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The Roadmap to Total Nuclear Disarmament

Achieving “nuclear zero” will undoubtedly prove to be a long-term process, involving many components and necessitating the engagement of both nuclear and non-nuclear weapon states. The New Agenda Coalition can play an important role, with special emphasis on the 13 Steps as the vehicle for achieving this aim. A cross-regional multilateral and multicultural dialogue is needed for this purpose—one with a clear objective of a world free of nuclear weapons. George Perkovich and James Acton’s positive contribution through this valuable Adelphi Paper is very much welcomed in this ongoing debate.

The First Challenge: Definitions

The authors say that their Adelphi Paper has two key aims: “first, to identify and explore the challenges to the complete abolition of nuclear weapons, and second, to discuss what states can start doing today to circumvent them. We do not claim to exhaust the range of issues that must be resolved, or have optimally framed the subjects we do address. If there are places where we appear defeated by obstacles that could be dismissed or better navigated, we welcome other people’s responses.”

The first challenge is to define what we are talking about. It could be argued that the “abolition” of nuclear weapons is a term generally associated with more philosophical writers, whereas their “elimination” might be favored by diplomats and “prohibition” by those involved in interna-

The views expressed in this chapter are exclusively the author’s personal views.

tional law. Moreover, the technicalities of what might actually be eliminated or prohibited within this context might also be considered, even at this early stage. In order of increasing comprehensiveness and stringency, the following might be included: first, nuclear weapons deployed with means for their own delivery. Second, intact nuclear weapons in all conditions and locations. Third, all nuclear weapons and all military stockpiles of directly weapons-usable nuclear materials (separated plutonium and highly enriched uranium). Fourth, all nuclear weapons and all stockpiles of directly weapons-usable nuclear materials, both civilian and military. Fifth, as above but also including all facilities capable of producing directly weapons-usable nuclear materials.

The Non-Proliferation Treaty: The Foundation for a More Secure Future

Most analysts and practitioners would agree that the 1968 Non-Proliferation Treaty (NPT) must be the starting point for constructive discussions on the subject of nuclear disarmament. The next review of the NPT will take place in 2010, and while some have warned about the possible collapse of the treaty, preparatory meetings suggest that efforts will be made to strengthen the treaty and achieve its universality. Despite detractors of the treaty, the reality is that in many important ways it has been a great success. Although India, Israel, and Pakistan have refused to sign the treaty and North Korea withdrew in 2003, its membership is the widest of any arms control treaty. Key successes included South Africa's historic decision to dismantle its nuclear weapons and join the treaty, and the decisions by Belarus, Kazakhstan, and Ukraine to transfer nuclear weapons back to Russia after they seceded from the Soviet Union. The NPT was indefinitely extended in 1995, leading some to assert that despite some problems associated with a lack of movement toward nuclear disarmament by the nuclear powers, the NPT has been the most successful arms control treaty ever negotiated.

Non-nuclear-weapon states are not averse to strengthening the barriers against proliferation. They see no advantage in a world in which more fingers are on nuclear triggers. This level of commitment to the treaty, however, does not guarantee progress unless it is coupled with positive action by the treaty's nuclear-weapon states toward nuclear disarmament.

Ten years ago, the foreign ministers of seven countries—Brazil, Egypt, Ireland, Mexico, New Zealand, South Africa, and Sweden—joined together to form the New Agenda Coalition to work toward a security order in which nuclear weapons would not have a role. Today I am more convinced than ever that nuclear disarmament is imperative for

international peace and security. Nonproliferation is vital to the elimination of nuclear weapons, but alone it is not sufficient. Nuclear nonproliferation and nuclear disarmament are two sides of the same coin. If nonproliferation is to remain a genuine global norm, the process of disarmament has to be revived. Nonproliferation cannot be sustained through coercive imposition of rules; that would serve only to decrease the chances of building and sustaining international cooperation and consensus on nonproliferation. Over time, states would become less inclined to cooperate in critical areas.

Then British defense secretary, Des Browne, recognized this in a 2008 speech when he related nonproliferation objectives to disarmament and said that “Our chances of eliminating nuclear weapons will be enhanced substantially if the [non-nuclear-weapon states] can see forward planning, commitment and action toward multilateral nuclear disarmament by [nuclear-weapon states]. Without this, we risk generating the perception that the [nuclear-weapon states] are failing to fulfill their disarmament obligations, and this will be used by some states as an excuse for their nuclear intransigence.”¹

There can be no doubt that the NPT is of vital importance to the achievement of nuclear disarmament and nuclear nonproliferation, but this regime should not be regarded as an “a la carte” menu. As IAEA General Director Mohamed ElBaradei has explained: “We must abandon the unworkable notion that it is morally reprehensible for some countries to pursue weapons of mass destruction, yet morally acceptable for others to rely on them for security—and indeed to continue to refine their capacities and postulate plans for their use.”² The NPT remains the only international instrument that not only seeks to prevent the proliferation of nuclear weapons but that also embodies a firm legal commitment to eliminate these weapons. In 2000, the nuclear powers made an unequivocal undertaking to eliminate their nuclear arsenals, and all parties adopted a practical plan for the pursuit of nuclear disarmament. Since then, however, little progress has been made in achieving these goals. This reference to an “unequivocal undertaking” is the strongest reaffirmation so far of the commitment to the global elimination of nuclear weapons. It gives diplomatic weight to the 1996 International Court of Justice advisory opinion, which interpreted Article VI of the NPT in the light of other legal obligations, de-linking nuclear disarmament from general and complete disarmament, and making explicit that the Article VI obligation to negotiate in “good faith” implies bringing negotiations to a conclusion.

It is high time to bring to reality the unequivocal commitment undertaken at the 2000 NPT Review Conference by the nuclear-weapon states to

seriously pursue the elimination of their nuclear arsenals. Because these states have the primary responsibility for undertaking the necessary steps to eliminate nuclear weapons, it is incumbent that they accelerate the implementation of their promises to make progress toward achieving the goal of a world free of nuclear weapons. This is a matter of enforcement, too. As Perkovich and Acton note, “Double standards on matters as materially and psychologically important as nuclear weapons will produce instability and noncompliance, creating enforcement crises that increase the risk of conflict and nuclear anarchy. Lawyers, diplomats, and military commanders may debate the relevance and precise meaning of Article VI of the NPT. But it is clear that states would not have agreed to extend the treaty indefinitely, as they did in 1995, if the nuclear-weapons states had tried to claim that they were not obliged to pursue nuclear disarmament.”

NPT articles other than article VI are relevant here too. NATO’s nuclear sharing arrangement would seem to be a direct contravention of Article I of the NPT because it involves the transfer of nuclear weapons during a conflict to non-nuclear-weapon states (such as Belgium and Italy). Simultaneously, the states receiving control of the weapons, which are non-nuclear-weapon state parties to the NPT, would also be in violation of the treaty because Article II forbids them to receive nuclear weapons from a nuclear-armed state or to control such weapons.

The New Agenda Coalition campaigns for the world envisaged by the treaty—a world in which nuclear weapons have no role. Its philosophy is that the world will be safe only when nuclear weapons are eliminated and we can be sure they will never be produced or used again. This is one reason that the coalition calls on India, Israel, and Pakistan to join the NPT as non-nuclear-weapon states. Challenges to the treaty are being made by states that would defy or undermine its rules. The 2010 NPT Review Conference will need to address those challenges as well as other concerns that have arisen in recent years about proliferation. The possession of weapons by the declared nuclear powers is no excuse for other nations to develop their own nuclear arsenals, taking into consideration their inalienable right to peaceful uses of nuclear energy in accordance with Article IV of the NPT.

Proliferation threatens the entire international community. All states have an interest and a responsibility to work together to remove this threat. Forging a common cause is as much the responsibility of the nuclear-weapon states as it is for non-nuclear-weapon states. The New Agenda Coalition anticipates playing a constructive role in ensuring that the Review Conference results in a strong, effective outcome, especially in removing the threats of existing huge arsenals of nuclear weapons and of proliferation.

Restoring Confidence in the NPT: A Task for the Great Powers

Often it is suggested that the NPT has been largely responsible for the slow growth in the number of proliferators and that it has to be supported and maintained. However, one must accept the stark reality that the regime is merely a reflection of the work of the larger forces in the international system. The underlying successes and failures are a function of relations between the great powers, their strategic objectives, and their power equations. Regimes need a medium in which to operate, and their effectiveness varies with the investment that major states put into them. For the regime to work more effectively, then, it needs the support of great powers, in particular the United States and the other nuclear-weapon states.

For the vision of zero to be credible, the permanent members of the UN Security Council should take the lead at an early stage. The agenda must be flexible, depending on both technical and political realities, but must include verification, the progressive reduction of operationally deployed strategic warheads, and a freeze in upgrading, modernizing, and replacing existing weapons.

Leadership in the United States and Russia is imperative, as they have by far the most nuclear weapons. The United States, with NATO's agreement, should withdraw its estimated 240 tactical nuclear weapons stationed in Europe, while Russia should withdraw its tactical weapons from operational deployment and place them in secure storage until they are abolished. In addition, the two countries should extend START I, the Strategic Arms Reduction Treaty, to ensure that verification measures remain in force.

Regardless of whether states agree in the near term to outlaw use of nuclear weapons, a reduction in these weapons' roles in security policies remains an essential component of the nuclear disarmament process, not only to enhance strategic stability and contribute to a climate of international confidence and security, but also to facilitate the process of their elimination. Any plans to develop new nuclear weapons or new uses, roles, or rationalizations for their use must be shelved immediately. In addition, taking practical steps to decrease the operational readiness of nuclear weapons systems, with a view to ensuring that almost 6,000 long-range nuclear weapons are removed from high-alert status, would contribute to nuclear disarmament.

French President Nicolas Sarkozy recently proposed significant movement by the five nuclear-weapon states in advance of the 2010 NPT Review Conference. His speech outlining this program of action—a milestone in changing the political atmosphere—took the international community by surprise. The five states need to take up Sarkozy's challenge collectively

and consider how to demonstrate the political commitment necessary to convince other states that they believe in achieving nuclear disarmament and reversing the dynamics driving proliferation. Sarkozy's list includes:

- The universal ratification of the Comprehensive Test Ban Treaty (CTBT).
- The transparent dismantling of all test sites.
- An immediate moratorium on the production of fissile materials for military purposes and serious negotiations within the Conference on Disarmament toward a Fissile Material Cut-Off Treaty (FMCT).
- Greater transparency among the nuclear-armed states.
- Implementation of the Hague Code of Conduct against ballistic missile proliferation.
- Negotiations on a treaty to ban short- and intermediate-range surface-to-surface missiles.

The Importance of Verification and Transparency

Achieving the vision of a world free of nuclear weapons requires at least a minimum of the following things, as listed by Jonas Gahr Støre, the Norwegian minister for foreign affairs: political leadership at the highest levels; commitment followed up by action; nondiscrimination; transparency; and cooperation. Støre went on to state that non-nuclear-weapon states should cooperate with nuclear-weapon states to develop the technologies required for verifying nuclear disarmament. Technically speaking, this cooperation in nuclear disarmament research should aim to focus on the following:³

1. Developing a generic model of the entire dismantlement process. This model should include all relevant verification objectives and technologies and identify suitable verification procedures for each dismantlement action.
2. Developing a declaration standard. This standard should allow the inspected party to list all sites, documentation, and personnel relevant to the verification process. It should include a

section describing sites, documents, or personnel not eligible for inspection and for what reasons. It should include an attached description of special safety precautions the inspectorate must take when visiting the facilities.

3. Identifying key inspection points and associated measurement technologies and techniques, including information barriers and other restrictions. The International Atomic Energy Agency (IAEA) Trilateral Initiative made significant headway in this work.
4. Developing procedures and methods that will help resolve compliance concerns involving national security-related facilities and information.
5. Calculating the cost of building new, identical, built-for-purpose dismantlement facilities and comparing it to the cost of using existing facilities with their inherent challenges.

A significant question is whether non-nuclear-weapon states will become involved in verifying complete nuclear disarmament and if this will require an extension of the IAEA's role. Verification can be understood as the "process of gathering and analyzing information to make a judgment about parties' compliance or non-compliance with an agreement."⁴ However, as a practical matter, it is difficult to say what verification will entail outside the context of a given treaty.⁵ One thing is relatively certain: The difficulties of verifying nuclear disarmament will correspond with the complexity of the disarmament commitment.

Beyond developing verification technology, the nuclear-weapon states should open their testing sites and their nuclear-weapon facilities to international inspection. Knowing what to look for and where to look is always challenging. Verifying complete disarmament is likely to be far more difficult and will involve addressing an even larger and more complex set of questions: How can the inspectorate be completely sure a state has declared all its nuclear warheads? How can the inspectorate be completely sure there is not a further undeclared production of nuclear warheads? A significant factor that would facilitate effective and efficient verification is a careful selection of which items, activities, and facilities must be monitored and which need not be. To increase transparency and build confidence in a

comprehensive verification scheme, nuclear-weapon states could provide annual declarations to a register that would perhaps be maintained by the United Nations. The declarations could include their:

- Total current numbers of nuclear warheads and delivery systems.
- Current projected level of arsenals at the next NPT Review Conference.
- Plans for the development and deployment of missile defenses and indications of the nature, location, and scope of such defenses.
- Fissile material inventories and plans to place excess fissile materials under international inspection.
- Plans for the elimination of nuclear weapons and delivery vehicles.

Key Practical Steps Toward Zero

The Middle East

The region's special status was recognized in the 1995 NPT Review and Extension Conference's Resolution on the Middle East, as well as in the Final Document of the 2000 NPT Review Conference. Insofar as it pertains to the NPT, its universality, and its review cycle, the Resolution on the Middle East focused on achieving the following clear objectives:

- The establishment of a nuclear-weapon-free zone in the Middle East.
- The accession to the NPT by states in the region that have not yet done so.
- The placement of all nuclear facilities in the Middle East under full-scope IAEA safeguards.

The establishment of a nuclear-weapon-free zone in the Middle East is a first step toward creating an effectively verifiable zone in the Middle East that would be free of all weapons of mass destruction—nuclear, chemical, and biological weapons and their delivery systems. Egyptian

President Hosni Mubarak's initiative calls for the establishment of such a zone in the Middle East. It has three main components:

- The prohibition of all weapons of mass destruction—nuclear, biological, and chemical—in all states of the Middle East.
- All states in the region should provide assurances toward the full implementation of this goal, in an equal and reciprocal manner to fulfill this end.
- Establishing proper verification measures and modalities to ensure the compliance of all states of the region without exception.

Comprehensive Test Ban Treaty

A few words on the CTBT are in order here. It was 12 years ago, on September 24, 1996, that the treaty was opened for signature. In its preamble, the CTBT argues “that cessation of all nuclear weapons test explosions and all other nuclear explosions... constitutes an effective measure of nuclear disarmament and non-proliferation in all its aspects...” It also underlines that “the most effective way to achieve an end to nuclear testing is through the conclusion of a universal and internationally and effectively verifiable comprehensive nuclear test-ban treaty.” As of November 2008, 180 states have signed it; 148, including Russia, have ratified it; and of the 44 that must ratify the treaty for it to enter into force, 41 have signed it and 35 have ratified it.

The central premise behind the CTBT, then, is that a ban on nuclear testing effectively ends the ability of any country to develop and deploy nuclear weapons. The treaty is intended to stop the qualitative nuclear arms race, and, once and for all, prevent further horrendous health and environmental damage caused by nuclear test explosions. Now that an agreement on the test ban has been reached and entry into force is within reach, the effort to establish an international norm against nuclear testing must be actively pursued.

Although the United States has not conducted a nuclear test explosion since 1992, the treaty has not been put to the Senate for consideration since it was last rejected in October 1999.⁶ If the United States, with its huge nuclear arsenal, does not commit to the treaty, other states may start to question their own involvement. Indeed, some disquiet has already emerged concerning the financial demands of treaty regime.

Fissile Material Cut-Off Treaty

The Conference on Disarmament must negotiate a nondiscriminatory, multilateral, and internationally effectively verifiable treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices in accordance with the 1995 statement of the special coordinator, taking into consideration both nuclear disarmament and nonproliferation objectives. The conference should begin negotiations on such a treaty with a view to completing a final draft within five years.

In addition to this central process, technical and scientific seminars should be held to discuss scope, definitions, transparency, accountability, and verification of an FMCT. Efforts should continue in the conference to break the deadlock over the establishment of an ad hoc committee on an FMCT with a negotiating mandate. A group of experts should be convened to examine possible verification measures in the context of an FMCT.

Operational Status of Nuclear Weapons

Because concrete and agreed measures to further reduce the operational status of nuclear weapon systems are necessary,⁷ the nuclear-weapon states collectively should be encouraged to:

- Deactivate warheads from all systems they are planning to dismantle or eliminate, unilaterally or through agreement.
- Keep only a minimum number of nuclear weapons on high-alert status.
- Develop transparency measures for changes in operational status.
- Initiate discussions of possible ways to reduce the operational status of their nuclear-weapon systems, and report their conclusions to the 2010 NPT Review Conference or the Conference on Disarmament, or both.

Missile Technology and Space

No country has developed long-range missiles simply to deliver conventional warheads. The cost of ballistic missile development and deployment can be justified only if they inflict the unique level of damage associated with a nuclear weapon. The stagnation of the disarmament process has resulted in missile defense systems being regarded in an increasingly favorable light. The strategic environment could become ever more competitive

as missile defense research yields technologies for offensive space-based weapons. Hence, it is hardly surprising that prevention of an arms race in outer space is becoming the subject of intense international debate and scrutiny.

Outlaw Use of Nuclear Weapons

It is obvious that the only absolute guarantee against the use of nuclear weapons is their elimination and the assurance that they will never be produced again. Following this logic, it should be equally clear that as long as even a single country possesses nuclear weapons, others will aspire to acquire them. The continued possession of nuclear weapons, or the retention of the nuclear-weapon option by some states, creates the very real danger that they could be used or that they could fall into the hands of non-state actors.

But while the complicated process of negotiating multilateral nuclear reductions and operational changes occurs, and of verifiably eliminating weapons, a global devaluation of the currency of nuclear weapons could be accomplished by outlawing their use. This would not eliminate the dangers overnight, but it would have a major impact in taking nuclear weapons off the list of objects of political status and desire. They would then be treated as weapons of terror that no sane or civilized state would want or be able to use. Those clinging to nuclear deterrence need to wake up to the 21st century. A more effective deterrent against the use of nuclear weapons is to make using them a crime against humanity.

Of course, major questions arise regarding how to enforce a ban on the use of nuclear weapons. As long as any states possessed nuclear weapons, the danger of their use would remain clear and present. A ban on use could therefore be enforced by reaching a legally binding convention along the lines of the conventions that prohibit biological and chemical weapons.

Trust and the Way Forward

The concept of trust is probably the one least developed in the whole disarmament and nonproliferation literature, yet trust is central to our work on the future of nuclear disarmament and arms control. Mutual trust is a key to any process of cooperation among nations. Trust, to me, is about constructive dialogue, cross-regional exchanges, reaching out, crossing bridges and cross-cultural tolerance; it is about building mutual understanding and finding ground for mutual interests.

A nuclear disarmament future based on trust would consist of one in which Iranian proliferation concerns are addressed; the North Korean

capability is rolled back; continuing reductions are made in the existing nuclear arsenals of the five nuclear-armed states toward eventual elimination; the nuclear-free zone in the Middle East makes progress; Israel joins the NPT as a non-nuclear-weapon state; and non-state actors do not acquire nuclear weapons. A combination of trust-building measures would encourage this path.

In contrast, a nuclear disarmament future based on mistrust would consist of a mix of serious challenges and a failure of the NPT regime, one in which proliferation occurs. Israel would continue to develop its arsenal; Iran would gain nuclear-weapon capabilities; and North Korea would not roll back its capacity. There would be a cascade of nuclear proliferation in the Middle East and Asia. In the absence of dialogue, the prevalence of mistrust would lead to failure of agreements or dialogue with North Korea, Israel, or Iran. At the same time, nuclear weapons would play an increasing role in the security policies of the states that possess them.

Multilateral Cross Regional, Multicultural Dialogue

Perkovich and Acton point out that aside from the Conference on Disarmament, there is no diplomatic structure pertaining to nuclear affairs that includes the five NPT-recognized nuclear-weapons states plus India, Pakistan, and Israel. Indeed, nuclear disarmament effectively disappeared from the global agenda some time ago; the Conference on Disarmament has been bereft of real work for nearly twelve years. The Conference on Disarmament should establish an appropriate subsidiary body with a mandate to deal with nuclear disarmament. In addition, the following steps, in the conference, would be appropriate:

- Discussion by an ad hoc group of the steps that would lead toward systematic and progressive efforts to eliminate nuclear weapons.
- Dialogue among states that possess nuclear weapons and those that do not on practical steps that would lead to the implementation of this commitment.
- Technical and political seminars to address issues of scope, definitions, verification, and negotiating approaches pending agreement on a program of work by the Conference on Disarmament.
- Development of ad hoc exchanges to establish a precedent that non-nuclear-weapon states have a legitimate interest and right to question nuclear-armed states on nuclear disarmament matters.

The authors state that “What is needed now is for a conversation about disarmament to take place between officials and experts from non–nuclear-weapon states and those from nuclear-weapon states. There has not been such a conversation for a long time.”

Much more could be done in Geneva, where I served for a few years. The Conference on Disarmament has vast potential and expertise that can make a difference with the necessary political will. Experts, diplomats, researchers, nongovernmental organizations and research institutes (including governmental ones) could do more; at least they could and should facilitate workshops and international dialogue. They can begin working on a genuine international collaboration and then report back to governments, whether through the NPT process, the Conference on Disarmament, or the UN General Assembly.

I very much welcome this call for serious, transparent, and time-framed conversation among the states that possess nuclear weapons and those that do not with the clear objectives of eliminating nuclear weapons and ending any potential proliferation.

The NPT should have a permanent secretariat. Perhaps the upcoming NPT Review Conference in 2010 should be on the ministerial level. We need to think along the lines of summits on the topics of energy, population, food, the financial crisis, and climate change. Why can't there be a summit for a nuclear zero? Isn't the fate of humanity worth it?

Conclusion

The short-term and medium-term effectiveness of the global nonproliferation regime requires the full support and cooperation of both the nuclear-weapon states and the non–nuclear-weapon states in the maintenance of a vigorous IAEA with the inspection powers and resources needed to do its job.

The potential benefits of comprehensive nuclear disarmament are so attractive relative to the attendant risks—and the opportunities presented by the end of the Cold War are so compelling—that increased attention is warranted to studying and fostering the conditions that would have to be met to make prohibition desirable and feasible.

Success in preventing the proliferation of nuclear weapons depends at some fundamental level on the ability to make a credible and compelling argument that they are neither necessary nor desirable, that whatever advantages they confer are outweighed by the costs. It is difficult to sustain this argument when the large and powerful states that possess nuclear weapons routinely proclaim that such weapons provide unique and crucial security benefits.

The ideal normative environment for promoting nonproliferation is one in which nuclear weapons are widely or even universally regarded to be illegal, illegitimate, and immoral. That is, to inhibit nuclear proliferation it is desirable not only to devalue nuclear weapons but also to delegitimize them. Doing so would put in place an additional (normative) barrier to nuclear proliferation.

Former UN Undersecretary for Disarmament Jayantha Dhanapala argues that “the nuclear powers have a particularly heavy burden to reinforce this regime by demonstrating through unilateral and multilateral actions how the interests of international peace and security are best pursued without nuclear weapons.”⁸ It is hard to believe that the arguments for acquiring nuclear weapons would play out the same way in a world in which they had been genuinely devalued and delegitimized, in which nuclear disarmament had been substantially achieved, and in which international opposition would confront any state that attempted to breach the universal disarmament norm.

In general, the nuclear-weapon states are keen to establish strict standards for compliance with the NPT and they support stern enforcement against states that violate their obligations. However, it is difficult to effectively advocate that others be held completely accountable under the NPT when the nuclear-weapon states themselves are viewed as delinquent. Why should others be taken to task when, as they see it, the nuclear five are themselves failing to comply with treaty obligations under Article VI? Thus the stern reminder offered by the Carnegie Endowment’s prominent report on universal compliance. “The burden of compliance ... applies equally to nuclear weapon states that are failing to honor their own non-proliferation pledges.”⁹

Notes

- ¹ Des Browne, "Laying the Foundations for Multilateral Disarmament," Speech to the Conference on Nuclear Disarmament, Geneva, February 5, 2008.
- ² Mohamed ElBaradei, "Saving Ourselves From Self-Destruction," *New York Times*, February 12, 2004. Most recently reiterated by ElBaradei at a conference on "Achieving the Vision of a World Free of Nuclear Weapons," Oslo, February 26, 2008.
- ³ Andreas Persbo and Marius Bjorningstad, "Verifying Nuclear Disarmament: The Inspector's Agenda," *Arms Control Today*, vol. 38, May 2008, http://www.armscontrol.org/act/2008_05/PersboShea.
- ⁴ United Nations Institute for Disarmament Research (UNIDIR) and the Verification Research, Training and Information Centre (VERTIC), *Coming to Terms with Security: A Handbook on Verification and Compliance*, 2003, <http://www.vertic.org/assets/Handbook.pdf>.
- ⁵ Allan S. Krass, *Verification: How Much Is Enough?* (Stockholm: SIPRI/Lexington Books, 1985).
- ⁶ It should be noted that other states, including India, Israel, and Pakistan, also have a responsibility to ratify the agreement.
- ⁷ NPT (1968), Article VI, paragraph 15, subparagraph 9, fourth item.
- ⁸ Jayantha Dhanapala, "Multilateralism and the Future of Global Nuclear Non-Proliferation Regime," *Nonproliferation Review*, vol. 8, no. 3, Fall/Winter 2001, p. 5.
- ⁹ George Perkovich, *Universal Compliance: A Strategy for Nuclear Security* (Washington, D.C.: Carnegie Endowment for International Peace, November 2006) p. 33.