INDIA-JAPAN CIVIL NUCLEAR COOPERATION: THE JOURNEY AND ITS FUTURE

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INTRODUCTION

On November 11, 2016, Indian Prime Minister (PM) Narendra Modi and his Japanese counterpart Shinzo Abe signed the India-Japan civil nuclear cooperation agreement in Tokyo. Eight months after the signing of the deal, on July 20, 2017, the civil nuclear cooperation agreement came into force. This agreement was historic as India became the first nuclear Non-Proliferation Treaty (NPT) non signatory state to sign such an agreement with Japan. This agreement with Japan not only promises to help India in getting advanced Japanese nuclear power technology but also increases India's stature as a responsible nuclear power state. The talks on India-Japan civil nuclear cooperation were initiated under the leadership of former PM Manmohan Singh in 2010. However, the 2011 Fukushima nuclear disaster and India's non-NPT status created roadblocks for the talks to move further quickly. Finally, after seven long years and numerous discussions, the agreement was signed. Japan became the 14th country to sign such an agreement with India. The other nations include the US, South Korea, Russia, France, Mongolia, Vietnam, the Czech Republic, Britain, Argentina, Namibia, Australia, Kazakhstan, and Canada.

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As a developing nation with a huge electricity demand, India is exploring energy resources other than traditional ones such as oil and natural gas. Nuclear energy is going to be crucial to fulfil India's growing energy needs.

Japan, the only country to have suffered from the devastation of atomic bombs, has been a staunch opponent of the proliferation of nuclear weapons. However, early on, it had begun to focus on the civilian use of atomic energy. Japan is one of the advanced nations in nuclear technology and power generation. India too has established its nuclear power programme through indigenous efforts, since, till recently, it was treated as an outcast in the nuclear arena because of its opposition to signing the NPT, Comprehensive Test Ban Treaty (CTBT) and other such nuclear-related treaties. As a developing nation with a huge electricity demand, India is exploring energy resources other than traditional ones such as oil and natural gas. Nuclear energy is going to be crucial to fulfil India's growing energy needs.

Though India and Japan have similar views on the non-proliferation of atomic weapons, and the use of atomic energy for peaceful or civilian purposes, both, nevertheless, remained constrained by circumstances and on opposite sides of the issue for a long time. From that point of view, the coming together of India and Japan for the civil nuclear agreement shows the increased trust factor between the two. In this context, studying the India-Japan civil nuclear cooperation is essential. While charting the journey of both nations in the civilian usage of nuclear power, and their stand on the issue of nuclear disarmament, this article will try to understand India-Japan civil nuclear cooperation. It also identifies the challenges for both nations that must be overcome to make this agreement a success.

WHAT KEPT INDIA AND JAPAN APART

Positions on NPT and Non-Proliferation

Japan's position on the nuclear issue has been impacted by the dropping of atomic bombs on its cities of Hiroshima and Nagasaki on August 6 and 9,

1945. On August 6, 1945, the US bomber B-29, the Enola Gay, dropped the atomic bomb known as "Little Boy." It immediately killed 80,000 people, and another 60,000 people who suffered injuries and radiation exposure, died by 1950.[1] After three days, on August 9, 1945, the bomber B-29, Bock's Car dropped "Fat Man," which killed between 60,000 to 80,000 people.[2] "Fat Man" was equivalent to 22 kilotons (KT) of TNT whereas "Little Boy" to 12.5 KT of TNT.

Because of these bombings, Japan became a staunch opponent of the nuclear weapons programme and never developed nuclear weapons of its own. When the NPT came into existence, Japan became its biggest supporter.

The world had never witnessed destruction on such a large scale. Japan succumbed to the devastation, and on August 15, 1945, Japanese Emperor Akihito announced Japan's unconditional surrender on a radio address to the nation wherein he mentioned the atomic bomb as "a new and most cruel bomb."[3] Because of these bombings, Japan became a staunch opponent of the nuclear weapons programme and never developed nuclear weapons of its own. When the NPT came into existence, Japan became its biggest supporter. Japan's nuclear disarmament and non-proliferation policy has four pillars[4]:

- The Atomic Energy Basic Law of 1955.
- The "Three Non-Nuclear Principles" which the Japanese Diet adopted in 1968.
- Japan's compliance with the NPT.
- Japan's reliance on the US for extended nuclear deterrence.

The Atomic Energy Basic Law of 1955

The Atomic Energy Basic Law of 1955 (AEBL-1955) is Japan's basic

1. "Hiroshima: Before and After the Atomic Bombing," *The Atlantic,* May 12, 2016, https://www.theatlantic.com/photo/2016/05/hiroshima-before-and-after-the-atomic-bombing/482526/. Accessed on December 4, 2017.
2. "Atomic Bomb Dropped on Nagasaki," *History,* 2009, http://www.history.com/this-day-in-history/atomic-bomb-dropped-on-nagasaki. Accessed on December 4, 2017.
3. Ibid.
4. "Japan," *NTI,* February 2017, http://www.nti.org/learn/countries/japan/nuclear/. Accessed on October 31, 2017.

legislative framework to govern its nuclear energy sector. AEBL-1955 was passed on December 19, 1955, and has 21 Articles. Article 1 defines the objective of this law as "to secure resources in the future, achieve scientific and technological progress, and promote industry by encouraging the research, development and utilization of nuclear energy, thereby contributing to the improvement of the welfare of human society and of the national living standard."[5]

Article 2 defines the basic policy thus: "The research, development and utilization of nuclear energy shall be performed independently under a democratic administration, and the results obtained shall be made public so as to actively contribute to international cooperation."[6]

Other Articles include those on development and acquisition of minerals, control over nuclear fuel materials, compensation, protection from radiation hazards, control over reactors, development of atomic energy, development of institutions and other atomic energy-related issues.

In 2012, the Japanese Diet amended Article 2 of this law and included the words "national security." It now reads, "The safe use of atomic power is aimed at contributing to the protection of the people's lives, health and property, environmental conservation and national security." This amendment stirred up a controversy as some sections felt that the language could be used as a legal basis for Japan to have a nuclear weapons programme in the future.[7] Also, voices from different sections claimed that the new amendment was not in harmony with the "Three Non-Nuclear Principles."

Three Non-Nuclear Principles

On December 11, 1967, Japanese PM Eisaku Sato gave a speech at the Budget Committee in the House of Representatives. In that speech, he stated,

5. "Atomic Energy Basic Act," *Japanese Law Translation,* December 19, 1955, http://www.japaneselawtranslation.go.jp/law/detail_download/?ff=09&id=2233. Accessed on October 31, 2017.
6. Ibid.
7. Dan Joyner, "Japan's Nuclear Law and National Security," *Arms Control Law,* July 24, 2012, https://armscontrollaw.com/2012/07/24/japans-nuclear-law-and-national-security/. Accessed on October 31, 2017.

> *My responsibility is to achieve and maintain safety in Japan under the Three Non-Nuclear Principles of not possessing, not producing, and not permitting the introduction of nuclear weapons, in line with Japan's Peace Constitution.*[8]

Almost 50 years have passed since that speech, and Japan has stood by those principles. However, recently, with the growing threat from North Korea, there have been concerns that the last part, "not permitting the introduction of nuclear weapons" bears reconsideration. In 2009, a retired administrative vice-minister of foreign affairs alleged that there is a secret paper which is an agreement between the US and Japan, allowing the US to introduce its nuclear weapons into Japanese territory without any advance permission.[9] These allegations were confirmed when, in 2010, Japanese Foreign Minister Katsuya Okada announced the existence of secret Cold War-era agreements of such nature.[10] In September 2017, amidst the high point of the North Korean missile crisis, Japan's ruling Liberal Democratic Party's (LDP's) former Secretary-General Shigeru Ishiba, raised the issue again when he called for deliberations on a review of Japan's "Three Non-Nuclear Principles." He said, "Is it right to refuse the deployment of nuclear weapons inside the country while relying on the US arms for protection?"[11] Such statements show that Japan under the current leadership is open to discussing the future possibilities of changing those principles. However, it remains an incipient debate at the moment.

The Nuclear Non-Proliferation Treaty (NPT)

The NPT opened for signature on July 1, 1968, and entered into force on March 5, 1970. In February 1970, Japan signed the NPT and ratified it in June 1976. Since then, Japan has been a proponent of nuclear non-proliferation

8. MOFA, "Three Non-Nuclear Principles," *MOFA,* December 11, 1967, http://www.mofa.go.jp/policy/un/disarmament/nnp/. Accessed on October 31, 2017.
9. Tomoko Kiyota, "Japan's Non-Nuclear Principles: Change in the Offing?" *IPCS,* August 17, 2009, http://www.ipcs.org/article/nuclear/japans-non-nuclear-principles-change-in-the-offing-2948.html. Accessed on October 31, 2017.
10. Anthony Kuhn, "Japan Confirms Secret Nuclear Pacts With US," *NPR,* March 11, 2010, http://www.npr.org/templates/story/story.php?storyId=124567404. Accessed on October 31, 2017.
11. "Japan Must Stick to Non-Nuclear Principles," *The Mainichi,* September 9, 2017, https://mainichi.jp/english/articles/20170909/p2a/00m/0na/009000c. Accessed on October 31, 2017.

Japan has been a proponent of nuclear non-proliferation and a world free of nuclear weapons. However, its support for nuclear non-proliferation is overshadowed by the fact that it is under the US nuclear umbrella. This brings it into conflict with complete support for universal nuclear disarmament despite its abhorrence for nuclear weapons.

and a world free of nuclear weapons. However, its support for nuclear non-proliferation is overshadowed by the fact that it is under the US nuclear umbrella. This brings it into conflict with complete support for universal nuclear disarmament despite its abhorrence for nuclear weapons. The dilemma was played out recently in the context of the New Nuclear Weapon Prohibition Treaty (NWPT).

On the historic day of July 7, 2017, 122 nations of the world voted for the NWPT at the United Nations General Assembly. This treaty bans the acquisition, development, production, manufacture, possession, transfer, receipt, testing, extra-territorial stationing, use, and threat of use, of nuclear weapons.[12] Japan, along with other countries such as Australia, India, Canada, and Norway decided to remain out of the NWPT. Many nations that see Japan as a significant force in the anti-nuclear movement felt betrayed by this move of Japan. Moreover, this move came at a time when the International Atomic Energy Agency (IAEA) and the UN High Representative for Disarmament Affairs—the two highest international bodies in the sector—are both headed by Japanese.

In an opposite move and one in line with Japan's earlier stance on the anti-nuclear movement, Japan circulated a draft UN resolution titled "United Action with the Renewed Determination Towards the Total Elimination of Nuclear Weapons." This draft was adopted by the First Committee of the UN General Assembly on October 28, 2017, with the

12. Ramesh Thakur, "Japan on the Wrong Side of Nuclear Weapons Ban Treaty," *The Japan Times.* July 10, 2017, https://www.japantimes.co.jp/opinion/2017/07/10/commentary/japan-commentary/japan-wrong-side-nuclear-weapons-ban-treaty/#.Wfk8j2iCwnk. Accessed on November 1, 2017.

support of 144 countries including 77 co-sponsor countries.[13]Japan has been forwarding a similar resolution for the past 24 years and has gained more and more sponsors. However, compared to last year, this year, the support was less. Last year, it was backed by 167 countries, with 109 countries as co-sponsors. One reason for the decline in the numbers of supporting countries was the language of the draft, for example, the phrase "nuclear weapons use" rather than "any use of nuclear weapons", and "to fully implement the Treaty on the Non-Proliferation of Nuclear Weapons" rather than "to accomplish the total elimination of their nuclear arsenals." Moreover, there is no reference or mention in it of the new NWPT.[14] [15]

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The North Korean nuclear and missile programme is a huge security issue for Japan. In 2017, the North Koreans fired 23 missiles during 16 tests. With each test, North Korean missile technology is improving. On December 4, 2017, the Japanese Parliament declared North Korea's missile tests an "imminent threat" to Japan. Japanese PM Shinzo Abe said that talking to the reclusive state was meaningless.[16] Amidst this crisis and the growing nuclear threat from North Korea, some Japanese political sections are suggesting that Japan should acquire nuclear weapons for effective deterrence. Though not much progress has been made in this

13. MOFA, "The Adoption of the Draft Resolution on Nuclear Disarmament Submitted by Japan to the First Committee of the United Nations General Assembly", MOFA, October 28, 2017, http://www.mofa.go.jp/press/release/press4e_001771.html. Accessed on November 1, 2017.
14. "Fewer Endorse Japan's 24th Anti-Nuclear Resolution at UN after Disarmament Tweak," *The Japan Times*, October 28, 2017, https://www.japantimes.co.jp/news/2017/10/28/national/politics-diplomacy/although-passed-u-n-vote-fewer-nations-endorsed-japans-anti-nuclear-resolution/#.WflBdGiCwnk. Accessed on November 1, 2017.
15. "Japan's Weakened UN Draft Resolution on Nukes Erodes Trust," *The Mainichi*, October 17, 2017, https://mainichi.jp/english/articles/20171017/p2a/00m/0na/004000c. Accessed on November 1, 2017.
16. "North Korea Missile Tests are 'Imminent Threat': Japan," *Channel News Asia*, December 4, 2017, http://www.channelnewsasia.com/news/asiapacific/north-korea-missile-tests-are-imminent-threat-japan-9466948. Accessed on December 4, 2017.

direction, the shifting attitude and Japan's focus more towards security rather than total elimination of nuclear weapons is understandable. However, the negative impact of this decision includes a decline in trust, a backlash from the Japanese people and a dent in Japan's standing in the anti-nuclear movement. These issues can harm Japan's national interests in the long run.

India's Position on the NPT

India's commitment to non-proliferation goes back to 1954 when Nehru proposed an end to nuclear testing in 1954. India signed the Partial Test Ban Treaty (PTBT) in 1963.[17] India was also part of the 18-nation Disarmament Committee (ENDC) which was convened in July 1965 in Italy to negotiate the NPT. There, the 8 non-aligned states stated that they would support an NPT only if "it takes to halt the nuclear arms race and to limit, reduce, and eliminate stocks of nuclear weapons and their means of delivery."[18] However, India was upset when in 1967, the NPT came into existence, and it recognised the countries that had exploded a nuclear device prior to January 1, 1967, as Nuclear Weapon States (NWS). Since then, India has rejected the NPT on the ground that it perpetuates an unjust distinction between the five nuclear states possessing nuclear weapons while requiring all other states party to the treaty to remain non-nuclear. To satisfy the concerns of the Non-Nuclear Weapons States (NNWS), the treaty incorporated Article VI which states,

> *Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.*[19]

17. Leonard Weiss, "India and the NPT," *Strategic Analysis*, 2010, pp.255-271.
18. Ibid.
19. Christopher A Ford, "Debating Disarmament: Interpreting Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons," *Nonproliferation*, November 2007, https://www.nonproliferation.org/wp-content/uploads/npr/143ford.pdf. Accessed on November 6, 2017.

However, India is highly critical of the pace of the nuclear weapon states' disarmament progress and claims that they have not fulfilled their obligations under Article VI.[20]

The efforts of Homi Bhabha and other scientists came to fruition in 1974 when India conducted a Peaceful Nuclear Explosion (PNE) codenamed "Smiling Buddha." The reactions to this were mixed, as France sent a congratulatory message and the US issued a message that was neither condemnatory nor congratulatory. However, the arms controllers in the US introduced Bills to tighten nuclear export controls under the Atomic Energy Act in the 94th Congress.

The creation of an elite club of 48 supplier states known as the Nuclear Suppliers Group (NSG) in 1975 was the result of India's PNE in 1974. The NSG guidelines aspire to ensure that nuclear trade for peaceful purposes does not contribute to the proliferation of nuclear weapons while not hindering international trade and cooperation in the nuclear field.[21] For 30 years, India-US nuclear technology transfers were stopped. But India's stance regarding disarmament remained the same.

India was aware of the fact that the Clinton Administration was planning to change the status of the NPT, and during the NPT Review and Extension Conference (NPTREC) of 1995, the Clinton Administration decided to extend the treaty for an indefinite period. The NWS agreed in a formal statement "to pursue 'systematic and progressive efforts to reduce nuclear weapons globally, with the ultimate goal of eliminating those weapons'."[22] This statement manifested in the form of the Comprehensive Test Ban Treaty (CTBT). Though India had co-sponsored the 1993 resolution for negotiations for the CTBT, it now opposed it. The reason for opposing the CTBT was that this treaty aimed to prevent all countries from conducting nuclear tests, thus, India faced the prospect of two nuclear-armed adversaries such as Pakistan

20. n.4.
21. "Nuclear Suppliers Group (NSG)," *NTI*, September 25, 2017, http://www.nti.org/learn/treaties-and-regimes/nuclear-suppliers-group-nsg/. Accessed on November 7, 2017.
22. "Principles and Objectives for Nuclear Non-Proliferation and Disarmament," *FAS*, December 9, 1996, https://fas.org/nuke/control/npt/text/prin_obj.htm. Accessed on November 7, 2017.

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and China.[23] Moreover, the CTBT did not include a timetable for nuclear disarmament as proposed by Rajiv Gandhi in 1988.[24]

In May 1998, India conducted a series of nuclear tests known as "Operation Shakti: 1998." Unlike the test of 1974, Operation Shakti was of a military nature. Brajesh Mishra, principal secretary to PM Atal Bihari Vajpayee, told reporters, "These tests have established that India has a proven capability for a weaponised nuclear program."[25] With these tests, India became a *de-facto* nuclear weapon state. The US put economic sanctions on India, but other nations refrained from doing this. However, the 9/11 terrorist attacks on the US made it change its approach towards India: it removed the sanctions from India, and is now open to engaging with India in the field of nuclear energy.

COLD WAR ALLIANCES

Japan and the US' Extended Nuclear Deterrence

US military forces were using bases in Japan for combat operations, and there were talks about deploying nuclear arms on those bases during the Vietnam War. These developments triggered fears among the Japanese that the presence of nuclear weapons in Japan would expose it to attacks. That led to the enactment of the "Three Non-Nuclear Principles." by Japanese PM Sato Eisaku in 1967. Since then, Japan has been banking on the US nuclear umbrella for extended deterrence.[26] Yukio Satoh, the vice-chairman of the Japan Institute of International Affairs (JIIA) stated that the nuclear umbrella has contributed to the goal of nuclear non-proliferation. Moreover,

23. Dhruva Jaishankar, "Decoding India's Nuclear Status," *The Wire,* April 3, 2017, https://thewire.in/120800/decoding-india-nuclear-status/. Accessed on November 7, 2017.
24. Leonard Weiss, "India and the NPT," *Strategic Analysis*, 2010, pp.255-271.
25. "Operation Shakti: 1998," *Nuclear Weapon Archive,* March 30, 2001, http://nuclearweaponarchive.org/India/IndiaShakti.html. Accessed on November 7, 2017.
26. Beina Xu, "The US-Japan Security Alliance," *CFR*, July 1, 2014, https://www.cfr.org/backgrounder/us-japan-security-alliance. Accessed on November 2, 2017.

he also affirmed that Japan's non-nuclear policy is an embodiment of the anti-nuclear weapons sentiment of the Japanese people and not simply a product of the US' nuclear umbrella.[27]

However, since 1993, when North Korea launched a Nodong missile and withdrew from the NPT to start developing its nuclear weapons materials, the question about the effectiveness of the extended nuclear deterrence has been raised many times. If we see the issue from the perspective of a nuclear attack, then we can say that the extended nuclear deterrence has been successful, but its efficacy is in question when it comes to deterring other provocations or low-intensity conflict.[28] On top of that, the remarks by President Donald Trump during his campaign about Japan paying more for the security assurance by the US and acquiring nuclear weapons, raised concerns among the Japanese regarding the future of the American nuclear umbrella.[29]

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India and Non-Alignment Movement (NAM)

After India got independence, it wanted to attain its rightful and respected position in the international arena. India felt that taking sides or joining camps during the Cold War would prove costly to its independence and would lead to a new form of imperialism. With that thought in mind, India decided not to join either of the two blocs in the interest of its economic

27. Yukio Satoh, "US Extended Deterrence and Japan's Security," Centre for Global Security Research (CGSR). 2017, https://cgsr.llnl.gov/content/assets/docs/satoh-report-final.pdf. Accessed January 30, 2018.
28. Van Jackson, "Raindrops Keep Falling on my Nuclear Umbrella," *Foreign Policy*, May 18, 2015, http://foreignpolicy.com/2015/05/18/raindrops-keep-falling-on-my-nuclear-umbrella-us-japan-south-north-korea/. Accessed on November 2, 2017.
29. Tetsuo Kotani, "The Future of Alliances and Extended Nuclear Deterrence," *CSIS*, February 1, 2017, https://csis-prod.s3.amazonaws.com/s3fs-public/event/170201_Future_Alliance_Extended_Nuclear_Deterrence_panel_2.pdf?5JgM6V0pORC2lbNKVRtBJx35X0yafW_X. Accessed on November 2, 2017.

development, to maintain an independent judgment in evaluating and deciding about foreign affairs, and following an independent foreign policy, to safeguard its interests and promote international peace.

The newly emerged independent countries had formed the third force called the non-aligned group, and India was the leader of that group. Most of the colonial countries that achieved their independence by 1963 became active members of the Non-Aligned Movement (NAM). The NAM countries were in a position to mobilise world public opinion on various international issues in their favour. This made it difficult for the superpowers to go against the interests of the non-aligned countries.[30]

India's non-aligned position and Japan embracing the US bloc also comprised a major reason for the low interaction between India and Japan during the Cold War.

Japan's Criticism of India's Nuclear Tests

On May 18, 1974, when India conducted its peaceful nuclear explosion under the name "Smiling Buddha" (also known as Pokhran-I), Japan was very upset and imposed sanctions on India. However, as mentioned above, Japan's aid to India comprised a small amount, and Japan itself was in the debating stage about the ratification of the nuclear NPT. When India was facing a balance of payment crisis in 1991, Japan offered a soft loan of $150 million and further committed $350 million.[31]

Japan was one of the first countries to condemn India's nuclear test at Pokhran in 1998. In a press release on May 14, 1998, the chief Cabinet Secretary talked about the measures undertaken by Japan.[32] In the 1990s, Japan was the top donor to India, having committed Yen 133 billion in loans, Yen 3.5 billion in grant assistance and technical support in addition to this

30. "India's Foreign Policy: An Historical Perspective," 2008, http://shodhganga.inflibnet.ac.in/bitstream/10603/95278/8/08_chapter%202.pdf. Accessed on January 23, 2018.
31. A.K. Bhattacharya, "Two Months that Changed India," *Business Standard,* July 2, 2011, http://www.business-standard.com/article/beyond-business/two-months-that-changed-india-111070200041_1.html. Accessed May 22, 2017.
32. MOFA, "Comments by Chief Cabinet Secretary on Measures in Response to the Second Nuclear Testing conducted by India," MOFA, May 14, 1998, http://www.mofa.go.jp/announce/announce/1998/5/0312-09.html. Accessed on May 22, 2017.

(accounting for half of India's foreign aid).[33] Following India's nuclear test, Japan imposed sanctions on India and stopped new loans. However, India was still receiving aid for ongoing projects, humanitarian aid, and grant assistance for grassroots projects.

WHAT IS BRINGING INDIA AND JAPAN TOGETHER TODAY?

India-US Nuclear Deal

The new phase of development in the Indian nuclear industry came after the India-US civil nuclear deal. The process of the India-US civil nuclear agreement started in July 2005, and it took more than three years for the deal to come to fruition as it had to pass through several complex stages. With this, India agreed to separate its civil and military nuclear facilities and placed its civilian nuclear reactors under the inspection of the International Atomic Energy Agency (IAEA). The process included a civil-military separation plan in India, amendment of the US domestic law, especially the Atomic Energy Act of 1954, an India-IAEA safeguards (inspection) agreement and the grant of an exemption for India by the NSG. Moreover, the deal promises to allow India access to the international uranium market; this will enable India to purchase the uranium it needs to fuel those reactors it chooses to put under IAEA safeguards.[34]

The India-US civil nuclear agreement opened the gates for India to the international nuclear community, which were closed when India conducted its PNE in 1974. However, critics point out that even after almost ten years, India has not bought a single US nuclear power reactor. But the success of the deal can be gauged from the fact that after this deal, India was able to sign similar agreements with more than 12 countries such as Japan, Russia, France, Britain, and Canada. This kind of engagement would have been impossible without the India-US civil nuclear agreement.

33. MOFA, "Press Conference by the Press Secretary 12 May, 1998," MOFA, May 12, 1998, http://www.mofa.go.jp/announce/press/1998/5/512.html#1. Accessed on May 23, 2017.
34. Rameez Raja, "India's Quest for Power and Status: A Study of India's Nuclear Policy," *IOSR Journal of Humanities and Social Sciences*, 2016, pp.1-10.

On March 11, 2011, the great East Japan earthquake, and tsunami, which caused the catastrophic nuclear calamity at the Fukushima Dai-ichi Nuclear Power Station put a full stop on Japan's nuclear power future. Though no one died due to the Fukushima nuclear disaster, it once again proved the destructive nature of nuclear power.

Nuclear Industry/Market

In 2011, Japan had 54 nuclear power reactors in operation across the country (after the US and France, Japan has the 3rd largest number of nuclear plants in the world). Japan, with a generation capacity of 48,847 Mega Watt (MW) was also the 3rd largest nuclear power producer after the US and France. Nuclear power comprised over 30 percent of the country's total electricity production and this was planned to increase to 40 percent and 50 percent by 2017 and 2030 respectively.[35]

However, on March 11, 2011, the great East Japan earthquake, and tsunami, which caused the catastrophic nuclear calamity at the Fukushima Dai-ichi Nuclear Power Station put a full stop on Japan's nuclear power future. Though no one died due to the Fukushima nuclear disaster, it once again proved the destructive nature of nuclear power. The Japanese government shut down all the 50 intact power reactors, one by one. In 2012, the incumbent Japanese PM Yoshihiko Noda announced that the government would try to phase out all nuclear power by 2040 when the existing plants will reach their 40-year licensed operating lives.[36] In September 2012, the Japanese government established the new nuclear regulatory agency, the "Nuclear Regulation Authority" (NRA). This new regulatory body is different from the old nuclear safety agency, the "Nuclear and Industrial Safety Agency" not only in name but also in affiliation. Whereas the older version was under the Ministry of Economy, Trade, and Industry (METI), the new regulatory body is under the Environment Ministry. The interesting facet of this change is that the earlier agency was under the ministry which was promoting nuclear

35. "Japan," *NTI,* February 2017, http://www.nti.org/learn/countries/japan/nuclear/. Accessed on November 2, 2017.
36. Tatsujiro Suzuki, "Six Years After Fukushima, Much of Japan has Lost Faith in Nuclear Power," *The Conversation,* March 10, 2017, https://theconversation.com/six-years-after-fukushima-much-of-japan-has-lost-faith-in-nuclear-power-73042. Accessed on November 2, 2017.

power. However, as this time the focus is on the safety and regulatory measures, it has been assigned under the Environment Ministry.

However, Shinzo Abe, a pro-nuclear leader came into power at the end of 2012. In 2014, the government adopted the 4th Basic Energy Plan, proposed by METI. This plan termed nuclear power as "an important base-load power source as a low carbon and quasi-domestic energy source." The NRA is responsible for the regulatory requirements which are of the most stringent level in the world, and if the NRA finds the nuclear power plants up to the mark, then only will the government go ahead with them.[37]

As of now, five out of 54 nuclear power reactors are back online, and the applications of 21 reactors are under review. Nuclear power is providing 1.7 percent of Japan's electricity which is way below from the 30 percent before the 2011 disaster.

In 2016, the Otsu district court in Shiga prefecture, under which lies the Takahama plant, ordered the shutdown of two nuclear reactors that were previously declared safe under the post-disaster safety rule. On this decision, Shinzo Abe stated in a press conference that a resource-poor country like Japan cannot do without nuclear power to secure its energy supply.[38]

The Current Status of Nuclear Power in Japan

As of now, five out of 54 nuclear power reactors are back online, and the applications of 21 reactors are under review. Nuclear power is providing 1.7 percent of Japan's electricity which is way below from the 30 percent before the 2011 disaster.[39] METI, which is in charge of the national energy policy, published a long-term plan in 2015 and suggested that the share of nuclear power would be 20-22 percent in the total energy mix [22-24 percent

37. "Strategic Energy Plan," *METI,* April 2014, http://www.enecho.meti.go.jp/en/category/others/basic_plan/pdf/4th_strategic_energy_plan.pdf. Accessed on November 3, 2017.
38. "Shinzo Abe says Japan 'Cannot do Without' Nuclear Power, on eve of Fukushima Disaster," *SCMP,* March 11, 2016, http://www.scmp.com/news/asia/east-asia/article/1922953/shinzo-abe-says-japan-cannot-do-without-nuclear-power-eve. Accessed on November 2, 2017.
39. Ken Silverstein, "Japan Circling Back To Nuclear Power After Fukushima Disaster," *Forbes,* September 8, 2017, https://www.forbes.com/sites/kensilverstein/2017/09/08/japan-may-be-coming-full-circle-after-its-fukushima-nuclear-energy-disaster/#2f0c4b5d30e8. Accessed on November 3, 2017.

of renewable energy, 26 percent of coal, 27 percent of Liquefied Natural Gas (LNG), and 3 percent of oil] by 2030.[40] The Greenpeace nuclear spokesperson Shaun Burnie has called this plan unrealistic: "The reality is, they will, by no means, get to that 20 or 22 percent. I think inside the government, some factions essentially believe that may be they can achieve that target, but a more realistic appraisal says may be it will be a lot less."[41] Moreover, the growing public distrust is also proving to be a severe challenge for the policy-makers and the nuclear industry. A poll by the Japan Atomic Energy Relations Organisation (a pro-nuclear body) in 2015 showed that 47.9 percent want nuclear energy to be abolished gradually and 14.8 percent said that it should be abolished immediately. Another survey by *Asahi Shimbun* in 2016 was even more negative as 57 percent respondents opposed restarting the plant.[42] With all these factors, the future of nuclear energy in Japan is bleak.

The Current Status of Nuclear Power in India

The construction of India's first nuclear power plant comprising two nuclear reactors began in 1964 at Tarapur, Maharashtra, and it became operational in 1969. General Electric, USA, built these reactors. With that, India became the first country in Asia to have an operating nuclear power plant in the year 1969. The first unit of India's second nuclear power plant came up in Rajasthan in 1972, which was developed with the assistance of Canada's Atomic Energy Canada Limited (AECL) in collaboration with the Nuclear Power Corporation of India Ltd (NPCIL). In 1970, the NPT came into effect,

40. "Plan Sets out Japan's Energy Mix for 2030," *World Nuclear News,* June 3, 2015, http://www.world-nuclear-news.org/NP-Plan-sets-out-Japans-energy-mix-for-2030-0306154.html. Accessed on November 3, 2017.
41. Rachel Mealey, "The Future of Nuclear Energy in Japan, Nearly Six Years after the 2011 Fukushima Disaster," *ABC,* January 5, 2017, http://www.abc.net.au/news/2017-01-05/the-future-of-nuclear-energy-in-japan-after-fukushima/8162686. Accessed on November 3, 2017.
42. JNFL, "Rokkasho Reprocessing Plant," *Stanford,* 2017, http://large.stanford.edu/courses/2017/ph241/solitario2/docs/jnfl.pdf. Accessed on November 3, 2017; n.4; Ken Silverstein, "Japan Circling Back To Nuclear Power After Fukushima Disaster," *Forbes,* September 8, 2017, https://www.forbes.com/sites/kensilverstein/2017/09/08/japan-may-be-coming-full-circle-after-its-fukushima-nuclear-energy-disaster/#2f0c4b5d30e8. Accessed on November 3, 2017; "Plan Sets Out Japan's Energy Mix for 2030," *World Nuclear News,* June 3, 2015, http://www.world-nuclear-news.org/NP-Plan-sets-out-Japans-energy-mix-for-2030-0306154.html. Accessed on November 3, 2017; Mealey, n.41; Suzuki, n.36.

and this was the reason why India's civil nuclear strategy, from its inception, has been aimed at complete independence in the nuclear fuel cycle. Keeping these limitations in mind, India conceived a three-stage programme wherein the spent fuel from stage one is reprocessed to produce fuel for the second stage, and from the second to the third stage. This three-stage programme not only increases the energy potential of the fuel multiple times but also reduces the quantity of waste generated.[43]

The responsibility for the design, construction, commissioning, and operation of thermal nuclear power plants has been given to NPCIL, a government-owned company. The Atomic Energy Act (AEA) of 1962 prohibits private control of nuclear power generation. The 2016 amendment in the AEA 1962 allows joint ventures among the public sector companies and the involvement of private companies is limited to the supply chain.[44]

Presently, India has 22 operational nuclear power reactors distributed in six states. Total nuclear power capacity is 6,780 MW, and, recently, India embarked on a plan to expand it by 7,000 MW more, increasing the total capacity to 14,000 MW, by 2024. Ten nuclear power reactors, each with 700 MW capacity will be built with indigenously manufactured equipment.[45] Regarding power generation, in 2014-15, nuclear power contributed just under 3 percent in total power generation. With the plan to increase the nuclear capacity, India is aiming to supply 25 percent of electricity from nuclear power by 2050.[46] With this ambition, it is necessary to have nuclear cooperation with other countries. Till now, India has signed a civil nuclear deal with as many as 12 states.[47]

43. S.K. Jain, "Nuclear Power: An Alternative," *NPCIL,* http://www.npcil.nic.in/pdf/nuclear%20power-%20an%20alternative.pdf. Accessed on November 9, 2017.
44. "Nuclear Power in India," *World-Nuclear,* October 2017, http://www.world-nuclear.org/information-library/country-profiles/countries-g-n/india.aspx. Accessed on November 9, 2017.
45. "India to Add 7,000 MW Nuclear Power Capacity: Power Minister Piyush Goyal," *The Economic Times,* August 12, 2017, https://economictimes.indiatimes.com/industry/energy/power/india-to-add-7000-mw-nuclear-power-capacity-power-minister-piyush-goyal/articleshow/60034058.cms. Accessed on November 14, 2017.
46. n.44.
47. "Important Agreements," *DAE,* November 30, 2017, http://www.dae.nic.in/?q=node/75. Accessed on December 4, 2017.

Japan's relationship with China has been going through a low for the past several years owing to the territorial dispute in the East China Sea. China's military modernisation, especially in the maritime domain, and its cyber attacks, and defence posture in the South China Sea, also concern Japan.

Geopolitics

Geopolitics is playing a significant role in bringing India and Japan closer and the India-Japan civil nuclear agreement is witness to that closeness. Because of this reason, it becomes important to study the equations of India and Japan with key players in international affairs such as the US and China.

Japan's Relations with the US and China

US President Donald Trump emphasised during his campaign that his foreign policy on Asia would be different from that of his predecessor Barack Obama. As soon as he was elected as the president of the US, he pulled out from the negotiations for a 12-country Trans-Pacific Partnership—a partnership that most economists think would make all parties richer.[48] Another issue that Mr. Trump is vocal about is the 'nuclear umbrella' to the US' Asian allies such as South Korea and Japan. Trump has suggested that the US should allow South Korea and Japan to go nuclear rather than continue to rely on the American security guarantees, arguing that these allies gain a competitive economic advantage by shifting their defence burdens onto the US.[49] In an article in *Forbes*, Doug Bandow has calculated that Japan, with a GDP of $4.6 trillion, should pay 4 percent (around $184 billion) to the US for the nuclear umbrella, minimal military outlays, standard defence, and a combination of economic international involvement

48. "How Donald Trump Weakens America's Influence in Asia," *The Economist,* August 31, 2017, https://www.economist.com/news/asia/21727944-nonetheless-american-led-asian-order-will-probably-survive-how-donald-trump-weakens-americas. Accessed on September 20, 2017.
49. Abraham Newman,, and Daniel Nexon, "Trump says American Allies Should Spend More on Defense. Here's Why he's Wrong," *VOX,* February 16, 2017, https://www.vox.com/the-big-idea/2017/2/16/14635204/burden-sharing-allies-nato-trump. Accessed on September 20, 2017.

and limited potential conflict.[50] Moreover, the recent missile test by North Korea (two went over the Northern Japanese island of Hokkaido) created uneasiness among the Japanese people. Additionally, Japan also fears that the exchange of provocative and escalatory language between US President Trump and North Korean leader Kim Jong-un can precipitate an attack on Japan.

Long-pending issues between India and China remain intact. The problems also arise from China's naval expansion under the 'string of pearls' strategy, and, primarily with its increased presence in the Indian Ocean Region (IOR), are a cause of concern for India.

Japan's relationship with China has been going through a low for the past several years owing to the territorial dispute in the East China Sea. China's military modernisation, especially in the maritime domain, and its cyber attacks, and defence posture in the South China Sea, also concern Japan. Furthermore, China's refusal to condemn North Korea over the recent missile launch has further strained Japan-China relations. Rather than criticising North Korea, China's Foreign Ministry spokesperson Hua Chunying suggested that other parties such as the US, South Korea, and Japan had prompted "the vicious cycle of endless nuclear tests, missile launches, and military drills." Hua demanded that they should be responsibile and called on all parties to exercise restraint and remain cool-headed.[51]

India's Relations with the US and China

In June 2017, India and China had the Doklam standoff which brought the two countries to the brink of war. The standoff countinued for more than two months and on August 28, both countries announced withdrawal of troops. However, in January 2018, satellite images showed that China is

50. Doug Bandow, "Donald Trump Has The Right Idea: If America Is Going To Defend The World, Rich Allies Should Pay Up," *Forbes,* September 30, 2015, https://www.forbes.com/sites/dougbandow/2015/09/30/make-rich-allies-pay-if-america-is-going-to-defend-the-world-donald-trump-got-one-idea-right/#1e3105d63073. Accessed on September 20, 2017.
51. Charlotte Gao, "China Refuses to Condemn North Korea's New Missile Launch," *The Diplomat,* August 30, 2017, http://thediplomat.com/2017/08/china-refuses-to-condemn-north-koreas-new-missile-launch/. Accessed on September 20, 2017.

building a huge military complex near the standoff site.[52] Moreover, the long-pending issues between India and China remain intact. The problems also arise from China's naval expansion under the 'string of pearls' strategy, and, primarily with its increased presence in the Indian Ocean Region (IOR), are a cause of concern for India. China had blocked India's move to include Pakistan-based terrorist organisations such as the Lashkar-e-Taiba (LeT) and Jaish-e-Muhammad (JeM) as UN designated terrorist organisations, and it defended Pakistan by saying that terrorism should not be linked to any country or religion. However, in a surprising move, China mentioned the names of the LeT, Haqqani network, and JeM along with the Islamic Movement of Uzbekistan and East Turkestan Islamic Movement during the September 2017 Brazil, Russia, India, China and South Africa (BRICS) Summit in Xiamen.[53] Another issue that is creating a problem between India and China is India's entry into the Nuclear Suppliers' Group (NSG). China has blocked India's admission into this group and insisted that the group should devise the criteria for the admittance of new members first, before making exceptions for any country. China emphasised that NSG membership should be given to Pakistan as well, along with India. Its 'technical hold' on Masood Azhar, the head of the JeM, being designated an international terrorist by the UN sanctions committee was also problematic for India.[54] The China-Pakistan Economic Corridor (CPEC) which passes through Pakistan-occupied Kashmir (PoK), the border dispute related to Arunachal Pradesh, and the issue of the Dalai Lama are other thorns in the relationship between India and China. The power struggle between India and China over Asian dominance has increased the complexity of this relationship.

52. PTI, "China Justifies Massive Construction in Doklam, Says Aimed at Improving Lives of Troops," *News 18*, January 19, 2018, http://www.news18.com/news/world/infrastructure-in-doklam-aimed-at-improving-lives-of-troops-china-1636859.htm. Accessed on January 22, 2018.
53. Harsh V. Pant, "India and China May Have Pulled Back on the Himalayan Frontier, but the Bilateral Chill is Real," *Quartz*, September 18, 2017, https://qz.com/1079868/doklam-standoff-india-and-china-may-have-pulled-back-on-the-himalayan-frontier-but-the-bilateral-chill-is-real/. Accessed on September 21, 2017.
54. Gurmeet Kanwal, "China's Insecurity Leads to India's NSG Bid Being Blocked Again," *The Quint*, June 28, 2017, https://www.thequint.com/voices/opinion/china-blocks-india-nsg-bid-again. Accessed on September 21, 2017.

HOW WILL THE DEAL HELP INDIA AND JAPAN?

Negotiations between India and Japan for a Civil Nuclear Agreement (CNA) started in 2010, but due to the Fukushima nuclear disaster of 2011, the talks were suspended. The talks resumed in 2013 between Indian PM Manmohan Singh and his Japanese counterpart Shinzo Abe. Since then, after four years of continuous negotiations, finally, in July 2017, the CNA came into force. That was a historic moment in India-Japan relations as India—a non-NPT and non-CTBT signatory country—became the first and only country to sign this kind of agreement with Japan. For Japan—the only country that had seen the horror of use of nuclear weapons—it was a difficult choice. Shinzo Abe had to go the extra mile to get it passed in the Japanese Diet.

In December 2015, the memorandum was signed between PMs Narendra Modi and Shinzo Abe, and after that, it took two more years to finalise the technical details, including the necessary internal procedures in Japan to ink the final agreement. In November 2016, the agreement was signed when Narendra Modi visited Japan, and in July 2017, the deal came into force. The agreement allows Japan to export sophisticated nuclear technology to India. Japan has also agreed to help in managing radioactive waste processing and management, and cooperate in all features of the nuclear fuel cycle, including nuclear fuel fabrication. Both countries also decided to collaborate and share best practices in the area of nuclear safety, including radiation and environmental protection, and intervention, and response to a radiation emergency or nuclear accident.[55]

However, there were differences related to the "nullification clause" in the agreement. The nullification clause is "the .agreement to halt Japanese cooperation with India if it conducts a nuclear test." India was not ready to include this clause as it would disrupt its nuclear power programme. In the final agreement, there is no such clause. However, Article 14 of the agreement talks about termination. The first paragraph of Article 14 says,

55. Reshmi Kazi, "India-Japan Civil Nuclear Deal: A Historic Step Towards an Effective Global Nuclear System," *The Dialogue*, July 25, 2017, http://www.thedialogue.co/india-japan-civil-nuclear-deal-historic-step-towards-effective-global-nuclear-system/. Accessed on November 15, 2017.

> *Either Party shall have the right to terminate this Agreement prior to its expiration by giving one year's written notice to the other Party. A Party giving notice of termination shall provide the reasons for seeking such termination. This Agreement shall terminate one year from the date of written notice, unless the notice has been withdrawn in writing by the Party giving such notice prior to the date of termination or the Parties otherwise agree.*[56]

Not having a nullification clause shows the trust each party has placed on the other. This is the reason why having secured an agreement with Japan is being considered to be as important as the India-US deal. Whereas the agreement with the US opened the doors for nuclear trade for India, the agreement with Japan is seen as a moral victory for India's nuclear programme and nuclear community. Moreover, both countries will gain from this deal. Japan is a major player in the field of nuclear energy and produces 80 percent of the world's total reactor cores. Japan specialises in the steelwork that is required for building Light Water Reactors (LWRs).[57] The Japanese conglomerate Toshiba owns the US-based nuclear plants makers Westinghouse and another Japanese business house, Hitachi, has a joint venture with General Electric (GE) known as GE-Hitachi. Both these companies are planning to build nuclear reactors in India. This deal will make it easier for these companies to invest in India's nuclear energy market. The Japanese companies will get the business and India will obtain the technology. Though the deal is done, many challenges remain for both parties to gain benefits from it.

Challenges

There is worldwide opposition to nuclear energy, whether peaceful or otherwise. Because of the horrible experience of Hiroshima and Nagasaki,

56. MOFA, "Agreement Between the Government of Japan and the Government of the Republic of India for Cooperation in the Peaceful Uses of Nuclear Energy," MOFA, 2017, http://www.mofa.go.jp/files/000202920.pdf. Accessed on November 15, 2017.
57. Hina Pandey, "Here's Why the Nuclear Deal Between Japan and India Matters," *CAPS*, June 7, 2017, http://capsindia.org/files/documents/CAPS_Infocus_HP_15.pdf. Accessed on November 16, 2017.

the resistance in Japan even for the peaceful use of nuclear power is high. Nevertheless, because of the lack of natural energy resources, the Japanese people have learnt to live with nuclear power as long as it is for civilian use. But the Fukushima nuclear disaster of 2011 brought back those memories and the protests to stop any use of nuclear power increased.

Japan has had a strong anti-nuclear lobby since the post-War period, and that lobby got an impetus after the disaster of 2011. Such groups are now urging both India and Japan to halt the nuclear power programme. One such group, "The Women of Fukushima, " issued an appeal in an open letter to Narendra Modi, to visit the disaster area for a first-hand experience of the consequences of nuclear power.[58] Moreover, in India too, land acquisition has been a major problem that Japan also is facing, even for setting up industrial zones. When it comes to a nuclear power plant, the people's resistance intensifies against giving up their land. Earlier, there has been opposition to acquisition of land for a nuclear power plant proposed to be set up at Kovvada in Srikakulam district of Andhra Pradesh.[59] A similar situation can arise in the future also which can deter Japan's business houses from investing in India. The domestic political scene in Japan can also create problems, as Japan's main opposition party, the Democratic Party of Japan (DPJ) had spoken out against the deal during the Lower House debate. The DPJ was primarily concerned about the exclusion of the term "nuclear tests" as a condition to halt the pact. Japan has signed similar nuclear deals with Vietnam and Jordan, which specify that in the case of "nuclear tests", Japan will suspend cooperation and terminate the agreement. The DPJ is also concerned about a provision that gives India special consideration in cases where a third-party state acts (for example, a nuclear test by China or Pakistan) in a way that threatens India's national security. According to the agreement, Japan

58. "Japan, India Sign Agreement on Civil Nuclear Power," *Al Jazeera,* November 12, 2016, http://www.aljazeera.com/news/2016/11/japan-india-sign-agreement-civil-nuclear-power-161111164153096.html. Accessed on November 16, 2017.
59. "Land Acquisition for Nuke Plant Opposed," *The Hindu,* November 12, 2016, http://www.thehindu.com/news/cities/Visakhapatnam/Land-acquisition-for-nuke-plant-opposed/article11757245.ece. Accessed on November 16, 2017.

The reason behind China's opposition is that entry into the NSG would further strengthen India's credentials as a rightful member of the nuclear non-proliferation mainstream. India would be on an equal footing with the China and other nuclear power states if it succeeded in joining the NSG.

may not, in such case, be able to terminate the deal.[60] If, in the future, the DPJ comes into power, it may carry out the necessary changes to live up to its opposition to the India-Japan nuclear deal.

Reactions of China and Pakistan to the India-Japan Civil Nuclear Deal

China's reaction to the India-Japan deal was surprisingly mild but had a cautious tone. The Chinese Foreign Ministry spokesman Geng Shuang said in a media briefing, "With regard to the nuclear agreement signed between India and Japan on the use of nuclear energy, we believe that under the promise of observing the international obligation of nuclear non-proliferation, all countries are entitled to the peaceful use of nuclear energy." He also mentioned, "At the same time, the relevant cooperation should be favourable to safeguard the authority and effectiveness of the international nuclear non-proliferation regime." However, this statement is very different from the criticism in the Chinese media. The state-run *Global Times* criticised Japan for relaxing the rules for this deal and opined that the deal would "taint Tokyo's reputation of advocating for a nuclear weapon-free world."[61]

China is also against India's entry into the NSG, and in June 2017, during the 27th Plenary Meeting in the Swiss city of Berne, it voiced its opposition. The reason behind China's opposition is that entry into the NSG would further strengthen India's credentials as a rightful member of the nuclear non-proliferation mainstream. India would be on an equal footing with

60. "Japan-India Nuclear Pact Clears Lower House Despite Opposition Concerns," *The Japan Times,* May 16, 2017, https://www.japantimes.co.jp/news/2017/05/16/national/politics-diplomacy/japan-india-nuclear-pact-clears-lower-house-despite-opposition-concerns/#.Wg1RKWiCwnk. Accessed on November 16, 2017.

61. "China Cautiously Backs India-Japan Nuclear Deal," *The Times of India,* November 14, 2016, https://timesofindia.indiatimes.com/world/china/China-cautiously-backs-India-Japan-nuclear-deal/articleshow/55416323.cms. Accessed on November 16, 2017.

China and other nuclear power states if it succeeded in joining the NSG. Moreover, Pakistan is not considered on par with India when it comes to membership of the NSG. China is apprehensive that once India is given entry into the NSG, it could block any plan of Pakistan to enter the group.[62]

Japan is known in the world for its efforts towards nuclear non-proliferation and, India, in its own way, has never propagated the use of atomic weapons. Though the approach of India and Japan towards nuclear non-proliferation is different, both countries are against the proliferation of nuclear weapons.

On the other hand, Pakistan, unsurprisingly, is against the deal and called it "discriminatory." Pakistan also fears that the deal can undermine regional stability. Pakistan's Foreign Ministry spokesman said that Pakistan had urged Japan and the other countries "to objectively assess the consequences of discriminatory approaches to our region." He also mentioned that this would allow India to expand its nuclear power industry and negatively impact the strategic balance in the region: "It has allowed India to gain access to foreign sources of nuclear fuel and freed up its domestic reserves which are being utilised for rapid expansion of its military nuclear program."[63]

CONCLUSION

The nuclear deal between India and Japan has started a new chapter in India-Japan relations. Japan has advanced nuclear technology which it can now export to India. Japanese business houses will get business, which will help the Japanese economy. As India's reliance on energy resources is increasing due to the growing demand to sustain its economic growth, nuclear energy has the potential to play a significant role in that. Nuclear

62. Kate Sullivan, and Nicola Leveringhaus, "China's Stance on NSG Membership Shows the Extent of India's Challenge in the Global Nuclear Order," *The Wire,* June 30, 2017, https://thewire.in/152726/india-china-nsg-global-nuclear-order/. Accessed on November 17, 2017.
63. "Pakistan Raps What it Called Japan's 'Discriminatory' Nuclear Deal with India," *The Japan Times,* November 12, 2016, https://www.japantimes.co.jp/news/2016/11/12/national/politics-diplomacy/pakistan-raps-called-japans-discriminatory-nuclear-deal-india/#.Wg1b7GiCwnk. Accessed on November 16, 2017.

power is a clean source of energy in comparison to the traditional energy resources such as coal and oil. This deal, along with India-US civil nuclear agreement, will help India transform its nuclear status. Now, with Japan on its side, the world has started seeing India as a responsible nuclear power. Moreover, Japan is known in the world for its efforts towards nuclear non-proliferation and, India, in its own way, has never propagated the use of atomic weapons. Though the approach of India and Japan towards nuclear non-proliferation is different, both countries are against the proliferation of nuclear weapons. Even from a strategic perspective, the India-Japan nuclear deal will help both nations to achieve harmony in the Indo-Pacific region. Now that the nuclear thorn has been removed, the India-Japan partnership has the potential to reach higher levels of cooperation that can only be a win-win situation for both.