

Viewpoint

A Japanese View on Nuclear Disarmament

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The world is changing very rapidly as it enters the new century and the transitional era following the end of the Cold War comes to an end. The events of September 11, 2001, have made clear that a dramatically new international security environment is now at hand. Among other major changes from the past is that the nuclear threat from Russia is no longer the highest danger in the current security agenda.

In the disarmament field, however, negotiations have been in gridlock for several years. (The term disarmament here includes arms control, reductions in classes of armaments, and their total elimination.) No negotiations, for example, are taking place in the Conference on Disarmament, in Geneva. Similarly, the Review Conference of the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction (Biological and Toxin Weapons Convention or BWC) was suspended on December 7, 2001, without adopting a final document, and talks on developing a verification protocol for the treaty are in disarray. Despite some intermittent good news, such as the announcement of U.S. President George W. Bush and Russian President Vladimir Putin on planned deep cuts in the U.S. and Russian nuclear arsenals, one month after that announcement, on December 13, 2001, the United States formally declared that it would with-

draw from the Anti-Ballistic Missile (ABM) Treaty, a decision whose impacts are still to be determined.

Looking back at history after World War II, disarmament has always reflected the security trends of the era. After the end of that war, the world was broken into two camps, and a fierce arms race took place. At the beginning of 1960s, the international community realized that it could not continue the arms race endlessly and entered a period of "competition and arms control." The achievements during this period included the Partial Test Ban Treaty (PTBT) in 1963; the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) in 1968; the BWC in 1972; the Anti-Ballistic Missile (ABM) Treaty in 1972; and the Final Document of the First Special Session of the UN General Assembly devoted to disarmament (SSOD I).²

This period came to an abrupt end when the former Soviet Union invaded Afghanistan in 1979. After that event, there were few significant achievements in disarmament for almost a decade. With the weakening and dissolution of the former Soviet Union, however, the world entered into the most productive era in the history of disarmament. The first signal of change was the conclusion of the treaty between the United States and the Soviet Union on the elimination of intermediate-range and short-

range missiles (INF Treaty) in 1987. Other major accomplishments during this period were the opening for signature and entry into force of the Chemical Weapons Convention, in 1993 and 1997 respectively; the indefinite extension of the NPT, in 1995; the opening for signature of the Comprehensive Test Ban Treaty (CTBT), in 1996; and the completion of the Ottawa Treaty banning anti-personal landmines in 1997.

The euphoria after the end of the Cold War was gradually replaced by complacency and immobility, however. One reason for this stagnation was that the world after the end of the Cold War was not as safe as people had expected, and the approaches of countries in seeking to address the new situation were deeply divided. New threats have emerged, for example, as a result of the proliferation of weapons of mass destruction (WMD) to countries such as the Democratic Republic of Korea (DPRK) and Iraq. The United States intends to deploy ballistic missiles defense (BMD) to deal with these threats, but Russia and China are deeply concerned about the U.S. initiative. Another reason for the deadlock in disarmament is that the world has not yet adapted to the new reality after the Cold War. The agenda now being used in the Conference on Disarmament, in Geneva, for example, is the one agreed to at the SSOD I in 1978, and the mode for conducting business in the Conference is through consultation among three groups—the Western Group, Eastern Group, and Non-Aligned Group.³ In sum, disarmament stalemated, and no meaningful progress has been made for some five years.

If past experience can be applied to the current situation, the new security environment should shape a new framework of security and disarmament. While that framework has not yet taken clear shape, the activities in the field of disarmament and security have become more dynamic compared to the past several years. Even looking only at the area of nuclear arms, the plans for deep cuts newly announced by the United States and Russia and their ongoing talks on this subject, together with the U.S. announcement of its plans to withdraw from the ABM Treaty and to deploy BMD, are events of great importance. As seen at the Preparatory Committee for the 2005 NPT Review Conference meeting in April 2002, international interest in the CTBT remains strong, even though the United States continues to oppose the pact.

Japan is one of the important players in the field of disarmament as a “middle ground voice” and can contribute in delineating the new disarmament framework. Yet, its

position and way of thinking on this subject do not seem to be well understood in the international community. With this background in mind, this paper tries to explain the Japanese approach to disarmament. More precisely, this viewpoint will explain the factors that Japan considers in formulating its position on disarmament issues and will then explain the Japanese view on three major items related to nuclear disarmament: the CTBT, deep cuts in nuclear arsenals (including the elimination of nuclear weapons), and BMD.

FACTORS CONSIDERED IN JAPANESE DISARMAMENT DECISIONMAKING

When Japan makes decisions on a disarmament measure, it considers the humanitarian value and the security implications of such a measure for Japan, the Asia Pacific region, and the world. These two interests are not always in conflict, but sometimes they do clash. In such cases, the government of Japan must strike a balance between them. How the Japanese government weighs these two elements is difficult to specify in general terms, because the balance depends on the issue at hand and on the underlying security environment. In most cases, however, both dimensions—humanitarian and security—have equal importance for Japan. This principle might seem universal, seen in all countries, but such an interpretation would be incorrect. For some countries, security considerations are far more important than humanitarian objectives. For others, it is the reverse.

Humanitarian Considerations

Early disarmament treaties were motivated by humanitarian concerns. The 1868 Declaration of St. Petersburg, for example, stated, “the employment of such arms (arms which uselessly aggravate the suffering of disabled men, or render their death inevitably) would be contrary to the laws of humanity.” The countries represented at the 1899 International Peace Conference at The Hague, which agreed to abstain from the use of bullets that expand or flatten in the human body, were “inspired by the sentiments which found expression in the Declaration of St. Petersburg.”

Humanitarian considerations unquestionably play a role in decisionmaking on more recent disarmament policy. The Ottawa Treaty of 1997 banning anti-personnel land mines is the latest example of a treaty that is motivated by humanitarian concerns. It goes without saying that

many governments, organizations, and citizens oppose nuclear weapons, because they regard such weapons as inhumane. For Japan, humanitarian considerations are a very important motivation for pursuing disarmament. Japanese public opinion expects the government to take initiatives to promote humanitarian goals through disarmament, and the government has made disarmament one of the pillars of Japanese diplomacy since the end of World War II. In general, Japanese diplomacy is pragmatic, but in the case of disarmament, the pursuit of humanitarian values has been a key justification. Underpinning this orientation are values instilled in the Japanese education system, the experience of World War II, and the tragedies in Hiroshima and Nagasaki.

Security Considerations

As Japan is located in a region where tensions are very high, the Japanese government needs to give proper consideration to the security implications that a disarmament measure has for Japan, the Asia Pacific region, and the world. The nature of the threat and the Japanese concept of security is as follows.

Increasing Threats from Proliferation

The proliferation of WMD and ballistic missiles is one of the serious causes of concern for Japan. In the past, only a limited number of countries could fabricate such weapons, but now many others can do so as well. The rapid progress of science and technology is one of the reasons. The information revolution made it possible for scientists and engineers of any country to have access to advanced knowledge and technology. Education has become borderless, and those students who wish to acquire knowledge and technology can study anywhere in the world. The expansion of trade, both in volume and speed, and easy access to dual purpose high-tech products have made it possible to procure sophisticated equipment. There have been repeated attempts to smuggle fissile materials and other items that are necessary to fabricate WMD from the states of the former Soviet Union. The brain drain of scientists and engineers that were involved in the fabrication of WMD and ballistic missiles in the former Soviet Union is a matter of concern. Under these conditions, the proliferation of WMD and ballistic missiles is not merely a possibility in the future, but a contemporary reality.

In Japan, the threats posed by proliferation are felt quite keenly. For example, the Japan Defense Agency White Paper, *2001 Defense of Japan*, states:

As North Korea is developing and deploying weapons of mass destruction and ballistic missiles, and also possesses large-scale special operational forces, it is thought that it is continuing to maintain and strengthen its so-called asymmetric military forces. By acting in this way, North Korea increases military tension over the Korean Peninsula and its behavior constitutes a serious destabilizing factor for the security of the entire East Asian region, including Japan.⁴

Terrorism by Non-State Actors

The events of September 11, 2001, proved that large-scale attacks by terrorists pose especially grave dangers. In these events, terrorists passed the psychological barrier of killing thousands of innocent people. Usama Bin Laden, who claimed responsibility for these events, is known to be seeking to inflict mass destruction on his enemies, including through the use of nuclear weapons. Terrorists can develop and use chemical weapons, as was proven in the 1995 sarin attack in Japan by the Aum Shinrikyo cult. The infrastructure of developed countries, including nuclear power reactors, communication lines, and urban facilities, is highly vulnerable to attack. In addition, deterrence does not work against terrorists, especially when they are prepared to sacrifice their lives. There is no reason to believe that the successful campaign in Afghanistan will resolve the threat of terrorist attacks. The targets of terrorists are not limited to those in some small group of countries, but include Japan.

Diminished Threat from Russia

The end of the Cold War, the dissolution of former Soviet Union, and the new Russian orientation toward a market economy and democracy led to declines in the quantitative level and readiness of Russian military forces during the 1990s. Russia seems to avoid confrontation with and wishes to become a good partner of the United States and its allies, judging from the cooperative attitude of Russia in the war in Afghanistan, its announcement on deep cuts in its nuclear weapons, and its restrained reaction to the U.S. announcement of its planned withdrawal from the ABM Treaty.

These changes do not mean, however, that the strategic threat from Russia has disappeared. Six thousand strategic nuclear warheads are currently deployed by Russia. Even after the proposed reductions over the next decade, Russia will probably retain roughly two thousand strategic warheads. This force will be much smaller than the ten thousand warheads Russia deployed in the early 1990s, but it will still represent tremendous destructive power. Russia must view the U.S. nuclear force in the same way. Therefore, it is understandable that both the United States and Russia plan to maintain their nuclear deterrents for some time into the future.

Since the end of the Cold War, there have also been changes in the military situation in the Russian Far East region. The scale of Russian military forces there has declined since 1990, and the current force level remains far smaller than its historical peak. However, significant military forces, including nuclear capabilities, still remain in the region.⁵ China has promoted reform and open-door policies centering on the introduction of a socialist market economy, and, as a result, has been growing politically and economically as a major regional power. Also, countries in the region have paid attention to Chinese movements on the military front.⁶

Diplomacy and International Regimes Enhance Security

In the Japanese view, diplomatic efforts, as well as defense efforts, contribute to enhance national security. Since the end of World War II, Japan has been endeavoring to assure its security through its Self-Defense Force, the Japan-U.S. Security Treaty, and diplomacy, in which disarmament has played a significant role. Japan decided not to use military capability as a means to resolve international conflicts, not to become a nuclear weapon state, not to possess offensive weapons such as aircraft carriers, not to export weapons, and not to enlarge its military expenditures above a minimal level. In its diplomacy, Japan has made efforts to maintain good relations with all countries, including its neighbors, and has extended assistance to those countries with less economic means. At the same time, Japan has urged other countries to promote disarmament, in particular nuclear disarmament. Japan's policy of not becoming a military power and promoting disarmament has been one of the elements that helped to assure its security.

International disarmament agreements also play an important role in the maintenance of peace and security. Some

one hundred major disarmament treaties, rules, and commitments have been made since the mid-nineteenth century. It is much less costly to maintain peace and security by law than to do so by force, because negotiations and implementation are far less expensive than military operations, both in monetary and human terms.

Despite these merits, international laws are not as effective as domestic ones, and there have been plenty of acts of non-compliance. The non-compliance to the 1925 Geneva Protocol by Iraq, the alleged non-compliance to the BWC by the former Soviet Union, and the non-compliance to the NPT by Iraq and North Korea are only some examples. However, non-compliance by a few is not a sound reason to negate the value of laws that are observed by many. Moreover, the existence of laws and treaties makes it possible to identify wrongdoers; without such rules, the world would be governed by the law of jungle.

Arms control and nonproliferation treaties are not perfect, but a treaty like the NPT serves as a restraining influence on most states, which enhances global stability. It also looks toward a long-term endpoint of restraint by all countries, while the alternative—reliance solely on military countermeasures—points toward long-term tension, unpredictability, and turmoil.

CTBT, DEEP CUTS, AND MISSILE DEFENSE

Bearing this background in mind, it is possible to appreciate more fully Japanese thinking on several key arms control and nonproliferation issues of current concern. This section will examine Japanese views on three leading issues, the CTBT, deep cuts in nuclear forces, and missile defense.

The CTBT

The United States seems to be hardening its position on the CTBT. On November 5, 2001, for example, the United States voted against a Japanese-sponsored resolution submitted to the United Nations General Assembly because of its language concerning the CTBT, which "stressed" the importance of early entry into force of the treaty.⁷ On the same day, the United States voted against an even more innocuous procedural resolution calling for placing the CTBT on the General Assembly agenda the following year, a resolution that was adopted by a vote of 140-1.⁸ Similarly, the United States did not attend the UN Conference on Facilitating the Entry into Force of

the CTBT that was held from November 11-13, 2002, in New York. Separately, in a January 9, 2002, briefing on the Nuclear Posture Review (NPR), a U.S. Department of Defense spokesperson made the point that Department of Energy readiness to recommence nuclear testing should be improved (to permit testing within one year rather than three, the current readiness level). The briefer also underscored that there was no change in Bush administration policy on nuclear testing, in that it opposes CTBT ratification but will continue to adhere to a testing moratorium.⁹

On the other hand, the broader international community, including Japan and other U.S. allies that are under the U.S. nuclear umbrella, continues to support the CTBT. In fact, delegates from 108 states, including 44 representatives at the ministerial level, attended the UN Conference on Facilitating the Entry into Force of the CTBT and adopted a final document by a consensus on November 13, 2001. The final document urged states to maintain existing testing moratoria and called on states that have not done so to sign and ratify the treaty "as soon as possible."

Japan's attitude towards the CTBT is firm and consistent. Japan recognizes that the treaty has certain limitations, but believes that on balance the CTBT will enhance Japanese security and international stability. The principal elements of Japanese thinking on this subject are discussed below.

The CTBT and Nuclear Proliferation

The CTBT will help to curb the proliferation of nuclear weapons, and, in particular, will restrain their technical advancement, thereby supporting Japanese security interests. Although the view that the CTBT will help to curb proliferation is widely shared internationally, it is a contested issue in the United States. A March 2001 report published by the National Institute for Public Policy, for example, argues:

- Nations do not need to test to develop a "simple" nuclear fission weapon.
- Most nations are already bound by the NPT not to develop nuclear weapons. An additional treaty is redundant.
- Those countries that are outside the NPT could refuse to join the CTBT.¹⁰

These points are true, in themselves, but do not tell the whole story. First, countries may not need tests to de-

velop crude nuclear weapons, but without tests, they will have difficulty in developing advanced nuclear warheads that can be delivered by ballistic missiles.¹¹ Whether a nearby country has such an advanced nuclear weapon capability makes a fundamental difference for a non-nuclear weapon state like Japan. Japan has a substantial interest in preventing the proliferation of nuclear weapons. It does not have its own means to deter and/or defend against the threats posed by ballistic missiles equipped with nuclear warheads. If a neighboring country develops nuclear weapons and improves them so that they can be delivered by ballistic missiles to the Japanese homeland, the capability will pose a serious problem for Japan.¹² Therefore, the entry into force of the CTBT, in conjunction with other measures, will advance Japanese security interests.

Second, it is true that most states are prohibited from developing nuclear weapons because they are parties to the NPT. The CTBT, however, not only prohibits nuclear tests, but also establishes an International Monitoring System to detect them, thereby helping to deter tests by any state.

Third, it is true that those countries that are not parties to the NPT could refuse to join the CTBT, but it should not be assumed fatalistically that they will never join the test ban. For example, Indian Prime Minister Shri Atal Bahari Vajpayee has repeatedly stated that India will not block the entry into force of the CTBT. Since India's ratification is essential to achieve this result, Vajpayee's statement indicates that India has not ruled out taking this step. At this stage, it is premature to speculate whether certain countries will join the CTBT or not, particularly if the group of ratifying states continues to grow.

If the emergence of a new nuclear weapon state is one concern, the re-emergence of the nuclear arms race among existing nuclear weapon states is a second. Today any nuclear weapon state can build up a significant nuclear arsenal by enhancing the quality and/or increasing the number of nuclear weapons it possesses.¹³ In order to prevent this possibility, it is necessary to restrain both paths, namely qualitative improvement and quantitative increase. The CTBT, in conjunction with other measures, could at least place an obstacle on the path to qualitative improvement of nuclear weapons. The cessation of the nuclear arms race is one of the fundamental objectives of the NPT. Prevention of the re-emergence of the nuclear arms race is the strong desire and in the security interests

of the international community, including Japan. Moreover, the emergence of a competitor that has a significant nuclear force would also be against the security interest of the United States.

The CTBT and the NPT

The CTBT is an important mechanism for buttressing the operation of the NPT: the entry into force of the CTBT will strengthen the NPT, but the failure of the CTBT may weaken it. The "Principles and Objectives for Nuclear Nonproliferation and Disarmament" adopted by the 1995 NPT Review and Extension Conference, reaffirmed the support of the Conference for the full realization and effective implementation of the NPT provisions that cover nonproliferation, disarmament, and safeguards.¹⁴ More recently, the 2000 NPT Review Conference in its final document, called for the early entry into force of the CTBT and endorsed many other measures to strengthen the NPT, including strengthening the IAEA safeguards and pursuing the universal acceptance by NPT non-nuclear weapon states of the IAEA Model Additional Protocol.¹⁵ If the United States continues to oppose to the ratification of the CTBT, other countries may find a good excuse not to implement other important commitments contained in the 2000 Review Conference Final Document, although Japan certainly will not take such a position.

Moreover, the CTBT is an important issue in the NPT Review process. As an example, the 1990 NPT Review Conference failed to adopt a final document owing to disagreement on the CTBT. Without the commitment to conclude the CTBT by 1996, the indefinite extension of the NPT might have been endangered. The CTBT will continue to be an important issue at the 2005 NPT Review Conference, and serious disagreement on this issue will jeopardize the adoption of a final document. (The rules of procedure of the review conference require consensus.) Failure to adopt a final document or similar declaration supporting the NPT at the 2005 Review Conference would mean losing a chance to bolster the NPT and the nonproliferation regime, more generally.

Finally, the United States is one of a small minority of states that oppose the CTBT. Other countries whose ratification is still required for the treaty to enter into force, but which are known to have the greatest reservations are Algeria, China, Colombia, Congo, North Korea, Egypt, India, Indonesia, Iran, Israel, Pakistan, and Vietnam.¹⁶

U.S. Concerns About Stockpile Reliability

While the Bush Administration fears that the CTBT would adversely affect the U.S. nuclear deterrent, the United States has a robust nuclear deterrent now, a sophisticated program to maintain the safety and reliability of its nuclear arsenal, and would retain the right to withdraw from the treaty if confronted by extraordinary events that necessitated a resumption of nuclear testing. Some in the United States argue that the CTBT would adversely affect the U.S. nuclear deterrent. For example, the National Institute of Public Policy contends that "The CTBT ban on nuclear testing would adversely impact the U.S. nuclear deterrent in at least three ways, by:

- Denying use of the one sure tool of ascertaining nuclear weapons reliability;
- Preventing safety upgrades; and
- Impeding U.S. nuclear weapon modernization.¹⁷

Among these points, the question of reliability seems to be the most serious concern. U.S. Under Secretary of State John Bolton, for example, declared in an August 14, 2001, interview that "concerns about the safety and reliability of nuclear stockpile remain" and "if the reliability of the deterrent itself came into question, then you'd have a dramatic change in the structure of the world order, and we want to be sure that doesn't happen."¹⁸

Other authoritative observers in the United States dispute this view, however. General John Shalikashvili, for example, stated in his January 5, 2001, review of the CTBT (undertaken at the request of former President Bill Clinton after the the U.S. Senate rejected the treaty), "In my judgment, the challenges facing the Stockpile Stewardship Program can be managed, and the safety and reliability of the U.S. nuclear deterrent can be maintained indefinitely, so long as future administrations and Congresses provide high standards of accountability and sufficient resources to keep uncertainty as an acceptable level."¹⁹

As complex as these issues may be, it is possible to offer some judgments. First, the United States apparently believes it has a robust nuclear deterrent at the moment and that it has been able to maintain that deterrent successfully for the past ten years without additional tests. While the new Nuclear Posture Review proposes the acceleration of test preparedness by the Department of Energy and reaffirms that the Bush administration opposes the CTBT, the review also reaffirms that the administration will continue to adhere to the global nuclear testing

moratorium. Japan appreciates the moratorium and hopes that the United States will continue to adhere to it, pending the entry into force of the CTBT. The fact that the United States has not conducted tests since 1992 and continues to adhere to the moratorium is strong evidence that the U.S. nuclear force remains in good shape at this time. Otherwise the United States should have conducted tests by now.

Second, although possibility of deterioration of reliability because of aging cannot be ruled out, it will not come as a bolt out of the blue.²⁰ It is likely to take place gradually, over a long period of time, if at all. As the U.S. Stockpile Stewardship Program progresses, it will provide a better understanding of the problems related to reliability, improve the ability of the United States to predict when and how such problems might emerge, and offer new capabilities for preventing and fixing such problems by means other than tests. In the meantime, there are likely to be changes in other dimensions of reliability and deterrence, such as overall advances in technology, adjustments in U.S. relationships with countries of concern, new roles for nuclear and conventional weapons, revisions in the offense-defense balance, and the like. Given these uncertainties, it is premature to say that if the CTBT enters into force, the possible deterioration of reliability will take place in a manner that would undermine the U.S. deterrent. Time and successful implementation of the Stockpile Stewardship Program will provide better perspectives.

Third, from a legal point of view, a state party has the right to withdraw from the CTBT. Should the CTBT enter into force, and should a state party decide that extraordinary events related to the subject matter of the treaty have jeopardized its supreme interests, that state has the right to withdraw from the CTBT. To be sure it would be politically difficult for the United States to withdraw from the CTBT, but it is not impossible. The United States has decided to withdraw from the ABM Treaty, and the withdrawal clause of that treaty is similar to that of the CTBT. There were considerable disagreements in the United States regarding this move and objections from Russia, but after all was considered, the United States exercised its sovereign right and decided to withdraw from the ABM Treaty. What was possible with the ABM Treaty would be possible with the CTBT.

CTBT Verification

Although the CTBT is criticized for not being verifiable, in fact, the International Monitoring System (IMS)

established by the treaty can detect nuclear explosions of one kiloton and above and its effectiveness can be improved if necessary, without seeking perfect detectability, which does not seem sensible. What the IMS cannot do is often highlighted, but it is also important to know what the IMS can do. By the end of 2001, 164 states had signed the CTBT, and 89 of those had ratified it.²¹ Site surveys of monitoring facilities were almost completed, and installation had been completed in some 105 stations.²² When it is completed, the IMS primary seismic system will provide three-station 90 percent detection thresholds below 500 tons on all continents and below 200 tons for all historic test sites in the Northern Hemisphere. The IMS hydro-acoustic system will be able to detect explosions with yields equivalent to a few pounds of dynamite in most of the Southern oceans.²³

That said, it is true that the international monitoring system of the CTBT cannot detect very small nuclear explosions. During the negotiation of the treaty, the negotiators made the point that it is especially difficult to detect the detonations that take place inside cavities, in soft earth structures like sand, just above the ocean surface under thunderstorms, or that take place simultaneously at the same location. Technically it would have been possible to establish an IMS that is more effective than the current one, but considering cost-effectiveness, the negotiators agreed to the current level of the detectability.

Views are divided in the United States on the question of how serious the inability to detect small explosions and evasive tests may be. The Shalikhvili report states, "Nuclear weapon states could not make a major qualitative breakthrough without testing above several kilotons."²⁴ The National Institute for Public Policy Report says, "On the contrary, there are two tremendous military advantages that could be obtained through clandestine nuclear testing by Russia or China—advantages which could undermine the effectiveness of the U.S. nuclear deterrent."²⁵

On balance, it would appear that while the IMS cannot always detect a very small secret test, it is the best compromise from the point of cost-effectiveness. Moreover, the effectiveness of the IMS can be improved after the entry into force of the CTBT, but seeking absolute detectability is not realistic.

Even without any modification, the CTBT and the IMS may function as a deterrent to prevent small tests. The IMS may be able to detect a small secret test when the

conditions are favorable or when camouflage efforts by the violator do not work as effectively as planned. While the IMS cannot always detect a secret small test, other means such as human intelligence, disclosure by internal informers, and satellite imagery may do so. In short, there is no guarantee that a small secret test will never be detected. Moreover, a violation of the CTBT is likely to be treated very seriously by the international community and to trigger painful consequences for the violator. Thus, the risk of secret tests being detected and of a violator facing the grave consequences should work as a deterrent against such testing.

In addition, the argument that small undetected tests can have dire consequences for the United States does not correspond well with recent experience. The reason is that if the IMS and other measures cannot detect a small secret test by definition, a state cannot know whether an adversary is conducting them or not. If one state believes that such tests offer great military advantage to an adversary, the state cannot but assume that its adversary is conducting them, a conclusion that would then drive a state to conduct at least similar tests itself, to offset the advantages that its adversary had gained. Yet with the ability to rely only on verification systems that are weaker than those that will be in place under the CTBT, the United States has not conducted any nuclear tests for a decade—strong evidence that, at least to date, small secret tests by potential adversaries have not been a major source of concern for Washington.

If one believes that the current level of detectability is unsatisfactory, one can propose to improve it rather than reject the CTBT. In principle, the effectiveness of the IMS depends on the money invested, while agreement would be needed for any changes. During the negotiations on the treaty, several options were proposed to establish a more effective IMS than the current one. For example, China proposed to include satellites and electro-magnetic pulse monitoring as elements of the IMS, and Russia proposed to include around-the-clock airborne monitoring. These measures were believed to enhance the effectiveness of the monitoring system, but negotiating parties did not support them because they are expensive. Improving the effectiveness of the IMS is achievable, if countries agree to spend more money and to amend the treaty after its entry into force. At the UN Conference on Facilitating the Entry into Force of the CTBT in November 2001, former Russian Minister of Defense Igor Sergeyev suggested that Russia is interested in “considering the possi-

bility to develop additional verification measures for nuclear test range going far beyond the existing provisions” once the CTBT enters into force. Sergeyev said such measures could include “exchange of geological data” or installation of additional sensors.”²⁶

Finally, it is impossible to obtain absolute detectability. As is true for everything in real life, reducing the risk of failure to zero or guaranteeing 100 percent success is impossible. In case of the IMS, the real problem is to achieve a reasonably satisfactory level of detectability. During the negotiations on the CTBT, the parties found it reasonable to draw the line at one kiloton and above. Should that no longer be acceptable, it would be more productive to discuss what must be done to reach an acceptable level rather than to reject the treaty altogether.

Japan and the U.S. Nuclear Umbrella

Reflecting its historical experience, Japan has been promoting the CTBT as one of its highest disarmament and nonproliferation priorities, a stance that is not in contradiction with Japan receiving protection under the U.S. nuclear umbrella.²⁷ While most observers abroad believe that Japan can fabricate nuclear weapons, Japan is firmly committed not to become a nuclear weapon state.²⁸ Japanese public opinion is strongly against nuclear weapons. Nor would becoming a nuclear weapon state serve Japanese economic, diplomatic, and security interests. Japanese non-nuclear weapon policy is solidly established through adherence to international treaties, codifying domestic laws, and policy declarations at the highest level. In the international arena, Japan has consistently advocated nuclear disarmament and nonproliferation. In particular, the CTBT has been one of the highest priorities for Japan. The Japanese public has a strong resentment against nuclear testing, and the strong protests triggered in Japan by the resumption of nuclear tests by France and China in 1995 are still a fresh memory.

Some may argue that Japanese dependence on the nuclear umbrella of the United States on the one hand and pursuing the CTBT on the other hand is a contradiction. It should first be recalled, however, that the fundamental reason for Japan being under the U.S. nuclear umbrella is to ensure Japanese national security. Therefore, the question that should be addressed is whether the entry into force of the CTBT will have a negative impact on the security of Japan or on that of the Asia-Pacific region more generally. In fact, it is not the entry into force

of the CTBT, but rather its failure to enter into force that will adversely impact the Japanese security, because of the chain reaction of nuclear test resumption this could trigger and its ensuing consequences. If the CTBT does not enter into force, sooner or later nuclear explosive tests will be resumed. If one country resumes tests, most probably the other nuclear weapon states will do the same.

Japan is surrounded by three nuclear weapon states, and the resumption of tests by each country may adversely affect Japanese security in a different way. Although, for example, Russia is not perceived today as a threat to Japan, during the Cold War, the former Soviet Union was such a threat; if Russia resumed tests and strengthened its nuclear forces the situation would look all too much like a return to the past. China is a nuclear weapon state, but most Japanese do not view it as a threat for now. If China resumed nuclear tests and strengthened its nuclear forces, however, it would raise concerns in Japan, and bilateral relations could deteriorate. The United States is the closest ally of Japan, but its resumption of nuclear tests could cause widespread protest in Japan. Such discord between the two countries would not be beneficial for the strength of their alliance. It is difficult to speculate on how serious the problem might become, because it would depend very much on the situation in which the resumption of tests took place. In any event, however, it would adversely affect the security environment in the Asia-Pacific region.

Finally, it should be noted that Japan believes that entry into force of the CTBT will provide Japan concrete security benefits by restraining the nuclear arsenals of both the larger and the lesser nuclear powers. In contrast, many Japanese observers believe that the possible erosion of confidence in the technical reliability of the U.S. nuclear umbrella is far more speculative—and they point out that several safeguards are available to address the reliability question, including the right of the United States to withdraw from the CTBT if its supreme national interests are jeopardized. Entry into force of the CTBT would thus offer new security benefits for Japan without damaging long-standing security guarantees. In sum, while recognizing the arguments of CTBT critics, Japan remains strongly committed to the treaty.

Deep Cuts in Nuclear Forces

On November 13, 2001, U.S. President Bush announced that over the next ten years, the United States would reduce its strategic nuclear arsenal to between 1,700

and 2,200 deployed strategic warheads. Russian President Putin responded that Russia would reduce its forces to 1,500 to 2,200 deployed strategic warheads. The U.S. Nuclear Posture Review submitted to Congress on January 9, 2002, gave some details of the reductions promised by President Bush. Talks between the United States and Russia are now taking place on the reductions promised by the two presidents.

Japan welcomes the deep cuts announced by Presidents Bush and Putin. Two points are of particular salience. One is that this step is the first concrete move to downsize U.S. and Russian nuclear forces since the early 1990s. In the intervening years, there were attempts to accelerate such reductions, but they were not realized. In 1993, for example, the United States and Russia agreed to reduce deployed strategic nuclear warheads to 3,000 to 3,500 in the Strategic Arms Reduction Treaty (START) II, but the ratification of the pact by the United States in 1997 and by Russia in 2000 were conditional, and, as a result, the treaty has not yet entered into force. In 1997, Presidents Clinton and Yeltsin agreed to start negotiations on START III to reduce deployed strategic warheads to 2,000-2,500, but the negotiations never began. Thus, the recent announcement on deep cuts by Presidents Bush and Putin is the first concrete move since the early 1990s.

The second point of importance to Japan is that the new Nuclear Posture Review seems to advocate a decreasing role for nuclear forces in the U.S. deterrent strategy. In a letter to Congress, U.S. Secretary of Defense Donald Rumsfeld wrote that the review establishes a “New Triad,” to replace the preexisting U.S. nuclear triad consisting of land-based missiles, submarine-based missiles, and strategic bomber forces. The new triad, wrote Rumsfeld, consists of offensive strike systems (both nuclear and conventional); defenses (both active and passive); and a revitalized defense infrastructure that will provide new capabilities in a timely fashion to meet emerging threats.” Rumsfeld continued, “The establishment of the New Triad can both reduce our dependence on nuclear weapons and improve our ability to deter attack in face of proliferating WMD capabilities.”²⁹

Reducing the dependence on nuclear force is a sensible option for the United States, because nuclear deterrence is not effective to deter some threats, such as that posed by terrorists; because the United States has the strongest comparative advantage in its conventional forces; and because there is a need to distribute U.S. resources in the most efficient way. It will be necessary to follow future

developments carefully, but the reduction in dependence on nuclear weapons meets the commitment made in the final document adopted by the 2000 NPT Review Conference³⁰ and Japanese disarmament policy objectives.

Although it is possible to identify shortcomings in the planned deep cuts announced by the United States, they represent realistic progress for the coming ten years. Some have criticized the deep cuts announced by President Bush, and the January 2002 Nuclear Posture Review, stressing the following points.³¹

- The downloaded U.S. warheads removed from operational deployment will be preserved for what the U.S. Department of Defense calls the “responsive force.” Some warheads removed from strategic delivery vehicles will be dismantled, but the others will be maintained in the stockpile. These warheads in “the hedge,” whose exact numbers will not be disclosed, can be uploaded onto the delivery vehicles in a short period of time. This approach undercuts the principles of “transparency and irreversibility” in nuclear arms reductions.
- The deep cuts do not address the issue of non-strategic nuclear weapons. Thousands of non-strategic weapons are held in the U.S. and Russian arsenals and none are subject to bilateral monitoring or controls under existing treaties or agreements. These systems pose a serious danger of theft or diversion by terrorists or other countries.
- Despite the dramatic rhetoric, the triad of land-based, sea-based, and aircraft-based strategic delivery systems from the Cold War period is to be retained, as is the doctrine for nuclear use. The U.S. nuclear triad will not differ significantly from the force structure established under the Clinton administration. President Bush has repeatedly said the United States and Russia are no longer enemies, but the U.S. nuclear arms are still balanced against those of Russia.
- Reducing to 1,700-2,200 deployed strategic warheads is equivalent to the reduction to 2,000-2,500 considered by the Clinton administration, because the Bush administration has changed certain counting rules. Previous administrations counted all strategic warheads that were deployed as forces in the active inventory, even if the systems on which they were deployed were in the process of refurbishment, but the Bush administration counts only “operationally deployed warheads,” excluding systems undergoing major overhaul. For these reasons, reduction to 1,700-2,200 is not a deeper cut than the one agreed in 1997 as the goal of START III.

- The reductions could be deeper in size and faster in pace.

There is considerable merit to these arguments, particularly those concerning “the hedge” and non-strategic nuclear weapons. It would be far better if warheads now intended to be preserved for the responsive force were dismantled and the fissile materials removed from them burned as nuclear power plant fuel or otherwise made unusable for military purposes. Without such measures, these warheads might be uploaded in a short period of time or used to make new bombs, creating the risk of a destabilizing arms race in a time of crisis. In the past, the United States destroyed a large number of its own decommissioned warheads, and helped Russia to do the same. If the United States discontinues the destruction of warheads removed from service, Russia will lose the incentive to destroy its own. Such a decision would increase the Russian stockpile, for which enhanced security measures are known to be needed and, in turn, increase the risk of theft or diversion by terrorists or other countries. Moreover, if the warheads in “the hedge,” both in the United States and Russia, were uploaded again, the trend of reduction in nuclear weapons would be reversed. It should be recalled that the 2000 NPT Review Conference agreed that “the principle of irreversibility to apply to nuclear disarmament, and to nuclear and other related arms control and reduction measures.”³²

Concerning non-strategic nuclear weapons, which are not addressed in the planning for deep cuts, the United States is estimated to possess over 1,600 tactical nuclear weapons, while Russia is estimated to possess some 4,000 to 5,000 of these weapons, although estimates are uncertain and conflicting. As these weapons are more susceptible to theft and unauthorized or accidental use than deployed strategic systems, this issue needs to be addressed in the future.³³

That said, it must be recognized that what may be desirable is not always achievable in a limited amount of time. All things considered, it is understandable that the Bush administration has taken a cautious approach to reducing the U.S. strategic nuclear force to 1,700-2,200 deployed warheads by 2012. This is not “too little, too slow,” because it will take time to implement disarmament, the more so if warheads are to be destroyed and fissile material made unusable for weapons, as argued above. It should be recalled that the deployed strategic nuclear arsenals of the United States and Russia have been decreasing in size

respectively, from their peak in the late 1980s to around 10,000 warheads for each in the early 1990s, and to the current level of 6,000 each. From an historical and realistic point of view, around 2,000 deployed strategic warheads in 2012 would not be too bad.

U.S.-Russian deep cuts should serve as an example for other nuclear weapon states to reduce their nuclear forces. The U.S., Russia, France, and the United Kingdom have been reducing their nuclear forces since the end of the 1980s. But China is believed to be modernizing its nuclear force, and India and Pakistan, which conducted nuclear weapon tests in 1998, might increase theirs depending on the regional situation. As explained earlier, two measures should be taken to slow the nuclear arms race and decrease dependence on nuclear forces: curbing qualitative improvement of nuclear weapons and increases in their quantity. The CTBT is a measure to prevent qualitative improvement. To limit the quantity of nuclear weapons, several options are possible, including legally binding agreements, political arrangements, and unilateral measures. Probably it is best not to be too ambitious at the beginning of such an effort, but to start with a modest step. Such an approach would be for the United States and Russia to urge all other nuclear weapon states that have not yet done so to downsize their nuclear arsenals. Now that these two countries have decided to reduce their nuclear forces by two-thirds, they should have the moral high ground to influence other nuclear weapon states.

Japanese Position on the Elimination of Nuclear Weapons

Japan recognizes the role of nuclear weapons in the current world, and is under the nuclear umbrella of the United States, but it urges all nuclear weapon states to reduce their nuclear forces, with the objective of the total elimination of nuclear weapons. Japan has been pursuing the goal of creating a safe world without nuclear weapons, based on its historical experience of nuclear tragedy. In particular, Japan has been pursuing this objective by proposing a practical and realistic approach to nuclear disarmament.

Nevertheless, nuclear deterrence still continues to play an important role in maintaining security in the contemporary world. Japan is located in a region where tension is high, and it would be highly imprudent for Japan to depend solely on the good will of other countries to ensure its security. Moreover, leaving Japan without credible means of defense would create a power vacuum that

could cause further instability in Asia-Pacific region. That is the reason why Japan places itself under the nuclear umbrella of the United States.

In this regard, some may argue that the Japanese policy of calling on the nuclear-weapon states to reduce their arsenals on the one hand and being under the U.S. nuclear umbrella on the other is a contradiction. In the Japanese view, however, these approaches to national security are not in contradiction, just as Japan does not see its support for the CTBT and simultaneous reliance on U.S. nuclear security guarantees to be a contradiction.

First of all, one should recognize that the reduction in nuclear weapons itself does not necessarily undermine deterrence and security. There are historical examples showing that a properly designed and well-implemented reductions in nuclear forces do not undermine security but, rather, enhances it. A leading example is the 1987 INF Treaty, which eliminated an entire category of nuclear weapons and contributed to enhanced security in Europe. The United States and Russia (and, previously, the Soviet Union) have been reducing their nuclear forces since the end of the 1980s, but their security and that of the world has not been compromised by this reduction. It goes without saying that a hasty and/or poorly planned reduction that does not pay appropriate attention to the security needs of the parties involved may undermine their security. It is easy to imagine such a case, but it is hard to find one, historically, because countries actively protect their interests in negotiations on such important matters. The point is that the reduction in nuclear weapons is not a problem in itself; how to do it is the problem. Being well aware of the potential negative implications of reductions, Japan has never made an unrealistic proposal, but always fostered a practical and realistic approach that does not jeopardize security for itself or others.

Proposals such as “the elimination of nuclear weapons with a time bound framework” or a “nuclear abolition treaty” may undermine security, because one cannot foresee the security environment in which abolition will take place. For this reason, Japan does not support these ideas, even though it shares the objective of the elimination of the nuclear weapons.

The Japanese proposal is different from these. It sets the elimination of nuclear weapon as a goal, but recommends concrete and practical steps leading to that goal. In its latest UN General Assembly resolution entitled, “A Path to the Total Elimination of Nuclear Weapons,” submitted in 2001, Japan proposed 24 concrete steps towards

this objective. They include the early ratification of the CTBT, the commencement of Fissile Material Cut-Off Treaty negotiations, deeper reductions in nuclear weapons by all nuclear weapon states, strengthened efforts to prevent and curb the proliferation of weapons of mass destruction, safe custody and physical protection against the theft of sensitive materials, and promotion of the ratification by NPT non-nuclear weapon states of the Additional Protocol to their IAEA safeguards agreements. In the Japanese view, all of all these steps are concrete measures that work towards the goal of the total elimination of nuclear weapons. Unfortunately, as noted earlier, the United States voted against this resolution because it was opposed to the language on the CTBT, but the United States does not oppose to the Japanese approach to the elimination of the nuclear weapons itself. Notably, the United States voted in favor of a Japanese-sponsored resolution in 2000 that had a similar content to that of 2001.

Quite often, opponents to the elimination of nuclear weapons argue that it is not feasible in the foreseeable future to create a safe world without nuclear weapons. But this stance is contradictory to the observation that the future is so uncertain. Moreover, one should not confuse the attainability of a goal with the desirability of setting a goal. It is definitely possible to make concrete steps toward that goal even now. The reduction in nuclear forces just announced by the United States and Russia, or promoting the additional protocols to IAEA safeguards agreements are some practical steps leading to that goal.

Ballistic Missile Defense

Ballistic Missile Defense (BMD) can mean two things in the Japanese context: one is BMD that the United States is pursuing; the other is BMD that Japan may or may not introduce in Japan. Japan and the United States are closely consulting each other in this area.³⁴

U.S. BMD

The official Japanese position on U.S. BMD can be summarized in three sentences. Japan shares the recognition with the United States that the proliferation of ballistic missiles is causing a serious threat to U.S. security. It expresses understanding that the United States is considering a missile defense program. It also hopes that the issue will be dealt with in a manner conducive to the improvement of international security environment, including in the areas of arms control and disarmament.

First, Japan shares the sense of threat with the United States, because Japanese security is affected by ballistic missiles. According to *2001 Defense of Japan*, published by the Japanese Defense Agency, North Korea has long been suspected of developing nuclear weapons. The issue of suspected North Korean development of nuclear weapons affects not just the security of Japan; in terms of the nonproliferation of weapons of mass destruction, it is a crucial matter for the entire international community.

It is believed that North Korea has been producing and deploying Scud-B missiles and their variant Scud-C missiles, and exporting these ballistic missiles to countries in the Middle East and elsewhere since the mid-1980s. North Korea is thought to have embarked on the development of long-range ballistic missiles, starting with Nodong and others, by the 1990s. In 1993, it carried out a missile test over the Sea of Japan, and that missile is likely to have been a Nodong. The Nodong is thought to have a range of about 1,300 km and is able to reach almost all of Japan. North Korea is also believed to have been working on the development of a longer-range missile, the Taepo Dong-1, and to be in the process of developing the Taepo Dong-2. Taken together with its suspected nuclear weapons program, ballistic missile development and deployment by North Korea constitutes a destabilizing factor not only for the Asia-Pacific region, but also for the entire international community, prompting strong concerns.³⁵

Second, Japan views the ABM Treaty as essentially a matter between the United States and Russia, while fully recognizing that it has implications for the security of the international community. Based on this thinking, Japan abstained on the UN resolution on the ABM Treaty sponsored by Russia in 2000 and 2001. It hoped that the United States and Russia would intensify their talks on this issue, which they actually did, to find a mutually satisfactory solution. It turned out that the United States announced its withdrawal from the treaty on December 13, 2001. Thanks to the intensified talks, the negative impact seems to have been held to a minimum.

Third, BMD can affect disarmament both positively and negatively. Theoretically, it has a potential for diminishing the role of offense by increasing that of defense, and Japan hopes that it would function in this way. On the other hand, BMD may disturb the disarmament process. Russia and China may strengthen their nuclear arsenals as a response to the U.S. decision to withdraw from the ABM Treaty and its future deployments of BMD. But, insofar as the United States can demonstrate that BMD is

clearly targeted only against the threat from countries of concern, Russia and China do not have a strong case for strengthening their nuclear forces. Seeing developments after the U.S. decision to withdraw from ABM Treaty, the reaction from these countries has been relatively restrained. But it is premature to judge the future course of events. It is a welcoming sign that the United States is conducting a strategic dialogue with China. But Japan hopes that this dialogue will not end with the recognition by the United States that China should consider itself free to strengthen its nuclear forces to compensate for BMD.

Finally the United States does not seem to be moving toward an open-ended deployment of BMD, but rather trying to deal with the strategic threat it faces, by the reduction of nuclear weapons and by the maintenance of an appropriate deterrent. Japan welcomes this course of action and hopes that the reductions will further improve relations between the United States, Russia, and China.

Japanese BMD

The Japanese government decided in 1999 to conduct cooperative research with the United States on the Navy Theater-Wide Defense system. However, the government of Japan has not yet reached the point of deciding whether or not to introduce BMD. This decision is an extremely important one for Japan, and it will be taken at the highest political level at an appropriate time, after considering technical, financial, security, diplomatic, and other factors.

From the defense point of view, Japan is concerned about the threat posed by the ballistic missiles, as explained earlier. The Japan Defense Agency makes interesting points on this issue. Its report, *2001 Defense of Japan* states, "BMD is an important issue for Japan's defense policy, which is exclusively defense oriented" and "Japan has continued its BMD study to date, with the understanding that it is necessary to make efforts to tackle the issue independently, since BMD is purely a defensive measure and thus well suited for its defense policy."³⁶ From the diplomatic point of view, it is important to take up this issue in the talks between Japan and China that are currently taking place, because China has concerns about the eventual introduction of BMD in Japan. Through the talks thus far, China seems to have understood that the eventual introduction of BMD by Japan will not affect China's strategic nuclear force. Yet China continues to have concerns that a future Japanese BMD might adversely im-

pact Chinese missile capability in the context of its relations with Taiwan. Further talks are needed to eliminate this concern, but whatever decision Japan may take, Japanese BMD will have the sole objective of defending Japan.

CONCLUSIONS

This paper has sought to explain the Japanese position on a number of key nonproliferation and disarmament issues, based on the author's familiarity with official thinking on these matters. Stated simply, the main objectives of Japanese disarmament policy are to promote the cause of disarmament, as much as possible, while carefully paying attention not to unravel security and stability in the Asia-Pacific region and the world.

In the field of nuclear disarmament, Japan urges nuclear weapon states to take concrete steps to come closer to a world without nuclear weapons, but Japan does not advocate measures that may undermine its security or international security more broadly. Some criticize the Japanese position as too conciliatory toward the nuclear weapon states, but this argument misses the mark. For several decades, Japan has been urging the nuclear weapon states to agree to the CTBT, even when they have been reluctant to do so. In recent years, Japan has firmly protested against nuclear tests by France, China, India, and Pakistan, even though all of them are very important countries for Japan. Others criticize the Japanese position as too idealistic. In fact, Japan is very realistic. Japan recognizes the role of nuclear weapons in the current world. It has expressed its understanding of the American missile defense program at a time when almost all other countries criticized it. Japan, moreover, has never supported unrealistic approaches to the abolition of nuclear weapons, even though it shares this objective.

From the earlier discussion, it is clear that the main characteristics of the Japanese disarmament policy are balance between idealism and realism. As happens quite often in our daily lives, extreme views attract attention and get the spotlight. Yet, the role of sound middle-ground views should not be underestimated in dealing with sensitive issues such as nuclear disarmament. Japan can contribute, in cooperating with both nuclear weapon states and non-nuclear weapon states, to promote the cause of nuclear disarmament without undermining security relationships.

¹ The views expressed here are strictly personal, and do not represent those of the Japanese Government.

² The SSOD I is formally named, "The Tenth Special Session of the General Assembly." The meeting adopted a final document that is considered, "the Bible in disarmament." The names of treaties and agreements are taken from Jozef Goldblat, *Arms Control: A Guide to Negotiations and Agreements*, (Oslo: PRIO, 1994; London, Thousand Oaks, CA: Sage Publications, 1994).

³ China does not belong to any of these groups, but works as a group consisting of one country.

⁴ Japan Defense Agency, *2001 Defense of Japan* (Tokyo, 2001), p. 34.

⁵ *Ibid.*, p. 42.

⁶ *Ibid.*, p. 27.

⁷ The related paragraph of the Japanese-sponsored resolution from 2001 is as follows: "[The General Assembly Stresses] 3.(a) the importance and urgency of signatures and ratifications, without delay and without conditions and in accordance with constitutional processes, to achieve the early entry into force of the Comprehensive Nuclear-Test-Ban Treaty as well as a moratorium on nuclear-weapon-test explosions or any other nuclear explosions pending entry into force of the Treaty."

⁸ The procedural rule of the UN First Main Committee and the General Assembly is to adopt resolutions by the simple majorities, rather than by consensus.

⁹ Walter Pincus, "U.S. to Cut Arsenal to 3,800 Warheads," *Washington Post*, January 9, 2002, p. 10.

¹⁰ Kathleen Bailey, *The Comprehensive Test Ban Treaty: An Update on the Debate* (Fairfax, VA: National Institute of Public Policy, March, 2001). <<http://www.nipp.org/Adobe/CTBT%20Update.pdf>>

¹¹ In his January 5, 2001, report addressing concerns raised during the Senate's deliberations on the Comprehensive Test Ban Treaty, General John M. Shalikashvili, acting as Special Advisor to the President and Secretary of State, stated: "From a technical standpoint, it is true that a state could have some degree of confidence that an unsophisticated fission device would work without testing it, as the United States did with the bomb used against Hiroshima... The main technical constraints that the Test Ban Treaty places on nuclear weapon development involve the vertical progression from first-generation fission designs to more advanced fission weapons..." John M. Shalikashvili, *Findings and Recommendations Concerning the Comprehensive Nuclear Test Ban Treaty*, (Washington, DC: United States Department of State, January 2001), pp. 6-7. Other analysts have argued: "Nuclear testing is necessary for the development of sophisticated, new types of nuclear warheads. Although crude nuclear devices can be produced without testing, nuclear warheads small enough to be delivered by missiles would require nuclear test explosions." See Rebecca Johnson and Daryl G. Kimball, "Briefing Paper on the Status and International Security Value of the Comprehensive Nuclear Test Ban," Arms Control Association, September 24, 2001, p. 1, <<http://www.armscontrol.org/subject/ctbt/ctbtbrief01.asp>>.

¹² In this regard, it is important to note the disclosure by the U.S. Central Intelligence Agency that "[t]he Intelligence Community judged in the mid-1990s that North Korea had produced one, [or] possibly two, nuclear weapons, although the North has frozen plutonium production activities at Yongbyong in accordance with the Agreed Framework of 1994." National Intelligence Council, "Foreign Missile Developments and Ballistic Missile Threats through 2015," unclassified summary of the December 2001 National Intelligence Estimate, (Washington, DC, January, 2001, <http://www.senate.gov/~gov_affairs/031102witness.htm>

¹³ Historically, nuclear weapon states have done both.

¹⁴ "Principles and Objectives for Nuclear Non-Proliferation and Disarmament," NPT/CONF.1995/L.5, <<http://www.mcis.soton.ac.uk/Bb2secC.pdf>>

¹⁵ According to the NPT, its parties are to hold a review conference every five years. In that conference, the parties review the operation of the treaty and agree on specific objectives for advancing the purposes of the treaty in the coming years. The conclusions of the parties gathered at the review conferences are reflected in the final documents of each conference, which are adopted by consensus.

¹⁶ The ratification of the 44 countries, which in 1996 possessed nuclear power or research reactors, is required for entry into force of the CTBT.

¹⁷ Bailey, *The Comprehensive Test Ban Treaty*.

¹⁸ United States Department of State, "Interview: Under Secretary John Bolton

on U.S. Arms Control Policy," *Washington File*, August 14, 2001, <<http://usinfo.state.gov/products/washfile/>>.

¹⁹ Shalikashvili, *Findings and Recommendations*, p. 19.

²⁰ *Ibid.* On this point, the General Shalikashvili states, "Few nuclear weapon experts view sudden catastrophic failure of the nuclear deterrence more than a remote theoretical possibility."

²¹ Anthony H. Cordesman, *Weapons of Mass Destruction and the Global Nuclear Balance: A Quantitative and Arms Control Analysis*, (Washington, D.C.: Center for Strategic and International Studies, December 4, 2001), <<http://www.csis.org/burke/mb/nuclear.pdf>>.

²² Comprehensive Nuclear-Test-Ban Treaty Organization, Press Release, "Comprehensive Nuclear-Test-Ban Treaty—Five Years On," September 24, 2001.

²³ Shalikashvili, *Findings and Recommendations*, p. 12.

²⁴ *Ibid.*, p. 14.

²⁵ Bailey, *The Comprehensive Test Ban Treaty*.

²⁶ ITAR-TASS, "Russia May Offer Extra Control on Nuclear Testing Grounds," November 11, 2001; in FBIS Document CEP20011111000088.

²⁷ During the negotiations, there was a long and heated debate about whether the CTBT is a disarmament treaty or a nonproliferation treaty. The compromise was the language in the preamble that reads, "Recognizing that the cessation of all nuclear weapon test explosions and all other nuclear explosions, by constraining the development and qualitative improvement of nuclear weapons and ending the development of advanced new types of nuclear weapons, constitutes an effective measure for nuclear disarmament and nonproliferation in all its aspects." The general sense of the negotiators was that the CTBT has both characters.

²⁸ This view is not held by the Japanese government. As it has never tried to develop nuclear weapons since the end of World War II, it is not possible to say whether Japan can fabricate nuclear weapons or not.

²⁹ Letter of Secretary of Defense Donald Rumsfeld to the U.S. Congress on the 2002 Nuclear Posture Review, January 9, 2002, p. 1, <<http://www.defenselink.mil/news/Jan2002/d20020109npr.pdf>>.

³⁰ "A diminishing role for nuclear weapons in security policies to minimize the risk that these weapons will ever be used and to facilitate the process of their total elimination" was agreed to by the Conference. *Report of the 2000 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons*. (New York, April 24-May 19, 2000). Copies available through the United Nations Dag Hammarskjöld Library.

³¹ For commentary prior to and after the announcement of the reductions, see Hans M. Kristensen, "The Unruly Hedge: Cold War Thinking at the Crawford Summit," *Arms Control Today* 31 (December, 2001), <http://www.armscontrol.org/act/2001_12/kristensenov01.asp>; Ivo H. Daalder and James Lindsay, "A New Agenda for Nuclear Weapons," Brookings Institution, January 9, 2002, <<http://www.brookings.edu/comm/policy/briefs/pb94.pdf>>; and Richard Sokolsky, "Nuclear Underachievers," *Washington Post*, January 17, 2002.

³² *Report of the 2000 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons*.

³³ Alistair Miller and Brian Alexander, *Uncovered Nukes: Arms Control and the Challenge of Tactical Nuclear Weapons*, (Washington, D.C.: Fourth Freedom Forum, November 30, 2001).

³⁴ The Japanese position on BMD in early 2002 was as follows: (1) The Government of Japan (GOJ) shares the recognition with the United States that the proliferation of ballistic missiles is causing a serious threat to our security.

(2) The GOJ expresses the understanding that the United States is considering the missile defense program, while making various diplomatic efforts to address the proliferation of ballistic missiles. (3) The GOJ welcomes President Bush's reference to further cuts in nuclear weapons in his recent speech. (4) Japan and the United States are conducting cooperative research on ballistic missile defense technologies. As such bilateral cooperation is important for the security of Japan, we will continue to cooperate on the research. (5) The GOJ hopes that the missile defense issue will be dealt with in a manner conducive to the improvement of the international security environment, including in the areas of arms control and disarmament, and welcomes the United States' renewed announcement of conducting close consultation on this issue with allies, and such other interested states as Russia and China.

³⁵ Japan Defense Agency, *2001 Defense*, pp. 37-39.

³⁶ *Ibid.*, pp. 183-184.