

## Japan-ASEAN Challenges for Nuclear Nonproliferation and Nuclear Security

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NUCLEAR ENERGY PROVIDES many challenges to peace and stability both regionally and internationally, exerting a double-edged effect on peace and prosperity worldwide. It is widely known that nuclear power technology was first developed for military use and has the potential to directly threaten global security. Nuclear weapons are considered weapons of mass destruction (WMD) and are regarded as a critical threat to peace and human life. In his famous address in Prague in April 2009, US President Barack Obama proposed taking concrete steps toward “a world without nuclear weapons” through nuclear arms reduction, support for ratification of the Comprehensive Nuclear Test Ban Treaty (CTBT), and the enhancement of the Nuclear Non-Proliferation Treaty (NPT) regime.<sup>1</sup> In reality, however, nuclear disarmament has not advanced since that speech was given, and the risk of nuclear proliferation continues to threaten international peace and stability.

In the decades following the famous speech proposing “Atoms for Peace” by President Dwight D. Eisenhower to the UN General Assembly in 1953, many countries used nuclear energy for peaceful purposes,<sup>2</sup> contributing to prosperity and improving standards of living. However, nuclear and radiological materials require careful handling—not only because they are inherently dangerous substances, but also because of the risk for abuse. Nuclear facilities, including research reactors as well as commercial nuclear power plants (NPPs), contain plutonium and other nuclear materials that may be vulnerable to nuclear theft and terrorist attacks. Nuclear-related and other dual-use technologies and items used for peaceful purposes may be converted for military use. Moreover, the advancement of globalization facilitates the marketing of nuclear

materials as well as nuclear-related and dual-use items and technology. In short, even if one country limits the use of nuclear energy to peaceful purposes, nuclear energy inevitably raises the risk of proliferation and damages nuclear safety and nuclear security.<sup>3</sup>

Many countries in East Asia possess nuclear power generation capabilities. Japan has been promoting nuclear power generation as well as other peaceful uses of nuclear power, like the use of radiation. China is a nuclear weapon state with many research reactors and commercial NPPs. South Korea also has many research reactors and commercial NPPs and has taken a positive stance on the expansion of nuclear power generation. South Korea is believed to be eager to have enrichment technology. North Korea's possession of nuclear weapons is a critical concern for the regional and global peace. India and Pakistan also possess nuclear weapons for their own security purposes. Some of the ASEAN countries have nuclear facilities and are eager to introduce commercial NPPs.

This push by Asian countries to increase the number of NPPs and advance nuclear power generation has continued despite the concerns raised by the accident at the Fukushima Daiichi Nuclear Power Plant in March 2011. It has also continued despite revelations that the expansion of trade and development in this region has enabled the trafficking of nuclear-related items, most notably by the A. Q. Khan network, which covered a vast area that included some Southeast Asian countries.

The East Asian region—including the ASEAN countries and Japan—is thus threatened by a number of risks surrounding nuclear power. Against this backdrop, it is both natural and imperative that Japan and ASEAN collaborate to counter these threats. The “Vision Statement on ASEAN-Japan Friendship and Cooperation: Shared Vision, Shared Identity, Shared Future,” adopted at the ASEAN-Japan Commemorate Summit held in December 2013, lists strengthening cooperation on disaster management, UN peacekeeping operations, nonproliferation and disarmament, counterterrorism, and transnational crime and maritime security, among others, as topics to be addressed in advancing the “partnership for peace and stability.” Stronger collaborative efforts by Japan and ASEAN on nonproliferation and nuclear security could contribute to the enhancement of peace and stability not only in the region, but around the world.

## INTERNATIONAL SCHEMES FOR NONPROLIFERATION AND NUCLEAR SECURITY

### Nonproliferation Regime

Nuclear proliferation is the spread of nuclear weapons, fissionable materials, and weapons-applicable nuclear technology and information to countries that are not recognized as “nuclear weapon states” by the NPT. Adopted in 1968, the NPT aims to prevent such proliferation and allows just five states (the United States, Russia, the United Kingdom, France, and China) to possess nuclear weapons while prohibiting other countries from possessing or developing nuclear weapons. The NPT also stipulates that non-nuclear weapon states should “undertake to accept safeguards<sup>4</sup> as set forth in an agreement to be negotiated and concluded with” the International Atomic Energy Agency (IAEA).<sup>5</sup>

The NPT and the IAEA are the foundations of the nonproliferation regime. Following the end of the Cold War, the NPT became the legitimate regime for universal nonproliferation. South Africa renounced its nuclear weapons program and signed the NPT in 1991. China and France joined in 1992, and although it was doubtful that it had developed nuclear weapons, Argentina joined in 1995. Following the collapse of the USSR, Ukraine, Belarus, and Kazakhstan also signed on as non-nuclear weapon states. The NPT currently embraces 190 member countries. At the first NPT Review Conference, members decided to extend the validity of the NPT indefinitely and to hold a review conference every five years. The fifth review conference is scheduled to be held in 2015.

Safeguards are the primary measure to ensure nonproliferation. The IAEA provides the guidelines for safeguards and supervises the implementation by each non-nuclear weapon state. Most non-nuclear weapon states are party to the Comprehensive Safeguards Agreement (CEA) (INFCITC/153 [Corr.]), through which the state accepts the IAEA’s safeguards on all source or special fissionable material in peaceful nuclear activities within the territory of the state. In 1997, the IAEA’s efforts to strengthen the safeguards led to the model Additional Protocol (INFCIRC/540). The Additional Protocol ensures the commitment to nonproliferation and safeguards by the non-nuclear weapon states and equips the IAEA with important new tools to verify the correctness and completeness of each state’s declaration under the Comprehensive Safeguards Agreement.

In addition to these safeguards, export controls are another critical measure for nonproliferation. Following the entry into force of the NPT in 1970, India shocked the world by conducting a successful nuclear test in

1974, using plutonium obtained through the reprocessing of spent nuclear fuel in a Canadian-supplied research reactor. After that incident, nuclear export control came to be regarded as an important task for nonproliferation, and the Nuclear Suppliers Group (NSG) was established in 1974. The NSG describes itself as “a group of nuclear supplier countries that seeks to contribute to the nonproliferation of nuclear weapons through the implementation of two sets of Guidelines for nuclear exports and nuclear-related exports.”<sup>6</sup> The Zangger Committee, formed in 1971, established guidelines for implementing the export control provisions of the NPT (Article III(2)), which prohibit NPT member states from providing “(a) source or special fissionable material, or (b) equipment or material especially designed or prepared for the processing, use or production of special fissionable material, to any non-nuclear-weapon State for peaceful purposes, unless the source or special fissionable material shall be subject to the safeguards required by this Article.”<sup>7</sup>

### **The Possession of Nuclear Weapons, Materials, and Technology by Rogue States and Nonstate Actors**

The nonproliferation regime has served to regulate the nuclear activities of most countries. However, the possibility of nuclear proliferation has not completely disappeared. India, Pakistan, and Israel continue to refuse to sign the NPT. India and Pakistan succeeded in carrying out nuclear tests and announced their possession of nuclear weapons in 1998. Israel has not publicly conducted a nuclear test and continues to deny that it possesses nuclear weapons, although it is widely suspected that they do. India is estimated to have up to 100 nuclear warheads, Pakistan is estimated to have between 90 and 110, and Israel is believed to have between 75 and 200.<sup>8</sup>

The possession and development of nuclear weapons by the “rogue states” of North Korea, Iran, and Syria are important issues in international security. One of the most critical threats to peace and stability in East Asia is the nuclear armament of North Korea. That country initially joined the NPT, but announced its withdrawal in 1993 and again in 2003. It pushed ahead with underground nuclear tests in 2006, 2009, and 2013, while also performing missile tests.

Iran is strongly suspected of having nuclear weapons, but even if it does not yet have nuclear weapons or sufficient fissile material stockpiles to build weapons, the country is pursuing a uranium-enrichment program and other projects that could provide it with the capability to produce bomb-grade fissile materials and develop nuclear weapons within the next few years. The

IAEA concluded in 2003 that Iran had undertaken covert nuclear activities to establish the capacity to produce fissile materials.<sup>9</sup>

Syria is also suspected of having attempted to produce fissile materials for nuclear armament. While the extent of Syrian–North Korean nuclear cooperation is still unclear, it is believed to have begun around 1997. In September 2007, Israel conducted an airstrike on the construction site of a nuclear research reactor in the Syrian Desert, which US officials alleged was similar to North Korea’s Yongbyon reactor.

The effectiveness of safeguards to prevent rogue states from possessing nuclear weapons is limited, mainly for two reasons. First, safeguards require sufficient support by the recipient countries, but in many cases rogue states do not provide such support. Second, the decision by a country to develop nuclear weapons depends on its political will. Although there is a strict, institutionalized nonproliferation regime, it is often not enough to stop ambitious countries from embarking on the path toward military use of nuclear energy.<sup>10</sup>

In addition to the activities of these rogue states, the possibility of non-state actors taking possession of or developing nuclear weapons threatens international security. Following the September 11 attacks on the United States, the risk of terrorists with nuclear weapons was recognized as a serious potential threat. Furthermore, the discovery in 2004 that the A. Q. Khan network was transferring nuclear-related technologies to Libya, Iran, and North Korea led to growing concern over the risk of proliferation of WMDs.

### **The advancement of nonproliferation efforts and nuclear security**

Since the start of the 21st century, export control efforts have been strengthened to prevent nuclear materials and nuclear-related technology from spreading to dangerous states and nonstate groups. The Proliferation Security Initiative (PSI) was created in response to the anxiety caused by the potential possession of nuclear weapons by rogue states and terrorist groups. The PSI was initially proposed by US President George W. Bush in May 2003 and is a multilateral framework to end shipments of biological, chemical, and nuclear weapons; their delivery systems; and other related materials that could be used to produce such weapons to terrorist groups or countries suspected of attempting to acquire WMDs. It is designed to strengthen the nonproliferation frameworks within international law and the domestic laws of each member country. The PSI is an attempt to block the spread of WMDs within peaceful countries and beyond through the promotion of multilateral collaboration. The primary activities of the PSI

involve conducting interdiction training exercises for members and outreach to nonmembers

The disclosure of Dr. Khan's black market operations for the sale of nuclear-related technologies and other items resulted in the passage of UN Security Council Resolution 1540 in April 2004, which affirmed that the "proliferation of nuclear, chemical and biological weapons, as well as their means of delivery, constitutes a threat to international peace and security"<sup>11</sup> and obliged UN member countries "to refrain from providing any form of support to non-State actors that attempt to develop, acquire, manufacture, possess, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery"; "adopt and enforce appropriate effective laws"; and "take and enforce effective measures to establish domestic controls" for these purposes.<sup>12</sup> It also mandated that member countries submit reports to describe ways in which they were implementing security trade control mechanisms domestically. In turn, these reports have contributed to the enhanced transparency of domestic mechanisms for the restriction of WMD materials transactions to nonstate actors.

In April 2009, President Obama proposed the goal of ridding the world of nuclear weapons, pointing out the risk the world faces if rogue countries or terrorists gain access to nuclear materials and weapons. He proposed a new "Global Summit on Nuclear Security," an idea that eventually came to fruition as the 1st Nuclear Security Summit, held in April 2010. Representatives from 47 countries (including India, Pakistan, and Israel) and three international organizations attended. In addition, the summit adopted a communiqué reaffirming that "maintaining effective nuclear security will require continuous national efforts facilitated by international cooperation and undertaken on a voluntary basis by states." Participant countries pledged that they "will promote the strengthening of global nuclear security through dialogue and cooperation with all states."<sup>13</sup> The 2nd Nuclear Security Summit was held in Seoul in March 2012, while the third took place in Hague in March 2014.

## THE STANCE OF JAPAN AND THE ASEAN COUNTRIES ON NUCLEAR ENERGY

### **A Shared Stance against Nuclear Weapons**

Japan and the ASEAN countries are non-nuclear weapon states and have collectively demonstrated their anti-nuclear weapon stance. Japan is the only country that has been attacked with an atomic bomb and, as a result,

the antinuclear movement has had a strong influence on Japanese diplomacy as well as on public opinion. While promoting the peaceful use of nuclear energy, the Japanese government has been very involved in international nonproliferation efforts through the NPT, the IAEA, the NSG, the Zangger Committee, and the PSI. However, because Japan's defense and security policies depend on its alliance with the United States, which possesses a large amount of nuclear weapons, Japan's antinuclear stance contains a fundamental contradiction.

The ASEAN countries have also taken an anti-nuclear weapon stance. The Southeast Asia Nuclear-Weapon-Free Zone (SEANWFZ) was already contained in the Zone of Peace, Freedom and Neutrality Declaration in November 1971, which reflected the members' opposition to the domination of any great power in Southeast Asia as well as their anxiety over the risk posed by nuclear weapons. In 1995, following the Cold War, they signed the SEANWFZ Treaty (Bangkok Treaty), which obliges parties "not to develop, manufacture or otherwise acquire, possess or have control over nuclear weapons; station nuclear weapons; or test or use nuclear weapons anywhere inside or outside the treaty zone." The Bangkok Treaty came into force in 1997, and all ASEAN member countries have now signed the treaty.<sup>14</sup>

ASEAN countries have demonstrated their determination to preserve the SEANWFZ.<sup>15</sup> The ASEAN Political-Security Community Blueprint of 2009 states that ASEAN members should ensure the implementation of the SEANWFZ and should encourage the nuclear weapon states to sign the Bangkok Treaty protocol, which would prohibit the use of nuclear weapons against any SEANWFZ members. By signing the protocol, the nuclear weapon states would contribute to global nonproliferation and disarmament efforts, but none have done so yet.<sup>16</sup>

### **Diverse Views on the Peaceful Use of Nuclear Power**

Although Japan and the countries of ASEAN share similar positions with regard to nuclear weapons, their stances on nuclear power generation are more diverse. Japan began to introduce and develop technologies for nuclear power generation in the 1950s. In the beginning, governmental agencies such as the Japan Atomic Energy Commission and the Japan Science and Technology Agency took the lead. The first commercial power plant in Japan was commissioned in 1966. Following the oil shock in 1973, the world began looking for alternative sources of energy, so the necessity for nuclear power rose. Against this backdrop, the Japanese government positioned nuclear power as the key source of energy to meet domestic demand. While the



1974 radiation leak aboard the nuclear-powered ship the *Mutsu*, the serious NPP accidents at Three Mile Island in 1979 and Chernobyl in 1986, and the fire in the Monju fast breeder reactor in 1995 were devastating, nuclear energy maintained a key position in Japan's energy policy portfolio. But the March 2011 incident at the Fukushima NPP has had a severe impact on Japan's energy policy. All commercial NPPs were gradually taken offline following the disaster, and as of this writing, none are currently in operation. However, Prime Minister Shinzo Abe's administration has attempted to resume the operations of NPPs and to position nuclear power once again as a basic energy source, despite criticism from many antinuclear groups and their followers. Regardless of the direction that Japan's domestic energy policy takes in the future, it is clear that Japan has an abundant supply of nuclear-related facilities, technologies, and experience, which ASEAN countries can use if they want to promote peaceful use of nuclear energy.

Energy policies across the 10 ASEAN member countries vary, reflecting differences in political direction, economic development, and natural resource endowments. However, they all face common themes: the need to enhance energy security, reduce economic costs, and improve the sustainability of their energy supply. To achieve these objectives, ASEAN countries have adopted or announced policies to diversify their energy supplies. From this point of view, nuclear energy is considered to be one of the most important energy components for ASEAN countries.<sup>17</sup> Currently, the only existing commercial NPP in any of the ASEAN countries is the Bataan Nuclear Power Plant in the Philippines,<sup>18</sup> and that has been in the decommissioning process since 2005.<sup>19</sup> There are also six research reactors currently operating in Southeast Asia—in Indonesia, Malaysia, Thailand, and Vietnam—and a number of ASEAN countries are studying the possibility of introducing commercial power plants.<sup>20</sup> Most of these plans, however, either were shelved or have not been promoted following the accident in Fukushima in March 2011 in light of the concerns about nuclear power safety. Despite the shock of the accident, however, Vietnam has continued to move forward with plans for constructing an NPP and has already signed an agreement with Russia to build its first facility.<sup>21</sup> Construction is expected to begin in late 2014, with nuclear energy entering into the country's power mix by 2015. Thailand has also included nuclear power in its Power Development Plan beginning in 2026,<sup>22</sup> and Indonesia has expressed interest in the introduction of nuclear power. But both Thailand and Indonesia are facing strong public objections, so the prospects for nuclear power in those countries are uncertain. However, the International Energy Agency's Southeast Asia Energy Outlook 2013 projects that Thailand will start producing electricity from NPPs before 2030.<sup>23</sup>



## Japan and ASEAN in the Global Nonproliferation Regime

Given that Japan and some ASEAN countries have nuclear facilities, nuclear-related technologies, and fissionable materials, they have a responsibility to guarantee nonproliferation, nuclear security, and nuclear safety. They have promoted these efforts individually, following international safeguards and guidelines under the supervision of the IAEA. Japan is one of the founding member states of the IAEA, which was established in 1957, and it signed the NPT in 1970 (ratifying it in 1976). To avoid arousing the suspicion that it plans to become a nuclear weapon superpower, Japan has consistently demonstrated its intention of following the guidelines of the IAEA to ensure nonproliferation. In addition to signing a Comprehensive Safeguards Agreement with the IAEA in 1977, Japan also signed the Additional Protocol, which enforces the authority of the IAEA to inspect nuclear facilities in member countries. The protocol came into force in December 1999.

Similarly, all ASEAN countries are members of the IAEA with the status of non-nuclear weapon states and have completed the ratification of or accession to the NPT. The Bangkok Treaty required all participating nations to conclude a Comprehensive Safeguards Agreement (CSA) with the IAEA. Furthermore, Indonesia (1999), the Philippines (2010), Singapore (2008), Vietnam (2012), and Cambodia (2015) have all signed and ratified the Additional Protocol.<sup>24</sup> Malaysia and Thailand signed the Additional Protocol in November 2005, Myanmar signed it in 2013, and Lao PDR signed in 2014, although it is not yet in force in those countries.<sup>25</sup>

In terms of export controls, Japan is a supplier of nuclear technology and has constructed the appropriate domestic legislative framework. Security trade control—including the trade in nuclear-related technologies and other items—is provided for under Japan’s Foreign Exchange and Foreign Trade Act (Foreign Exchange Act). Regarding the export of goods, article 48, section 1, of the Foreign Exchange Act stipulates, “Any person who intends to conduct the export of specific kinds of goods to specified regions, which are specified by Cabinet Order as being considered to obstruct the maintenance of international peace and security, shall obtain, pursuant to the provisions of Cabinet Order, permission from the Minister of Economy, Trade and Industry.”<sup>26</sup> And with regard to the transfer of technology, article 25, section 1, of that act stipulates, “When a resident intends to conduct transactions listed in the following items with a non-resident, he/she shall obtain, pursuant to the provisions of Cabinet Order, permission from the Minister of Economy, Trade and Industry in regard to the transactions. (i) Transactions designed to provide technology pertaining to the design, manufacture or use of specific kinds of goods specified by Cabinet Order

as those considered to undermine the maintenance of international peace and security... in the specified region.”<sup>27</sup>

By contrast, most ASEAN countries have been slow to assemble domestic systems to implement strategic trade controls, with only Malaysia and Singapore making significant strides in improving their systems to date.<sup>28</sup> The Philippines has also been making efforts to build a comprehensive legal framework for export control.<sup>29</sup> Thus the construction of domestic legislative systems as well as capacity building for strategic trade control are critical issues for ASEAN countries.

Internationally, Japan has assumed a leading role in the NSG and the Zangger Committee and is involved in various activities under the PSI. It has hosted several maritime, port, and air exercises, such as Team Samurai (2004), Exercise Pacific Shield (2007), and Pacific Shield (2012), while also participating in a number of exercises hosted by other countries.<sup>30</sup>

The ASEAN countries have taken diverse positions on the PSI. Currently, only five ASEAN countries—Brunei, Cambodia, the Philippines, Singapore, and Thailand—have participated in some capacity in activities related to the PSI, with Singapore being the most active and hosting the first PSI exercise in Southeast Asia in 2005. Thailand has been the most concerned with issues such as domestic levels of skills and equipment, lack of sufficient resources, the need for clarity concerning compensation for inspected vessels, and delegation of responsibility to law enforcement agencies. Indonesia was strongly opposed to the PSI in 2003 and continues to have reservations because it is concerned about the contradiction between measures under the PSI and issues of sovereignty and the legality of interdiction.<sup>31</sup>

## ASEAN-JAPAN REGIONAL COOPERATION ON NUCLEAR ISSUES

### **ASEAN’s Potential and Activities to Enhance Nonproliferation and Nuclear Security**

The efforts of both Japan and the ASEAN countries in the areas of nonproliferation and nuclear security have contributed to the enhancement of peace and stability, not only in the region, but also internationally. Initially, Japan and each ASEAN country should enhance their efforts to ensure nonproliferation and nuclear security; however, they face difficulties because their experiences and perspectives are different. As noted above, Japan has a long history of using nuclear power peacefully and has rich experience with and knowledge of nonproliferation efforts, including safeguards as well as

export controls. On the other hand, each ASEAN country regards nuclear energy issues differently, depending upon its past policies on peaceful use. Those countries that do not have NPPs tend to regard nonproliferation and nuclear security as issues for other countries to worry about. However, all countries—including ASEAN countries—are affected by these issues and they can and should implement efforts to ensure nonproliferation and nuclear security.

In terms of safeguards, ASEAN countries have followed the guidelines and procedures of the IAEA, but they are lagging on export controls. Countries attempting to promote nuclear power generation and non-energy-related usage of nuclear technologies have shown a particularly reluctant attitude to enhance such controls. Against a backdrop of economic development and increased trade, ASEAN and the entire Asian region have begun to face more difficult challenges in terms of export controls. These include “procurement below the threshold of the control lists of international export control regimes, more demand for high-tech items and materials, countries’ expanded capabilities to produce dual-use items as well as more diversified proliferation routes and other sophisticated procurement techniques by proliferators.”<sup>32</sup>

The enhancement of export control efforts should be a critical topic for ASEAN countries as they seek to contribute to nonproliferation. The fact that A. Q. Khan extended his covert nuclear capability development network to a Malaysian company demonstrates the risk of proliferation in the absence of an effective regime for export control. However, some ASEAN members are concerned about the possibility that strict export controls may have a negative impact on the growth of their trade. Furthermore, ASEAN countries do not have sufficient human resources to handle counterproliferation efforts and ensure nuclear security.

The ASEAN Single Window (ASW), part of the “ASEAN Economic Community Blueprint,” might provide an effective mechanism for export control. The ASW is a trade facilitation mechanism for creating a regional portal where the national single windows of ASEAN member states can operate in order to help streamline intra-ASEAN trade and minimize the cost of doing business in the region. The ASW will provide a mechanism for integrated trade management and information sharing among ASEAN countries, potentially functioning as an export control for strategic items, including radioactive and fissionable materials and dual-use commodities related to nuclear development. In addition, the process of creating the mechanism of the ASW will require ASEAN countries to reinforce their domestic expertise, legislation, and legal mechanisms for trade and customs management.<sup>33</sup>

The ASEAN countries have reaffirmed their intention to implement counterterrorism measures in various meetings and reports, such as the APSC Blueprint of 2009, and have developed mechanisms for cooperation on counterterrorism and transnational crime, including the ASEAN Ministerial Meeting on Transnational Crime and the ASEAN Convention on Counter-Terrorism. These mechanisms serve as appropriate models for cooperation on the enhancement of nonproliferation and nuclear security in the future. Furthermore, the ASEAN Network of Regulatory Bodies on Atomic Energy, an initiative first proposed by Thailand, is a network of the individual regulatory bodies in ASEAN countries that aims to strengthen nuclear safety, security, and safeguards within the ASEAN community by enhancing cooperation and complementing the work of existing mechanisms.<sup>34</sup> It represents a voluntary movement among the ASEAN countries to promote regional cooperation on nuclear issues.

In short, ASEAN countries' concern about and awareness of nuclear issues have arisen from the viewpoint of regional security in Southeast Asia. It is important to spread awareness that their commitment to nuclear issues can contribute to not only regional but also global governance.

### **Nonproliferation and Nuclear Security Cooperation in the ASEAN-Centered Architecture**

The two main regional frameworks on security in Asia are the ASEAN Regional Forum (ARF) and the ASEAN Defense Ministers Meeting Plus (ADMM-Plus), which were constructed as ASEAN-centered structures to affect the tone of discussions. The ARF has already taken up nonproliferation and nuclear security issues. In July 2004, after the UN Security Council passed Resolution 1540, the ARF adopted its own "ARF Statement on Non-Proliferation," which declared that "the proliferation of weapons of mass destruction (WMD) in all its aspects and their means of delivery constitute a threat to international peace and security and a growing danger to all states."<sup>35</sup> The ARF first held an Inter-sessional Meeting on Non-Proliferation and Disarmament (ISM on NPD) in July 2009. The 4th ISM on NPD in 2012 focused on strengthening global and regional nuclear nonproliferation measures, including making a strong contribution to international frameworks like the NPT, CTBT, and IAEA; enhancing safeguards; and strengthening export control mechanisms and abilities by member countries.<sup>36</sup>

The ADMM-Plus is another framework in Asia Pacific to discuss security and defense issues. It brings together the defense ministers from the 10 ASEAN countries along with those from Australia, China, India,

Japan, New Zealand, South Korea, Russia, and the United States. In the Chairman's Statement from the first ADMM-Plus, held in 2010, participants expressed concern about nonproliferation as one of the new and complex challenges threatening regional and global peace and stability.<sup>37</sup> However, the subsequent discussions under this framework have not emphasized nonproliferation or nuclear security per se, but instead focus on the necessity for broader counterterrorism efforts.

### **Japan's Efforts to Encourage ASEAN Countries to Commit to Nonproliferation and Nuclear Security**

Japan has already been working to offer cooperation and assistance on nonproliferation and nuclear security to ASEAN countries. Many of Japan's efforts have focused on sharing its domestic expertise and contributing to the establishment of networks of nuclear-related personnel in Asia, and they have been assisting ASEAN members with the building of regional frameworks. The Forum for Nuclear Cooperation in Asia (FNCA) is a Japan Atomic Energy Commission-supported framework for the peaceful use of nuclear technology in Asia. The various activities of the FNCA focus on radiation utilization development for industrial, environmental, and healthcare use, and they deal with nuclear safety management, nuclear security, and safeguards. Furthermore, the FNCA has promoted a project on human resource development for nuclear-related personnel.<sup>38</sup> The Asian Nuclear Safety Network has promoted efforts to improve nuclear safety in the development of nuclear programs in Asia by means of information exchange and the construction of human networks among nuclear experts in the region.<sup>39</sup>

The Asian Senior-Level Talks on Non-Proliferation (ASTOP), which began in November 2003, have focused on nonproliferation and nuclear security. It is a Japan-led multilateral regional framework to provide a forum to discuss various issues in nonproliferation and nuclear security among Asia Pacific countries. Senior government officials in the department in charge of nonproliferation and security in each member country attend the meeting and exchange ideas to deal with issues regarding nuclear nonproliferation and security. The Chairman's Statement adopted at ASTOP X in November 2013 stated that "building enhanced awareness of the importance of strengthening export control systems in the region" is one of the accomplishments of the ASTOP. Participants at this meeting also affirmed "the importance of export control measures being implemented more effectively."<sup>40</sup>

The Integrated Support Center for Nuclear Nonproliferation and Nuclear Security (ISCN) is another institution intended to promote cooperation and assistance on nonproliferation and nuclear security. The Japanese government first proposed the establishment of such a center under the Japan Atomic Energy Agency at the 1st Nuclear Security Summit, held in Washington DC in April 2010. This proposal was accepted and the ISCN was established in December 2010. The ISCN aims to support nuclear security on a permanent basis and contribute to strengthened nuclear security in Asia. Many of its activities concentrate on capacity building and human resource development by means of providing training programs on nuclear security, nonproliferation, and safeguards.<sup>41</sup> The targets of the human resource development are nuclear-related government officials, as well as other personnel, researchers, and plant operators in Japan and other Asian countries.

Furthermore, the ISCN provides bilateral assistance for capacity building to Asian countries, including Vietnam, Indonesia, Malaysia, and Thailand, as well as to the Energy Department of the ASEAN Secretariat. In addition, it provides technical assistance, through such programs as the “Technology Development Programs of Measurement and Detection of Nuclear Material.”

Japan also provides assistance focused on export controls. The Center for Information on Security Trade Control (CISTEC) is a private-sector organization that provides support for the implementation of security trade control for domestic companies and businesspeople. Since 1993, CISTEC has been convening Asian Export Control Seminars, cosponsored by the Ministry of Foreign Affairs and the Ministry of Economy, Trade and Industry (METI). CISTEC has also provided Joint Industry Outreach Seminars, which are bilateral outreach activities with Asian countries. Since 2010, METI is the main convening body for the seminar. In 2014, the Joint Industry Outreach Seminar will be held in Malaysia and the Philippines.<sup>42</sup>

Japan is a member of the Asia-Pacific Safeguards Network (APSN) and the Regional Radiological Security Partnership (RRSP), both of which are Australian-sponsored frameworks. Among the ASEAN nations, Indonesia, the Philippines, Singapore, Thailand, and Vietnam are also participating in the APSN, while the RRSP includes all ASEAN members. These two frameworks provide opportunities to enhance Japan’s assistance to and cooperation with ASEAN countries on nonproliferation and nuclear security.



## CONCLUSION AND RECOMMENDATIONS

Nuclear nonproliferation and nuclear security are critical issues for global governance. Although a country may use nuclear power only for “peaceful” purposes, the technology used in nuclear power generation can be diverted for “military” purposes, thereby putting that country and others at risk. Thus the absence of NPPs does not allow a country to escape from the risks associated with nuclear power. All ASEAN countries, regardless of whether they possess a nuclear power facility or not, must therefore tackle the issues raised by nuclear power.

Additionally, Asia contains various threats and risks related to nuclear energy. North Korea’s aggressive nuclear development makes the regional environment unstable. The possession of nuclear weapons by India and Pakistan shakes the effectiveness and legitimacy of the NPT regime. The expansion of trade in East Asia, led by economic development, has raised the risk of proliferation of fissionable and radioactive materials as well as nuclear-related technologies and items to rogue states and malicious nonstate actors and terrorist groups. While the NPT grants all parties to the treaty “the right ... to develop research, production and use of nuclear energy for peaceful purposes without discrimination,”<sup>43</sup> the pursuit of this right by Asian countries, including some ASEAN members, also heightens the potential for proliferation unless effective and strict countermeasures are put in place. The risk of proliferation raises the possibility of terrorist attacks with nuclear materials. For example, the Abu Sayyaf attacks in Malaysia, the MILF in the Philippines, the Al Qaeda presence in Indonesia, and so on, mean that the risk of terrorist access to unsecured nuclear materials is quite real.

Japan and ASEAN should continue to commit themselves to nonproliferation and nuclear security in the context of global schemes like the NPT, IAEA, and CTBT. For the foreseeable future, Japan-ASEAN cooperation on this issue should primarily be focused on capacity-building measures by means of various regional schemes as well as bilateral assistance to enhance the ability of each country in the areas of safeguards, export controls, nuclear safety, and nuclear security. These efforts will contribute to enhancing not only regional security but also global peace.

In order to solve and mitigate the risks and threats caused by nuclear energy, the first step for ASEAN-Japan cooperation is to spread and deepen the common awareness in the region of the importance of commitments to safeguard measures among ASEAN countries, including those that do not have NPPs. In addition, ASEAN-Japan cooperation on nonproliferation and nuclear security should enter a new stage. The “Implementation Plan



of the Vision Statement on ASEAN-Japan Friendship and Cooperation: Shared Vision, Shared Identity, Shared Future,” adopted at the ASEAN-Japan Commemorative Summit in December 2013, outlined the future direction by calling on ASEAN and Japan to

intensify efforts to implement relevant measures for non-proliferation and disarmament, and for the safe and peaceful uses of nuclear energy, including cooperation for strengthening export control capacity of ASEAN Member States as well as capacity building and confidence building for nuclear security, in accordance with and through further promoting regional and international instruments...<sup>44</sup>

This statement reflects the fact that ASEAN and Japan already share a common interest in advancing cooperation on nonproliferation and nuclear security and can therefore move ahead on specific measures. This is their obligation as members of the international community.

Based on the arguments presented in this chapter, there are four primary recommendations that can be made for cooperation among ASEAN countries and Japan within international, regional, and bilateral frameworks:

1. Japan and the ASEAN countries should continue to promote nonproliferation and nuclear security efforts by following the rules and procedures of global mechanisms like the NPT, IAEA, CTBT, and PSI in order to sustain and enhance the legitimacy and credibility of these mechanisms.
2. Japan and the ASEAN countries should work to promote capacity building in the area of export control. Japan’s assistance for the drafting of legislation and the development of human resources in each ASEAN country is a key element at the current stage.
3. Japan and ASEAN should collaborate to construct regional networking systems for strategic export controls beyond the current efforts between Japan and some of the ASEAN countries.
4. Japan and the ASEAN countries should make greater efforts to enhance ongoing regional activities for nonproliferation and nuclear security. These include Japan’s support to enhance ASEAN’s regional cooperation on these agendas, including the ASW and various antiterrorism activities, and to promote discussion and activities under existing regional mechanisms that include both Japan and the ASEAN countries, like the ARF, ADMM-Plus, FNCA, and ASTOP.

## NOTES

1. Remarks by President Barack Obama, Hradčany Square, Prague, Czech Republic. April 5, 2009.
2. Peaceful use of nuclear power refers to electric power generation and utilization of radiation.
3. With regard to the various risks of nuclear-related materials and technologies, see Jor-Shan Choi, “Nuclear Energy and Security Risks,” in *Nuclear Power and Energy Security in Asia*, ed. Rajesh Basrur and Koh Swee Lean Collin, (London: Routledge, 2012), 112–39.
4. According to the definition of the IAEA, “safeguards system comprises an extensive set of technical measures by which the IAEA secretariat independently verifies the correctness and the completeness of the declaration made by States about their nuclear material and activities.”
5. Treaty of the Nonproliferation of Nuclear Weapons, Article III.
6. Nuclear Supplier Group, “About the NSG,” <http://www.nuclearsuppliersgroup.org/en/>.
7. Communication Received from Members Regarding the Export of Nuclear Material and of Certain Categories of Equipment and Other Material, INFCIRC/209, September 3, 1974, Letter I.
8. Daryl Kimball, “Nuclear Weapons: Who Has What at a Glance,” November 2013, <http://www.armscontrol.org/factsheets/Nuclearweaponswhohaswhat>.
9. Ibid.
10. David Fischer, *International Safeguards, 1979*, International Consultative Group on Nuclear Energy, September 1979, p.11.
11. Resolution 1540, adopted by the Security Council at its 4986th meeting, on April 28, 2004.
12. Ibid., paragraphs 1, 2, and 3.
13. Communiqué of the Washington Nuclear Security Summit, April 13, 2010.
14. In 1995, ASEAN member states at that time (Brunei, Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam) signed the treaty. Cambodia, Laos, and Myanmar signed it after their entry into ASEAN.
15. ASEAN Charter, article 1.3.
16. Five nuclear weapon states expressed their intention to sign the protocol in 2011 and were scheduled to do so in July 2012. However, they suddenly stated reservations about the protocol just before the scheduled date of signing.
17. International Energy Agency (IEA), “Southeast Asia Energy Outlook,” *World Energy Outlook Special Report 2013* (September 2013), 31.
18. The Bataan NPP is the only commercial NPP in Southeast Asia but was never put into operation because of safety concerns arising from the Three Mile Island accident in 1979 and the Chernobyl disaster in 1986. Furthermore, the location of the site was too close to major earthquake fault lines and the Mount Pinatubo volcano. James Martin Center for Nonproliferation Studies, the Center for Energy and Security Studies, and the Vienna Center for Disarmament and Nonproliferation, “Prospects for Nuclear Security Partnership in Southeast Asia” (Monterey/Moscow/Vienna, May 2012), 4.
19. Ibid.

20. Indonesia, Malaysia, the Philippines, Singapore, and Vietnam are observers of the International Framework for Nuclear Energy Cooperation (IFNEC). The IFNEC is the forum for cooperation to promote use of nuclear energy for peaceful purposes, especially nuclear power generation, in a manner that is efficient, safe, and secure and that supports nonproliferation and safeguards. IFNEC, "About," <http://www.ifnec.org/About/Membership.aspx>.
21. IEA, "Southeast Asia Energy Outlook," 19.
22. *Ibid.*, 44.
23. *Ibid.*, 55.
24. IAEA, "Status of the Additional Protocol," <https://www.iaea.org/safeguards/safeguards-legal-framework/additional-protocol/status-of-additional-protocol>.
25. *Ibid.*
26. Foreign Exchange and Trade Act, [http://www.japaneselawtranslation.go.jp/law/detail\\_main?re=&vm=2&id=21](http://www.japaneselawtranslation.go.jp/law/detail_main?re=&vm=2&id=21).
27. *Ibid.* As for the detail of Japan's export control framework, see Tatsujiro Suzuki and Heigo Sato eds., "Security Trade Control in Asia: Searching for a Regional Framework," Science & Technology and International Relations (STIR) Project, University of Tokyo (March 2008), 8–15.
28. "Prospects for Nuclear Security Partnership in Southeast Asia," 21.
29. "Chairman's Statement of ASTOP X," paragraph 1.
30. PSI, "Activities," <http://www.psi-online.info/Vertretung/psi/en/02-activities/0-activities.html>.
31. "Prospects for Nuclear Security Partnership in Southeast Asia," 8.
32. "Chairman's Statement of ASTOP X," paragraph 2.
33. As for the ASW and its benefits for enhancing export control in the ASEAN region, see Greg Leon, "ASEAN Single Window: Creating a Tool for the Public and Private Sector" (presented at the 2nd ARF Confidence Building Measure Seminar on Implementation of UNSCR 1540, Bangkok, May 14–15, 2013), and "Prospects for Nuclear Security Partnership in Southeast Asia," 41.
34. Siriratana Biramontri, "ASEAN Network of Regulatory Bodies on Atomic Energy" (presented at 2nd ARF Confidence Building Measure Seminar of UNSCR 1540, Bangkok, May 14–15, 2013).
35. ASEAN Regional Forum Statement on Nonproliferation, Jakarta, July 2, 2004.
36. This meeting adopted export control as one of the main topics to discuss. The co-chairs' summary report of the 4th ARF Intersessional Meeting on Nonproliferation and Disarmament, Sydney, March 8–9, 2012.
37. Chairman's Statement of the 1st ASEAN Defense Ministers Meeting Plus, "ADMM+: Strategic Cooperation for Peace, Stability and Development," paragraph 9.
38. FNCA, <http://www.fnca.mext.go.jp/english/index.html>. [need name of webpage content] Participant countries are Japan, Korea, China, the United States, Australia, Canada, New Zealand, and ASEAN countries.
39. ANSN, "Homepage," <https://ansn.iaea.org/default.aspx>
40. "Chairman's Statement of ASTOP X."
41. Capacity Building, the ISCN homepage; three programs constitute Nuclear Security Course, Safeguards, and SSAC Course, and International Nonproliferation Framework

- Course, see, ISNC, “Activities,” [http://www.jaea.go.jp/04/iscn/04\\_activities\\_en.html#Technical](http://www.jaea.go.jp/04/iscn/04_activities_en.html#Technical), and interviews of the staff in the ISCN (November 13, 2013).
42. For detail of these seminars, see Export Control Seminar for Asian Region, <http://www.simul-conf.com/outreach/2013/ecseminar/index.html>, and interviews of the staff of the CISTEC, November 6, 2013.
43. NPT, Article IV (1).
44. “Implementation Plan of the Vision Statement on ASEAN-Japan Friendship and Cooperation: Shared Vision, Shared Identity, Shared Future,” Tokyo, December 14, 2013, 1.8.