Sixth Meeting of the CSCAP Study Group on Nonproliferation and Disarmament in the Asia Pacific Bali, Indonesia, April 7, 2019

CONFERENCE REPORT

USCSCAP and CSCAP Vietnam co-chaired the sixth meeting of the CSCAP Study Group on Nonproliferation and Disarmament (NPD) in the Asia Pacific. The meeting took place in Bali, Indonesia on April 7, 2019, on the front-end of the ASEAN Regional Forum Inter-Sessional Meeting on Nonproliferation and Disarmament (ARF ISM on NPD). Approximately 45 senior scholars and officials and Pacific Forum Young Leaders attended, all in their private capacity, including a number of ARF ISM participants. Off-the-record discussions focused on recent developments in nonproliferation and disarmament, including the impact of the termination of the Intermediate-Range Nuclear Forces (INF) Treaty; Korean Peninsula denuclearization in the wake of the US-DPRK Hanoi Summit; nuclear governance in Southeast Asia; and nuclear disarmament collaboration between nuclear-armed and non-nuclear states on nuclear risk reduction. In keeping with the intent of the CSCAP Study Group on NPD, issues discussed were focused on the broad areas of nonproliferation, disarmament, and the peaceful use of nuclear technology.

Session 1: Recent developments in nonproliferation and disarmament

With the recent decision to terminate the Intermediate-Range Nuclear Forces (INF) Treaty, the first session focused primarily on the broad impact this would have on arms control initiatives in Asia. Victor Mizin (Moscow State Institute of International Relations) began the session with a brief review of the context in which the INF entered into force in 1987, noting that in its early stages of implementation, it was the basis for significant reductions in nuclear arsenals in Europe. Since then, there has been growing suspicion on both sides that the other has been in violation of the treaty. In 2014, the US began claiming that Russia was in violation of the treaty by developing a missile that flies to the intermediate ranges prohibited by the INF Treaty and launches from a ground-mobile platform. Likewise, Russia has also been accusing the US of violating the treaty since 1999 when it began testing unmanned aerial combat vehicles with specifications similar to those of ground-launched cruise missiles banned by the treaty. Later, in 2014, it began deploying in Europe launching pads that could be used to launch Tomahawk medium-range cruise missiles. The net effect of these accusations is a growing lack of confidence in all bilateral arms control agreements including the New START, which is currently under review by both the US and Russia.

In his presentation, Sitakanta Mishra (Pandit Deendayal Petroleum University) noted that beyond the growing mistrust between the US and Russia, other factors leading to the decision to abandon the bilateral agreement include the fact that others, especially China and North Korea, were not bound by the treaty and had been developing intermediate-range missiles that violated its terms. In addition, a new wide range of capabilities including hypersonic weapons and ballistic missile defense systems have rendered the idea of controlling intermediate-range missiles inadequate as the basis for an arms control mechanism in Asia. The alternative would be to develop a more universal INF Treaty that included all relevant countries and took emerging capabilities into account. While certainly seen as desirable, it was also recognized that such a treaty in today's

geopolitical environment would be difficult to achieve at best. As a result, there is an increasing likelihood of a "missile race" in Asia. By Mishra's count, there are 19 countries in the region that either have developed an indigenous missile capability or possess ballistic missiles.

The upcoming Nuclear Nonproliferation Treaty (NPT) Review Conference was also raised during the session. Here the discussion centered on the growing disconnect between the nuclear weapon states and the non-nuclear weapon states. It was noted that while the effort to prevent the proliferation of nuclear weapons has been somewhat successful in that only a few states have chosen to develop nuclear arsenals outside the confines of the NPT, the effort to eliminate nuclear weapons has been a non-starter. Mishra argued that as long as nuclear weapons are seen as a meaningful deterrent, disarmament will remain unattainable. Therefore, he proposed the immediate goal should be to delegitimize the use of nuclear weapons with the first step being to pursue a no first use of nuclear weapons treaty – similar to what was done with chemical weapons in the Geneva Protocol of 1925.

The discussion highlighted the fact that the current international security environment has continued to deteriorate over the past year. As a result, it is unclear if there is enough political will to sustain existing arms control agreements or to attempt any new arms control efforts, especially with the introduction of new capabilities and the growing number of states engaged in developing new missile-related technologies.

Session 2: The Korean Peninsula and denuclearization

As a regular feature of the CSCAP NPD Study Group, the session on the Korean Peninsula has focused on different perspectives on the relationship between denuclearization and security perceptions of the various parties with security interests on the Peninsula. Given the recent "no deal" outcome at the US-DPRK summit in Hanoi, the focus this year was on what happened at the summit and why. Not surprisingly, there were more questions than answers given the opacity of what actually happened in Hanoi and the apparent miscalculations by both sides during the summit.

Jina Kim began the session with her assessment that the inability to reach a final agreement stemmed from the lack of clarity over what each side expected as the desired end state (what is the definition of denuclearization) and the lack of agreement over approach (the US wanting a one "big" step deal and the DPRK wanting an incremental (a series of small steps) deal). In practical terms, there was a fundamental disagreement on what sites and the specific programs that should be included in the denuclearization deal. While both sides agreed with the principle of reciprocal action, they did not agree on the transaction itself. Kim anticipated some retrenchment following the summit and significant slowing of any progress in North-South cooperation. South Korea would likely seek to redefine its role as a "facilitator" rather than mediator while actively engaging the US. North Korea would likely examine its alternatives for the "new path" Kim Jong Un had mentioned in his New Year's address and seek to enhance coordination with China and Russia in an effort to reduce the impact of UN-imposed sanctions.

In an effort to explain the rationale behind these approaches, Kim spoke about structural limitations and the importance of domestic considerations on all sides. Specifically, she noted that if North Korea accepted the "big" deal of full denuclearization it would take away its leverage with the

major powers. Instead, its priority is lifting sectoral sanctions, which greatly restrict North Korea's economic growth. Essentially, North Korea sees the maintenance of its nuclear weapons program as its key asymmetric capability. For the United States, giving up sectoral sanctions would eliminate its key leverage on the DPRK. In addition, since US leaders are more accountable to their domestic constituencies, there was important pressure on President Trump to avoid reaching an agreement that would be criticized as being too accommodative toward North Korea.

Georgy Toloraya (Asian Strategy Center, Institute of Economics of the Russian Academy of Sciences) offered a rather bleak assessment of the current situation on the Korean Peninsula in his presentation, arguing that maximalist positions like final, fully verified denuclearization or full removal of sanctions are impossible. Further, while Kim Jong Un's commitment to denuclearization is contingent on a security guarantee, especially from the US, it is almost impossible for the US to offer such guarantees given the nature of the US political system. As an alternative, he argued for a more gradual approach that would have specific, limited short-term goals like a missile ban or a nuclear weapon and fissile material production freeze in exchange for an implicit acknowledgement of North Korea's nuclear weapon status similar to what has been done with Israel.

Toloraya also noted that the denuclearization process is complicated. First, there is no clear agreement on what denuclearization entails. For North Korea, the concept of the US nuclear umbrella creates a problem. For the US, North Korea's right to maintain a nuclear power program for peaceful use and its right to launch satellites as part of a space program creates a problem. Second, the process has been estimated by some to take up to 10 years to complete.

He concluded by stressing the need for a multilateral approach. While the Six-Party Talks were notoriously difficult, the complexity of security issues on the Korean Peninsula make it necessary to involve all interested parties to produce more lasting outcomes. A new multilateral process on Korean denuclearization could take the form of "3+1" talks involving the US, China, DPRK and Russia, along with a second track involving other relevant powers.

Moving into the discussion, South Korea's role as an "honest broker" was debated given its critical interest in the outcome, as was the role of non-nuclear weapons states (NNWS) in the denuclearization process. It was noted that South Korea has recently characterized its role as a facilitator. It was also noted that there had been a lack of specific details regarding how the Hanoi Summit ended without producing an agreement on next steps in the process. The fact that negotiations had not broken down completely and that both sides appeared willing to continue dialogue was encouraging, as was the continued absence of provocative actions. Nevertheless, the breakdown did create some concern regarding next steps.

While a step-by-step approach toward denuclearization seems to be the most promising path provided there is agreement in advance on a mutually acceptable desired end state, and a clearer definition of what constitutes "complete denuclearization," it was also noted that the current US position appears to have shifted to a less accommodative approach. The counter-argument was that legitimizing DPRK nuclear capabilities is dangerous and would essentially undermine US commitment to non-proliferation, sending the message that a nuclear weapons program provides

negotiating power. Finally, it would undermine US security commitments and nuclear umbrella to the ROK, Japan and Taiwan.

There was also an extended discussion on the implications of an end-of-war declaration. Some argued that it would be difficult as both Koreas' constitutions state their respective government is the only legitimate one on the peninsula. Another argument presented was that the declaration could be made as a political statement rather than legal documentation. A response was that the non-binding nature of such a document would be further justification for the DPRK to keep its nuclear weapons. Another view was that the combination of a negative security assurance, bilateral assurances, and normalization of the DPRK'S diplomatic relations with other countries could be an important first step in reconciling differences and allow both sides to move beyond the current armistice arrangement. Concluding the session, there was general agreement that although we may never reach a final resolution that is acceptable to all sides, the process is nevertheless constructive since as long as countries are talking, they are not at war. That felt like small comfort to some who saw the opportunity for real progress toward peace on the peninsula as rapidly fading after such great expectations leading into the Hanoi summit.

Session 3: Nuclear safety and security governance

In session three the focus shifted to nuclear governance in Southeast Asia. Mely Caballero-Anthony and Julius Trajano (S. Rajaratnam School of International Studies) began with a presentation examining nuclear governance institutions in Southeast Asia. While it is a common perception that many ASEAN states are quiet when looking at nuclear proliferation, this does not mean they are not interested in it. In fact, there has been a regular emphasis within ASEAN to ensure that the region is prepared for nuclear-related incidents. They also argued that through ASEAN, Southeast Asian countries have made substantial progress in promoting nuclear governance, especially through the establishment of the ASEAN Network of Regulatory Bodies on Atomic Energy (ASEANTOM). They also argued that strengthening of the Southeast Asian Nuclear Weapon Free Zone (SEANWFZ) Treaty would facilitate further progress. Nevertheless, significant challenges remain, including difficulty with establishing safety norms and a decentralized model of establishing expertise.

Since being established in 2013, ASEANTOM has had an important role in coordinating bilateral and multilateral cooperation among ASEAN member states in promoting capacity building. It has served a very useful function for ASEAN member states by becoming a focal point for regional engagement with the IAEA and facilitating better coordination among national nuclear regulatory agencies. Specific areas that have received bilateral and multilateral attention include capacity building to enhance nuclear and radiological security, enhancing the role of the nuclear centers of excellence in the Asia-Pacific region, conducting nuclear security border exercises, and enhancing emergency preparedness and response.

In her presentation, Denise Cheong (ESI-CIL/National University of Singapore) focused on the role of SEANWFZ as a basis for ASEAN adherence to international norms and standards for ensuring nuclear governance in Southeast Asia. With Article 4 of the SEANWFZ Treaty as a basis, ASEAN member states are committed to following IAEA guidelines and standards. The treaty also includes several enforcement and compliance mechanisms, although it is limited due to its

non-self-executing nature, ambiguities regarding triggering of compliance mechanisms, and its lack of specific standards and compliance mechanisms for nuclear security governance. She concluded by noting that SEANWFZ provides a potentially robust legal framework for managing nuclear safety and possibly security (which it presently does not) in Southeast Asia, but full implementation of the treaty requires better coordination between the IAEA and ASEAN, as well as within the ASEAN community pillars and sectors.

One major problem that remains is the fact that several ASEAN member states are not party to key safety and security conventions and treaties. This has prevented full compliance with nuclear safety and security requirements established in various international treaties and conventions. Further national policy frameworks on nuclear safety and security culture are fragmented, and there is a lack of nuclear security support centers in the region. As a result, Southeast Asian countries would benefit from better engagement with existing nuclear security centers of excellence located in Northeast Asia.

During the discussion, it was acknowledged that ASEAN has an excellent track record in complying with international norms and standards. However, it was also noted that while legal mechanisms have been created, there is still a lack of political will to implement some of the more controversial parts of the SEANWFZ Treaty, including enforcement and compliance mechanisms and the protocol for nuclear weapon states (NWS). After several years of trying to gain acceptance from the NWS, the general impression was that none of the ASEAN states were willing to take on the initiative to get the five NWS to sign the protocol. While ASEANTOM has been a positive step in the process of improving nuclear governance in Southeast Asia, it is also true that the introduction of a nuclear reactor for power generation in the region would change the dynamic. One scenario highlighted was the introduction of small floating reactors in the South China Sea, which would bring a set of challenges related to regulatory capacity and oversight jurisdiction. Meanwhile, ASEAN member states seem to view the development of ASEANTOM as an important step toward better regional nuclear governance.

Session 4: Nuclear disarmament

In the final session, Alex Bednarek explained the International Partnership for Nuclear Disarmament Verification (IPNDV) project being undertaken by the Nuclear Threat Initiative and 30 countries (including Australia, Indonesia, Japan, the Philippines, South Korea and the United States) to promote better understanding of the nuclear disarmament process. Specific objectives of the project include identifying challenges of nuclear disarmament verification, developing potential solutions to address those challenges, and building and diversifying international capacity and expertise in the area of disarmament verification.

Based on several other verification projects including the Verification Pilot Project, the US-Russia monitoring and verification experience, the US-UK Program on Nonproliferation and Arms Control Technology, and the UK-Norway Initiative on Nuclear Warhead Dismantlement Verification, the project began in 2015 and was conducted in two phases. The first phase, which ended in March 2018, focused on identifying monitoring and verification objectives, on-site inspections, and isolating technical challenges and solutions. It was noted that near the end of phase one in 2017, several states became skeptical that work could be continued without breaching

the NPT by revealing weapon-relevant details to non-nuclear weapon states. While Russia was the most vocal critic, China and Pakistan also left the project at the end of phase one. However, they are still informed of project developments.

Phase two, which began in 2018 and is still underway, has focused on verification of nuclear weapon declarations, means to verify reductions, and identifying technologies for verification. The project has identified 14 steps in a nuclear weapon lifecycle, which begins with removal of the weapon from the deployment site and ends with the disposition of the components. It hopes to publish its findings and offer recommendations for providing a verifiable path to nuclear weapon dismantlement prior to the 2020 NPT Review Conference.

During the discussion, it was argued that the IPNDV initiative is about bridging the gap between nuclear weapon states and non-nuclear weapon states and not about drafting a new treaty. The intent is to build a menu of options that can be considered when there is political will to pursue disarmament. Despite concerns expressed by the three countries that withdrew from the project, the sponsors argue that processes that enable the dismantlement of nuclear weapons while also protecting proprietary information and preventing sensitive nuclear weapon design-related information being transferred to NNWS are in place, permitting further collaborative participation between NWS and NNWS. It was also argued that the work of the IPNDV could help strengthen the case for implementation of the Ban Treaty by addressing in cooperative ways the verification details and technicalities that are seen by many as preventing the NWS from fulfilling their obligation under Article 6 of the NPT.

KEY FINDINGS

USCSCAP and CSCAP Vietnam co-chaired the sixth meeting of the CSCAP Study Group on Nonproliferation and Disarmament (NPD) in the Asia Pacific. The meeting took place in Bali, Indonesia on April 7, 2019, on the front-end of the ASEAN Regional Forum Inter-Sessional Meeting on Nonproliferation and Disarmament (ARF ISM on NPD). Approximately 45 senior scholars and officials and Pacific Forum Young Leaders attended, all in their private capacity, including a number of ARF ISM participants. Off-the-record discussions focused on recent developments in nonproliferation and disarmament, including the impact of the termination of the Intermediate-Range Nuclear Forces (INF) Treaty; Korean Peninsula denuclearization in the wake of the US-DPRK Hanoi Summit; nuclear governance in Southeast Asia; and nuclear disarmament collaboration between nuclear-armed and non-nuclear states on nuclear risk reduction. Key findings from this meeting include:

The current strategic nuclear landscape in Asia is worrisome. The international security environment has continued to deteriorate, including among major nuclear-armed states (especially between the United States and Russia). It is unclear if there is enough political will in both capitals to extend the 2010 New Strategic Arms Reduction Treaty.

While the group did not attempt to determine the specifics regarding Russian or US compliance with the provisions of the INF, there was general agreement that the significant change in the security environment since the INF Treaty was signed in 1987 was a major factor in its demise. Any subsequent agreement needs to be multilateral and involve all key players including China, India, Pakistan, and Iran given the growing proliferation of these systems. There was skepticism that such a multilateral deal could be struck given the current international environment and reluctance of other missile-capable states to come on board.

Advances in weapons capability including the development of increasingly sophisticated missile defense systems and hypersonic missiles further complicated the process. There was a broader concern that the evolving major power competition and expansion of nuclear and missile capabilities made future arms control agreements more difficult.

Concerns were expressed regarding the lack of progress on Korean Peninsula denuclearization and the lack of specific details regarding how the Hanoi Summit ended without producing an agreement on next steps in the process. The fact that negotiations had not broken down completely and that both sides appeared willing to continue dialogue was encouraging, as was the continued absence of provocative actions.

A step-by-step approach toward denuclearization seems to be the most promising, provided there is agreement in advance on a mutually acceptable desired end state and a clearer definition of what constitutes "complete denuclearization."

South Korea's role as an "honest broker" was debated given its critical interest in the outcome, as was the role of non-nuclear weapons states (NNWS) in the denuclearization process. It was noted that South Korea has recently characterized its role as a facilitator. Some argued that a cooperative threat reduction approach toward Korean Peninsula denuclearization would be useful.

Nuclear governance in Southeast Asia shows promising signs of progress, including the establishment of ASEANTOM and the strengthening of SEANWFZ. However, even with such progress, there remain significant challenges, including difficulty establishing safety norms and a decentralized model of establishing expertise.

Since being established in 2013, ASEANTOM has had an important role in coordinating bilateral and multilateral cooperation among ASEAN member states in promoting capacity building by facilitating nuclear security border exercises and enhancing emergency preparedness and response.

ASEANTOM presents potential as a broader nuclear security mechanism. It has served a very useful function for ASEAN member states by becoming a focal point for regional engagement with the IAEA and facilitating better coordination among national nuclear regulatory agencies.

SEANWFZ provides a potentially robust legal framework for managing nuclear safety and possibly security (which it presently does not) in Southeast Asia. A comprehensive institutional framework exists but requires coordination between ASEAN community pillars and sectors.

The fact that several ASEAN member states are not party to key safety and security conventions and treaties prevents full compliance with nuclear safety and security requirements in Southeast Asia. National policy frameworks on nuclear safety and security culture are fragmented and there is a lack of nuclear security support centers of excellence in the region.

There is significant potential for enhanced nuclear safety and security engagement between Southeast Asia and Northeast Asia through the existing nuclear security centers of excellence.

A game changer for nuclear energy utilization in Southeast Asia would be a decision to develop a nuclear power program using small modular reactors, especially if it involved floating reactors in the South China Sea that could pose safety and security concerns.

The trust gap between nuclear and non-nuclear states is a serious problem which is inherent to the current system of arms control and disarmament. Development of technological solutions to support verification of disarmament is a key way to resolve the trust gap – both by strengthening trust in disarmament and by allowing non-nuclear states to be involved.

The International Partnership for Nuclear Disarmament Verification (IPNDV) is a unique way for non-nuclear states to get involved in resolving disarmament and verification challenges without violating NPT obligations. A concern was raised that involving a non-governmental organization in disarmament verification could result in the leakage of sensitive information.

For more information, please contact NPD Study Group co-chair Carl Baker [Carl@pacforum.org]. These findings reflect the view of the study group chair and is not a consensus document.



COUNCIL FOR SECURITY COOPERATION IN THE ASIA-PACIFIC

Sixth Meeting of the CSCAP Study Group on Nonproliferation and Disarmament in the Asia-Pacific

Padma Resort Legian - Bali, Indonesia - April 6-7, 2019

AGENDA

Saturday, April 6, 2019

18:30 **Welcome Reception**

19:00 **Opening Dinner**

Sunday, April 7, 2019

8:30 **Registration**

9:00 Welcome Remarks

9:05 Session 1: Recent developments in nonproliferation and disarmament This session will focus on recent developments in nonproliferation and disarmament. In late 2018, the United States indicated that it would withdraw from the Intermediate-range Nuclear Forces (INF) Treaty. What is the meaning and significance of the US withdrawal? Can the INF be saved? What is the impact on other arms control treaties? How is the review process of the Nuclear Nonproliferation Treaty (NPT) proceeding? What should we expect at the third (and last) Preparatory Committee for the 2020 NPT Review Conference (RevCon)? What are the key challenges? Can they be overcome by the time the NPT RevCon convenes? What are the key issues to be addressed in the Convention on the Physical Protection of Nuclear Material Review Conference?

Presenters: Victor MIZIN

Sitakanta MISHRA

10:30 Coffee Break

10:45 Session 2: The Korean Peninsula and denuclearization

This session will examine the current situation on the Korean Peninsula. What are the respective parties' assessments of recent developments, notably since the second summit between US President Donald Trump and North Korean Chairman Kim Jong Un? What is the way forward? What are the consequences and implications for the broader region?

Presenters: Jina KIM

Georgy TOLORAYA

12:15 **Lunch**

13:30 Session 3: Nuclear safety and security governance

This session will focus on nuclear safety and security. What progress has been made to enhance nuclear safety and security governance in the Indo-Pacific in recent years? What areas need improvement? What role can SEANWFZ and ASEANTOM in promoting enhanced coordination on nuclear governance among the ASEAN states? Can these mechanisms be used as a model for nuclear governance in the broader region? What are the opportunities and challenges to do so? Is there a role for the various centers of excellence that have been established in the region?

Presenters: Mely CABALLERO-ANTHONY/Julius TRAJANO Denise CHEONG

15:00 Coffee Break

15:15 Session 4: Nuclear disarmament

This session will look at nuclear disarmament. The opening for signature of the Treaty on the Prohibition of Nuclear Weapons (or "Ban Treaty") has led to some disagreement between nuclear-weapon and nonnuclear-weapon states regarding the path to disarmament. What can be done to reduce the tension? What technical work has been done to advance nuclear disarmament verification? Specifically, what work has the UN Nuclear Disarmament Verification Group of Governmental Experts accomplished? What are the lessons from existing disarmament verification initiatives, notably the International Partnership for Nuclear Disarmament Verification? What can Asian states do to advance this work?

Presenters: Alex BEDNAREK

16:45 **Wrap-up**

17:30 Meeting Adjourns

18:30 Closing Dinner



COUNCIL FOR SECURITY COOPERATION IN THE ASIA PACIFIC

Sixth Meeting of the CSCAP Study Group on Nonproliferation and Disarmament in the Asia-Pacific Bali, Indonesia – April 6-7, 2019

Participant List

1. Carl BAKER (USCSCAP)

Executive Director Pacific Forum

2. Alex BEDNAREK (US)

Program Officer International Fuel Cycle Strategies Nuclear Threat Initiative

3. Mely CABALLERO-ANTHONY (CSCAP SG)

Professor and Head of Centre for Non-Traditional Security Studies S. Rajaratnam School of International Studies

4. Ralph COSSA (USCSCAP)

WSD-Handa Chair Pacific Forum

5. **Denise CHEONG** (Singapore)

Senior Research Fellow Centre for International Law National University of Singapore

6. Cassandra CHONG (ARF Singapore)

Desk Officer International Organisations Directorate Singapore Ministry of Foreign Affairs

7. **Denis FEDOROV** (ARF Russia)

Deputy Head Mission of Russia to ASEAN

8. Trevor FINDLAY (CSCAP Australia)

Principal Fellow University of Melbourne

9. Robert GIRRIER (USCSCAP)

President Pacific Forum

10. **Benjamine ISIP** (ARF Australia)

Policy Officer Department of Defence, Australia

11. Jina KIM (CSCAP ROK)

Research Fellow Korea Institute for Defense Analysis

12. Carson KUO (ARF US)

Foreign Affairs Officer Bureau of International Security and Nonproliferation U.S. Department of State

13. Kenneth KWA (ARF Singapore)

Assistant Director, International Organisations Directorate

Singapore Ministry of Foreign Affairs

14. LEE Chyungly (Chinese Taipei)

Distinguished Research Fellow Institute of International Relations Chengchi University

15. LEE Seungyun (ARF ROK)

Deputy Director, Office of Korean Peninsula Peace and Security Affairs Ministry of Foreign Affairs, ROK

16. LI Chijiang (CSCAP China)

Vice Chair and Secretary-General China Arms Control and Disarmament Association

17. Adelwisa MERJUDIO (ARF Philippines)

National Security Analyst Philippines National Security Council

18. Zaw MIIN (CSCAP Myanmar)

Advisor Myanmar Institute of Strategic and International Studies

19. Sitakanta MISHRA (CSCAP India)

Professor Pandit Deendayal Petroleum University

20. Victor MIZIN (CSCAP Russia)

Leading Research Fellow Moscow Satet Institute of International Relations Russian Ministry of Foreign Affairs

21. Masashi MURANO (CSCAP Japan)

Research Fellow Okazaki Institute

22. NAH Liang Tuang (CSCAP Singapore)

Research Fellow

S. Rajaratnam School of International Studies

23. NGUYEN Dinh Sach (CSCAP Vietnam)

Research Fellow

Diplomatic Academy of Vietnam

24. NGUYEN Vu Minh (CSCAP Vietnam)

Research Associate

Diplomatic Academy of Vietnam

25. Sunchai NILSUWANKOSIT (CSCAP Thailand)

Associate Professor

Department of Nuclear Engineering

26. NING Tuanhui (CSCAP China)

Research Assistant

China Institute of International Studies

27. Karla Mae PABELINA (CSCAP Philippines)

Senior Foreign Affairs Research Specialist, Center for International Relations and Strategic Studies, Foreign Service Institute

28. Sothirak POU (CSCAP Cambodia)

Executive Director

Cambodian Institute for Cooperation and Peace

29. Nizhan Faraz Bin RIZAL (ARF Malaysia)

Assistant Secretary

Multilateral Security Division

Ministry of Foreign Affairs, Malaysia

30. Shivanand SIVAMOHAN (ARF Malaysia)

Assistant Director

ASEAN-Malaysia National Secretariat Ministry of Foreign Affairs Malaysia

31. Gonzo SUAREZ (ARF US)

Acting Deputy Assistant Secretary Bureau of International Security and Nonproliferation

U.S. Department of State

32. Riin TEOH (ARF Australia)

Assistant Director, Nuclear Policy Section Australian Government Department of Foreign Affairs and Trade

33. Georgy TOLORAYA (CSCAP Russia)

Director, Asian Strategy Center Institute of Economics of the Russian Academy of Sciences

34. Julius Cesar I. TRAJANO (CSCAP SG)

Research Fellow

Center for Non-Traditional Security Studies,

S. Rajaratnam School of International Studies

35. Elizabeth Konstantinova VARBANOVA

(CSCAP EU)

Alternate Chair of the CONOP Working Group, Policy Officer-Nuclear European External Action Service

36. Kate VASHARAKORN (ARF Thailand)

Second Secretary

Department of International Organization Ministry of Foreign Affairs

37. Paul WINTER (CSCAP New Zealand)

Doctoral Candidate

University of Otago, New Zealand

Pacific Forum Young Leaders

38. Martin MOORE (US)

Academic and Operational Support University of Hawaii – KCC

39. Joseph PARKES (UK)

Asia Analyst

Verisk Maplecroft

40. Muhammad QASIM (Pakistan)

Research Professor

Gachon University (South Korea)

41. Trisha RAY (India)

Junior Fellow

Observer Research Foundation

42. Rae SHIH (US)

Legal Fellow

ACLU of Hawai'i

43. Jason SHON (US)

High School Program Director Pacific and Asian Affairs Council

44. Nikolaos SKONDRIANOS (Australia)

Supplier Administrator

SG Fleet

Staff

45. Nicholas CIUFFETELLI (US)

Program Manager

Pacific Forum

46. Keoni WILLIAMS (US)

Director, Young Leaders Program Pacific Forum