



**Countering Proliferation of
Weapons of Mass Destruction:**

**Adherence to WMD-Related Regimes
in the Asia Pacific**

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Table of Contents

Executive Summary	v
Biological and Chemical Regimes	1
The Geneva Protocol (GP)	
The Biological and Toxin Weapons Convention (BTWC)	
The Chemical Weapons Convention (CWC)	
Nuclear Regime	8
Nonproliferation	
The Treaty on the Non-Proliferation of Nuclear Weapons (NPT)	
The International Atomic Energy Agency Membership (IAEA)	
The Comprehensive Safeguards Agreement (CSA)	
The Additional Protocol (AP)	
The Small Quantity Protocol (SQP)	
The Comprehensive Test Ban Treaty (CTBT)	
The Southeast Asian Nuclear Weapons Free Zone (SEANFWZ)	
Nuclear Safety	18
The Convention on the Early Notification of Nuclear Accidents (CENNA)	
The Convention on Assistance in case of Nuclear Accidents and Radiological Emergencies (CACNARE)	
The Convention on Nuclear Safety (CNS)	
The Joint Convention on Safety of Spent Fuel and Radiological Waste Management (JC – RADW)	
The IAEA on Safety and Security of Radioactive Sources (IAEA CoC), and the Supplementary Guidance on the Import and Export of Radioactive Sources	
Nuclear Security	25
The Convention on the Physical Protection of Nuclear Material (CPPNM) and the 2005 Amendment (CPPNM/A)	
The International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT)	
The Proliferation Security Initiative (PSI)	
Global Initiative to Combat Nuclear Terrorism (GICNT)	
United Nations Security Council Resolution 1540 (UNSCR 1540)	
Delivery Systems	34
The Hague Code of Conduct against Missile Proliferation (Hague CoC)	
Conclusions	36
About the Author	39

Executive Summary

This paper assesses the status of adherence to key instruments of the biological, chemical, and nuclear nonproliferation, security, and safety regimes in the Asia Pacific. This is timely given that chemical and biotechnology industries are rapidly expanding, countries in the region have expressed interest in exploring nuclear power programs and the risk of an inadvertent release of biological agents is emerging.

The focus is on instrument adherence. The countries assessed in this paper are all members of the Council for Security Cooperation in the Asia Pacific (CSCAP): Australia, Brunei Darussalam, Cambodia, China, India, Indonesia, Japan, North Korea, South Korea, Malaysia, Mongolia, Myanmar, New Zealand, Philippines, Russia, Singapore, Thailand, and Vietnam. Countries have been divided into sub-regional groups: Southeast Asia; Northeast Asia; South Asia; and Australasia.

The paper shows that while much progress has been achieved in recent years, there is still a considerable amount of work needed, particularly in nuclear safety and security.

Countering Proliferation of Weapons of Mass Destruction: Adherence to WMD-Related Regimes in the Asia Pacific

By Federica Dall' Arche

Biological and Chemical Regimes

The Geneva Protocol. Concluded in June 1925, the *Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare*, also known as the Geneva Protocol, is the first international instrument to prohibit the *use* of both chemical and biological weapons in *international* armed conflicts¹. The Protocol was concluded after the use of chemical agents during World War I, when poisonous gases were used as weapons of war.²

The Geneva Protocol has several limitations. It does not ban the use of chemical and biological weapons in internal disputes, nor does it prohibit the production or stockpile of such weapons.³ That is why it was supplemented by the Biological and Chemical Weapons Conventions (1972, 1993).

CSCAP countries have acceded to the Geneva Protocol. While Brunei Darussalam, Myanmar, Singapore have not signed the treaty, others such as Cambodia, Indonesia, Vietnam, China, North Korea, South Korea, India, and the United States have acceded to it with reservations. In other cases, countries have withdrawn their reservations: this is the case of Australia, New Zealand, Mongolia, and Russia, although the latter has allegedly repeatedly used chemical weapons during the Syrian conflict in 2016.⁴

¹ The use of chemical agents was already prohibited by the Hague Conventions (1899, 1907). Chemical agents were largely used during World War I, however.

² Chemical Weapons – United Nations Office of Disarmament. Retrieved June 23, 2017, from <https://www.un.org/disarmament/wmd/chemical/>

³ 1925 Geneva Protocol – United Nations Office of Disarmament. Retrieved June 26, 2017, from <https://www.un.org/disarmament/wmd/bio/1925-geneva-protocol/>

⁴ Russia/Syria: War Crimes in Month of Bombing Aleppo. (2016, December 05). Retrieved June 26, 2017, from <https://www.hrw.org/news/2016/12/01/russia/syria-war-crimes-month-bombing-aleppo> ; Davis, J. H., & Cooper, H. (2017, April 11). White House Accuses Russia of Cover-Up in Syria Chemical Attack. Retrieved June 26, 2017, from <https://www.nytimes.com/2017/04/11/world/middleeast/russia-syria-chemical-weapons-white-house.html? r=0>

Table 1. Status of adherence to the *Geneva Protocol*

South East Asia	Geneva Protocol <i>(Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare)</i>
Brunei Darussalam	X
Cambodia	Acceded in 1983 - With reservations**
Indonesia	Succeeded in 1971 from the Netherlands with reservations****
Lao P.D.R.	Acceded in 1989
Malaysia	Acceded in 1970
Myanmar	X
Philippines	Acceded in 1973
Singapore	X
Thailand	Ratified in 1931
Viet Nam	Ratified in 1980 With reservation* **
North East Asia	
People's Republic of China	Succeeded in 1952 from the Republic of China (1929) with reservations**
DPRK	Acceded in 1988 With reservations**
Japan	Ratified in 1970
Mongolia	Acceded in 1968 Withdraw reservations in 1990
ROK	Acceded in 1989 With reservations**
South Asia	
India	Ratified in 1930 With reservation* **
Australasia	
Australia	Acceded in 1930 Withdraw reservations in 1986
New Zealand	Acceded in 1930 Withdraw reservations in 1989
USA	Ratified in 1975 With reservation****
Russia	Acceded in 1928 as the USSR Withdraw reservations in 2001

*Reservation n. 1 – The provisions of the Protocol only apply to those states that have ratified or acceded to it (and not only merely signed it). That means that if a state has signed but not ratified the Protocol, the use of biological and chemical weapons against that state is not a violation.

**Reservation n. 2 – The Protocol ceases to be binding if any state, and/or its allies, does not observe the prohibitions of the Protocol.

***Reservation n.3 – The ratification of the Protocol does not constitute recognition of, or establishing any relations with, Israel. The provisions of the Protocol are not binding with respect to Israel.

****Reservation n. 4 – The Protocol ceases to be binding in regard to any state that does not observe the prohibitions of the protocol. That means that if an enemy does not respect the provisions of the Protocol, the use of biological and chemical weapons against it is not a violation.

The Biological and Toxin Weapons Convention. The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, also known as the Biological Weapons Convention (BWC) or Biological and Toxin Weapons Convention (BTWC), builds upon the Geneva Protocol, banning the development, production, stockpiling, and transferring of biological weapons. Key provisions of the Convention, provided for in Art. I – X, include the prohibition of acquiring, retaining, and transferring biological weapons (Art. I and III); the destruction of biological weapons and associated resources and their diversion to peaceful purposes (Art. II); and the assistance and cooperation among States in case of biological weapons exposure or in regard to any issues with the Convention’s implementation (Art. IV, VI, and VII). The Convention opened for signature in 1972 and entered into force in 1975.⁵

As of May 2017, the convention has 175 state parties, and all countries analyzed in this scorecard have either signed and ratified, or acceded. Myanmar is the latest country to join the Convention, ratifying it in 2014.

While it is almost universal, the Convention has been the subject of sharp criticisms. It lacks a verification regime, and its data-submission procedures are inadequate.⁶ The Confidence-Building Measures (CBMs) process, established in 1986 with the aim of preventing/reducing ambiguities and of improving international cooperation and transparency by inviting states to declare their biological holdings, has not matched expectations, with states often submitting incomplete declarations.⁷

To provide support to member states in implementing the provisions of the Convention, in 2006, the Sixth Review Conference agreed to establish an Implementation Support Unit (ISU).⁸ As part of its mandate, the ISU provides annual

⁵ Biological Weapons – United Nations Office of Disarmament. Retrieved June 23, 2017, from <https://www.un.org/disarmament/wmd/bio/>

⁶ Hart, J. (2011, November 23). The Biological and Toxin Weapons Convention-approaching a mid-life crisis? Retrieved June 20, 2017, from <https://www.sipri.org/commentary/essay/wed-11-23-2011-13-00/biological-and-toxin-weapons-convention-approaching-a-mid-life-crisis>

⁷ Sixth Review Conference Of The States Parties To The Convention On The Prohibition Of The Development, Production And Stockpiling Of Bacteriological (Biological) And Toxin Weapons And On Their Destruction. (2006, October 20). Retrieved June 20, 2017, from http://www.opbw.org/rev_cons/6rc/docs/WP/BWC_CONF.VI_WP.4_EN.pdf ;

Participation Of States Parties In The Agreed Confidence-Building Measures (Cbms) 1987-2011. (2014, July 03). Retrieved June 20, 2017, from http://www.nti.org/media/pdfs/apmcbm_2.pdf?_id=1410387225

⁸ Implementation Support Unit – United Nations Office of Disarmament. Retrieved June 19, 2017, from <https://www.un.org/disarmament/geneva/bwc/implementation-support-unit/>

reports of its activities to the Meeting of States Parties and on the overall status of implementation of the Convention.

In November 2016, member states convened in Geneva for the Eighth Review Conference. They failed to fill many of the Convention’s gaps, including on verification, and did not reach consensus on a program of work and future inter-sessional meetings.⁹

Table 2. Status of adherence to the *Biological and Toxin Weapons Convention*

South East Asia	<i>Biological and Toxin Weapons Convention</i>
Brunei Darussalam	Acceded in 1991
Cambodia	Signed in 1972 Ratified in 1983
Indonesia	Signed in 1972 Ratified in 1992
Lao P.D.R.	Signed in 1972 Ratified in 1973
Malaysia	Signed in 1972 Ratified in 1991
Myanmar	Signed in 1972 Ratified in 2014
Philippines	Signed in 1972 Ratified in 1973
Singapore	Signed in 1972 Ratified in 1975
Thailand	Signed in 1973 Ratified in 1975
Viet Nam	Signed in 1972 Ratified in 1980
North East Asia	
People’s Republic of China	Acceded in 1984
DPRK	Acceded in 1987
Japan	Signed in 1972 Ratified in 1982
Mongolia	Signed in 1972 Ratified in 1972
ROK	Signed in 1972 Ratified in 1987
South Asia	
India	Signed in 1973 Ratified in 1974
Australasia	
Australia	Signed in 1972 Ratified in 1977
New Zealand	Signed in 1972 Ratified in 1973

⁹ David, M., Konovalova, E., & Bertherat, C. (2017, winter). Biological Weapons Convention 8th Review Conference outcome: below expectations. Retrieved June 14, 2017, from <http://www.vertic.org/media/assets/TV/TV155.pdf>

USA	Signed in 1972 Ratified 1975
Russia	Signed in 1972 Ratified 1975

The Chemical Weapons Convention. Despite The Hague Conventions and Geneva Protocol, chemical weapons continued to be occasionally used, heavily produced, and stockpiled. In 1992, under strong civil society pressure and after 12 years of negotiations, the United Nations Conference on Disarmament adopted the Chemical Weapons Convention (CWC), also known as the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction.¹⁰ The Convention’s goal is to prevent chemistry from being used for warfare purposes. To this end, it contains four key provisions: destroying all existing chemical weapons; monitoring chemical industry to prevent new weapons from re-emerging; providing assistance and protection to States Parties against chemical threats; and fostering international cooperation to strengthen implementation of the Convention and promote the peaceful use of chemistry.¹¹

The Convention, which opened for signature in 1993 and entered into force in 1997, includes a stringent verification regime, unlike the BTWC. Verification is managed by the Organization for the Prohibition of Chemical Weapons (OPCW), an inter-governmental organization established with the aim of inspecting chemical industries and weapons production facilities, setting destruction timelines with State Parties, and monitoring the complete destruction of chemical weapons.¹²

As of May 2017, the CWC has 192 State parties, which “represent about 98 percent of the global population and landmass, as well as 98 percent of the worldwide chemical industry.”¹³ The only countries not included are North Korea, Egypt, Palestine, and South Sudan.¹⁴ All other countries in the Asia Pacific have acceded to the convention.

While the production and possession of chemical weapons became illegal under the CWC, some countries still produce and/or possess them. North Korea is believed to possess between 2,500 and 5,000 tons of chemical agents, which include

¹⁰ Krutzsch, W., Myjer, E., Herbach, J., & Trapp, R. (2014). *The Chemical Weapons Convention: A Commentary*, Oxford University Press <https://goo.gl/hYQjGC>

¹¹ Organization For The Prohibition Of Chemical Weapons. Retrieved June 23, 2017 from <https://www.opcw.org/about-opcw/>

¹² Destruction of Chemical Weapons - Organization For The Prohibition Of Chemical Weapons. Retrieved June 23, 2017 from <https://www.opcw.org/our-work/demilitarisation/destruction-of-chemical-weapons/>

¹³ Member States of the Organisation for the Prohibition of Chemical Weapons (OPCW). Retrieved June 23, 2017, from <https://www.opcw.org/about-opcw/member-states/>

¹⁴ Status Of Participation In The Chemical Weapons Convention. (2015, October 17). Retrieved June 23, 2017, from https://www.opcw.org/fileadmin/OPCW/S_series/2015/en/s-1315-2015_e_.pdf

nerve, blister, choking, and blood agents.¹⁵ The United States, which in 1991¹⁶ unilaterally decided to dismantle all chemical weapon agents, dispersal systems, and chemical weapons production facilities by April 2012, still retain about 10.25 percent of its original stockpile.¹⁷ Russia, which according to the Convention's obligations was required to dismantle its stockpile by April 2012, still maintain 8 percent of the arsenal it declared in 1993.¹⁸ The Syrian case, although outside the scope of this research project, is another interesting example of the difficulties faced by the OPCW. After signing the Convention in 1993 and ratifying it in 2013, the Syrian government continued to develop, stockpile, and repeatedly *use* large amounts of chemical weapons, including Sarin and VX, against its population.¹⁹

¹⁵ Country Profile: North Korea. The Nuclear Threat Initiative (2015, December). Retrieved June 23, 2017, from <http://www.nti.org/learn/countries/north-korea/chemical/>

¹⁶ Even before the adoption of the CWC

¹⁷ Achievements of U.S. Army Chemical Materials Activities. Retrieved June 23, 2017, from <https://www.cma.army.mil/RCMD/ACHIEVEMENTS/Pages/Achievements.aspx>

¹⁸ OPCW Director-General Visits Russia to Mark Closure of Maradykovsky Chemical Weapons Destruction Facility (2015, October 30). Retrieved July 06, 2017, from <https://www.opcw.org/news/article/opcw-director-general-visits-russia-to-mark-closure-of-maradykovsky-chemical-weapons-destruction-facility/>

¹⁹ Syria - Use of Chemical Weapons. Press Release. Organization for the Prohibition of Chemical Weapons. Retrieved July 06, 2017, from <https://www.opcw.org/special-sections/syria/press-releases/> ;

OPCW Director-General Shares Incontrovertible Laboratory Results Concluding Exposure to Sarin (2017, April 19). Retrieved July 06, 2017, from <https://www.opcw.org/news/article/opcw-director-general-shares-incontrovertible-laboratory-results-concluding-exposure-to-sarin/> ;

Kawashima, Y. (2017, April 7). Timeline of Syrian Chemical Weapons Activity, 2012-2017. Retrieved July 06, 2017, from <https://www.armscontrol.org/factsheets/Timeline-of-Syrian-Chemical-Weapons-Activity> ;

Goldman, R. (2017, April 05). Assad's History of Chemical Attacks, and Other Atrocities. Retrieved July 06, 2017, from https://www.nytimes.com/2017/04/05/world/middleeast/syria-bashar-al-assad-atrocities-civilian-deaths-gas-attack.html?_r=0 ;

Table 3. Status of adherence to the *Chemical Weapons Convention*

South East Asia	<i>Chemical Weapons Convention</i>
Brunei Darussalam	Signed in 1993 Ratified in 1997
Cambodia	Signed in 1993 Ratified in 2005
Indonesia	Signed in 1993 Ratified in 1998
Lao P.D.R.	Signed in 1993 Ratified in 1997
Malaysia	Signed in 1993 Ratified in 2000
Myanmar	Signed in 1993 Ratified in 2015
Philippines	Signed in 1993 Ratified in 1996
Singapore	Signed in 1993 Ratified in 1997
Thailand	Signed in 1993 Ratified in 2002
Viet Nam	Signed in 1993 Ratified in 1998
North East Asia	
People's Republic of China	Signed in 1993 Ratified in 1997
DPRK	Non-signatory
Japan	Signed in 1993 Ratified in 1997
Mongolia	Signed in 1993 Ratified in 1997
ROK	Signed in 1993 Ratified in 1997
South Asia	
India	Signed in 1993 Ratified in 1997
Australasia	
Australia	Signed in 1993 Ratified in 1997
New Zealand	Signed in 1993 Ratified in 1997
USA	Signed in 1993 Ratified in 1997
Russia	Signed in 1993 Ratified in 1997

Nuclear Regime

Nonproliferation

The Treaty on the Non-Proliferation of Nuclear Weapons (NPT). The Treaty on the Non-Proliferation of Nuclear Weapons (NPT) is the cornerstone of the nuclear nonproliferation regime. Establishing a dichotomy between nuclear weapons states (NWS) defined as those states that had built and tested nuclear explosive devices before January 1, 1967 (namely China, France, Russia, the UK and the USA), and other states, defined as non-nuclear weapons states (NNWS), the NPT opened to signature in 1968 and in force since 1970. The Treaty relies on three pillars: nonproliferation, the peaceful use of nuclear energy, and disarmament. These pillars are the basis for the so-called “grand bargain” between NWS and NNWS: in exchange for concrete and complete nuclear disarmament by NWS, and for the right to develop, produce, and use nuclear energy for peaceful purposes, non-nuclear weapons states agree not to acquire (nor to assist other states to acquire) nuclear weapons. The Treaty’s objective is “to prevent the spread of nuclear weapons and weapons technology, to promote cooperation in the peaceful uses of nuclear energy and to further the goal of achieving nuclear disarmament and general and complete disarmament.”²⁰

Initially intended for duration of 25 years, the NPT was extended indefinitely during the 1995 Review Conference. It is almost universal, with 191 member states. India, Israel, North Korea, Pakistan, and South Sudan are the only countries outside its scope. Under Article VIII, parties to the NPT convene every five years to review the implementation of the Treaty, and in each of the three years preceding a Review Conference (RevCon), states convene in 10-day Preparatory Committee (PrepCom) meetings.²¹ The latest Review Conference, which was held in New York in spring 2015, ended without the adoption of a consensus document. This resulted from the inability to reconcile nuclear and non-nuclear weapons states’ approaches on nuclear disarmament, and from the lack of consensus on establishing a Middle East Weapons of Mass Destruction Free Zone.

With the exception of India and North Korea, all Asia-Pacific countries that are members of the CSCAP process are party to the NPT. Most Southeast Asian, Northeast Asia, and Australasia countries acceded the treaty in the early 70s and early 80s. Myanmar and China joined in 1992. China is a nuclear-weapon state, having conducted a nuclear test in 1964. Myanmar, for its part, was suspected of harboring

²⁰ Treaty on the Non-Proliferation of Nuclear Weapons (NPT) – United Nations Office of Disarmament. Retrieved July 06, 2017, from <https://www.un.org/disarmament/wmd/nuclear/npt/>

²¹ Treaty text - http://www.nti.org/media/pdfs/aptnpt_1.pdf?_id=1430761933

nuclear weapon ambitions.²² Since 2011, however, on the heels of sweeping political and economic reforms, Naypyidaw affirmed its aversion to nuclear weapons and denied cooperation with countries potentially involved in nuclear proliferation.²³

North Korea withdrew from the NPT in 2003, as a result of rocky relations with the United States and the failure of the [Agreed Framework](#), an agreement signed in 1994 and aimed at normalizing relations between the two countries in exchange for a freeze of the North Korean nuclear-weapon program.²⁴

While North Korea is the only country to have withdrawn from the treaty, India is one of the few countries, together with Israel, Pakistan, and South Sudan, that have never been party to it. India has maintained that the NPT is an unequal treaty that allows certain states to possess nuclear weapons, while forbidding the rest of the world to acquire them. During a visit to Tokyo in 2007, then Indian External Affairs Minister Pranab Mukherjee affirmed that India did not sign the NPT “not because of [India’s] lack of commitment for non-proliferation, but because we consider NPT as a flawed treaty and it did not recognize the need for universal, non-discriminatory verification and treatment”.²⁵

²² Spillius, A., & McElroy, D. (2010, July 26). Burma is working on nuclear weapons programme, experts claim. Retrieved July 06, 2017, from <http://www.telegraph.co.uk/news/worldnews/asia/burmamyanmar/7909774/Burma-is-working-on-nuclear-weapons-programme-experts-claim.html>

²³ International Atomic Energy Agency, “Statement by the Leader of Myanmar Delegation H. E. U. Tin Win to the 55th Annual Regular Session of the IAEA General Conference,” Vienna, Sept. 19-23, 2011.

²⁴ Bureau of Arms Control. (1994, October 21). Agreed Framework Between the United States of America and the Democratic People’s Republic of Korea. Retrieved July 06, 2017, from <https://2001-2009.state.gov/t/ac/rls/or/2004/31009.htm>

²⁵ S. K. Shah (2017) India’s Foreign Policy: Past, Present and Ties with the World, Vij Books India Pvt Ltd.

Table 4. Status of the *Treaty on the Non-Proliferation of Nuclear Weapons*

South East Asia	Treaty on the Non-Proliferation of Nuclear Weapons
Brunei Darussalam	Acceded in 1985
Cambodia	Acceded in 1972 (Washington) /1987(Moscow)
Indonesia	Signed in 1970 Ratified in 1979
Lao P.D.R.	Signed in 1968 Ratified in 1970
Malaysia	Signed in 1968 Ratified in 1970
Myanmar	Acceded in 1992
Philippines	Signed in 1968 Ratified in 1972
Singapore	Signed in 1970 Ratified in 1976
Thailand	Acceded in 1972
Viet Nam	Acceded in 1982
North East Asia	
People's Republic of China	Acceded in 1992
DPRK	Acceded in 1985 - Withdrawn in 2003
Japan	Signed in 1970 Ratified in 1976
Mongolia	Signed in 1968 Ratified in 1969
ROK	Signed in 1968 Ratified in 1975
South Asia	
India	Non-signatory
Australasia	
Australia	Signed in 1970 Ratified in 1973
New Zealand	Signed in 1968 Ratified in 1969
USA	Signed in 1968 Ratified in 1970
Russia	Signed in 1968 Ratified in 1970

The International Atomic Energy Agency Membership. The International Atomic Energy Agency was established in Vienna in 1957 “in response to the deep fears and expectations generated by the discoveries and diverse uses of nuclear technology.”²⁶ By facilitating scientific and technical cooperation in the nuclear field among member states, the Agency promotes the peaceful use of nuclear energy while inhibiting its diversion for military uses.

With the exception of North Korea, which withdrew in 1994, all members of the CSCAP dialogue process are members of the IAEA. From 2003 to 2009, Cambodia was outside the auspices of the Agency due to arrears; it joined again after a dues repayment plan.²⁷

Comprehensive Safeguards Agreements. To further the goal of nonproliferation and as a confidence-building measure among states parties, Article III of the NPT establishes a safeguards system under the supervision of the IAEA. Safeguards are used to verify compliance with the NPT through inspections conducted by the IAEA on the basis of national declarations of nuclear activities, materials, and facilities. While the NPT and the IAEA promote cooperation in the field of peaceful nuclear technology, safeguards prevent the diversion of fissile material for weapons use.²⁸ On the basis of [INFCIRC/153 \(Corrected\)](#),²⁹ Comprehensive Safeguards Agreements (CSA) are concluded bilaterally between the IAEA and all NNWS party to the NPT, as well as States parties to regional NWFZ.³⁰

All countries analyzed in this study have, or had in North Korea’s case, a CSA in place. Despite having announced its withdrawal from the IAEA in June 1994, North Korea allowed IAEA inspections to proceed under its CSA for almost a decade, as part of its NPT obligations. In December 2002, after months of difficult relations with the United States and with the Korean Peninsula Energy Development Organization (KEDO), Pyongyang decided to restart its nuclear facilities, frozen under the Agreed Framework, and to expel IAEA inspectors.³¹ The inspectors were allowed in again in 2007 under the auspices of the [Six Party Talks](#), but then were expelled in 2009 following the failure of the Talks and North Korea’s launch of a

²⁶ History of the IAEA. International Atomic Energy Agency (2016, June 08). Retrieved July 06, 2017, from <https://www.iaea.org/about/overview/history>

²⁷ Country Details: Cambodia. International Atomic Energy Agency. Retrieved July 06, 2017, from <https://ola.iaea.org/ola/FactSheets/CountryDetails.asp?country=KH>

²⁸ Treaty on the Non-Proliferation of Nuclear Weapons (NPT) – United Nations Office of Disarmament. Retrieved July 06, 2017, from <https://www.un.org/disarmament/wmd/nuclear/npt/>

²⁹ INFCIRC/153 - The Structure And Content Of Agreements Between The Agency And States Required In Connection With The Treaty On The Non-Proliferation Of Nuclear Weapons. International Atomic Energy Agency. (1772, June). Retrieved July 5, 2017 from <https://www.iaea.org/sites/default/files/publications/documents/infcircs/1972/infcirc153.pdf>

³⁰ Safeguards agreements. International Atomic Energy Agency. (2016, June 08). Retrieved July 06, 2017, from <https://www.iaea.org/safeguards/safeguards-legal-framework/safeguards-agreements>

³¹ Davenport, K. (2017, July). Chronology of U.S.-North Korean Nuclear and Missile Diplomacy. Arms Control Association. Retrieved July 06, 2017, from <https://www.armscontrol.org/factsheets/dprkchron>

three-stage Unha-2 rocket.³²

Model Additional Protocol. Although CSAs were helpful in verifying activities on *declared* nuclear material and facilities, the 1991 Iraqi attempt to enrich indigenous uranium to weapons-grade material in violation of its safeguards obligations made it clear that it is not enough. The IAEA also needed the capability to detect *undeclared* nuclear material and activities.³³ As a corrective, in 1997, the IAEA Board of Governors approved the Model Additional Protocol.

The Model Additional Protocol (AP) is a legal document that supplements States' IAEA safeguards agreements, granting the IAEA expanded rights of access to information and sites. While voluntary, once in force an AP enables the IAEA to obtain "a much fuller picture of States' nuclear programmes, plans, nuclear material holdings, and trade."³⁴ An AP allows the Agency to verify the correctness and completeness of countries' declarations, providing greater assurance on the absence of undeclared nuclear material and activities.

With the exception of Brunei Darussalam and North Korea, most states that have a CSCAP member committee have an AP in force. Laos, Malaysia, Myanmar, and Thailand have signed an AP, but entry into force is pending.

Small Quantities Protocol. The Small Quantities Protocol (SQP) was introduced by the IAEA in the early 1970s. Designed for those states with limited or no nuclear infrastructures and small quantities of nuclear materials (less than 10 tons), the SQP holds the implementation of most safeguards measures in abeyance. In 2005, following a report from IAEA Director-General Mohamed ElBaradei³⁵ indicating the protocol's limitations and loopholes,³⁶ the SQP was modified and strengthened, requesting signatory states, among other things, to provide an initial inventory report, and to facilitate ad hoc and special inspections.³⁷ Due to their limited nuclear technologies and infrastructures, Brunei Darussalam, Cambodia, Laos, Myanmar, Mongolia, and Singapore adopted an SQP in 2005. New Zealand adopted an SQP in 2006. Singapore amended its SQP in 2008, and Cambodia and New Zealand amended

³² IAEA and DPRK: Chronology of Key Events. International Atomic Energy Agency. (2017, July).

Retrieved July 06, 2017, from <https://www.iaea.org/newscenter/focus/dprk/chronology-of-key-events>

³³ Nuclear Proliferation Case Studies. World Nuclear Association. (2017, June). Retrieved July 06, 2017, from <http://www.world-nuclear.org/information-library/safety-and-security/non-proliferation/appendices/nuclear-proliferation-case-studies.aspx>

³⁴ Additional Protocol. International Atomic Energy Agency. (2016, June 08). Retrieved July 06, 2017, from <https://www.iaea.org/safeguards/safeguards-legal-framework/additional-protocol>

³⁵ Tackling the Nuclear Dilemma: An Interview With IAEA Director-General Mohamed ElBaradei. Arms Control Association. (2005) Retrieved July 06, 2017 https://www.armscontrol.org/act/2005_03/ElBaradei

³⁶ Kerr, P. (2005, November 1). IAEA Board Closes Safeguards Loophole. Arms Control Association. Retrieved July 06, 2017, from <https://www.armscontrol.org/print/1923>

³⁷ Status of Small Quantities Protocols. International Atomic Energy Agency. (2017, May 19). Retrieved July 06, 2017, from <https://www.iaea.org/safeguards/safeguards-legal-framework/safeguards-agreements/status-small-quantities-protocols>

theirs in 2014. Brunei Darussalam, Laos, Myanmar, and Mongolia have yet to adopt the modified text.

Table 5. Status of Membership to the *International Atomic Energy Agency* and to *Safeguards Agreements*

South East Asia	IAEA Membership	CSA	AP	SQP
Brunei Darussalam	2014	In Force 1987	-	2005
Cambodia	1958 -> 2003; 2009	In Force 1999	In Force 2015	2005 Amended 2014
Indonesia	1957	In Force 1980	In Force 1999	-
Lao P.D.R.	2011	In Force 2001	Signed 2014	2005
Malaysia	1969	In Force 1972	Signed 2005	-
Myanmar	1957	In Force 1995	Signed 2013	2005
Philippines	1958	In Force 1974	In Force 2010	-
Singapore	1967	In Force 1977	In Force 2008	2005 Amended 2008
Thailand	1957	In Force 1974	Signed 2005	-
Viet Nam	1957	In Force 1990	In Force 2012	-
North East Asia				
People's Republic of China	1984	In Force 1989	In Force 2002	-
DPRK	1974 Withdraw in 1994	In Force 1992 Not anymore	-	-
Japan	1957	In Force 1977	In Force 1999	-
Mongolia	1973	In Force 1972	In Force 2003	2005
ROK	1957	In Force 1975	In Force 2004	-
South Asia				
India	1957	In Force 1988, 1989, 1994, 2009	In Force 2014	-
Australasia				
Australia	1957	In Force 1974	In Force 1997	-
New Zealand	1957	In Force 1972	In Force 1998	2006 Amended 2014

USA	1957	In Force 1980	In Force 2009	-
Russia	1957	In Force 1985	In Force 2007	-

The Comprehensive Test Ban Treaty. The Comprehensive Test Ban Treaty (CTBT) is the latest effort in a nuclear-weapons-test-banning process initiated in 1963, when the United States, the Soviet Union, and the United Kingdom, pressured by public concern over nuclear fallouts from underwater and atmospheric nuclear tests,³⁸ agreed to adopt the Limited Test Ban Treaty (LTBT).³⁹

Adopted in September 1996, the CTBT bans all nuclear weapons tests and nuclear explosions, both for military and civilian purposes, in all environments. As of May 2017, the treaty had 183 signatories and 164 ratifications. The Treaty will enter into force when all states with nuclear power plants at the time of the treaty's conclusion (44 states, listed in Annex 2 of the Treaty) ratify it. To date, the holdouts are: China, Egypt, Iran, Israel, the United States, North Korea, India, and Pakistan. While the first five have signed but not ratified, North Korea, India, and Pakistan have not signed it.

Russia ratified the CTBT in 2000, with the expectation that the United States would do the same. Foreign Minister Igor Ivanov stated that the ratification was “a serious claim by the new Russian leadership to an active foreign policy in the field of disarmament [and that] the ball is now in the court of the United States.”⁴⁰ While US President Clinton tried to build support within the US Congress to advance ratification, and US President Obama repeatedly expressed his intention to ratify the Treaty, both attempts proved unsuccessful.⁴¹ In the United States, CTBT opponents argue that the Treaty is unverifiable (and that other states could cheat). They add that if the United States were to ratify, the Treaty would not enter into force given that North Korea, China, Pakistan, and India have not yet ratified. Others have argued that the principal concern, however, is that the US nuclear stockpile would not be as safe

³⁸ Civil society became particularly vocal against nuclear tests after the Daigo Fukuryū Maru incident, when a crew of 23 Japanese fishermen were exposed to a nuclear fallout following a US' thermonuclear weapon test at Bikini Atoll in March 1, 1954.

³⁹ Also known as the Partial Test Ban Treaty (PTBT).

⁴⁰ Zerbo, L., & Ryabkov, S. (2016, April 22). The United States Needs to Step Up and Ratify the Nuclear-Test-Ban Treaty. Retrieved July 06, 2017, from <http://foreignpolicy.com/2016/04/22/the-united-states-needs-to-step-up-and-ratify-the-nuclear-test-ban-treaty-china/>

⁴¹ Senate Rejects Comprehensive Test Ban Treaty; Clinton Vows to Continue Moratorium. Arms Control Association (1999, September 1). Retrieved July 06, 2017, from https://www.armscontrol.org/act/1999_09-10/ctbso99; Pifer, S. (2016, September 26). What's the deal with Senate Republicans and the test ban treaty? | Brookings Institution. Retrieved July 06, 2017, from <https://www.brookings.edu/blog/order-from-chaos/2016/09/26/whats-the-deal-with-senate-republicans-and-the-test-ban-treaty/>; Rogin, J. (2016, August 04). Obama will bypass Congress, seek U.N. resolution on nuclear testing. Retrieved July 06, 2017, from https://www.washingtonpost.com/news/josh-rogin/wp/2016/08/04/obama-will-bypass-congress-seek-u-n-resolution-on-nuclear-testing/?utm_term=.fe85e71bc8a7

or reliable in the absence of testing.⁴²

In Southeast Asia, Thailand is the only country that has not yet ratified the Treaty. While the reason can be attributed to a lack of capacity or prioritization, considering that the country does not possess nuclear weapons and has ever expressed the interest or desire to acquire nuclear weapons, prompt ratification would enhance its nonproliferation credentials.

Indonesia ratified the CTBT in 2012. While a prominent advocate for nuclear disarmament, the country remained outside the scope of the CTBT for almost two decades for political reasons. The country claimed that it would not ratify the Treaty unless the United States and China did so as well. In 2012, however, during its ASEAN Chairmanship, Jakarta proceeded with ratification. On the day of ratification, Indonesian Foreign Minister Marty Natalegawa stated: “I am determined to ensure that Indonesia's decision today will create momentum to encourage others who are still holding out to do the right thing. And the only right thing is to ratify the CTBT now, no more procrastination, no more delaying because it is right, it is proper and it makes a more secure world.”⁴³

⁴² The United States and the CTBT: Renewed Hope or Politics as Usual? Nuclear Threat Initiative. Retrieved July 06, 2017, from <http://www.nti.org/analysis/articles/united-states-and-ctbt/>; Olson, L. (2009, June). CTBT Today: More Reasons for Ratification. Physicians for Social Responsibility. Retrieved July 5, 2017, from <http://www.psr.org/assets/pdfs/ctbt-today-more-reasons-for.pdf>

⁴³ CTBT brought closer to entry into force by Indonesia's ratification. Preparatory Commission for the Comprehensive Nuclear-Test-Ban-Treaty Organization. (2012, February 6). Retrieved July 06, 2017, from <https://www.ctbto.org/press-centre/highlights/2012/ctbt-brought-closer-to-entry-into-force-by-indonesias-ratification/>

Table 5. Status of *The Comprehensive Test Ban Treaty*

South East Asia	<i>Comprehensive Test Ban Treaty</i>
Brunei Darussalam	Signed in 1997 Ratified in 2013
Cambodia	Signed in 1996 Ratified in 2000
Indonesia	Signed in 1996 Ratified in 2012
Lao P.D.R.	Signed in 1997 Ratified in 2000
Malaysia	Signed in 1998 Ratified in 2008
Myanmar	Signed in 1996 Ratified in 2016
Philippines	Signed in 1996 Ratified in 2001
Singapore	Signed in 1999 Ratified in 2001
Thailand	Signed in 1996 Not ratified
Viet Nam	Signed in 1996 Ratified in 2006
North East Asia	
People's Republic of China	Signed in 1996 Not ratified
DPRK	Not signed nor acceded
Japan	Signed in 1996 Ratified in 1997
Mongolia	Signed in 1996 Ratified in 1997
ROK	Signed in 1996 Ratified in 1998
South Asia	
India	Not signed nor acceded
Australasia	
Australia	Signed in 1996 Ratified in 1998
New Zealand	Signed in 1996 Ratified in 1999
USA	Signed in 1996 Not ratified
Russia	Signed in 1996 Ratified in 2000

The Southeast Asian Nuclear Weapons Free Zone. The Southeast Asian Nuclear-Weapon-Free Zone Treaty (SEANWFZ), also known as the Bangkok Treaty because it was adopted in Bangkok in December 1995, is a nuclear weapon free-zone treaty among the 10 ASEAN member states: Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and

Vietnam.⁴⁴ The treaty establishes a nuclear weapon free zone, prohibiting its members to develop, manufacture or otherwise acquire, possess, test, use or have control over nuclear weapons.

The Protocol also obliges members not to “take any action to assist or encourage the manufacture or acquisition of any nuclear explosive device by any state; not to provide source or special fissionable materials or equipment to any non-nuclear weapon state (NNWS), or any nuclear weapons state (NWS) unless subject to safeguards agreements with the IAEA; not to dump radioactive wastes and other radioactive matter at sea anywhere within the zone, and to prevent the dumping of radioactive wastes and other radioactive matter by anyone in the territorial sea of the States Parties.”⁴⁵

Unlike other Nuclear-Weapons-Free-Zones (NWFZ), the SEANFWZ also applies to continental shelves and Exclusive Economic Zones (EEZ) of the contracting parties.⁴⁶

The treaty includes a protocol under which the five permanent members of the United Nations Security Council commit to respect the Treaty and avoid contributing to any violation. None of the five states, however, has yet signed the protocol. If NWS were to sign the protocol, they would commit not to use nuclear weapons against any contracting State or *protocol Party* within all the zones of application.⁴⁷ Limitations would also be applied to the free transit of military ships, leaving visits by foreign ships and aircraft to ports and airfields, transit of airspace by foreign aircraft, and navigation by foreign ships carrying nuclear weapons at States Parties’ discretion.⁴⁸

Verification of compliance is achieved through reports, the exchange of information among members, and through the application of IAEA safeguards.

⁴⁴ Treaty on the Southeast Asia Nuclear Weapon-Free Zone – Bangkok Treaty. United Nations Office for Disarmament Affairs. Retrieved July 06, 2017, from <http://disarmament.un.org/treaties/t/bangkok>

⁴⁵ Treaty on the Southeast Asia Nuclear Weapon-Free Zone – Bangkok Treaty Text <http://disarmament.un.org/treaties/t/bangkok/text>

⁴⁶ Klein, N. (2012). *Maritime security and the law of the sea*. Oxford: Oxford University Press. Pp. 52

⁴⁷ Ibid.

⁴⁸ Treaty on the Southeast Asia Nuclear Weapon-Free Zone – Bangkok Treaty Text <http://disarmament.un.org/treaties/t/bangkok/text>

Table 6. Status of *The South East Asian Nuclear Weapons Free Zone*

South East Asia	<i>The South East Asian Nuclear Weapons Free Zone</i>
Brunei Darussalam	Signed in 1995 Ratified in 1996
Cambodia	Signed in 1995 Ratified in 1997
Indonesia	Signed in 1995 Ratified in 1997
Lao P.D.R.	Signed in 1995 Ratified in 1996
Malaysia	Signed in 1995 Ratified in 1996
Myanmar	Signed in 1995 Ratified in 1996
The Philippines	Signed in 1995 Ratified in 2001
Singapore	Signed in 1995 Ratified in 1997
Thailand	Signed in 1995 Ratified in 1997
Viet Nam	Signed in 1995 Ratified in 1996
North East Asia	
The People's Republic of China	X
DPRK	n/a
Japan	n/a
Mongolia	n/a
ROK	n/a
South Asia	
India	n/a
Australasia	
Australia	n/a
New Zealand	n/a
USA	X
Russia	X

Nuclear Safety

The Convention on the Early Notification of Nuclear Accidents. The Convention on the Early Notification of Nuclear Accidents (CENNA) was adopted

in 1986, following the nuclear power plant accident in Chernobyl. The Convention was adopted with the goal of creating a notification system for nuclear accidents with potential transboundary effects. Contracting parties are required to report to the IAEA (or directly to the affected States) an accident's time, location, radiation releases, and other data essential for assessing the situation. While the Convention obliges States to report nuclear accidents only involving nuclear power plants, the five NPT-recognized NWS have all declared their intent to also report accidents involving nuclear weapons and nuclear weapons tests.⁴⁹

With the exception of Brunei Darussalam, which has little to no nuclear activities or infrastructure, all countries in this scorecard have acceded to the Convention. Over the years, India has repeatedly raised concerns over the existence of “serious and inherent defects [within the Convention] in as much as it differentiates between nuclear weapon states and non-nuclear weapon states. The Convention is defective as it does not contain a legal provision to make it mandatory on the nuclear weapon States to notify accidents involving nuclear weapons or weapon tests. The Government of India feels that the Convention should have provided for notification of nuclear accidents in any nuclear facility, vessel, aircraft, spacecraft, etc. used for peaceful or military purposes as well as nuclear weapons.” Nevertheless, India ratified the Convention in 1987, “in view of the solemn assurances that has been given by the five nuclear weapon States to the effect that they undertake to notify all accidents.”⁵⁰

The Convention on Assistance in the Case of a Nuclear Accident Or Radiological Emergency. Similarly to CENNA, the Convention on Assistance in the Case of a Nuclear Accident Or Radiological Emergency (CACNARE) was adopted following the Chernobyl nuclear plant accident in 1986. Unlike CENNA, the CACNARE not only requires States to give notice of a nuclear accident, but it also sets out an international framework for cooperation to facilitate prompt assistance and support in the event of nuclear accidents or radiological emergencies.⁵¹ By adhering to the CACNARE, States agree to share support and provide assistance through available experts, equipment, and other materials. The support “may be offered without costs taking into account inter alia the needs of developing countries and the particular needs of countries without nuclear facilities. The IAEA works as the focal point for such cooperation by channeling information, supporting efforts,

⁴⁹ Convention on Early Notification of a Nuclear Accident. International Atomic Energy Agency. Retrieved July 06, 2017 from <https://www.iaea.org/publications/documents/treaties/convention-early-notification-nuclear-accident>

⁵⁰ Declarations/reservations made upon expressing consent to be bound and objections thereto. (2016, August 16). Retrieved July 5, 2017, from https://www.iaea.org/Publications/Documents/Conventions/cenna_reserv.pdf

⁵¹ Convention on Assistance in the Case of a Nuclear Accident Or Radiological Emergency. International Atomic Energy Agency. Retrieved July 06, 2017, from <https://www.iaea.org/publications/documents/treaties/convention-assistance-case-nuclear-accident-or-radiological-emergency>

and providing its available services.”⁵²

As with CENNA, some countries have expressed reservations and concerns over the fact that CACNARE does not specifically include nuclear accidents resulting from nuclear tests and nuclear weapons. Nonetheless, as of May 2017, CACNARE has 115 states parties.

Brunei Darussalam, Cambodia, and Myanmar are the only countries analyzed in this study that have not yet signed the Convention. While this is not worrisome considering that none of the three countries has nuclear infrastructure, their adherence to both the CENNA and the CACNARE would be beneficial, particularly considering their recent stated interest in developing nuclear energy programs.⁵³

The Convention on Nuclear Safety. The Convention on Nuclear Safety (CNS), developed by the IAEA in June 1994, legally commits states parties operating land-based nuclear power plants to implement strict standards and regulations and to maintain high levels of safety. CNS obligations are based on the principles contained in the IAEA Safety Fundamentals document “[Fundamental Safety Principles \(SF-1\)](#).” They include: the selection of appropriate siting, adequate design, construction, and operation; the availability of adequate financial and human resources; the assessment and verification of safety; quality assurance; and emergency preparedness for nuclear power plants.⁵⁴

The CNS, which currently has 81 contracting parties, requires members to submit reports on the implementation of their obligations for “peer review.”⁵⁵ The reports are discussed during triennial review meetings held at the IAEA, in Vienna. If deemed necessary, states parties can also convene in extraordinary meetings as per Article 23 of the Convention.⁵⁶

Of the countries examined in this research, Brunei Darussalam, Laos, Malaysia, Thailand, North Korea, Mongolia, and New Zealand have not acceded to the CNS. While the lack of adherence by New Zealand and countries in Southeast

⁵² Ibid.

⁵³ Rahil, S. (2011, July 5). Energy talks in Brunei will place nuclear power on regional agenda. Retrieved July 06, 2017, from <http://www.japantimes.co.jp/news/2011/07/05/national/energy-talks-in-brunei-will-place-nuclear-power-on-regional-agenda/#.WRkcv-WGO00> ;

Shin, A. (2016, June 06). Russia and Myanmar to establish working body for nuclear technology. Retrieved July 06, 2017, from <http://www.mmtimes.com/index.php/business/20681-russia-and-myanmar-to-establish-working-body-for-nuclear-technology.html> ;

Yee, T. H. (2016, May 30). Cambodia, Thailand edging closer to nuclear power. Retrieved July 06, 2017, from <http://www.thejakartapost.com/seasia/2016/05/30/cambodia-thailand-edging-closer-to-nuclear-power.html>

⁵⁴ Convention on Nuclear Safety. International Atomic Energy Agency. Retrieved July 06, 2017, from <http://www-ns.iaea.org/conventions/nuclear-safety.asp>

⁵⁵ Status of the Convention on Nuclear Safety. International Atomic Energy Agency. Retrieved July 06, 2017, from http://www.iaea.org/Publications/Documents/Conventions/nuclearsafety_status.pdf

⁵⁶ Convention on Nuclear Safety Text <https://www.iaea.org/sites/default/files/infirc449.pdf>

Asia is not alarming, given that they do not operate nor have any nuclear power plants, the non-adherence of countries such as North Korea and Mongolia, raises environmental and safety concerns.⁵⁷

Additionally, Russia, Indonesia, and China have recently planned the construction of floating nuclear power plants, the first of which, for China, will be commissioned by 2020.⁵⁸ While portable and floating nuclear power plants are not a new concept, it raises environmental and safety concerns.⁵⁹ Particularly worrisome is that the provisions and obligations of the CNS only apply to land-based nuclear power plants.

The Joint Convention on Safety of Spent Fuel and Radiological Waste Management. The Joint Convention on Safety of Spent Fuel and Radiological Waste Management (JC) lays out methods of storage and transportation for spent fuel and radiological waste, obliging member states to maintain high standards and procedures for waste management. Adopted in Vienna, in 1997, the JC is the first legal instrument to address the issue of nuclear waste on a global scale.⁶⁰ As of May 2017, the convention had 75 state parties and 42 signatories.⁶¹

Given its stringent requirements, it is not surprising that most countries of this study are not parties to the JC. In terms of adherence, the same considerations made for the CNS are also applicable for the Joint Convention. A prompt ratification of both treaties would not only enhance safety in Asia, but would also boost regional countries' safety credentials.

⁵⁷ Mongolia is planning on constructing its first Nuclear Power Plants by 2020
Shen, R. (2011, April 07). Mongolia eyes first nuclear power plant by 2020: MonAtom. *Reuters*. Retrieved July 06, 2017, from <http://www.reuters.com/article/us-mongolia-nuclear-idUSTRE73625A20110407>

⁵⁸ Tiantian, B. (2016, April 22). China edging closer to first maritime nuclear station. Retrieved July 06, 2017, from <http://www.globaltimes.cn/content/979644.shtml> ; Stover, D. (2016, June 02). Floating nuclear power plants: China is far from first. *Bulletin of the Atomic Scientists*. Retrieved July 06, 2017, from <http://thebulletin.org/floating-nuclear-power-plants-china-far-first9522>

⁵⁹ The United States built a floating nuclear power plant in 1943, the *USS Sturgis*, but then dismantled it due to the high maintenance and highly skilled technician requirements.

⁶⁰ Nuclear Safety Conventions. International Atomic Energy Agency. Retrieved July 06, 2017, from <https://www.iaea.org/topics/nuclear-safety-conventions>

⁶¹ Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management. International Atomic Energy Agency. Retrieved July 06, 2017, from https://www.iaea.org/Publications/Documents/Conventions/jointconv_status.pdf

Table 7. Status of adherence to main Nuclear Safety Treaties and Conventions

South East Asia	<i>CENNA</i>	<i>CACNARE</i>	<i>CNS</i>	<i>JC - RADW</i>
Brunei Darussalam	NO	NO	NO	NO
Cambodia	Acceded and IF 2012	NO	Acceded and IF 2012	NO
Indonesia	Signed in 1986 Ratified/IF in 1993	Signed in 1986 Ratified/IF in 1993	Signed in 1994 Ratified/IF in 2002	Signed in 1997 Ratified/IF in 2011
Lao P.D.R.	Acceded and IF 2013	Acceded and IF 2013	NO	NO
Malaysia	Signed in 1987 Ratified/IF in 1987	Signed in 1987 Ratified/IF in 1987	NO	NO
Myanmar	Acceded in 1997 IF 1998	NO	Acceded in 2016	NO
Philippines	Acceded and IF 1997	Acceded and IF 1997	Signed in 1994	Signed in 1998
Singapore	Acceded in 1997 IF 1998	Acceded in 1997 IF 1998	Acceded in 1997 IF 1998	NO
Thailand	Signed in 1987 Ratified/IF in 1989	Signed in 1987 Ratified/IF in 1989	NO	NO
Viet Nam	Acceded and IF 1987	Acceded and IF 1987	Acceded and IF 2010	Acceded in 2013 IF 2014
East Asia				
People's Republic of China	Signed in 1986 R/IF 1987	Signed in 1986 R/IF 1987	Signed in 1994 R/IF 1996	Signed in 2006 R/IF 2006
DPRK	Signed in 1986	Signed 1986	NO	NO
Japan	Signed 1987 R/IF 1987	Signed 1987 R/IF 1987	Signed in 1994 R 1995 IF 1996	Signed in 2003 IF 2003
Mongolia	Signed 1987 R/IF 1987	Signed 1987 R/IF 1987	NO	NO
ROK	Signed 1990 IF 1990	Signed 1990 IF 1990	Signed in 1994 R 1995 IF 1996	Signed in 1997 R/IF 2002
South Asia				
India	Signed in 1986 R/IF 1987	Signed in 1986 R/IF 1988	Signed in 1994 R/IF 2005	NO
Australasia				

Australia	Signed in 1986 R/IF 1987	Signed in 1986 R/IF 1987	Signed in 1994 R 1996 IF 1997	Signed in 1998 R/IF 2003
New Zealand	Signed 1987 IF 1987	Signed 1987 IF 1987	NO	NO
USA	Signed in 1986 R/IF 1988	Signed in 1986 R/IF 1988	Signed in 1994 R/IF 1999	Signed in 1997 R/IF 2003
Russia	Signed and Ratified in 1986 IF 1987	Signed and Ratified in 1986 IF 1987	Signed in 1994 R/IF 1996	Signed in 1999 R/IF 2006

The IAEA Code of Conduct on Safety and Security of Radioactive Sources, and the Supplementary Guidance on the Import and Export of Radioactive Sources. The IAEA Code of Conduct on Safety and Security of Radioactive Sources is a set of standards and guidelines to help states adopt legislation that ensures adequate safety and security for radioactive sources. The Code encourages the establishment of a regulatory body, the adoption of strong and detailed laws and regulations, and provides suggestions on what the content of these laws and regulations should be. The Code also aims at harmonizing policies, laws, and regulations among IAEA members.⁶²

Published by the IAEA in 1994, the Code was revised and strengthened after the events of September 11, 2001. The new text was published in January 2004 and, in 2005, it was supplemented by the “Guidance on the Import and Export of Radioactive Sources.” The text of the Guidance was also revised in 2011, and the new version was published in 2012.⁶³

The table below shows if countries with a CSCAP member committee have made a political statement in support of the Code, have adopted the supplementary guidance, notified the IAEA of their intent to act in accordance with the guidance, nominated a point of contact for the purpose of facilitating the export and/or import of radioactive sources, and if their responses to the guidance questionnaire are available to the IAEA.⁶⁴ While only a limited number of countries have expressed support for the Code and the Guidance, adherence would be beneficial for those governments that are exploring the nuclear energy option.

⁶² Code of Conduct on the Safety and Security of Radioactive Sources, and supplementary Guidance on the Import and Export of Radioactive Sources. International Atomic Energy Agency. Retrieved July 06, 2017, from <http://www-ns.iaea.org/tech-areas/radiation-safety/code-of-conduct.asp>

⁶³ Guidance On The Import And Export Of Radioactive Sources. International Atomic Energy Agency. Retrieved July 06, 2017, from http://www-pub.iaea.org/MTCD/Publications/PDF/8901_web.pdf

⁶⁴ Pursuant to art. 18 of the Supplementary Guidance, in fact, each State is urged to make available to the IAEA its responses to the Importing and Exporting State Questionnaire and an update of those responses if they change.

Table 8. Status of IAEA CoC on the Safety and Security of Radioactive Sources, and supplementary Guidance on the Import and Export of Radioactive Sources

South East Asia	<i>Political Commitment</i>	<i>Sup Guidance: Statement of intent</i>	<i>Sup Guidance: Designated PoC</i>	<i>Sup Guidance: Response to Q</i>
Brunei Darussalam	NO	NO	Y	NO
Cambodia	NO	NO	Y	NO
Indonesia	Y	Y	Y	NO
Lao P.D.R.	NO	NO	NO	NO
Malaysia	Y	Y	Y	Y
Myanmar	NO	NO	NO	NO
Philippines	Y	Y	Y	NO
Singapore	Y	NO	Y	NO
Thailand	Y	Y	Y	Y
Viet Nam	Y	Y	Y	NO
East Asia				
People's Republic of China	Y	Y	Y	NO
DPRK	NO	NO	NO	NO
Japan	Y	Y	Y	Y
Mongolia	NO	NO	NO	NO
ROK	Y	Y	Y	Y
South Asia				
India	Y	Y	Y	Y
Australasia				
Australia	Y	Y	Y	Y
New Zealand	Y	Y	Y	NO
USA	Y	Y	Y	Y
Russia	Y	Y	Y	Y

Nuclear Security

The Convention on the Physical Protection of Nuclear Materials and the 2005 Amendment. The Convention on the Physical Protection of Nuclear Materials (CPPNM) establishes measures related to the prevention, detection, and punishment of offenses relating to nuclear materials. Opened for signature in 1980 and entered into force in 1987, the CPPNM also provides a framework for international cooperation against the theft, unauthorized use, and unauthorized diversion of nuclear materials from civilian to military programs.

In 2005, the Convention was amended and strengthened, creating a legal obligation for states parties to protect nuclear materials and facilities. The obligations cover the use, storage, and transportation of all nuclear materials. The Amendment also expands cooperation among parties, providing for rapid measures to locate and recover stolen or smuggled nuclear material, mitigate any radiological consequences of sabotage, and prevent and combat related offences.⁶⁵

As of May 2017, the CPPNM had 155 member states and 44 signatories.⁶⁶ The Amendment, which is now in force, had 109 contracting parties⁶⁷. Brunei Darussalam, Malaysia, and Thailand, which do not operate nuclear facilities and possess limited to none nuclear materials, are the only countries in Southeast Asia outside the CPPNM. North Korea and Mongolia are also non-signatories.

⁶⁵ Convention on the Physical Protection of Nuclear Material. International Atomic Energy Agency. Retrieved July 06, 2017, from <https://www.iaea.org/publications/documents/conventions/convention-physical-protection-nuclear-material>

⁶⁶ Status of the Convention on the Physical Protection of Nuclear Material https://www.iaea.org/Publications/Documents/Conventions/cppnm_status.pdf

⁶⁷ Status of the Amendment to the Convention on the Physical Protection of Nuclear Material https://www.iaea.org/Publications/Documents/Conventions/cppnm_amend_status.pdf

Table 8. Status of the *Convention on the Physical Protection of Nuclear Materials and of the 2005 Amendment*

South East Asia	<i>Convention on the Physical Protection of Nuclear Materials</i>	<i>2005 Amendment</i>
Brunei Darussalam	NO	NO
Cambodia	Acceded and IF 2006	NO
Indonesia	S/R 1986 IF 1987	R 2010 IF 2016
Lao P.D.R.	Acceded and IF 2010	NO
Malaysia	NO	NO
Myanmar	Acceded 2016 IF 2017	R 2016 IF 2017
Philippines	S 1980 R 1981 IF 1987	NO
Singapore	Acceded and IF 2014	Accepted 2014 IF 2016
Thailand	NO	NO
Viet Nam	Acceded and IF 2012	R 2012 IF 2016
East Asia		
People's Republic of China	Signed and IF in 1989	R 2009 IF 2016
DPRK	NO	NO
Japan	Acceded in 1988 IF 1988	Accepted 2016 IF 2016
Mongolia	Signed and R in 1986 IF 1987	NO
ROK	S in 1981 R IN 1982 IF 1987	R 2014 IF 2016
South Asia		
India	Signed and IF in 2002	Signed in 2014 IF 2016
Australasia		
Australia	Signed in 1984 R/IF 1987	R 2008 IF 2016
New Zealand	Acceded in 2003 IF 2004	Accepted/ IF 2016
USA	S in 1980 R IN 1982 IF 1987	Ratified 2015 IF 2016
Russia	S in 1980 R IN 1983 IF 1987	Ratified 2008 IF 2016

S = Signed
R = Ratified
IF = In Force

The International Convention for the Suppression of Acts of Nuclear Terrorism. Opened for signature in 2005 and entered into force in 2007, the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT) is designed to criminalize acts of nuclear terrorism and to cooperate in bringing those who commit such crimes to justice.⁶⁸ The ICSANT, which has 115 signatories and 109 states parties, requires its members to create specific legislation that criminalizes acts of terrorism; investigate alleged terrorist offenses; arrest, prosecute or extradite offenders; and cooperate with the investigations of other states parties through information sharing.⁶⁹ The ICSANT also provides detailed definitions for acts of nuclear terrorism, including a broad range of related materials and possible targets.⁷⁰

With the exception of Brunei Darussalam, Laos, Myanmar, and North Korea, all countries in this study have signed the Convention. Most states, however, have not yet ratified it nor translated its commitments in concrete legislation, mainly due to a lack resources, technical capacity, and relevant expertise.⁷¹

The Proliferation Security Initiative. The Proliferation Security Initiative (PSI) was launched in May 2003 to counter the trafficking of weapons of mass destruction, related materials, and their means of delivery to and from states and non-state actors.⁷² The PSI complements existing counter-proliferation efforts, striving to coordinate participating states' efforts with national legal authorities, and relevant international law and frameworks. Through this multinational initiative, adherents mobilize and conduct inspections and interdictions of cargoes at sea, in the air, and on land. Participants also convene periodically to perform interdictions training exercises.

While the Initiative is endorsed by 105 States as of May 2017, it has also been subjected to strong criticisms. China, North Korea, India, and Indonesia remain outside the Initiative. They argue that interdicting cargoes is a violation of international law and of the United Nations Convention on the Law of Sea,⁷³ and that

⁶⁸ Nuclear Terrorism Convention. International Atomic Energy Agency. Retrieved July 06, 2017, from http://www-ns.iaea.org/security/nuclear_terrorism_convention.asp?s=4&l=28

⁶⁹ International Convention for the Suppression of Acts of Nuclear Terrorism. United Nations Treaty Collection. (2005, April 13) Retrieved July 06, 2017, from https://treaties.un.org/pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XVIII-15&chapter=18&Temp=mtdsg3&lang=en

⁷⁰ International Convention For The Suppression Of Acts Of Nuclear Terrorism – Treaty Text <https://treaties.un.org/doc/db/terrorism/english-18-15.pdf>

⁷¹ Kassenova T. (May, 2011) 1540 in Practice: Challenge and Opportunities for Southeast Asia. Stanley Foundation Policy Analysis Brief. Retrieved July 06, 2017 from <http://www.stanleyfoundation.org/publications/pab/KassenovaPAB611.pdf>

⁷² The Proliferation Security Initiative. Retrieved June 19, 2017, from <http://www.psi-online.info/>

⁷³ Valencia, M. J. (2008, May 29). Put the Proliferation Security Initiative Under the UN. Policy Forum 08-043. Nautilus Institute for Security and Sustainability. Retrieved July 06, 2017 from <http://nautilus.org/napsnet/napsnet-policy-forum/put-the-proliferation-security-initiative-under-the-un/>

the PSI is a “US-led” initiative aimed at targeting specific countries.⁷⁴

Global Initiative to Combat Nuclear Terrorism. The Global Initiative to Combat Nuclear Terrorism (GICNT) is a voluntary multilateral partnership of 86 states and five international organizations committed to “strengthen global capacity to prevent, detect, and respond to nuclear terrorism. The GICNT works toward this goal by conducting multilateral activities that strengthen the plans, policies, procedures, and interoperability of partner nations.”⁷⁵

The GICNT was launched in 2006 by Russia and the United States, which currently serve as co-chairs. By endorsing the Initiative, states agree to implement the Statement of Principles (SOP), a set of broad nuclear security goals encompassing a range of deterrence, prevention, detection, and response objectives.

Brunei Darussalam, Indonesia, Laos, Myanmar, North Korea, and Mongolia are the only countries with CSCAP member committees that have not joined the GICNT.

⁷⁴ Boese, W. (2004, June 1). U.S., Panama Agree on Boarding Rules for Ships Suspected of Carrying WMD. Retrieved July 06, 2017, from <https://www.armscontrol.org/print/1586> ;
India's fears of terror-via-sea real: US. Times of India. (2007, August 25). Retrieved July 06, 2017, from <http://timesofindia.indiatimes.com/india/Indias-fears-of-terror-via-sea-real-US/articleshow/2308869.cms?referral=PM> ;

Suryanarayana, P. S. (2004, January 13). Singapore joins U.S.-led security initiative. The Hindu. . Retrieved July 5, 2017, from <http://www.thehindu.com/2004/01/13/stories/2004011301331300.htm>

⁷⁵ The Global Initiative to Combat Nuclear Terrorism. Retrieved July 5, 2017, from <http://www.gicnt.org/>

Table 9. Status of main Nuclear Security Treaties and Initiatives

South East Asia	<i>PSI</i>	<i>ICSANT</i>	<i>GICNT</i>
Brunei Darussalam	Y	NO	NO
Cambodia	Y	Signatory 2006 Not ratified	Y
Indonesia	NO	Acceded and IF 2014	NO
Lao P.D.R.	NO	NO	NO
Malaysia	Y	Signatory 2005 Not ratified	Y
Myanmar	NO	NO	NO
Philippines	Y	Signatory 2005 Not ratified	Y
Singapore	Y	Signatory 2006 Not ratified	Y
Thailand	Y	Signatory 2005 Not ratified	Y
Viet Nam	Y	Acceded and IF 2016	Y
East Asia			
People's Republic of China	NO	Signed in 2005 R/IF 2010	Y
DPRK	NO	NO	NO
Japan	Y	S 2005 R/IF 2007	Y
Mongolia	Y	S 2005 R 2006 IF 2007	NO
ROK	Y	S 2005 R/IF 2014	Y
South Asia			
India	NO	S/R 2006 IF 2007	Y
Australasia			
Australia	Y	Signed in 2005 R/IF 2012	Y
New Zealand	Y	S 2005 R/IF 2016	Y
USA	Y	S 2005 R/IF 2015	Y
Russia	Y	S 2005 R/IF 2007	Y

S = Signed
R = Ratified
IF = In Force

United Nations Security Council Resolution 1540 (UNSCR 1540). In response to growing security concerns over the possibility that non-state actors might acquire

and use WMDs, in 2004, the United Nations Security Council adopted Resolution 1540. Recognizing WMD proliferation by non-state actors as a threat to peace under the terms of Chapter VII of the UN Charter, UNSCR 1540 establishes a legally binding commitment, requiring all UN member states to implement effective measures against the proliferation of WMDs, their means of delivery, and related materials.

Specifically, UNSCR 1540 includes three primary obligations: to refrain from supporting non-state actors to develop, acquire, manufacture, possess, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery (Article 1); to adopt and enforce appropriate effective laws which prohibit any non-state actor to manufacture, acquire, possess, develop, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery (Article 2); to take and enforce effective measures to establish domestic controls to prevent the proliferation of nuclear, chemical, or biological weapons and their means of delivery (Article 3).⁷⁶

To monitor and promote the implementation of these obligations, paragraph 4 of UNSCR 1540 established the “1540 Committee,” an ad-hoc body tasked to collect information and assist countries in measures’ enforcement. The Committee was originally established with a two-year mandate. The mandate was later extended for a period of two years with UNSCR 1673 (2006), three more years with UNSCR 1810 (2008), and finally for a period of ten years with UNSCR 1977 (2011). Since its establishment, the Committee has collected National Countries Reports (which include UN member states’ declarations of taken or to-be-taken steps to implement the provisions of UNSCR 1540), organized regional workshops to raise awareness and provide assistance to members, and has published reports on the overall status of implementation of the resolution.

Reporting to the Committee is an obligation under UNSCR 1540, however, the modality of information submission is at States’ discretion. While some countries have submitted extensive information, others have submitted national reports that are incomplete or that lack crucial data. To harmonize information and facilitate data submission, the 1540 Committee created a Matrix template⁷⁷ available for member states to present the status of implementation of the provisions of the resolution. Of all the countries studied in this research, North Korea is the only state that has not submitted any report to the Committee.

⁷⁶ United Nations Security Council Resolution 1540 (2004) Text [https://undocs.org/S/RES/1540\(2004\)](https://undocs.org/S/RES/1540(2004))

⁷⁷ UNSCR 1540 Matrix Template. 1540 Committee established pursuant to Resolution 1540 (2004). Retrieved July 5, 2017, from <http://www.un.org/en/sc/1540/national-implementation/1540-matrices/matrix-template.shtml>

While notable progress has been registered since 2004, the threat of proliferation remains considerable and much work remains to be done. Full implementation requires a long-term effort by member states, but lack of capacity and resources is often cited as an impediment. This is the case, for instance, of Brunei Darussalam, Cambodia, Mongolia, the Philippines, Thailand, and Vietnam, which have all requested assistance in their reports to the Committee.⁷⁸ By contrast, among the countries analyzed in this study, only a limited number have offered assistance: Australia, China, India, Japan, Malaysia, New Zealand, South Korea, Singapore, the United States, and Russia.⁷⁹

⁷⁸ UNSCR 1540 National Reports. 1540 Committee established pursuant to Resolution 1540 (2004). Retrieved July 5, 2017, from <http://www.un.org/en/sc/1540/national-implementation/national-reports.shtml>

⁷⁹ Ibid.

Table 10. Status of United Nations Security Council Resolution 1540: Members National Reports

South East Asia	<i>United Nations Security Council Resolution 1540</i>	
Brunei Darussalam	30 December 2004 26 December 2007 21 June 2016	S/AC.44/2004/(02)/96 National Submission of Brunei National Submission of Brunei
Cambodia	27 September 2016 21 March 2005	National Submission of Cambodia S/AC.44/2004/(02)/110
Indonesia	28 October 2004 22 November 2005 2 January 2008	S/AC.44/2004/(02)/45 Add.1 National Submission of Indonesia
Lao P.D.R.	3 May 2005	S/AC.44/2004/(02)/117
Malaysia	26 October 2004	S/AC.44/2004/(02)/35
Myanmar	6 April 2005	S/AC.44/2004/(02)/113
Philippines	28 October 2004 28 October 2005 30 November 2005 6 February 2008 2 July 2013	S/AC.44/2004/(02)/34 Add.1 Add.2 S/AC.44/2007/20 S/AC.44/2013/10
Singapore	21 October 2004 29 August 2005 28 May 2013	S/AC.44/2004/(02)/8 Add.1 S/AC.44/2013/8
Thailand	5 November 2004 14 December 2007	S/AC.44/2004/(02)/71 National Submission of Thailand
Viet Nam	26 October 2004 12 December 2005 7 March 2008	S/AC.44/2004/(02)/39 Add.1 S/AC.44/2007/12
North East Asia		
People's Republic of China	4 October 2004 2 September 2005 4 December 2007	S/AC.44/2004/(02)/4 Add.1 National Submission of China
DPRK		X
Japan	28 October 2004 17 March 2006 29 January 2014	S/AC.44/2004/(02)/49 Add.1 National Submission of Japan
Mongolia	31 May 2005 18 April 2014	S/AC.44/2004/(02)/119 S/AC.44/2014/4

ROK	27 October 2004 S/AC.44/2004/(02)/24 26 September 2005 Add.1 14 December 2007 National Submission of Republic of Korea 12 November 2013 S/AC.44/2013/19
South Asia	
India	1 November 2004 S/AC.44/2004/(02)/62 16 January 2006 Add.1 8 February 2006 Add.2 31 May 2013 S/AC.44/2013/9
Australasia	
Australia	28 October 2004 S/AC.44/2004/(02)/53 8 November 2005 Add.1 14 March 2008 National Submission of Australia 6 May 2014 National Submission of Australia
New Zealand	28 October 2004 S/AC.44/2004/(02)/54 11 January 2006 Add.1 11 February 2008 National Submission of New Zealand
USA	12 October 2004 S/AC.44/2004/(02)/5 15 September 2005 Add.1 21 December 2007 S/AC.44/2007/10 11 October 2013 S/AC.44/2013/17 29 September 2014 National Submission of the USA 23 March 2016 S/AC.44/2016/2
Russia	26 October 2004 S/AC.44/2004/(02)/14 23 August 2005 Add.1 24 December 2007 National Submission of Russian Federation 15 July 2014 National Submission of Russian Federation

Delivery Systems

The Hague Code of Conduct of Ballistic Missiles. The Hague Code of Conduct against Ballistic Missile Proliferation (HCoC) seeks to counter the proliferation of one of the delivery systems used to carry weapons of mass destructions: ballistic missiles.⁸⁰

Opened for signature in November 2002, the HCoC expands on the 1987 [Missile Technology Control Regime](#) (MTCR) and the 1996 [Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies \(WA\)](#). Unlike the MTCR and WA, which are ad hoc regimes for technology-holders and where membership is restricted, the HCoC is a voluntary multilateral political agreement. By subscribing, “members voluntarily commit themselves politically to provide pre-launch notifications (PLNs) on ballistic missile and space-launch vehicle launches (SLVs) and test flights. Subscribing States also commit themselves to submit an annual declaration (AD) of their country’s policies on ballistic missiles and space-launch vehicles.”⁸¹

The HCoC has been subjected to several criticisms. One is that the Code is only a political statement of good intentions that does not include a verification regime. Signatories also do not have any legal obligations and the focus of the Code remains on broad principles rather than on detailed action plans. Moreover, there is no inspection system in place to assure compliance, nor sanctions in case of violations.⁸²

Another criticism is that the HCoC (as the MTCR) is advancing the agenda of a specific group of countries. This belief relies on the fact that the negotiations of the Code’s terms were open to only a limited number of countries.⁸³ Among the supporters of this criticism, China and the DPRK, which remain resolutely outside the scope of the HCoC.⁸⁴

India, which for a long time was also opposed to the Code, in 2016 decided to subscribe to it, hoping to send a strong signal of the country’s “readiness to further

⁸⁰ Having the capability of developing, acquiring, and stockpiling weapons of mass destructions, does not necessarily translate into having the ability to deliver and use them. Among the main delivery systems: ballistic missiles, cruise missiles, unmanned aerial devices (UAVs), aircrafts, gravity bombs, and unconventional devices (i.e. trucks, trains, cars, etc.).

⁸¹ The Hague Code of Conduct against Ballistic Missile Proliferation (HCoC) <http://www.hcoc.at/>

⁸² Hague Code of Conduct Against Ballistic Missile Proliferation (HCOC). Nuclear Threat Initiative (2017, February 1) Retrieved July 5, 2017, from <http://www.nti.org/learn/treaties-and-regimes/hague-code-conduct-against-ballistic-missile-proliferation-hcoc/>

⁸³ Smith, M. (2012). The Hcoc: Current Challenges And Future Possibilities. Fondation Pour La Recherche Stratégique. Retrieved July 5, 2017, from <https://www.nonproliferation.eu/hcoc/wp-hcoc/uploads/2017/02/THE-HCOC-CURRENT-CHALLENGES-AND-FUTURE-POSSIBILITIES.pdf>

⁸⁴ But also Brazil, Egypt, Iran, Israel, Pakistan, and Syria to name a few.

strengthen the global non-proliferation regime.”⁸⁵

In Southeast Asia, only Cambodia, Singapore, and the Philippines have signed the HCoC. In this case, however, the lack of adherence is mostly due to a lack of applicability of the Code, considering that no country in SEA has demonstrated interests in developing ballistic missile technology.⁸⁶

Table 11. Status of *The Hague Code of Conduct of Ballistic Missiles*

South East Asia	<i>The Hague Code of Conduct of Ballistic Missiles</i>
Brunei Darussalam	NO
Cambodia	Y
Indonesia	NO
Lao P.D.R.	NO
Malaysia	NO
Myanmar	NO
Philippines	Y
Singapore	Y
Thailand	NO
Viet Nam	NO
North East Asia	
People’s Republic of China	NO
DPRK	NO
Japan	Y
Mongolia	Y
ROK	Y
South Asia	
India	Y
Australasia	

⁸⁵ India joins The Hague Code of Conduct. The Hindu. (2016, June 03). Retrieved July 06, 2017, from <http://www.thehindu.com/news/national/India-joins-The-Hague-Code-of-Conduct/article14380477.ece>

⁸⁶ Jing, Z. (2002, Summer). Missile Issues in East Asia. The Nonproliferation Review. Retrieved July 5, 2017, from <https://www.nonproliferation.org/wp-content/uploads/npr/92jing.pdf>

The only exception to this, could perhaps be Indonesia, which once developed a satellite program. In 1998, however, the country cancelled the program due to a financial crisis.

Australia	Y
New Zealand	Y
USA	Y
Russia	Y

Conclusions

This study has assessed WMD instrument adherence by countries with a CSCAP member committee. While adherence has improved in the past few years, important gaps remain. Given that these instruments are crucial building blocks to international peace and security, achieving universality is paramount.

There are several reasons for these gaps. Many countries have more immediate priorities, such as internal conflict, poverty alleviation, and economic development. Moreover, given their interest in exploring nuclear power programs as a way to spur development and alleviate extreme poverty, countries in this geographic area have focused on nuclear safety rather than nonproliferation and nuclear security.⁸⁷

The existence of language barriers is also worth noting. Countries often encounter difficulties in translating the provisions of treaties and conventions into local languages, causing delays in accession, ratification, and implementation of the instruments. Myanmar is a case in point. While the country is committed to implementing the AP, the modified SQP, as well as UN sanctions against North Korea, for instance, it will take Naypyidaw time to understand all the instruments' provisions and translate them so that stakeholders know how to implement them.⁸⁸

Another important reason for delayed adherence to key instruments is the lack of capacity. Many regional countries lament a lack of human, technical, and financial resources. In its latest report to the 1540 Committee, for example, Brunei indicated the need for assistance in strengthening nuclear safety and nuclear security. Specifically, the country expressed the necessity for technical support in adopting legislations and border control measures, in setting a radiological emergency response, and in developing testing and detection capabilities.⁸⁹

⁸⁷ Ibid.

⁸⁸ Baker, C., & Dall'Arche, F. (2017, January). 4th US/UK-Myanmar Nonproliferation Dialogue.

Retrieved July 5, 2017, from https://csis-prod.s3.amazonaws.com/s3fs-public/publication/4thNPD%20Myanmar%20Publication_1.pdf?XUbe4zySiLDI.BvO7tzKkdqf8zqeISJI

⁸⁹ Brunei Darussalam National Report (2016, June 21). 1540 Committee established pursuant to Resolution 1540 (2004).

Retrieved July 5, 2017, from <http://www.un.org/en/sc/1540/documents/BruneiDarussalamReport21Jun2016.pdf>

Finally, instrument adherence has been slow for political reasons. Some of the countries analyzed in this study are part of the Non-Aligned Movement (NAM) and, therefore, refuse to adhere to some instruments, notably those negotiated or adopted outside the auspices of the United Nations or other International Organizations.

Looking to the future, what, then, are the next steps for the region?

A way to address the prioritization question, the lack of resources, capacity, and language barriers, and political issues is through diplomatic dialogues at the track I.5 and track II level. Without the formality of official track I dialogues, multilateral groups such as CSCAP provide an informal forum for discussion and a fertile ground for cooperation, facilitating information and expertise exchange, and allowing participating countries to share know-how and learn from others' experiences.

Direct bilateral cooperation between countries and ad-hoc technical institutions are also useful in supporting the development, implementation, and effectiveness of international agreements, initiatives, treaties, and conventions. Several organization can provide assistance in translating international commitments into national legislation and regulations; others organize training courses and workshops to train officials, technicians, and customs and border personnel.

International and regional cooperation is also crucial to facilitate prioritization of security and safety issues. By recognizing the importance of strong safety and security regimes, and by implementing them, countries will spur foreign trust and attract investments in numerous sectors such as agriculture, energy, and mining, ultimately contributing to national and regional economic growth.

While economic and capacity reasons are intrinsic in less developed countries, the lack of political commitment can also be attributed to a perceived lack of *real* commitment by the P5 and other developed countries toward disarmament and global safety and security. NAM, nuclear weapon capable states outside the NPT, and NNWS have expressed frustration over being asked to implement and comply with international norms, while not seeing the same commitment by the NWS. Ratification of the CTBT by the United States and China, and of the SEANWFZ protocols by the P5, for example, constitutes a first step to re-build trust and credibility, demonstrating that nonproliferation, security, and safety instruments are an international priority and are not just serving the interests of the West.

About the Author

Federica Dall'Arche graduated Summa Cum Laude in Political Science at the University of Roma Tre, Italy, winning a full merit scholarship for an exchange program at Macquarie University in Sydney, Australia. Federica obtained her Master's degree in Nonproliferation and Terrorism Studies and a Certificate in Conflict Resolution from the Middlebury Institute of International Studies at Monterey (MIIS), California and won a prize for the best paper on Human Trafficking. She has had an internship at the Asia-Pacific Center for Security Studies, and a Fellowship as United Nations Security Council Monitor at PeaceWomen. She also worked as a Graduate Research Assistant at the James Martin Center for Nonproliferation, at the William Tell Coleman Library, and as a freelance collaborator for the online magazine *Geopolitica.info*. She is a former Nuclear Policy Fellow at the Pacific Forum CSIS.