session 4: The Korean Peninsula and Denuclearization

The fourth session examined the status of denuclearization on the Korean Peninsula. The first speaker, Katsuhisha Furukawa (*UN Panel of Experts established Pursuant to UNSCR 1874, UN Security Council*), focused on North Korea's ongoing nuclear- and ballistic missile-related activities. Key recent activities include the construction of new infrastructure at the Sohae launch site, participation in the Joint Institute for Nuclear Research in Russia, and a continued space launch program under the National Aerospace Development Administration (previously the Korean Committee for Space Technology).

North Korea's continuing program, Furukawa noted, shows that prohibited activities are continuing in violation of UN sanctions. North Korea uses intermediary and shell companies, falsification of cargo manifests, transshipments, dual-use items, and physical concealment measures to get the technology it needs. To effectively enforce sanctions, states must establish catch-all mechanism for interdiction, share good inspection practices, establish cooperative relationships with industry, ensure chain of custody meets evidentiary requirements, and share information about individual violators.

In the second presentation, Chen Kai (*China Arms Control and Disarmament Association*) discussed the political dynamics that prevent progress toward denuclearization on the Korean Peninsula. Chen argued that the main problem is conflicting interests and lack of trust between North Korea and the United States. North Korea views nuclear weapons primarily as political, not military weapons and hopes to use them to improve relations with the United States and achieve its political and security goals.

There has, however, been little progress toward denuclearization of the Korean Peninsula in large part because of a change in US policy. Since 2009, there has been little if any enthusiasm in Washington for engagement. Some argue that US policy changed because North Korean

denuclearization is no longer a top priority, while others believe that the change is a result of a lack of trust. It is also, in Chen's view, the policy of the United States to seek regime change, which makes productive dialogue difficult.

In the discussion several participants pushed back against Chen Kai's characterization of the political dynamics. They noted that the United States has not changed its policy and still seeks a negotiated denuclearization of North Korea, but believes that the first step is for North Korea to credibly show that it is willing to move in that direction by implementing its previous commitments. In general, participants were pessimistic about the diplomatic route, but also urged innovative thinking. They agreed that the United States, South Korea, and China needed to present North Korea a clear proposal of the benefits it would receive if it did denuclearize.

Session 5: Nonproliferation Priorities in the Asia-Pacific

The third session examined nonproliferation priorities in the Asia-Pacific. In the first presentation, Carl Baker (*Pacific Forum CSIS*) outlined the ASEAN Regional Forum (ARF) priorities for nonproliferation and disarmament. The ARF issued statements supporting nonproliferation in 2004 and UN Resolution 1540 in 2007, then, in 2012, accepted the Work Plan on Nonproliferation and Disarmament. The work plan includes priority for projects in three broad areas: nonproliferation, peaceful use of nuclear technology, and disarmament. Countries can submit proposals in any of the three areas to do things such as information sharing, training, and capacity building.

The ARF Work Plan has resulted in a number of successful project including workshops on export licensing; nonproliferation; 1540 implementation; chemical, biological, radiological, and nuclear risk mitigation; safeguards; nuclear forensics; and missile defense. In the future, workshops are expected on strategic trade controls, 1540 implementation, and nuclear safety. To move the process forward, Baker argued, the ARF needs to establish priorities and focus on strategic trade controls, nuclear security, disarmament, biosecurity, and capacity building. There has been a heavy focus on nuclear issues and raising awareness, but there should be a shift toward nonproliferation capacity building. The ARF must promote regional norms and establish performance standards and metrics for measuring progress.

In the second presentation, Maria Rost Rublee (*International Security Studies Section, ISA, Australia*) argued that developing a nuclear security culture should be a priority in the Asia-Pacific. Nuclear safety and security requires proper equipment, training, and procedures, but it also needs workers that are committed to safety and security. In the 2011 Fukushima disaster, for example, a failure of nuclear safety culture – refusal to accept peer review, incentives to falsify reports, and short-cycle staff rotations – has been cited as a key factor.

While there is general recognition that effective nuclear security culture is a key element in ensuring the security of nuclear facilities, there is little consensus on how it can best be taught. To build a security culture, Rublee argued that countries need incentives, processes, policies, reviews, and training for staff and managers that place high value on nuclear safety and security. Southeast Asia countries can benefit from outside training and assistance, but effective culture must develop within each country. Governments can help the process by establishing processes

that encourage transparency and support whistleblowers, reviews that uncover mistakes, and training that reminds staff of the real goals.

In the discussion, participants agreed that there is an urgent need for CSCAP and the ARF to move from raising awareness to implementation. The focus should be on ratifying and implementing key treaties and instruments and building capacity in critical areas like strategic trade management and nuclear security. Participants noted that raising awareness, however, remains important because it is the only way to getting governments to put resources behind capacity building.

Session 6: Nonproliferation Capacity-Building in the Asia-Pacific

The sixth session focused on nonproliferation capacity building in the Asia-Pacific. In the first presentation Robert Finch (*Sandia National Laboratories*) provided an overview of US activities to advance nuclear nonproliferation and disarmament capabilities in the Asia-Pacific. Between the Department of Defense, Department of State, and Department of Energy, the US has a number of programs aimed at increasing nonproliferation capacity. In the Asia-Pacific, the US has, for example, supported maritime law enforcement, enhanced disease surveillance, and hosted ARF nuclear forensics workshops. However, the question, according to Finch, is how US programs can better support ARF Work Plan priorities.

In the second presentation, Naoko Noro (*Integrated Support Center for Nuclear Nonproliferation and Nuclear Security, Japan Atomic Energy Agency*) focused on efforts to expand human resource capacity. As nuclear power expands in Asia, there will be increasing risks of nuclear accidents, attacks against facilities, theft of materials, and illicit trafficking requiring nuclear nonproliferation and security human capacity building.

There are a number of regional and international efforts in this regard, but they need to be effectively harmonized. Capacity-building organizations need to identify important stakeholders, use limited resources effectively, and avoid inconsistency. Nuclear Security Centers of Excellence help to increase understanding of key issues nuclear security and provide education and training, but to be effective, the COEs must exchange information on each other's training activities, share good practices, and coordinate resources. The Asia-Pacific COE network must also coordinate with international organizations such as the International Atomic Energy Agency (IAEA) and the Global Partnership against the Spread of Weapons and Materials of Mass Destruction.

In the third presentation, Karla Mae Pabelina (*Center for International Relations and Strategic Studies, Philippine Foreign Service Institute*) addressed nonproliferation capacity-building in Southeast Asia. Pabelina began by noting the importance of UN Resolution 1540, whose implementation was endorsed by the ARF Work Plan. In order to fulfill their obligations, all ASEAN states have submitted national implementation reports. Brunei, Cambodia, Thailand, the Philippines, and Vietnam have also sent requests to the 1540 committee for specific capacity-building assistance.

On the whole, Pabelina argued, the scope and complexity of UN Resolution 1540 makes it challenging to implement at the national level, which makes third-party capacity building critical. There are, however, a number of challenges including low awareness of the importance of 1540 among decision-makers and difficulty in ascertaining states' capacity shortfalls. The solution is targeted interventions that are tailored to the needs and capabilities of partners.

The closing discussion focused on the way forward for nonproliferation in the Asia-Pacific. Participants agreed that nonproliferation must remain a key component of the regional security architecture. They argued that while the 1540 Committee plays an important role in connecting requests for capacity with willing donors, it is not particularly efficient in taking requests. The ARF could improve this process by establishing a mechanism at the regional level to coordinate requests and relay them to the committee. One participant also urged that the ARF through its Inter-Session Meeting on Nonproliferation and Disarmament should avoid compartmentalizing nonproliferation, disarmament, and the peaceful use of nuclear energy. Rather than discussing each topic once every three years, all three issues should be addressed at each inter-sessional meeting. Another participant noted that chemical and biological issues also need to be better integrated into the ARF Work Plan.

Key findings from this CSCAP Study Group Meeting include:

While work remains in raising regional awareness regarding nonproliferation, there is an urgent need to move toward implementation of key treaties and instruments and to build capacity to do so in critical areas like enhanced controls on strategic goods and a comprehensive approach to nuclear security that includes security of facilities, transportation, and information management systems. Raising awareness, however, remains critical; it is key to getting governments to put resources behind capacity building.

A first step to engaging private industry in implementing effective trade controls on strategic goods is to create a legal framework that gives companies incentives to comply with requirements to create internal compliance programs to ensure licensing of strategic goods and the protection of key technologies.

All too often, efforts aimed at countering the proliferation of weapons of mass destruction or promoting non-proliferation and disarmament focus almost exclusively on nuclear issues, but significant threats remain in the biological, chemical, and radiological areas as well which should not be overlooked.

The growing importance of biological research and the threat of pandemic diseases have created an urgent need for a comprehensive regional approach to biosecurity. While the primary threat may be from the unintended spread of disease, the consequences are the same if a biological agent is intentionally introduced. A program that includes effective surveillance, control of biological materials and technology, biosafety practices in laboratories, as well as broad disease prevention, mitigation, and response measures is critical to promoting public health and preventing the proliferation of substances used in the development of biological agents.

Important first steps in promoting regional biosecurity are establishing a code of conduct for researchers, improving domestic legislation, training to conduct bio-risk assessments, and developing comprehensive response plans that effectively integrate multiple agencies into the process to ensure effective response to a biosecurity incident.

The ARF should not compartmentalize nonproliferation, disarmament, and the peaceful use of nuclear energy. Rather than discussing each topic once every three years, all three issues should be addressed at each inter-sessional meeting. Chemical and biological issues also need to be better integrated into the ARF Work Plan on NPD.

Nonproliferation must be an integral part of the regional security architecture in the Asia-Pacific region. All ARF member states should be encouraged to accede to the key conventions, treaties, and agreements that serve as implementing mechanisms for enhancing nuclear safety and security and preventing the spread of strategic goods and technologies to nonstate actors. All states and especially those contemplating the use of nuclear energy should take immediate steps to accede to the Comprehensive Test Ban Treaty (CTBT), the Convention on Nuclear Safety, and complement their IAEA Comprehensive Safeguards Agreement with the Additional Protocol. Promoting entry into force of the CTBT should remain a priority; it promotes other nonproliferation initiatives by serving as a confidence-building measure and verification tool.

The outlook for the 2015 Nuclear Nonproliferation Treaty (NPT) Review Conference (RevCon) is rather modest with most analysts expecting a minimally acceptable consensus statement as the most likely outcome. The Preparatory Committee meetings have set the groundwork and the Iran framework agreement should provide positive momentum. Major barriers to a more robust outcome are tensions between the West and Russia which inhibit new arms control initiatives, and continued frustration by non-nuclear-weapon states over the perceived lack of progress toward nuclear disarmament. The delays in convening the promised dialogue on establishing a Middle East WMD-free zone will likely be seen as an ongoing disappointment. To improve the chances of success, all states should focus on reaffirming the 2010 action items and establishing a mechanism for measuring progress.

The movement on the humanitarian consequences of nuclear weapons use is at odds with the incremental approach favored by the nuclear weapon states. The anticipated joint statement by the P-5 at the upcoming NPT RevCon should directly address this issue by announcing increased transparency on their disarmament activities.

Dialogue is critical to promote denuclearization of the Korean Peninsula. Meanwhile, the current stalemate and general lack of trust between the DPRK and the US will require innovative thinking to move the process forward.

The recent UNSC DPRK Sanctions Committee report reveals an increasingly sophisticated effort by the DPRK to circumvent UN sanctions under UNSCR 1718, 1874, 2087, and 2094 by taking deliberate actions such as renaming vessels and trading companies, falsifying shipping documents, masking financial transactions, and taking advantage of the lack of “catch-all” provisions in regulations governing transit shipping. States should pass legislation that allows seizure of goods and prosecution of individuals involved in these practices.

The Southeast Asian Nuclear Weapons Free Zone (SEANFZ) has been severely weakened by reservations from the UK, France, and especially Russia. In addition to seeking an end to the demand for reservations, SEANFZ states should explore the idea of expanding from a nuclear weapon free zone to a WMD free zone.

The Nuclear Security Summit (NSS) process has helped raise awareness of the threat of nuclear terrorism and the need for enhanced nuclear security. However, the nuclear security regime remains fragmented and underdeveloped and it's not clear what happens to the NSS process after the 2016 Summit. The ARF should encourage all states to accede to key nuclear security regimes such as the Convention on the Physical Protection of Nuclear Material including the 2005 amendment, the International Convention on the Suppression of Nuclear Terrorism, and the Code of Conduct on the Safety and Security of Radioactive Sources.

Nuclear Security Centers of Excellence in the Asia-Pacific region elevate understanding of nuclear security and provide education and training to professionals in the field. The ARF should work to institutionalize nuclear governance in Asia by improving coordination among the CoEs to avoid duplication of efforts and take advantage of economies of scale and comparative advantages of each center.

There is general recognition that effective nuclear security culture is a key element in ensuring the security of nuclear facilities, but little consensus on how it can best be taught. Given the broad range of definitions and the various approaches being taken, the ARF should undertake a study to determine alternative approaches to implementing nuclear security culture.

The value of UNSCR 1540 is broadly recognized. The ARF should continue to promote 1540 information-sharing, identify best practices, promote national action plans, and designate points of contact. As indicated in the recently completed CSCAP Memorandum No. 27, "Implementation of United Nations Security Council Resolution (UNSCR) 1540," greater effort is needed at both the national and regional levels to implement the resolution.

The UN Resolution 1540 Committee plays an important role in connecting requests for capacity with willing donors, but, because of a lack of resources, is inefficient in taking requests. The ARF could improve this process by establishing a mechanism at the regional level to coordinate requests and relay them to the committee.

The ARF is strongly encouraged to carefully examine CSCAP Memorandums to develop new projects to implement the ARF Work Plan on Nonproliferation and Disarmament. Five separate memos covering nonproliferation, management of trade of strategic goods, UNSCR 1540, disarmament, and peaceful use of nuclear energy can be found at the CSCAP website: http://www.cscap.org/index.php?page=memoranda.

For more information, please contact CSCAP WMD Study Group co-chairs Ralph Cossa [RACPacForum@cs.com] or Nguyen Nam Duong [nd@namduong.info]. These findings reflect the view of the seminar chairmen; this is not a consensus document.