



Advancing the NPT 13 Practical Steps

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Table of Contents

LETTER FROM SENATOR DOUGLAS ROCHE

RECOMMENDATIONS	1
ANALYSIS: STATUS OF IMPLEMENTATION OF THE 13 PRACTICAL STEPS.....	4
<i>Step 1. CTBT</i>	4
<i>Step 2. Nuclear Test Moratorium</i>	4
<i>Step 3. Fissile Material Treaty</i>	5
<i>Step 4. Subsidiary Body to CD to Discuss Nuclear Disarmament</i>	7
<i>Step 5. Principle of Irreversibility</i>	7
<i>Step 6. Elimination of Nuclear Arsenals</i>	7
<i>Step 7. START II, START III, and ABM Treaties</i>	8
<i>Step 8. Trilateral Initiative</i>	10
<i>Step 9. Steps Leading to Nuclear Disarmament Consistent with Stability and Security</i>	11
(a) Unilateral reductions	11
(b) Increased transparency	12
(c) Reductions of non-strategic weapons	13
(d) Reduction of operational status	14
(e) Diminished role for nuclear weapons in security policies.....	14
(f) Engagement in process leading to total elimination of nuclear weapons.....	15
<i>Step 10. Excess Fissile Materials</i>	16
<i>Step 11. General and Complete Disarmament</i>	18
<i>Step 12. Regular Reports</i>	18
<i>Step 13. Development of Verification Capabilities</i>	19

NPT 13 PRACTICAL STEPS: OVERVIEW

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Ottawa, April 16, 2003

Dear Colleague,

At the conclusion of the 1995 Review and Extension Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, Jayantha Dhanapala, then President of the Conference and presently Under-Secretary-General for Disarmament Affairs at the United Nations, emphasized several points which were prescient in their insight:

- 1) "The strengthened review process will now ensure a sharper focus on review conferences of the future and their preparatory committees. These forums of rigorous accountability will play a more crucial role in the operation of the Treaty than ever before. As States Parties to the Treaty, we have to ensure that we make maximum use of this mechanism of accountability in the fulfillment of the undertakings of the Treaty.
- 2) "The permanence of the Treaty does not represent a permanence of unbalanced obligations, nor does it represent the permanence of nuclear apartheid between nuclear haves and have nots.
- 3) "I want to highlight the unmistakable message emanating from this Conference: non-proliferation and disarmament can be pursued only jointly, not at each other's expense.
- 4) "Over the past 25 years non-governmental organizations have performed valuable services for the Non-Proliferation Treaty – in encouragement, ideas, public support and advocacy of further progress towards the goals of the Treaty."

NPT/CONF. 1995/PV.19, 13 MAY 1995

The goals of the Middle Powers Initiative remain guided by the principles set forth above. We sincerely hope that governments and non-governmental organizations will act effectively on this mandate: to fulfill the goals of the Treaty.

Sincerely,

Senator Douglas Roche, O.C.
Chair, Middle Powers Initiative

RECOMMENDATIONS

The Middle Powers Initiative urges governments to work vigorously on the following priority steps in fulfillment of nuclear disarmament and non-proliferation objectives under the NPT and reduce current nuclear dangers:

Step 1: CTBT

- Governments should pressure CTBT hold-out states to sign and ratify the treaty without delay or conditions.
- Support for the activities of the CTBTO PrepComm should be continued.

Step 2: Nuclear Test Moratorium

- Pending entry-into-force of the CTBT, all states with nuclear weapons should be pressured to maintain the moratorium on nuclear explosions.
- Governments should speak out strongly against the concept of “usable” nuclear weapons and affirm that any use of nuclear weapons is contrary to international humanitarian law and other laws governing armed conflict.

Step 3: Fissile Material Treaty

- Pending adoption of a CD programme of work, all nuclear-weapon states should be urged to adopt and maintain unilateral moratoria on the production of weapons-grade fissile materials.
- Breaking the CD impasse represents an absolute priority. Governments should support the call for negotiations on a FISSBAN and the formalization of negative security assurances. They should also consider proposals for progress on a FISSBAN outside the CD.
- Governments should support the creation of a comprehensive, reliable inventory of all weapons-usable fissile material stocks.

Step 4: Subsidiary Body of CD to Discuss Nuclear Disarmament

- In an effort to break the CD deadlock, governments should promote the “Five-Ambassadors” (A-5) proposal, which calls for the establishment of an ad hoc committee to deal with nuclear disarmament.
- Governments should support the UN Secretary General’s Millennium call for an international conference to end nuclear dangers.

Step 5: Principle of Irreversibility

- Nuclear-weapon states should be encouraged to apply the principle of irreversibility explicitly to current and future agreements on the reduction of strategic and non-strategic nuclear warheads.

Step 6: Elimination of Nuclear Arsenals

- Nuclear-weapon states and NATO members should be encouraged to revise their security policies and render them consistent with their commitment to accomplish the total elimination of nuclear weapons.
- Governments should continue to promote both the 2000 “unequivocal undertaking” and the 1996 Advisory Opinion of the International Court of Justice, which unanimously ruled that there exists an obligation to “bring to a conclusion” nuclear disarmament negotiations.

Step 7: START II, START III, and ABM Treaties

- Russia and the US should continue to reduce their strategic nuclear arsenals in accordance with the goals and principles agreed upon under START II and III. Hence, reductions should be rendered transparent, irreversible, and verifiable; multiple-warhead missiles should be destroyed; and verification measures should be applied to warheads as well as delivery systems.
- Governments should support the A-5 proposal, which calls for the establishment of an ad hoc committee to deal with the arms race in space.

- Pending the adoption of a CD programme of work, governments should reaffirm the international, legally binding principles anchored in the 1967 Outer Space Treaty, which calls for the peaceful exploration and use of outer space and prohibits the stationing and installation of nuclear weapons or any other kinds of weapons of mass destruction in outer space.
- Governments should support efforts for comprehensive and non-discriminatory missile control including flight test bans and space launch verification mechanisms.

Step 8: Trilateral Initiative

- Russia and the US should be encouraged to sign bilateral agreements with the IAEA under the Trilateral Initiative to subject all of their excess weapons-grade fissile materials to irreversible international control.
- Bilateral initiatives aimed at securing, converting, and eliminating weapons-grade fissile materials should be incorporated in an overarching multilateral, legally binding disarmament verification regime under IAEA control.
- Governments should support the creation of an IAEA Nuclear Arms Control Verification Fund to help finance the implementation of the Trilateral Initiative and its progressive expansion to additional facilities located in Russia, the United States and other nuclear-weapon countries.

Step 9: Steps Leading to Nuclear Disarmament Consistent with Stability and Security

a) Unilateral reductions

- Governments should insist on additional unilateral reductions of both strategic and non-strategic arsenals worldwide.
- The “10 plus 10 over 10” initiative deserves maximum support. Financial assistance under the initiative should be made contingent upon international verification and immediate de-emphasis of the role of nuclear weapons in the security policies of the nuclear-weapon states.

b) Increased transparency

- Russia and the US should apply the START transparency framework to the SORT, with verification measures applied to both delivery systems and warheads.
- Governments should work actively for the conclusion of the Convention on Nuclear Terrorism and ensure that it includes adequate transparency and information sharing measures.
- All members of the CD should authorize, within the broader context of adopting a programme of work, the creation of the position of a Special Coordinator on transparency in armaments. This coordinator, in close cooperation with the Secretary-General, should examine proposals concerning the inclusion of nuclear weapon stockpiles in the UN arms register. Governments should actively support the expansion of the register to include WMD.

c) Reductions of non-strategic weapons

- The Presidential Nuclear Initiatives of 1991 and 1992 should be turned into legally binding agreements incorporating the principles of transparency and irreversibility.
- Immediate steps should be taken to reduce the operational status of all deployed non-strategic weapons.
- The “10 plus 10 over 10” initiative should pay specific attention to enhancing the security of the large Russian tactical nuclear stockpiles.
- NATO member states should reformulate their national security policies to fully comply with Arts. I and II of the NPT.

d) Reduction of operational status

- De-alerting measures should be applied to all nuclear forces.

e) Diminished role for nuclear weapons in security policies

- A treaty formalizing the negative security assurances of 1995 should be negotiated within the CD. The PrepComm should make recommendations to the 2005 NPT Review Conference on the modalities for immediate negotiations on this issue.
- Nuclear weapon states and NATO members should be encouraged to reassess their nuclear doctrines in light of the 1996 ICJ Opinion, and to reject the concept of “usable” nuclear weapons.

f) Engagement in process leading to total elimination of nuclear weapons

- Governments should support measures integrating all nuclear-weapon states in a process leading to the total elimination of nuclear weapons.
- Governments should encourage informal discussions on the legal, technical and political requirements for the complete elimination of nuclear weapons.

Step 10: Excess Fissile Materials

- Unilateral and bilateral disposition initiatives represent a step in the right direction, but ultimately fail to guarantee the irreversible conversion of fissile material stocks from military to exclusively civil use, nor do they allow for the required international verification. Nuclear-weapon states should conclude special bilateral verification agreements with the IAEA, based on the Trilateral Initiative.
- A process should be initiated to create a global inventory of all weapons-usable fissile materials.
- Governments should provide financial support to the various ongoing US-Russian initiatives aimed at the reduction of excess military stocks of weapons-grade fissile materials. Such financial support should be made contingent upon effective international verification and immediate de-emphasis of the role nuclear weapons play in the security policies of the nuclear-weapon states.
- Governments should support global moratoria on both reprocessing spent fuel for plutonium separation and using HEU in civil reactors.
- While tritium is not a fissile material, it should also be subject to internationally verified control and reduction because of the important role it plays in nuclear weapons.

Step 11: General and Complete Disarmament

- Governments should reduce their conventional military spending and strengthen multilateral disarmament treaties, in particular the Biological Weapons Convention.

Step 12: Regular Reports

- All states parties to the NPT should provide regular, standardized reports on the implementation of Art. VI as well as paragraph 4 (c) of the 1995 Decision.
- These reports should be submitted to each session of the NPT PrepComm. The reports on article VI should cover issues and principles addressed by the thirteen steps and include specific and complete information on each of these steps (*inter alia*, the number and specifications of warheads and delivery systems in service and number and specifications of reductions, dealerting measures, existing holdings of fissile materials as well as reduction and control of such materials, achievements in the areas of irreversibility, transparency and verifiability). Further, the reports should address current security policies and nuclear postures.

Step 13: Development of Verification Capabilities

- Nuclear disarmament must be verifiable. Governments should support the IAEA in its verification-related work and provide the Agency with generous assistance to enable it to perform the increasing number of international disarmament verification tasks under Art. VI.

ANALYSIS: STATUS OF IMPLEMENTATION OF THE 13 PRACTICAL STEPS

Step 1. CTBT

The importance and urgency of signatures and ratifications, without delay and without conditions and in accordance with constitutional processes, to achieve the early entry into force of the Comprehensive Nuclear-Test-Ban Treaty.

More than six years have passed since the *Comprehensive Nuclear-Test-Ban Treaty* (CTBT) was opened for signature, yet the treaty has still not entered into force.

As of March 2003, 166 states have signed and 97 have ratified the CTBT. Of the 44 nuclear-capable countries whose ratification is required for the treaty to enter into force, three states have not yet signed the treaty (Democratic People's Republic of Korea, India, Pakistan). Another 10 nuclear-capable states have signed, but not yet ratified the CTBT (Algeria, China, Colombia, Democratic Republic of the Congo, Egypt, Indonesia, Iran, Israel, United States of America, Vietnam).

The US presents a major obstacle to early entry into force of the CTBT. Although the US has been paying its contributions to the *CTBT Organization Preparatory Commission* (CTBTO PrepComm), the December 2001 *Nuclear Posture Review* (NPR) explicitly states that the US will not support CTBT ratification. In November 2002, the US was the only country to vote against UNGA Res. 57/100, which stressed the importance and urgency of immediate and unconditional signature and ratification of the CTBT by all countries. China, France, Russia and the UK supported the resolution. India abstained. In March 2003, Pakistan's Foreign Minister stated that his country will not sign the CTBT due to the lack of prospects for the treaty's entry into force.

In spite of continuing US opposition and slow progress on ratification by a number of key states, the CTBTO PrepComm has been able to make considerable progress in putting into place the *International Monitoring System* (IMS). Over 100 monitoring stations, of a projected 321, are already transmitting data to the *International Data Centre* (IDC) in Vienna.

The PrepComm's annual budget is just under \$100 million. The European Union is the biggest contributor to the PrepComm's budget (37 percent), followed by the US (22 percent), Japan (19.5 percent) and Canada (2.6 percent). Russia currently pays 1.2 percent of the annual budget. Overall compliance with fees assessments has been positive, with collection rates of 90 percent.

Continuing strong support for putting the IMS into place is crucial. Completing the installation of the IMS – even before the CTBT's entry into force – would underscore the unbroken commitment of the majority of countries to reach the goal of a legally binding universal nuclear test ban. Further, it would allow the international community to collect independently verified, highly credible data on nuclear activities throughout the world. Though the system is not able to detect every possible nuclear explosion, the low-yield underground tests most likely to escape detection (below 0.5 kilotons or 4 points on the Richter scale) are militarily not significant.

Recommendations:

- Governments should pressure CTBT hold-out states to sign and ratify the treaty without delay or conditions.
- Support for the activities of the CTBTO PrepComm should be continued.

Step 2. Nuclear Test Moratorium

A moratorium on nuclear-weapon-test explosions or any other nuclear explosions pending entry into force of that Treaty [CTBT].

Since January 1996, none of the five NPT nuclear-weapon states have conducted nuclear weapons tests. All five states remain committed to the moratorium. However, recent developments show that those voices in the US supporting an eventual resumption of testing – both to test new or modified nuclear weapons and to reassess stockpile performance – are gaining influence.

The US FY 2003 energy budget earmarks \$12 million for a study to determine the steps necessary to reduce Nevada Test Site readiness from the current three-year requirement down to 24, 18, 12 or six months. The defense budget earmarks \$15.5 million for the first year of a three-year feasibility study on the *Robust Nuclear Earth Penetrator* (RNEP). A January 2003 Pentagon meeting attended by high-ranking officials from the Defense and Energy Departments set an agenda to evaluate requirements for low-yield weapons, such as RNEPs, enhanced radiation weapons, and agent defeat weapons for the destruction of chemical or biological agents. Influential persons in the U.S. nuclear weapons laboratories have called for pursuit of usable low-yield nuclear weapons rather than the “self-deterring” high-yield weapons of the Cold War era. Also, the Republican Congressional leadership has been trying to repeal the *Spratt-Furse restriction*, a 1994 law prohibiting the development of low-yield nuclear weapons (below 5 kilotons).

The pursuit of these new and modified nuclear weapons – not only in the US, but apparently also in Russia – is the most likely cause of a potential breakdown of the testing moratorium. France has taken a strong position against the development of “usable” nuclear weapons. The UK, on the other hand, appears to acquiesce to the new trend. Should the US and Russia indeed resume nuclear testing, it is likely that China, India and Pakistan will follow suit with new testing programs focused on warhead miniaturization, better yield-to-weight ratios, and improved safety features.

Recommendations:

- Pending entry-into-force of the CTBT, all states with nuclear weapons should be pressured to maintain the moratorium on nuclear explosions.
- Governments should speak out strongly against the concept of “usable” nuclear weapons and affirm that any use of nuclear weapons is contrary to international humanitarian law and other laws governing armed conflict.

Step 3. Fissile Material Treaty

The necessity of negotiations in the Conference on Disarmament on a non-discriminatory, multilateral and internationally and effectively verifiable treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices in accordance with the statement of the Special Coordinator in 1995 and the mandate contained therein, taking into consideration both nuclear disarmament and nuclear non-proliferation objectives. The Conference on Disarmament is urged to agree on a programme of work, which includes the immediate commencement of negotiations on such a treaty with a view to their conclusion within five years.

Since the early 1990s, the NPT nuclear-weapon states – with the possible exception of China – have not been producing weapons-grade fissile materials. In 1995, all NPT member states – including the five nuclear-weapon states – committed to commence immediate negotiations leading to a treaty banning the production of weapons-grade fissile materials (FISSBAN). Despite a formal renewal of this commitment at the 2000 NPT Review Conference, negotiations of a FISSBAN have yet to start. Sharp differences among several of its key members about the treaty’s purpose, scope and verification have paralyzed the CD since 1998, preventing the adoption of an overall programme of work. A number of linkage proposals have been aggravating the impasse.

First, China, Russia and numerous NAM states, concerned about decade-old US missile defense plans and stated aspiration for “full spectrum dominance” (*see* US Space Command, *Vision 2020*, 1997), have been insisting on parallel negotiations on a treaty preventing an arms race in outer space (PAROS). In 1985, the CD for the first time established an ad hoc committee on the issue. The committee operated until 1994. Pending the adoption of a new CD programme of work, it is awaiting the renewal of its mandate. While most countries currently agree that addressing space weaponization is of importance, differences persist regarding the committee’s new mandate. China, Russia and the NAM are pushing for the initiation of formal negotiations. The US and some of its allies, on the other hand, insist on mere discussions.

Second, India and Pakistan, supported by a great number of NAM countries, wish to link FISSBAN negotiations to parallel negotiations on both nuclear disarmament within a specified time-frame and negative security assurances (*see* CD/1501, para. 2). Regarding the FISSBAN as a nonproliferation tool capping their nuclear capabilities rather than as a non-discriminatory disarmament measure, India and Pakistan insist that they will only make commitments limiting their nuclear options in exchange for additional commitments by the declared nuclear-weapon states toward the full implementation of Art. VI. The US is opposing their linkage proposal.

Third, a group of NAM countries, among them Algeria, Egypt, Iran, Pakistan and the G-21, insist that the FISSBAN’s material scope not only cover future production, but also existing stocks of military fissile materials. It would be unfair, the NAM states argue, to subject the have-nots to a production ban while allowing the haves to freely utilize their stocks. China, possessing only limited amounts of excess fissile materials, sympathizes with the NAM position. All other nuclear-weapon states oppose this linkage.

Some countries, notably Germany, have been calling for the establishment of a global fissile material inventory that would also cover civilian stockpiles of HEU, separated plutonium, and spent fuel to prevent their conversion for military purposes. According to a German 2002 working paper, existing stockpiles of these weapons-usable fissile materials amount to over 3,000 metric tons, enough to produce 200,000 nuclear weapons.

In an effort to advance the FISSBAN, numerous attempts have been made to break the CD impasse. Most recently, a group of five former CD Presidents – Ambassadors Lint (Belgium), Dembri (Algeria), Vega (Chile), Reyes (Colombia) and Salander (Sweden) – have formally submitted their so-called “Five Ambassadors” proposal to the CD (CD/1693 of January 2003). Building upon the Amorim proposal of August 2000 (CD/1624), the A-5 proposal calls for the establishment of four ad hoc committees with the following mandates:

- (a) to “negotiate” a FISSBAN;
- (b) to “deal with” the prevention of an arms race in outer space (PAROS);
- (c) to “deal with” nuclear disarmament; and
- (d) to “negotiate” a formal arrangement concerning negative security assurances.

The A-5 proposal underscores that FISSBAN negotiations ultimately must lead to a “non-discriminatory, multilateral and internationally and effectively verifiable” treaty.

The CD stalemate may be overcome by addressing the FISSBAN issue outside the CD, that is, in a unilateral setting involving only those eight or nine countries actually concerned – the P-5 and the nuclear threshold states. While such action could indeed free up the CD for other tasks, it may weaken the CD’s position as the sole body for multilateral disarmament negotiations.

Recommendations:

- Pending adoption of a CD programme of work, all nuclear-weapon states should be urged to adopt and maintain unilateral moratoria on the production of weapons-grade fissile materials.

- Breaking the CD impasse represents an absolute priority. Governments should support the call for negotiations on a FISSBAN and the formalization of negative security assurances. They should also consider proposals for progress on a FISSBAN outside the CD.
- Governments should support the creation of a comprehensive, reliable inventory of all weapons-usable fissile material stocks.

Step 4. Subsidiary Body to CD to Discuss Nuclear Disarmament

The necessity of establishing in the Conference on Disarmament an appropriate subsidiary body with a mandate to deal with nuclear disarmament. The Conference on Disarmament is urged to agree on a programme of work which includes the immediate establishment of such a body.

Ever since the indefinite extension of the NPT in 1995, China, India, Pakistan and other NAM countries have been stressing that progress concerning the adoption of a FISSBAN would directly depend on advances made in other crucial areas, including nuclear disarmament. The NAM countries have also been demanding that nuclear disarmament, within the multilateral framework of the CD, “be given equal importance and dealt with in a balanced way.” France, Russia and the US, on the other hand, have traditionally rejected the call for a multilateral process within the CD that would deal with the problem of nuclear disarmament. In recent years, however, these three countries have somewhat softened their position, indicating that they may be willing to support the idea of establishing within the CD a subsidiary body with an exploratory mandate to discuss nuclear disarmament issues.

The A-5 proposal of March 2003, building on the Amorim proposal of August 2000, tries to overcome the impasse by accommodating the concerns of both camps. The proposal calls for formal negotiations of a FISSBAN and a treaty concerning negative security assurances, while suggesting informal discussions on nuclear disarmament and PAROS.

Recommendations:

- In an effort to break the CD deadlock, governments should promote the A-5 proposal, which calls for the establishment of an ad hoc committee to deal with nuclear disarmament.
- Governments should support the UN Secretary General’s Millennium call for an international conference to end nuclear dangers.

Step 5. Principle of Irreversibility

The principle of irreversibility to apply to nuclear disarmament, nuclear and other related arms control and reduction measures.

The *Strategic Offensive Reductions Treaty* (SORT) represents a dramatic departure from the principle of irreversibility (*see below*, Step 9).

Recommendations:

- Nuclear-weapon states should be encouraged to apply the principle of irreversibility explicitly to current and future agreements on the reduction of strategic and non-strategic nuclear warheads.

Step 6. Elimination of Nuclear Arsenals

An unequivocal undertaking by the nuclear-weapon States to accomplish the total elimination of their nuclear arsenals leading to nuclear disarmament to which all States parties are committed under Article VI.

The nuclear-weapon states claim that they are enacting their commitments to nuclear elimination through practical steps including reductions in deployed warheads and ceasing the production of fissile materials. However, the US *Nuclear Posture Review* (NPR), submitted to Congress at the end of 2001, clearly states that the US intends to maintain the current US force structure until 2020 or longer. It reveals that the majority of the warheads to be “reduced” under SORT will actually be kept in the active stockpile, for potential redeployment on short notice (weeks to months). Only a small fraction – notably the W-62 – will actually be permanently dismantled. The NPR further proposes that the capacity of the US nuclear weapons assembly line be increased from currently 350 to 600 warheads per year. Finally, the NPR also calls for the expansion of an existing plutonium pit factory and the creation of a new one.

The types and quantities of NATO’s nuclear non-strategic forces in Europe have been considerably reduced since the end of the Cold War. All nuclear-equipped mines, missiles, and artillery shells have been removed. Land-based nuclear warheads have been reduced by over 85 percent, while nuclear storage sites have been reduced by about 80 percent. The few hundred warheads that are left, however, are to stay for the foreseeable future. This is affirmed in the Alliance’s 1999 Strategic Concept, which states that “[n]uclear weapons make a unique contribution in rendering the risks of aggression against the Alliance incalculable and unacceptable.”

Having destroyed most of their Cold War stockpiles, both France and the UK retain small strategic nuclear arsenals and have actively reaffirmed their reliance on nuclear deterrence. However, the UK has also made clear that it is willing to engage in multilateral negotiations on the complete elimination of nuclear weapons when satisfied with progress on nuclear reductions by other states. China has also indicated its willingness to enter such negotiations.

Russia has made clear that it is maintaining long term reliance on nuclear weapons. However, it has also expressed its willingness to substantially reduce its nuclear arsenal. To what extent such reductions will occur depends both on foreign financial aid and the US nuclear policy. Though the “10 plus 10 over 10” initiative and various US sponsored programs provide Russia with substantial resources to move forward in reducing its stockpiles (*see below*, Step 10), actual reductions could be impeded by US missile defense plans.

Recommendations:

- Nuclear-weapon states and NATO members should be encouraged to revise their security policies and render them consistent with their commitment to accomplish the total elimination of nuclear weapons.
- Governments should continue to promote both the 2000 “unequivocal undertaking” and the 1996 Advisory Opinion of the International Court of Justice, which unanimously ruled that there exists an obligation to “bring to a conclusion” nuclear disarmament negotiations.

Step 7. START II, START III, and ABM Treaties

The early entry into force and full implementation of START II and the conclusion of START III as soon as possible while preserving and strengthening the ABM Treaty as a cornerstone of strategic stability and as a basis for further reductions of strategic offensive weapons, in accordance with its provisions.

The US and Russia have reneged on commitments made under this step.

Following the adoption of the 1991 *Strategic Arms Reduction Treaty* (START I), Russia and the US signed START II in 1993. A slow ratification process – the US approved START II in 1996, while Russia did so only in 2000 – led the two sides in 1997 to agree to an extension protocol prolonging the treaty’s implementation period. Pending US ratification of the protocol, the US in December 2001 announced its

withdrawal from the 1972 *Anti-Ballistic Missile (ABM) Treaty*. Russia, in response, announced that it would withdraw its START II ratification – a step it undertook in June 2002 (CD/1677).

The dissolution of START II also killed START III, whose outlines had been sketched in the March 1997 Helsinki commitments, but which never reached the negotiation stage. START II would have eliminated all land-based intercontinental ballistic missiles (ICBMs) carrying multiple warheads. Under START III, deployed strategic warheads would have been reduced to between 2,000 and 2,500 each by 2007. START III also envisaged, for the first time, verification of the dismantling of warheads.

In May 2002, the US and Russia signed the *Strategic Offensive Reductions Treaty (SORT)*, thereby derailing the START process. Contrary to the START agreements, the SORT does not require reductions to be irreversible, verifiable and transparent. The treaty has other critical shortcomings: it does not deal with delivery vehicles and tactical warheads, fails to establish an itemized schedule and time table for reductions, and excludes from its scope the roughly 12,000 non-deployed nuclear warheads stored in Russia and the US. The US Senate unanimously approved the SORT in early March 2003. The Russian Duma, which was scheduled to ratify the treaty in late March, has postponed its decision, probably due to the US invasion of Iraq.

Following its June 2002 withdrawal from the ABM Treaty, the US initiated construction of ballistic missile interceptor silos at the missile defense test bed at Fort Greeley, Alaska. In FY2003, the United States will spend \$7.4 billion on ballistic missile defenses. The US also began promoting plans for a European theater missile defense (TMD) system and called for a new NATO missile defense feasibility study at the NATO Summit in Prague in November 2002.

US missile defense plans have generated increasing – and well justified – concerns about space weaponization. The US has plans for developing and testing not only ground- and sea-based, but also space-based missile defense technologies such as laser systems. As US Deputy Defense Secretary Paul Wolfowitz observed in October 2002: “Space offers attractive options not only for missile defense but for a broad range of interrelated civil and military missions. It is truly the ultimate high ground. We are exploring concepts and technologies for space-based intercepts ...”

Russia has agreed to study possible areas of missile defense cooperation with the US and Europe. Nevertheless, overall Russian opposition to unilateral US missile defense and space weaponization plans persists. In a December 2002 statement, Russia affirmed that it is “watching with dismay as the United States of America steps up its attempts to set in place its so-called ‘global missile defence system’. ... [Such steps] can only lead to a weakening of strategic stability, a senseless new arms race in the world, including the proliferation of weapons of mass destruction and their missile delivery systems, and the diversion of resources from efforts to combat the real challenges and threats of the present day - above all, international terrorism.” (CD/1690)

The UNGA in November 2002 adopted – for the fourth year in a row – a resolution on missiles (A/RES/57/71). The resolution calls for a process within the UN framework to explore missile proliferation, and asks the Secretary-General to prepare a second report on this topic for 2004. However, the resolution was not well supported with 60 states abstaining. Many of these, including NATO and EU states, support instead the *Hague Code of Conduct against Ballistic Missile Proliferation (HCOC)*, which has been negotiated outside the UN. The difficulties in achieving universal consensus on missiles is demonstrated by the fact that the UN study group, which submitted its first missile report in July 2002, was not able to agree on a single recommendation (A/57/229).

The adoption of the HCOC in November 2002 can be seen as a small step forward. However, some key countries – notably China, Egypt, India, Israel, North Korea and Pakistan – reject the code as an illegitimate attempt to protect the maintenance of missile programs by those who already have them, and to restrict the right of others to the peaceful exploration of space .

Recommendations:

- Russia and the US should continue to reduce their strategic nuclear arsenals in accordance with the goals and principles agreed upon under START II and III. Hence, reductions should be rendered transparent, irreversible, and verifiable; multiple-warhead missiles should be destroyed; and verification measures should be applied to warheads as well as delivery systems.
- Governments should support the A-5 proposal, which calls for the establishment of an ad hoc committee to deal with the arms race in space.
- Pending the adoption of a CD programme of work, governments should reaffirm the international, legally binding principles anchored in the 1967 Outer Space Treaty, which calls for the peaceful exploration and use of outer space and prohibits the stationing and installation of nuclear weapons or any other kinds of weapons of mass destruction in outer space.
- Governments should support efforts for comprehensive and non-discriminatory missile control including flight test bans and space launch verification mechanisms.

Step 8. Trilateral Initiative

The completion and implementation of the Trilateral Initiative between the United States of America, the Russian Federation and the International Atomic Energy Agency.

The *Trilateral Initiative*, an informal agreement between Russia, the US and the IAEA, was launched in 1996. The initiative seeks to bring weapon-origin and other excess fissile material under IAEA verification. The US has nearly 750 metric tons of weapons-grade uranium and 85 metric tons of weapons-grade plutonium. Russia is believed to possess more than 1,000 metric tons of weapons-grade uranium and at least 150 metric tons of weapons-grade plutonium. Considerable amounts of the Russian materials are stored in old, decaying buildings that lack modern security installations. Over the past eight years, the US has provided substantial assistance under the *Cooperative Threat Reduction* (CTR) initiative to improve the security of Russian storage facilities. Thus far, however, only 40 percent of these facilities have undergone security improvements. Of these, only half have received complete security systems.

Progress toward the irreversible removal of weapons-grade fissile materials under IAEA control has been very slow. A joint working group established under the Trilateral Initiative has primarily focused on preparatory work, such as developing procedures that would allow for the verification of fissile materials with classified characteristics without revealing weapons secrets. In addition, the working group paid much attention to the development of inventory monitoring mechanisms for specific facilities, and of procedures suitable for the conversion of classified fissile materials to unclassified forms that could be used for peaceful purposes. Fundamental issues such as when verification under the Trilateral Initiative will begin, how long it is supposed to last, how its costs will be covered, and what facilities will be subject to verification still remain unresolved.

Pending approval of a *Model Verification Agreement* by the IAEA Board of Governors, Russia and the US have yet to sign legally binding bilateral agreements with the IAEA that would submit to verification any weapon-origin fissile material, or any other fissile material released from defense programs. No action has been taken on a proposal by the IAEA Director General to establish an IAEA *Nuclear Arms Control Verification Fund* for the financing of the new, costly verification system.

While the Trilateral Initiative has made only modest advances over the past two years, some progress in the realm of securing and eliminating weapon-origin fissile materials has been achieved through bilateral agreements between Russia and the US. The *Plutonium Management and Disposition Agreement*, the *Accelerated Materials Disposition Initiative*, and the *Russian Transition Initiative* represent positive steps in the right direction. However, they fail to satisfy the fundamental NPT principles that call for verifiable, transparent and irreversible nuclear disarmament (*see also below*, Step 10).

Recommendations:

- Russia and the US should be encouraged to sign bilateral agreements with the IAEA under the Trilateral Initiative to subject all of their excess weapons-grade fissile materials to irreversible international control.
- Bilateral initiatives aimed at securing, converting, and eliminating weapons-grade fissile materials should be incorporated in an overarching multilateral, legally binding disarmament verification regime under IAEA control.
- Governments should support the creation of an IAEA Nuclear Arms Control Verification Fund to help finance the implementation of the Trilateral Initiative and its progressive expansion to additional facilities located in Russia, the United States and other nuclear-weapon countries.

Step 9. Steps Leading to Nuclear Disarmament Consistent with Stability and Security

Steps by all the nuclear-weapon States leading to nuclear disarmament in a way that promotes international stability, and based on the principle of undiminished security for all:

(a) Unilateral reductions

Further efforts by the nuclear-weapon States to reduce their nuclear arsenals unilaterally.

In May 2001, the US announced that it would unilaterally reduce its remaining 6,000 deployed strategic nuclear warheads to between 2,200 and 1,700. Russia had previously indicated that it was interested in bilaterally negotiated reductions down to about 1,000 warheads each. A compromise was reached in May 2002, when the two countries signed the *Strategic Offensive Reductions Treaty* (SORT).

Over the past decade, the *Cooperative Threat Reduction* (CTR) initiative has helped eliminate over 1,700 aging delivery systems and deactivate about 6,000 nuclear warheads in the former Soviet Union, at a total cost of \$7 billion. The adoption of the *Global Partnership Against the Spread of Weapons and Materials of Mass Destruction* ("10 plus 10 over 10" initiative) at the G-8 Summit in June 2002 has led to a welcome broadening of participation in the CTR initiative. Nevertheless, estimates concerning future Russian strategic nuclear stockpiles remain highly speculative, ranging from a minimum of 1,000 to a maximum of over 3,000 warheads by 2010.

China possesses a very small number of strategic nuclear warheads, perhaps 20 on delivery systems with intercontinental reach. Concerned about the neutralizing effect of US missile defenses on its limited second-strike capability, China is considering increasing the size of its strategic arsenal and developing multiple-warhead technology and non-nuclear countermeasures.

France and the UK made unilateral reductions in the late 1990s, but have not made any indication that further reductions are planned, either unilaterally or through agreement until there is much greater progress by Russia and the US.

Recommendations:

- Governments should insist on additional unilateral reductions of both strategic and non-strategic arsenals worldwide.
- The "10 plus 10 over 10" initiative deserves maximum support. Financial assistance under the initiative should be made contingent upon international verification and immediate de-emphasis of the role of nuclear weapons in the security policies of the nuclear-weapon states.

(b) Increased transparency

Increased transparency by the nuclear-weapon States with regard to the nuclear weapons capabilities and the implementation of agreements pursuant to Article VI and as a voluntary confidence-building measure to support further progress on nuclear disarmament.

The proposed START III was the first nuclear disarmament agreement that included transparency measures related to strategic nuclear warhead inventories and the destruction of such warheads. However, the sudden collapse of START III has delayed advancement toward increased transparency.

The SORT itself does not contain any reference to transparency measures. When signing the SORT in May 2002, Russia and the US pledged to implement transparency measures similar to those mentioned in START I. However, concrete procedures have yet to be adopted. It will be left to bodies established under SORT or START I to address the transparency issue upon SORT's entry into force. The two transparency-increasing conditions the US Senate attached to the treaty when approving it in March 2003 are small steps in the right direction. They require the president to submit two annual reports, one on general implementation issues (strategic force levels, planned offensive reductions, efforts to improve verification, transparency, and overall effectiveness), the other on how Cooperative Threat Reduction (CTR) assistance to Russia is helping the implementation of the SORT.

A promising multilateral path towards greater transparency is the integration of nuclear weapons data into the existing UN *Conventional Arms Register*. Sponsored by a wide cross-group of over 100 states, a November 2002 UNGA resolution called for further exploration of this idea (A/RES/57/75). 143 countries, including France, Russia, the UK and the US, voted in favor of the resolution. 23 countries, among them China and many Arab nations, abstained. No country voted against the resolution. OP 4 (b) called for a special UN report on the issue of scope expansion. 140 countries supported this request, while two voted against (Egypt and Syria). 20 countries, including China, abstained. The positive feedback is encouraging. Strong support for the A-5 proposal of March 2003 could generate additional momentum, given the fact that the proposal calls for the establishment of a "Special Coordinator" on transparency in armaments.

Recently initiated discussions in the NATO-Russia Council and the US-Russia Consultative Group for Strategic Security (CGSS) about specific confidence-building measures related to non-strategic nuclear weapons represent another positive development in light of the fact that Russian "loose nukes" continue to represent a very serious security threat.

Negotiations are underway on a *Convention on Nuclear Terrorism* that would include transparency and information sharing mechanisms to protect against terrorist acquisition of nuclear weapons, fissile materials, or nuclear weapons technology. However, the negotiations are floundering.

Recommendations:

- Russia and the US should apply the START transparency framework to the SORT, with verification measures applied to both delivery systems and warheads.
- Governments should work actively for the conclusion of the Convention on Nuclear Terrorism and ensure that it includes adequate transparency and information sharing measures.
- All members of the CD should authorize, within the broader context of adopting a programme of work, the creation of the position of a Special Coordinator on transparency in armaments. This coordinator, in close cooperation with the Secretary-General, should examine proposals concerning the inclusion of nuclear weapon stockpiles in the UN arms register. Governments should actively support the expansion of the register to include WMD.

(c) Reductions of non-strategic weapons

The further reduction of non-strategic nuclear weapons, based on unilateral initiatives and as an integral part of the nuclear arms reduction and disarmament process.

Reductions implemented under the *Presidential Nuclear Initiatives* (PNIs) of 1991 and 1992 remain opaque. Neither Russia nor the US has established verification, confidence-building or transparency measures covering their non-strategic arsenals. The Cooperative Threat Reduction initiative (CTR) does not specifically refer to non-strategic weapons. No official numbers are available on the size of these tactical arsenals. According to estimates, more than 12,000 non-strategic nuclear weapons still remain in existence worldwide.

As of summer 2002, the US is believed to possess about 1,620 non-strategic nuclear weapons, that is, 320 Tomahawk land-attack cruise missiles and 1,300 B-61 gravity bombs. Approximately 150 of these bombs are deployed at ten air bases in seven European NATO countries, including Belgium, Germany, Greece, Italy, Netherlands, Turkey, and the UK. The nuclear-sharing agreements between the US and these countries violate, if not the letter then at least the spirit of Arts. I and II of the NPT, which stipulate that nuclear-weapon states ought not to transfer, and non-nuclear-weapon states ought not to receive, nuclear weapons or the control over them. In spite of their questionable legal status, recent NATO strategy documents – notably the 1999 *Strategic Concept* and its military implementation *MC400/2* – suggest that US nuclear warheads will remain in Europe. The plan to modernize the *Weapons Storage and Security System*, which secures the overseas US stockpile, supports this assumption.

Little is known about the Russian non-strategic arsenal, except its magnitude. In addition to possessing about 3,400 operational non-strategic warheads, Russia is believed to keep several thousand non-strategic warheads in storage. France and the UK have eliminated their tactical arsenals. China, on the other hand, has a small non-strategic arsenal, estimated to consist of between 100 and 300 warheads.

The US is planning to develop new non-strategic weapons, including robust nuclear earth penetrators (RNEPs). Despite their low yield, such “bunker-busters” would still blow out a massive crater and send up a plume of radioactive dust over a large area. To avoid such release of radioactivity, a 1 kiloton weapon would have to burrow 450 feet into the earth; a 5 kiloton weapon would have to penetrate at least 650 feet deep. Military experts have acknowledged that reaching such depths is impossible.

The *New Agenda Coalition* (NAC) in November 2002 introduced a resolution that called for the integration of non-strategic weapons in the multilateral disarmament process. The resolution also asked Russia and the US to reduce the number and operational status of their non-strategic nuclear weapons in a transparent, irreversible and verifiable fashion by formalizing the 1991 and 1992 PNIs. Reactions to the resolution were mixed. 120 states voted in favor. France, the UK and the US, stressing their preference for a unilateral reduction process, voted against it. China did not vote, while Russia abstained, considering it premature to support the resolution. Another 41 countries, among them most NATO members and candidates, also abstained.

Recommendations:

- The Presidential Nuclear Initiatives of 1991 and 1992 should be turned into legally binding agreements incorporating the principles of transparency and irreversibility.
- Immediate steps should be taken to reduce the operational status of all deployed non-strategic weapons.
- The “10 plus 10 over 10” initiative should pay specific attention to enhancing the security of the large Russian tactical nuclear stockpiles.
- NATO member states should reformulate their national security policies to fully comply with Arts. I and II of the NPT.

(d) Reduction of operational status

Concrete agreed measures to further reduce the operational status of nuclear weapons systems.

In 1998, the UK reduced the operational status of all its nuclear weapons from a firing capability of several minutes to one of several days.

The NPR of December 2001 affirms that “U.S. forces are not on ‘hair trigger’ alert” This statement represents a grave misrepresentation. In reality, the US and Russia each keep over 2,000 nuclear warheads on heightened alert status – that is, on missiles that are armed and fueled at all times, ready to be launched within seconds. Of a total of 4,800 US and Russian warheads on hair trigger alert, about 2,000 are on intercontinental ballistic missiles (ICBMs) targeting the US; 1,800 are on ICBMs targeting Russia; and 1,000 are on submarine-based missiles the two states target at each other. All together, these weapons have a combined destructive power of nearly 100,000 times that of the atomic bomb used in Hiroshima.

Given the immense destructiveness of each of these warheads, their continuing high alert status represents a tremendous risk. The safety and security of the decaying Russian arsenal remains highly questionable. As far as the US arsenal is concerned, a recent confidential Pentagon study found that cyber-terrorists could potentially hack into the US submarine communications network and actually transmit a launch order to the Trident fleet.

Recommendations:

- De-alerting measures should be applied to all nuclear forces.

(e) Diminished role for nuclear weapons in security policies

A diminishing role for nuclear weapons in security policies to minimize the risk that these weapons ever be used and to facilitate the process of their total elimination.

No progress has been achieved. On the contrary, Russia and the US are expanding options for the possible use of nuclear weapons, while NATO and China continue to consider nuclear weapons “essential” for their security.

The US continues to plan for a massive retaliation or preemptive attack in response to an actual or imminent nuclear attack, and for first use of nuclear weapons against an overwhelming conventional attack. The December 2001 *Nuclear Posture Review* (NPR) also reveals some new trends. It states that nuclear weapons will be “integrated with new nonnuclear strategic capabilities” including advanced conventional precision-guided munitions, and contemplates enlarging the range of circumstances under which nuclear weapons could be used. It calls for contingency planning for the use of nuclear weapons against Russia, China, North Korea, Iraq, Iran, Syria, and Libya; identifies possible “immediate contingencies” requiring US nuclear use, such as “an Iraqi attack on Israel or its neighbors, a North Korean attack on South Korea, or a military confrontation over the status of Taiwan;” and states that nuclear weapons “could be employed against targets able to withstand nonnuclear attack,” or in retaliation for use of nuclear, biological, or chemical weapons, or “in the event of surprising military developments.”

These NPR options for use of nuclear weapons have not, so far as is known, been codified in a presidential directive (the last publicly known directive was that of President Clinton in 1998). Top US officials have sought to downplay their significance. However, the NPR was signed by US Secretary of Defense Rumsfeld, and certainly indicates at the very least a strong trend in US nuclear planning. In

some respects, the NPR has been officially elevated to presidential policy. In presidential strategy documents of September and December 2002, the US adopted a policy of possible nuclear use in response to a chemical or biological attack. In addition, the strategy documents left open the possibility of a pre-emptive nuclear strike against such threats. The December 2002 *National Strategy to Combat Weapons of Mass Destruction* declares that the US “reserves the right to respond with overwhelming force - including through resort to all of our options - to the use of WMD against the United States, our forces abroad, and friends and allies.” “All of our options” encompasses both “conventional and nuclear response” capabilities, employed in “appropriate cases through *preemptive* measures.” (Emphases added.)

In addition to violating the 2000 commitment to a diminishing role for nuclear weapons, the US plans undermine the negative security assurances. Those assurances are at a minimum political commitments essential to the bargain underlying the NPT, and arguably have become legally binding, notably because they were reiterated in connection with the indefinite extension of the NPT in 1995.

Regarding nuclear use in response to a chemical or biological attack, the use of nuclear weapons, or any weapon, including in reprisal, must always meet fundamental requirements of necessity, proportionality, and discrimination. The *International Court of Justice (ICJ)* in its 1996 Advisory Opinion affirmed that states must “never use weapons that are incapable of distinguishing between civilian and military targets.” Nuclear weapons cannot meet this requirement.

NATO’s 1999 *Strategic Concept* failed to reassess nuclear doctrine in light of the ICJ opinion. Also, the document did not return to the formula of the London Summit of 1990, where nuclear weapons were said to be weapons of “last resort.”

The Russian nuclear posture has undergone significant changes since the end of the Cold War. The relative loss of economic and conventional military power and the recent NATO expansion has led Russia to attribute a greater role to nuclear weapons. Accordingly, Russia in 1993 abandoned its traditional “no first use” policy. In addition, Russia’s *National Security Strategy* of 2000 lists nuclear weapons as the ultimate panacea against **any** kind of armed aggression. The document states that Russia is considering “the use of all forces and means at its disposal, including nuclear weapons, in case it needs to repel an armed aggression... .”

Recommendations:

- A treaty formalizing the negative security assurances of 1995 should be negotiated within the CD. The PrepComm should make recommendations to the 2005 NPT Review Conference on the modalities for immediate negotiations on this issue.
- Nuclear weapon states and NATO members should be encouraged to reassess their nuclear doctrines in light of the 1996 ICJ Opinion, and to reject the concept of “usable” nuclear weapons.

(f) Engagement in process leading to total elimination of nuclear weapons

The engagement as soon as appropriate of all the nuclear-weapon States in the process leading to the total elimination of their nuclear weapons.

Nuclear disarmament very much remains a uni- or bilateral affair. Russia and the US have shown no interest in getting other countries involved in their reductions. Conversely, the other nuclear-weapon states have indicated that they will not enter into multilateral disarmament talks until Russia and the US have substantially reduced their arsenals to a level comparable to theirs.

As mentioned above, India and Pakistan, and many NAM countries insist on a linkage between multilateral nuclear disarmament within a phased program, on the one hand, and the negotiations of

FISSBAN, on the other. In an effort to break the CD impasse, the A-5 proposal calls for the establishment of an ad hoc committee “to deal with” nuclear disarmament.

Other efforts have been undertaken to advance the issue. At the Millennium Summit in 2000, the Secretary-General called for a special conference on eliminating nuclear dangers.

Following the Secretary-General’s appeal, the UN General Assembly in November 2002 adopted a decision that underscored the importance of organizing such a special United Nations Conference (A/57/510). 121 states supported the resolution, while six voted against it (France, Israel, Micronesia, Poland, UK, US). 37 countries abstained, among them most NATO countries and NATO candidates. Opponents of the decision argued that a nuclear disarmament process parallel to the CD could potentially weaken the CD and block progress in other areas such as FISSBAN.

Consideration of a *Nuclear Weapons Convention* represents yet another way of developing a foundation for multilateral negotiations on nuclear disarmament. In January 2002, Canada hosted a roundtable to consider the political and legal requirements for the complete elimination of nuclear weapons, using the 1997 *Model Nuclear Weapons Convention (A/C.1/52/7)* circulated within the UN as a basis for discussion. In November 2002, the UNGA once again adopted a resolution that called for the commencement of negotiations leading to an international convention prohibiting the possession, development, threat or use of nuclear weapons.

Recommendations:

- Governments should support measures integrating all nuclear-weapon states in a process leading to the total elimination of nuclear weapons.
- Governments should encourage informal discussions on the legal, technical and political requirements for the complete elimination of nuclear weapons.

Step 10. Excess Fissile Materials

Arrangements by all nuclear-weapon States to place, as soon as practicable, fissile material designated by each of them as no longer required for military purposes under IAEA or other relevant international verification and arrangements for the disposition of such material for peaceful purposes, to ensure that such material remains permanently outside of military programmes.

Current global stocks of weapons-usable fissile materials (including enriched uranium and plutonium from military and civil stocks) amount to about 3,000 metric tons (MT) – enough to produce 200,000 nuclear weapons. Military stocks of weapons-grade fissile materials alone amount to roughly 2,000 MT worldwide. Taking into account that the five nuclear-weapon states need only 400 MT of weapons-grade fissile materials for their nuclear arsenals, the surplus is enormous. Recognizing this fact, the US, Russia, France and the UK each have adopted a unilateral production moratorium on weapons-grade fissile materials, and declared certain quantities of these materials as excess stockpile. However, these countries have been slow in subjecting their excess weapons-grade fissile materials to international verification. The adoption of legally binding verification agreements under the *Trilateral Initiative* would greatly accelerate things. To date, however, neither Russia nor the US nor any other nuclear-weapon country have adopted such an agreement (*see above*, Step 8). The IAEA currently controls only 10 MT of weapons-grade uranium and 2 MT of plutonium under the *Voluntary Offer Agreement (VOA)* with the US. The UK has granted the IAEA access to 4.4 MT of weapons-grade plutonium under its VOA. Due to a lack of funding, however, the materials in the UK have not yet been put under IAEA safeguards.

While little progress has been achieved in the realm of multilateral verification, some positive developments occurred in the uni- and bilateral sphere. Unilaterally, the US will continue to down-blend

50 MT of domestic surplus HEU through 2005. An additional 124 MT of US excess HEU are to be rendered non-weapon usable thereafter.

Under the bilateral 1993 *HEU Purchase Agreement*, the US is helping Russia to eliminate 500 MT of its excess HEU. Between 1995 and 2002, Russia down-blended over 170 MT HEU, and sold the resulting low-enriched uranium to the US for commercial use, at the cost of over \$3 billion. The agreement asks Russia to continue selling down-blended HEU to the US for another decade, at an annual rate of 30 MT. A supplemental bilateral transparency program provides for monitoring mechanisms such as on-site inspections, portable non-destructive assay instruments, and permanently installed verification equipment. Annual costs for the transparency program amount to about \$18 million and are covered by the US.

In May 2002, the US launched the *Accelerated Materials Disposition (AMD)* initiative, under which it will buy additional HEU from Russia. The FY 2004 energy budget earmarks \$30 million for this initiative – an increase of over 100 percent over the FY 2003 budget. The AMD initiative reinforces another ongoing fissile materials conversion and consolidation effort under the US *Materials Protection, Control and Accounting (MPC&A)* program, which installs comprehensive security upgrades at Russian facilities containing about 400 MT of weapons-usable materials. Funding for the MPC&A program in FY 2004 will amount to \$31.0 million – a 15 percent increase over FY 2003.

In September 2000, Russia and the US signed the bilateral *Plutonium Management and Disposition Agreement (PMDA)*, under which each country agreed to dispose of 34 MT of excess weapons-grade plutonium. The disposal on each side will follow roughly parallel timetables over a period of about 20 years. While the original US implementation plan called for the disposal of the excess fissile material through irradiation and immobilization, the US decided in January 2002 to proceed with irradiation only, at an annual rate of 2 MT. In December 2002, Russia agreed to build a mixed-oxide (MOX) fuel fabrication facility identical to the one being built in the US. Both facilities are scheduled to start operation in 2007.

Total PMDA implementation costs are expected to amount to between \$5.5 and \$7 billion. The construction costs for the US MOX facility alone are estimated at \$2 billion. Another \$2 billion will be necessary to build and operate the Russian MOX facility. In FY 2004, the US intends to spend \$610 million for domestic plutonium disposition. This represents a 75 percent increase over the FY 2003 budget, mainly caused by high construction costs. US funding for the Russian program component in FY 2004 will amount to about \$47 million. The US hopes that additional funding will be provided through the “10 plus 10 over 10” initiative. Raising funds for the Russian plutonium disposition program, however, may prove difficult as the MOX approach remains controversial. Opponents are concerned about the security of MOX fuel, which would have to be transported over long distances to nuclear reactors in Russia or – as suggested in a new plan called the “Western option” – in Western Europe. Proponents of the “Western option” stress that the revenues generated through leasing MOX fuel to Western power providers and shipping the spent fuel back to Russia for storage would cover all operational costs of the Russian MOX facility.

Recommendations:

- Unilateral and bilateral disposition initiatives represent a step in the right direction, but ultimately fail to guarantee the irreversible conversion of fissile material stocks from military to exclusively civil use, nor do they allow for the required international verification. Nuclear-weapon states should conclude special bilateral verification agreements with the IAEA, based on the Trilateral Initiative.
- A process should be initiated to create a global inventory of all weapons-usable fissile materials.
- Governments should provide financial support to the various ongoing US-Russian initiatives aimed at the reduction of excess military stocks of weapons-grade fissile materials. Such financial support should be made contingent upon effective international verification and immediate de-emphasis of the role nuclear weapons play in the security policies of the nuclear-weapon states.

- Governments should support global moratoria on both reprocessing spent fuel for plutonium separation and using HEU in civil reactors.
- While tritium is not a fissile material, it should also be subject to internationally verified control and reduction because of the important role it plays in nuclear weapons.

Step 11. General and Complete Disarmament

Reaffirmation that the ultimate objective of the efforts of States in the disarmament process is general and complete disarmament under effective international control.

The NPT Review Conference of 2000 clarified that achieving progress in nuclear disarmament and achieving progress in general disarmament are separate undertakings, despite the fact that Art. VI mentions them both. Although a legal requirement for linking the two does therefore not exist, it remains important that both are undertaken hand in hand.

The proliferation of biological and chemical weapons continues to represent a serious threat. As the tragedy of September 11, 2001, and the following anthrax scare illustrated, not only state but also individual actors could potentially attack civilians and kill thousands of innocent people. Considerable amounts of BC weapons remain in storage around the world. Membership in the Biological and Chemical Weapons Conventions is not universal, and there are concerns as well about compliance with those treaties.

After the decline from 1987 to 1998, military expenditure began to rise again, both globally and in most regions of the world. Over the 3-year period 1998–2001, it increased by around 7 percent in real terms, to a total of \$839 billion (2.6 percent of world GDP).

Multilateral disarmament efforts in the realm of chemical, biological and conventional weapons have been dragging. The *Chemical Weapons Convention Organization* (CWCO) experienced a shortfall in funding, which significantly limited the effectiveness of its verification activities. The adoption of a verification protocol to the *Biological Weapons Convention* (BWC) failed due to US opposition. Though the international community adopted a *Programme of Action to Prevent, Combat and Eradicate the Illicit Trade in Small Arms and Light Weapons in All Its Aspects* (Programme) in July 2001, actual achievements under the Programme are modest. The language of the *Programme* is non-binding and leaves wide margins for states to exercise discretion or interpretation.

More positive results were achieved in the realm of landmines, where mine use and trade in landmines has significantly decreased since the adoption of the *Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction* (Ottawa Convention) in December 1997. In only a few years, the number of countries producing such mines has dropped from 55 in the early 1990s to 14 in 2002. Over 30 million stockpiled mines have been destroyed, and vast tracts of land could be cleared. However, some key countries including China, Russia, India, Pakistan and the US have not yet ratified the Ottawa Convention.

Recommendations:

- Governments should reduce their conventional military spending and strengthen multilateral disarmament treaties, in particular the Biological Weapons Convention.

Step 12. Regular Reports

Regular reports, within the framework of the NPT strengthened review process, by all States parties on the implementation of Article VI and paragraph 4 (c) of the 1995 Decision on "Principles and Objectives

for Nuclear Non-Proliferation and Disarmament”, and recalling the Advisory Opinion on the International Court of Justice of 8 July 1996.

While the nuclear-weapon states have provided limited information in NPT proceedings in support of their claims of compliance with Article VI, the 2000 reporting promise above marked the first time that the nuclear-weapon states legally committed to provide “regular” information about their NPT implementation, particularly of Art. VI. At the 2002 NPT PrepComm, however, these states – led by the US and France – challenged the new reporting requirement by trying to force it off the Chairman’s agenda. Their opposition seemed grounded in both a general reluctance to accept new obligations under the NPT, and a overall refusal to take seriously the commitments made in 1995 and 2000. In particular, the nuclear-weapon states tried to prevent the creation of a precedent that would establish a frequent reporting obligation within the broader framework of compliance with Art. VI. In this endeavor, however, they failed. The 2002 NPT PrepComm Chair’s paper included a recommendation that reports be submitted annually, and that they be submitted prior to each PrepComm and the 2005 NPT Review Conference.

Recommendations:

- All states parties to the NPT should provide regular, standardized reports on the implementation of Art. VI as well as paragraph 4 (c) of the 1995 Decision.
- These reports should be submitted to each session of the NPT PrepComm. The reports on article VI should cover issues and principles addressed by the thirteen steps and include specific and complete information on each of these steps (*inter alia*, the number and specifications of warheads and delivery systems in service and number and specifications of reductions, dealing measures, existing holdings of fissile materials as well as reduction and control of such materials, achievements in the areas of irreversibility, transparency and verifiability). Further, the reports should address current security policies and nuclear postures.

Step 13. Development of Verification Capabilities

The further development of the verification capabilities that will be required to provide assurances of compliance with nuclear disarmament agreements for the achievement and maintenance of a nuclear-weapon-free world.

Verification capabilities of states and international organizations have developed considerably through political achievements such as verification mechanisms and disarmament treaties. Technical advances have also contributed to progress. The US and Russia in particular have developed verification expertise through the implementation of bilateral treaties. However, the application of these capabilities to the goal of complete elimination of nuclear weapons remains relatively undeveloped. At the 2000 NPT review, the UK reported on a study conducted by the Aldermaston Weapons Establishment on the verification of nuclear disarmament. There has been little follow-up to this initiative.

Adequate financing is of particular importance. The total budget of the IAEA – currently about \$300 million per year – will not be sufficient to cover the costs of the ever more demanding verification tasks the Agency has to perform. It is estimated that verification of FISSBAN alone could lead to a two- or threefold increase of the IAEA safeguard budget, which currently amounts to about \$230 million per year. Despite the IAEA’s growing responsibilities, however, its budget has been frozen for over 15 years as the result of a blanket zero real growth policy imposed on all UN system organizations.

Recommendations:

- Nuclear disarmament must be verifiable. Governments should support the IAEA in its verification-related work and provide the Agency with generous assistance to enable it to perform the increasing number of international disarmament verification tasks under Art. VI.

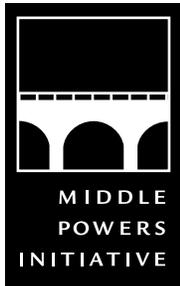
13 PRACTICAL STEPS

EXCERPTED FROM THE FINAL DOCUMENT OF THE 2000 NPT REVIEW CONFERENCE

The Conference agrees on the following practical steps for the systematic and progressive efforts to implement Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons and paragraphs 3 and 4 (c) of the 1995 Decision on "Principles and Objectives for Nuclear Non-Proliferation and Disarmament":

1. The importance and urgency of signatures and ratifications, without delay and without conditions and in accordance with constitutional processes, to achieve the early entry into force of the Comprehensive Nuclear-Test-Ban Treaty.
2. A moratorium on nuclear-weapon-test explosions or any other nuclear explosions pending entry into force of that Treaty.
3. The necessity of negotiations in the Conference on Disarmament on a non-discriminatory, multilateral and internationally and effectively verifiable treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices in accordance with the statement of the Special Coordinator in 1995 and the mandate contained therein, taking into consideration both nuclear disarmament and nuclear non-proliferation objectives. The Conference on Disarmament is urged to agree on a programme of work which includes the immediate commencement of negotiations on such a treaty with a view to their conclusion within five years.
4. The necessity of establishing in the Conference on Disarmament an appropriate subsidiary body with a mandate to deal with nuclear disarmament. The Conference on Disarmament is urged to agree on a programme of work which includes the immediate establishment of such a body.
5. The principle of irreversibility to apply to nuclear disarmament, nuclear and other related arms control and reduction measures.
6. An unequivocal undertaking by the nuclear-weapon States to accomplish the total elimination of their nuclear arsenals leading to nuclear disarmament to which all States parties are committed under Article VI.
7. The early entry into force and full implementation of START II and the conclusion of START III as soon as possible while preserving and strengthening the ABM Treaty as a cornerstone of strategic stability and as a basis for further reductions of strategic offensive weapons, in accordance with its provisions.
8. The completion and implementation of the Trilateral Initiative between the United States of America, the Russian Federation and the International Atomic Energy Agency.
9. Steps by all the nuclear-weapon States leading to nuclear disarmament in a way that promotes international stability, and based on the principle of undiminished security for all:
 - * Further efforts by the nuclear-weapon States to reduce their nuclear arsenals unilaterally.
 - * Increased transparency by the nuclear-weapon States with regard to the nuclear weapons capabilities and the implementation of agreements pursuant to Article VI and as a voluntary confidence-building measure to support further progress on nuclear disarmament.
 - * The further reduction of non-strategic nuclear weapons, based on unilateral initiatives and as an integral part of the nuclear arms reduction and disarmament process.
 - * Concrete agreed measures to further reduce the operational status of nuclear weapons systems.
 - * A diminishing role for nuclear weapons in security policies to minimize the risk that these weapons ever be used and to facilitate the process of their total elimination.
 - * The engagement as soon as appropriate of all the nuclear-weapon States in the process leading to the total elimination of their nuclear weapons.
10. Arrangements by all nuclear-weapon States to place, as soon as practicable, fissile material designated by each of them as no longer required for military purposes under IAEA or other relevant international verification and arrangements for the disposition of such material for peaceful purposes, to ensure that such material remains permanently outside of military programmes.
11. Reaffirmation that the ultimate objective of the efforts of States in the disarmament process is general and complete disarmament under effective international control.
12. Regular reports, within the framework of the NPT strengthened review process, by all States parties on the implementation of Article VI and paragraph 4 (c) of the 1995 Decision on "Principles and Objectives for Nuclear Non-Proliferation and Disarmament", and recalling the Advisory Opinion of the International Court of Justice of 8 July 1996.
13. The further development of the verification capabilities that will be required to provide assurance of compliance with nuclear disarmament agreements for the achievement and maintenance of a nuclear-weapon-free world.

This Middle Powers Initiative briefing paper was prepared by Dr. Urs Ciplat, program director of the Middle Powers Initiative.



THE MIDDLE POWERS INITIATIVE

www.MiddlePowers.org

The Middle Powers Initiative is a program of the Global Security Institute.

Through the Middle Powers Initiative, eight international non-governmental organizations are able to work primarily with "middle power" governments to encourage and educate the nuclear weapons states to take immediate practical steps that reduce nuclear dangers, and commence negotiations to eliminate nuclear weapons.

Middle power countries are politically and economically significant, internationally respected countries that have renounced the nuclear arms race, a standing that gives them significant political credibility.

MPI, which started in 1998, is widely regarded in the international arena as a highly effective catalyst in promoting practical steps toward the elimination of nuclear weapons.

The work of MPI includes:

- a) Formal delegations to educate and influence high-level policy makers such as Foreign and Prime Ministers. Delegations focus on leaders who can have the greatest impact on policy and domestic and international initiatives, and are often planned to coincide with significant political events;
- b) Strategy consultations, which serve as "off the record" interventions designed to provide a working environment in which ambassadors, diplomats, experts, and policy makers can come together in an informal setting at pivotal opportunities, in order to complement the ongoing treaty negotiations at various forums such as the United Nations; and
- c) The Parliamentary Network for Nuclear Disarmament [www.pnnd.org], recently created to provide a non-partisan network and forum designed to help parliamentarians share ideas, legislation, and initiatives, and to take leadership on nuclear disarmament issues.



THE GLOBAL SECURITY INSTITUTE

www.GlobalSecurityInstitute.org

The Global Security Institute was founded by Senator Alan Cranston (1914-2000) who considered it unworthy of civilization to base security on terror, on the threat to annihilate millions of innocent people. Our survival and values require ending the unacceptable risks posed by nuclear weapons. GSI targets influential stakeholders, networks and decision-makers to promote incremental steps that enhance security and lead to the global elimination of nuclear weapons.

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