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1. Basic stance

It is natural for Japan, the only country to have ever suffered nuclear devastation in Hiroshima and Nagasaki, to focus on disarmament and non-proliferation of nuclear weapons (nuclear disarmament and non-proliferation). Given the massive destructive power of nuclear weapons, it is also natural from a security point of view that Japan places high priority on nuclear disarmament and non-proliferation. In practice, Japan has played an active role in the international community for this issue, and has made a substantial contribution.

Japan's basic stance on nuclear disarmament and non-proliferation rests with two fundamental requests: ① a request for an effort toward the total elimination of nuclear weapons to improve Japan's security environment as the only country to have ever suffered nuclear devastation, as well as from a long-term perspective, and ② a request not to harm Japan's security while Japan relies on the United States' deterrence, including the nuclear one. Based on these fundamental requests, on the one hand Japan does rely on the United States' nuclear deterrent against nuclear threats, on the other hand Japan, being the sole country to have suffered nuclear devastation, adopts a realistic and incremental approach to realize a peaceful world free of nuclear weapons through practical disarmament measures to improve Japanese security environment. These fundamental stances are mentioned in "National Defense Program Outline in and after FY 2005" ("Against the threat of nuclear weapons, rely on the US nuclear deterrent, while working actively on international efforts for realistic and steady nuclear disarmament aiming at a world free from the nuclear weapons. Furthermore, Japan will play an active role in the international community to address the issue of disarmament and non-proliferation of other weapons of mass destruction, missiles and their means of delivery.")

2. Efforts to nuclear disarmament and non-proliferation

Japan ratified the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) in June 1976. Upon depositing the instrument of ratification, Japan explicitly stated, "Japan, as the only nation to have suffered atomic bombings, declares anew to the world its fundamental policy of forsaking nuclear armament." At the same time, Japan hoped "as many States as possible will become parties to this Treaty in order to make it truly effective." Furthermore, Japan strongly "urged" the nuclear-weapon states, which have special responsibilities for nuclear disarmament "to take concrete nuclear disarmament measures such as the reduction of nuclear weapons and the realization of a comprehensive nuclear test ban, in accordance with Article VI of this Treaty." Japan made such statements under the belief that "the nuclear-weapon states must rectify this discrimination in the future by totally abolishing their nuclear weapons" since "the NPT permits only the nuclear-weapon states to possess nuclear weapons and allows them a special status."

The basic stance of Japan on nuclear disarmament and non-proliferation and its support for the NPT have remained unchanged since Japan ratified the Treaty. The realization of a world free of nuclear weapons is the essential condition to ensure Japan's national security because Japan renounced its nuclear option by joining the NPT. At the same time, Japan, as the only nation that has suffered atomic bombings, has a humanitarian responsibility to the international community to advocate the total elimination of weapons of mass destruction, in particular nuclear weapons. Therefore, Japan emphasizes the importance of making diplomatic efforts to implement concrete measures based on a practical and incremental approach so as to achieve its objectives of total elimination of nuclear weapons as early as possible. Instead of arousing negative reactions in nuclear-weapon states by making unrealistic and radical requests that may not be acceptable to them, and thereby causing a stalemate in nuclear disarmament, Japan intends to engage nuclear-weapon states in nuclear disarmament and build up feasible measures one by one, taking into account the undeniable reality that nuclear weapons still exist and that they serve as a deterrent.

Based on those basic stances on nuclear disarmament and non-proliferation, Japan attaches great importance to the NPT as the foundation to achieve the goals of nuclear disarmament and non-proliferation. In addition, Japan also regards the International Atomic Energy Agency (IAEA) safeguards and the Comprehensive Nuclear-Test-Ban Treaty (CTBT) as major pillars supporting the NPT regime.

The NPT is the most universal disarmament and non-proliferation treaty, ratified by 189 state parties. However, there are states that are not yet parties to the treaty, as well as countries suspected of developing nuclear weapons clandestinely in violation of the treaty (North Korea, etc.). There are three important measures to strengthen the nuclear non-proliferation regime: ① to further enhance the Treaty's universality; ② to strengthen the capability to verity the compliance with the obligations under the Treaty by the State Parties; ③ to take appropriate measures to rectify breaches of the Treaty when they occur.

The IAEA safeguards measures play an important role in verification. By ensuring to prevent nuclear materials and activities for peaceful purposes from being diverted to military ends, it makes nuclear non-proliferation effective through controlling nuclear materials. Triggered by covert nuclear weapon development programs conducted by Iraq and North Korea that had been brought to light during the early 1990s, the importance of strengthening the traditional safeguards systems was recognized. As a result of strenuous work and deliberations, the IAEA adopted a Model Additional Protocol in May 1997. The Additional Protocol is designed with the main aims of further enhancing IAEA's capacity to detect undeclared nuclear activities, by expanding the scope of facilities to be inspected by the IAEA and by granting the IAEA to inspect with shorter advance notice.

Japan concluded the Additional Protocol in December 1999 as the first state possessing nuclear-power reactors for commercial use. However, as of January 2006, only 107 states had signed the Additional Protocol, and only 73 of these countries had placed it into effect.

It is an urgent task to universalize the Additional Protocol, so Japan has been vigorously making efforts to this end. Since the latter half of 2004, as a member of the G8, Japan has issued a demarche to non-signatory states of the Additional Protocol and also made a human and financial contribution to various seminars hosted by the IAEA to promote the universalization of the Additional Protocol. While prohibiting non-nuclear-weapon states from developing and acquiring nuclear weapons, the NPT obliges the nuclear-weapon states to make efforts toward disarmament in good faith. Therefore, if nuclear-weapon states only emphasize the nuclear-non-proliferation aspect of the NPT regime and disregard their obligations for nuclear disarmament, it

may endanger the credibility of the NPT regime itself, and result in the weakening of the NPT regime. From this perspective, Japan has been persistently urged the nuclear-weapon states to make progress in nuclear disarmament process.

When the indefinite extension of the NPT was decided in 1995, the international community agreed to promote negotiations on the CTBT as one of the nuclear disarmament measures to be implemented by nuclear-weapon states. Japan has been making active diplomatic efforts for the early entry into force of the CTBT since Japan regards the treaty as an effective and practical measure to achieve both nuclear disarmament and non-proliferation. The entry into force of the CTBT still seems far away given the fact that states such as the US, China, India, Pakistan, and North Korea, whose ratifications are required for the entry into force of the Treaty, have not yet signed or ratified it. Nevertheless, fully convinced of the importance of establishing the International Monitoring System, which is a verification measure of the CTBT and to set up a network to monitor nuclear tests around the world, Japan has been making earnest efforts to install monitoring facilities in Japan and to provide technical assistance to other states. (See Section 3, Chapter 3, Part III of this book for details of Japan's efforts for the early entry into force of the CTBT.)

The next significant issue to the CTBT in the multilateral disarmament and non-proliferation negotiations is the adoption of the Fissile Materials Cut-off Treaty (Cut-off Treaty). The Cut-off Treaty, intended to ban the production of fissile material that could be used to produce nuclear weapons, is a concrete measure of nuclear non-proliferation and disarmament. It is an urgent task to activate the Conference on Disarmament for early commencement of negotiations on this Treaty.

It is also of great significance to develop practical international cooperative projects not only to form agreements, but to implement them for nuclear disarmament and non-proliferation. Such demand has been generated in the international environment after the Cold War, and Japan has deployed active efforts for such projects under the policy referred to as "Disarmament in Action." Japan is cooperating within the framework of G8 to ensure the safe control of fissile materials such as plutonium removed from dismantled nuclear weapons of Russia, to dispose such materials so that these materials will not be used again in the manufacture of nuclear weapons, and to prevent the outflow of nuclear scientists from Russia and Ukraine. The dismantlement projects of decommissioned nuclear submarines in Far East Russia (the so-called "Star of Hope") (See Section 3, Chapter 8, Part III) are placed in the context of this type of cooperation. Such cooperation is becoming increasingly important not only to promote nuclear disarmament, but also to minimize the risks of nuclear weapons, fissile materials and related technologies falling into the hands of countries of concern or terrorists.

3. Submission of Japan's draft resolution on nuclear disarmament to the UN General Assembly

The resolution proposed by Japan to the UN General Assembly every year since 1994 summarizes and clearly demonstrates the basic stance of Japan on nuclear disarmament and nonproliferation. Japan presented draft resolutions entitled "Nuclear Disarmament with a View to the Ultimate Elimination of Nuclear Weapons" during the period from 1994 and 1999, which was supported by the overwhelming majority of the international community. This idea of "the ultimate elimination of nuclear weapons" was incorporated into the document adopted at the NPT Review Conference in 1995 (the Conference takes place every 5 years) entitled "Principles and Objectives for Nuclear Non-proliferation and Disarmament." It was quite meaningful that nuclear-weapon states undertook to pursue the objective of "the elimination of nuclear weapons" even through it was qualified by the word "ultimate."

At the NPT Review Conference held in 2000, the Final Document was adopted unanimously. The Final Document mentions "practical steps for the systematic and progressive efforts on nuclear disarmament" that have to be taken up by the international community, which include the early entry into force of the CTBT, and the immediate commencement of negotiations on the Cut-off Treaty with a view to its conclusion within five years. In the Final Document, an "unequivocal undertaking" by the nuclear-weapon states to accomplish the total elimination of their nuclear weapons was agreed on. This undertaking marked a step forward ahead of Japan's resolution "Nuclear Disarmament with a View to the Ultimate Elimination of Nuclear Weapons," and it is safe to say that Japan's resolutions laid the groundwork for this progress.

Based on these achievements, Japan submitted a new nuclear disarmament resolution entitled, "A Path to the Total Elimination of Nuclear Weapons," instead of "Resolution on the Nuclear Disarmament with a View to the Ultimate Elimination of Nuclear Weapons" at the United Nations Millennium General Assembly in 2000; this resolution was adopted by an overwhelming majority. This resolution indicated a concrete path based on a practical and incremental approach towards the realization of the total elimination of nuclear weapons, with the goal of "a world free of nuclear weapons." This resolution contained progressive measures in addition to those in the Final Document of the 2000 NPT Review Conference, including further reduction of nuclear weapons with a view to their total elimination, while ensuring an appropriate balance between nuclear disarmament and nuclear non-proliferation.

Since 2001, the US has drastically changed its approach from that of the previous US-Russia nuclear arms control regime. While pursuing unilateral reduction of its nuclear weapons, the US took a passive or negative stance against several multilateral treaties on disarmament and nonproliferation: for example the CTBT. Under such circumstances, Japan has continued to submit the draft resolutions on nuclear disarmament to the UN General Assembly. In 2004, Japan submitted a draft resolution on nuclear disarmament entitled "A Path to the Total Elimination of Nuclear Weapons." This time again Japan was inspired by its consistent stance based on the practical and incremental approach and aimed at bringing about a peaceful and safe world free of nuclear weapons through the accumulation of specific measures for nuclear disarmament. The draft was prepared with due consideration to the expression of growing concerns over proliferation of weapons of mass destruction and to increasing emphasis on the importance of the compliance with the NPT, thus reflecting shared views emerging from recent developments in the international scene. This draft resolution was adopted by an overwhelming majority at the UN General Assembly. In light of the failure of the NPT Review Conference in May 2005 and the lack of reference to disarmament and non-proliferation in the UN World Summit Outcome in September of the same year, Japan submitted a new resolution entitled "Renewed determination towards the total elimination of nuclear weapons" which continues to enjoy overwhelming support from the international community (adopted at the UN General Assembly with 168 votes in favor.)

Chapter 2. The Treaty on the Non-Proliferation of Nuclear Weapons (NPT)

Section1. Outcome of the 2005 NPT Review Conference and future issues

The 2005 Review Conference of the Parties to the Treaty on the Non-proliferation of Nuclear Weapons (NPT) was held in New York from May 2 to 27. Ambassador Sergio Queiroz-Dearte of the Federal Republic of Brazil presided over the Conference. Mr. Nobutaka Machimura, Minister for Foreign Affairs of Japan (then) (Head of Delegation), made a statement on the first day of the Conference. The Parliamentary Secretary for Foreign Affairs, Mr. Katusyuki Kawai, attended the NGO session and invited the NGOs that attended the session to a reception at which he made opening remarks.

1. Outcome of the Conference

The NPT Review Conference is held every five years with the objective of reviewing the operation of the Treaty in accordance with Article VIII of the Treaty. Substantive discussions were to take place in Main Committee I (disarmament), II (non-proliferation) and III (peaceful use of nuclear energy). Each Committee was appointed with the task to make a consensus report on the substantive issues allocated to each Committee and to submit it to the Plenary for adoption as an integral part of a final document. To gauge the degree of success, attention of the world public seemed to focus on whether or not substantive agreements could be reached, and the content of such agreements.

The 2005 Review Conference began without even having reached a decision on procedural issues (the agenda and the establishment of subsidiary bodies) although they were supposed to be settled before the Conference. Two thirds of the Conference was spent in order to resolve these procedural issues due to differences of views between the Non-Aligned Movement states, centering on the Middle Eastern countries on one hand, and the Western countries on the other hand. As a result, time for substantive discussion and for coordination on the language of the final document was extremely limited.

Although each of the three Main Committees held substantive discussions, none of them were able to produce a consensus document on substantive issues. There were two constraints posed on the Conference: first was the severe time constraint; second, the consensus rule which posed a constraint to reach agreements among concerned States Parties and groups of States Parties on some major issues such as the Middle East (treatment of Israel, etc.), Iranian nuclear issues and nuclear disarmament issues including the Comprehensive Nuclear-Test-Ban Treaty (CTBT). Furthermore, the President of the Conference did not issue any statement on substantive issues at the end of the Conference.

Nonetheless, many States Parties pointed out at the Conference the important role of the NPT in ensuring international peace and security as well as the necessity of compliance with it. Many States Parties and groups of States Parties, including Japan, the EU and G10 (note: a group of western countries formed mainly for the purpose of nuclear non-proliferation and peaceful use of nuclear energy; Australia and New Zealand are among the member states.), presented useful proposals to the Conference for strengthening the NPT regime.

2. Japan's efforts

Prior to the Review Conference, Japan held an NPT Seminar in Tokyo in February 2005, in which President Duarte and other ambassador-level officials participated, in an effort to facilitate the smooth operation of the Conference. Japan also actively contributed to the Review Conference in May 2005.

Foreign Minister Machimura made a statement on the first day of the Conference. Japan submitted a proposal entitled "21 Measures for the 21st Century", which comprehensively covers three pillars of the NPT (nuclear disarmament, non-proliferation, and peaceful use) (of which the nuclear disarmament-related section was jointly proposed with Australia), and Japan made every effort for these measures to be reflected in the final document. Japan also submitted a comprehensive working paper on its position and two reports on nuclear disarmament and on the implementation of the 1995 Middle East Resolution. Furthermore, Japan and seven other countries jointly submitted a working paper on disarmament and non-proliferation education and Japan submitted a working paper introducing Japan's efforts.

In the second week of the Conference, Parliamentary Secretary Kawai attended the NGO session and subsequently held a reception for NGOs, which called attention to Japan's stance of emphasizing dialogue with NGOs in the field of disarmament and non-proliferation.

With regard to the DPRK's nuclear issues, Japan kept close contact with the United States and the Republic of Korea (ROK) from an early date, and held a number of consultations with China, Russia, and the President of the Conference and others, with the aim of reflecting in the final document Japan's stance that the DPRK's nuclear program is a grave threat to the NPT regime and that Japan does not accept any nuclear program of the DPRK.

At the Conference, Japan called for a further reduction in nuclear weapons. Prior to the Conference, in April, Foreign Minister Machimura sent letters to Foreign Ministers of all the states that have yet to ratify the Comprehensive Nuclear-Test-Ban Treaty (CTBT) and whose ratification is required for its entry into force, including the US, urging them to ratify the CTBT at an early date. Japan also held a meeting of the CTBT Friends while the Conference was in session.

Japan reiterated its position on the importance of universalizing the Additional Protocol of the International Atomic Energy Agency (IAEA), which was supported by many countries. As for the peaceful use of nuclear energy, Japan expressed its support for promoting the IAEA's efforts in the fields of nuclear safety and security and stressed the importance of technical cooperation. At the final stage of the Conference, Foreign Minister Machimura issued an emergency appeal calling on States Parties to cooperate further in order to make the Conference a success.

3. Evaluation

Japan finds it regrettable that the 2005 Review Conference was unable to produce a final consensus document on substantive issues, thus missing an important opportunity to send a strong message for strengthening the NPT regime. The following factors can be considered the main reasons behind this result.

- There were serious differences in views regarding the Middle East issues and the Iranian nuclear issue.
- ⁽²⁾ The rule that "every effort should be made to reach agreement on substantive matters by

means of consensus" was abused and applied to procedural matters.

- ③ From the beginning, the prevailing view was that it would be difficult to agree on more substantive content than that in the 2000 Final Document. Many countries thought it was better to retain the 2000 agreement than to compromise and agree on less favorable content.
- ④ There was a wide gap between States Parties with respect to their stance on nuclear disarmament issues including the CTBT.
- (5) The perceived gravity of the proliferation threat was not necessarily shared by all States Parties.
- (6) In addition to the above, considerable time was spent for sorting out procedural issues, leaving limited time for substantive discussions. In particular, the time available to seek out consensus language for the final document was extremely insufficient.

Nonetheless, many States Parties including Japan and groups of States Parties submitted useful proposals of various kinds in order to contribute to the Review Conference. Japan believes that the intensive exchange of opinions on these proposals provided valuable material for future work on strengthening the nuclear disarmament and non-proliferation regime.

The failure to produce a consensus document on substantive issues at this Conference must not diminish the authority of the NPT regime and negatively affect individual issues of nuclear disarmament and non-proliferation. In order to avoid such a situation, Japan believes that it has become even more urgent to strengthen specific measures with a view to reinforcing the international nuclear disarmament and non-proliferation regime by cooperating with major countries and working through frameworks such as the G8, the IAEA, the Conference on Disarmament, the Nuclear Suppliers Group (NSG), the First Committee of the United Nations General Assembly, and the Asian Senior-Level Talks on Non-proliferation (ASTOP).

Section 2. Developments prior to 2005

1. Progress in international nuclear non-proliferation regime to date

The NPT has been one of the most successful disarmament and non-proliferation treaties, and has greatly contributed to the maintenance of international peace and security as one of the main pillars of the nuclear non-proliferation regime since it entered into force in 1970.

The universality of the treaty has drastically increased, especially since the end of the Cold War. South Africa abandoned its nuclear weapons, and acceded to the treaty as a non-nuclear-weapon state in 1991. France and China acceded to the treaty as nuclear-weapon states in 1992. Kazakhstan, Belarus, and Ukraine, which became independent from the former Soviet Union, transferred their nuclear weapons within their territories to the Russian Federation and had all acceded to the treaty as non-nuclear-weapon states by 1994. Also, Brazil and Argentina, after overcoming many years of mutual rivalry, renounced their nuclear development programs and acceded to the treaty as non-nuclear-weapon states (Argentina acceded to the treaty in 1995, Brazil in 1998). Also, Cuba and East Timor ratified the NPT in 2002 and 2003 respectively.

While the universality was almost being established, several serious challenges emerged in the 1990s that threatened the international nuclear non-proliferation regime founded on the NPT.

One of these issues is the nuclear capacity of non-state parties, India and Pakistan, neither

signatory to the NPT, which conducted nuclear tests one after another in 1998. These two countries continue to have the capacity to manufacture nuclear weapons. In addition, Israel takes the stance that it neither denies nor confirms that it has nuclear weapons. It is extremely difficult to persuade theses countries to accede to the NPT: however, Japan has been calling these three NPT non-state parties for an early accession to the treaty. (See Part II "Regional non-proliferation issues and Japan's efforts".)

The issue of a nuclear weapon development program disguised as a peaceful nuclear power program has been of particular concern in recent years. There is an extremely serious case exemplified by North Korea. It announced its withdrawal from the NPT after launching the nuclear weapons program and declared itself a nuclear-weapon state. The non-compliance issue not only has a negative impact on the credibility of the NPT but may jeopardize the NPT regime from within, and therefore it will directly and seriously threaten international peace and stability. Japan has been making a series of efforts in this regard toward the peaceful resolution of these issues in cooperation with countries concerned. (See Part II "Regional non-proliferation issues and Japan's efforts".)

Under such severe circumstances, the international community is faced with the crucial task of deciding how to maintain, strengthen and further universalize the international regime of nuclear non-proliferation and disarmament founded on the NPT.

2. The NPT Review and Extension Conference in 1995 and decision of indefinite extension of the NPT

The NPT stipulates that a conference shall be held at five-year intervals in order to discuss the operational issues of the treaty. Since nuclear-weapon states and non-nuclear-weapon states have different obligations under the NPT regime, it is significant for state parties to inspect the compliance with the NPT among themselves, for the sake of better transparency and confidence building. Japan also regards this perspective as important.

The NPT also stipulates that, 25 years after the entry into force of the treaty, a conference shall be convened to decide whether the treaty shall continue in force indefinitely, or shall be extended for an additional fixed period or periods. In accordance with this provision, 25 years after the entry into force of the NPT, the NPT Review and Extension Conference was held in New York from April to May 1995. As a result, at the Conference, it was decided by consensus without voting that the NPT would be extended indefinitely, and the decision on "Principles and Objectives for Nuclear Non-Proliferation and Disarmament" and "Strengthening the Review Process for the Treaty" was concurrently adopted. Also adopted was the "Resolution on the Middle East."

The "Principles and Objectives" adopted at the Conference listed the future nuclear disarmament measures to be taken mainly by the nuclear-weapon states, such as: the nuclear-weapon states are to pursue efforts for nuclear disarmament with the goal of ultimate elimination of nuclear weapons; negotiations on the Comprehensive Nuclear-Test-Ban Treaty (CTBT) should be completed no later than 1996; pending the entry into force of the CTBT, the nuclear-weapon states should exercise the utmost restraint not to conduct a nuclear test; and the immediate commencement and early conclusion of negotiations on the Cut-off Treaty. Thus nuclear disarmament measures to be taken by the nuclear-weapon states were stipulated in the adopted resolution as well as the decision to extend the treaty indefinitely. Behind these achievements was the fear on the part of the non-nuclear-weapon states which thought the indefinite extension of the NPT would perpetuate the distinction between the nuclear-weapon states and the nonnuclear-weapon states which is clearly drawn in the NPT, and therefore they were firmly determined to have the nuclear-weapon states commit themselves to the objectives of nuclear disarmament as unambiguously as possible, in return for supporting the indefinite extension of the treaty.

In addition, Japan presented to the First Committee of the UN General Assembly, the "Draft Resolution on the Nuclear Disarmament with a View to the Ultimate Elimination of Nuclear Weapons" in the fall of 1994, and it was adopted with an overwhelming majority. This resolution showed the future direction in which international efforts for nuclear non-proliferation and disarmament would be engaged. The substance of this resolution was reflected in the "Principles and Objectives" mentioned above.

3. The 2000 NPT Review Conference

Subsequent to the decision of indefinite extension of the NPT in 1995, the first Review Conference was held in New York from April and May 2000. The situations surrounding disarmament and non-proliferation at that time were severe: the progress of nuclear disarmament was in stalemate and furthermore, the international community was facing a serious nuclear proliferation crisis triggered by the nuclear tests by India and Pakistan in 1998, etc. Nonetheless, the conference successfully adopted the Final Document, which included thirteen "practical steps" toward future nuclear disarmament and non-proliferation. It was adopted by consensus after overcoming several crises when negotiations almost broke down in the course of four weeks of discussions.

The main "practical steps" agreed upon at this conference are listed below. They include a range of measures, some of which should be carried out immediately while others should be fully considered over a long period of time.

Especially notable were the activities of the New Agenda Coalition (NAC) consisting of the following non-nuclear-weapon states: Sweden, Ireland, New Zealand, South Africa, Egypt, Mexico, and Brazil. The NAC stated its position in the 8 countries' Joint Declaration in June 1998. (The NAC at that time consisted of eight countries including Slovenia.) The NAC advocated that the nuclear-weapon states should make an unequivocal undertaking to accomplish the total elimination of their nuclear arsenals. This position was reflected in the outcome of conference, and made the goals of nuclear elimination more specific and realistic.

Japan actively coordinated preparations for the 2000 Review Conference from an early stage, and these efforts contributed to its success. At the Conference, Japan presented the practical "Eight-item Proposals" covering measures designed to advance nuclear disarmament and non-proliferation, and which provided a foundation for consensus building.

(Reference) "Practical steps" toward future nuclear disarmament and non-proliferation (adopted at the 2000 NPT Review Conference)

- Early entry into force of the CTBT;
- A Moratorium on nuclear testing pending the entry into force of the CTBT;
- To urge the Conference on Disarmament to agree on a program of work which includes the immediate commencement of negotiations on the Cut-off Treaty with a view to their conclusion within five years;
- To urge the Conference on Disarmament to immediately establish an appropriate subsidiary body with a mandate to deal with nuclear disarmament;
- An unequivocal undertaking by the nuclear-weapon states to accomplish the total elimination of nuclear weapons;
- To apply the "principle of irreversibility" to nuclear and other related arms control and reduction measures;
- Early entry into force of and full compliance with the START II Treaty, enforcement and maintenance of the AMB, and early ratification of the START III;
- Conclusion and implementation of the Three Party Initiatives (the U.S., Russia, and the IAEA);
- Steps by nuclear-weapon states leading to nuclear disarmament in a way that promotes international stability, and based on the principle of undiminished security for all (such as, further efforts by the nuclear-weapon states to reduce their nuclear weapon arsenals unilaterally, increased "transparency," the further reduction of non-strategic nuclear weapons, and the engagement of all nuclear- weapon states in the process leading ultimately to the total elimination of nuclear weapons);
- International control of surplus fissile materials by the IAEA, etc., and their disposition;
- Reaffirmation that the ultimate objective of disarmament is the comprehensive and complete disarmament under effective international control;
- Regular reports on the implementation of nuclear disarmament as stipulated in article VI of the NPT and the "Principles and Objectives" (efforts for nuclear disarmament); and
- Further development of the verification capabilities for nuclear disarmament.

(Reference) Overview of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT)

The Treaty on the Non-Proliferation of Nuclear Weapons (NPT) designates the United States, Russia, the United Kingdom, France and China, which manufactured and exploded nuclear weapons or other nuclear explosive devices prior to 1 January 1967, as the "nuclear-weapon states" (Article IX-3). While the treaty aims to prevent the spread of nuclear weapons to other states (non-nuclear-weapon states), it also aims to place the nuclear-weapon states under the obligation to pursue negotiations on nuclear disarmament. The treaty was opened for signature in July 1968 and entered into force in March 1970. (Japan signed the treaty in February 1970, and ratified it in June 1976.)

The number of state parties that are signatories to the treaty has increased to 189 as of July 2005, indicating the increasing universality of the NPT. Among the UN member nations (191), only three countries, namely India, Pakistan, and Israel are not yet states parties to the treaty.

The NPT is composed of the preamble, 11 articles and the concluding text. Roughly divided, the treaty stipulates the following four items

1. Obligation of nuclear non-proliferation

The NPT prohibits nuclear-weapon states from transferring nuclear weapons (Article I), and prohibits non-nuclear-weapon states from receiving and manufacturing nuclear weapons (Article II). The treaty obliges non-nuclear-weapon state parties to the NPT to accept the International Atomic Energy Agency (IAEA) safeguards (Article III).

2. Rights to use nuclear energy for peaceful purposes

The NPT aims to prevent non-nuclear-weapon states from diverting nuclear materials and equipment to military purposes by obliging those states to accept the IAEA safeguards. One the other hand, the treaty stipulates the "inalienable right of all the Parties to the Treaty" to the development, research, production and use of nuclear energy for peaceful purposes (Article IV-1). It acknowledges that all the Parties to the treaty have the right to participate in the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy (Article IV-2).

3. Obligation of negotiations on nuclear disarmament by the nuclear-weapon states

The NPT obliges the state parties to pursue negotiations in good faith on nuclear disarmament (Article VI), while preventing non-nuclear-weapon states from diverting nuclear energy for military ends.

4. Procedural matters

The NPT stipulates that a conference shall be held at intervals of five years in order to review the operation of this treaty (Article VIII-3), and also to convene a conference twenty-five years after the entry into force to decide whether the treaty shall continue in force indefinitely, or shall be extended for an additional fixed period or periods (Article X-2). The treaty was indefinitely extended at the 1995 NPT Review and Extension Conference, which was decided based on this article.

Furthermore, each Party has the right to withdraw if it decides extraordinary events, related to the Treaty have jeopardized that country's supreme interests. To withdraw, a Party must give notice of its intentions to all other NPT Parties and to the United Nations' Security Council three months in advance. The notice must include a statement of the extraordinary events the Party regards as having jeopardized its supreme interests (Article X-1).

Section 1. Overview of the Comprehensive Nuclear-Test-Ban Treaty (CTBT)

Although the Partial Test-Ban-Treaty (PTBT) was concluded in August 1963, underground nuclear tests were excluded from the scope of prohibition in the PTBT, and the ban on all nuclear tests including underground nuclear tests has been deemed one of the primary tasks of the international community. The Comprehensive Nuclear-Test-Ban Treaty (CTBT) is a treaty on nuclear disarmament and non-proliferation that bans all nuclear tests at any place.

Nuclear tests are considered indispensable for the development or improvement of nuclear weapons. Therefore, to ban nuclear tests is of great significance for promoting both nuclear disarmament and non-proliferation. It is said to be the largest obstacle for a new country aspiring to develop nuclear weapons to acquire nuclear fissile materials for weapons. Even if they acquire such materials, it is necessary to conduct nuclear tests to assure the credibility and practicality in using them as weapons. Therefore, the development of nuclear weapons can be prevented by banning nuclear testing, which contributes to the non-proliferation of nuclear weapons. Furthermore, banning nuclear testing contributes to the disarmament by prohibiting the nuclear-weapon states from conducting nuclear test explosion for the quality improvement of nuclear weapons including the technical advancement of nuclear warheads.

Negotiations on the CTBT were commenced at an Ad Hoc Committee on a Nuclear Test Ban, established under the Conference on Disarmament in Geneva, from January 1994. However, since any decision made at the Conference on Disarmament has to be by consensus, after two and a half years of difficult negotiations, CTBT was not adopted in the end due to the opposition by countries such as India.

Then, the draft text of the CTBT made at the Conference on Disarmament was submitted to the UN General Assembly by Australia and other states in September 1996, and it was adopted by an overwhelming majority (Favor:153, Opposed: India, Bhutan, Libya, Abstention: Cuba, Syria, Lebanon, Tanzania, Mauritius).

The entry into force of the CTBT needs ratification by the specified 44 states (the so-called "Annex 2 State") which are considered to have the potential to develop nuclear weapons; for example, possessing nuclear reactors is regarded as conferring such potential. However, at present the prospect for ratification by some of the Annex 2 States is slim. The CTBT has not yet entered into force.



1. Major elements of the CTBT

Besides prohibiting all nuclear tests explosions (any nuclear weapon test explosion or any other nuclear explosion), the CTBT provides for the establishment of the CTBT Organization in Vienna in order to verify the compliance, as well as the international verification systems. These international verification systems include measures such as an International Monitoring System (IMS) consisting of 321 monitoring stations and 16 radionuclide laboratories around the world to detect all nuclear tests explosions, on-site inspections, and confidence-building measures. The CTBT also foresees measures to be taken in the event that a state party conducts a nuclear test explosion. These measures include restriction or suspension of the state party's exercise of its rights and privileges under the CTBT, and recommendations to the state parties on collective measures in conformity with international law.

2. Verification system

In order to verify compliance with the treaty, the CTBT provides verification systems comprising (1) the International Monitoring System (IMS), (2) consultation and clarification, (3) onsite inspections, and (4) confidence-building measures.

(1) The International Monitoring System (IMS) is designed to monitor nuclear weapon test explosions or any other nuclear explosions that are prohibited under the CTBT, with four types of monitoring stations installed at 321 locations around the world: seismological monitoring stations (Note 1), radionuclide monitoring stations (Note 2), hydroacoustic monitoring stations (Note 3) and infrasound monitoring stations (Note 4). Data obtained by the monitoring activities is sent to the International Data Center established in Vienna for processing.

(Note 1) Nuclear explosions are monitored through the observation of seismic
waves.
(Note 2) Nuclear explosions are monitored through the observation of radionu-
clides in the atmosphere.
(Note 3) Nuclear explosions are monitored through the observation of acoustic
waves propagating underwater.
(Note 4) Nuclear explosions in the atmosphere are monitored through the observa-
tion of very low-frequency sound waves in the atmosphere.

- (2) "Consultation and clarification" is a system by which state parties clarify and resolve, among themselves or with or through the CTBT Organization, any matter which may cause concern about possible non-compliance, in the event that a state party is suspected of conducting a nuclear weapon test explosion or any other nuclear explosion. The system includes clarification by the suspected state.
- (3) "On-site inspection" is performed by an inspection team sent to a state party to clarify whether a nuclear weapon test explosion or any other nuclear explosion has been carried out in violation of the CTBT, and, to gather as much information as possible that might be useful in identifying a suspected violator. The decision to approve of the on-site inspection is made by at least 30 affirmative votes of 51 member of the Executive Council.
- (4) "Confidence-building measures" means measures to be taken by a state party that include the timely resolution (with a report to the Technical Secretariat of the CTBT Organization) of any concerns arising from possible misinterpretations of verification data relating to, for instance, chemical explosions carried out in a mine.

Section 2. Towards the early entry-into-force of the CTBT

1. Current status of signature and ratification

The CTBT has been signed by 176 states and ratified by 132 states as of June 2006. Of 44 Annex 2 States, 41 have signed and 34 have ratified the treaty. The Annex 2 States that have not signed are India, Pakistan and North Korea. States that have signed but not ratified are China, Columbia, Egypt, Indonesia, Iran, Israel, and the US.

2. Significance of the efforts in the promotion of the entry-into-force of the CTBT

As described below, prospect of the entry-into-force of the CTBT is not yet in sight. However, the political cost to carry out a nuclear test explosion is becoming increasingly prohibitive under the circumstances where the majority of the nations of the world is politically calling for the entry-into-force of the CTBT. Thus, five nuclear-weapon states declared a moratorium on nuclear weapon test explosions and both India and Pakistan, which conducted nuclear tests in 1998, finally announced a moratorium on nuclear weapon test explosions. To this day, there has been no nuclear test explosion since 1998. It is fair to say that the political momentum of seeking the entry-into-force of the CTBT has considerable effect on deterrence of nuclear tests, when considering the fact that nuclear tests were carried out by some countries since the end of the Second World War until 1996, and at the peak, 178 tests were conducted in a year. Japan, has been spearheading international efforts to facilitate the entry-into-force of the CTBT, with an aim to boost the political momentum to maintain and strengthen such deterrent efforts.

3. Conference on Facilitating the Entry-into-Force of the CTBT

The CTBT stipulates that a conference to facilitate early entry-into-force of the treaty upon the request of a majority of the state parties be convened if the treaty has not entered into force three years after the date of the anniversary of its opening for signature. Conferences on Facilitating the Entry-into-Force of the CTBT have been held four times so far, in October 1999, November 2001, September 2003, and September 2005, pursuant to this provision.

The 4th Conference, convened at the United Nations Headquarters in New York in September 2005, attended by 117 states, adopted the Final Declaration unanimously, which called for early signature and ratification by states which have not done so. The US, which has been opposing treaty ratification due to the necessity of maintaining the reliability and safety of its nuclear weapons, did not attend the Conference, just as it did not attend the last time. India, Pakistan, and North Korea, which have yet to sign the treaty, also did not participate in the Conference.

4. Prospects for the treaty's entry-into-force

Though some progress has been made since 2000 with ratification by some CTBT of Annex 2 States such as Turkey, Russia, Ukraine, Chile, Bangladesh, Algeria, the Democratic Republic of Congo, and Viet Nam, the outlook for the entry-into-force of the CTBT still remains uncertain. Of Annex 2 States, India and Pakistan are committed to continuing the moratorium on nuclear tests and have repeatedly expressed their willingness to make their best efforts to form a domestic consensus on their signing of the treaty. However, they have not signed the treaty to date. In

addition, China, a nuclear-weapon state that has not ratified the CTBT, is not definite about when the ratification bill will be approved although it has, according to the Chinese authorities, already been presented to the National People's Congress.

5. Attitude of the US to the CTBT

The US signed the CTBT in September 1996 during the Clinton Administration. The US Senate, however, rejected ratification with 48 votes in favor versus 51 against in October 1999 despite the cumulative momentum toward entry into force that had gathered in the international community on the occasion of the First Conference on Facilitating the entry-into-force of the CTBT.

Immediately before the Bush Administration was formed in January 2001, the former Chairman of Joint Chiefs of Staff John Shalikashivili presented his report recommending certain measures necessary for the Senate's approval at the request of the White House, and President Clinton himself urged the Senate and the Bush Administration to take action on the CTBT in his statement.

However, in the same month, Colin Powell, the Secretary of State designate (at that time), made a statement at the hearing of the Senate Foreign Relations Committee that the administration would not ask the Senate to ratify the CTBT in its next session, and that there were still flaws with the CTBT. Thus, the passive and negative attitude of the Bush Administration toward the CTBT was made known to the public.

For example, in August 2001, Secretary of State Powell explained in his reply to a letter from Makiko Tanaka ,the Japanese Minister for Foreign Affairs at the time, who urged the early ratification of the CTBT, that the US Government did not intend to request the US Senate to reconsider its negative decision about the CTBT. From 2001, the US voted against the Draft Resolution on Nuclear Disarmament proposed by Japan to the UN General Assembly because the early entry-into-force of the CTBT was mentioned in it. The US did not attend the Third and Fourth Conferences on Facilitating the entry-into-force of the CTBT.

Furthermore, the US maintained its position "to oppose the ratification of the CTBT" in the explanatory material of the Nuclear posture Review (NPR) in January 2002. However, the US supports the establishment of the International Monitoring System by the Preparatory Commission for the CTBT Organization.

Section 3. Japan's efforts to facilitate the entry-into-force of the CTBT

Japan regards the CTBT, along with the International Atomic Energy Agency (IAEA) Safeguards, as an indispensable pillar of the nuclear non-proliferation and disarmament regime established under the NPT. Accordingly, Japan considers the CTBT's early entry-into-force as the top priority in the area of nuclear disarmament and non-proliferation, and has continued its diplomatic efforts as described below.

1. Contribution to the Conference on Facilitating the Entry-into-Force of the CTBT

(1) At the First Conference on Facilitating the Entry-into-Force of the CTBT in 1999, former Minister for Foreign Affairs Masahiko Koumura attended as the representative of Japan, and presided at the conference. After that, Japan endeavored to coordinate opinions among states concerned by, among other moves, hosting an unofficial meeting prior to the Second Conference on Facilitating the entry-into-force of the CTBT in 2001 as a "coordinator." At the Second Conference, a Progress Report was presented by the representative of Japan, Nobuyasu Abe, (former UN Under-Secretary-General for Disarmament Affairs) that noted the progress in the situation toward the entry-into-force of the treaty since the last conference.

- (2) In September of 2002, the year when the Conference on Facilitating the Entry-into-Force of the CTBT was not convened, the CTBT Ministerial Meeting was held at the UN Headquarters in New York, attended by Foreign Ministers of the countries that had already ratified it, including Foreign Minister Yoriko Kawaguchi (then) and the foreign ministers of Australia and the Netherlands. A joint ministerial statement was issued that called for the treaty to be signed and ratified as soon as possible and the moratorium on nuclear tests to be continued. This statement was originally signed by the foreign ministers of 18 countries including weapon states, namely the UK, France and Russia, and went on to win the approval of the foreign ministers of more than 50 countries.
- (3) Prior to the Third Conference on Facilitating the Entry-into-Force of the CTBT in September 2003, a joint ministerial letter was sent to invited countries by the Foreign Ministers of Finland, the presidency holder, Austria, the host nation, and Japan, the presidency holder of the First Conference, calling for the participation of the ministerial delegations in the conference and the early signature and ratification of the CTBT. Efforts were also made to call for the participation of the ministerial delegations in the conference and the early signature and ratifications in the conference and the early signature and ratification of the CTBT at the capital cities of eleven non-ratification countries among 44 Annex 2 States, excluding North Korea, by presenting the ministerial letter in cooperation with the above-mentioned three countries.

Foreign Minister Yoriko Kawaguchi of Japan (then) attended the Third Conference on Facilitating the Entry-into-Force of the CTBT and delivered an address as a first speaker, emphasizing the importance of early entry-into-force of the CTBT.

- (4) In September 2004, the year when the Conference on Facilitating the entry-into-force of the CTBT was not convened, Japan, Finland, Australia and Netherlands (then EU presidency holder) co-hosted the second CTBT Ministerial Meeting at the UN Headquarters in New York, attended by Foreign Minister Yoriko Kawaguchi (then) of Japan. A joint ministerial statement was issued calling for the treaty to be signed and ratified as soon as possible by states which have not done so and pledging active involvement in the 2005 NPT Review Conference.
- (5) Prior to the 2005 NPT Review Conference, then Foreign Minister Nobutaka Machimura sent letters to Foreign Ministers of eleven non-ratification countries of CTBT, calling for early ratification of the CTBT. Japan also held a meeting of the CTBT Friends while the 2005 Review Conference was in session.
- (6) At the Fourth Conference on Facilitating the entry-into-force of the CTBT in September 2005, in his statement, Mr. Tatsuo Arima, Special Envoy of the Government of Japan, called for non-ratification states to ratify the CTBT as soon as possible.

2. Efforts to facilitate the entry into force at the bilateral talks and multilateral forums

Japan has been calling for the early entry into force, signature and ratification of the CTBT on various occasions, such as at bilateral meetings and international or regional forums, etc. The following is a list of the major efforts of Japan since 2002.

(1) Commitments at bilateral meetings

At the Japan-US Foreign Minister's Meeting (Tokyo) in January 2002, Japan again requested that the US ratify the CTBT. Prime Minister Junichiro Koizumi called on Pakistani President Pervez Musharraff to promptly sign the CTBT at the Japan- Pakistan summit talks in March 2002. Prime Minister Junichiro Koizumi also urged General Secretary of the Communist Party of Vietnam Central Committee, Nong Duc Mahn, for early ratification of the CTBT at the Japan-Vietnam summit talks in October 2002.

Foreign Minister Yoriko Kawaguchi (then) called on Indian Foreign Minister Singh and Israeli Foreign Minister Shalom to urgently ratify the CTBT in January and April 2003 respectively. Early ratification of the CTBT was called for on the following occasions: from Foreign Minister Kawaguchi (then) and Vice-Minister Yano (then) to the Vietnamese Vice Prime Minister Khiem in September 2003, from Foreign Minister Kawaguchi (then) to Foreign Minister Hassan of the Republic of Indonesia at the APEC Ministerial Meeting in October 2003, and from Foreign Minister Kawaguchi (then) to the Egyptian Foreign Minister Maher on her visit to Egypt in October 2003.

Prime Minister Junichiro Koizumi called on Vietnamese Prime Minister Khai to promptly ratify the CTBT at the Japan Vietnam summit talks in June 2004. Foreign Minister Kawaguchi (then) used the following occasions to call for early ratification of the CTBT: to Foreign Minister Barco of Columbia in March 2004, to Foreign Minister Singh of India and Foreign Minister Kasuri of Pakistan in June 2004, to Foreign Minister Nien of Vietnam in July 2004, and to President Musharaff of Pakistan and Foreign Minister Singh of India in August 2004. Furthermore, Foreign Minister Machimura (then) urged Foreign Minister Singh of India to promptly sign and ratify the CTBT in November 2004.

In February 2005, Foreign Minister Machimura (then) called for Foreign Minister Kasuri of Pakistan to sign and ratify the CTBT as soon as possible. In April 2005, the summit meeting was held in April 2005 between Prime Minister Junichiro Koizumi and Columbian President Uribe, and the transcript of the joint press conference states that despite institutional and constitutional provisions against the said matter, the President of Columbia reiterates his intention to ratify the CTBT as soon as possible.

(2) Commitments at the multilateral forums

Foreign Minister Yoriko Kawaguchi (then) called on ASEAN nations for early ratification of the CTBT at the ASEAN + 3 Foreign Minister's Meeting in August 2002 in Brunei.

Foreign Minister Kawaguchi also encouraged high-level participation at the Conference on Facilitating the Early-Entry-into Force of the CTBT, scheduled in September, at the ARF Ministerial Meeting in June 2003 held in Phnom Penh.

3. Initiative to establish International Monitoring System

Through its advanced seismological observation technology, Japan has provided technical

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The Comprehensive Nuclear-Test-Ban Treaty (CTBT Explosions in the atmosphere, under water and in outer space w

Under CTHT, a global system of monitoring stations, using four complementary technologies, is being establis this network of 321 monitoring stations will be capable of registering shock waves emanating from a nucthe atmosphere. The location of the stations has been carel

The monitoring stations will transmit, via satellite, the data to the International Data Centre (IDC) with These data and IDC products will be made avail Overlead is a liatine of the 337 facilities of the international monitories

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DNITORING SYSTEM



Hydroacountic (hydrophone) station (HA) Hydroacountic (T-phane) station (HA) Hydroacountic (T-phane) station (HA) Infrasound station (HA) Radiomiclide station (RN) Radiomiclide laboratory (RL) Source: Perspective Control (THT) PrepCont, Vienna Source: Perspective Control (THT) PrepCont, Vienna Source: Perspective Control (THT) PrepCont, Vienna Source: Preparatory Commission for the CTBTO

assistance to developing countries in order to support the development of the International Monitoring System for verifying compliance with the CTBT. Specifically, Japan has accepted trainees for global seismological observation training courses every year since 1995 (105 trainees by FY 2005), and supplied seismological observation instruments (17 cases by FY 2004). Japan has been deploying much effort in order to contribute to the development of the International Monitoring System, and at the same time, to facilitate the entry into force of the CTBT by making it easier to comply with the obligations under the CTBT. These activities have been highly valued by the Preparatory Commission of the CTBT Organization and other states. Particularly, a report that contains the expression of gratitude for Japan's contribution was adopted by consensus at the Working Group on verification technology of the Preparatory Commission for the CTBT Organization in February 2002.



Participants in the "Global Seismological Observation Training" receiving technical guidance on how to use a seismological observation instrument

4. Commitment for the International Monitoring System in Japan

The establishment of 10 monitoring facilities in Japan, as listed below, is required under the CTBT. The CTBT National Operation System of Japan was established in November 2002 in order to facilitate the establishment of theses facilities. To date, the facilities in Takasaki, Matsuhiro, Isumi have started provisional operation after being certified by the Provisional Technical Secretariat of the Preparatory commission for the CTBT Organization. Although incomplete as a monitoring facility under the Treaty, seismic data obtained at the facility (2) below have already been transmitted to the International Data Center in Vienna.

(1) Primary Seismological Station: Matsushiro

(2) Auxiliary Seismological Stations: Oita, Kunigami, Hachijojima, Kamikawa-Asahi, Chichijima

- (3) Infrasound Station: Isumi
- (4) Radionuclide Stations: Okinawa, Takasaki
- (5) Radionuclide Laboratory: Tokai

Chapter 4. The Fissile Material Cut-off Treaty (Cut-off Treaty)

Section 1. Overview of the Cut-off Treaty and its significance

The Fissile Material Cut-off Treaty is generally called the FMCT or the Cut-off Treaty. In the movement of the international disarmament negotiations, this treaty is regarded as a practical and substantial multilateral measure for nuclear disarmament and non-proliferation, which the international community should pursue, following the conclusion of the Comprehensive Nuclear-Test-Ban Treaty (CTBT) in 1996. In other words, the Treaty on the Non-proliferation of Nuclear Weapons (NPT), which is the basis of the current nuclear non-proliferation regime, aims to prevent the transfer of nuclear weapons and other nuclear explosive devices from nuclear-weapon states to non-nuclear-weapon states, and to suppress the emergence of new nuclear weapons states. The FMCT aims to suppress the emergence of new nuclear-weapon states. The FMCT aims to suppress the emergence of new nuclear-weapon states, thus it carries a great significance from the perspective of both nuclear disarmament and non-proliferation.

If the Cut-off Treaty is concluded, it would support the reduction of nuclear weapons by the nuclear-weapon states such as the US and Russia and prevent non-nuclear-weapon states from acquiring nuclear weapons. Also, it will make it possible to bring a nuclear arms race to a halt. The conclusion of the Cut-off Treaty would not only be significant in the history of nuclear disarmament and non-proliferation but also contribute greatly to stabilizing the international security environment. It is a positive sign that the Bush Administration also supports the commencement of negotiation on the Cut-off Treaty.

The assumed provisions under the treaty are: (1) not to produce fissile material for nuclear weapons with the aim of research, production and use of nuclear weapons and other nuclear explosive devices; (2) not to assist other states in the production of fissile material for nuclear weapons and; (3) to accept measures to verify compliance with the treaty.

Section 2. Background

The Cut-off Treaty was initially proposed by then US President Bill Clinton in his speech at the UN General Assembly (UNGA) in September 1993. The UNGA resolution, recommending negotiations at an appropriate international forum, was adopted by consensus in November of the same year. It was later agreed that the Conference on Disarmament (CD) would be the forum for negotiations.

It was agreed that an Ad Hoc Committee on the FMCT would be established to negotiate the Cut-off Treaty within the CD, following the adoption of a negotiation mandate drafted by the Special Coordinator, Ambassador Shannnon of Canada, in 1995. At the CD it is necessary to establish an Ad Hoc Committee to negotiate; however, it was only in 1995 and 1998 when Ad Hoc Committees were established at the CD. Even then, negotiations on the Cut-off Treaty have not gotten underway at the Ad Hoc Committee in 1995 as the chair was not appointed.

The Ad Hoc Committee was established in August 1998 in response to the emergence of new situations such as the nuclear tests by India and Pakistan, and Ambassador Moher of Canada was appointed as a Chair of the Ad Hoc Committee. Under the leadership of the Chairman, two meetings of the Ad Hoc Committee were convened during August 27 and September 1, 1998. However, no substantial negotiations for the treaty were conducted except some exchanges of opinions among the participants, mainly because it was near the end of the 1998 session of the CD. The reestablishment of the Ad Hoc Committee failed at the 1999 session of the CD due to the repeated disagreement over the program of work. At the 2000 NPT Review Conference, the CD was urged in the Final Document to agree on a program of work that included the immediate commencement of negotiations on the Cut-off treaty with a view to their conclusion within five years. This raised the expectation for new progress in negotiations on the Cut-off Treaty during the 2000 sessions. China, however, insisted that the negotiations on the Prevention of Arms Race in Outer Space (PAROS) must be concurrently commenced with that of the Cut-off Treaty, while the US stated that it would not accept the commencement of negotiations on PAROS. Due to this divergence of views between the US and China, an Ad Hoc Committee failed to be reestablished and negotiations on the Cut-off Treaty did not commence.

Many countries have repeatedly advocated the importance of the commencement of negotiations on the Cut-off Treaty including Japan, and have made various efforts to obtain consensus among the countries concerned. Despite these efforts, the negotiations on the treaty have not yet commenced as of the end of the 2003 session.

The CD was still unable to agree on the program of work even at the first and second sessions of 2004; however, at the third session, the US, which had previously been noncommittal about the program of work, officially took a stance of encouraging states to commence negotiations on the legally binding Cut-off Treaty at the CD. This gathered momentum toward the program of work at the CD; however, the agreement on the program of work failed to reach a conclusion at the 2004 session, partly due to the time remaining before the end of the third session being quite limited. (See Chapter 2, Part VII)

Section 3. Basic stance of Japan

Japan considers it important to immediately commence and conclude negotiations of the Cut-off Treaty, and continues to make efforts in this direction. This stance of Japan is clearly defined in the speech delivered by then Foreign Minister Yoriko Kawaguchi at the Conference on Disarmament in September 2003.

It may take a long time for the treaty to enter into force even if negotiations on the treaty are concluded. Japan, therefore, assets that nuclear-weapon states should ultimately declare a moratorium on the production of fissile material for nuclear weapons pending the entry into force of the treaty. In fact, four nuclear-weapon states other than China have already declared the production moratorium. Japan referred to this point in its draft resolution on nuclear disarmament, which was adopted by the overwhelming majority at the UN General Assembly in 2005. Japan also urged China to commit herself to the production moratorium (at the Japan-China Consultation on Disarmament and Non-proliferation in December 2005).

Section 4. Japan's efforts for the commencement of negotiations on the Cut-off Treaty

Japan has been advocating the early commencement of negotiations on the Cut-off Treaty on various occasions such as at the 2000 NPT Review Conference and the UN General Assembly First Committee (dealing with disarmament and security affairs). Also, various diplomatic efforts have been directed to the development of conditions so as to facilitate the conclusion of the treaty once negotiations have commenced. For example, Japan hosted a seminar on the Cut-off Treaty in Geneva in May 1998 (chaired by Mr. Hirouyoshi Kurihara, Senior Counselor, Special Assistant to the Ministry of Foreign Affairs), mainly from a technical perspective. Japan jointly hosted a workshop with Australia in Geneva in May 2001 to help representatives of various countries deepen their knowledge about all issues of negotiations on the Cut-off Treaty. Ambassador Kuniko Inoguchi, Permanent Representative of Japan to the Conference on Disarmament (then), made a speech on the Cut-off Treaty at the CD in February 2003, emphasizing the urgent task of controlling the fissile materials which are not placed under the IAEA Safeguards, in order to maintain the peace and security of the international community. Japan, Australia and the United Nations Institute for Disarmament Research (UNIDIR) co-hosted a workshop entitled "Promoting Verification in Multilateral Disarmament Treaties" again in Geneva in March 2003. About 120 participants in this workshop were government representatives of the countries concerned, and members of relevant international organizations and non-governmental organizations, including representatives from China and Pakistan, which did not attend the previous seminar on the Cut-off Treaty of 2001. They had concluded discussions from multiple perspectives concerning "verification," which is a vital issue in the area of arms control, disarmament and non-proliferation treaties.

Furthermore, eyeing the appointment of Ambassador Kuniko Inoguchi, Permanent Representative of Japan to the CD (then), as the President of the 3rd session of the Conference on Disarmament in August 2003, Japan presented a working paper to the CD in which major points of argument are comprehensively clarified, in order to activate discussions on the Cut-off Treaty (which clarifies the scope of the treaty's coverage, and points of argument concerning technical discussion including verification and organizational and legal items).

In addition, taking every opportunity, Japan has emphasized the importance of the Cut-off Treaty to the governments of countries concerned and the international public opinion. Japan's policy is to continue these diplomatic efforts toward the early commencement of negotiations on the Cut-off Treaty.

Chapter 5. International Atomic Energy Agency (IAEA) Safeguards System

Section 1. Overview of the IAEA safeguards system

Safeguards are a set of activities by which the International Atomic Energy Agency (IAEA) verifies that a state is not using its nuclear materials such as uranium and plutonium in a way which would help develop nuclear weapons. Article IIIA.5. of the IAEA Statute stipulates that the implementation of such safeguards measures is the responsibility of the IAEA. Based on this, the IAEA assumes the role of verifying the nuclear activities of a state, in line with the safeguards agreement concluded between that state and the IAEA. IAEA safeguards system is an indispensable mechanism to verify the effectiveness of the nuclear non-proliferation regime centered on the NPT. The IAEA initially concluded safeguards agreements with states which received nuclear materials and nuclear equipment, in accordance with bilateral nuclear energy agreements, and implemented safeguards targeting nuclear materials and nuclear equipment transferred to these states. Subsequently, non-nuclear-weapon state parties were obliged by the NPT, which came into force in 1970, to accept IAEA safeguards to be applied on all nuclear material within the territory of the state (Article III-1). Accordingly, the IAEA structured a model safeguards agreement to be concluded by NPT signatory states. Since then, the IAEA has concluded safeguards agreements with individual countries in line with the model and implemented safeguards measures in the states with such agreements in force.

However, allegations of nuclear development by Iraq and North Korea in the early 1990s indicated the limitations of the conventional safeguards system, and strengthening of safeguards has become an urgent task. The Board of Governors of the IAEA approved the Model Additional Protocol in 1997 that was to be concluded by each state in addition to their respective safeguards agreements. Since then, strengthened safeguards measures have been applied to states which concluded the additional protocol. While the safeguards measures are being strengthened, rationalized safeguards (integrated safeguards) in view of more effective utilization of limited safeguards resources, have been applied since 2002 to the states whose transparency of nuclear activities have been verified through the implementation of the conventional safeguards agreement and the additional protocol.

Japan has exerted its utmost efforts in cooperating in implementing the IAEA safeguards in order to maintain transparency of its own nuclear activities as one of the leading nuclear energy users in the world, while continuing diplomatic efforts for universalization of the additional protocol in order to strengthen the international nuclear non-proliferation regime.

Section 2. Details of safeguards agreement

1. Comprehensive safeguards agreement

Article III-1 of the NPT stipulates that each non-nuclear-weapon state party to the treaty undertakes to accept safeguards to prevent diversion of nuclear energy from peaceful use to nuclear weapons or other nuclear explosive devices, as set forth in an agreement to be negotiated and concluded with the IAEA in accordance with the Statute of the IAEA and the Agency's safeguards system. Furthermore, the safeguards required by this article shall be applied to all source or special fissionable material in all peaceful nuclear activities within the territory of such state, under its jurisdiction, or carried out under its control anywhere. Many non-nuclear-weapon state parties to the NPT have concluded this agreement with the IAEA, called "comprehensive safeguards agreement" (also called "INFCIRC/153 type safeguards agreement" from the IAEA document number or "full-scope safeguards agreement"). As for Japan, the agreement entered into force on December 2, 1977.

The objective of safeguards measures under a comprehensive safeguards agreement is the timely detection of diversion of a significant quantity of nuclear material from peaceful nuclear activities to the manufacture of nuclear weapons or other nuclear explosive devices or for unknown purposes, and the deterrence of such diversion by the risk of early detection. "Significant quantity" is defined as an amount of nuclear material where the manufacture of nuclear explosive devices cannot be ruled out: for example, 8 kg of plutonium or U-233, or 25kg of enriched uranium containing 20% or more of U-235.

Specific measures of safeguards consist mainly of the "nuclear material accountancy," which verifies the accountancy records of nuclear materials maintained by facility operators, and these measures are complemented by "containment" and "surveillance." The purpose of accountancy is to control the stock of nuclear materials and the inventory of received and shipped material at nuclear facilities. In addition to the control by the facility operators and by the state, the IAEA verifies whether declaration by the state is appropriate or not. "Containment" is a means by which the IAEA attaches seals to containers and physically contains nuclear materials therein in order to detect if the containers with nuclear materials are tampered with. "Surveillance is a measure to ensure no illicit transfer of nuclear material occurs, utilizing video cameras, radiation measuring and other monitoring devices.

2. Other safeguards agreements

The safeguards agreement based on the IAEA documents set out prior to the comprehensive safeguards agreement is called the "INFCIRC/66-type safeguards agreement" or "individual safeguards agreement." It places under safeguards nuclear materials and equipment only within the scope of the agreement. As of today, it is applied to three non-state parties to the NPT: India, Pakistan and Israel. Although the five nuclear-weapon states (China, France, Russia, UK and US) have no obligation to accept safeguards under the NPT, they, in light of the importance of nuclear non-proliferation, have voluntarily accepted safeguards on the nuclear materials used for non-military purposes. The safeguards agreements concluded between these nuclear-weapon states and the IAEA are called "voluntary offer agreement."

Section 3. Improving the effectiveness and efficiency of safeguards

1. Strengthened safeguards and the additional protocol

The revelation of nuclear development by Iraq and North Korea in the early 1990s made it apparent that the existing comprehensive IAEA safeguards system was not able to provide detection ability of undeclared nuclear activities and to prevent the diversion of undeclared nuclear materials to military use. This is mainly due to the fact that the inspection targets set forth in the comprehensive safeguards system are the nuclear materials declared by the states, on the assumption that all nuclear materials in the territory of the relevant state are declared. In response, the IAEA started to seek ways to strengthen safeguards measures, aiming at improving detection capabilities of undeclared nuclear materials and activities.

The IAEA launched "Program 93 +2" in 1993 to strengthen and improve efficiency of the IAEA safeguards which, as a result, issued recommendations on measures enforceable within the framework of comprehensive safeguards and measures to be taken through the establishment of a new framework. The former measures have been gradually implemented. As for the latter, a model protocol, designed to be added to the existing comprehensive safeguards agreement, was adopted at the Board of Governors meeting of the IAEA in May 1997. This is called "Additional Protocol" due to its relation with the existing comprehensive safeguards agreement.

The Additional Protocol expanded the scope of information provided to the IAEA, the scope of verification by the IAEA and the accessible sites for the IAEA inspectors. This gave the IAEA an enhanced power to verify whether there was no indication of undeclared nuclear activities in addition to the inspections conducted under the existing comprehensive safeguards system. Specifically, a state with the Additional Protocol is required to provide the IAEA with information on research activities on the nuclear fuel cycle without using nuclear material, on activities such as manufacture and assembly of enrichment and reprocessing related equipment, and on export and import of specific equipment and materials. Furthermore, the IAEA is granted a right to conduct two hours or 24 hours notice inspection called complementary access, and a right to collect environmental samples at all places.

In consideration of the recent challenges to the nuclear non-proliferation regime, interests in the IAEA's activities are growing, and the importance of the IAEA safeguards, indispensable to maintaining the non-proliferation regime, has been broadly recognized. It is of great importance that a greater number of states conclude both the comprehensive safeguards agreement and the Additional Protocol in order to strengthen the nuclear non-proliferation regime and to maintain peace and security of the world. However, of 184 state parties that are obliged to conclude comprehensive safeguards agreements under the NPT, only 149 have actually done so (as of January 2006). The number of state party with additional protocols in force remains low at 73 (the number of signatory states is 107) (as of January 2006). Further efforts are required to universalize the Additional Protocol, in addition to efforts for comprehensive safeguards agreements.

2. Efficiency of safeguards and integrated safeguards

The strengthening of safeguards measures brought with it such issues as an increased workload of safeguards and the need to secure financial resources. Active discussions took place about integrated safeguards which aimed at rationalization and improved efficiency of safeguards. As a result, basic principles concerning the application of integrated safeguards were adopted at the Board of Governors meeting of the IAEA in March 2002.

Integrated safeguards are the conceptual framework to systematically integrate conventional safeguards measures and safeguards measures based on additional protocols, and it is applied to the states, for which absence of undeclared nuclear material and activities has been concluded by the IAEA through the implementation of the comprehensive safeguards agreements and additional protocols. In effect, it serves to rationalize regular inspections based on comprehensive safeguards. Application of integrated safeguards is of importance for contributing to the

reduction of clerical work and costs of both the IAEA and the states concerned accrued from the implementation of safeguards measures.

Section 4. Japan's efforts

Japan has been making efforts as described below in order to strengthen and improve efficiency of the safeguards system which constitutes a crucial part of the functions of the IAEA. In addition to such contributions, Mr. Yukiya Amano, Ambassador to the Permanent Mission of Japan to the International Organizations in Vienna, has been working since October 2005 as Chairman of the IAEA Board of Governors, which in effect is the decision-making body of the IAEA, contributing to strengthening the international nuclear non-proliferation regime through the efforts for smooth and effective operation of the IAEA.

1. Universalization of the Additional Protocol

Japan has accepted the IAEA safeguards measures based on the comprehensive safeguards agreement and its additional protocol, and has been working to ensure transparency of its nuclear activities including the use of plutonium. In particular, Japan is one of the countries with the most advanced nuclear industries and has sufficient knowledge as a country accepting the safeguards. Japan not only played an active role in the process of formulating the Additional Protocol, but also has been accepting many complementary accesses based on the protocol since 2000, following its entry into force in December 1999, as the first country to do so among those engaged in nuclear power generation. Japan believes that, in order to enhance the international nuclear non-proliferation regime, it is important for as many countries as possible to conclede the Additional Protocol, and thus has been actively promoting the "universalization of the Additional Protocol." As a part of such efforts, Japan has made substantial financial and personnel contributions to a series of regional seminars hosted by the IAEA, including the one held in Tokyo in June 2001. In cooperation with the IAEA, Japan held the "International Conference on Wider Adherence to Strengthened IAEA Safeguards" in Tokyo on December 9 and 10, 2002, inviting representatives from 36 countries. Specific achievements of this conference include the sharing, among all participants, of the outcomes of previous regional seminars for promotion of the conclusion of the Additional Protocol, and the compilation, by consensus of all the participants, of the chairman's summary, which will serve as a guideline for achieving the universalization of the Additional Protocol. Japan, taking advantage of bilateral meetings and multilateral forums, has been working to urge other countries to accept the Additional Protocol and to actively take part in the joint efforts of G8 countries in this respect.

2. Making safeguards measures more efficient and implementation of integrated safeguards

The regular budget of the IAEA has seen no real growth for more than 10 years, and it has become difficult for the IAEA to effectively execute its expanding tasks, especially in the field of safeguards, which accounts for 40% of the regular budget. To counteract the situation, a new budget was adopted at the 47th IAEA General Conference in 2003 to mark a significant increase in the regular budget, the bulk of which was for safeguards measures. Japan accepted the

increase, with the view that securing the financial basis of the safeguards contributes to the enhancement of the safeguards measures. At the same time, in view of the importance of effective utilization of the limited resources of the IAEA, Japan has been urging the IAEA Secretariat to improve efficiency and reduce costs in terms of safeguards activities.

The application of integrated safeguards is granted to a state only when the IAEA has concluded that there has been no indication of diversion of nuclear materials from declared facilities nor undeclared nuclear activities or materials. This conclusion was drawn for Japan at the Board of Governors meeting of the IAEA in June 2004, and the implementation of integrated safeguards commenced on September 15, 2004. Japan is the first case of integrated safeguards being applied to a country which conducts nuclear activities on a large scale (applied to six countries, including Japan, as of the end of 2004). This has verified the transparency of nuclear activities of Japan and reduction of costs associated with the implementation of safeguards is now expected.



Mr. Amano, Ambassador to the Permanent Mission of Japan to the International Organizations in Vienna, serving as Chairman of the IAEA Board of Governors (in Vienna, October 2005)

The Nobel Peace Prize awarded to the International Atomic Energy Agency and its Director General, Mohamed ElBaradei

On 7 October 2005, the Norwegian Nobel Prize Committee made an announcement to award the Nobel Peace Prize for 2005 to the International Atomic Energy Agency and its Director General, Mohamed ElBaradei. The Committee made this decision for their efforts to prevent nuclear energy from being used for military purposes and to ensure that nuclear energy for peaceful purposes is used in the safest possible way. The committee also stated that "At a time when disarmament efforts appear deadlocked, when there is a danger that nuclear arms will spread both to states and to terrorist groups, and when nuclear power again appears to be playing an increasingly significant role, IAEA's work is of incalculable importance".

The Japanese Foreign Minister Machimura (then) released a statement on the decision of the Nobel Committee, in which he congratulated the IAEA and Director General ElBaradei. He regarded the award as a tribute to the contribution made by the IAEA to international peace and stability through maintaining and strengthening the nuclear non-proliferation regime and as an expression of the international community's expectation of IAEA's further activities. He also expressed Japan's intention to continue its support for the IAEA's activities.

In response to the announcement of the award, the IAEA held a special meeting of the Board of Governors where they welcomed the award. The Board further decided that a special fund would be established to use the Agency's monetary award for funding the needs of developing countries (in the areas of cancer management and nutrition), and that Chairman Amano (Ambassador to the Permanent Mission of Japan to the International Organizations in Vienna) would receive the award on behalf of the Agency, accompanied by other IAEA representatives of the IAEA. The award ceremony (in Oslo, Norway) was held on December 10, and the IAEA Director General ElBaradei and Ambassador Amano received the Nobel medals, etc.



The IAEA Director General ElBaradei and the Chairman of the IAEA Board of Governors, Ambassador Amano, who received the Nobel Peace Prize(in Oslo, Norway, December 2005)

Chapter 6. Strict control over equipment and technologies for enrichment and reprocessing

Section 1. International discussions

1. Overview

The international nuclear non-proliferation regime has been greatly shaken by challenges such as the nuclear issues of North Korea and Iran when they surfaced in 2002, Libya's nuclear weapons program which had declared to be abandoned in December 2003, and the underground network of nuclear proliferation led by Dr. Khan revealed in February 2004. Under such circumstances, more and more members of the internatinal community have come to recoginze the necessity to close loopholes of the international nuclear non-proliferation regime, especially the necessity to further strengthen the control over equipment and technologies related to uranium enrichment and reprocessing usable for the development of nuclear weapons. Various ideas, including that of Director General ElBaradei of the International Atomic Enegy Agency(IAEA) and that of President Bush of the United States, have been proposed, and are currently under discussions in international fora.



Source: The Japan Atomic Energy Relations Organization, "Nuclear Power/Energy" Picture Book 2005-2006

2. Proposal of the IAEA Director General ElBaradei

In October 2003, Director General ElBaradei of the IAEA contributed to "The Economist" an article titled "Towards a safer world", in which he stated that "there is nothing illicit, under the current regime, in a non-nuclear-weapon state having enrichment and reprocessing technology or possessing weapon-grade nuclear material", and "if a state with a fully developed fuel cycle capacity decides to break away from its non-proliferation commitments, it could produce a nuclear weapon within a matter of months", and therefore underlined the necessity of " a new approch".

Subsequently the Director General, at the meeting of the IAEA Board of Governors in June 2004, announced that the IAEA had formed an Expert Group to consider the possibility of "Multilateral Nuclear Approaches (MNAs). This group was set to discuss and consider the following three points:

- <u>Identification and presentation of analysis of issues and options</u> concerning Multilateral Nuclear Approaches to front-end and back-end nuclear facilities;
- (2) Presentation of overview on promoting and restricting factors in relation to policies, laws, security, economy, institutions and technology to support multilateral approaches to frontend and back-end nuclear fuel cycles.
- (3) <u>Presentation of overview and analysis of historical and present experiences</u> about multilateral approaches to nuclear fuel cycles, in relation to this group.

The Expert Group held four meetings between August 2004 and February 2005, and released a report on MNAs on February 22, 2005. As the main conclusion of the report (*Note), the group recommended that measures be taken to strengthen controls over nuclear fuel cycles and transfer of the technologies and that such measures include universalization of the Additional Protocol and stricter implementation of and universal participation in export controls.

In order to maintain the momentum of the discussions, the Group recommended the IAEA state parties, the IAEA Secretariat, nuclear energy industry, and other nuclear-related organizations to follow MNAs in general as well as the five approaches listed below;

- (1) Reinforcemet of existing commercial market mechanisms;
- (2) Development and implementation of supply assurance with IAEA participation;
- (3) Promotion of voluntary conversion of existing facilities to MNAs;
- (4) Creation of multinational and regional MNAs for new facilities; and
- (5) Development of a nuclear fuel cycle with stronger multilateral arrangements by region or by continent - and broader cooperation, involving the IAEA and the international community.

The Group also estimates that the objective to enhance an assurance of non-proliferation of commercial-based nuclear fuel cycles, while ensuring international supply guarantees, may be achieved through gradual introduction of MNAs.

In his opening statement to the Board of Governors in March 2005, the IAEA Director General ElBaradei referred to the report of the Expert Group. He also made a statement at the Review Conference of the NPT in May 2005 that, if requested, he would pursue more detailed work on the relevant legal, technical, financial and institutional aspects of the fuel cycle, perhaps beginning with the development of approaches for providing assurance of supply. At the Review Conference, no substantial agreements were reached despite the fact that many states expressed positive attitudes towards the MNAs.

In his statement to the IAEA General Conference in September 2005, Director General ElBaradei remarked that a first step would be to create an international framework for assuring the supply of reactor technology and nuclear fuel, and the United States announced its intention to start working on the assurance of reliable fuel supply to countries that abandon enrichment and reprocessing activities to be used for their civilian reactors. As of February 2006, no further progress has been witnessed in terms of consideration of the MNAs.

Apart from the MNAs, Director General ElBaradei proposed, in "The Financial Times" dated February 2, 2005, that an agreement be reached at the NPT Review Conference to be held in May 2005, on a five-year moratorium on the construction of any further facilities related to uranium enrichment and reprocessing while a better alternative is designed in the longer term for the control of technologies. Such proposals were also referred to in the report submitted in December 2004 by the United Nations High-Level Panel on Threats, Challenges and Change, established by the Secretary General of the United Nations Kofi Annan. Director General ElBaradei noted in his statement at the Review Conference of the NPT in May 2005 that the High-Level Panel called for, while such an arrangement was being negotiated, a voluntary timelimited moratorium on the construction of any further fuel cycle facilities being put in place, a proposal which had been previously made by him. The report of the High-Level Panel in March 2005 did not include the proposal of a time-limited moratorium, although it stated that a focus should be placed on creating incentives for states to voluntarily forgo the development of uranium enrichment and plutonium separation capability. Moreover, no substantial discussions were made at the NPT Review Conference held in May 2005, with few states supporting the said proposal.

(Note) Official title of the report: Multilateral Approaches to the Nuclear Fuel Cycle. In the text of this report the approach was abbreviated as Multilateral Nuclear Approaches (MNAs). According to the report, the term "multilateral", meaning the participation of multiple bodies, is used to broadly include the concept of, "multinational" (participation of multiple countries), "regional" (participation of neighboring countries) and "international" (participation of multiple countries) countries and of international organizations, such as the IAEA).

3. Proposals by US President George W. Bush

In a speech at the National Defense University on February 11 2004, President George W Bush of the United States remarked: "the greatest threat before humanity today was the possibility of secret and sudden attack with chemical or biological or radiological or nuclear weapons". Referring to the recent revelation of the underground network of nuclear proliferation by Dr. AQ Khan, President Bush made seven proposals to strengthen the non-proliferation regime. As the fourth step, he urged the 40 nations(45 as of 2006) of the Nuclear Supplies Group (NSG) to "refuse to sell enrichment and reprocessing equipment and technologies to any state that does not already possess full-scale, functioning enrichment and reprocessing plants".

This proposal has been discussed at the NSG meetings and was also referred to in the G8

Action Plan on Nonproliferation at Sea Island in June 2004, as follows; "The export of such items should only occur pursuant to criteria consistent with global nonproliferation norms and to states rigorously committed to those norms. We shall work to amend appropriately the Nuclear Suppliers Group (NSG) guidelines, and to gain the widest possible support for such measures in the future. We aim to have appropriate measures in place by the next G-8 Summit. In aid of this process, for the intervening year, we agree that it would be prudent not to inaugurate new initiatives involving transfer of enrichment and reprocessing equipment and technologies to additional states."

Discussions followed at the NSG meetings on this issue. Although the Plenary Meeting of the NSG in Oslo in June 2005 did not reach a conclusion, it was agreed to give priority to strengthening of the NSG guidelines on enrichment and reprocessing technologies and to continue discussions. Furthermore, language similar to the Sea Island Summit of the previous year was included in the G8 Statement on Non-Proliferation, Gleneagles Summit, July 2005.

4. New initiatives

Aiming at creating a "virtual fuel bank" as a safety net that complements the existing market for nuclear fuel, discussions have been under way since September 2005 between US and France, Germany, Netherlands, Russia and UK, the current suppliers of enriched uranium, concerning the establishment of a framework to assure the supply of nuclear fuel. In order to further assure the supply of nuclear fuel, the US proposed, at the IAEA General Conference in September 2005, as its original initiative, to create a Fuel Reserve by 2009. The Fuel Reserve uses low-enriched uranium which is obtained by down-blending 17.4 metric tons of weapongrade highly enriched uranium (enough to run 15 nuclear reactors for a year), under the monitoring of the IAEA.

In 2006, both Russia and the US announced new initiatives respectively. On January 25, President Putin of Russia proposed to create international centers providing nuclear fuel cycle services including enrichment. Russia explains this proposal envisions provision of enrichment and reprocessing services by international centers on a non-discriminatory, rational and commercial basis and under the control of the IAEA, to nations that forgo uranium enrichment and reprocessing technologies which can be converted to military use.

As part of the Advanced Energy Initiatives announced by President Bush at the State of the Union address, Secretary of Energy Samuel Bodman announced on February 6 2006 the Global Nuclear Energy Partnership (GNEP). In light of growing needs for energy resources on a global scale, this new initiative aims to expand the use of nuclear energy to contribute to the environment, development and non-proliferation purposes. Other elements included in this Initiative are to reduce radioactive waste by recycling spent fuel, to develop highly advanced nuclear proliferation resistant technologies in order to minimize the risk of proliferation and to work with other nuclear-advanced nations including Japan, and to establish a nuclear fuel services program which would allow developing nations to enjoy the benefits of abundant sources of clean and safe nuclear energy in exchange for their commitment to forgo enrichment and reprocessing activities.
Section 2. Basic stance of Japan

Japan's basic stance is described in Japan's proposal, "21 Measures for the 21st Century" and in the working paper submitted to the NPT Review Conference in May 2005. Japan maintained in those papers that there was a common recognition that the international nuclear non-proliferation regime should be strengthened in order to maintain and strengthen the peace and stability of the international community. The most realistic and effective measure to achieve this is to improve the capability of the IAEA safeguards activities through the universalization of the Additional Protocol and to reinforce the multinational export control framework, including the NSG and the Zangger Committee. For this reason Japan actively engages itself in discussions at the NSG in response to the proposals of President Bush.

Japan appreciates the intensive efforts for the MNAs carried out by the Expert Group and believes it necessary to examine thoroughly the following points, which have not been sufficiently discussed:

- (1) how MNAs can contribute to strengthening the international nuclear non-proliferation regime, which is the starting point of the whole question; and
- (2) whether the MNA will not unduly affect the peaceful uses of nuclear energy by a nonnuclear-weapon state that carries out nuclear activities with the confidence of the international community by squarely fulfilling its NPT obligations and by ensuring high transparency of its nuclear activities.

As international discussions on the assurance of nuclear fuel supply are expected to intensify in the future, Japan, having fulfilled the obligation of nuclear non-proliferation and peaceful use of nuclear energy in good faith, will consider what it can do to contribute to the establishment of a new international framework responding to the issue of nuclear non-proliferation of the world and will actively participate in discussions in international forums.

As for the proposal of a five-year moratorium on the construction of any further facilities for uranium enrichment and plutonium separation, Japan believes it inappropriate since it may hinder peaceful nuclear activities, including nuclear fuel cycle activity that Japan carries out on the basis of the confidence of the international community.

Chapter 7. Nuclear Security

Following the terrorist attacks on September 11, 2001, the international community has reviewed and strengthened measures against terrorism with renewed urgency. However, taking full advantage of advanced science and technology and the mechanisms of the global society, terrorist organizations are becoming ever more sophisticated in their activities, undertaking cross-border activities, financial and weapon procurement, propaganda activities, etc. Nuclear technologies have been used for peaceful purposes in various areas including power generation, human health, agriculture, and industry, etc., but if nuclear materials and radioactive sources fall into the hands of terrorists and are abused, it would cause enormous harm to human life, health, or property. The International Atomic Energy Agency (IAEA) has categorized four potential nuclear security risks: the theft of a nuclear weapon; the acquisition of nuclear materials for the construction of nuclear explosive devices; the malicious use of radioactive sources - including in so called "dirty bombs"; the radiological hazards caused by an attack on, or sabotage of, a facility or a transport vehicle.

The IAEA considers various measures taken to prevent these threats from becoming real as a general concept of nuclear security. The IAEA identifies the overall measures to prevent, detect and respond to theft, attack or sabotage, illicit transfer, or malicious conduct with regard to nuclear materials and other radioactive sources or related facilities as preventive measures for nuclear security.

Various approaches are taken, primarily by the IAEA and the UN, toward strengthening nuclear security at an international level, and Japan actively supports these approaches.



Uranium slugs seized in Czech Republic (November 2003: source, IAEA)



Strontium 90 for a nuclear battery found in waste (found in Georgia in December 2001: source, IAEA)



A device scrapped together with cesium 137 (seized in Turkey in December 2004: source, IAEA)

Section 1. Efforts led by the IAEA and the United Nations

1. Efforts of the IAEA

(1) IAEA Nuclear Security Plan of Activities

At the IAEA General Conference held in Vienna immediately after the terrorist attacks on September 11, 2001, a resolution was adopted to the effect that the IAEA activities and programmes relevant to preventing acts of terrorism involving nuclear materials and other radioactive materials shall be reviewed and a report shall be submitted to the IAEA Board of Governors as soon as possible. In response, the first plan of activities (2002-2005) was approved by the IAEA Board of Governors in March 2002. The plan consists of eight activity areas such as physical protection of nuclear material and nuclear facilities (Note), to be implemented by the IAEA to support measures against nuclear terrorism. Accordingly, the Nuclear Security Fund was established for the implementation of the plan. The International Conference on Nuclear Security was held in London in March 2005 to review the IAEA's activities against nuclear terrorism. The importance of continuing and strengthening the activities through the utilization of the Agency's Nuclear Security Fund was emphasized at this Conference. Then, Activity Areas were reorganized (1) needs assessment, analysis and coordination, (2) prevention (3) detection and response) and the second Plan of Activities (2006-2009) was approved by the IAEA Board of Governors in September 2005.

(Note) Eight Activities Areas: ① physical protection of nuclear material and nuclear facilities; ② detection of malicious activities involving nuclear and other radioactive materials; ③ strengthening state systems for nuclear material accounting and control; ④ security of radioactive material other than nuclear material; ⑤ assessment of safety and security related vulnerability at nuclear facilities; ⑥ response to malicious acts or threats thereof; ⑦ adherence to and implementation of international agreements, guidelines and recommendations; and ⑧ nuclear security co-ordination and information management.

(2) Safety and Control of Radioactive Sources

As a result of the emergence of new concerns about the diversion of radioactive sources to a "dirty bomb," the control of radioactive sources, to which potential terrorists may find it easier to gain access, has become a task with equal urgency to the physical protection of nuclear material. Prompted by a series of fatal radiation accidents involving the general public caused by "orphan" sources in the former Soviet Union, and Eastern Europe, etc., the International Conference on the Safety of Radioactive Sources hosted by the IAEA was held in Dijon, France in 1998. Conference participants shared recognition of the importance of strengthening safety and control systems of radioactive sources by individual governments. The IAEA General Conference of September 1998 adopted a resolution to request that the IAEA Secretariat prepare an international action plan for strengthening the safety and security of radioactive sources, while referring to the outcomes in Dijon. The IAEA Secretariat, in response, submitted an international action plan concerning the safety and security of radioactive sources in September 1999, and the IAEA General Conference approved the international action plan for the Safety and Security of Radioactive Sources. With these events as a background, the IAEA has been working on the formulation of the Code of Conduct on the Safety and Security of Radioactive Sources, which incorporates more details, since the beginning of 2000. Particularly, following the terrorist attacks in the US on September 11, 2001, there was a growing concern in the international community about the diversion of radioactive sources to a "dirty bomb". Accordingly, the IAEA Board of Governors approved the revised Code of Conduct on the Safety and Security of Radioactive Sources in September 2003. The Code of Conduct requests that all states establish a legal framework to implement effective control over radioactive sources with an aim to prevent malicious use of radioactive sources. The part related to the export and import control of the Code of Conduct became more specific and was formulated as the IAEA Guidance on the Import and Export of Radioactive Sources. It was approved at the IAEA Board of Governors in September 2004. Also at the subsequent IAEA General Conference, a resolution was adopted, encouraging States to act in accordance with the Guidance on a harmonized basis and to notify the Director General of their intention to do so as supplementary information to the code of conduct.

(3) International Standards for Protection of Nuclear Material

The IAEA has formulated the recommendations on the physical protection of nuclear materials (INFCIRC/225) since 1975 in order to develop international standards for the physical protection of nuclear material, and Revision 4 is the latest updated version of the document. In the recommendations in INFCIRC/225/Rev.4 (Corrected), (1) roles between the state and the operator are more clearly defined; 2) it is clearly stipulated that evaluation and formulation of Design Basis Threat, which is to identify the level of threats to be considered when designing the State's system of physical protection, shall fall under the responsibility of the state; ③ requirements for physical protection against the sabotage of nuclear facilities (the title itself has been changed from "Physical Protection of Nuclear Material" to "Physical Protection of Nuclear Material and Nuclear Facilities") are clearly stipulated; ④ it is recommended to thoroughly ensure the confidentiality of physical protection systems and associated documentation including making offences punishable by appropriate penalties; and (5) it is also recommended that the state should be responsible for verifying continued compliance with the physical protection regulations of operators and operators themselves should conduct self-evaluations. It also recommends 6 to require an evaluation of transport by safety specialists and advance authorization of transport plans and protective measures by a competent authority in order to reinforce protection and (7) to install a central alarm station, transport control center, and every possible measure to communicate and coordinate with response forces to respond to sabotage against nuclear facilities in order to ensure response to armed attacks.

(4) Convention on the Physical Protection of Nuclear Material

The main objective of the Convention on the Physical Protection of Nuclear Material (CPPNM) is to protect against theft and other unlawful taking of nuclear material in use, storage and transport. The current Convention obliges States Parties to ensure a certain level of protective measures to protect nuclear materials during international transport, such as constant surveillance by guards, and it restricts the export or import of nuclear material unless such measures are assured. The Convention also obliges the States Parties to establish certain acts related to nuclear materials, such as theft and robbery, as punishable offences, and each States Parties is obliged to establish its jurisdiction and to deem the offences under this convention to be made extraditable offences, with a view to extraditing

the alleged offender or of submitting the case to its competent authorities, so that the alleged offender would not escape penal proceedings. The current Convention entered into force in February 1987, and as of February 2006, 115 states and one international organization (European Atomic Energy Community) are States Parties to the Convention. Japan acceded to the Convention in October 1988.

With the purpose of further strengthening international efforts for the physical protection of nuclear material and nuclear facilities, various consultations has been done to amend the Convention on the Physical Protection of Nuclear Material since 2001. As a result, the amendment to the Convention was adopted by consensus in July 2005. The amended Convention makes it legally binding for States Parties to protect nuclear material and nuclear facilities in peaceful domestic use, storage as well as transport, and to criminalize an act of sabotage against nuclear material and nuclear facilities as a punishable offense.

(5) Coordination with Global Threat Reduction Initiative

The Global Threat Reduction Initiative (GTRI) was announced by the United States Secretary of Energy, Mr. Spencer Abraham, in May 2004. This is a comprehensive initiative to minimize the world-wide amounts of nuclear material and radioactive sources that could pose threats to the international community, with a view to preventing highly-enriched uranium, which has been supplied as fuel for research reactors to various countries from the US and the former Soviet Union, from falling into the hands of terrorists. Among others, this initiative aims to repatriate all US and/or Russian-origin fresh highly enriched uranium fuel and others. The GTRI International Partners Conference held in Vienna in September 2004 set its purpose as repatriation of all Russian-origin spent fuel by 2010 and expediting the repatriation of all US-origin research reactor spent fuel to be completed within 10 years (Note), and decided to continue considerations about the implementation modality of the GTRI in cooperation with the IAEA.

(Note) In December 2004, the United States Department of Energy announced that it would extend the repatriation deadline to 2019.

2. Efforts of the UN

Prompted by the adoption of a resolution on Measures to Eliminate International Terrorism, which includes the establishment of an Ad Hoc Committee for the suppression of international terrorism, by the UN General Assembly in 1996, at the initiative of Russia negotiations began for the International Convention for the Suppression of Nuclear Terrorism at the Ad Hoc Committee for the suppression of international terrorism in February 1997. Although negotiations were temporary suspended, they were resumed following the terrorist attacks on September 11, 2001. The joint statement on nuclear security cooperation by the US and Russia, issued after the summit meeting, emphasized that both countries will work together to help

ensure the early adoption of an International Convention on Nuclear Terrorism. In the report of the UN Secretary General, released in March 2005, Secretary General Kofi Annan urged member states to adopt the Convention as soon as possible. As the early adoption of the Convention gained momentum, a draft of the Convention was finalized at the Ad Hoc Committee for the suppression of international terrorism on April 1, 2005, which was followed by the adoption by consensus at the UN General Assembly on April 13, 2005.

Under the consideration that nuclear terrorism would cause devastating consequences and is a threat to the peace and security of the world, this Convention aims to strengthen international cooperation as well as to prevent nuclear terrorism to take effective and practical measures to prosecute and punish alleged offenders. In specific terms, the Convention obliges the Parties to establish the act of possession and use of radioactive material or a nuclear explosive device with the intent to cause death, or serious bodily injury, or to cause substantial damage to property, etc., and the act of use and/or damage to nuclear facilities in a manner which releases radioactive materials as criminal offenses under the national law.

Section 2. Japan's efforts

Japan has contributed an accumulated total of US\$ 658,000 by the end of FY 2004 to the Nuclear Security Fund, with a view to supporting the first nuclear plan of activities of the IAEA. Using part of this contribution, the IAEA carries out a project of improving the nuclear material control system at the Ulba nuclear fuel fabrication facility in Kazakhstan by utilizing such systems as accurate analysis and accountancy techniques, which Japan has gained from its long-term experience with the peaceful use of nuclear energy and experiences in accepting safeguards. The IAEA recognizes this project has drastically improved the accuracy of accounting of residual uranium within the fabrication process, which was one of the problems of the facility.

Furthermore, Japan, with the recognition that the stringent control and physical protection of nuclear material is a basic and significant step for promoting denuclearization as well as for preventing the proliferation of threats, provides equipment for accountancy and control systems, including various radiation measurement devices, computers, accountancy and control software, etc., to Ukraine, Kazakhstan and Belarus, to support the establishment of the State System for Nuclear Material Accountancy and Control (SSAC). At the same time, Japan also contributes to upgrading nuclear security by improving the nuclear material protection system through the provision of such equipment as various sensors, surveillance cameras, surveillance systems, etc.

With respect to the International Convention for the Suppression of Acts of Nuclear Terrorism mentioned earlier, Prime Minister Junichiro Koizumi signed the Convention in September 2005 when the Convention was opened for signature at the time of the UN World Summit. Together with the Amendment to the Convention on the Physical Protection of Nuclear Material which was adopted in July 2005, considerations have been under way for early conclusion of the Convention.

In response to the increasing need for strengthening nuclear security following the terrorist attacks on September 11, 2001, the Japanese Government instructed nuclear facility operators to tighten security as part of the anti-terrorism measures at nuclear facilities, including nuclear power stations, etc.

In order to also upgrade the protection of nuclear facilities including nuclear power stations to

the highest level on an international scale and to solidify the nuclear material protection regime, the Ministry of Education, Culture, Sports, Science and Technology, and the Nuclear and Industrial Safety Agency of the Ministry of Economy, Trade and Industry formulate Design Basis Threat for Nuclear power stations, using protection requirements stipulated by the latest recommendations in the IAEA IINFCIRC/225/Rev.4 (Corrected))., which allows operators to apply measures to strengthen and improve protective measures against the conceived threats. Furthermore, in 2005 in its ordinary session, the Diet passed the revision of the Law on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors, which includes the following various protective measures:

- (1) The competent authority shall inspect protective measures undertaken by operators from the perspective of effectiveness, and if necessary, give instructions for improvement; and
- (2) Operators shall secure confidentiality regarding confidential information pertaining to the protection of nuclear materials, and shall punish those who leak confidential information.

Moreover, Japan issued a letter to the IAEA Secretariat in December 2005 to the effect that it will implement the previous mentioned IAEA Guidance on the Export and Import of Radioactive Sources as of January 2006, approved by the IAEA Board of Governors in September 2004.

Chapter 8. Assisting denuclearization of the former Soviet Union

Section 1. Overview

The US and Russia signed START I (Strategic Arms Reduction Treaty I) and agreed to eliminate large quantities of nuclear weapons in July 1991. Strategic nuclear weapons were deployed in four of fifteen republics, namely Russia, Ukraine, Kazakhstan, and Belarus when the Soviet Union collapsed in December 1991. It was decided in May 1992 to transfer all the nuclear weapons deployed in Ukraine, Kazakhstan and Belarus to storage facilities in Russia as part of the nuclear non-proliferation measures.

Russia has assumed primary responsibility for the dismantlement of these nuclear weapons since succeeding them. However, due to the political, economic and social disorder after the collapse of the Soviet Union, there was concern that the dismantlement of nuclear weapons and implementation of nuclear non-proliferation measures might not be fully carried out. Ignoring this situation could lead to risks of proliferation of nuclear weapons and accidents involving radioactive contamination, and this represented a serious international security concern. Therefore, there emerged a call for international efforts to support countries, initially Russia, in order to dismantle nuclear weapons.

In cooperation with the US, the UK, Germany, France and Italy, Japan decided, therefore, to provide assistance in the safe dismantlement of nuclear weapons of the former Soviet Union countries and in solving the related weapons of the former Soviet Union countries and in solving the related environment problems. For example, Japan concluded a bilateral agreement with the four former Soviet countries (Russia, Ukraine, Kazakhstan and Belarus where nuclear weapons were deployed under the Soviet Union) on assisting their denuclearization in the form of several concrete projects. The Japanese government announced its commitment to provide US\$100 million in April 1993, and commenced with assistance to those countries by establishing the committee between October 1993 and March 1994.

At the G8 Summit Meeting in Cologne in 1999, Japan pledged funds amounting to US\$200 million (some portion was to be allotted from the funds that had already been contributed) to the four former Soviet Union countries to further promote the projects. (See Section 3 and 4 for the details of the assistance program for each country.)

Later, an important task of preventing the proliferation, particularly the acquisition of weapons of mass destruction by terrorists, has become apparent throughout the international community due partly to the terrorist attacks on the United States in September 2001. Under such circumstances, G8 countries have taken a cooperative stance to prevent the proliferation of weapons of mass destruction and related materials and technologies, which were left in vast quantities in the former Soviet Union countries including Russia. At the Kananaskis Summit in 2002, G8 leaders launched "The G8 Global Partnership against the Spread of Weapons and Materials of Mass Destruction."

Section 2. G8 Global Partnership

1. Background

At the Kananaskis Summit in Canada on June 26 and 27, 2002, G8 leaders launched "The G8 Global Partnership against the Spread of Weapons and Materials of Mass Destruction," aiming mainly to prevent the proliferation of weapons of mass destruction: namely, nuclear, chemical and biological weapons, and the related materials, etc.

It contains the cooperation in the implementation of projects for nuclear safety, initially in Russia, including non-proliferation, disarmament, counter-terrorism and preservation of the environment. Specific priorities are placed on the following four areas: dismantlement of the decommissioned nuclear submarines, destruction of chemical weapons, disposition of fissile materials, and employment of former WMD-related scientists.

Under this concept, G8 nations formulated "Guidance" for the smooth implementation of cooperation projects in order to solve practical difficulties in implementation of these projects. G8 leaders also started that they would commit to raise financial assistance up to \$20 billion to support such projects over the next 10 years.

2. Significance

The G8 Global Partnership aims at making cooperative efforts in the projects to remove various sources of threat left in Russia and other countries. The concept has a historical significance of wiping clear the negative legacy of the Cold War and a practical significance in three aspects, namely, security, non-proliferation including counter-terrorism measures, and environmental conservation.

Even before the announcement of the G8 Global Partnership, countries including Japan had made cooperative efforts to tackle such issues as disposition of nuclear weapons, destruction of chemical weapons and the safety of nuclear power plants, within the framework of bilateral cooperation. The G8 Global Partnership is to establish a comprehensive framework of G8 by encompassing all of these issues, specifying the scale of funding, and clarifying rules and mechanisms of implementation of the projects. At the same time, in order to remove difficulties in the implementation of the projects, the Guideline was formulated with Russian consent to set the direction for problem-solving. The G8 Global Partnership is not a simple political message, but can be regarded as a manifestation of the strong will of the G8 to realize practical achievements.

The G8 Global Partnership carries a great significance for Japan as well.

First, the guideline on the implementation of projects affirms that the primary responsibility for the implementation of projects rests on Russia, and it also specifies that Russia cooperates fully with other countries in the implementation of the projects. This guideline clarifies the focus of responsibility, necessity of substantial cooperation, and the establishment of the G8 coordination mechanism for assessment. At the same time, the guideline also provides for the necessary measures to ensure, among others, access to the project sites, tax exemption and indemnity, etc., which adequately reflects the views of Japan.

Second, the establishment of the cooperative framework to promote coordination among G8 countries and Russia enables each country having common difficulties in implementing projects to make concerted efforts for solving problems and to coordinate with Russia.

3. Japan's efforts

At the Kananaskis Summit, Japan stated that the prerequisite for the cooperation would be the resolution of difficulties in implementing concrete projects, and pledged to contribute a little more than \$200 million to projects under the G8 Global Partnership. Specifically, slightly more than \$100 million would be spent on dismantling decommissioned nuclear submarines (See Section 3 below), and the remaining \$100 million would go to the disposal plan of surplus weapon-grade plutonium (See Section 3-3 below).

4. Efforts of other countries

The governments of G8 countries announced the following assistance under the G8 Global Partnership by October 2003:

The US: US\$ 10 billion, Russia: \$2 billion, Germany: 1.5 billion euro, Italy 1 billion euro, EU: 1 billion euro, the UK: US\$ 750 million, France: 0.75 billion euro, Canada: 1 billion Canadian dollars.

The Global Partnership was broadened to include the following nations by July 2005: Norway, Sweden, Finland, Switzerland, Poland, The Netherlands, Australia, Belgium, the Czech Republic, Denmark, Ireland, Korea, New Zealand, and Ukraine. In June 2004, at the time of joining the Global Partnership, Australia contributed 10 million Australian dollars to the Committee on Cooperation for Elimination of Nuclear Weapons Reduced in the Russian Federation for projects related to dismantlement of decommissioned nuclear submarines in the Russian Far East.

Annual reports have been adopted to follow up the G8 Global Partnership at the Evian Summit 2003, the Sea Island Summit 2004 and the Gleneagles Summit 2005. Each report refers to the progress of related projects of the past year, solutions to various issues to achieve substantive outcomes, and further expansion of members of the Global Partnership.



Section 3. Assistance of Japan for denuclearization of Russia ("Star of Hope" etc.)

The following are the details of assistance from Japan for denuclearization of Russia.

Construction of a facility to dispose of low-level liquid radioactive waste "SUZU-RAN" (Lily of the Valley)

Serious concerns were raised when it was discovered that Russia had been dumping radioactive waste into the Sea of Japan in 1993. Japan strongly urged Russia to suspend the dumping and decided to design a facility for processing of liquid radioactive waste, "SUZURAN", as a practical measure to prevent such dumping through the Japan-Russia Committee on Cooperation for Elimination of Nuclear Weapons Reduced in the Russian Federation.

"SUZURAN" is the floating treatment facility constructed on a barge with a capacity to treat up to 7,000 cubic meters of liquid radioactive waste per year. It is capable of treating liquid radioactive waste (about 5,000 cubic meters) that is currently stored in the Far East, and liquid radioactive waste which will be generated by the dismantlement of nuclear submarines conducted in the Far East (about 300 cubic meters per submarine). The construction of "SUZURAN" started in January 1996 and was completed in April 1998, and it was handed over to the Russian government in November 2001 after the trial running required for the full operation and the coordination within Russia. The facility is currently moored at the Zvezda Shipyard in the Bolshoi Kamen city near Vladivostok, and it processes liquid radioactive waste generated by the dismantlement of nuclear submarines. According to a Russian source, not even a drop of liquid radioactive waste has been dumped in the Sea of Japan after "SUZURAN" started to operate.



The low-level liquid radioactive waste treatment facility "SUZURAN" constructed and provided within the framework of the Japan-Russia Cooperation for Elimination of Nuclear Weapons Reduced in the Russian Federation

2. Dismantlement project of decommissioned nuclear submarines: "Star of Hope"

In the Russian Far East region, facing Japan across the Sea of Japan, about 30 nuclear-powered submarines decommissioned from the Russian Pacific Fleet are moored. Many of them are still carrying nuclear fuel and if they are left as they are, there is a potential danger of serious radioactive contamination from the submarines suffering from corrosion due to years of immersion in seawater. Therefore, this has become a potential threat to the environment of the Sea of Japan and the safety of the fishery. (In fact, a critical nuclear submarine incident occurred in the 1980s in this region, causing radioactive contamination in the area, and this submarine is still left untreated). Moreover, there is also a risk that nuclear materials on board may fall into the hands of terrorists.

Therefore, the safe and immediate dismantlement of the decommissioned nuclear submarines has become an important and urgent matter, not only from a nuclear disarmament standpoint but also from a perspective of non-proliferation and the preservation of the environment of the Sea of Japan. Russia should assume primary responsibility for the dismantlement of the decommissioned submarines, and Russia itself makes efforts to this end. However, it takes time for Russia alone to dismantle all the nuclear submarines and there is a risk of environment contamination. Thus cooperation from other countries is requested.

While coordinating with the US, Japan issued the "Japan-Russia Operational Project for Disarmament and Environment Protection" in May 1999 and the "Memorandum between the Government of the Russian Federation on Promoting Disarmament and Non-Proliferation Disposition of the Nuclear Arms Subject to Reduction in the Russian Federation." (September 2000) Japan carried out through the Committee the feasibility studies towards the implementation of the projects related to the dismantlement of decommissioned nuclear submarines in the Far East. In addition, Mr. Yoshitaka Shindo, then Parliamentary Secretary for Foreign Affairs, visited Vladivostok to hold discussions directly with concerned personnel of Russia in November 2002.

The "Japan-Russia Action Plan" which was adopted by the leaders of Japan and Russia in January 2003, when Prime Minister Junichiro Koizumi visited Russia, specifies the reinforcement of the activity coordination mechanism and steady implementation of dismantlement projects of decommissioned nuclear submarines in the Russian Far East in order to accelerate the implementation of the program. In the Prime Minister's speech delivered on the occasion of his visit there, this program was named "Star of Hope" after the Zvezda (meaning "Star" in Russian) Shipyard where the dismantling of submarines is taking place. In addition, an "Executive Task Force," consisting of responsible officials of both Japan and Russia, was set up in the Committee on Cooperation for Elimination of Nuclear Weapons Reduced in the Russian Federation in order to strengthen the implementation regime.

Based on the results of the studies conducted thus far, the Committee made a decision in February 2003 to cooperate in dismantling a Victor III-class decommissioned nuclear submarine at the Zvezda Shipyard. A basic document on this project was signed between the Japan-Russia Committee on Cooperation to Assist the Destruction of Nuclear Weapons and the Ministry of Atomic Energy of Russia (then) in June 2003. Specific contracts for the dismantlement were signed in December of the same year and the dismantlement project commenced. It was completed in December 2004.



Dismantling of a submarine (Victor III-class decommissioned nuclear submarine) at the Zvezda Shipyard

Then Parliamentary Secretary for Foreign Affairs Kazunori Tanaka (then) visited Vladivostok and Kamchatka in 2004 and Parliamentary Secretary for Foreign Affairs, Katsuyiki Kawai (then) visited Vladivostok in July 2005 to visit the dismantling site of submarines and have talks with the officials concerned.

At the Governing Council of the Committee on Cooperation for Elimination of Nuclear Weapons Reduced in the Russian Federation, held in January 2005 when Foreign Minister Nobutaka Machimura (then) visited Russia, the Committee was decided to consider the implementation of cooperation for dismantlement of another five decommissioned submarines. Later, based on the decision of this project, Japan and Russia had talks to reach an implementing arrangement. The arrangement was signed when Russian President Vladimir Putin visited Japan in November 2005. Practical dismantling work will begin in the near future. Japan will hold talks with Russia about cooperation for the construction of an on-shore storage facility for the reactor compartment from the decommissioned submarines.



Parliamentary Secretary for Foeign Affairs (then), Katsuyiki Kawai, visiting "SUZURAN" (July 2005)

3. Control and disposition of surplus weapons-grade plutonium in Russia

(1) The locus of the problem

In the process of nuclear disarmament involving the US and Russia, a large quantity of plutonium is extracted from dismantled nuclear weapons (See Reference "Arms control and nuclear disarmament of nuclear-weapon states" Section 1-1). Particularly, in Russia, where the national control regime was weakened and funding is not sufficient, the prevention of surplus weapon-grade plutonium from being reused for military purposes or being handed to others has become a critical issue from the following two points: (a) to further facilitate the progress of US and Russian nuclear disarmament by securing irreversibility (to make sure plutonium is not reused for the manufacturing of nuclear weapons), and (b) to strengthen counter-terrorism and nuclear non-proliferation measures.

The US and Russia, as the parties concerned, have been endeavoring to cope with this issue. However, assistance in terms of funding and technologies from other major nations is strongly recommended. Thus, providing assistance is now under consideration as a key agenda item in the G8 Summit process.

(2) Discussions in the process of the G8 Summit and Japan's efforts

In 2000, the US and Russia agreed that each country would dispose of 34 tons of weapons-grade plutonium. However, Russia, facing economic difficulties, asked other G8 nations for assistance. Discussions followed on the establishment of a multilateral framework for the funding plan and for the coordination of the partnership.

The G8 Global Partnership at the Kananaskis Summit in June 2002 identified the disposition of surplus weapon-grade plutonium as one of the key areas. In response to this, Prime Minister Junichiro Koizumi announced a contribution of \$100 million for disposition of the surplus weapon-grade plutonium program.

Meanwhile, about 20kg of weapon-grade plutonium, which is equivalent to 2 to 3 atomic bombs, was successfully processed into vipack (vibro-packing) fuel and irradiated in a fast reactor through research cooperation between the Japan Nuclear Cycle Development Institute (then) and Russian research institutions. Thus, Japan expects the financial contribution of \$100 million mentioned above to lead to further development of the Japan-Russia research cooperation.

Currently, discussions are taking place among G8 nations and other concerned states about the method of disposition of surplus weapon-grade plutonium and the fundamentals of multilateral framework, etc.



Section 4. Other assistance of Japan for denuclearization

1. Ukraine

 Assistance for the establishment of a State System for Nuclear Material Accountancy and Control (SSAC)

The SAAC is a system to accurately account for and control the categories and respective quantities, the inflow and outflow over a specific period, as well as the present inventories of nuclear and related materials. At the same time, its purpose is to contain and monitor nuclear material in order to prevent any illicit outflow of such material. This system needs to be developed as a prerequisite for the effective and credible application of the IAEA safeguards.

Ukraine was obliged to accept the IAEA safeguards agreement by acceding to the NPT as a non-nuclear-weapon state after becoming independent from the former Soviet Union. It was difficult, however, for Ukraine to establish a necessary SSAC, and Japan has provided necessary assistance for Ukraine through coordination with the IAEA. To be more specific, Japan has supplied systems for nuclear material accountancy and control, and physical protection of nuclear and other materials to the Kharkov Institute of Physics and Technology, and also provided systems for nuclear material accountancy and control to the State Nuclear Regulatory Committee of Ukraine and the Kiev Institute for Nuclear Research. This equipment includes radiation measuring instruments used at the site of nuclear weapon dismantlement and devices to detect toxic gas generated from solid rocket fuel used for nuclear weapons. Japan contributes to the promotion of the safe disposal of nuclear weapons.

(2) Supply of medical equipment for nuclear weapon disposal personnel

Japan supplied medical equipment and medicine to 21 military hospitals attached to the Ministry of Defense four times during the period between 1994 and 2001. They were used for the examination and treatment of military personnel who had been exposed to radioactive contamination during the process of dismantling nuclear weapons, military personnel who had been injured by leakage of toxic missile fuels and those who had been engaged in the dismantlement of the Chernobyl Nuclear Power Plant.

2. Kazakhstan

(1) Assistance for the establishment of a State System for Nuclear Material Accountancy and Control (SSAC)

In order to establish the SAAC that is a prerequisite for the IAEA safeguards to be applied to a non-nuclear-weapon state, Japan supplied Kazakhstan with flow monitor equipment, a nuclear material protection system, and an accountancy and control system for the Aktau fast breeder reactor (BN-350), as well as providing a nuclear material protection system to the Atomic Energy Agency (then) and the Atomic Energy Research Institute.

(2) Measures against radioactive contamination in the vicinity of the Semipalatinsk Nuclear Test Site

The nuclear test site was set up in Semipalatinsk during the Soviet era, and some 820,000

local residents were exposed to radiation according to statistics by Kazakhstan Ministry of Health. After the collapse of the Soviet Union, it was not necessarily clear that there was a causal relationship between the health of the exposed population and radioactive contamination. Still, medical devices were provided for the purpose of contributing to the environmental issues of the vicinity of Semipalatinsk, including the treatment of the exposed individuals and the study of a causal relationship, in response to the request of the Kazakhsatn Public Health Committee (then). Specifically, in August 1999, Japan provided a remote medical diagnostic system to Semipalatinsk Medical University and radiation measurement devices to the Semipalatinsk Research Institute of Radiology and Environment. This project was carried out with the full cooperation of the Medical Department of Nagasaki University.

Japan also supplied medical equipment and medicines to the Republican Clinical Hospital for War Injuries, which treated radiation survivors in Almaty, in response to the request made by the Kazakhstan Ministry of Health.

Furthermore, Japan supplied equipment to measure the radiation levels of sampled teeth to the National Nuclear Center, which was engaged in a radioactive contamination survey in the Seimpalatinsk district.

3. Belarus

(1) Assistance for the establishment of a State System for Nuclear Material Accountancy and Control (SSAC)

Japan has provided the Department for Supervision of Industrial and Nuclear Safety, which falls under the Belarus Ministry of Emergency, with radiation measurement devices and other equipment and the Academic Scientific-Technical Center "Sosny", located near the capital city Minsk, with a nuclear material protection system and an accountancy and control system, to establish the SSAC that is a prerequisite for the IAEA safeguards to be applied to a non-nuclear-weapon state.

(2) Supply of equipment to the Vocational Retraining Center for Ex-Military Personnel

Japan supplied equipment, including vehicle maintenance equipment and computers, in January 2000, to the Vocational Retraining Center for Ex-Military Personnel in Lida City (a former missile base of the former Soviet Union) to promote the re-employment of former soldiers who had been discharged by the disbandment of the strategic nuclear missile force and to prevent the nuclear-related technical expertise of former soldiers from being leaked.

4. International Science and Technology Center (ISTC)

The International Science and Technology Center (ISTC) is an international organization whose purpose is to prevent the outflow of scientists and researchers formerly engaged in research and development on weapons of mass destruction in the former Soviet Union, to provide such scientists and researchers with opportunities to participate in research projects with peaceful application so as to facilitate their military-to-civilian conversion. Japan signed the "Agreement Establishing an International Science and Technology Center (ISTC)" with the US, the EU and Russia in 1992, and has been actively supporting the projects since the inauguration of the ISTC head office in Moscow in March 1994.

ISTC is a successful framework whose objectives are non-proliferation and denuclearization in the former Soviet Union through scientific and technological cooperation on a multilateral basis, and now includes Japan, the US, the EU, Canada, Russia, Republic of Korea, Norway, Belarus, Kazakhstan, Armenia, Georgia, Kyrgyz and Tajikistan. Assistance with over 600 million dollars has been approved for more than 2000 projects involving more than 58,000 scientists and researchers from the former Soviet Union states (as of April 2005). Japan has provided assistance for the projects amounting to about 60 million dollars.

Reference: Arms control and nuclear disarmament by nuclear-weapon states

Section 1. Overview

1. Nuclear-weapon states

The states officially recognized as the nuclear-weapons states under the NPT are the US, Russia, the UK, France and China. India and Pakistan are non-states parties to the NPT that have detonated nuclear tests and have publicly announced possession of nuclear weapons. Although Israel has never admitted to possessing nuclear weapons, it is considered a threshold state.

The US and Russia possess the majority of nuclear weapons in the world, therefore reduction of nuclear weapons by the two states is crucial for global nuclear disarmament.

Article VI of the NPT stipulates that each of the parties "undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament..."

unem si	atus of nuclear weapons	(as of J	anuary 200	4)	
\searrow	Details	Number of		Number of	
		nuclear warheads		delivery means	
	ІСВМ	1490	total	540	total
US	SLBM	2736	7006	360	1014
	Strategic bomber	1660		114	
	Non-strategic nuclear	1120		—	
	weapon				
	ICBM	2478		613	
Russia	SLBM	1072		232	
	Strategic bomber	872	7802	78	923
	Non-strategic nuclear	3380		-	
	weapon				
	Ground-based missile	0		0	
UK	SLBM	185	185	48	48
	Aircraft such as	0		0	
	bomber				
_	Ground-based missile	0		0	
France	SLBM	288	348	48	132
	Strike aircraft	60		84	
	(including				
	carrier-based aircraft)	100		100	
C1 .	Ground-based ballistic	120	402	120	
China	missile	10	402	12	282
	SLBM	12		150	
	Bomber aircraft	150		_	
	Non-strategic nuclear	120			
	weapon				



2. Types of nuclear weapons

There is no definite classification of nuclear weapons, but they are generally classified into three groups according to the objective of defeating war-waging capability: nuclear weapons that can directly attack opponent's territory are classified as strategic nuclear weapons, (including long-range nuclear weapons, or ICBMs, and heavy bombers), nuclear weapons used within a theater of war are classified as theater nuclear weapons (intermediate-range nuclear weapons), and nuclear weapons primarily used in limited military maneuvers are classified as tactical nuclear weapons (short-range nuclear weapons). In some cases, theater nuclear weapons and tactical nuclear weapons are collectively referred to as non-strategic nuclear weapons.

Between the US and Russia, strategic (nuclear) weapons are defined by the Strategic Arms Reduction Treaty (START), etc., and other nuclear weapons are interpreted as non-strategic nuclear weapons. The START classifies nuclear weapons according to the delivery means (ICBMs, SLBMs, strategic bombers, etc.), instead of the size of the warheads (nuclear yield).

However, a strict definition is hard to come by since a theater nuclear weapon by the definition of the US and Russia can be, in effect, treated as a strategic nuclear weapon by other countries, depending on the geographical location and land area, etc.

Section 2. Nuclear disarmament and arms control of the US and Russia

1. Outline of the US-Russia Strategic Arms Reduction Treaty

(1) Outline

Negotiations on the Strategic Arms Reduction Treaty (START) were the first of a process to reduce strategic nuclear weapons held by the US and Russia that had accumulated during the Cold War. (The Intermediate-Range Nuclear Forces Treaty (IFN Treaty) to eliminate all ground-based intermediate-range nuclear weapons was signed between the US and Russia in December 1987 and entered into force in June 1988.) Through this process, the strategic nuclear weapons of both states were substantially reduced, and it can be considered as significant from the perspective of nuclear disarmament. As a result of the START I process, the number of strategic nuclear warheads of the US and Russia was reduced to about 60% of those during the Cold War. START has, therefore, established one of the important foundations for nuclear disarmament.

The Bush administration, which took office in January 2001, put an end to hostile relations with Russia (USSR) which existed during the Cold War with each state possessing more than 10,000 strategic nuclear weapons, and advocated the need to establish a new security regime to combat threats such as weapons of mass destruction and proliferation of ballistic missiles. Accelerated by the terrorist attacks on September 11, 2001 in the US, this policy direction was pushed forward, and an agreement was formed to mutually reduce the number of strategic nuclear weapons to 2,000. As a result, the Strategic Offensive Reductions Treaty (Moscow Treaty), which codifies both countries' commitment to make strategic nuclear weapons reductions, was signed beyond previous START process.

(2) START process

(a) Strategic Arms Reduction Treaty I (START I)

The START I signed by the US and the USSR in July 1991 stipulates that both states reduce the three major means of delivery for strategic nuclear weapons, namely, Intercontinental Ballistic Missiles (ICBMs), Submarine-launched Ballistic Missiles (SLBMs), and heavy bombers, to 1,600 for each side within seven years after the Treaty enters into force. The Treaty also stipulates that heavy ICBMs possessed by Russia (those ICBMs with massive destruction power, i.e., heavy launch weight or throw-weight such as the SS-18 equipped with multiple warheads) are to be reduced to 154 or less. In addition, the number of strategic nuclear warheads deployed is limited to 6,000, of which the total number of strategic nuclear warheads mounted on ICBMs or SLBMs must not exceed 4,900.

After the collapse of the USSR, it was agreed that Ukraine, Kazakhstan, Belarus, and Russia, where strategic nuclear weapons were deployed, and the US, would become the parties to the START I, while Ukraine, Kazakhstan, and Belarus would accede to the NPT as non-nuclear-weapon-states (the Lisbon Protocol).

The three republics of the former Soviet Union other than Russia were required to transfer all of their nuclear weapons in their respective territories to Russia to place them under the control of Russia. The last nuclear warheads were transferred from Belarus to Russia in November 1996, making completion of the transfer of all nuclear warheads (Kazakhstan completed the transfer in May 1995 and Ukraine in June 1996). The START I entered into force in December 1994. In December 2001, the US and Russia announced that they had reduced the number of strategic nuclear warheads to 6000, and completely implemented their obligation under the START I.

(b) Strategic Arms Reduction Treaty II (START II)

Even before the entry into force of the START I, the US and Russia reached an agreement on the basic framework of the START II in June 1992. The START II was signed in January 1993, stipulating as follows: the number of deployed strategic nuclear warheads of the US and Russia should be reduced to less than 3,000-3,500 by January 1, 2003, among which the number of nuclear warheads mounted on SLBMs should be reduced to less than 1,700-1,750; and each ICBM should be fitted with a single warhead, in other words, multiple-warhead ICBMs and heavy ICBMs (SS-18) should be eliminated. (Thereafter, the completion date of START II was extended to 2007 under the START II Protocol signed in September 1997).

The Russian parliament approved the Federal Law on the Ratification of the START II in April 2000 on the condition that Russia reserves the right to withdraw from the START II if the US decides to withdraw from the Anti-Ballistic Missile (ABM) Treaty. Although the US ratified the START II, it did not ratify the START II Protocol, which modified START II, and thus the START II has yet to enter into force.

On December 13, 2001, the US notified Russia of its withdrawal from the ABM Treaty. The Russian Government pointed out that the US rejected the ratification of the START II Protocol and withdrew from the ABM Treaty, and announced in a statement on June 14, 2002, that "the Russian Federation notes the absence of any prerequisites for the entry into force of the START II Treaty, and does not consider itself bound any longer by the obligation under international law to refrain from any actions which could deprive this Treaty of its object and goal."

(c) Strategic Arms Reduction Treaty III (START III)

The US and Russia agreed, in the Joint Statement on "Parameters on Future Reduction in Nuclear Forces" issued after the US-Russian summit talks in Helsinki in March 1997, as follows: the US and Russia are to start negotiations on a START III as soon as the START II enters into force; the number of strategic warheads shall be reduced to 2,000-2,500 by December 31, 2007 as a basic element of the START III; and both states shall start negotiating on other issues including tactical nuclear weapons and Submarine Launched Cruise Missiles (SLCMs). However, no agreement or its signature was made on the draft treaty to this date.

(3) The Treaty on Strategic Offensive Reductions (Moscow Treaty)

From the beginning, the Bush administration had emphasized the necessity of establishing a new security structure in the post-Cold War era. In his statement delivered at National Defense University in May, 2001, President Bush stated that "in the post-Cold War era, Russia is no longer an enemy of the United States. Although nuclear weapons continue to play a crucial role in the security of the US and its allies, the US is now able to change the scale, composition and characteristics of its nuclear force and will do so, reflecting the fact that the Cold War has ended."

Summit talks between the US and Russia were held (in Washington D.C./ Crawford) during November 13-15, 2001, and President Bush conveyed to President Putin that the US would reduce the number of operationally deployed strategic nuclear warheads to 1,700-2,000 in the next decade, a level commensurate with US security requirements.

Following a series of talks, at the US-Russia Summit Meeting in Moscow on May 24, 2002, the two leaders signed the Treaty on Strategic Offensive Reductions (Moscow Treaty), which stipulates a further reduction of strategic nuclear forces than START I. The US and Russia completed the ratification procedure at Congress in March 2003 and at the Parliament in May 2003, respectively. US President George W. Bush and Russian President Vladimir Putin exchanges instruments of ratification in St. Petersburg and the Treaty entered into force on June 1, 2003.

(Reference) Outline of the Moscow Treaty

- The Moscow Treaty is a legally binding treaty which stipulates that the US and Russia shall reduce strategic nuclear warheads to a level not exceeding 1,700-2,200 respectively in the next decade until 2012 (The Treaty must be ratified by the parliaments of both Parties).
- The Treaty stipulates that the number of operationally deployed strategic nuclear warheads be reduced, rather than destroying nuclear warheads or their delivery systems (missiles, such as ICBMs, and SLBMs and bombers, etc.). Both Parties are allowed to stockpile the reduced warheads.
- The composition and structure of strategic offensive (nuclear) weapons (to be retained without reduction) shall be determined by each Party (no restriction would be imposed on such matters as the type and number of ICBMs, SLBMs, and strategic bombers, or the possession of MIRV).
- 4. The Parties shall hold meetings at lease twice a year of the Bilateral Implementation Commission, for the purposes of implementing the Treaty.
- 5. The verification measures shall be based on the provisions of the START I and be entrusted to the Bilateral Implementation Commission.



2. The Anti-Ballistic Missile Treaty (ABM Treaty)

(1) Overview of the ABM Treaty and its significance

Signed in May 1972 between the US and the USSR, and entered into force in October 1972, the Anti-Ballistic Missile Treaty (ABM Treaty) strictly limited the development and deployment of the missile systems that would intercept strategic ballistic missiles to initially two locations (one location each as modified by the Protocol of July 1974, i.e., the ICBM base in North Dakota for the US, and in Moscow, the capital of the USSR). The Treaty also stipulated that each state could deploy up to 100 launchers and interceptor missiles per location. The ABM Treaty forms the basis of the concept of so-called "Mutual Assured Destruction" (MAD) and enables each state to deter the opponent's nuclear attack by limiting the capability of "the shield" and by intentionally maintaining a vulnerable defense posture.

(2) Withdrawal of the US from the ABM Treaty

After taking office, US President George W. Bush advocated the need for nuclear disarmament and non-proliferation, establishment of a new security structure in order to combat threats faced by today's world which is different from those during the Cold War and the framework that moves beyond the ABM Treaty that would impose a limit on the defense capability of the US. (Speech at the National Defense University, May 2001).

Following the terrorist attacks in September 2001, the Bush administration has further emphasized the link between international terrorism and the threat posed by the proliferation of weapons of mass destruction as well as ballistic missiles.

Under these circumstances, President Bush officially notified the Russian Federation of its withdrawal from the ABM Treaty on December 13, 2001, with a view to promoting the missile defense program. The President Putin of the Russian Federation gave a restrained response to the notification, and observed that such an action by the US was not unexpected, and the US's withdrawal from the ABM Treaty did not pose a threat to Russia's national security, though he regarded the US's decision as a mistake.

The US's withdrawal from the ABM Treaty meant the collapse of the framework for securing strategic stability between the US and Russia symbolized by the ABM Treaty which was based on the concept of Mutual Assured Destruction (MAD) during the Cold War (the framework of nuclear arms control). The important issue of international peace and security was what kind of strategic framework might subsequently be established between the states. In such circumstances, the fact that the US and Russia signed the Moscow Treaty in May 2002 is a symbolic effort for more stable bilateral relations between the two states and for the establishment of a new strategic framework.

As the ABM Treaty stipulated that a member state needs to notify its withdrawal six months in advance, the withdrawal of the US became effective on June 13, 2002, and the treaty expired.

3. Measures of unilateral disarmament of the US and Russia

The US and Russia drastically reduced their non-strategic nuclear weapons (tactical nuclear weapons) in a voluntary manner in the early 1990s. This was the measure responding to imminent dangers emerged while the former Soviet Union was disintegrating into the several

republics, signifying the collapse of the nuclear control system and nuclear proliferation in the third world.

In September 1991, then US President George H. Bush announced his nuclear weapons reduction initiatives, calling on the Gorbachev administration to cooperate. The initiatives include the unilateral withdrawal and disposal of ground-launched tactical nuclear weapons and the withdrawal of all and the disposal of a part of the sea-launched tactical nuclear weapons. In the next month in response to this, President Gorbachev (then) announced that the USSR would withdraw and dispose of all of its ground-launched and sea-launched tactical nuclear weapons.

Following the collapse of the Soviet Union in December 1991, US President Bush (then) announced, in January 1992, his nuclear weapons reduction initiative including: reduction of the B-2 bombers; cancellation of the small ICBM program; reduction of strategic nuclear weapons, including the reduction of the number of warheads on the US submarine-launched ballistic missiles (SLBMs), by about one-third, if the Commonwealth of Independent States (CIS) would eliminate all land-based multiple-warhead ICBMs. In response to the above initiative, Russian President Yeltsin (then) made a comprehensive proposal in his statement on arms control and disarmament policy to reduce all ground-launched tactical nuclear weapons, as well as to reduce aircraft-loaded air- and sea-launched tactical nuclear weapons, to halt the production of heavy bombers (TU-160, TU-95MS), and to reduce the total number of strategic nuclear warheads.

As of January 2004, the US is believed to possess 1,120 non-strategic nuclear warheads, while Russia possesses 3,380 (including those for defense purposes) (SIPRI Year Book 2004).

In addition, the US and Russia announced that each ceased the production of fissile material for nuclear weapons in 1988 and 1994, respectively.

4. Movement concerning nuclear weapons of the US and Russia

(1) The United States

(a) Issue of research of low-yield nuclear weapons

The United States possessed low-yield nuclear weapons (those that has a yield of less than 5 kilotons) before 1994, but its national law prohibited its research and development activities in 1994 (National Defense Authorization Act). However, the FY 2004 National Defense Authorization Bill was adopted in November 2003, which included the abolition of the Spratt-Furse Provision, which prohibited the United States from conducing research and development or production of low-yield nuclear weapons. The new Act ① repeats the prohibition on research and development of a low-yield nuclear weapon but ② does not authorize testing, acquisition and deployment of a low-yield nuclear weapon, while ③ barring engineering development or subsequent phases of a low-yield weapon without congressional approval.

(b) Robust Nuclear Earth Penetrator (RNEP)

The Robust Nuclear Earth Penetrator (RNEP) is a weapon aiming at effectively destroying buried underground facilities. Concerning the earth penetrators, the United States currently possesses B61-11 nuclear bombs and BLU-28 conventional bombs (a bunker buster developed at the time of the Gulf War) and others. However, it has been pointed out that these earth penetrators may not be effective to attack and destroy WMD-related facilities buried deeply underground, since they have a limited capacity for sub-

terranean penetration.

(c) Movement of nuclear weapon-related budget of the United States

The Department of Energy related budget of FY2003 approved the expenditure of US\$ 15 million for research on RNEP using existing nuclear warheads. The Department of Energy related budget of FY 2004 approved the expenditure of US\$ 7.4 million for research on RNEP and US \$ 6 million for the Advanced Concepts Initiative(ACI) (excluding RNEP) that could lead to the development of new nuclear weapons. However, the Appropriations Bill of FY 2005 (passed in December 2004) did not approve any expenditure for the RNEP and the ACI.

Although it was reported that approval of the expenditure for the ACI for the development of new nuclear weapons in the budget of FY 2004 would include the research on a new low-yield nuclear weapon, the US Government states that the program refers to research intending to improve the military capacity of, for example, the nuclear weapons stockpile, and no research activities on a low-yield nuclear weapon have been conducted.

The United States, at the NPT Review Conference in May 2005, emphasized that it was not developing new nuclear weapons, not developing, testing, or producing any nuclear warheads and had not done so in more than a decade. The United States also stated that there have been no decisions on the RNEP and the ACI to move beyond the study stage.

(2) Russia

Speaking at a meeting of senior defense officials and military commanders, President Putin said, "We are not only doing research and successful testing of new nuclear-missile-systems technologies. I am sure that, in the near future, these weapons will appear, systems that other nuclear powers do not and will not possess," suggesting that Russia is developing a new generation of nuclear weapons.

(3) Japan's response

Japan has urged all nuclear-weapon states to take concrete measures toward a peaceful and safe world free of nuclear weapons. At the 2005 NPT Review Conference, Japan called upon all nuclear-weapon states to take further steps towards nuclear disarmament with greater transparency and in an irreversible manner, including deeper reductions in all types of nuclear weapons.

Japan has also emphasized to the international community that it is necessary for all nations possessing non-strategic nuclear weapons, including low-yield nuclear weapons, to further reduce these weapons in a transparent manner, and to maintain a threshold for the use of nuclear weapons at the highest possible level. This stance of Japan has been made clear to the US on the occasion of bilateral meetings.

With regard to the resumption of research on low-yield nuclear weapons, Japan has pointed out to the US Government at the periodical meetings that there are concerns among the opinions of the international community, including those of Japan, that research on low-yield nuclear weapons might adversely affect the nuclear disarmament and non-proliferation regime, and lead to the resumption of nuclear testing. Japan also raised the issue that such concerns might give negative impact on the international disarmament and non-proliferation of weapons of mass destruction.

Section 3. Prevention of arms race in outer space

1. Framework for controlling the use of outer space for military purposes

There are mainly three treaties to control the use of outer space for military purposes, as follows:

(1) The Outer Space Treaty

The Outer Space Treaty (officially named: the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, entered into force in 1967)

Main provisions: prohibition of the deployment of weapons of mass destruction in outer space and prohibition of the establishment of military bases on the moon and other celestial bodies

(2) The Partial Nuclear-Test-Ban Treaty

The Partial Nuclear-Test-Ban Treaty (officially named: the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, entered into force in 1963) Main provision: prohibition of any nuclear weapon test explosion in the atmosphere, outer space and under water

(3) The ENMOD Convention

The ENMOD Convention (Officially named: the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, entered into force in 1978)

Main provision: prohibition of military or any other hostile use of environmental modification techniques to change the structure composition, and dynamics of the Earth or of outer space

2. Prevention of Arms Race in Outer Space (PAROS)

(1) Overview

Development of weapons of mass destruction in outer space is prohibited by the Outer Space Treaty, and current military use of outer space is limited primarily to reconnaissance, early-warning satellites, communication satellites, the global positioning system (GPS), etc.

In consideration of the need to restrain further expansion of the military use of outer space along with advancements in science and technology, in the Final Document of the first special session of the UN General Assembly in 1978, it was proposed that in order to prevent an arms race in outer space, further measures and appropriate international negotiations be held in accordance with the spirit of the Outer Space Treaty. This formed the concept of PAROS and the basis for subsequent discussions.

(2) Discussions on PAROS

The Ad Hoc Committee on PAROS was established in 1985 at the Conference on Disarmament in Geneva to discuss issues such as the necessity of a new treaty, the prohibi-

tion of Anti-satellite offensive weapons, evaluation on anti-ballistic missile systems and confidence building measures. At the Conference, while the former Soviet Union and Easter European countries expressed serious concerns about the US's Strategic Defense Initiative (SDI) by stating "this initiative leads to the militarization of outer space and also violates the ABM Treaty," the US and UK contended, "a new treaty cannot be formulated in the absence of an effective verification system" and "there is no need for creating a new treaty since there is no sign of any countries pursuing the development of outer space weapons and arms races are restricted under the existing treaties." The Ad Hoc Committee ended in 1994 without substantial results.

Later, in 1999, with the emergence of the US national missile defense issues, China proposed to reestablish an Ad Hoc Committee with a mandate to negotiate a treaty to prevent the weaponization of outer space. This was followed by strong arguments from China for the promotion of prevention of the weaponization of outer space, highlighted by the submission of documents on the prevention of the weaponization of outer space in 2000 and 2001 to the Geneva Conference on Disarmament.

Russia was also concerned about the promotion of the missile defense program of the United States and its withdrawal from the ABM Treaty, and Foreign Minister Igor Ivanov gave a speech at the UN General Assembly in September 2001, emphasizing the importance of the efforts of the international community to formulate a comprehensive treaty that prohibits the deployment of weapons in outer space and the use of force against any object in space.

In June 2002, China and Russia together with other nations submitted a joint working paper to the Conference on Disarmament. The objective of the document is to focus the prohibition of the deployment in outer space of mainly conventional arms, rather than weapons of mass destruction whose deployment in outer space is already prohibited by the Outer Space Treaty.

(Reference) Outline of a Working Paper presented by China and Russia in 2002 on the Prevention of the Development of Weapons in Outer Space

- (1) Name: Possible Elements for a Future International Legal Agreement on the Prevention of the Deployment of Weapons in Outer Space, the Threat or Use of Force against Outer Space Objects
- (2) Basic Obligations
 - Not to place in orbit around the Earth any objects carrying any kinds of weapons;
 - Not to install such weapons on celestial bodies;
 - · Not to station such weapons in outer space in any other manner
 - Not to resort to the threat or use of force against outer space objects; and
 - Not to assists or encourage other States, groups of States, or international organizations to participate in activities prohibited by this Treaty.
- (3) The Use of Outer Space for Peaceful and Other Military Purposes
 - This Treaty shall not be construed as impeding the research and use of outer space for peaceful purposes or other military uses not prohibited by this Treaty.
 - Each State Party to the Treaty shall carry out activities in outer space in accordance with the general principles of international law and shall not violate the sovereignty and security of other States.

3. Japan's stance

Japan ratified the Outer Space Treaty in 1967. "A Diet Resolution concerning Principles for the Development and Utilization of Outer Space" adopted at the plenary session of the House of Representatives in May 1969 provides that Japan's development and utilization of outer space shall be limited to 'peaceful purposes.'

The Japanese government considers that the use of outer space by the Defense Agency and the Self-Defense Force is not restricted if such use is of a general nature. For example, the use of communication satellites or earth observation satellites by the Self-Defense Force does not contravene the principles of peaceful use of outer space.

Japan recognizes that the proliferation of weapons of mass destruction and missiles as their means of delivery, poses a challenge to its security, and strongly feels that space development technology must not be used to conceal ballistic missile programs.

Based on such stance, Japan has been voting in favor of the resolution on "Prevention of Arms Race in Outer Space" at the UN General Assembly, and playing an active role in the international frameworks to deal with the proliferation of ballistic missiles.

Section 4. Other developments in nuclear-weapon states

1. China

(1) China's nuclear policy

China's nuclear deployment and nuclear disarmament measures are not completely visible, but the following are the nuclear policies of China expressed in the statements at international conferences:

(1) China possesses a small number of nuclear weapons necessary for self-defense purposes only;

- ⁽²⁾ China will not use nuclear weapons first against any state. Nor will it use or threaten to use nuclear weapons against non-nuclear-weapon states; and
- ③ China will not participate in a nuclear arms race.

China's nuclear forces, though not at all comparable to those of the US or Russia, are composed of about 400 nuclear warheads (SIRPI Year Book 2004). Its means of delivery are ground-launched missiles, submarine-launched missiles and bombers. China also possesses a small number of intercontinental ballistic missiles (ICBMs) capable of reaching the east coast of the US. While the other four nuclear-weapon states declared a unilateral production moratorium of fissile materials for nuclear weapons, China has not done so.

(2) Japan's response

Japan has taken various approaches to the Chinese nuclear issues on a number of occasions through bilateral talks such as the Japan-China Security Dialog, Japan-China Consultation on Disarmament and Non-proliferation, etc. In recent years, the Japan-China Consultations on Disarmament and Non-proliferation was held in Beijing in December 2005. Japan requested that China promptly ratify the CTBT, declare moratorium of nuclear testing, cease production of fissile materials for nuclear weapons, and take concrete measures to reduce nuclear weapons. Although China's military forces are the largest in scale in the world, much of military equipment of the People's Liberation Army of China is obsolete, and sufficient weapons in terms of fire power and mobility are not available for the entire force. Thus, China has been modernizing its nuclear and missile forces as well as naval and air forces. According to the Chinese Government, China's defense budget has recorded a double-digit increase for 17 consecutive years until 2005. There remains some obscurity in these circumstances, and Japan regards it as important that China increases its military transparency in order to eliminate the concerns of the neighboring states. Based on this recognition, at the bilateral talks, Japan requested that China increase its military transparency. With respect to the move of the EU toward the lifting of its arms embargo against China, Japan has expressed its opposition to the lifting from the perspective of the security environment in East Asia.

2. France

Since its announcement to eliminate all ground-to-ground missiles in September, France's nuclear forces are based on its second-strike capability to survive an opponent's attacks, in the form of highly survivable bomber loaded air- and submarine-launched systems.

France reduced the means of delivery of nuclear weapons by two thirds since 1985. The share of nuclear weapons in the defense budget fell 17% in 1990 to below 9.5 % in 2004. France abandoned all its surface-to-surface missiles and reduced the number of nuclear ballistic missile submarines (SSBN). France declared in 1996 that it no longer produces fissile material for nuclear weapons. France then closed down the Pierrelatte plant for producing weapon-grade fissile material, and closed and dismantled the South Pacific nuclear test site (in Mururoa). France explained that these disarmament operations are in line with France's hitherto known principle that it maintains the nuclear forces at a level of strict sufficiency.

3. United Kingdom

In its "Strategic Defense Review" in July 1998, the UK, while maintaining its security strategy based on nuclear deterrence like France, announced the following measures: to reduce the number of nuclear warheads for the Trident-type nuclear missiles, the UK's only nuclear force, from 300 to fewer than 200; to reduce the number of Trident submarines on patrol at any one time to only one; to reduce the number of missiles equipped with nuclear warheads on the submarine from 96 to 48; to lower the alert level of nuclear-powered submarines to de-target its missiles. By these and other measures, such as the removal of nuclear bombs from bombers, the UK's nuclear forces have been reduced by more than 70% compared with the Cold War level.

Also, the UK announced that it ended the production of fissile material for nuclear weapons and other nuclear explosive devices in 1995, and completed the disposal of submarine-launched ballistic missile Chevaline warheads in 2002.

Reference: Nuclear-Weapon-Free Zones

Section 1. Overview

A "nuclear-weapon-free zone" is defined in general as a "zone free form nuclear weapons" created by an international agreement which (1) prohibits regional states from manufacturing, acquiring, possessing, deploying or controlling any nuclear weapons in the region, and by a protocol under which (2) all nuclear-weapon states (the US, Russia, the UK, France and China) shall undertake not to use nuclear weapons against the states in the zone (negative security assurance).

Initially, the concept of a nuclear-weapon-free zone was considered to be a complementary measure on the part of the international community to establish a global nuclear non-proliferation regime, and, during the Cold War, it was taken as a regional approach initiated by non-nuclear-weapon states that were concerned by the prospect of a confrontation between the eastern and western blocs developing into a nuclear war.

Section 2. Japan's stance

Japan's basic stance on a nuclear-weapon-free zone is that the establishment of a nuclearweapon-free zone proposed by the states in the region where appropriate conditions are generally met will contribute to the objectives of nuclear non-proliferation and others.

Conditions to make the proposal on nuclear-weapon-free zone "practical" are, among others: (1) all the states concerned, including the nuclear-weapon states, agree to the proposal; (2) it contributes to the peace and security not only of the states within the zone but of the world as a whole; (3) appropriate inspection/verification measures are provided; and (4) it is consistent with the principles of international law including the freedom of navigation on the high seas.

Section 3. Nuclear-weapon-free zone treaties concluded to date

Nuclear-weapon-free zone treaties have been formulated in Latin America, South Pacific, Southeast Asia and Africa, and the treaties in the former three regions have already entered into force.

1. The Treaty of Tlatelolco (The Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean, adopted in 1967 and entered into force in 1968)

This treaty is the first nuclear-weapon-free zone treaty in the world. With the Cuban Crisis in 1962, the idea of the denuclearization of Latin America was developed and a UN resolution calling for the denuclearization of this region was adopted in 1963. Drafting of the treaty was initiated by Mexico and the treaty was opened for signature in February 1967, and entered into force in April 1968.

The treaty applies to 33 countries in Latin America, all of which have already ratified (Cuba was the last to ratify the treaty in October 2002).

The treaty prohibits testing, use, manufacture, production, acquisition, storage, and deploy-

ment of nuclear weapons in the territories of the state parties.

The protocol, which was ratified by all nuclear-weapon states, prohibits the nuclear-weapon states from acting in a way that would contribute to a violation of the obligations of denuclearization as well as from using or threatening to use nuclear weapons against the state parties to the treaty.

At the UN General Assembly, resolutions have been adopted regularly to strengthen the Treaty of Tlatelolco, and Japan has joined the consensus.

2. The Treaty of Rarotonga (The South Pacific Nuclear Free Zone Treaty, adopted in 1985 and entered into force in 1986)

Against the background in which France commenced nuclear testing in the South Pacific in 1966, the momentum to oppose nuclear testing increased in this region. The resolution supporting the establishment of a nuclear-weapon-free zone in the South Pacific was adopted at the UN General Assembly in 1975. Moves toward the establishment of the nuclear-weapon-free zone accelerated when the Labour Party took office in Australia in 1983. The treaty was adopted at the plenary meeting of the South Pacific Forum (SPF) and opened for signature in 1985. The treaty entered into force in December 1986.

The treaty applies to all 16 member states and areas (self-governing domains) of the Pacific Islands Forum (PIF, formerly SPF). Thirteen states and areas have signed the treaty as of July 2005 (it has not yet been signed by the Federated States of Micronesia, Republic of the Marshall Islands, and the Republic of Palau).

The treaty prohibits the states parties from manufacturing, acquiring, possessing and having control of nuclear explosive devices, and bans the stationing and testing of nuclear explosive devices in their territories. It also prohibits the dumping of radioactive material at sea anywhere within the South Pacific Nuclear Free Zone (including the high seas).

The Protocol prohibits the nuclear-weapon states form using or threatening to use nuclear weapons against the parties to the treaty and from testing any nuclear explosive devices within the zone (including high seas). Of the nuclear-weapon states, while Russia, China, the UK, and France have already ratified the Protocol, the US has signed but not yet ratified it.

3. Treaty of Bangkok (The Treaty of the Southeast Asia Nuclear-Weapon-Free Zone, adopted in 1995 and entered into force in 1997)

The "Zone of Peace, Freedom and Neutrality" (ZOPFAN), to create a free, peaceful and neutral zone to exclude any interference of countries outside the region, was first envisioned in the Kuala Lumpur declaration of 1971 at the ASEAN (Association of Southeast Asian Nations, established in 1967) Foreign Ministers' Meeting. As one of the elements to realize this concept, it was agreed to discuss the nuclear-free-zone concept at the ASEAN Standing Committee in 1984. This was followed by meetings for the draft of a treaty; however, no substantial progress was made. The movement to formulate the draft started to develop after the end of the Cold War. The Southeast Asia Nuclear-Weapons-Free-Zone Treaty was signed by the leaders of ten states in the Southeast Asia at the ASEAN Summit Meeting in December 1995, and the treaty entered into force in March 1997.

The treaty applies to the ten states of ASEAN, and all of them have already ratified the treaty.

The treaty stipulated that the states parties undertake not to develop, manufacture, acquire, possess, control, station, transport, or test any nuclear weapons. It also prohibits the states parties from dumping any radioactive material in their territories (including high seas) or discharging the same into the atmosphere. Furthermore, it prohibits the states parties from allowing any other states to engage in any of the above activities (except for the transportation of nuclear weapons).

The protocol prohibits the nuclear-weapon states from using or threatening to use nuclear weapons within the zone, including continental shelves and exclusive economic zones in addition to the states parties' territories. It also stipulates that the nuclear-weapon states undertake to respect the treaty, and not to contribute to any act that constitutes a violation of the treaty or its protocol. None of the nuclear-weapon states has signed the protocol yet. However, China and Russia, which had been reluctant to sign the protocol, expressed their willingness to sign it at the ASEAN Post-Ministerial Conference in July 1999, on the condition that disputes over the scope of application are resolved. No particular progress has been made to date, although a working-level consultation was held between ASEAN and the nuclear-weapon states in May 2001.

4. The Treaty of Pelindaba (The African Nuclear-Weapon-Free Zone Treaty, adopted in 1996, but not yet entered into force)

The Declaration on the Denuclearization of Africa was adopted at the UN in 1961. In 1964 the Assembly of Heads of State and Government of the Organization of African Unity (OAU) adopted the Cairo Declaration, declaring Africa to be a nuclear-weapon-free zone. However, drafting of the treaty had been deferred because it was suspected that South Africa had been developing nuclear weapons. The move toward realization of the treaty gained momentum when South Africa abandoned its nuclear weapons in 1991 and acceded to the NPT as a non-nuclear-weapon state. The final draft of the African Nuclear-Weapon-Free Zone Treaty was adopted at the OAU Summit Meeting in June 1995. The treaty was signed by 42 African States in April 1996.

The treaty applies to 54 African states (including West Sahara which Japan has not yet recognized as a state), and has been ratified by 20 states as of July 2005. The treaty has not yet entered into force, since its entry into force requires the ratification of 28 states. Resolutions calling for early ratification have been adopted biennially at the UN General Assembly, and Japan has joined the consensus.

The treaty prohibits the states parties from conducting research on, developing, manufacturing, stockpiling, acquiring, possessing, controlling or testing of any nuclear explosive devices, and from stationing, transporting or testing thereof in the territory of each state.

The protocol prohibits the nuclear-weapon states from using or threatening to use nuclear explosive devices against the states parties to the treaty, and from testing thereof within the zone (excluding high seas). Among the nuclear-weapon states, France, China, and the UK have already ratified the protocol, while the US and Russia have signed but not ratified it.

Section 4. Planned and proposed Nuclear-Weapon-Free Zones

In addition to the above-mentioned nuclear-weapon-free zones, various nuclear-weapon-free zones are planned or proposed. The zones that have been proposed at the UN General Assembly are as follows.

1. The Central Asia Nuclear-Weapon-Free Zone

This idea had derived from the Almaty Declaration adopted at the summit meeting convened in February 1997 among the leaders of five Central Asian states (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan). The expert group organized by the Regional Centre for Peace and Disarmament in Asia and the Pacific, UN Department for Disarmament Affairs, started drafting the treaty in 1998. A conference of the expert group was held in Sapporo, Japan, in October 1998, and the drafting was almost finished. However, agreement among the five countries could not be obtained, as Tajikistan and Turkmenistan were absent from the conference. Another conference of the expert group was convened in Sapporo in April 2000, but they failed to reach an agreement as Turkmenistan did not participate in the conference once again. The expert group meeting of five Central Asian states, which was held in Samarkand in September 2002, finalized the negotiations on the drafting of the treaty. At the intra-regional conference in Tashkent in February 2005, agreement was reached on the Treaty and its Protocol and the Tashkent declaration was issued, which affirmed the efforts of five states for early signature of the Treaty.

Japan has been providing various logistical and financial assistances to support the two conferences held in Sapporo. Japan also supports the conclusion of the Central Asia Nuclear-Weapon-Free Zone Treaty, by making financial contributions to the Global Regional Disarmament Activity Trust Fund for the negotiations of the treaty. Also at the UN General Assembly, a resolution to establish the Central Asia Nuclear -Weapon-Free Zone has been adopted every year, and Japan has joined the consensus.

2. A Nuclear-Weapon-Free Zone in the Middle East/A Middle East Zone Free of Weapons of Mass Destruction

Since the resolution proposed by Egypt that welcomed an initiative on a Nuclear-Weapon-Free Zone in the Middle East was adopted at the UN General Assembly in 1974, UN resolutions that urge all states parties to take the necessary steps for the implementation of the proposal have been adopted every year. However, due to such problems as Israel, which seems to have highly advanced nuclear capability, having not yet acceded to the NPT, this vision has no prospect of realization.

At the 2005 NPT Review Conference, Japan submitted a report on the resolution on the Middle East of the 1995 NPT Review Conference, which called for the establishment of a nuclear-weapon-free zone in the Middle East.

The resolutions on the establishment of a nuclear-weapon-free zone in the Middle East have been adopted at the UN General Assembly every year. Israel contended at the 59th General Assembly that each of the Middle Eastern state needs to commit itself to changing the status quo.

3. Mongolia's nuclear-weapon-free status

President Ochirbat of Mongolia declared its nuclear-weapon-free status at the UN General Assembly in 1992, and urged the nuclear-weapon states to respect the status and give Mongolia security assurances. The UN General Assembly adopted the Resolution (53/77D) in 1998 in which Mongolia's declaration was welcomed. Resolutions to welcome Mongolia's nuclear-weapon-free status have been adopted biennially since then, and Japan has joined the consensus.

The five nuclear-weapon states issued a joint statement in October 2000 declaring that they would cooperate in the implementation of this resolution and reaffirmed that they would provide negative security assurance to Mongolia, as enunciated in 1995 to non-nuclear-weapon states parties to the NPT. In September 2001, an expert group meeting was convened in Sapporo to examine Mongolia's nuclear-weapon-free status from the viewpoint of international law.

Section 5. Demilitarization of the Antarctic, the seabed, outer space, and the moon

In addition to the nuclear-weapon-free zones mentioned above, the deployment of nuclear weapons and other weapons of mass destruction has been banned in specific places by the following treaties:

1. Antarctic Treaty (Adopted in 1959, entered into force in 1961. Ratified by Japan in 1960)

The treaty stipulates in Article I that, "Antarctica shall be used for peaceful purposes only. There shall be prohibited any measures of a military nature, such as the establishment of military bases as well as testing of any types of weapons."

2. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the moon and Other Celestial Bodies (Adopted in 1967, entered into force in 1967. Ratified by Japan in 1967)

The treaty stipulates in Article IV that "State Parties to the Treaty undertake not to place in orbit around the Earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, install such weapons on celestial bodies, or station such weapons in outer space in any other manner."

Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof (Adopted in 1971, entered into force in 1972. Ratified by Japan in 1971)

The treaty stipulated in Article I that, "The States Parties to this Treaty undertake not to implant or emplace on the seabed and the ocean floor and in the subsoil thereof beyond the outer limit of a seabed zone (beyond 12 nautical miles), any nuclear weapons or any other types of weapons of mass destruction as well as any structures, launching installations or any other facilities specifically designed for storing, testing or using such weapons."
4. Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (Adopted in 1979, entered into force in 1984. Japan has not signed)

The treaty stipulates in Article III, Paragraph 3 that, "States Parties shall not place in orbit around or other trajectory to or around the moon objects carrying nuclear weapons or any other kinds of weapons of mass destruction, or place or use such weapons on or in the moon."