Israel, India, and Pakistan: Engaging the Non-NPT States in the Nonproliferation Regime

Arms Control Today

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The problem at the top of the global nonproliferation agenda today, particularly as viewed by the Bush administration, is how to thwart the nuclear weapons ambitions of Iran and North Korea. However, to achieve this goal the administration needs to pay more attention to the three de facto nuclear-weapon states that are outside the nuclear Nonproliferation Treaty (NPT): Israel, India, and Pakistan.

Short of becoming party to the treaty as non-nuclear-weapon states—a remote prospect at this time—these countries need to be more fully engaged in the nonproliferation regime. For example, it is not clear that Iran can be convinced or coerced into giving up its weapons ambitions unless Israel accepts constraints on its unacknowledged nuclear program. Additionally, the transfer of weapons-relevant nuclear items and expertise from the non-NPT states, particularly Pakistan, to North Korea, Iran, and other countries needs to be much more rigorously controlled. Finally, the non-universality of the NPT, and the U.S. view of the nuclear reality in Israel, India, and Pakistan as a situation to be "managed" rather than reversed, weakens the global nonproliferation norm and thus undermines the regime.

However, those charged with formulating nuclear policy in the Bush administration see little connection between the possession of nuclear weapons by the eight existing nuclear weapons states, including the three non-NPT states, and the real danger to international security and stability: the acquisition of nuclear weapons by rogue regimes and their possible transfer to terrorist organizations who could not be easily deterred from using them against the United States and its allies.

Although the United States has always opposed the proliferation of nuclear weapons, in cases where this could not be prevented the basic determinant of our attitude toward the possession of these weapons by other countries is whether the regime is supportive of or antagonistic to U.S. interests. More precisely, U.S. officials have considered whether there are any conceivable circumstances where they would attack us with those weapons. Israel, India, and Pakistan have never posed such a threat. Thus, our opposition to their nuclear weapons development, although sometimes significant, was rarely sustained and has now evolved into tacit acceptance. Yet, reducing the size and salience of the existing nuclear arsenals, including those in the non-NPT states is crucial if the international community led by the United States is to stem further proliferation to both states and terrorist groups.

In the following, we trace the evolution of the U.S. policy toward the nuclear weapons programs in the three non-NPT states, the potential consequences for the proliferation challenges we now face, and what can be done to confront these challenges.

Getting the Bomb: A Brief History of the Three NPT Outliers

Israel

The United States initially opposed Israel's acquisition of nuclear weapons, but a secret understanding was reached in 1969 in which the United States agreed to accept the "nuclear facts on the ground" in Israel, while Israel pledged not to test or declare itself a nuclear-weapon state.[1] The reason for this change of attitude by the United States went beyond the perceived futility of
continuing to pressure Israel on the nuclear issue in the face of significant domestic support for the Jewish state. President Richard Nixon and Secretary of State Henry Kissinger viewed the United States and Israel as strategic allies with a common attitude toward nuclear weapons: essential for their own security but a grave danger if acquired by their enemies. To this end and at considerable cost, both states have developed sophisticated nuclear (and conventional) weapons capabilities while seeking to prevent the acquisition of nuclear weapons by their enemies, by persuasion if possible, by violent means if necessary. Despite various “bumps on the road” which have drawn public attention to the nuclear reality in Israel over the intervening years (e.g., “the flash in the South Atlantic”[2] in 1979 and the Vanunu revelations [3] regarding Israel’s nuclear capabilities in 1986), the 1969 understanding still holds.

Indeed, although the first Bush and Clinton administrations tried to interest Israel in signing on to a fissile material cutoff treaty (FMCT), which would place a cap on the production of plutonium and highly enriched uranium for weapons, the United States did not push very hard. Israel for its part never had much enthusiasm for such a treaty, regarding it as a “slippery slope” toward nuclear disarmament.[4] As a result of this and other problems, proposals for a regional or a global FMCT went nowhere. Since taking office, the current administration has not raised disarmament issues with Israel, contenting itself with continuing the practice of previous administrations of periodically “tipping its hat” to the importance of the universality of the NPT as a long-term goal but deferring any efforts to pressure Israel on this issue until a broader, lasting peace in the Middle East is achieved.

For example, U.S. Assistant Secretary of State for Nonproliferation John Wolf told a gathering of NPT signatories in April:

> U.S. support for the goal of universal NPT adherence remains undiminished. We do not support and change in the NPT that would accord a different status to states currently outside the treaty. The 2000 NPT Review Conference recognized that universality would depend on successful efforts to enhance regional security in areas of tension such as the Middle East and South Asia. We continue to recognize the validity of the goal of the 1995 resolution on the Middle East, and we are committed to helping the parties of the Middle East to achieve peace.[5]

Consonant with this view, also embraced by Israel, that peace in the Middle East is a precondition for eliminating nuclear weapons is the Bush administration’s focus on the Israeli/Palestinian “road map” rather than attempting simultaneously to promote some sort of “nuclear road map” for the region including Iran. Indeed, the United States is seeking to forge an international consensus on the need to pressure Iran to curtail its weapons-related nuclear activities, while Israel bolsters its ability to deal with the possible failure of such efforts by investing in missile defense and, reportedly, a second-strike nuclear deterrent.[6]

*India and Pakistan*

India acquired a nuclear-weapon capability under the cover of an ambitious nuclear power program that received considerable support from the major nuclear suppliers, particularly Canada and the United States, until India detonated a so-called peaceful nuclear explosive (PNE) in 1974. Pakistan’s acquisition and subsequent development of nuclear weapons have been driven by its perceived need to match India in this sphere as well as to compensate for its conventional military inferiority to India in the context of a possible war over Kashmir.
In the aftermath of the Indian PNE, the United States led an international effort to clamp down on further proliferation. One step was bringing the major nuclear suppliers together to agree on a code of conduct (the Nuclear Supplier Guidelines) for nuclear exports that mandated International Atomic Energy Agency (IAEA) safeguards on nuclear-related items and also urged restraint on the transfer of sensitive nuclear technologies. Domestically, the United States enacted the Nuclear Nonproliferation Act of 1978, conditioning U.S. nuclear cooperation on a country’s acceptance of full-scope safeguards. That law led to the termination of U.S. nuclear cooperation with India.

By contrast, U.S. policy toward Pakistan has been much less consistent. Pakistan’s acquisition of uranium-enrichment technology in 1979 resulted in a U.S. cutoff of economic and military assistance. Two years later, however, the United States suspended these sanctions as a result of Pakistan’s cooperation in supporting the effort to oust the Soviet Union from Afghanistan. Yet, sanctions were imposed again in 1990 after the Soviets withdrew from Afghanistan and President George H. W. Bush could not (as required by the 1985 Pressler amendment) affirm that Pakistan did not possess a nuclear explosive device. The nuclear tests carried out in May 1998 by India and Pakistan resulted in the suspension of military and foreign economic assistance to both countries as well as prohibitions on U.S. bank-backed loans or credits and denial of Export-Import Bank support for exports. Eventually, domestic and foreign policy considerations, accelerated by the need for allies in the war on terrorism after September 11, 2001, led to an easing and ultimate lifting of all sanctions.

Technical and Political Differences

Although all three non-NPT states have acquired nuclear weapons, there are significant technical and political differences among them as well as differences in the way the United States has addressed their nuclear status. On the technical level, there is little reliable information about their nuclear arsenals in the public domain, but most knowledgeable observers give Israel a qualitative edge over India and Pakistan in the sophistication of their nuclear assets. There are strong differences of opinion about how India and Pakistan compare in this regard. As for the size of their arsenals, the consensus view is that Israel has more weapons than India, which has more than Pakistan, although again there are significant uncertainties in publicly available estimates.[7]

The impact of these technical differences on the political level is the perceived need of these states to conduct further testing and production of weapons. The principal political difference between India and Pakistan on the one hand and Israel on the other with regard to nuclear weapons policy is that since May 1998 both India and Pakistan are declared nuclear-weapon states, while Israel’s nuclear status—although aptly characterized by the Economist as the “world’s worst-kept” secret—remains officially unacknowledged by both Israel and the United States. Thus, although the current U.S. administration now appears to regard the nuclear weapons capabilities of India and Pakistan as well as Israel as a fait accompli—to be “managed” rather than opposed—this policy can only be acknowledged with regard to India and Pakistan. For example, Secretary of State Colin Powell has stated that he did not expect either India or Pakistan to give up their nuclear capabilities, acknowledging that the world sees little point in trying to reverse “that bit of proliferation,” but no mention was made of Israel.[8]

Delinking Iran and Israel

A significant sorepoint in the troubled relations between United States and the Muslim world is whether the United States in recent years has adopted a double standard that favors Israel. The focus of this debate has been on U.S. policy vis-à-vis a political settlement between Israel and the Palestinians. The charge has also been made, however, that the United States had adopted a “nuclear double standard” in the Middle East, acquiescing in the possession of nuclear weapons by Israel while strongly opposing their possession by its neighbors, with Iran being the most prominent contemporary example. Although there is no legal equivalence between Israel possessing nuclear weapons and Iran attempting to obtain them since the latter is party to the NPT and the former is not, some would extend the lack of equivalence to the moral dimension, arguing that democratic Israel acquired nuclear weapons only to deter any attempt to annihilate the Jewish state, while Iran is presently ruled by autocratic ayatollahs who do not accept the legitimacy of “the Zionist entity” and thus cannot be trusted with nuclear weapons.
There is merit to this argument, but it is also true that the acquisition of nuclear weapons for reasons of status and security has been a goal of Iran for decades, dating back to the time of the shah.[9] Iran’s self-image as a regional superpower and the inheritor of a great cultural and intellectual tradition as well as the heart of the Shi’a branch of Islam would make it difficult to live without the bomb. These views are reinforced by Iranian concerns about the future nuclear ambitions of a Saddam Hussein-less Iraq and the fact that Iran’s Sunni-dominated neighbor and rival, Pakistan, already has nuclear weapons. Moreover, a more Western-oriented government in Tehran might view Israel’s nuclear capability as less menacing. Nevertheless, Israel’s possession of nuclear weapons outside the NPT remains a thorn in the side of the dominant states of the Islamic world, particularly Iran and Egypt, and the weight of opinion across the Iranian political spectrum is opposed to its giving up its quest for nuclear weapons without some reciprocity on the part of Israel.

Iran has now agreed to accept an additional protocol to IAEA comprehensive safeguards and to suspend temporarily its enrichment of uranium to reassure the international community about the peaceful intent of its nuclear program. However, this surely reflects a pragmatic assessment of current global politics and its national security interests rather than a commitment to forgo the acquisition of nuclear weapons forever.[10] Pressure needs to be maintained on Iran to remain a non-nuclear-weapon state-party to the NPT, but its incentives to obtain nuclear weapons, including their possession by Israel, also need to be addressed. Thus, in the long term it will be difficult if not impossible for Israel to maintain its nuclear monopoly in the Middle East without courting potentially catastrophic consequences. Israel should now consider, and the United States should support, stronger engagement in the nuclear nonproliferation regime short of the total elimination of its weapons as a means of reducing the risk of their further proliferation and possible use. (The same is true for India and Pakistan with regard to further vertical proliferation and possible use.) The important point is that implementation of various means to this end should not be hostage to the coming of a “just, stable, and enduring peace” to the region.[11] On the contrary, there can be a positive synergy between arms control measures and progress in the political arena.

Arms Control Under Ambiguity

Can nonproliferation measures be implemented if Israel maintains a policy of ambiguity with regard to its nuclear arsenal? The case that such a policy is a significant impediment to arms control and nonproliferation was made some years ago by McGeorge Bundy, William Crowe Jr., and Sidney Drell. They observed that, although the pretense that Israel is not a nuclear-weapon state may make relations with the United States and other states less troublesome, it prevents the Israeli government from making a convincing argument that no state need fear a nuclear Israel unless it attempts the destruction of the Jewish state. Moreover, it is very difficult to discuss constraints on a weapons program that does not officially exist.[12]

The basic counterargument is that nuclear ambiguity has served both Israel and the cause of nonproliferation well by enhancing deterrence against any military threat to Israel’s existence, while not providing the added incentive for any of its Muslim neighbors to acquire the bomb that might result from an open declaration of its nuclear status. It has also given Israel leverage in obtaining advanced conventional weapons and other military assistance from U.S. administrations concerned that Israel might resort to nuclear weapons without them. In addition, no declared nuclear-weapon state has ever given up its weapons, the implication being that acquiring and relinquishing nuclear weapons are most easily accomplished under conditions of ambiguity.[13] Finally, the policy of ambiguity is integral to Israel’s 1969 secret agreement with the United States, and it is difficult to imagine any significant shift in this policy without some new nuclear understanding between Israel and the United States. This in turn might lead to a wider public debate on such fundamental issues as who is entitled to have nuclear weapons, an outcome unlikely to be welcomed by either the U.S. government or that of the other weapon states.

Still, Bundy, Crowe, and Drell raise important concerns. Although other democracies such as the United States also restrict public access to sensitive information about national security in general and nuclear weapons in particular, Israel is unique in suppressing any public debate about a number of questions such as: Under what circumstances would Israel use the bomb, and who are the nuclear decision-makers? What change in nuclear policy might be needed in the event that states such as
Iran also acquire nuclear capability; and how adequate is physical security on and command and control of Israel’s weapons? These are important issues and not just for Israel.

For now, however, it is more important to focus on reducing political tensions in the Middle East and engage Israel more fully in the nonproliferation regime rather than in a divisive debate about the ambiguity surrounding its nuclear status. No state, even the United States, has unlimited political capital, and efforts should be focused where there is a chance that some progress might be made.

**NPT Article IV**

1. Nothing in this Treaty shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with articles I and II of this Treaty.

2. All the Parties to the Treaty undertake to facilitate, and have the right to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy. Parties to the Treaty in a position to do so shall also cooperate in contributing alone or together with other States or international organizations to the further development of the applications of nuclear energy for peaceful purposes, especially in the territories of non-nuclear-weapon States Party to the Treaty, with due consideration for the needs of the developing areas of the world.

**North Korea and Pakistan**

Another, more direct link between the three non-NPT powers and the so-called axis of evil is what the nonproliferation community views as a pattern of nuclear weapons cooperation between Pakistan and North Korea and possibly also Iran. There have been disturbing reports in the nonproliferation community that Pakistan has transferred centrifuge enrichment technology and perhaps also weapons design information to Pyongyang and perhaps Tehran.[14] This is a serious matter that arguably is intrinsic to Pakistan’s non-NPT status. Although the NPT does not explicitly prohibit a non-nuclear-weapon state party from assisting another state in acquiring nuclear weapons, it is clear that to do so would fundamentally violate the normative foundation and rationale of the treaty.

However, not being a party to the NPT need not exacerbate the problem of limiting nuclear technology transfers that facilitate a recipient’s access to nuclear weapons. France demonstrated that, by participating in the Nuclear Suppliers Group (NSG) from its inception and endorsing a charter for responsible nuclear cooperation involving constraints on national behavior even while eschewing participation in the NPT (to which it adhered only in 1992), it is possible to maintain an independent posture on one’s own nuclear program while supporting international efforts to forestall nuclear proliferation. As a charter member of the NPT and a country with substantial leverage on Pakistan, the United States also bears substantial responsibility for bringing pressure on Pakistan not to assist non-nuclear-weapon states in acquiring nuclear weapons.

**Engaging the Outliers**

There are a variety of means for the non-NPT states to engage more fully in the nuclear nonproliferation regime while staying outside the treaty.[15] Besides implementing rigorous export
control policies, all three non-NPT states could provide strong evidence for their claim to be responsible actors by supporting efforts to strengthen the Convention on the Physical Protection of Nuclear Materials, to which they are already party. Efforts have been under way for some time to extend the convention’s provisions to cover physical protection of nuclear material for peaceful purposes in domestic use, storage, or transport and to prevent sabotage of such material and the facilities in which they may be located. Given the threat of terrorist access to weapons-useable nuclear materials and the presence of such materials in the three non-NPT states, this is a matter of urgency and common sense.

There are other measures outside the NPT per se relating to nonproliferation and nuclear disarmament in which the non-NPT parties could constructively engage. Of particular importance would be support for the FMCT, which was singled out in the Principles and Objectives decision document that was part of the 1995 agreement to extend the NPT indefinitely. It has remained on the NPT review agenda ever since.

The FMCT is the counterpart of the Comprehensive Test Ban Treaty (CTBT) that constrains the development of and confidence in the performance of nuclear weapons beyond simple fission bombs. India and Pakistan have thus far refused to sign the CTBT but continue to observe unilateral nuclear testing moratoria. Israel, which has signed but not yet ratified the CTBT, is an active participant in all preparatory activities for the treaty’s international monitoring system and the development of procedures for on-site inspections. In September, Israel along with Iran (another CTBT signatory) reiterated its support for the early entry into force of the CTBT.

Unlike the NPT, both accords are universally applicable, nondiscriminatory agreements that represent a significant step in the effort to minimize further proliferation and create conditions in which existing nuclear weapons programs could be terminated or at least frozen.

The draft FMCT considered by the Conference on Disarmament (CD) in the mid-1990s applied only to future production and hence “grandfathered” the existing stocks of weapons-useable material in and out of weapons in NPT and non-NPT weapons states. Despite this, as previously noted, the treaty was opposed by Israel on the grounds that it constituted “a slippery slope” to the elimination of Israel’s nuclear arsenal, as well as by Pakistan because of its perception that its stockpile of fissile material is much smaller than that of India. Although the CTBT is moribund because of opposition by the Bush administration, the administration has previously expressed support for an FMCT that “advances U.S. security interests.”[16] However, the CD had not been able to take up the FMCT for years primarily because of a dispute between the United States and China on the latter’s position that there be concurrent negotiations on preventing an arms race in outer space. More recently, the United States announced that it is reviewing its position on the FMCT.[17] Resolving this disagreement and then moving forward toward the successful negotiation of a treaty will require continued support for the FMCT and stronger leadership by the United States, for example, in convincing the Israeli and Pakistani governments that such a treaty also advances their security interests.

Importance of NPT Universality

The importance of the universality of a treaty is that it consolidates the normative strength of the treaty and the regime that it anchors while the absence of universality weakens the strength of the norm. Universality also raises the costs of noncompliance by increasing the prospect of collective response to noncompliance and for enforcement of treaty and regime norms, rules, and principles.

In particular, accepting the non-NPT weapons status of Israel, India, and Pakistan weakens support for the treaty among its non-weapon state signatories in two ways: it strengthens the hand of those who argue that it is impractical to contain nuclear proliferation, and it erodes the value of the carrot provided by the NPT’s Article IV provisions that permits the transfer of peaceful nuclear technology to responsible states. The slippery slope of “nuclear realism” can be seen in the arguments of such experts as Middle Eastern security analyst Geoffrey Kemp when he argues that, when it comes to Iran:

[1] If the forces of moderation were to gain more power in Tehran and show that they are willing to be cooperative with the West and to resolve their outstanding differences with the US over terrorism
and the Arab-Israeli peace process, then it might be easier to tolerate some form of legal nuclearization of Iran, particularly if other aspects of the relationship are going well.\[18\]

Although this might seem far-fetched at the moment, recall that the United States and the other major nuclear suppliers were quite supportive of the shah's grandiose plans to build a vast nuclear enterprise in Iran in the 1970s. Of course, this enterprise was advertised as being strictly peaceful, but there is considerable overlap in the materials, technologies, and training required in peaceful and military applications of nuclear energy. As the Swedish physicist Hannes Alfvén observed long ago, “[A]toms for peace and atoms for war are Siamese twins”—a position that the Bush administration now recognizes with regard to the “peaceful” nuclear assistance provided to Iran by Russia and other countries as well as the aid that the IAEA has doled out under the auspices of its Technical Cooperation Program.

The case for permitting peaceful nuclear technology to be transferred to New Delhi is usually made by India and its supporters in the United States who stress the importance of strengthening ties with the “world’s largest democracy” that is also an ally of the United States (and Israel) in the war against fundamentalist Islamic terrorism. Moreover, they argue that, because the United States has accepted Indian nuclear weapons development as a reality, there is little point in continuing to penalize India by denying it the benefits of nuclear technology transfer, especially if it might offer to accept international safeguards on some of its indigenous nuclear facilities and perhaps other constraints on its nuclear activities as a quid pro quo.

The acceptance of safeguards on some or even all indigenous non-weapons-related facilities in the non-NPT states—like the acceptance of safeguards on similar facilities on a voluntary basis by the NPT weapons states—has politically important symbolic value. However, permitting the transfer of nuclear technology on this basis, even if coupled with their endorsement and implementation of rigorous export control arrangements such as the NSG guidelines, as some advocate, would blur the distinction between NPT parties and nonparties and thus undermine the treaty. In the case of the United States (and other major nuclear suppliers), such a trade-off would contradict national law and the NSG guidelines that require acceptance of full-scope safeguards as a condition for nuclear technology transfer. For this reason, such a trade-off is not prudent. Further discussion and debate should be encouraged, however, on the appropriateness of other quid pro quos for the willingness of the non-NPT states to engage more fully in the nonproliferation regime as suggested above.\[19\]

\[18\] NPT Article VI

Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a Treaty on general and complete disarmament under strict and effective international control.

\[19\] A New and Improved “Grand Bargain”

The major current proliferation problems are the nuclear ambitions of North Korea and Iran, and thus they deserve the concentrated attention they are receiving from the United States and other countries. However, the possession of nuclear weapons and the non-NPT status of Israel, India, and Pakistan is also a serious problem that is relevant to curtailing the North Korean and Iranian problems and to the long-term viability of the nonproliferation regime. Leadership by example is required from the United States in strengthening nonproliferation norms. Specifically, the United States should encourage the non-NPT states to participate more fully in the nonproliferation regime by (1) engaging constructively in FMCT negotiations; (2) implementing strengthened export controls and physical protection of nuclear materials and technologies; and (3) responding positively to the request by the IAEA Board of Governors to negotiate additional protocols to their item-specific safeguards agreements. For its part, the United States should also (1) reconsider its rejection of the CTBT; (2) complete ratification of its additional protocol agreement, which awaits Senate action; and
(3) make a commitment to accept both state-of-the-art safeguards as well as some degree of multinational involvement in new centrifuge plants planned in the United States.[20]

Although the NPT has been a major bulwark against nuclear proliferation and has provided the legal and evidentiary basis for cases of noncompliance, the Iranian and North Korean situations have underlined several of its known deficiencies, in particular the ability of non-nuclear-weapon states-parties to misuse Article IV to acquire weapons-relevant materials and technology, foil verification attempts, and then withdraw from the treaty by invoking Article X. Potential remedies that have been proposed recently by various individuals and groups[21] include requiring states not only to accept the Additional Protocol but also to justify their plans for a peaceful nuclear program to independent expert groups. These groups would likely be skeptical of plans for the construction of a uranium-enrichment plant under national control when secure supplies of enriched fuel at competitive prices are available on the international market.

However, in order to persuade states-parties to accept such changes in the interpretation of the treaty, the weapons states should be willing to move more quickly and forcefully to fulfill their obligations under Article VI, including providing the resources required to secure and then dispose of the large excess stocks of weapons-useable material. The amount of excess material stocks hopefully will grow over time as disarmament progresses, but they already constitute a considerable risk of diversion by nonstate actors, particularly in Russia.

In sum, although the existence of three de facto states outside the NPT is not high on the current nonproliferation agenda, they need to be engaged more fully in the nonproliferation regime in order to address the Iranian and North Korean problems as well as to maintain the viability of the treaty itself. Whatever measures a given state may take against proliferation on its own, the task of reducing nuclear risks including further proliferation lies beyond the capacity of any single state. Leadership in mobilizing and institutionalizing the needed collective effort and action is today in the hands of the United States.

**NPT Article X**

1. Each Party shall in exercising its national sovereignty have the right to withdraw from the Treaty if it decides that extraordinary events, related to the subject matter of this Treaty, have jeopardized the supreme interests of its country. It shall give notice of such withdrawal to all other Parties to the Treaty and to the United Nations Security Council three months in advance. Such notice shall include a statement of the extraordinary events it regards as having jeopardized its supreme interests.

2. Twenty-five years after the entry into force of the Treaty, a conference shall be convened to decide whether the Treaty shall continue in force indefinitely, or shall be extended for an additional fixed period or periods. This decision shall be taken by a majority of the Parties to the Treaty.

**NOTES**


2. The reference is to a signal picked up by one of the Vela satellites—the United States’ primary means of detecting aboveground nuclear explosions—that originated about 1,500 miles southeast of Cape of Good Hope, South Africa. Although a blue-ribbon panel of scientists convened by the Carter administration to investigate the signal concluded that it was probably not of nuclear origin, there is a considerable body of evidence that lends credence to the proposition that the flash resulted from an Israeli nuclear device detonated in a joint Israeli-South African test exercise. Stephen Green, *Living by the Bomb* (Brattleboro, VT: Amana Books, 1988), pp. 111-134.

4. There is evidence that Israeli opposition to the FMCT has hardened since the first Bush and Clinton administrations made their initial overtures. For example, according to Aluf Benn, the diplomatic correspondent of the Israeli newspaper Ha’aretz, in two letters and several conversations in 1999, former Israeli Prime Minister Benjamin Netanyahu told Clinton, “We will never sign the treaty, so do not delude yourselves, no pressure will help. We will not sign the treaty because we will not commit suicide.” See Aluf Benn, “The Struggle to Keep Nuclear Capabilities Secret,” Ha’aretz, September 14, 1999 (Internet edition); Aluf Benn, “Sharon Will Stick to Tradition of Nuclear Ambiguity,” Ha’aretz, February 18, 2001.

5. Wolf’s remarks were to the Preparatory Committee Meeting for the 2005 NPT Review Conference, which focused on the actions of “irresponsible NPT parties” that pose fundamental challenges to the NPT.


7. This is mainly due to the lack of hard information on the size and operating history of the facilities used to produce the requisite plutonium and highly enriched uranium as well as the amounts of these materials that are incorporated into weapons. See David Albright, Frans Berkhout, and William Walker, Plutonium and Highly Enriched Uranium 1996: World Inventories, Capabilities, and Policies (New York: Oxford University Press, 1997), pp. 259-281.


9. “No Iranian government, regardless of its ideological leanings is likely to abandon programs to develop weapons of mass destruction that are seen as guaranteeing Iran’s security.” Elaine Sciolino, “Nuclear Ambitions Aren’t New for Iran,” The New York Times, June 22, 2003 (quoting CIA director George Tenet).

10. Elaine Sciolino, “Nuclear Accord Shows Iran’s New Pragmatism,” International Herald Tribune, October 29, 2003, p. 9. Although the actual enrichment of uranium will (hopefully) be suspended, there was no commitment to suspend enrichment research and development or other activities such as construction of a heavy-water production plant that raise legitimate concerns about the rationale for Iran’s nuclear program.

11. The phrase is from a statement by the head of the U.S. delegation to the 2000 NPT Review Conference, who noted that “Israel has stated that it is prepared to surrender its nuclear weapons in the context of a just, stable, and enduring Middle East peace.” See Gerald Steinberg and Aharon Etengoff, “Arms Control and Non-Proliferation Developments in the Middle East: 2000-1” (Ramat-Gan, Israel: Begin-Sadat Center for Strategic Studies, Bar-Ilan University, December 2002), p. 38.


13. For example, see George Perkovich, India’s Nuclear Bomb (Berkeley, CA: University of California Press, 1999), pp. 459-464.


15. Lawrence Scheinman, “Engaging Non-NPT Parties in the Nuclear Non-Proliferation Regime,” Programme for Promoting Nuclear Non-Proliferation Issue Review no. 16 (Southampton, United Kingdom: Mountbatten Centre for International Studies, University of Southampton, May 1999).


17. In August 2003, China indicated that it was not opposed to a compromise proposal for a CD
working agenda that would permit negotiations on an FMCT while establishing a group dealing both with weapons in outer space and nuclear disarmament without any explicit reference to negotiations. Although the United States has not yet responded to this proposal, the Bush administration’s distaste for any linkage of an FMCT with other issues it does not want addressed is well known. Thus, it seems unlikely that negotiations on an FMCT in the CD will resume any time soon. See “U.S. Reviewing FMCT Policy,” Arms Control Today, November 2003, p. 43.


19. Anupam Srivastava and Seema Gahlaut suggest that, if India and Pakistan agree to make their export control systems identical to that of the NSG as well as the Australia Group and the MTCR, the principal supplier states within these regimes would assist the civilian programs in these countries through technology transfer and co-development. Anupam Srivastava and Seema Gahlaut, “Curbing Proliferation from Emerging Suppliers: Export Controls in India and Pakistan,” Arms Control Today, September 2003, pp. 12-16.

20. See “New Mexico Will Host the $1.2 Billion U Enrichment Plant,” Nuclear News, October 2003, p. 64. Besides the plant in New Mexico, to be built by Louisiana Energy Services using technology developed by the European Urenco enrichment consortium, the United States Enrichment Corporation also plans to build a centrifuge plant in Ohio using technology previously developed in the United States under the auspices of the U.S. Department of Energy.


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