



# Japan's Nuclear Future: Policy Debate, Prospects, and U.S. Interests

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## Summary

Japan, traditionally one of the most prominent advocates of the international non-proliferation regime, has consistently pledged to forswear nuclear weapons. Nevertheless, evolving circumstances in Northeast Asia, particularly North Korea's nuclear test in October 2006 and China's ongoing military modernization drive, have raised new questions about Japan's vulnerability to potential adversaries and, therefore, the appeal of developing an independent nuclear deterrent. The previous taboo within the Japanese political community of discussing a nuclear weapons capability appears to have been broken, as several officials and opinion leaders have urged an open debate on the topic. Despite these factors, a strong consensus—both in Japan and among Japan watchers—remains that Japan will not pursue the nuclear option in the short-to-medium term.

This paper examines the prospects for Japan pursuing a nuclear weapons capability by assessing the existing technical infrastructure of its extensive civilian nuclear energy program. It explores the range of challenges that Japan would have to overcome to transform its current program into a military program. Presently, Japan appears to lack several of the prerequisites for a full-scale nuclear weapons deterrent: expertise on bomb design, reliable delivery vehicles, an intelligence program to protect and conceal assets, and sites for nuclear testing. In addition, a range of legal and political restraints on Japan's development of nuclear weapons, including averse public and elite opinion, restrictive domestic laws and practices, and the negative diplomatic consequences of abandoning its traditional approach is analyzed.

Any reconsideration and/or shift of Japan's policy of nuclear abstention would have significant implications for U.S. policy in East Asia. In this report, an examination of the factors driving Japan's decision-making—most prominently, the strength of the U.S. security guarantee—analyzes how the nuclear debate in Japan affects U.S. security interests in the region. Globally, Japan's withdrawal from the Nuclear Non-Proliferation Treaty (NPT) would damage the world's most durable international non-proliferation regime. Regionally, Japan "going nuclear" could set off an arms race with China, South Korea, and Taiwan. India and/or Pakistan may then feel compelled to further expand or modernize their own nuclear weapons capabilities. Bilaterally, assuming that Japan made the decision without U.S. support, the move could indicate a lack of trust in the U.S. commitment to defend Japan. An erosion in the U.S.-Japan alliance could upset the geopolitical balance in East Asia, a shift that could strengthen China's position as an emerging hegemonic power. All of these ramifications would likely be deeply destabilizing for the security of the Asia Pacific region and beyond.

This report will be updated as circumstances warrant.

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## Introduction

The notion of Japan developing nuclear weapons has long been considered far-fetched and even taboo, particularly within Japan. Hailed as an example of the success of the international non-proliferation regime, Japan has consistently taken principled stands on non-proliferation and disarmament issues. Domestically, the largely pacifist Japanese public, with lingering memories of the destruction of Hiroshima and Nagasaki by atomic bombs in the closing days of World War II, has widely rejected any nuclear capacity as morally unacceptable. The inclusion of Japan under the U.S. nuclear “umbrella,” with regular reiterations from U.S. officials, provides a guarantor to Japanese security. Successive Japanese administrations and commissions have concluded that Japan has little to gain and much to lose in terms of its own security if it pursues a nuclear weapons capability.

Today, Japanese officials and experts remain remarkably uniform in their consensus that Japan is unlikely to move toward nuclear status in the short-to-medium term. However, as the security environment has shifted significantly, the topic is no longer toxic and has been broached by several leading politicians. North Korea’s test of a nuclear device in 2006 and China’s military modernization have altered the strategic dynamics in the region, and any signs of stress in the U.S.-Japan alliance raises questions among some about the robustness of the U.S. security guarantee. An ascendant hawkish, conservative movement—some of whom openly advocate for Japan to develop an independent nuclear arsenal—has gained more traction in Japanese politics, moving from the margins to a more influential position. In addition, previous security-related taboos have been overcome in the past few years: the dispatch of Japanese military equipment and personnel to Iraq and Afghanistan, the elevation of the Japanese Defense Agency to a full-scale ministry, and Japanese co-development of a missile defense system with the United States. All of these factors together increase the still unlikely possibility that Japan will reconsider its position on nuclear weapons.

Any reconsideration of Japan’s policy of nuclear weapons abstention would have significant implications for U.S. policy in East Asia. Globally, Japan’s withdrawal from the Nuclear Non-Proliferation Treaty (NPT) could damage the most durable international non-proliferation regime. Regionally, Japan “going nuclear” could set off a nuclear arms race with China, South Korea, and Taiwan and, in turn, India, and Pakistan may feel compelled to further strengthen their own nuclear weapons capability. Bilaterally, assuming that Japan made the decision without U.S. support, the move could indicate Tokyo’s lack of trust in the American commitment to defend Japan. An erosion in the U.S.-Japan alliance could upset the geopolitical balance in East Asia, a shift that could indicate a further strengthening of China’s position as an emerging hegemonic power. These ramifications would likely be deeply destabilizing for the security of the Asia Pacific region and beyond.

## Background

Japan’s post-war policy on nuclear weapons and non-proliferation has been to reject officially a military nuclear program. The Japanese Army and Navy each conducted nuclear weapons research during World War II, but neither was successful in gaining enough resources for the

endeavor.<sup>1</sup> Despite the fact that by the early 1970s Japan had already acquired the technical, industrial and scientific resources needed to develop its own nuclear weapons, Japanese policy has repeatedly stated its opposition to the development of nuclear weapons.

Complicating Japan's anti-nuclear weapons policy has been a post-World War II dependence on the U.S. "nuclear umbrella" and security guarantee. Under the terms of the Mutual Security Assistance Pact signed in 1952 and the 1960 Treaty of Mutual Cooperation and Security, Japan grants the U.S. military basing rights on its territory in return for a U.S. pledge to protect Japan's security. The rejection of nuclear weapons by the Japanese public appears to be overwhelmingly driven by moral, rather than pragmatic, considerations, but Japan's leaders have based their policy of forswearing nuclear weapons on protection by the U.S. nuclear arsenal.

The bedrock of domestic law on the subject, the "Atomic Energy Basic Law" of 1955, requires Japan's nuclear activities to be conducted only for peaceful purposes. In 1967, the "Three Non-Nuclear Principles" (*hikaku sangensoku*) were announced by Prime Minister Eisaku Sato, enshrining the policy of not possessing, not producing, and not permitting the introduction of nuclear weapons into Japan. When Japan ratified the Nuclear Non-Proliferation Treaty (NPT) in 1976, it reiterated its three non-nuclear principles, placed itself under the treaty obligation as a non-nuclear weapons state, and pledged not to produce or acquire nuclear weapons. Japan has been a staunch NPT supporter in good standing ever since.

Despite multiple reiterations of Japan's non-nuclear status, this orthodoxy has been challenged on several occasions, usually when Japan has felt strategic vulnerability. Probably the most prominent episode occurred in the mid-1960s: China tested a nuclear device for the first time in 1964, and the United States was engaged in the Vietnam War. Prime Minister Eisaku Sato secretly commissioned several academics to produce a study exploring the costs and benefits of Japan's possible nuclearization, the so-called "1968/70 Internal Report."<sup>2</sup> Another secret investigation into Japan's nuclear option was done by the Japan Defense Agency (JDA) in 1995 as Japan assessed its standing in the new post-Cold War environment after the 1994 North Korean nuclear crisis in 1994 and as the international community was considering the indefinite extension of the NPT.<sup>3</sup> Both reports concluded that Japan should continue to rely on the U.S. security guarantee and that development of nuclear weapons would threaten that relationship.

## **An Evolving Security Environment in Asia**

Since the end of the Cold War, and particularly in the past decade, developments in the region have increased Japan's sense of vulnerability and caused some in the policy community to rethink Japan's policy of forswearing nuclear weapons development. During the Cold War, the U.S. military presence in Japan represented the Pacific front of containing the Soviets, a reassuring statement of commitment to Japan's security to many Japanese. North Korea's test of a ballistic missile over Japan in August 1998 dispelled the sense of a more secure post-Cold War

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<sup>1</sup> Priority was placed on biological and chemical weapons programs. Kurt M. Campbell and Tsuyoshi Sunohara, "Japan," in Campbell, Einhorn, Reiss, eds., *The Nuclear Tipping Point*, Brookings Institution Press, 2004; and Federation of American Scientists website. <http://www.fas.org/nuke/guide/japan/nuke/>

<sup>2</sup> Yuri Kase, "The Costs and Benefits of Japan's Nuclearization: An Insight into the 1968/70 Internal Report," *The Nonproliferation Review*, Summer 2001.

<sup>3</sup> "'95 Study: Japan and Nukes Don't Mix," *The Asahi Shimbun*, February 20, 2003.

environment for the archipelago. Moreover, India and Pakistan both conducted underground nuclear weapons tests earlier that year, which to many undermined the success of the international non-proliferation regime and set off fears of a new nuclear arms race. Japan was particularly alarmed at the tests, and instituted a freeze on new loans and grants to the two states.

Since then, more provocative behavior from Pyongyang, particularly its 2006 tests of medium-range missiles and a nuclear device, have heightened Japan's fear of potential attacks. The nuclear test prompted prominent officials in the ruling party to call for an open debate on whether to pursue nuclear arms: both then-Foreign Minister (and current Prime Minister) Taro Aso and chairman of the party's policy council called for such a debate before later backing off their comments. In addition to North Korea's activities, a U.S.-India civilian nuclear deal has led to concern among some Japanese non-proliferation experts that the NPT has weakened further. To these experts, the legitimacy and deterrent effect of the global non-proliferation regime underpins Japan's commitment to its own non-nuclear status.

While North Korea represents a more immediate danger, many defense experts see China as the more serious and long-term threat to Japan's security.<sup>4</sup> China's rapid military modernization and advancements in weapons systems have compounded Tokyo's concern. Japanese defense papers have pointed to Beijing's apparent progress in short and medium range missiles, its submarine force (some of which have on occasion intruded into Japan's territorial waters), and nuclear force modernization as specific areas of concern. As Chinese military spending continues to accelerate, Japanese defense budgets have stagnated or declined. Although Sino-Japanese relations appear to have stabilized since a period of tension under former Prime Minister Junichiro Koizumi's administration, fundamental distrust and the potential for conflict remains between the Pacific powers.

## **Japan's Nuclear Capacity**

### **Japan's Nuclear Energy Program**

Japan is a country poor in natural resources but with a high level of energy consumption. Since the 1960s, Japan has relied on nuclear power for a significant portion of its energy; nuclear energy currently provides 35% of its electricity. The Japan Atomic Energy Commission's 2005 Framework for Nuclear Energy Policy emphasizes the importance of nuclear power for energy independence and carbon emission reduction. Japan is currently the third-largest user of nuclear energy in the world, with 55 light-water nuclear power reactors (49.58 million kW) operated by 10 electric power companies. The first commercial power reactor began operation in 1966. Two nuclear power plants are under construction, four are in regulatory review, and an additional seven may be built over the next decade.

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<sup>4</sup> Hajime Izumi and Katsuhisa Furukawa. "Not Going Nuclear: Japan's Response to North Korea's Nuclear Test," *Nautilus Institute Policy Forum Online*. July 19, 2007.

Japan's policy is to achieve a fully independent, or "closed," fuel cycle.<sup>5</sup> The closed fuel cycle promotes the use of mixed-oxide (MOX) fuel in light-water reactors. The set goal is to have 16-18 such reactors by FY2010, and utilities in Japan are now in the process of being licensed for MOX loading and obtaining consent from the local governments. The Japan Atomic Energy Agency (JAEA) was established on October 1, 2005, to integrate Japan's R&D institutes, the Japan Atomic Energy Research Institute and the Japan Nuclear Cycle Development Institute. JAEA carries out R&D work on the full range of fuel cycle activities.

Two of the more controversial aspects of Japan's civilian power program are its large stocks of separated plutonium and advanced fuel cycle facilities. Plutonium is a by-product of the uranium fuel used in all nuclear reactors. Plutonium in spent fuel is not weapons-usable. Once this reactor-grade<sup>6</sup> plutonium is separated out of spent fuel through reprocessing, it is potentially directly usable in nuclear weapons.<sup>7</sup> This separated plutonium can also be "recycled" into MOX fuel for light-water power reactors. France, India, Japan, Russia and the U.K. currently all produce reactor fuel through reprocessing.

The global stockpile of separated plutonium is estimated to be about 500 tons, including military and civilian stocks.<sup>8</sup> Stocks of civilian separated plutonium are growing around the world. Japan possesses 6.7 MT of civilian stocks of separated plutonium stored in Japan, and 38 MT of separated plutonium stored outside the country.<sup>9</sup> This material has the potential to make over 1,000 nuclear weapons. Japan's civilian separated plutonium stockpile is expected to grow to 70 tons by 2020.

To date, Japan has sent its spent fuel to the United Kingdom (Sellafield) and France (La Hague) for reprocessing and MOX fuel fabrication. But Japan is completing facilities which will eliminate the need for such outsourcing. The private company Japan Nuclear Fuel Limited (JNFL) has built and is currently running active testing on a large-scale commercial reprocessing plant at Rokkasho-mura. The testing phase is expected to be completed in August 2009. Its expected capacity is 800tons/year.<sup>10</sup> Advance site preparation work was started in October 2008 for a MOX fuel fabrication plant being built by JNFL at Rokkasho-mura. An experimental

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<sup>5</sup> Natural uranium ore first passes through the refining, conversion, enrichment, reconversion and fabrication processes before it is fed into the nuclear reactor as a metal-sheathed fuel. Following irradiation, the spent fuel from the reactor is sent to a reprocessing plant where the residual uranium and newly produced plutonium are recovered for re-use as fuel. Then, the plutonium oxide is mixed with uranium oxide at a MOX fuel conversion plant to produce a mixed oxide nuclear fuel. MOX fuel can then be irradiated just like fresh fuel in a nuclear power plant. This entire process is called the "closed" nuclear fuel cycle. See <http://www.japannuclear.com/nuclearpower/fuelcycle/what.html>.

<sup>6</sup> Plutonium that contains at least 20 percent of the nonfissile isotopes Pu-240. Reactor-grade plutonium is 65% fissile (by thermal neutrons) compared with 93% fissile for weapon-grade material.

<sup>7</sup> Although reactor-grade plutonium has a higher-rate of spontaneous fission reactions and therefore difficult to use in nuclear weapons, it was proven possible in a 1962 test. See U.S. Congress, Office of Technology Assessment, "Technologies Underlying Weapons of Mass Destruction," December 1993; "Additional information concerning underground nuclear weapon test of reactor-grade plutonium," U.S. Department of Energy Office of Public Affairs <https://www.osti.gov/opennet/document/press/pc29.html> and Richard L. Garwin, "Reactor-Grade Plutonium Can be Used to Make Powerful and Reliable Nuclear Weapons," August 1998 <http://www.fas.org/rlg/980826-pu.htm>.

<sup>8</sup> Global Fissile Material Report 2008, IPFM. <http://www.fissilematerials.org>

<sup>9</sup> One metric ton is approximately 1.1 U.S. tons. Global Fissile Material Report 2008, *ibid.*; also see the November 2008 declared annual inventory under IAEA INFCIRC/549. <http://www.iaea.org/Publications/Documents/Infcircs/2008/infcirc549a1-11.pdf>

<sup>10</sup> A pilot reprocessing plant began full-scale operation in 1981 at the Tokai Nuclear Fuel Cycle Engineering Laboratories.

reprocessing plant has operated at Tokai-mura since 1977. It completed its contractual work to reprocess spent fuel for nuclear power utilities in March 2006.<sup>11</sup> The Tokai plant is currently being prepared to conduct R&D work for fast reactor fuels.

Around 2050, Japan plans to shift from MOX fuel in light water reactors to using MOX fuel in fast breeder reactors.<sup>12</sup> R&D work continues using the prototype MONJU and JOYO fast breeder reactors, despite earlier accidents and continued technical difficulties.<sup>13</sup> A final disposal site for high level radioactive waste has not yet been selected. Japan plans to store and dispose of its nuclear waste domestically.<sup>14</sup> Japan also has a uranium enrichment R&D facility at Tokai-mura and is developing an advanced centrifuge uranium enrichment plant at Rokkasho-mura.

The industrial-scale Rokkasho-mura reprocessing plant, the first in a non-nuclear weapon state, has raised some proliferation concerns.<sup>15</sup> Fast breeder reactors also produce more plutonium than they consume, potentially posing a proliferation risk. Some cautionary voices point out that advanced countries have been shifting away from the pursuit of reprocessing technologies as the international community strives to find appropriate multilateral approaches to containing the spread of enrichment and reprocessing technologies to new countries.<sup>16</sup>

To counteract public concern, Japan emphasizes transparency in all aspects of its nuclear activities to assure the public and international community that atomic energy is used solely for peaceful purposes. All reactor-operating electric power utilities in Japan are required by law to make public the quantity of plutonium in possession and a plutonium use plan each fiscal year. All of Japan's nuclear facilities are subject to IAEA full-scope safeguards, and an Additional Protocol to its IAEA safeguards agreement came into force in December 1999. The protocol augments the agency's authority to verify that nuclear activities are not diverted to military purposes. Once the Rokkasho Reprocessing Plant starts operation, it will be the largest facility ever placed under IAEA safeguards. Japan has worked with the IAEA since the design phase to incorporate unique IAEA verification measures into the plant.<sup>17</sup>

Japan has been a leader in developing advanced safeguards technologies with the IAEA, and participates in multilateral advanced research efforts for future fuel cycle technologies, such as Generation IV International Forum (Gen-IV), International Project on Innovative Nuclear

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<sup>11</sup> "Reprocessing Technology Development," JAEA Website, <http://www.jaea.go.jp/english/04/tokai-cycle/02.htm>

<sup>12</sup> A fast breeder reactor is a fast neutron reactor that produces more plutonium than it consumes, which can then be reused as fuel in the reactor, thereby creating a closed fuel cycle.

<sup>13</sup> The MONJU reactor's operation was stopped due to a sodium leakage accident in the reactor's secondary system in 1995. During the course of manufacturing fuel for the JOYO reactor, a Level-4 criticality accident occurred in September 1999 at a fuel conversion facility.

<sup>14</sup> For more on waste storage in Japan, see <http://www.japannuclear.com/nuclearpower/program/waste.html>.

<sup>15</sup> A nuclear weapon state as defined by the NPT is limited to states that have detonated a nuclear weapon or nuclear explosive device before January 1, 1967. The United States, United Kingdom, Russia, France, and China are the five nuclear weapon states under the NPT. All other NPT parties are non-nuclear weapon states.

<sup>16</sup> Since Japan has been in possession of this technology for decades, it does not fall into the category of countries whose access to the technology might be limited in the future. See CRS Report RL34234, *Managing the Nuclear Fuel Cycle: Policy Implications of Expanding Global Access to Nuclear Power*, by Mary Beth Nikitin, (name redacted), and (name redacted).

<sup>17</sup> See Iwamoto, T., Ebata, T. Fujimaki, K. and Ai, HI, "Establishment of the Safeguards at Rokkasho Reprocessing Plant," Presented at 15<sup>th</sup> Pacific Basin Nuclear Conference, October 2006. <http://www.pacificnuclear.org/pnc/2006-Proceedings/pdf/0610015final00362.pdf>



Reactors and Fuel Cycles (INPRO) and the U.S.-led Global Nuclear Energy Partnership (GNEP).<sup>18</sup>

## **Technological Potential**

Japan's technological advancement in the nuclear field, combined with its stocks of separated plutonium, have contributed to the conventional wisdom that Japan could produce nuclear weapons in a short period of time. In 1994, Prime Minister Tsutomu Hata famously told reporters that "it's certainly the case that Japan has the capability to possess nuclear weapons but has not made them." Indeed, few dispute that Japan could make nuclear weapons if Tokyo were to invest the necessary financial and other resources.

However, the ability to develop a few nuclear weapons versus the technological, financial and manpower requirements of a full nuclear deterrent should be considered. Producing nuclear weapons would require expertise on bomb design including metallurgists and chemists; while a reliable deterrent capability may also require reliable delivery vehicles, an intelligence program to protect and conceal assets from a first-strike, and a system for the protection of classified information. The 1995 JDA report stated that Japan's geography and concentrated populations made the political and economic costs of building the infrastructure for a nuclear weapons program "exorbitant." If one assumes that Japan would want weapons with high reliability and accuracy, then more time would need to be devoted to their development unless a weapon or information was supplied by an outside source.

As some analysts have pointed out, if Japan manufactured nuclear warheads, then it would need to at the minimum perform one nuclear test—but where this could be carried out on the island nation is far from clear.<sup>19</sup> Furthermore, Japan's nuclear materials and facilities are under IAEA safeguards, making a clandestine nuclear weapons program difficult to conceal. The Rokkasho-mura reprocessing plant was built in close consultation with the IAEA, with safeguards systems installed in process lines during construction. Japan seems to have intentionally built its nuclear program so it would not be ideal for military use, in compliance with Japanese law.

## **Japanese Legal and Political Restraints**

### **Domestic Factors**

#### **Public Opinion**

In general, public opinion on defense issues in Japan appears to be shifting somewhat, but pacifist sentiment remains significant. In the past, Japanese public opinion strongly supported the limitations placed on the Japanese military, but this opposition has softened considerably since the late 1990s. Despite this overall shifting tide, the "nuclear allergy" among the general public remains strong. The devastation of the atomic bombings led Japanese society to recoil from any

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<sup>18</sup> <http://www.gen-4.org/index.html>, <http://www.iaea.org/OurWork/ST/NE/NENP/NPTDS/Projects/INPRO/index.html>, <http://www.gnep.energy.gov/>

<sup>19</sup> Tetsuya Endo, "How Realistic Is a Nuclear-Armed Japan?," *AJISS-Commentary* No. 8, July 20, 2007.

military use of nuclear energy. Observers say that the Japanese public remains overwhelmingly opposed to nuclearization, pointing to factors like an educational system that promotes pacifism and the few surviving victims of Hiroshima and Nagasaki who serve as powerful reminders of the bombs' effects.

While Japanese public opinion remains, by most accounts, firmly anti-nuclear, some social currents could eventually change the conception of nuclear development. Many observers have recognized a trend of growing nationalism in Japan, particularly among the younger generation. Some Japanese commentators have suggested that this increasing patriotism could jeopardize closer cooperation with the United States: if Japan feels too reliant on U.S. forces and driven by U.S. priorities, some may assert the need for Japan to develop its own independent capability. Another wild card is the likelihood that Japan will face a major demographic challenge because of its rapidly ageing population: such a shock could either drive Japan closer to the United States because of heightened insecurity, or could spur nationalism that may lean toward developing more autonomy.

## **Elite Opinions**

A review of recent articles and interviews with prominent Japanese opinion-makers and experts revealed a near-consensus of opposition to the development of nuclear weapons.<sup>20</sup> Realist-minded security observers cite the danger of threatening China and causing unnecessary instability in the region, while foreign policy managers point to the risk of weakening the U.S. alliance. Some observers claim, however, that a younger generation of upcoming elites may be more nationalistic and therefore potentially more supportive of the option in the future.

There is some degree of disagreement in Japan on if a debate *itself* about whether Japan should consider the nuclear option would be a valuable exercise. Some nuclear critics argue that such a debate would solidify Japan's non-nuclear stance by articulating for the public why not possessing nuclear weapons serves the national interest. The debate could also reassure those who oppose Japan's nuclear development. Others, however, argue that simply raising the issue would alarm Japan's neighbors, arouse distrust, and negatively affect regional security. Domestically, some analysts think that a public debate on nuclear weapons would outrage the Japanese public, making most politicians averse to the proposal.

## **Constitutional Restraints**

There are several legal factors that could restrict Japan's ability to develop nuclear weapons. The most prominent is Article 9 of the Japanese constitution, drafted by American officials during the post-war occupation, that outlaws war as a "sovereign right" of Japan and prohibits "the right of belligerency." However, Japan maintains a well-funded and well-equipped military for self-defense purposes, and the current interpretation of the constitution would allow, in theory, the development of nuclear weapons for defensive purposes. Beginning with Prime Minister Nobusuke Kishi in 1957, and continuing through Shinzo Abe in 2006, Japanese administrations have repeatedly asserted that Article 9 is not the limiting factor to developing nuclear weapons.<sup>21</sup>

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<sup>20</sup> According to a series of interviews carried out in Tokyo in February 2007 as well as articles such as Hajime Izumi and Katsuhisa Furukawa. "Not Going Nuclear: Japan's Response to North Korea's Nuclear Test," *Arms Control Today*, Volume 37, Issue 6. July 1, 2007.

<sup>21</sup> Llewelyn Hughes, "Why Japan Will Not Go Nuclear (Yet)," *International Security*, Vol. 31, No. 4. Spring 2007.

As Chief Cabinet Secretary in 2002, former Prime Minister Yasuo Fukuda said that the constitution did not prohibit nuclear weapons, adding that “depending upon the world situation, circumstances and public opinion could require Japan to possess nuclear weapons.”<sup>22</sup>

### **1955 Atomic Energy Basic Law**

Although the Constitution may be interpreted to allow for possession of nuclear weapons, since 1955 Japanese domestic law prohibited any military purpose for nuclear activities.<sup>23</sup> Its basic policy statement (Article 2) says: “the research, development, and utilization of atomic energy shall be limited to peaceful purposes, aimed at ensuring safety and performed independently under democratic management, the results therefrom shall be made public to contribute to international cooperation.” This law, which also established regulatory bodies for safety and control issues, is at the core of Japanese policy in maintaining a peaceful, transparent nuclear program.

### **Three Non-Nuclear Principles**

Japanese leaders have often cited the “Three Non-Nuclear Principles” as another obstacle to Japanese development of nuclear weapons. The trio consists of Japanese pledges not to allow the manufacture, possession, or importation of nuclear weapons. Many security experts, however, point out that the principles, passed as a Diet resolution in 1971 as part of domestic negotiations over the return of Okinawa from U.S. control, were never formally adopted into law, and therefore are not legally binding.<sup>24</sup> Although not technically a legal constraint, Japanese leaders have consistently stated their commitment to the principles, including a reiteration by Prime Minister Shinzo Abe in the aftermath of North Korea’s nuclear test in 2006.

## **External Factors**

### **International Law**

Japan is obligated under Article 2 of the NPT not to “receive the transfer from any transferor whatsoever of nuclear weapons or other nuclear explosive devices or of control over such weapons or explosive devices directly, or indirectly; not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices; and not to seek or receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices.” Under Article 3 of the NPT, Japan is required to accept IAEA full-scope safeguards on its civilian nuclear program. Japan signed an Additional Protocol in 1998 under which the IAEA can use an expanded range of measures to verify that civilian facilities and materials have not been diverted to a military program.

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<sup>22</sup> “So Much for Japan’s Nuclear Taboo,” *International Herald Tribune*. June 13, 2002.

<sup>23</sup> <http://www.jaea.go.jp/jnc/kaihatu/hukaku/english/atomiclaw.htm>

<sup>24</sup> Llewelyn Hughes, “Why Japan Will Not Go Nuclear (Yet),” *International Security*, Vol. 31, No. 4. Spring 2007.

## **Consequences for Civilian Nuclear Program**

Lacking adequate indigenous uranium supplies, Japan has bilateral civilian nuclear cooperation agreements with the United States, France, United Kingdom, China, Canada, and Australia. If a Japanese nuclear program for military purposes were declared or discovered, Japan would need to return the supplied material to its country of origin. Japan's civilian nuclear energy program—which supplies over a third of Japan's energy—would then be cut off from world supplies of natural uranium, enriched uranium and related equipment.

The United States most recent nuclear energy cooperation agreement with Japan took effect on July 17, 1988. Article 12 of this agreement states that, if either party does not comply with the agreement's nonproliferation provisions or violates their IAEA safeguards agreement, the other party has the right to cease further cooperation, terminate the agreement, and require the return of any material, nuclear material, equipment or components transferred or "any special fissionable material produced through the use of such items."

If Japan withdrew from the NPT, it would likely be subject to UN Security Council-imposed sanctions and economic and diplomatic isolation. Penalties under a U.N. Security Council resolution could include economic sanctions beyond the Nuclear Suppliers Group cut-off of nuclear-related supply.

## **International Diplomatic Consequences**

Diplomatically, the policy turn-about would have profound implications. Japan has built a reputation as a leader in non-proliferation and as a promoter of nuclear disarmament. It has consistently called for a "safe world free of nuclear weapons on the earliest possible date." Japan submits a resolution to the General Assembly's First Committee each year on a nuclear-free world and submits working papers to the NPT review conferences and preparatory committees on disarmament. It has been a vocal advocate for IAEA verification and compliance and was the first to respond with sanctions to nuclear tests in South Asia and North Korea. It has been a constant voice in support of nuclear disarmament in international fora. An about-face on its non-nuclear weapon state status would dramatically change the global view of Japan, or might dramatically change the perception of nuclear weapons possession in the world. This move could have profound implications for nuclear proliferation elsewhere, perhaps leading to additional NPT withdrawals. Acquiring nuclear weapons could also hurt Japan's long-term goal of permanent membership on the U.N. Security Council.

## **Issues for U.S. Policy**

### **U.S. Security Commitment**

Perhaps the single most important factor to date in dissuading Tokyo from developing a nuclear arsenal is the U.S. guarantee to protect Japan's security. Since the threat of nuclear attack developed during the Cold War, Japan has been included under the U.S. "nuclear umbrella," although some ambiguity exists about whether the United States is committed to respond with

nuclear weapons in the event of a nuclear attack on Japan.<sup>25</sup> U.S. officials have hinted that it would: following North Korea's 2006 nuclear test, former Secretary of State Condoleezza Rice, in Tokyo, said, "... the United States has the will and the capability to meet the full range, and I underscore full range, of its deterrent and security commitments to Japan."<sup>26</sup> Most policymakers in Japan continue to emphasize that strengthening the alliance as well as shared conventional capabilities is more sound strategy than pursuing an independent nuclear capability.<sup>27</sup>

During the Cold War, the threat of mutually assured destruction to the United States and the Soviet Union created a sort of perverse stability in international politics; Japan, as the major Pacific front of the U.S. containment strategy, felt confident in U.S. extended deterrence. Although the United States has reiterated its commitment to defend Japan, the strategic stakes have changed, leading some in Japan to question the American pledge. Some in Japan are nervous that if the United States develops a closer relationship with China, the gap between Tokyo's and Washington's security perspectives will grow and further weaken the U.S. commitment.<sup>28</sup> These critics also point to what they perceive as the soft negotiating position on North Korea's denuclearization in the Six-Party Talks as further evidence that the United States does not share Japan's strategic perspective.<sup>29</sup> A weakening of the bilateral alliance may strengthen the hand of those that want to explore the possibility of Japan developing its own deterrence.

Despite these concerns, many long-time observers assert that the alliance is fundamentally sound from years of cooperation and strong defense ties throughout even the rocky trade wars of the 1980s. Perhaps more importantly, China's rising stature likely means that the United States will want to keep its military presence in the region in place, and Japan is the major readiness platform for the U.S. military in East Asia. If the United States continues to see the alliance with Japan as a fundamental component of its presence in the Pacific, U.S. leaders may need to continue to not only restate the U.S. commitment to defend Japan, but to engage in high-level consultation with Japanese leaders in order to allay concerns of alliance drift. Disagreement exists over the value of engaging in a joint dialogue on nuclear scenarios given the sensitivity of the issue to the public and the region, with some advocating the need for such formalized discussion and others insisting on the virtue of strategic ambiguity.<sup>30</sup>

U.S. behavior plays an outsized role in determining Japan's strategic calculations, particularly in any debate on developing nuclear weapons. Security experts concerned about Japan's nuclear option have stressed that U.S. officials or influential commentators should not signal to the Japanese any tacit approval of nuclearization.<sup>31</sup> Threatening other countries with the possibility of Japan going nuclear, for example, could be construed as approval by some quarters in Tokyo.

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<sup>25</sup> Hajime Izumi and Katsuhisa Furukawa, "Not Going Nuclear: Japan's Response to North Korea's Nuclear Test," *Nautilus Institute Policy Forum Online*. July 19, 2007.

<sup>26</sup> "U.S. Is Japan's Nuclear Shield, Rice Says," *Los Angeles Times*. October 19, 2006.

<sup>27</sup> Mike M. Mochizuku, "Japan Tests the Nuclear Taboo," *Nonproliferation Review*, Vol. 14, No. 2. July 2007.

<sup>28</sup> Brad Glosserman, "Japan Peers Into the Abyss," *PacNet Newsletter #20*. March 20, 2008.

<sup>29</sup> Brad Glosserman, "Nuclear Basics for the Alliance," *PacNet Newsletter #21*. April 19, 2007.

<sup>30</sup> See, for example, "Turmoil in Tokyo: Military Bases and the Nuclear Deterrent are Key to Reinvigorating the U.S.-Japan Alliance," *Armed Forces Journal*. October 18, 2008 and "An Alliance in Need of Attention," *International Herald Tribune*. January 22, 2009.

<sup>31</sup> Kurt Campbell and Tsuyoshi Sunohara, "Japan: Thinking the Unthinkable," *The Nuclear Tipping Point*, 2004.

U.S.-Japanese joint development of a theater missile defense system reinforces the U.S. security commitment to Japan, both psychologically and practically. The test-launch of several missiles by North Korea in July 2006 accelerated existing plans to jointly deploy Patriot Advanced Capability 3 (PAC-3) surface-to-air interceptors as well as a sea-based system on Aegis destroyers. If successfully operationalized, confidence in the ability to intercept incoming missiles may help assuage Japan's fear of foreign attacks. This reassurance may discourage any potential consideration of developing a deterrent nuclear force. In addition, the joint effort would more closely intertwine U.S. and Japan security, although obstacles still remain for a seamless integration.<sup>32</sup>

## **Potential for Asian Arms Race**

To many security experts, the most alarming possible consequence of a Japanese decision to develop nuclear weapons would be the development of a regional arms race.<sup>33</sup> The fear is based on the belief that a nuclear-armed Japan could compel South Korea to develop its own program; encourage China to increase and/or improve its relatively small arsenal; and possibly inspire Taiwan to pursue nuclear weapons. This in turn might have spill-over effects on the already nuclear-armed India and Pakistan. The prospect—or even reality—of several nuclear states rising in a region that is already rife with historical grievances and contemporary tension could be deeply destabilizing. The counter-argument, made by some security experts, is that nuclear deterrence was stabilizing during the Cold War, and a similar nuclear balance could be achieved in Asia. However, most observers maintain that the risks outweigh potential stabilizing factors.

## **U.S.-China Relations**

The course of the relationship between Beijing and Washington over the next several years is likely to have a significant impact on the nuclearization debate in Japan. If the relationship chills substantially and a Cold War-type standoff develops, there may be calls from some in the United States to reinforce the U.S. deterrent forces. Some hawkish U.S. commentators have called for Japan to be “unleashed” in order to counter China's strength.<sup>34</sup> Depending on the severity of the perceived threat from China, Japanese and U.S. officials could reconsider their views on Japan's non-nuclear status. Geopolitical calculations likely would have to shift considerably for this scenario to gain currency. On the other hand, if U.S.-Sino relations become much closer, Japan may feel that it needs to develop a more independent defense posture. This is particularly true if the United States and China engaged in any bilateral strategic or nuclear consultations.<sup>35</sup> Despite

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<sup>32</sup> The principle of “collective self-defense” raises questions about how closely the United States and Japan can integrate missile defense cooperation. The term comes from Article 51 of the U.N. Charter, which provides that member nations may exercise the rights of both individual and collective self-defense if an armed attack occurs. The Japanese government maintains that Japan has the sovereign right to engage in collective self-defense, but a 1960 decision by the Cabinet Legislation Bureau interpreted the constitution to forbid collective actions because it would require considering the defense of other countries, not just the safety of Japan itself. The ban on collective self-defense raises questions about how Japanese commanders will gauge whether American forces or Japan itself is being targeted. Under the current interpretation, Japanese forces could not legally respond if the United States were attacked.

<sup>33</sup> Masahiro Matsumura, “Prudence and Realism in Japan's Nuclear Options,” Brookings Institution website, January 16, 2008.

<sup>34</sup> See Richard Lowry, “Time for the Sun to Rise,” *National Review*. July 4, 2005.

<sup>35</sup> Katsuhisa Furukawa, “Japanese Perspectives on Nuclear Weapons, Disarmament, and Nonproliferation,” Research Institute of Science and Technology for Society powerpoint presentation. November 29, 2007. For more on existing (continued...)

improved relations today, distrust between Beijing and Tokyo remains strong, and many in Japan's defense community view China's rapidly modernizing military as their primary threat.

## **Future of the Korean Peninsula**

Any eventual reunification of the Korean peninsula could further induce Japan to reconsider its nuclear stance. If the two Koreas unify while North Korea still holds nuclear weapons and the new state opts to keep a nuclear arsenal, Japan may face a different calculation. Indeed, some Japanese analysts have claimed that a nuclear-armed reunified Korea would be more of a threat than a nuclear-armed North Korea.

Such a nuclear decision would depend on a variety of factors: the political orientation of the new country, its relationship with the United States, and how a reunified government approached its historically difficult ties with Japan. Although South Korea and Japan normalized relations in 1965, many Koreans harbor resentment of Japan's harsh colonial rule of the peninsula from 1910-1945. If the closely neighboring Koreans exhibited hostility toward Japan, it may feel more compelled to develop a nuclear weapons capability. The United States is likely to be involved in any possible Korean unification because of its military alliance with South Korea and its leading role in the Six-Party Talks. U.S. contingency planning for future scenarios on the Korean peninsula should take into account Japan's calculus with regard to nuclear weapon development.

## **Japan's International Reputation**

If Japan decided to go nuclear, its international reputation as a principled advocate for non-proliferation would erode. Many observers say this would rule out Japan's ambition of eventually holding a seat on the United Nations Security Council. Japan, of course, would bear the brunt of these consequences, but it could be harmful to U.S. interests as well. Japan is generally viewed overwhelmingly positively by the international community, and its support for U.S.-led international issues can lend credibility and legitimacy to efforts such as democracy promotion, peacekeeping missions, environmental cooperation, and multilateral defense exercises, to name a few.

## **Damage to Global Non-Proliferation Regime**

Japan's development of its own nuclear arsenal could also have damaging impact on U.S. nonproliferation policy. It would be more difficult for the United States to convince non-nuclear weapon states to keep their non-nuclear status or to persuade countries such as North Korea to give up their weapons programs. The damage to the NPT as a guarantor of nuclear power for peaceful use and the IAEA as an inspection regime could be irreparable if Japan were to leave or violate the treaty. If a close ally under its nuclear umbrella chose to acquire the bomb, perhaps other countries enjoying a strong bilateral relationship with the United States would be less inhibited in pursuing their own option. It could also undermine confidence in U.S. security guarantees more generally.

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(...continued)

U.S.-PRC nuclear cooperation, see CRS Report RL33192, *U.S.-China Nuclear Cooperation Agreement*, coordinated by (name redacted).

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