INSIDE | Missile Defense Five Years After the ABM Treaty’s End

Arms Control TODAY
THE SOURCE ON NONPROLIFERATION AND GLOBAL SECURITY

Volume 37
Number 5
JUNE 2007

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Russia, Burma Sign Nuclear Agreement
When and why do states pursue nuclear weapons? It is a question that has long been debated among arms control and nonproliferation analysts. This month’s issue looks at one state that has crossed the nuclear Rubicon and another that some analysts fear may do so. It also touches on a Bush administration initiative to try and interdict relevant technology involved in nuclear and other forms of proliferation.

North Korea’s Oct. 9, 2006, nuclear test sounded alarm bells in Washington not only because of Pyongyang’s newly demonstrated capabilities. Commentators and policymakers fretted that other countries in the region, particularly Japan, might feel it necessary to develop nuclear weapons as well. But in this month’s cover story, Hajime Izumi and Katsuhisa Furukawa say that such concerns are overblown and perhaps intentionally manipulated by some Japanese officials. What Tokyo wants, they write, is a closer nuclear relationship with the United States.

Drawing on new sources, Avner Cohen looks at when and how Israel made its crucial decision to produce nuclear weapons, a fact widely known but not officially acknowledged by the Israeli government. He finds the key in the stressful days leading up to the 1967 Arab-Israeli War. That crisis, he writes, pushed Israel, which already had developed the relevant technology, to make the fateful leap to assemble weapons.

Mark J. Valencia evaluates the success of the Bush administration’s much-touted Proliferation Security Initiative (PSI). An initiative first unveiled four years ago, the PSI is designed to prevent the spread of weapons of mass destruction, their delivery systems, and related materials from entering or leaving “states of proliferation concern.” Valencia concludes that the PSI has improved the awareness of the danger and urgency of the problem and constrained some relevant illicit trade, but that several shortcomings have hampered its effectiveness.

Our news section this month contains two news analyses. One examines the state of U.S. missile defenses five years after the U.S. withdrawal from the Anti-Ballistic Missile Treaty. The other is a first-hand report from Vienna on this year’s preparatory meeting for the 2010 nuclear Nonproliferation Treaty review conference.

In “Looking Back,” Rose Gottemoeller recounts the history of the Intermediate-Range Nuclear Forces Treaty and its current status. Her article comes after Russian leaders have publicly mulled withdrawing from the treaty to gain strategic flexibility and to retaliate for the planned construction of U.S. missile defenses in Europe. Gottemoeller concludes that such a withdrawal is unlikely and that the treaty’s precedent-setting negotiating principles and verification standards offer a valuable tool for future arms control efforts.

—Miles A. Pomper
Five years ago at the signing ceremony for the Strategic Offensive Reductions Treaty (SORT), President George W. Bush claimed the agreement “liquidates the Cold War legacy of nuclear hostility” between the United States and Russia. Think again. Although SORT calls for deeper reductions in deployed strategic nuclear warheads, to 1,700-2,200 each by 2012, it has not liquidated the weapons nor mutual nuclear suspicions.

The treaty’s emphasis on flexibility detracts from its predictability, lessening its value in building a more stable and secure U.S.-Russian relationship. Unlike the earlier Strategic Arms Reduction Treaty (START) approach, SORT does not require the destruction of strategic delivery systems. SORT also allows each side to store non-deployed warheads. The treaty fails to establish new verification mechanisms, relying instead on those contained in START.

Now, news reports indicate that neither government wants to extend START past its scheduled expiration on Dec. 5, 2009. Although the 1991 treaty may require adjustments to reflect present-day realities, it serves as an important foundation for deeper, faster, and irreversible reductions in U.S. and Russian arsenals that would head off renewed strategic competition.

U.S. plans to install missile interceptors in Poland have added to Russian concerns that the United States might redeploy its reserve nuclear forces and utilize leftover nuclear delivery systems for conventional strike missions. In response, President Vladimir Putin has authorized new strategic missile systems and plans to increase the number of warheads carried by certain missile systems. Putin also has threatened to withdraw from the 1987 U.S.-Russian treaty banning intermediate-range nuclear forces.

The loss of START would complicate an increasingly complicated U.S.-Russian relationship. START was a breakthrough agreement that helped end the Cold War. It slashed strategic nuclear forces from approximately 10,000 warheads each to no more than 6,000 apiece by December 5, 2001. The accord also limits each side to 1,600 strategic delivery vehicles (land- and submarine-based ballistic missiles, plus heavy bombers).

In addition, START established a far-reaching system of notifications and inspections that provides an accurate assessment of the size and location of each side’s forces. In 2002, the intelligence community warned that its ability to monitor SORT would be significantly compromised in the absence of START. If no new verification mechanisms are established, a former U.S. verification official told Arms Control Today in 2005 that the two countries would be “flying blind” in their nuclear relationship.

U.S. and Russian experts began discussions in March on follow-on measures to START, but the two sides are at odds over several core issues. Russia favors negotiating a new treaty that would reduce strategic nuclear warheads to less than 1,500 each, with additional limits on delivery systems. The Bush administration rejects further weapons limits and prefers new, informal transparency and confidence-building measures.

Both sides want some verification measures after START. But Russia claims that more intrusive measures, such as on-site inspections, would need to be included in a legally binding agreement as required by Russia’s domestic laws. U.S. negotiators argue for understandings that would allow for “visits” to each other’s weapons storage sites.

What should be done? Informal transparency measures may be helpful but provide too little certainty and do nothing to achieve deeper and more lasting force reductions. On the other hand, given the Bush administration’s antipathy toward arms control treaties, the prospects for a new legally binding agreement before the end of 2008 look dim. The next U.S. president will have limited time to work out a new arrangement before START lapses.

Rather than allow the pact to expire or mask long-simmering differences with halfway measures, Bush’s and Putin’s successors should agree to continue to observe START until they can enter into a new agreement that achieves what SORT did not: permanent and verifiable reductions of excess U.S. and Russian Cold War nuclear forces. A new treaty with streamlined START-style verification protocols is necessary to restore confidence that each country will actually dismantle, not simply warehouse, warheads and missiles originally deployed to destroy the other.

Such an agreement should map out permanent, phased reductions of all strategic nuclear warheads, deployed and reserve, to a level of 1,000 or less and establish ceilings on the number of non-nuclear strategic missiles. As the two sides’ strategic arsenals shrink, they must also account for and agree to scrap Russia’s residual arsenal of at least 3,000 tactical nuclear warheads, as well as the smaller U.S. stockpile, which includes 480 warheads stationed in Europe.

The year 2009 will mark two decades since the fall of the Berlin Wall. The United States and Russia are no longer enemies, yet their still massive nuclear arsenals continue to engender distrust and worst-case assumptions. What is required is a new push for real nuclear reductions based on the proven principles of START. ACT
Notable Quotable

“What has happened in Europe that is so negative that one should need to fill central Europe with arms?”

—Russian President Vladimir Putin, May 23 in Vienna, Austria, commenting on U.S. plans to establish a strategic ballistic missile defense base in Europe.

“I don’t think anyone expects the United States to permit somehow a veto on American security interests.”

—Secretary of State Condoleezza Rice May 15 in Moscow, responding to Russian statements about U.S. plans to station 10 ground-based interceptors in Poland and a radar in the Czech Republic.

Five Years Ago in ACT

The Jury is Still Out

Despite Bush administration statements that the United States no longer needs to match Russia warhead for warhead and that mutual assured destruction is being left behind, the number of weapons left in play by this treaty suggests otherwise. Bush’s triumphant claim that the Strategic Offensive Reductions Treaty “liquidates the Cold War legacy of nuclear hostility” is decidedly premature.

—Wade Boese and J. Peter Scoblic, June 2002

BY THE NUMBERS

U.S. Missile Defenses

5
Years since U.S. Anti-Ballistic Missile Treaty withdrawal on June 13, 2002

$41.3 Billion
Appropriated by Congress to the Missile Defense Agency (MDA) for fiscal year 2003 through fiscal year 2007

$8.8 Billion
MDA funding request for fiscal year 2008

18
Strategic Ground-based Interceptors deployed in Alaska and California as of May 17, 2007

2
Aborted flight tests of Strategic Ground-based Interceptor

1
Successful Strategic Ground-based Interceptor intercept test*

*This Sept. 1, 2006 test was the first for an interceptor model the same as those now deployed. Between October 1999 and the test last September, prototype interceptors tallied five hits in 10 intercept attempts. None of the tests have been under a fully realistic operational scenario.
### Reports of Note

**The United States Nuclear Weapons Program: The Role of the Reliable Replacement Warhead**

American Association for the Advancement of Science, April 2007

Tasked with assessing whether a program to design and build a new nuclear warhead might ease longevity concerns about the aging U.S. stockpile, a 13-member panel of the American Association for the Advancement of Science concluded that it is too early to tell. The panel reported that not enough information exists about the costs, scope, schedule, or risks of the proposed Reliable Replacement Warhead (RRW) program to judge whether it will accomplish what its advocates claim: to increase long-term confidence in the arsenal by introducing allegedly safer, more reliable, and easier-to-maintain warheads. The panel warned against overselling the potential benefits of the RRW program and cautioned that any effort to revamp the U.S. nuclear weapons stockpile and complex should be balanced with nonproliferation and arms control goals. Most fundamentally, the panel indicated the U.S. government should first determine long-term plans and requirements for its nuclear stockpile before deciding on what types of nuclear warheads should make up that stockpile. Bruce Tarter, former director of the Lawrence Livermore National Laboratory, which won the first RRW design competition, chaired the panel.

**Nuclear Black Markets: Pakistan, A.Q. Khan and the Rise of Proliferation Networks**

International Institute for Strategic Studies, May 2007

This dossier traces the evolution of nuclear black markets from the procurement and subsequent entrepreneurial activities of Pakistani scientist Abdul Qadeer Khan to current illicit nuclear shopping sprees by Iran. It judges that the international response to Khan’s proliferation has constrained but not eradicated nuclear trafficking. One-stop shopping networks such as Khan’s have disappeared, although individual suppliers are still operating. Instead, the demand side has become more centralized. For instance, Iran’s procurement system is appraised to be equal to or larger than Khan’s. Other states, such as North Korea and India, have replicated the Pakistani system, including the use of its embassies in acquisition efforts. To counter the black market threat, this detail-rich dossier offers policy suggestions to states on staying a step ahead of proliferators and avoiding a perpetual “game of catch-up.” Banning production of highly enriched uranium and expanding the Bush administration’s Proliferation Security Initiative are among these options.

### Treaty Update

**Biological Weapons Convention**

Kazakhstan signed legislation May 8 to join the Biological Weapons Convention (BWC). It will officially accede to the convention after it has submitted its instrument of accession to Russia, the United Kingdom, or the United States, the depositary governments of the convention. There are 156 states-parties to the BWC. Twenty-two states remain nonmembers, and 16 states are signatories but not states-parties.

**Comprehensive Test Ban Treaty**

On May 16, the Comprehensive Test Ban Treaty Organization (CTBTO) suspended the voting rights of the United States on account of $38.3 million in unpaid dues since 2002. Underpayments by the United States and 102 other signatories—85 of which, including Iran, also have had their voting rights suspended—threatens ongoing construction of the International Monitoring System (IMS), which detects nuclear detonations. CTBTO officials have expressed concern that the arrears of the United States, which is the largest single contributor according to the UN dues system, may encourage other nations to withhold dues as well. As of April 18, the organization had installed 75 percent of monitoring stations and laboratories and plans to have installed 90 percent of the IMS network by 2008. However, CTBTO officials say the financial impediments may impede construction of the remaining stations and maintenance of existing facilities. The Bush administration has proposed an $18 million contribution to the CTBTO for the 2008 fiscal year, $5.4 million less than the organization’s assessment.

**Global Initiative to Combat Nuclear Terrorism**

Participation in a U.S.-Russian anti-nuclear terrorism initiative has more than doubled since March to 39 countries. The July 2006 initiative is expected to grow even more by its third meeting, which will take place June 11-12 in Kazakhstan. Initially comprising 13 countries, the initiative opened its door to new members in February, pending their commitment to eight principles to prevent or respond to nuclear terrorism. The new members added since March are Afghanistan, Armenia, Cambodia, Cape Verde, Chile, Croatia, Cyprus, the Czech Republic, Denmark, Georgia, Greece, Iceland, Israel, Macedonia, Madagascar, Montenegro, the Netherlands, Norway, Palau, Romania, South Korea, Spain, Sri Lanka, Switzerland, and Turkmenistan.

### What’s Ahead

**On the Calendar**

- **July 5-6** UN 2007 Global Compact Leaders Summit, Geneva.
- **July 16** The 62nd anniversary of “Trinity,” the first nuclear explosion, Alamogordo, New Mexico.
- **July 29** The 50th anniversary of the founding of the International Atomic Energy Agency.
Since North Korea’s nuclear test on October 9, 2006, there has been considerable foreign speculation that the explosion might prompt Japan to develop its own nuclear weapons arsenal. These views do not reflect the relatively restrained reaction in Japan itself. Although the test helped break a public taboo on discussing the possibility of a Japanese nuclear capability, there is little serious desire to replace the U.S. nuclear umbrella with a homegrown nuclear option.

Indeed, the discussions themselves may have been aimed in part at shoring up the credibility of U.S. extended deterrence. Rather than relying on nuclear weapons, Japan’s security policy seems more geared toward strengthening cooperation with the United States while shoring up global non-proliferation efforts.

North Korea’s nuclear test certainly shocked the Japanese public. Just after the test, an Asahi Shimbun poll found that 82 percent of the respondents were “concerned.” Some 44 percent of those polled felt a “strong threat” from North Korea, and 38 percent felt “some level of threat.” It seems, however, that such concerns were neither deep nor sustained. The Japanese public in general did not demonstrate active interest in taking any specific measures, such as establishing underground shelters. Rather the Japanese media focused primarily on the radioactive contamination risks the test might pose to Japan. Having recognized that such risk was almost nonexistent, the public interest on this issue faded away promptly.

After November 2006, the Japanese media’s coverage of North Korea focused more on Pyongyang’s decades-old abduction of Japanese citizens than concern over North Korea’s current nuclear weapon programs. There is a view among some experts that the Japanese public’s “sense of loathing” toward the Kim Jong Il regime may have overridden its perception of the threat emanating from North Korea’s missiles and nuclear-weapons programs.

The Japanese government also has been restrained in several regards in its response to the tests. First, although it imposed sanctions on North Korea, Tokyo appears to place a higher priority on the abductions matter. Following his 2006 inauguration, Japanese Prime Minister Shinzo Abe quickly established within his cabinet an office to manage the abductions issue. Abe did not create an equivalent office to address Pyongyang’s nuclear or missile programs, despite his repeated statements that North Korea’s nuclear weapons presented the gravest threat to Japan, nor was any voice raised among the Japanese media in support of establishing such an office.

Second, Tokyo remains reluctant to negotiate with North Korea on ballistic missile development and deployment, although Japan is the country that should be most concerned about Pyongyang’s medium-range ballistic missile programs.

Third, despite North Korea’s nuclear testing and missile firings, Japan has not seriously discussed or received strong domestic pressure to
increase the defense budget. The reduction of the government’s accumulated deficit, almost 150 percent of Japan’s gross domestic product (GDP), still remains one of Tokyo’s top priorities, and the defense budget remains at less than 1 percent of GDP. Each military service branch of the Japanese Self-Defense Forces, for instance, has been forced to cut back on personnel and procurement.

Fourth, soon after North Korea’s nuclear test, Japanese officials discussed the need to enact new legislation to enable interdiction and inspection of North Korean ships with suspected weapons of mass destruction (WMD)-related cargoes on the high seas, but such discussion has faded. Similarly, Japanese officials also weighed procuring and deploying an offensive weapon system to take out North Korea’s missile launching sites. This discussion has faded as well.

To be sure, Tokyo has speeded up deployment of proposed anti-missile systems, and a limited number of politicians and experts have argued in favor of Japan pursuing a nuclear option. It is difficult, however, to find convincing evidence that the Japanese public feels so gravely threatened by North Korea’s nuclear program that they want to take concrete action as a response. Most Japanese regard foreign countries’ concerns about Japan’s nuclear future as exaggerated. In fact, the

Japanese media rarely conducts any extensive or serious discussion about Japan’s nuclear weapons capability or what might constitute Tokyo’s nuclear doctrine if it were to pursue such an option.

Changing Regional Security Environment
Speculation that Japan might pursue nuclear weapons surfaced first in the aftermath of China’s initial nuclear tests in the 1960s and then during the North Korean nuclear crisis in 1993-1994, as well as at the time of the international negotiations over the nuclear Nonproliferation Treaty (NPT) both in the 1970s and in 1994-1995. With the 2006 North Korean test, those concerns have been renewed, especially in the United States and a few Asian countries. Some countries fear North Korea’s possession of nuclear weapons might lead to a potential tsunami of nuclear proliferation in Asia that would engulf Japan and force it to shift its position on nuclear armament.

This overstates the influence of North Korea on the thinking of Japanese defense authorities. Although North Korea’s WMD programs certainly represent one of the gravest threats to Japan’s national security, the North Korean challenge is not necessarily regarded as the sole determinant factor shaping Japan’s national security strategy.

Other problems Tokyo is concerned about include:

- The increasing capabilities of China’s People’s Liberation Army (PLA), particularly its ballistic missiles capabilities that can strike targets in Japan;
- The activities of the PLA Navy (PLAN) that have been conducted in a manner inconsistent with the Law of the Sea treaty, occasionally even violating this pact;
- The uncertain future of a reviving Russia;
- Ongoing territorial disputes with China, Russia, South Korea, and Taiwan;
- Nontraditional security threats, including natural disasters, infectious diseases, man-made accidents, and terrorism; and
- Japan’s perceived vulnerability to an energy supply cutoff because it depends heavily on oil from the Middle East.

Japan’s UN Permanent Representative Kenzo Oshima addresses the Security Council Oct. 14 after it unanimously adopted Resolution 1718, applying sanctions to North Korea in response to its Oct. 9 nuclear test.
Indeed, there is even a widespread view among Japanese security experts that North Korea’s provocations provide Japan with legitimate cover to advance its defense posture and capability in order to meet these threats and uncertainties, especially those related to China.

As it weighs the North Korea threat, Japan also has to place equal if not greater value on strengthening its bilateral alliance with the United States. Perhaps even more importantly, Tokyo today aspires to enhance its diplomatic standing in the world in order to balance against China’s rising political influence. To do so, Japan is seeking a permanent seat on the UN Security Council and trying to foster regional integration and institutionalization in Asia, with the aim of shaping rather than reacting to the global and regional security environment.

The changing geopolitical landscape in Asia is prompting Japan to resort to a new diplomatic principle of “value-oriented diplomacy,” emphasizing the adoption of universal values and disciplines as major diplomatic instruments, such as democracy, freedom, the rule of law, and the market economy.

Japan is currently embarking on a new major diplomatic initiative to build an “arc of freedom and prosperity” around the outer rim of the Eurasian continent through diplomacy that emphasizes values.1 Tokyo decision-makers regard Japan’s international reputation as an asset the country has nurtured since the end of World War II. They regard it as too valuable to throw away simply for the sake of establishing its own nuclear deterrent against North Korea’s nuclear weapons programs.

Debating Japan’s Nuclear Option
To be sure, since North Korea expelled International Atomic Energy Agency inspectors in December 2002, there has been some open debate in Japan about whether to acquire nuclear weapons. This discussion has been fairly marginal, however, and included several consistent characteristics.

First, a limited number of conservative politicians have for decades argued for a vision of Japan with an independent military capability.

Second, it still remains very difficult and controversial for many Japanese politicians to advocate nuclear weapons. Careless comments by Cabinet members on this matter can trigger a huge controversy. For example, Shoichi Nakagawa, chairman of the Policy Research Council of the ruling Liberal Democratic Party (LDP), made public remarks on Japan’s nuclear option repeatedly after North Korea’s nuclear test, which made world headlines. He continued to repeat this remark despite strong pressures from the other LDP leaders to retract his comments. Even he, however, did not go beyond saying that Japan needed open discussions on its nuclear option.

Third, as noted, a majority of the Japanese public does not yet seem to perceive neighboring countries’ nuclear weapons as an issue of the highest priority. In fact, the presence of nuclear weapons on the neighboring continent is nothing new to Japan. Since the 1960s, Japan has learned to “peacefully” co-exist with Chinese nuclear weapons. (In a sense, this may be a reflection of the public’s tacit confidence in the credibility of U.S. extended deterrence.)

Fourth, it is no longer taboo to discuss nuclear strategy and the hypothetical possibility that Japan could require such weapons. Although a nuclear option is still unacceptable to the general public, there is recognition that such an option should be discussed openly. Within the national security community, experts are raising voices to call for pragmatic debate on Japan’s nuclear option, but no one dares to take the lead in such a discussion because the issue is still relatively sensitive. Leading this kind of discussion could negatively affect the government’s funding of an individual researcher’s work.

Overall, a majority of the Japanese public does not support the possession of nuclear weapons, at least so far, and there is only limited support for even examining whether Japan’s nuclear weapons would contribute to strengthening deterrence against any adversary and whether Japan would actually be able to develop nuclear weapons if it should decide to do so.

The Utility of Japan’s Nuclear Armament
Technically, experts have long contended that Japan possesses the basic capabilities to produce crude nuclear weapons. Indeed, Japanese Foreign Minister Taro Aso said last fall that “Japan is capable of producing nuclear weapons.” But he added, “We are not saying we have plans to possess nuclear weapons.” Japan has nuclear fuel-cycle programs that produce reactor-grade plutonium, although in the form of mixed-oxide fuel, for civilian purposes. Japan also has the M-V and H2-A rockets, which have potential intercontinental capabilities.

Japan has not yet established the warhead control technology necessary for operational missiles. In addition, Japan does not have the basic infrastructure that would be essential for nuclear weaponry, including a nuclear doctrine, a stringent legal frame-

Japanese Prime Minister Shinzo Abe has said repeatedly that North Korean nuclear weapons present the gravest threat to Japan.
work to protect classified information, a unified command and control system, or a unified intelligence system.

Moreover, Japan’s use of any nuclear material has been strictly regulated by bilateral and international treaties. It is illegal for Japan to use its plutonium for weapons purposes without the consent of its treaty counterparts, unless Japan dare follow the brinksmanship strategy of North Korea. Even the proponents of Japan’s nuclear armament acknowledge that Japan would not be able to develop nuclear weapons without the approval and cooperation from other countries, most importantly the United States, because of Japan’s obligations under bilateral treaties to use imported nuclear materials, equipment, facilities, and technologies for peaceful purposes.

Furthermore, Japan’s scientific and academic communities still remain within the pacifist tradition despite the general trend toward Japan becoming a more “normal country.” It would take enormous effort to establish a working relationship between these communities and the national security community. This would invariably make it difficult to mobilize resources essential for the construction of any sophisticated nuclear weapon.

Additionally, under Japan’s democratic government, selecting the location of nuclear weapons facilities could prove a painstaking process. Over the past decades, for instance, the selection of a location for a radioactive-waste storage site has faced strong opposition from local communities nationwide.

The Japanese government has quietly re-examined its nuclear option several times, most poignantly in the 1960s when China conducted its first nuclear test. All such examinations have reached the same conclusion: Japan’s possession of its own nuclear arsenal had little strategic merit. These studies have determined that a nuclear Japan could motivate a number of other countries to pursue nuclear development, and Japan could not secure a location to store nuclear weapons safely given its geographic limitations. Even the option to base nuclear weapons on submarines could not be completed before a decade and would require an enormous amount of investment, a challenge given Japan’s current budget deficit.

Furthermore, Japan believes that the credibility of the international nonproliferation regimes is still intact. These regimes are certainly imperfect, but Japan believes they have established legitimacy in the international community. As a result, Japan has intensified its efforts to strengthen these regimes by complementing them with various national, bilateral, and multilateral measures. Japan assesses that the relative costs associated with noncompliance with the treaties outweigh and should continue to outweigh the relative costs associated with observing the regimes.

Lastly, most of the pragmatic thinkers who support examining, though not necessarily pursuing, Japan’s nuclear option favor a strong Japanese-U.S. alliance. For example, former Japanese ambassador to Thailand, Hisahiko Okazaki, one of Japan’s most prominent strategic thinkers, argues that Japan’s nuclear armament should proceed in tandem with the strengthened bilateral alliance with the United States, while recognizing that the potential utility of Japan’s own nuclear weapons could be fairly marginal. In his view, the real utility of Japan’s discussion of a nuclear option may lie in its utility to indirectly press the United States to continue its nuclear commitment to protect Japan.

Indeed, this also has been the line of thinking among some of Japan’s key strategic thinkers over the past decades. In the 1970s, Takuya Kubo, then bureau director of defense policy of Japan’s Defense Agency, wrote an article articulating Japan’s defense posture: “[I]f Japan prepares latent nuclear capability by which it would enable Japan to develop significant nuclear armament at anytime…the United States would hope to sustain [the] Japan-U.S. security system by providing [a] nuclear guarantee to Japan, because otherwise, the U.S. would be afraid of a rapid deterioration of the stability in…international relations triggered by nuclear proliferation.”

Even today, the authors have met several journalists and officials who have also expressed similar views, although privately.

### Japan’s Deterrence Posture

Given those relative merits and demerits, Tokyo’s decision-makers have been pursuing another option as a response to North Korea’s nuclear testing, in contrast to the political rhetoric surrounding the nuclear option. These policymakers are determined to continue efforts to strengthen deterrence on multiple fronts by further institutionalizing the bilateral alliance with the United States and by developing a comprehensive national security posture. In fact, over the past years, Japan has been developing a comprehensive national security strategy to cover and integrate a wide range of areas, including assurance, dissuasion, deterrence, denial, defense, and damage confinement as well as crisis management, in order to keep up with the changing security environment.

The strongest indirect supporter of these efforts has been North Korean leader Kim Jong Il. Since the 1990s, Japan’s national security policy and the Japanese-U.S. alliance have consistently evolved every time when there...
was a crisis on the Korean Peninsula. After the North Korean crisis in 1993-1994, Japan decided to redefine its roles and missions within the alliance, announced a Japan-U.S. Joint Declaration that Japan will pursue a nuclear weapons option.
and the U.S. government's command and control systems will be integrated when these systems are deployed or what level of interoperability can be achieved between the two militaries. Additionally, it is unclear whether Japan can legally intercept any long-range ballistic missiles heading toward the United States because doing so could violate the Japanese government's interpretation of its constitution, which prohibits itself from engagement in the act of collective self-defense. Abe has launched a commission to examine these issues.

**Japan's Strategic Push**

In addition to the above efforts, Japanese officials would like more detailed discussions with their U.S. counterparts on U.S. nuclear doctrine and strategy, including its operational details, as an additional measure to sustain the credibility of U.S. extended deterrence. There have been few bilateral discussions on such matters so far. Although Japan must establish stringent mechanisms for information protection before discussing such sensitive matters with the United States, once it does so, the Japanese government may want to have a regularized bilateral mechanism to discuss the strategic details, somewhat similar to the institutional framework of the Nuclear Planning Group of NATO.

In fact, Japanese government officials and experts have recently been discussing the possibility of establishing a Japan-U.S. Nuclear Planning Group. As Michael Green, former senior director for Asian affairs on the National Security Council in the Bush administration, has said, Tokyo may want to have “some control of the U.S. nuclear umbrella.”

Certainly, Japanese security experts and officials have expressed frustration over the ambiguous nature of U.S. declaratory policy about its nuclear umbrella. There is an emerging view in Japan that it should ask for a more explicit statement of policy from the U.S. government, for example, by revising the bilateral defense guidelines to state that the United States would retaliate with nuclear weapons if Japan were to be attacked by an adversary's nuclear weapon. Indeed, as they manage the alliance, U.S. policymakers would be well advised to consider how to manage Japan’s increasing aspiration to be consulted in the formation of the U.S. nuclear posture and to participate in the operation of U.S. extended deterrence. This should capture more attention than worries that Japan will pursue a nuclear weapons option.

**Conclusion**

As noted, Japan’s domestic reaction to North Korea’s nuclear test has been much more restrained than predicted by some foreign experts, particularly in the United States. Similar predictions followed China’s nuclear tests in the 1960s and the North Korea nuclear crisis of 1992–1994. Then, as now, these predictions have proven ill-founded.

It is difficult to find in Japan any major public leader who strongly advocates Japan’s pursuit of its own nuclear option or who questions the credibility of U.S. nuclear deterrence. Shifts in Japan’s regional security environment and strategic culture from pacifism to realism in recent years have ended the taboo on discussing publicly the hypothetical possibility that Japan might pursue a nuclear option. After North Korea’s October 2006 nuclear test, Japanese media highlighted remarks by a limited number of Japanese politicians, including Cabinet members, who argued in favor of a public discussion about Japan’s nuclear option. Others countered that such a discussion could invoke regional concerns about Japan’s nuclear intentions. Tokyo’s decision-makers are concerned that such a discussion might undermine the trust it has fostered with its neighbors since the end of World War II. These political leaders deem retaining this trust to be of greater value to Japan than developing a nuclear deterrent against North Korea.

Thus, the consensus in Japan today favors continued reliance on the Japanese-U.S. alliance, the U.S. nuclear umbrella, and missile defense to negate North Korea’s nuclear capability. Of course, the credibility of U.S. extended deterrence is key here. Certainly, Japanese political leaders and strategic planners aspire to secure the credibility of U.S. extended deterrence. In the minds of Japanese political leaders and strategic planners, the answer to this challenge is not whether to pursue Japan’s nuclear option, but rather how to secure some control or participation in the process of shaping and sustaining U.S. extended deterrence. The focus is to examine what type of bilateral mechanism may be appropriate to conduct regularized dialogue with the United States on nuclear strategy issues, whether in official or unofficial channels, and what agenda Japan may want to discuss as well as what type of information the United States may want to share with Japan under what conditions. In a way, Japan and the United States now have a unique opportunity to shape each other’s priorities in the realm of nuclear strategic affairs.

**ENDNOTES**


Forty years ago, war dramatically transformed the Middle East. Six memorable days, known by Israelis as the Six-Day War and by Arabs and others as the 1967 War, redrew the landscape of the Arab-Israeli conflict in fundamental ways. In those six days, Israel defeated three Arab armies, gained territory three times its original size, and became the dominant military power in the region. From a nation that perceived itself as fighting for its own survival, Israel became an occupier.

In recent years, new historical research has taught us more about the war and its profound impact on the psyche of Israelis and Arabs alike. Yet, one important aspect of the war and the crisis that preceded it has remained obscure and largely untold: the nuclear dimension of the war. On this issue, both sides still seem to bond together by layers of taboo, silence, and secrecy.

Some bits and pieces of additional historical information have emerged in recent years that permit a more comprehensive and daring reconstruction of the nuclear aspect of the 1967 war, at least on the Israeli side. This new evidence indicates that prior to that war, Israeli leaders were still unsure about their ultimate goals for the program and deeply concerned about world reaction if they were to move forward. The May 1967 crisis, however, also was a critical turning point in Israel’s nuclear history. It was then, in a crash and improvised initiative, that Israel assembled nuclear devices to be ready for the unthinkable.

This narrative not only allows us to understand the past better, but also it may suggest insights into the dynamics of nuclear proliferation, including possible implications for Iran’s nuclear program. It is likely that Iran today, like Israel before the 1967 war, has taken important technological steps toward a nuclear weapons capability but has delayed making the essential political decision to move forward with such arms. Creative diplomacy may still be able to prevent Tehran from going nuclear.

In the year prior to the 1967 war, Israel was moving fast toward wrapping up separate research and development efforts on fissile material production and weapons design and nearing a complete nuclear option. This convergence brought the Israeli nuclear project to a major junction that required a new set of political decisions. For all previous nuclear proliferators, this phase had ended with a full-yield nuclear test. Such a test not only demonstrated technical capability but also indicated that the state has made a nuclear commitment; testing was a membership claim to the nuclear club, a way to acknowledge the state’s new international status and remove political ambiguity.
Israel was in a position to conduct a full-yield nuclear test in the second half of 1966, had its leaders so chosen. Had Israel conducted a test that year, even a so-called peaceful nuclear explosion, it could have declared itself the world's sixth nuclear state, and subsequently, it could have joined the nuclear Nonproliferation Treaty (NPT) as a declared nuclear-weapon state. As a matter of international law, there was nothing illegal about following that path; China and France had just tested a few years earlier. Israel’s strategic situation and unique relationship with the United States, however, made it fundamentally different from previous proliferators. Because of these considerations, Israel’s political leadership was profoundly hesitant about the degree of its nuclear intentions and commitment.

One thing was clear: Prime Minister Levi Eshkol ruled out conducting a nuclear test on political grounds. “Do you think that the world would congratulate us for our achievement?” Eshkol used to ask sarcastically of those people around him who entertained the idea of a test. He had good reasons to reject a test outright.

First, Eshkol knew that a nuclear test would be a blatant violation of Israel’s “nonintroduction” commitment, the pledge that Israel would not be the first to introduce nuclear weapons to the Middle East. This formula had been used orally in 1962 by Israel’s first leader, David Ben-Gurion, and then a year later by Deputy Minister of Defense Shimon Peres, who used it in a response to a query from President John F. Kennedy. Eshkol, in a memorandum of understanding he signed with the United States in March 1965, made it a key pillar in U.S.-Israeli security relations. Israel left the exact meaning of “nuclear introduction” vague, and the United States did not press then for clarifications; but in those days, nonintroduction meant, at the minimum, nontesting, nonpossession, and nonproduction of nuclear weapons.2

In addition, Eshkol was aware that the superpowers were leading negotiations on a global treaty aimed at preventing the proliferation of nuclear weapons. Conducting a nuclear test would not only be a catastrophe for U.S.-Israeli bilateral relations, relations that Eshkol had invested so much political capital to cultivate, but also an act of defiance against the entire world community.

Furthermore, the nonintroduction pledge meant more than a pledge to the United States. It reflected an Israeli consensus on the nation’s nuclear program. In the eyes of Eshkol’s closest political allies, in particular Ministers Yisrael Galili and Yigal Allon, both of whom had strong views on the nuclear issue, the nonintroduction pledge was not viewed as a concession to the United States but a genuine Israeli strategic interest, that Israel’s own ultimate interest lay in opposing the introduction of nuclear weapons to the Middle East. They thought that Israel should keep ahead of the Arab countries in nuclear research but should avoid initiating any move that would nuclearize the region.

Then, of course, there was the Egyptian factor. Eshkol knew that an Israeli test would be disastrous from a regional point of view. It would surely bring to an end all the friendly probes he was trying to initiate to the Arab world. In fact, it could well provoke Egypt into an all-out war, as Egyptian leader and Arab nationalist Gamal Abdul Nasser had publicly threatened in early 1966 and as many Israelis feared.

Putting the test issue aside, Israel needed to figure out its response to a set of complicated issues involving the future of its nuclear project:

Palestinians surrender to Israeli soldiers in June 1967 in the occupied territory of the West Bank during the Six-Day War, which took place June 5-10, 1967.
In “Eshkol, Give the Order!,” a new study based on exclusive IDF archival material, Israeli historian Ami Ghouska revealed how deeply engrained those concerns were among the IDF leadership. Specifically, they were concerned that Dimona’s lack of international “legitimacy” would tempt Egypt to attack it while making it difficult for Israel to respond. In a top-level meeting in 1965, IDF Chief of Staff General Yitzhak Rabin expressed this very concern: “If Egypt bombs Dimona, and we want to wage a war, we could be issued an ultimatum from the entire world.”

In 1966-1967, Israel had no clear-cut answers to these questions. Ben-Gurion had left those long-term issues unsettled for years, even untouched; now the project was approaching the threshold point, and they had to be addressed. The challenge was to find the right balance between the two opposite horns of the state’s nuclear dilemma, between technological resolve and political caution. In a way, it was a moment of truth for the national nuclear project.

Of course, the project’s leaders pushed for moving forward. For them, it was almost inconceivable to bring the project to a pause at such a critical junction. The very ethos of the project, as they understood it, was that the nuclear option meant an operational capability available for the existential moment of last resort. Freezing the program in a nondeployable mode was unthinkable. Israel must retain a real nuclear option, not something virtual and amorphous.

New historical evidence suggests that Eshkol and some of his political and military associates saw things differently. While Eshkol generally did not intervene in the project’s development work, there are indications that he was cautious, hesitant, and even ambivalent about its future. During 1965-1967, Eshkol, along with the leadership of the Israel Defense Forces (IDF), increasingly worried about the potential Egyptian reaction to the completion of the Dimona complex, especially if the Egyptians concluded that Israel was indeed getting the bomb. Israel was especially concerned about a scenario of an Egyptian surprise aerial attack on the facilities.

In late 1966, Rabin cited concerns over a possible Egyptian attack on Dimona to explain why Israel should limit its military actions against Syria. “There is one vital object in the south,” Rabin reminded his colleagues, “which is an ideal object for a limited attack, and of which Egypt may have the support of the entire world.”

Those concerns were most critical in shaping the fundamental Israeli perceptions and responses when Egypt massed troops on the Sinai peninsula in May 1967. One could not understand the gravity with which Israel viewed this move without taking into account Israeli apprehensions that the Dimona nuclear complex may have been the motivation for the crisis and that Egypt was planning to attack it. There were high-altitude reconnaissance flights over Dimona on May 17 and May 26 that the Israeli air force was unable to intercept, and those flights had dramatic effects on Israeli perceptions of the situation. Indeed, Egypt may have been very close to launching an aerial attack on Dimona on May 26 or May 27, but it was called off by Nasser on a few hours’ notice.

There are other indications of Israeli apprehensions on the nuclear issue. In the year and a half prior to the Six-Day War, Mossad Chief General Meir Amit promoted the establishment of a direct, secret channel with Egypt. It started as a humanitarian effort—releasing Israeli prisoners—but Amit was pushing to turn the probe into a channel for diplomacy aimed at transforming relations between the two states. Although the nuclear issue was not the trigger that led to the Ikaros initiative (the Mossad code name for that probe) in 1966, there is little doubt that it was a stimulating factor in Amit’s overall interest. By 1966, Amit knew that Israel was fast approaching the nuclear threshold and understood the grave implications of a nuclearized Middle East. He was troubled that the advent of Israel’s nuclear capability could lead potentially to war or to the Soviet Union enfolding Egypt in its nuclear umbrella.

Amit recognized that the period from 1966 to 1968 was a critical time, perhaps the last chance for Israel to reach out to Egyptian leaders on the nuclear issue before the situation became irreversible. The Ikaros initiative could have been put to the test when Amit was invited for a secret visit to Cairo, including a possible meeting with Nasser, but the Eshkol government was afraid to take the risk. Amit continued with efforts to keep Ikaros alive until the 1967 war but without much success.

Another indication of Israel’s nervousness on the nuclear issue came from a different direction. In December 1966, a major industrial accident occurred in one of the “hottest” areas in the Dimona complex. An employee was killed, and a sensitive working area was contaminated. It took weeks of cleanup to decontaminate the area. The accident left Israel’s nuclear chiefs shaken, including Eshkol. Three months later,
The nuclear project was at a historical junction, and it was simply unthinkable for its leaders that, at such a national dire moment, when Israel was facing existential threats, they would sit idle and do nothing.

that Dimona was “not running at full blast.”

The nuclear project was at a historical junction, and it was simply unthinkable for its leaders that, at such a national dire moment, when Israel was facing existential threats, they would sit idle and do nothing.}

The final evidence is extracted from an interview I conducted in 1996 with Dr. Floyd Culler, the team leader of most of the U.S. annual visits at Dimona in the mid- to late 1960s. In that interview, Culler revealed that, at the end of his last visit at Dimona in April 1967, Professor Amos de-Shalit, the official Israeli host, took him aside to raise with him some “nonconventional” ideas how to prevent nuclearization in the Middle East. Culler refused to tell me what exactly those ideas were but noted that he wrote a special report on the topic to the Department of State. De-Shalit presented his ideas as “private,” but Culler took it as if de-Shalit had launched a balloon trial on behalf of Eshkol.

The general picture from the bits and pieces of evidence is that Israel was quickly reaching circumstances under which it could be used or, more accurately, the circumstances under which decision makers would be willing to consider using it. Clearly, such contingencies were incompatible with IDF plans for war that were based on aerial preemption followed by an Israeli armor attack deep into the Sinai. Efforts to rationalize atomic use illustrated the eeriness involved in thinking about the unthinkable. They involved doomsday scenarios of a colossal failure of the IDF and a decisive strategic surprise by Egypt, say, massive use of missiles tipped with chemical warheads against Israeli cities.

As far as can be determined, these improvised activities were not a response to any specific political or military request that came from the top, surely not in a response to any specific operational need. These steps were taken because it would have been inconceivable not to take them. The nuclear project was at a historical junction, and it was simply unthinkable for its leaders that, at such a national dire moment, when Israel was facing existential threats, they would sit idle and do nothing. If the capability could be made available, it must be made available.

In the minds of the project’s leaders, the actual assembly of all the components into one system was momentous because it signified that Israel had become a nuclear power. From their perspective, it was also an irreversible moment. They could not conceive a future Israeli prime minister who would give up this capability for any political assets, except perhaps a real peace. Indeed, while Eshkol may have kept open the option to sign the NPT until mid-1968, he never did do. His successor, Prime Minister Golda Meir, ultimately decided not to join the treaty and Israel’s retention of these weapons was firmly established.

The Israeli nuclear situation in 1966-1967 is intriguing because of the apparent tension between technology and politics, between technical capability and political commitment. Judging by technology, Israel was reaching the nuclear threshold and appeared to have made a commitment to possess nuclear weapons.

Yet, this was not the case. Politically, Israel in 1966-1967 was still far from making a firm political commitment to nuclear weapons, let alone on nuclear strategy. Not only was Eshkol reluctant to take the nuclear plunge, but he was apparently leaning to keep the option open yet not necessarily to go beyond it. At that time, Eshkol probably thought that the country would eventually sign the NPT and position itself on the non-nuclear side of the threshold rather than on the nuclear side.

Israel was ambivalent, hesitant, and sitting on the fence on the nuclear issue; the Israeli nuclear case was still undetermined. I would even make the counterfactual suggestion that had the 1967 war not broken, and the NPT had been presented for signature in that year and not a year later, Israel would have signed the NPT and opted for a substantial nuclear infrastructure, including nuclear power, but not pursued actual nuclear weapons. Technology is important and provides options to policymakers, but in itself, it does not determine the course of action.

This account is at odds with the realist picture of the dynamics of nuclear proliferation. Realists often refer to Israel as the purest case of nuclear proliferation, a case of a state determined to go nuclear because of security reasons, a case where soft issues such as prestige, domestic, or bureaucratic politics play a very limited role. The realist picture tends to view the state in deterministic and monolithic terms.

As the Israeli case shows, this realist picture is no more than a poor caricature of the real world of nuclear proliferation. The reality of nuclear proliferation is inherently fluid, tentative, fuzzy, and ultimately undeterministic in its nature. Key proliferation decisions are never solid commitments. It takes states many years, often a decade and longer, to establish full nuclear weapons capability. Given the time frame and complexity of the proliferation reality, decisions tend to be tentative, hesitant, and reversible.

Moreover, states can even complete the research and development phase without forming such clarity, as the Israeli case in 1966-1967 illustrates. By that time, Israel still had no
clue how far it would be able to go, how far the world would allow it to go, or how far it would like to go for its own sake. After Israel crossed the nuclear threshold, however, after the dramatic events in late May 1967, the situation changed. At that point, it became much more difficult, perhaps close to impossible, for Israel to roll back what it had achieved.

I would dare to suggest that these historical lessons may be of some relevance even when we consider the current Iranian nuclear situation. It would be a mistake to think about Iran's nuclear ambitions as irreversible.

One can reasonably make the case that Iran's nuclear project today is at a similar juncture to Israel in 1963-1964 as it started to operate the Dimona reactor. Iran is commonly believed to be two to three years away from the ability to produce weapons-grade fissile material on an industrial scale, a threshold that Israel crossed sometime in 1966. If Israel in a world without the NPT and without political and economic sanctions was hesitant about its nuclear future, Iran today should be viewed with an even stronger sense of uncertainty and indeterminism.

Notwithstanding the obvious domestic differences between Israeli democracy and Iranian theocracy, Iran's governing system is similar to Israel than Iraq was under Saddam Hussein in terms of its national decision-making process. In Iran, significant decisions cannot be made by a sheik dictating without some degree of public support or without considerable consensus within the national elite. Although there is a great and visible popular support in Iran for the notion that it has the right to full industrial enrichment, there is no public support for producing nuclear weapons, nor for leaving the NPT. Furthermore, hurtful sanctions could make more Iranians realize that they would pay a price for defying world opinion on the nuclear issue.

Nothing is inevitable at this point about the Iranian bomb, and it would be a grave mistake to perceive it as such. At the same time, the West must be resolute not to allow Iran to establish “facts on the ground” as a perceived negotiating tactic for, as the Israeli case shows, once established, such capabilities are difficult if not impossible to reverse.

ENDNOTES


2. Indeed, in his speech in the Knesset in May 1966, Prime Minister Levi Eshkol confirmed that interpretation when he stated plainly that Israel had no nuclear weapons.


4. Ibid., p. 71. IDF Chief of Staff General Yitzhak Rabin's statement sounds off-course to contemporary readers, but it reveals how Israelis thought about the nuclear project in those days. Ironically, Israel took the initiative 16 years later and attacked the Iraqi Osirak reactor, which was under International Atomic Energy Agency safeguard.

5. There was even some vague concern as to possible Soviet reaction to the discovery that Israel was approaching the nuclear threshold. In retrospect, it appears that Israel should have been even more concerned about Soviet reaction to Dimona. In a new book, Israeli researchers Isabella Ginor and Gideon Remez make a circumstantial case that the Soviets instigated the false reports that led to the Six-Day War as part of a larger plot aimed at Israel's nuclear program. Isabella Ginor and Gideon Remez, Foxbats Over Dimona (New Haven: Yale University Press, 2007).


7. Ibid., pp. 70-71, 73, 225, 227-230, 234, 244, 245, 250-251, 253, and 265.

8. Gluska, Eshkol, Give the Order!, pp. 300-301 and 495, n. 17. In Foxbats Over Dimona, Ginor and Remez make a claim that those reconnaissance flights were made by Soviet MiG-25s (Foxbats flown by Soviet pilots.

9. Gluska, Eshkol, Give the Order!, pp. 227-230, 300-303, and 495, n. 17. The second flight, on May 26, was reported to Israeli decision makers as they were attending a special cabinet meeting. During a consultation between Eshkol and Rabin, following the first report, Rabin told Eshkol that Israeli intelligence believed “a strange and worrisome transmission indicating possible coordination between interceptors and bombers.” The high-altitude flight was initially interpreted as a possible prelude to a full aerial attack on Dimona. Decades later, a participant in that cabinet meeting revealed the sense of shock among the ministers when they were notified that “a squadron” of Egyptian aircraft was flying over Dimona.


13. Floyd Culler, interviews and correspondence with author, May-June 1996. Culler declined in 1996 to specify the details of the de-Shahter message but suggested that I talk to him again a few years later. Culler died in late 2004.

14. One of them recalls, as he told me decades later, that he proposed after the war to seize the moment and to conduct a test with one of those cores. His proposal was never seriously considered. “It was a total taboo to talk about it,” he recalled years later. It shows the strength of nuclear caution at the political level, but one can only speculate the outcome had that proposal been accepted.


The Proliferation Security Initiative: A Glass Half-Full

As we approach the fourth anniversary of President George W. Bush’s May 31, 2003, launch of the Proliferation Security Initiative (PSI), it is appropriate and fair to compare rhetoric with reality, assess the effort’s effectiveness, and attempt to divine the way forward. The PSI was announced with considerable fanfare in Krakow, Poland, as an activity designed to prevent the spread of weapons of mass destruction (WMD), their delivery systems, and related materials from entering or leaving states “of proliferation concern.”

The focus was to be on interdiction because of the fear of rapid growth in states and groups pursuing WMD programs, worries of an expanding nexus between weapons of mass destruction and terrorism, and gaps in the existing nonproliferation architecture. It was thought that interdiction could fill the gaps by ensuring commitments are kept and by stopping proliferation-related exports from states whose activities fall outside existing source-based nonproliferation regimes. At least, it was assumed that it would deter suppliers and customers and make proliferation more costly and difficult. Although interdiction was not novel to the PSI, the focus on this tool elevated consideration of its use at borders, in ports, in the air, and at sea.

The Bush administration clearly had high hopes and expectations for the PSI. On the first anniversary of its initiation, John Bolton, then undersecretary of state for arms control and international security, proclaimed that the PSI would evolve to the point where it “will have shut down the ability of persons, companies, or other entities to engage in this deadly trade.” He claimed that the PSI was “succeeding because it is based on practical actions that make maximum use of each country’s strengths to counter proliferation. The partnerships being forged, the contacts being established, the operational readiness being enhanced through [the] PSI are all helping to create a lasting basis for co-operative action against proliferation.” The administration made the PSI a key foreign policy and defense goal in 2005, and Congress approved $50 million to help states support the initiative.

On the PSI’s second anniversary, in May 2005, Secretary of State Condoleezza Rice claimed that the United States and its PSI partners had undertaken 11 successful intercepts since its inception, including the prevention of two WMD-related deliveries to North Korea as well as the transfer of ballistic missile-related and nuclear program-related materials to Iran. A 12th successful PSI interdiction was subsequently announced, although the details of these interdictions were left vague. These claims of success were repeated by Robert Joseph, Bolton’s replacement, who subsequently increased the figure to “more than 30.”

A few weeks after the PSI’s third anniversary, representatives of 65 states met anonymously behind closed doors in Krakow to discuss its political, policy, and legal issues. The chairman of the conference, Polish Ambassador Tadeusz Chomicki, reiterated the claims of the PSI’s success, including providing a “platform” for...
impeding traffic in weapons of mass destruction and related materials, enhancing numerical and geographic support, and improving national capacities to interdict shipments of proliferation concern. Detailed information to support these claims or even a list of countries attending the meeting were not made available.

To be sure, the PSI and other U.S.-driven supportive efforts have improved the awareness of the danger and urgency of the problem. The focus on interdiction also has no doubt constrained some trade in weapons of mass destruction, their delivery systems and related materials or at least forced rogue traders to change their tactics. PSI exercises have increased national capacities for coordinated detection and interdiction of suspect shipments. With the United States having successfully negotiated ship-boarding agreements with the countries whose flags fly on the bulk of the world’s ships, flag-state consent for boarding to search for weapons of mass destruction has become an expectation for and of many states (but not a legal obligation). Most importantly, the PSI has evolved and metamorphosed from a focus on interdiction of ships at sea to inspection in ports, to carriage of weapons of mass destruction by aircraft, and for the United States, to disruption of financial networks involved or supporting such trafficking.

However, much water has flowed under the stern since the PSI’s early heady days of full steam ahead. The PSI’s architects and principal champions, Bolton and Joseph, are no longer in the U.S. government. Moreover, the PSI has been criticized for lack of transparency and public accountability, stretching if not violating the principles of international law, impeding legal trade, weakening the UN system, being politically divisive, diluting other nonproliferation efforts, and for all these reasons, having limited effectiveness.

Rhetoric Versus Reality
Because PSI interdictions are cloaked in secrecy, an assessment of the PSI must rely on an examination of publicly available information regarding specific claims for the PSI made by the U.S. government and PSI advocates. In many cases, the reality does not appear to match the Bush administration’s rhetoric.

The Limits of Support
The Bush administration claims that nearly 80 countries support the PSI, but it is unclear what “support” means. The “concrete steps” for contribution to the PSI listed on the Department of State’s website are rather vague and conditional. First and foremost, participating states are encouraged to commit formally to and endorse publicly, if possible, the PSI’s Statement of Interdiction Principles. Follow-up steps are also replete with conditional language such as “indicate willingness,” “as appropriate,” “might contribute,” and “be willing to consider.”

Although the State Department has posted a list of some 81 nations that have participated in PSI meetings or exercises, it is not at all clear that “participation” equates with “support” as defined by the State Department. Indeed, apparently some participating states have not publicly (or even privately) endorsed the PSI Principles. Reasons given include not perceiving the PSI as a top security priority and wanting to avoid possible reprisals as well as domestic criticism for cooperating with the United States. This reluctance in itself indicates less than stalwart support. Further, given the flexibility of cooperation, many if not most of these 80 so-called supporters would not be obligated to interdict vessels or aircraft at the behest of the United States and might well decline doing so. Thus, in a pinch, such “support” could easily evaporate.

Weak Support in Asia
Although there is indeed a growing list of nations willing to associate themselves with different aspects of the PSI on a case-by-case basis, support in Asia, a major focus of proliferation concern, is weak. Despite considerable U.S. pressure to participate fully and publicly, key countries such as China, India, Indonesia, Malaysia, Pakistan, and South Korea remain outside the “coalition of the willing.” The cooperation of others, such as Japan and Russia, is lukewarm at best.

Unsupported Claims of Success
There is insufficient public information and no objective measure of PSI success or failure. Thus it is unclear how the much-touted 12 or even 30 PSI interdictions in three years compares to efforts prior to the initiative or if an increase in successful interdictions is due to an increase in proliferation activity. The reported interdictions could actually be considered a rather poor result compared to the Stanford Database estimate of an average of 65.5 nuclear trafficking incidents per year. Furthermore, the much-touted October 2003 interdiction of WMD-related materials bound for Libya was most likely not due to the PSI, contrary to assertions by some U.S. officials. Rather, it was the result of an unrelated effort to get Libya to abandon its ambition to possess weapons of mass destruction.

Limited Support Under International Law
PSI critics contend that the United States should seek specific backing for the initiative under international law, but its supporters say several measures already provide such a legal foundation. They include UN Security Council Resolutions 1540 and 1718, amendments to a relevant international maritime convention, a series of ship-boarding agreements, and the right to self-defense under the UN Charter.
Resolution 1540

In March 2004, the United States and the United Kingdom began an effort to obtain a UN Security Council resolution specifically authorizing states to interdict, board, and inspect any vessel or aircraft if there is reason to believe it is carrying weapons of mass destruction and/or their means of delivery. This was a difficult tacit admission by the United States that it needs a UN mandate to legitimize high-seas PSI interdictions. It was hoped that such a resolution would also prohibit UN member states from purchasing, receiving, assisting, or allowing the transfer of weapons of mass destruction from specified states.

The resolution that passed, Resolution 1540, was a much watered-down version of the original. For example, under a veto threat from China, the United States dropped a provision specifically authorizing the interdiction of vessels suspected of transporting weapons of mass destruction. China has questioned the efficiency and legality of the PSI as it involves interdictions, arguing that the best way to prevent WMD proliferation is through dialogue, not force.10

The resolution does not specifically mention the PSI and does little to strengthen its effectiveness against state-supported trafficking because it focuses on nonstate actors. Moreover, large gaps exist between obligations incurred under the resolution and the number of countries that have taken steps to meet those obligations, i.e., strengthening their domestic laws criminalizing the spread of weapons of mass destruction and enhancing their export and border controls.11

Finally, some states consider Resolution 1540 imbalanced because it does not address disarmament and it obliges governments to devote resources to problems they do not consider a high priority. In other words, they view Resolution 1540 as another example of U.S. hegemony and are therefore not likely to be robust in their application of it.

Resolution 1718

This resolution, drafted by the United States and Japan, prohibits the transfer to and from North Korea of nuclear, chemical, or biological weapons; their means of delivery (ballistic missiles); and related materials. This language is very similar to that used in the principles guiding PSI implementation. The United States clearly wanted to conflate the PSI with Resolution 1718 and thereby legitimize it. The resolution does require all UN member states to prevent the transfer of such material to North Korea on their flag vessels or aircraft, in theory a boost for the PSI. For compliance with these requirements, however, it merely “calls upon” states to take cooperative action to prevent illicit trafficking in such materials. It does not require them to do so.

Moreover, it clearly states that measures must be taken under UN Charter Chapter VII, Article 41, which specifically does not authorize the use of armed force. Such use of armed force would probably be necessary if a country operating under the PSI tried to interdict and board a vessel that refused to stop. Thus, the use of force in such a situation could still be interpreted as an act of war. Even Secretary of Defense Donald Rumsfeld in 2006 conceded that the PSI “has holes in it,” including the lack of a legal basis for interdiction of vessels and aircraft and confiscation of their cargo on the high seas.12

China was again the main obstacle to a more robust resolution. At China’s and Russia’s insistence, the authority to use military force was dropped from the draft resolution as was the requirement to check all cargo bound to or from North Korea. Although China voted for the resolution, it immediately ruled out its participation in interdiction of vessels or aircraft on or over the high seas, saying that it was not required. South Korea also demurred. Japanese Prime Minister Shinzo Abe and leading hawks in his administration support such interdictions on the high seas or in Japanese territorial waters, even though there are many inconvenient legal obstacles to Japan’s direct involvement. There have been several inspections of North Korean vessels in foreign ports under Security Resolu-
tion 1718, but there have been no reports of interdictions at sea.

Because Proliferation Security Initiative (PSI) interdictions are cloaked in secrecy, an assessment must rely on information provided by the U.S. government and PSI advocates.

Amendments to Maritime Convention
In October 2005, the International Maritime Organization approved U.S.-proposed and British-supported amendments to the Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation. The convention already obligates states-parties to incorporate into their domestic laws the offenses it identifies. The amendments broadened the covered offenses to include the use of a vessel as an instrument of or platform for terrorist activity; the transport of weapons of mass destruction and "any equipment, materials or software or related technology that significantly contribute to [WMD] design, manufacturing or delivery;"13 and the transport of a person who has committed a terrorist act. Direct consent from the flag state is still required to board, inspect, or take any other action.

Moreover, there must be evidence of knowledge of intent that the material in question will be used for terrorism. Finally and most importantly, the convention and its amendments apply only to states-parties, and most states of proliferation concern are not states-parties. Moreover, few countries have yet taken legislative action to turn the amendments into domestic law.

Ship-boarding Agreements
Some argue that bilateral agreements between the United States and other states make interdiction and boarding of suspect vessels allowable under customary international law. The United States has entered into seven PSI ship-boarding agreements, with Belize, Croatia, Cyprus, Liberia, Malta, the Marshall Islands, and Panama. Together with PSI "core supporters," these agreements cover perhaps 70 percent of the world’s commercial fleet by tonnage. The agreements use language from the PSI principles and make it easier for the United States to board and inspect vessels from these flag states reasonably suspected of transporting weapons of mass destruction, their delivery systems, and related materials.

All the agreements respect flag-state consent for boarding on the high seas, although in four such agreements a lack of response by the flag state in two or four hours authorizes boarding and search for weapons of mass destruction.

Nevertheless, such interdiction, boarding, and search would not apply to flag states not party to these agreements. Freedom of the high seas and its corollary, the flag-state consent regime, remain fundamental principles of international law and cannot be overturned or eroded by the practice of a few countries over such a short period of time.

The UN Charter
A final legal argument for PSI interdictions relies on the right of self-defense in Article 51 of the UN Charter. Preemptive self-defense includes anticipatory self-defense and preventive self-defense.14 For an action to be compatible with current international legal interpretations of anticipatory self-defense, the United States and its coalition partners would probably have to demonstrate not only that the interdicted cargo required such action because it posed a specific and imminent threat of attack on the United States or one of its allies but also that the necessity of self-defense was instant and overwhelming, leaving no choice of means and no time for deliberation.15 In other words, a response was necessary, proportional to the threat, and the threat was imminent.16 Otherwise, such action and rationale would be greatly expanding the traditional definition of self-defense to include preventive self-defense regarding nonimminent threats and would set a dangerous precedent that could undermine the very foundations of the United Nations.

In fact, Article 51 provides the right of self-defense only in the case of an armed attack and only until the UN Security Council “has taken measures necessary to maintain international peace and security.”17

The PSI’s Limited Effectiveness
Reflecting the Bush administration's philosophical disdain for the UN, the PSI was conceived, originated, and implemented outside the UN system. In reality, it remains a U.S.-initiated and -driven ad hoc activity designed primarily to deter trade in WMD components and “related materials” to and from North Korea and now Iran. It is far from clear that 12 successful interdictions in two years or even 30 in three years18 mean that the PSI is effective. State and nonstate actors that want to avoid PSI interdictions can still transport WMD components on their own flag vessels or aircraft or on those of nonparticipating states, such as Cambodia. This is particularly applicable to warships and government ships operated for noncommercial purposes, which under Article 32 of the 1982 UN Convention on the Law of the Sea have immunity from other state’s jurisdiction.

Moreover, countries that are key to an effective PSI, such as China, India, Indonesia, and South Korea, have not publicly joined the activity despite U.S. pressure to do so, and Japan and Russia seem to be rather reluctant participants. Some states feel that the United States is applying double standards19 and are concerned by the lack of clarity in some PSI definitions, such as what determines which states are “of proliferation concern” and what constitutes “good cause” (for interdiction), as well as the obligations linked to these vague and subjective definitions.

The secrecy surrounding PSI interdictions and the methods employed make it difficult to evaluate its effectiveness or its legitimacy and, more importantly, the garnering of support from countries suspicious of U.S.-driven endeavors. Some fear that the United States would like to change existing international law to allow PSI interdictions on or over the high seas or to erode the regimes of freedom of the high seas and innocent passage. Others were alarmed by Bolton’s argument that such interdictions are warranted by a right to preemptive self-defense. Indeed, they do not want to see the PSI lead to instability or the weakening of the international prohibition against the unilateral use of force outside the constraints of the UN Charter. Moreover, public support for the PSI by some countries would be a domestic public liability as it would make the government appear to be the handmaiden of the United States and reliant on U.S. intelligence.

Because finding and interdicting suspected WMD-related cargo is so difficult, the PSI relies heavily on intelligence sharing. Unfortunately, U.S. intelligence failures have been all too common and are not new. The 1993 detention of the Chinese vessel Yinhe, which was suspected of carrying chemical warfare precursors to Iran, is a specific example of faulty intelligence resulting in an unjustified interdiction.20
Intelligence sharing has constraints both for the provider and the receiver. For the provider of intelligence, there will have to be a careful trade-off between providing sufficient intelligence to show “good cause” and protecting intelligence methods and sources.

For the receiver that is requested to interdict, it would have to decide if the WMD material in the hands of the intended recipient constitutes a threat significant enough to warrant action.21 It would also want to know if the intended recipient has a legitimate civilian use for the material. Further, the intelligence will probably have to pass different thresholds regarding its ability to support a decision for interdiction.22 These thresholds will likely vary between and even within nations and with the action intended (e.g., interdiction, boarding, inspection, diversion or seizure).

In sum, the United States is unlikely to trust all PSI participant nations equally with its intelligence, and given past U.S. intelligence failures, some countries may not be willing to act on skimpy or suspect intelligence.

As is often stated by its proponents, the PSI is an activity rather than an organization, and thus it lacks an independent budget or coordinating mechanism. Although these features may enhance its flexibility, as well as the speed of decision-making and resultant action, they also constrain its capacity. Moreover, placing such emphasis on interdictions may undermine other nonproliferation efforts.

Perhaps the greatest obstacle to PSI effectiveness is the dual-use nature of WMD materials and technologies. Few if any countries export “turn-key” weapons of mass destruction. The harsh reality is that countries and nonstate actors can build their own weapons of mass destruction from items that have civilian application. This means that it is very difficult to make decisions regarding “good cause” for interdiction and that such decisions will inevitably be politically influenced and based on who is sending or receiving the shipment. Moreover, a proliferation of interdictions of dual-use materials may hamper legitimate commerce and thus engender opposition, even from allies.

Enhancing PSI Effectiveness

The PSI obviously has some way to go before it becomes the widely supported, effective tool its founders envisioned and its advocates desire. Indeed, for the PSI to be fully successful will require near universal support. Even if global support is forthcoming, inadequate resources, intelligence, and capacity may ensure that a significant portion of WMD-component shipments will avoid detection and air or sea interdiction.

Most of the PSI’s shortcomings stem from its ad hoc, U.S.-driven nature outside the UN structure. Bringing it into the UN system and providing a budget for it, as advocated by a recent House of Representatives-approved bill,23 would rectify many of these shortcomings and in the long run improve its effectiveness. One way to do this would be to seek a UN Security Council resolution authorizing the use of force for interdiction on or over the high seas and in territorial waters of weapons of mass destruction and related materials, either in specific cases or in general.

The PSI’s reach and effectiveness could also be improved by eliminating double standards, increasing transparency, and establishing a neutral organization to assess intelligence, coordinate and fund activities, and make recommendations or decisions regarding specific or generic interdictions. Such an organization, perhaps built on the 1540 Committee, if seen to be neutral, transparent, fair, and objective, could answer key questions, such as what combinations of actors and materials represent threats and what is good cause. It would also help avoid erroneous judgments and disagreements that might impede legitimate commerce or delay action. The organization would also give the PSI a concrete structure with a consistent strategy and modus operandi, as well as a budget to fill gaps in interdiction and intelligence-collection efforts. Moreover, it could ensure that PSI activities stay within existing international law or serve as a vehicle for changing it. Last but not least, it would also ensure that the effort complements other nonproliferation efforts rather than undermines them. ACT

ENDNOTES
14. Anticipatory self-defense is an attack on another state that actively threatens violence and has the capacity to carry out the threat but has not yet done so. Preventive self-defense is an attack against another state when a threat is feared or suspected but there is not evidence that the threat is imminent. Daniel H. Joyner, “The PSI and International Law,” The Monitor, Vol. 10, No. 1 (Spring 2004), pp. 7-9.
16. Ibid.
19. The United States apparently exempts suspect shipments to and from India, Israel, and Pakistan for political reasons.
22. Ibid.
23. “It is the sense of Congress…that the President should strive to expand and strengthen the Proliferation Security Initiative (PSI)...with a particular emphasis on...working with the United Nations Security Council to develop a resolution to authorize the PSI under international law.” “A Bill to Provide for the Implementation of the Recommendations of the National Commission of Terrorist Attacks Upon the United States,” Subtitle B - “Proliferation Security Initiative,” Sec. 1221, 110th Cong., 1st sess.
PARTNERSHIPS FOR PROSPERITY & SECURITY
How the Private Sector Advances U.S. Nonproliferation Goals

The U.S. Industry Coalition is dedicated to promoting nonproliferation by engaging and refocusing the scientific and engineering talent behind weapons of mass destruction (WMD) in the former Soviet Union (FSU).

USIC acts as the commercialization agent for the U.S. Department of Energy’s Global Initiatives for Proliferation Prevention program which has sponsored over $201M in cost-shared projects with U.S. companies.

With 13 years’ experience fostering successful international partnerships, USIC builds business ventures through access to world-class scientific talent, knowledge of former Soviet WMD institutes, and expertise in facilitating commercialization.

USIC ADVANCES TECHNOLOGY COMMERCIALIZATION
Our experts in business, science and marketing work to:

- Identify technologies for commercial markets
- Evaluate commercial and market potential for proposed technologies
- Verify FSU institute and/or company credentials
- Match FSU institute and/or company with U.S. partner
- Review business plans; conduct contract negotiations
- Facilitate essential Intellectual Property protections
- Identify sources of capital financing

USIC FOSTERS SUCCESSFUL PARTNERSHIPS
USIC leverages an extensive network of contacts with:

- Over 160 USIC members – multi-national corporations and entrepreneurial start-ups in a wide range of high-tech fields
- FSU weapons institutes (nuclear, chemical, biological and missile delivery systems)
- U.S. national laboratories
- Key U.S. agencies
- Top officials in Russia, Ukraine, Kazakhstan
- The National Industry Coalition of Russia (NIC) – our partner organization in Moscow

In 2005, over 2,800 long-term, sustainable jobs were held by former WMD personnel; FSU partners generated over $22.5M in revenues.

USIC’s goal is to reduce the threat of WMD proliferation by helping to create jobs and sustainable income for former Soviet WMD scientists and their U.S. partners through new commercial ventures.

USIC members generated revenues over $30.5M in 2005, and have attracted outside investments over $137M in recent years.
NPT Preparatory Meeting Scores Some Success

Substantive discussions at the first of three preparatory meetings for the 2010 review conference of the nuclear Nonproliferation Treaty (NPT), held April 30-May 11 in Vienna, were cut short because of an Iranian objection to the agenda. Yet, conference participants viewed the meeting as a success because of an improved atmosphere and despite continuing differences with regard to the appropriate balance between the treaty’s nonproliferation and disarmament commitments as well as on next steps to improve the operation of the treaty.

A Difficult Start

The Vienna meeting took place against the background of the failed 2005 NPT review conference, which stalled for more than two weeks because of disagreements over the agenda. (See ACT, June 2005.) Therefore, many participants had a sense of déjà vu when Iran at the end of the first day of the meeting prevented the adoption of the agenda by objecting to discussions on “the need for full compliance with the treaty.”

Ambassador Ali Asghar Soltanieh, head of the Iranian delegation, told Arms Control Today May 21 that Iran proposed to amend the agenda to clarify that the meeting should discuss compliance with “all provisions” of the treaty in order to prevent “any sort of interpretation or misinterpretation and to avoid ambiguities” and enable, in particular, discussions on compliance with nuclear disarmament obligations.

Soltanieh also repeated allegations that the chair of the preparatory committee, Japanese Ambassador Yukiya Amano, had not shown the draft agenda to Iran before the meeting. In an unusual move, Amano publicly rebutted these accusations during the conference and listed the occasions that he had presented the draft text to Iran, which he said at that time had not voiced any objections.

In Vienna, Amano refused to reopen discussions on the draft agenda, apparently because he feared that other delegations might also push for amendments and cause the agreement to unravel. Soltanieh said this approach “forced Iran into a corner.” Thus, the meeting effectively came to a halt on May 2, after three days of general debate.
Many participants believe that Iran, which has been censured by the UN Security Council as well as the International Atomic Energy Agency (IAEA) for the lack of transparency related to its nuclear activities, was trying to block or delay proceedings because it was afraid of becoming the center of criticism at the meeting.

“If it wasn’t this, it would have been something else,” Christopher Ford, U.S. special representative for nonproliferation, who headed the U.S. delegation in Vienna, told Arms Control Today May 16. This sentiment was shared by many Western delegates.

In contrast to past meetings, Iran was unable to get public support for its position from the group of nonaligned, or developing, states, of which it is a member. Iran remained all but isolated, with only Cuba, Syria, and Venezuela publicly supporting its stance. Privately speaking, some nonaligned delegates voiced a certain degree of sympathy for Iran’s position, arguing that the emphasis on compliance was indeed a U.S. priority and that singling out particular issues in the agenda could prevent a balanced debate.

The dispute over the agenda was finally resolved by a South African compromise proposal. Ambassador Abdul Minty, South Africa’s special representative on disarmament and head of the South African delegation, had proposed at the end of the first week to leave the agenda unchanged but to reflect Iranian concerns through a separate decision by the conference that “the reference in the agenda to ‘reaffirming the need for full compliance with the treaty’ to mean that it will consider compliance with all the provisions of the treaty.” Iran accepted this compromise language, linked via an asterisk to the agenda, on May 8, three and a half days before the scheduled end of the conference.

**Differences on Disarmament**

As a result of these delays, substantive debates on disarmament, nonproliferation, and the peaceful uses of nuclear energy, as well as a number of proposals to improve the operation of the treaty, were cut short. Many delegates felt that debate on disarmament was “remarkable for its very constructive tone rather than its content” as a senior EU diplomat told Arms Control Today May 18. The debate was seen as useful primarily for fleshing out differences on nuclear disarmament rather than bridging these gaps. Because the preparatory committee did not have to agree on a consensus document, participants were not forced to resolve disagreements. The EU official cautioned that this year’s debate did not increase his expectation “that there will be a final document in 2010.”

Most non-nuclear-weapon states criticized nuclear-weapon states for not disarming fast enough and for abandoning nuclear arms control, increasing reliance on nuclear weapons, and especially for developing new types of nuclear weapons. There were repeated calls on states that have not done so to ratify the Comprehensive Nuclear Test Ban Treaty so that it can enter into force. There was also broad support for commencement of negotiations on a treaty to end production of fissile material for weapons purposes on the basis of the six presidents’ proposal tabled at the Geneva Conference on Disarmament (see page 27).

One notable development was the revitalization of the New Agenda Coalition (NAC), an informal grouping of states formed in 1998 to advance nuclear disarmament, which issued a joint working paper and made joint statements. NAC members Brazil, Egypt, Ireland, Mexico, New Zealand, South Africa, and Sweden explicitly called on nuclear-weapon states “not to develop new nuclear weapons,” particularly if these weapons have new capabilities or are designed to take on new roles.

Nuclear-weapon states, by contrast, argued that nuclear weapons reductions since the end of the Cold War had contributed to the fulfillment of disarmament obligations under Article VI, which obliges nuclear-weapon states to pursue negotiations on nuclear disarmament.

The United Kingdom defended its position to pursue a replacement system for its Trident nuclear submarines. (See ACT, April 2007.) British Ambassador John Duncan rejected criticism that it is “hypocritical” for the United Kingdom “to maintain its nuclear weapons while calling on others to desist from their development” by arguing that the United Kingdom “does not belong to an opposite camp that insists on ‘non-proliferation’ first.”

The United States went on the offensive. A U.S. working paper on disarmament submitted to the conference May 3 stated that the planned development of a reliable replacement warhead “advances the goals expressed in the preamble and Article VI of the NPT” by making it possible to reduce the size of the reserve stockpile of nuclear weapons and making it more unlikely that nuclear testing needs to be resumed.

This line did not find support among non-nuclear-weapon states, but many participants viewed the U.S. presentation of “A Work Plan for the 2010 Review Cycle: Coping With Challenges Facing the Nuclear Nonproliferation Treaty” as Washington’s attempt at least to appear more constructive than at past NPT meetings. “The United States was more forthcoming and prepared to engage where previously it was sitting back much more,” Minty told Arms Control Today May 17. A senior Brazilian diplomat, speaking to Arms Control Today May 2 pointed out, however, that U.S. positions on arms control...
issues had not changed despite the softened rhetoric.

Several parties urged the United States and Russia to agree on further cuts in strategic nuclear arms. The European Union in its statement noted that START I is due to expire in 2009 and the Strategic Offensive Reductions Treaty will end in 2012. It stressed “the need for more progress in reducing these nuclear arsenals through appropriate follow-on processes.” The 27 EU states “would welcome a further continuation of the above processes represented by a bilateral follow-on agreement to the expiring START I.”

With bilateral discussions about possible follow-on measures to the START verification provisions still taking place (see ACT, May 2007), the United States was reluctant to go into detail about its wish list for those talks. A senior U.S. official in a Vienna press conference April 30 only told reporters that Washington hopes that a “post-START way of living together would include significant transparency and confidence-building measures.”

Europeans also urged Russia and the United States to begin “negotiations on an effectively verifiable agreement to best achieve the greatest possible reductions” in tactical nuclear weapons. The non-aligned states went further and implicitly called for an end to NATO nuclear-sharing arrangements, under which the United States still deploys about 480 tactical nuclear weapons in six European countries, stating that “nuclear-weapon states, in cooperation among themselves and non-nuclear-weapon states, and with states not parties to the treaty, must refrain from nuclear sharing for military purposes under any kind of security arrangements.”

Preventing a Nuclear Fuel-Cycle Debate

The debate on a reform of controls of nuclear fuel-cycle activities was muted because states were waiting for the IAEA Secretariat to prepare a report on the topic to be presented to the agency’s Board of Governors at its June 11-15 meeting. The IAEA in its statement to the conference did not provide details on the report but announced that it would entail “modalities and criteria for possible assurance mechanisms.”

According to the statement, the IAEA envisages a two-step approach and is likely to propose, first, that “mechanisms for assurances of supply of fuel for nuclear power reactors” would be established, including possibly for the acquisition of reactors. “The second step would be to encourage all enrichment and reprocessing operations to be under multilateral control,” the agency stated. From the IAEA’s perspective, “any assurance of supply of nuclear fuel should be formulated in a manner that is equitable and accessible to all users of nuclear energy.”

This point was echoed by many nonaligned states, and Minty told Arms Control Today that, for him, “it is very clear that the board cannot accept any discriminatory practice. That is just impossible to conceive of.” The EU official admitted to Arms Control Today that based on the debate in Vienna, “much work remains to be done” to convince potential recipients of a fuel-supply mechanism of the concept. There appears to be no clarity yet as to what will happen after the IAEA report has been presented to the board in June, but substantive discussions and possible decisions on the issue are not expected before the IAEA General Conference in September or a board meeting in November.

Meanwhile, the IAEA and Russia have agreed to set up a working group to establish an international uranium-enrichment center at the Angarsk Electrolysis Chemical Complex in Siberia as Moscow had proposed under its January 2006 Global Nuclear Power Infrastructure initiative. (See ACT, November 2006.) According to a March 22 IAEA press release, IAEA Deputy Director General Yuri Sokolov told a press conference March 18 in Angarsk that the agency’s main point of concern about proposals discussed with Russia was the provision of a mechanism that would ensure that states are not cut off from fuel supplies for political reasons.

On May 10, Russia and Kazakhstan signed a bilateral agreement on the establishment of an international enrichment center at Angarsk. “We consider this document the first step in the implementation of our initiative to create a global nuclear energy infrastructure,” Russian President Vladimir Putin was quoted by RIA Novosti as saying. Kazakhstan holds 15 percent of the world’s uranium reserves. Sergei Kiriienko, head of the Russian Federal Agency of Nuclear Power, was quoted in the same article as saying that “now that the agreement is signed, the process of establishing the center is complete” and inviting other countries to join the project by signing a similar intergovernmental agreement with Moscow.

On April 26, Germany proposed establishing a new enrichment plant on an extraterritorial site outside the current provider states. Germany introduced the idea during an IAEA special event on nuclear fuel-supply assurances in September 2006, but the proposal got caught up in bureaucratic infighting in Berlin between the Ministry of Economics and the Federal Foreign Ministry. According to the scheme published on the IAEA site as an official document, the plant would be “under sole IAEA supervision with regard to export controls.” The facility would be constructed by a commercial company but financed and owned by an international consortium of member states. The IAEA would supervise the plant and decide on the release of deliveries of low-enriched uranium on the basis of “a binding catalogue of criteria.” In a May 2 article in the German daily Handelsblatt, Foreign Minister Frank Walter Steinmeier emphasized that contrary to other proposals, the plan “would not prohibit anyone from enriching uranium. If a country wanted to develop and perform its own enrichment openly and in accordance with the IAEA, nobody would stop it.”

Raising the Hurdles for Withdrawal

The conference also debated whether and how to raise the bar for states to withdraw from the NPT. At the 2005 review conference, the EU had been a major proponent of related measures; at this year’s event, the issue was also endorsed by the United States. A U.S. working paper lists possible measures to dissuade states that have previously violated the NPT from withdrawing, including:

• the use of coercive measures by the UN Security Council;

• continued safeguards or withdrawal of nuclear facilities and technology through the IAEA in cases where such material was acquired during NPT membership; and

• “appropriate means to halt the use of nuclear material and equipment previously supplied to the withdrawing state and to secure the elimination of such items or their return to the original supplier.”
These proposals met mixed responses from nonaligned states, some of which placed the issue in a broader context. They argued that higher hurdles for withdrawal would be primarily aimed at non-nuclear-weapon states and that nuclear-weapon states in return should also accept new obligations, for example, with regard to nuclear disarmament. Minty, in his closing statement May 11, argued for limiting discussions on withdrawal to procedural matters. He warned against any discussion of penalties, which in South Africa's view would require a formal amendment of the treaty. “It can be argued that if it had been the intention of the drafters to penalize withdrawal, then it would have been expressively provided for in the NPT,” Minty stated.

Soltanieh, when talking to Arms Control Today, described the debate as unnecessary and divisive. He argued that “any change or any interpretation of Article X needs an amendment conference” of NPT states-parties. The EU official, when talking to Arms Control Today, disputed the notion that the debate on withdrawal was “an attempt to develop new disciplinary measures.” He said that the perception of some nonaligned states in this regard was wrong and that it was not the EU’s intention to curtail the sovereign right to withdraw from the treaty.

Careful Criticism of the U.S.-Indian Nuclear Deal
Several states indirectly raised their concerns about the effects on the NPT of a possible lifting of nuclear sanctions on India. The NAC in their working paper reminded states-parties that, “at the Review Conference in 2000, states parties reaffirmed the unanimous agreement at the Review and Extension Conference in 1995 not to enter into new nuclear supply arrangements with parties that did not accept IAEA full-scope safeguards on their nuclear facilities.”

The EU official supported the view that the U.S.-Indian deal is of relevance to the NPT and argued that “it is wrong to focus this debate only on decisions to be taken in the Nuclear Suppliers Group.”

Nonaligned states, which are traditionally also critical of Israel’s nuclear program, argued in their statement to the conference, delivered April 30 by Cuba, that there should be a “total and complete prohibition of the transfer of all nuclear-related equipment, information, material and facilities, resources or devices and the extension of assistance in the nuclear, scientific or technological fields to states that are not parties to the treaty without exception.” Some delegations were even more explicit in their national statements. Egypt in a May 1 working paper maintained that it is in “direct contravention with the treaty, as expressed in the 2000 final document, to engage in nuclear cooperation with any state whose nuclear facilities are not under IAEA full-scope safeguards.”

The United States defended its plans to engage in nuclear cooperation with India. In a statement during the debate on regional issues, Ford argued that the U.S. interactions with Pakistan and India “continue in every respect to be consistent with our NPT obligations.”

When talking to Arms Control Today, Ford emphasized that the United States is committed to “ensuring that any nuclear cooperation avoids providing assistance to the military side” of India’s nuclear activity and that this remains “a critical consideration for being able to provide assistance” to India. Ford also stressed that India’s “separation plan is intended to separate the military aspects from the civilian aspects in such a way that there is no spillover between the two.”

The Role of the Review Process
Disagreements about the character of the review process itself loomed in the background of substantive discussions. The United States argued in its statement that review conference decisions are not binding on member states and that “suggestions” the 2010 review conference “might make in a consensus document would be recommendations.”

Ford elaborated in the interview with Arms Control Today that “[i]f we offer good advice to future policymakers in such a document, they should take it. But if our advice doesn’t address the challenges they face, they shouldn’t be shy about re-evaluating.”

According to Ford, this argument also applies to past agreements at review conferences. “I don’t see any reason for people to adhere reflexively to an obsolete recommendation just because one hasn’t gotten consensus on a replacement recommendation.” Such an approach “would be almost a sort of policymaker professional malpractice,” he said.

At the 2005 review conference, France and the United States argued that they felt no longer bound by the 13 practical steps on nuclear disarmament contained in the 2000 consensus final document because the global context had changed so dramatically after September 11, 2001. Yet, even nuclear-weapon states disagree on this point. Thus, Duncan reaffirmed in Vienna the United Kingdom’s commitment to “the unequivocal undertaking to accomplish the relevant disarmament measures contained in the 1995 Review Conference decisions and in the 2000 Final Document.”

Several non-nuclear-weapon states, while agreeing with Washington that decisions by review conferences are not legally binding, flatly rejected the U.S. line that review conferences only make suggestions. Minty in the interview with Arms Control Today pointed out that the U.S. line has broad implications.

“If you selectively decide how to deal with [decisions taken at review conferences], then you break the consensus on the regime because the regime is not just the treaty. The nonproliferation regime is the treaty plus the decisions taken at multilateral meetings.” This was echoed by the EU diplomat, who argued it would be difficult to strengthen any multilateral treaty based on the U.S. approach. Minty pointed out that “we have taken decisions before to which the United States has not objected to. In 1995, we extended the treaty. So, should we now say that the extension at that time should have been thought of as a recommendation? And then, who would have extended the treaty?”

Adopting the Report
In contrast to the slow start, the conference ended in a hurry. With the morning of the last day still occupied by substantive debates, Amado had little time available to finish his report. As a result, several delegations, including those of the nonaligned group and France, were unable to endorse the chair’s “factual summary.”

Soltanieh told Arms Control Today that the report is “biased” but also objected in principle to the chairman being entrusted with summarizing proceedings at a multilateral meeting without delegations being able to discuss and alter the report. Asked about a statement in Amano’s report that “serious concern was expressed over Iran’s nuclear program” during the meeting, Soltanieh called it “unacceptable that we come to a meeting of parties to a treaty and we criticize one of the parties explicitly in the report.” He warned that “[t]his will have serious consequences for the future of [the] NPT.”

In the end, Amano’s paper was issued as a working paper instead of being formally annexed to the conference report. This procedural downgrading was not seen as significant, and many echoed Minty’s assessment that no “real damage is done by the fact that the chairman’s summary will appear in another section of the conference proceedings.” Instead, many participants thanked the chair for successfully steering the meeting around multiple points of potential failure, obviously relieved that the meeting had not completely collapsed.—OLIVER MEIER, reporting from Vienna.
Conference on Disarmament Stalemate Persists

The latest bid to end the protracted negotiating impasse of the 65-member Conference on Disarmament (CD) is faltering primarily because China and Pakistan are raising objections to the March 23 proposal.

Western diplomatic sources and a UN official close to the conference indicated to Arms Control Today in May interviews that the prospects for the conference holding negotiations this year are growing dimmer as each day passes. The UN official said May 16 that there is a “definite sense of momentum being lost.”

The CD operates by consensus, and the last agreement it negotiated was the 1996 Comprehensive Test Ban Treaty. Following the conclusion of that treaty, conference members have almost continuously clashed over negotiating priorities.

The sole exception was a few weeks in 1998 when the conference convened negotiations on a fissile material cutoff treaty (FMCT), which would prohibit the production of plutonium and highly enriched uranium for weapons. No agreement resulted from those talks.

Renewing FMCT negotiations is a key element of the March 23 work package offered by Sri Lankan Ambassador Sarala Fernando. The package also includes less formal discussions on nuclear disarmament, prevention of an arms race in outer space, and negative security assurances, which are intended to assure states without nuclear weapons that they will not suffer nuclear attacks. (See ACT, April 2007.)

Most conference members announced support for or indicated they would not block the package before the end of the CD’s first of three annual working periods on March 30. But some delegations, most prominently China and Pakistan, said they had to wait for instructions from their capitals. Others not prepared immediately to adopt the proposal included Egypt, India, and Iran.

Aiming to get final approval for the four-item package before the CD’s second work period started May 14, Fernando proposed a special April plenary for this purpose. That meeting never occurred because some countries again said they needed more time.

China announced May 22 that the package, among other failings, does not adequately address the outer space issue. Beijing’s remedy for this perceived shortcoming is to specify that the proposed discussions on space could lead to negotiation of a treaty—an outcome staunchly opposed by Washington.

Concerned about U.S. missile defense developments, China puts higher priority on negotiations on outer space than an FMCT. Beijing reportedly has stopped fissile material production for weapons, but it has not publicly announced such a halt as have France, Russia, the United Kingdom, and the United States.

Although Pakistan claims to be still reviewing the package, Islamabad also raised some objections May 15. One of the diplomatic sources said May 16 that Pakistan appears intent on “killing” the proposal.

Pakistan suggested all four items in the package should be treated equally. Iran seconded this notion, an approach anathema to France and the United States. Iran, which the United States and several others allege is illicitly pursuing nuclear weapons, recently obstructed a separate conference on the nuclear Nonproliferation Treaty (see page 23).

Pakistan, as well as China, argued that FMCT negotiations should aim to produce a verifiable treaty, meaning one with mechanisms to detect cheating. Pakistan’s neighbor and nuclear rival, India, endorsed the same objective May 15, but it was unclear how firmly each of the countries was making this goal a precondition for negotiations.

Most countries support a verifiable FMCT, but they are not insisting this be a declared negotiating outcome because the United States opposes such an approach. Washington asserts that an FMCT verification regime would be time consuming to negotiate, costly to implement, and ultimately imperfect, potentially impinging on the national security interests of law-abiding states while not deterring determined cheaters. Before 2004, the United States supported a verifiable FMCT. (See ACT, September 2004.)

Although Algeria and Egypt also questioned certain aspects of the March 23 proposal, some of the Western diplomatic sources implied that China’s position was key because it provides other countries cover to raise objections.

Winning consensus on the proposal, a couple of the sources said, would be further complicated if Russia follows through on President Vladimir Putin’s February pledge to submit a draft treaty to bar space weapons. Such a move might further increase pressure to elevate the outer space issue from discussions to negotiations.

All the sources pointed out that time to conduct any negotiations this year was dwindling. The second work period ends June 29, and the third and final work period begins July 30 and expires Sept. 14. Moreover, some of the last period is consumed by end-of-the-year administrative work. —WADE BOESE

Security Council May Close Iraq Inspection Unit

The United States and other permanent members of the UN Security Council are drafting a resolution that would officially terminate the mission of UN inspectors tasked with verifying and monitoring Iraq’s disarmament, Ben Chang, a spokesperson for the U.S. mission to the United Nations, told Arms Control Today May 22.

Speaking to reporters May 15, Zalmay Khalilzad, the U.S. permanent representative to the UN, did not mention a resolution but did say that “the time has come to move to bring this to a close appropriately. And I believe that there is an emerging consensus to do that.”

The United States is working with the United Kingdom and other council members on a resolution, Chang said, adding that the process “is taking a while because there is a lot of complexity” surrounding the issue.
For example, numerous Security Council resolutions governing the question of Iraq’s disarmament remain in effect. Ewen Buchanan, a spokesperson for the UN Monitoring, Verification and Inspection Commission (UNMOVIC), pointed out in a May 21 interview with Arms Control Today that these resolutions contain restrictions, such as a prohibition on Iraqi missiles with ranges exceeding 150 kilometers, that the council must address.

Both U.S. and UNMOVIC officials explained that the Security Council also needs to decide the fate of the commission’s archives, which contain proliferation-sensitive material that could aid other countries in developing nuclear, chemical, or biological weapons.

After the 1991 Persian Gulf War, the UN Security Council tasked the UN Special Commission (UNSCOM), UNMOVIC’s predecessor, with verifying and supervising the destruction of Iraq’s chemical and biological weapons as well as missiles exceeding UN-permitted ranges. Inspectors from the International Atomic Energy Agency (IAEA) were charged with verifying and supervising the destruction of Iraq’s nuclear weapons program. The UN withdrew the inspectors in December 1998, but they returned in November 2002 with Iraq’s consent. (See ACT, July/August 2006.)

The UN inspectors found no evidence that Iraq was pursuing illicit weapons programs but still had some unanswered questions about the country’s past weapons programs.

The inspectors left Iraq just before the U.S.-led March 2003 invasion. Since then, UNMOVIC, which includes staff in New York and teams of inspectors from UN member states, has remained on standby and has not been able to conduct in-country inspections.

At least one Security Council member still remains skeptical of the resolution. Russian Foreign Minister Aleksandr Yakovenko charged that a draft resolution “breaches established [Security Council] regulations,” according to a May 11 press account.

Yakovenko also stated that UNMOVIC and the IAEA should present a report to the council “on the state of affairs connected to disarmament programs in Iraq.” Acknowledging that neither organization is “in a position to do this on their own,” he suggested that the United States “officially present to the UN the findings of its own search teams.”

A U.S.-led postinvasion investigation found that Iraq did not have prohibited weapons programs. But the United States has never briefed the UN on the investigation’s classified findings, Buchanan said.

Yakovenko also argued that the problem of Iraqi illicit weapons “has acquired added acuity” because of the lack of security at Iraqi facilities that could be used to produce such weapons.

For its part, Iraq would like UNMOVIC’s mission to end. In an April 24 letter to the Security Council, Iraqi Foreign Minister Hoshyar Zebari reiterated Baghdad’s past requests that the council “terminate the mandate of the UNMOVIC and IAEA inspectors.” Zebari argued that their mission is no longer relevant because “there are no longer any legal or technical grounds for continuing their mandate” and because Iraq no longer has prohibited weapons or related programs.

Zebari’s letter also described several steps that Iraq has taken to provide assurance that it is not pursuing such weapons, including drafting a law that would permit Iraq to accede to the Chemical Weapons Convention. Iraq declared in 2004 that it would accede to the convention. (See ACT, July/August 2006.)

He also wrote that “preparations are underway” for Iraq to ratify an additional protocol to its IAEA safeguards agreement. Such agreements, which are required under the nuclear Nonproliferation Treaty, allow the agency to monitor non-nuclear-weapon states-parties’ declared nuclear activities. An additional protocol augments the agency’s ability to discover undeclared nuclear activities.—PAUL KERR
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KEYNOTE SPEAKERS

Jayantha Dhanapala
Rolf Ekéus

FORUM TOPICS

Elimination of CW stockpiles – progress, outlook and challenges
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Missile Defense Five Years After the ABM Treaty

Five years after President George W. Bush orchestrated the June 13, 2002, U.S. withdrawal from the 1972 Anti-Ballistic Missile (ABM) Treaty to build an “effective” missile defense, the system remains unproven or insufficient in the eyes of many.

Yet, Bush administration officials say that their fledgling strategic missile defense system proved its worth when North Korea fired several ballistic missiles into the Sea of Japan last July. Right before the tests, the Bush administration activated the system as a precaution.

Secretary of State Condoleezza Rice and Secretary of Defense Robert Gates penned an April 26 Daily Telegraph piece claiming that the defense had helped “promote stability” by allowing U.S. leaders “to consider a wider, more flexible range of responses to a potential attack.” John Rood, assistant secretary of state for international security and nonproliferation, declared in a Feb. 27 speech that the system’s activation had “heartened” him.

North Korea’s missile launch preparations were no secret last June and had been reported generally as being for testing purposes. Still, Rick Lehner, a spokesperson for the Pentagon’s Missile Defense Agency (MDA), told Arms Control Today May 29 that North Korea’s intentions were not known and, therefore, the “system was brought to alert status in case it was needed to defend the country.” As it turned out, the system was unneeded because North Korea was conducting flight tests, and the Taepo Dong-2, the missile of greatest U.S. concern, flopped approximately 40 seconds into its inaugural flight.

The MDA asserts the defense would have stopped the Taepo Dong-2 had the test been a real attack. Lieutenant General Henry Obering, the head of the MDA, told the Senate Armed Services Strategic Forces Subcommittee April 11, “I am confident [the system] would have worked.”

Not everyone has such confidence. Skeptics and critics point to what they say is skimpy and rudimentary testing of the system, which has components stretching from radars in Japan and the United Kingdom to 18 interceptors deployed in Alaska and California. On the other hand, some missile defense supporters criticize the administration for not being ambitious enough after pulling out of the ABM Treaty, which barred Moscow and Washington from developing nationwide strategic ballistic missile defenses.

Although Russia initially had a muted reaction to the U.S. treaty withdrawal, Russian leaders now more strongly assert that U.S. missile defenses, particularly a plan to base interceptors in Poland, are provocative. They imply that if Washington continues to proceed, it could trigger another arms race, which is what Bush and other senior administration officials said would not result from a U.S. ABM Treaty exit.

No Consensus on Capability

Despite its proclaimed confidence in the Ground-based Midcourse Defense (GMD), which was the system activated last summer, the administration has had trouble convincing others to share the same view, largely because it has performed few visible tests over the past several years. Indeed, since Bush’s December 2002 decision to deploy the GMD system, only one successful intercept test has been conducted (see Table 2).

The MDA hoped to double this tally with a May 25 test, but the experiment was scrubbed when the target missile failed to fly properly.
vious tests included one to three decoys, although they did not closely resemble the target.

Coyle, who is currently a senior adviser at the nonprofit Center for Defense Information, contends that the Achilles’ heel of the system is countermeasures, including decoys, because the system cannot discriminate between real targets and fake ones. He contends that adversaries capable of launching a long-range ballistic missile would employ decoys or other countermeasures to penetrate the system.

That assertion is based on U.S. intelligence. Robert D. Walpole, a national intelligence officer, informed lawmakers Feb. 9, 2000, that North Korea and Iran “could develop countermeasures based on [readily available] technologies by the time they flight-test their missiles.” Neither Iran nor North Korea has successfully flight-tested a missile with a range greater than approximately 2,000 kilometers.

Obinger defends the MDA testing strategy. At the April 11 hearing, he argued, “We think that there are many situations where we will not be faced with complex countermeasures.” At an April 25 Senate Appropriations Defense Subcommittee hearing, the general stated, “Just because you do not have countermeasures does not mean that [tests are] not realistic.”

The MDA has deployed a sea-based X-band radar, which would have been prohibited by the ABM Treaty, that the agency claims will help with target discrimination. The agency also is working to miniaturize EKVs so that a single interceptor can carry several at a time to engage separate objects in a target cluster. Flight testing of this Multiple Kill Vehicle program is set to start in 2012.

The current head of the Pentagon’s testing office, Charles McQueary, testified April 11 that the current system has “demonstrated a capability to intercept a simple foreign threat.” Meanwhile, his office’s annual report, released earlier this year, stated that a lack of flight-test data “limits confidence in assessments” of the defense. It recommended that future program decisions should “stress reliable and repeatable performance in integrated system testing.”

Similarly, a March report by the Government Accountability Office (GAO), which conducts investigations for Congress, concluded the system “has not completed sufficient flight testing to provide a high level of confidence that [U.S. missile defenses] can reliably intercept ICBMs.” It applauded the MDA for generally reducing missile defense test failures and improving quality control procedures but reported that previous shortcomings may have permitted “less reliable or inappropriate parts” to be incorporated in the deployed interceptors, raising questions about their “reliability.” According to the GAO, the MDA plans to spend $65.5 million to retrofit the interceptors beginning in fiscal year 2009.

**Stable of Programs Remains Similar**

When running for president, Bush derided the Clinton administration’s ground-based system as too modest. (The ABM Treaty permitted Moscow and Washington each to field up to 100 strategic ground-based interceptors at one site.) He suggested that if the United States truly wanted to shield itself against ballistic missiles, it had to break free

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**Table 1: Status of Key Missile Defense Programs**

Below are summaries of the five key interceptor programs currently under development by the Pentagon’s Missile Defense Agency (MDA). All the programs, except the Kinetic Energy Interceptor, preceded President George W. Bush’s administration. The table does not include the short- and medium-range Patriot Advanced Capability-3 (PAC-3) system that has been transferred to the Army for deployment. The Army has a 2007 inventory of 546 PAC-3 interceptors. The year 2013 was selected for the far right column because that is the future year that MDA uses in briefing documents.

<table>
<thead>
<tr>
<th>Missile Defense System</th>
<th>Target Missiles</th>
<th>Previous Deployment Plans</th>
<th>Current Deployment Status</th>
<th>Intercept Testing Record</th>
<th>Projected 2013 Capability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ground-based Midcourse Defense</strong></td>
<td>Ballistic missiles with ranges greater than 5,500 kilometers (intercontinental)</td>
<td>President Bush in December 2002 called for deploying up to 20 interceptors by 2004-2005.</td>
<td>18 total interceptors are currently deployed in Alaska and California.</td>
<td>The system has scored six hits in 11 intercept attempts since October 1999.*</td>
<td>54 total interceptors, including 10 in Europe.</td>
</tr>
<tr>
<td><strong>Aegis Ballistic Missile Defense</strong></td>
<td>Ballistic missiles with ranges below 5,500 kilometers (short, medium, and intermediate)</td>
<td>President Bush in December 2002 called for deploying up to 20 interceptors by 2004-2005.</td>
<td>20 total interceptors have been fielded and seven ships have been converted to launch them.</td>
<td>The system has scored eight hits in 10 intercept attempts since January 2002</td>
<td>132 interceptors and 18 ships equipped to launch them.</td>
</tr>
<tr>
<td><strong>Terminal High-Altitude Area Defense</strong></td>
<td>Ballistic missiles with ranges below 5,500 kilometers (short, medium, and intermediate)</td>
<td>In 1999, the Pentagon predicted an initial deployment around 2007.</td>
<td>First fire unit is scheduled to be deployed in 2009.</td>
<td>After a seven-year lull, intercept testing resumed in July 2006 and the system has three hits in three tests.</td>
<td>Four fire units with 96 interceptors.</td>
</tr>
<tr>
<td><strong>Airborne Laser</strong></td>
<td>All ranges of ballistic missiles</td>
<td>In 2002, the Pentagon said it wanted an emergency capability by 2004.</td>
<td>No current official projection. Deployment decision awaits intercept tests.</td>
<td>The Clinton administration planned for first intercept attempt in 2003, but that test has now slipped to at least 2009.</td>
<td>No current prediction. Future plans rest on successful intercept testing.</td>
</tr>
<tr>
<td><strong>Kinetic Energy Interceptor</strong></td>
<td>Ballistic missiles with ranges above 1,000 kilometers (medium, intermediate, and intercontinental)</td>
<td>Launched in 2003, the program was projected for an initial deployment as early as 2010.</td>
<td>Current projection is that the first operational system could be available by 2014.</td>
<td>No flight tests yet. First booster flight test scheduled for 2008 and first intercept attempt in 2012.</td>
<td>Deployment not planned until 2014 or 2015.</td>
</tr>
</tbody>
</table>

* Only the last test involved an interceptor model the same as those deployed.

from ABM Treaty rules against air-, sea-, space-, and mobile land-based systems as well as foreign deployments. This position reflected decades-long complaints of missile defense advocates that the only thing blocking effective defenses was treaty limits making certain technologies and basing modes off-limits.

Writing in The Wall Street Journal a day after the U.S. treaty withdrawal took effect, then-Deputy Secretary of Defense Paul Wolfowitz hailed the possibilities that the MDA could now exploit. “We can now move forward with the robust development and testing program that the Department of Defense has designed to take advantage of new technologies and basing modes,” he stated.

Yet, five years after the administration shed the treaty constraints and spent some $41 billion on the MDA, the U.S. inventory of systems has changed little (see table 1). Air-, sea-, space-, and mobile land-based systems to counter strategic long-range missiles or ICBMs have not materialized.

The MDA has programs that fit these basing modes, but they are systems geared toward stopping shorter-range missiles and were under development prior to the treaty withdrawal. To be sure, the MDA contends some of the programs have an inherent capability against longer-range missiles or that they can be upgraded for the mission, but such claims remain unproven.

The Airborne Laser (ABL) is a prime example. Initiated under the Clinton administration, the ABL program called for arming a Boeing 747 with a powerful laser to destroy shorter-range ballistic missiles shortly after their launch. Following the U.S. treaty withdrawal, program officials announced the system also could shoot down longer-range missiles. Prolonged development delays, however, have postponed the first ABL intercept attempt from 2003 to at least 2009. Not yet armed with its main laser, the aircraft recently tracked a target, but Obering noted in the April 25 hearing that the program is not “out of the woods.”

Some ABM Treaty antagonists also saw great promise in fielding ship-based strategic interceptors, pointing to the then-Navy Theater Wide program as a possible model or starting point. Now known as Aegis Ballistic Missile Defense, the program has recorded eight intercepts in 10 tests involving shorter-range missiles, and MDA officials are seeking to expand its capabilities. As with the ABL program, however, the schedule has slipped. Whereas a first attempt to hit a long-range target had been predicted for as early as 2007, now it is set for 2014.

The MDA’s only mobile land-based system nearing deployment is the Terminal High-Altitude Area Defense (THAAD), which is supposed to collide with missiles during their last minute or so of flight. Intercept testing of the system resumed last July after completion of an intercept redesign that started in 1999. In the three intercept tests since then, THAAD has not missed. The system is designed to destroy missiles below the strategic threshold.

A mobile land-based strategic system, the Kinetic Energy Interceptor (KEI), is in the works, but it has suffered frequent budget cuts from lawmakers who question the program’s utility. As a result, the MDA has pushed back possible deployment of the system, which has yet to be flight-tested, from 2010 to at least 2014.

Space-based interceptors remain just a gleam in Obering’s eyes. “Space offers a lot of flexibility, and it offers a lot of attraction,” he testified April 25. But his agency has requested relatively modest sums to explore the option. Congress, particularly Democratic members, have signaled strong reservations about basing interceptors in orbit. In its defense authorization bill passed May 17, the House of Representatives cut nearly $800 million, including all $10 million for the space project, from the MDA’s fiscal year 2008 $8.8 billion budget request. The Senate has yet to pass its version of this bill, which will have to be reconciled with the House measure.

For some missile defense doubters and opponents, the administration’s failure to bring any new systems to fruition might be bittersweet vindication of their arguments that it was premature on technical grounds to withdraw from the ABM Treaty.

A number of missile defense supporters, however, knock the administration for not being aggressive enough. Daniel Goure, vice president of the nonprofit Lexington Institute, contended in an April 23 paper that the administration “went on to squander the opportunity”

**Table 2: Strategic U.S. Missile Defense Tests After the ABM Treaty Withdrawal**

<table>
<thead>
<tr>
<th>Date</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct. 14, 2002</td>
<td>Target Intercepted</td>
</tr>
<tr>
<td>Dec. 11, 2002</td>
<td>Target Missed</td>
</tr>
<tr>
<td>Dec. 15, 2004</td>
<td>Interceptor Failed to Fire</td>
</tr>
<tr>
<td>Feb. 14, 2005</td>
<td>Interceptor Failed to Fire</td>
</tr>
<tr>
<td>Sept. 1, 2006</td>
<td>Target Intercepted</td>
</tr>
<tr>
<td>May 25, 2007</td>
<td>Cancelled, Target Failed</td>
</tr>
</tbody>
</table>

Lt. General Henry Obering addresses the press April 18 in Warsaw, Poland. Russian leaders assert that U.S. missile defenses, particularly a plan to base interceptors in Poland, are provocative and could trigger another arms race.
presented by scrapping the ABM Treaty. He suggests the KEI program be ramped up and put on ships.

Other missile defense proponents such as Ambassador Henry Cooper, who headed one of the MDA’s predecessors, issued a 2006 report criticizing the administration for sticking with the ground-based system. They recommended limiting work on that system and devoting more time and effort to sea- and space-based interceptors. The report noted that the current approach ignores defending against Chinese and Russian missiles.

**Russian Reactions**

A major point of contention when the Bush administration was maneuvering to withdraw from the ABM Treaty was how other states, particularly Russia and China, would respond. The possibility that either country might build up its arsenal in reaction to a U.S. treaty withdrawal and construction of a nationwide defense induced anxiety within Washington and worldwide.

The Bush administration dismissed such concerns as exaggerated. It argued that future U.S. defenses would not be aimed at China or Russia and that the withdrawal would help usher in a new era of better relations between the United States and Russia by removing an irritant and a vestige of Cold War competition. White House Press Secretary Ari Fleischer noted Dec. 12, 2001, that the president often remarked that withdrawing from the treaty would “lead to a strengthening of U.S.-Russian relations.”

Russian President Vladimir Putin characterized the withdrawal at the time as “mistaken,” and the Kremlin has grumbled ever since. But a U.S. proposal to nullify a potential Iranian missile threat by stationing 10-ground-based U.S. interceptors in Poland and a radar in the Czech Republic now has Russia growling. (See ACT, April 2007.)

Putin set the tone in a Feb. 10 speech, saying the U.S. plans “cannot help but disturb us.” He asked, “Who needs the next step of what would be, in this case, an inevitable arms race?”

Foreign Minister Sergey Lavrov also suggested May 15 that an arms competition was certain. “In questions of military-strategic stability, there are its own immutable laws: actions, counteractions, defensive, offensive systems,” he explained, adding that “these laws operate regardless of how somebody would like to see this or that situation.”

Although 10 interceptors would clearly pose no threat to Russia’s roughly 530 ICBMs,
Panel Endorses U.S. Global Strike Initiative

An independent panel recently provided a boost to a cooly received Pentagon initiative that would convert some long-range, submarine-launched ballistic missiles to deliver conventional warheads instead of nuclear ones.

In a May 11 report to Congress, the 19-member panel of the National Academy of Sciences (NAS) Naval Studies Board stated the initiative, if proven effective, “would be a valuable addition to U.S. military capabilities.” The initiative is intended to enable the United States to conduct non-nuclear strikes worldwide in less than an hour.

The general concept is known as prompt global strike. Under the Conventional Trident Modification program, each of the dozen deployed U.S. ballistic missile submarines would have two of their 24 Trident nuclear-armed ballistic missiles converted to carry conventional payloads.

The panel recommended that lawmakers sufficiently fund research and development of the program so an “initial operational capability” will be ready in three years. But it also urged postponing full-scale production and deployment until some policy issues are settled.

The experts said policymakers should explore alternatives and deal with the “ambiguity issue,” which is the possibility that other countries, particularly Russia, might mistake a conventional Trident launch as a nuclear attack. This danger has been a central concern of lawmakers, leading them last year to cut inaugural funding for the program from $127 million to $25 million and commission the NAS study. The Bush administration asked Congress in February for an additional $175 million. (See ACT, April 2007.)

Congressional caution toward the program remains widespread. On May 17, the House passed a fiscal year 2008 defense authorization bill that prohibits any spending to deploy conventional Tridents. Rep. Ellen Tauscher (D-Calif.), who chairs the House Armed Services Strategic Forces Subcommittee, which initially proposed the restriction, said the move reflected a “need for additional effort to ensure that a conventional missile launch from a Trident submarine is not misinterpreted.”

The Senate has yet to pass its version of the defense authorization bill, which will then need to be reconciled with the House measure, but some senators share similar sentiments. At an April 11 hearing, Senate Armed Services Chairman Carl Levin (D-Mich.) said the proposed conversion “is a very destabilizing idea in the minds of many of us.”

The NAS panel suggested that “cooperative measures” with other countries might help reduce misunderstandings and recommended that any prompt global strike effort, including the Trident conversion, “be designed in both hardware and operational terms to minimize the possibility of misinterpreting intent.” Yet, the panel noted, “the ambiguity between...
nuclear and conventional payloads can never be totally resolved.”

Still, the experts asserted that a prompt global strike capability is worth pursuing. “Given the pace of terrorism’s spread and the consequent uncertainty about where terrorist operations will occur, coupled with the proliferation of weapons of mass destruction, a truly global capability may soon be required, if it is not required today,” the panel stated.

In addition to being used against terrorists, the panel said prompt global strike systems could be employed at the outset, or “leading edge,” of major combat operations. In such a scenario, the panel cautioned that misinterpretation risks would rise.

The brief time frames associated with prompt global strike also present difficulties, according to the panel. It stated that getting accurate and reliable short-notice data on a target would be a “daunting challenge” and warned that decision-makers would have to rapidly weigh potential collateral damage and other risks.

The panel predicted that the actual use of prompt global strike weapons would be rare, numbering “at most a few dozen” instances during their first decade of service. It calculated that “only a few terrorist leaders would merit use of such a weapon.”

Other prompt global strike options mentioned by the panel include conventionally armed U.S.-based ICBMs, intercontinental-range hypersonic boost-glide vehicles, and higher-speed cruise missiles launched from bombers. These and the Trident conversion program will be analyzed more fully in a second report the panel is supposed to supply Congress early next year.

Albert Carnesale, who most recently served as chancellor of UCLA, chairs the panel. Other panel members include retired General Eugene Habiger, former commander of U.S. Strategic Command; James Woolsey, former head of the Central Intelligence Agency; and Walter Slocombe, former undersecretary of defense for policy. — WADE BOESE

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A Trident D-5 strategic missile is launched from the submarine USS Tennessee Feb. 12, 1990.


Authors: John Burroughs, Jacqueline Cabasso, Felicity Hill, Andrew Lichterman, Jennifer Nordstrom, Michael Spies, and Peter Weiss; Edited by Michael Spies and John Burroughs; Foreword by Zia Mian

Available at www.wmdreport.org
Russia Casts Doubt on Conventional Arms Pact

President Vladimir Putin and other top Russian leaders recently ratcheted up warnings that Moscow might freeze or end participation in a treaty limiting conventional weapons in Europe if some long-running disputes with NATO are not soon resolved.

In an annual address to Russian lawmakers, Putin said April 26 that Moscow would “declare a moratorium on its observance” of the 1990 Conventional Armed Forces in Europe (CFE) Treaty, which restricts the number and location of battle tanks, armored combat vehicles, and heavy artillery that states-parties can field in Europe. Putin added that if talks with the 26-member NATO alliance did not yield results, Russia will “examine the possibility of suspending our commitments” under the CFE Treaty.

For days and weeks after the speech, there was confusion about when the moratorium would take effect and whether Putin was threatening that Russia might pull out of the treaty.

The Russian news agency RIA Novosti quoted a Kremlin source April 26 as saying Russia would withdraw from the treaty if nothing changed. Russian Foreign Minister Sergey Lavrov similarly told reporters the same day in Oslo, Norway, that Russia’s “withdrawal from [the] CFE [Treaty] will become imminent” if Moscow’s concerns go unmet.

Still, on May 9, NATO spokesperson James Appathurai told reporters, “I don’t think the full details of what President Putin meant are fully clear yet.”

Appathurai’s comment came a day before Russian General Yuri Baluyevsky, chief of the general staff, visited NATO headquarters in Brussels. The Russian newspaper Novaya Gazeta quoted Baluyevsky as telling reporters there that lawyers in Russia’s foreign and defense ministries were analyzing “legitimate opportunities for a moratorium.”

A Russian official told Arms Control Today May 21 that the “moratorium is not immediate.” Without mentioning a possible treaty withdrawal or termination, the official further explained that Russia would “suspend implementation if NATO does not respond positively.”

U.S. and other NATO-member government officials said in May interviews that Russia had not altered its behavior under the CFE Treaty since Putin’s speech. They noted Russia has made some regular treaty notifications and agreed to a treaty inspection.

The accord does not allow a state-party to suspend implementation. A treaty withdrawal option exists if a country feels that “extraordinary events...have jeopardized its supreme interests.” A minimum 150-day advance notice of an intended withdrawal is required by the treaty.

Consequently, a Russian move to suspend implementation would likely be judged by other states-parties as noncompliance. Compliance issues are supposed to be resolved in the treaty’s Joint Consultative Group.

Putin’s speech came amid increased sparring by Washington and Moscow over a U.S. plan to deploy 10 strategic missile interceptors in Poland (see page 30), but Russian officials deny any tie between the recent CFE Treaty policy and the interceptor base.

For several years, Moscow has been seeking to have the 1990 accord replaced by a November 1999 “adapted” CFE Treaty that imposes less stringent restrictions on Russia. Unlike the original treaty, the updated version also permits additional countries to join and adopt weapons limits. This appeals to Russia because it is upset that some newer NATO members, particularly Estonia, Latvia, and Lithuania, currently have no arms constraints.

The adapted treaty cannot enter into force and legally replace the original accord until all of its 30 states-parties ratify the revised version. Only four—Belarus, Kazakhstan, Russia, and Ukraine—have completed this step.

NATO members are refusing to ratify the adapted treaty until Russia fulfills promised military withdrawals from Georgia and Moldova. These pledges are known as the Istanbul commitments, after the summit at which they were made. The adapted CFE Treaty was finalized at the same gathering. (See ACT, November 1999.)

The Russian military is belatedly making progress in leaving Georgia, but a similar effort in Moldova halted unfinished in March 2004. (See ACT, January/February 2007.)

Kremlin officials frequently criticize the NATO linkage and complain about being bound by what they deride as an obsolete agreement. In his Oslo remarks, Lavrov stated that Russia “finds itself in a situation where it simply does not want to participate in a theater of the absurd.”

Washington and other NATO capitals are urging Russia to uphold its obligations. Referring to the CFE Treaty as “one of the most important treaties of the 20th century,” Secretary of State Condoleezza Rice said in a May 15 interview with the Russian radio station Ekho Mosvky that Russia should address its concerns “in the context of the treaty rather than trying to get out of the treaty.”

NATO governments also are reiterating that they will continue to delay ratifying the adapted CFE Treaty until the Russian military is out of Moldova and Georgia. NATO Secretary-General Jaap de Hoop Scheffer said April 26 that “the allies attach great importance to ratification of the adapted CFE Treaty, but we have things like the Istanbul commitments which have to be fulfilled.” —WADE BOESE
NUCLEAR BLACK MARKETS:
Pakistan, A.Q. Khan and the rise of proliferation networks

A net assessment

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Iran Continues Security Council Defiance

May 23 report from International Atomic Energy Agency (IAEA) Director-General Mohamed ElBaradei documents that Iran has continued work on its nuclear program in defiance of the UN Security Council. This lack of compliance sets the stage for the council to impose additional sanctions against Tehran.

The IAEA Board of Governors also is expected to discuss the report during its next meeting, which begins June 11.

Although Iranian officials continue to express their willingness to enter into negotiations with Germany and the five permanent members of the Security Council, they refuse to meet the Security Council’s repeated demands to suspend its nuclear program.

Most recently, the Security Council on March 24 adopted Resolution 1747 requiring Iran to comply “without further delay” with Resolution 1737, which the council adopted last December, or face “further appropriate [nonmilitary] measures.” (See ACT, April 2007.) The March resolution requested ElBaradei to report on Iran’s compliance within 60 days.

Resolution 1747 also imposed new restrictions on Tehran and expanded the scope of existing sanctions. Those included a demand that Iran suspend all activities related to its uranium-enrichment program, as well as construction of a heavy water-moderated nuclear reactor. Iran says these programs are for peaceful purposes, but both also could be used to produce fissile material for nuclear weapons. (See ACT, January/February 2007.) According to the report, Iran has not suspended either of these programs.

The resolutions require Iran to cooperate fully with the IAEA’s investigation of its nuclear programs, as well as to ratify an additional protocol to its comprehensive IAEA safeguards agreement. Such safeguards agreements, which are required under the nuclear Nonproliferation Treaty (NPT), allow the IAEA to monitor NPT states-parties’ declared civilian nuclear activities. Iran has signed an additional protocol, which augments the IAEA’s authority to investigate possible undeclared nuclear activities, but has not ratified it.

Both French Foreign Minister Bernard Kouchner and Department of State spokesperson Tom Casey stated May 24 that their governments want the Security Council to impose additional sanctions against Iran.

Casey said that the council would “take a look at…enhancing” current UN sanctions and imposing new ones. Asked about the prospect for further sanctions, two European diplomats told Arms Control Today May 25 that whether and to what extent other council members are willing to sanction Iran is unclear.

Both diplomats added that there will be no formal discussions regarding further Security Council action until after the European Union’s foreign policy chief, Javier Solana, meets May 31 with Ali Larijani, secretary of Iran’s Supreme National Security Council and Tehran’s lead nuclear negotiator. The relevant countries will discuss the contents of another council resolution if the talks “do not bear fruit,” one diplomat said.

Larijani and Solana last met in late April but did not reach an agreement. (See ACT, May 2007.)

Larijani told reporters May 30 that suspending Iran’s enrichment program is “not acceptable,” according to the official Islamic Republic News Agency (IRNA). He added, however, that a suspension agreement could be the “outcome of the talks.”

Similarly, Iranian Foreign Minister Manouchehr Mottaki stated May 16 that Iran remains flexible on other aspects of a potential solution, according to IRNA. Tehran would “welcome” any proposal that officially recognized Iran’s right to produce nuclear fuel, he said.

But Larijani threatened that Iran would “use its levers” against the international community if the Security Council were to impose additional sanctions on Iran, the semi-official Iranian Students News Agency (ISNA) reported May 18. He did not elaborate.

Modest Enrichment Progress

Iran has continued work on its gas centrifuge-based uranium-enrichment program. Such centrifuges enrich uranium by spinning uranium hexafluoride gas at very high speeds in order to increase the concentration of the uranium-235 isotope. They can produce low-enriched uranium, which can be used in nuclear reactors, and highly enriched uranium (HEU), which can be used in certain types of nuclear reactors and as fissile material in nuclear weapons.

Tehran has a pilot centrifuge facility located at Natanz and is constructing a larger commercial facility at the same site. Iran also has a facility for converting uranium oxide into uranium hexafluoride.

Discussing Iran’s nuclear progress, ElBaradei told reporters May 24 that Iran would need at least three to eight years before it could develop a nuclear weapon, Reuters reported.

Interviews with knowledgeable sources have provided a mixed picture of the program’s status. One European diplomat pointed out May 25 that the most important issue is whether Iran can keep its centrifuges “running for an extended period of time.” Tehran has not yet demonstrated that it can do so, he said.

Iran continued to operate the 10-, 20-, and 164-centrifuge cascades, as well as “single machines,” in its pilot facility. Iran fed 4.8 kilograms of uranium hexafluoride into the single machines and the 10-machine cascade between Feb. 21 and March 17, ElBaradei reported.

As for Iran’s commercial enrichment facility, IAEA inspectors during a May visit found that Iran was “operating simultaneously” eight 164-centrifuge cascades. The report says Tehran has “two other similar cascades” which have not been tested with nuclear material. Three more such cascades are “under construction.” According to another European diplomat, the operating cascades are not linked together, a key element required to oper-
ate an enrichment facility at the scale necessary to produce large quantities of enriched uranium.

The number of operating cascades in the facility has not increased since mid-April, according to an April 18 letter from agency Deputy Director-General Olli Heinonen. Iran had two cascades installed as of February.

Iran told the IAEA that it intended to "continue progressively with the installation of 18 cascades" into the commercial facility and "bring them gradually into operation by May," according to a report ElBaradei issued in February. Although Iran failed to meet this target date, a diplomatic source in Vienna close to the IAEA told Arms Control Today April 25 that Iran is able to build one 164-centrifuge cascade every 10 days. At that rate, Iran will be able to install approximately 3,000 centrifuges by the end of June, the source said.

Tehran has said that it eventually plans to install more than 50,000 centrifuges in the facility. It will take Iran up to four years to do this, according to an April statement by Vice President Gholamreza Aghazadeh, who also heads Iran's Atomic Energy Organization.

In addition to installing centrifuges, Iran has begun to enrich uranium in its commercial facility. Tehran has fed approximately 260 kilograms of uranium hexafluoride into those cascades, the report says. Iran appears to have begun doing this sometime after April 18. On that day, a knowledgeable source told Arms Control Today that Tehran was not actually enriching uranium but was instead injecting small amounts of feedstock into the centrifuges to ready them for operation.

Iran has declared that it has enriched uranium levels up to 4.8 percent uranium-235 at the commercial facility, a claim that the IAEA is in the process of verifying. The report does not specify the quantity of enriched uranium Iran has produced. ElBaradei reported in February that Iran presented 269 metric tons of feedstock to IAEA inspectors when they visited the facility in March. The agency is "evaluating the results" obtained during the visit. Mohammad Saeedi, deputy director of Iran's Atomic Energy Organization, claimed May 7 that Iran has 280 metric tons of feedstock, ISNA reported. Iran began the conversion campaign in June 2006.

Whether Iran can produce centrifuges of sufficient quantity and quality is unclear. The Vienna diplomat said that Tehran can produce enough centrifuge components for its projected enrichment needs. But a knowledgeable source told Arms Control Today that Iran may not be "fully independent" in making such components.

Asked about the quality of Iran's centrifuges, the Vienna source added that Iran "can make functional machines." Separately, a European diplomat said that it is not clear that Iran can do so, explaining that "quite a high number" of centrifuges have crashed at rates "higher than one would expect."

Iran also has apparently continued to operate its uranium-conversion facility. According to the report, Iran presented 269 metric tons of uranium hexafluoride to IAEA inspectors when they visited the facility in March. The agency is "evaluating the results" obtained during the visit. Mohammad Saeedi, deputy director of Iran's Atomic Energy Organization, claimed May 7 that Iran has 280 metric tons of feedstock, ISNA reported. Iran began the conversion campaign in June 2006.

Whether Iran's uranium hexafluoride is of sufficient purity is unclear. The Vienna diplomat said that Iran is using its own feedstock, noting that the material is "good enough" to produce enriched uranium. But the two other European diplomats told Arms Control Today that Iran is probably using uranium hexafluoride obtained from China more than a decade ago.

Regarding Iran's conversion efforts, one diplomat said that Iran is now attempting to convert its own uranium oxide into feedstock but the "process has not been perfected." Iran had previously been converting uranium oxide acquired from South Africa, he said.

**Increased Transparency**

ElBaradei's report states that although the IAEA is able to verify that Iran has not diverted any of its safeguarded nuclear material, the agency "remains unable to make further progress" in verifying "the scope and nature" of Iran's nuclear program.

Since its investigation began in 2002, the IAEA has discovered that Iran engaged in secret nuclear activities, some of which violated Tehran's safeguards agreement. Iran has provided explanations for some of these issues, but the agency says that several others remain unresolved. (See ACT, March 2006.)

ElBaradei reported that Iran has provided no new information regarding these matters, with one exception. Tehran has disclosed details regarding the HEU particles found at the Karaj Waste Storage Facility, a facility that Iran had not declared to the agency. The IAEA is currently analyzing the information, the report says. (See ACT, December 2006.)

The report emphasizes that the IAEA's "level of knowledge of certain aspects" of Iran's nuclear activities "has deteriorated" because Tehran has been providing less information than it did in the past. For example, Iran stopped adhering to its additional protocol in February 2006, the terms of which Iran had been observing since Fall 2003 even though the protocol was not yet in force. (See ACT, March 2006.)

According to ElBaradei, Iran has withheld a significant amount of data, including "information relevant to the assembly of centrifuges, the manufacture of centrifuge components...and research and development of centrifuges or enrichment techniques." His report also notes that Iran has not allowed the IAEA to inspect its heavy water reactor site since Tehran's March decision to end its compliance with a portion of the subsidiary arrangements for its IAEA safeguards agreement. —PAUL KERR

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**Spy Satellites**

Thomas Graham Jr. and Keith A. Hansen  
Foreword by Robert Huffstutler

"Graham and Hansen are superbly qualified to analyze the critical role of satellites in space and other national technical means in monitoring compliance with arms control treaties."
—Sidney Drell

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Russia, Burma Sign Nuclear Agreement

The United States has expressed concerns about an agreement Burma and Russia signed May 15 that could pave the way for the construction of a Russian nuclear research reactor in the Southeast Asian nation.

Department of State spokesperson Tom Casey told reporters May 16 that Burma lacks the necessary regulatory and management systems to operate a nuclear power facility safely. Washington “would be concerned about the possibility for accidents, for environmental damage, or for proliferation simply by the possibility of fuel being diverted, stolen, or otherwise removed,” Casey said. He did not argue that the project could be part of a nuclear weapons program.

Although the United States and Burma maintain diplomatic relations, Washington has a series of sanctions in place against Rangoon for such issues as its poor human rights record. The United States downgraded its level of representation in Burma from ambassador to chargé d'affaires after the government’s crackdown on democratic opposition in 1988.

According to a May 15 Russian Atomic Energy Agency (Rosatom) press release, the two governments signed an intergovernmental cooperation agreement in Moscow to establish a “nuclear studies” center in Burma, which will include a 10-megawatt, light water-moderated nuclear reactor.

The fuel for the reactor will contain uranium comprised of 20 percent uranium-235. Rosatom Press Secretary Sergey Novikov said May 15 that Russia is planning initially to supply 10 metric tons of fuel for the reactor, Gazeta.ru reported. Nuclear weapons use uranium containing more than 90 percent uranium-235.

The center also will include a medical isotope production laboratory and nuclear waste treatment and burial facilities. In addition, Russian universities are tasked with training 300–350 specialists for the center, according to Rosatom.

Moscow and Rangoon have been discussing a nuclear project for several years. Although Burma also has expressed interest in constructing nuclear power reactors, a Russian diplomat emphasized in a May 24 interview with Arms Control Today that the new agreement only concerns a research reactor. He added that Russian efforts, such as training Burmese personnel and providing assistance to establish proper regulatory procedures, would mitigate any risks posed by the reactor. (See ACT, May 2004.)

Many details of the agreement, which was signed by Rosatom head Sergey Kiriyenko and Burma’s minister of science and technologies, U Thaung, remain to be negotiated. Indeed, Novikov told the Moscow Times May 15 that the agreement “opens the door so a contract can be concluded.” Similarly, Irina Yesipova, spokesperson for Atomstroyexport, the project’s Russian contractor, said that it is “too early to talk about anything concrete, from timeline to location to expenses,” the Moscow Times reported.

On May 16, Atomstroyexport officials held the first negotiations on the agreement in Moscow with a Burmese delegation, according to a company press release, which provided no further details of the discussions. The next round of talks will take place in Burma in the second half of 2007.

The center will be placed under International Atomic Energy Agency (IAEA) safeguards, the Rosatom statement said. The research reactor is subject to IAEA safeguards as Burma is a party to the nuclear Nonproliferation Treaty (NPT) and has completed a comprehensive IAEA safeguards agreement. Such agreements allow the agency to ensure that parties to the NPT do not divert civilian nuclear programs to military purposes.

Burma also has signed the Treaty of Bangkok, which established a nuclear weapons-free zone in Southeast Asia when it entered into force in 1997. —PAUL KERR
LOOKING BACK: The Intermediate-Range Nuclear Forces Treaty

On January 26, 1988, Ambassador Maynard Glitman, the chief U.S. negotiator at the Intermediate-Range Nuclear Forces (INF) Treaty talks, wound up his testimony in support of the treaty with the following:

It remains fundamentally true that improved East-West relations cannot be based solely on arms control.... To be of lasting benefit, movement in arms control must be paralleled by the resolution of problems in other areas, such as human rights and regional issues. Nevertheless...the knowledge that agreement can be achieved in a sensitive area despite major obstacles should be among the most important legacies of the INF negotiations and Treaty.1

Twelve years after its signing, it is worthwhile to reflect on the INF Treaty’s legacies. The treaty was unique when negotiated and remains so. It was designed as a global ban on all U.S. and Soviet missiles having a range of 500 to 1,500 kilometers and, for the first time in U.S. treaty history, contained verification measures that permitted the presence of U.S. inspectors on Soviet soil, and vice versa.2 The fact that inspectors could for the first time enter sensitive U.S. and Soviet missile facilities was a breakthrough and harbinger of the end of the Cold War.

Glitman’s words have a special resonance now, when the mood in Moscow and Washington is sour and at times seems to be turning back toward the Cold War. Major disputes have sprung up over several issues, including U.S. plans to deploy missile defenses in Europe, the independence of Kosovo, and Russian accession to the World Trade Organization. In addition, Russian President Vladimir Putin announced during his State of the Nation address in April that Russia would cease to implement the Conventional Armed Forces in Europe (CFE) Treaty, pending resolution of a dispute with NATO over ratification of an adapted version of the treaty, which is linked in turn to disagreements about the withdrawal of Russian troops from Georgia and Moldova (see page 36).

The INF Treaty has received some knocks as well, with Russian military leaders calling for Russia to withdraw from the treaty in order to free up the possibility of deploying intermediate-range missiles against certain neighbors, such as China. They also argue that this step would be an appropriate response to U.S. deployments of missile defenses in Europe.3 Thus, the INF Treaty could become a source of tension between the United States and Russia, despite its reputation as a major stepping stone on the road to ending the Cold War.

Looking back at the history and legacies of the INF Treaty thus provides an opportunity to reflect on how far the United States and Russia have come since the end of the Cold War. It also allows us to measure how much farther we must go to address the key security issues that remain between the United States and Russia. Many of these issues are still linked to the detritus of the Cold War, whether nuclear weapons, fissile material, chemical and biological weapons, or vast stocks of unnecessary missiles and conventional weapons. Finding enough mutual confidence to come to grips with these security issues despite worsening relations between Russia and the West is a critical and urgent matter.

The legacies of the INF Treaty are remarkable. The treaty not only eliminated an entire class of nuclear missiles but also “brought about a new standard of openness by creating a 13-year on-site verification regime of unparalleled intrusiveness.”4 Furthermore, the treaty came about during a period when publics were incensed by their governments’ nuclear-weapon decisions. The INF Treaty negotiators displayed a responsiveness to those concerns that is today difficult to imagine, mostly because the public has lost interest in nuclear issues. Most importantly, the INF Treaty proved the main principle of what is required in international negotiations: the outcome might not be symmetrical, but each side must see that it has gained a result that is right for its own national security.

The Ghosts of Old Issues
When one considers the period during which the INF Treaty took shape and was negotiated, 1979 to 1987, it is enlightening to see how few

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of the ghosts of old issues remain. The demise of the Soviet Union and Warsaw Pact had a profound effect, rendering some issues immediately obsolete but in some cases having a follow-on effect that has taken a longer time to unfold. Changing attitudes toward NATO’s role and missions and the whole U.S.-European relationship is a good example of this phenomenon. It would be ironic if Russia’s temper tantrum over the CFE Treaty drove the United States and Europe back into each others’ arms.

In the 1970s and 1980s, the security elites on each side of the Atlantic were gripped by the notion of “strategic coupling,” ensuring that the United States would be linked to its NATO allies not only through a standard conventional alliance, but also through the presence of nuclear weapons on the territory of Europe. Under the theory of flexible response, if the Soviet Union attacked NATO, it would receive an appropriate response from nuclear systems in Europe, but it also risked an attack from U.S.-based systems. The link would extend from the nuclear systems in Europe directly back to U.S. strategic nuclear systems. The Europeans feared that if any link in this chain were broken, then the United States might not respond to an attack on Europe. Some feared the United States would not be willing to risk a nuclear attack on its territory to defend Europe from Soviet aggression.

In fact, that fear underlay one of the original reasons why the INF issue arose: when the Soviets began deploying the highly accurate, intermediate-range SS-20 missiles in the 1970s, they disturbed the logic chain, for NATO had no missiles of the same range or accuracy. In theory, the Soviets could have attacked NATO with the SS-20 and, having a choice between a short-range response that would not touch Soviet territory and a response involving U.S. central strategic systems, NATO would be left with no choice at all. Again, the Europeans feared that the United States might not be willing to respond to an attack. As Lynn Davis wrote in 1988, “NATO governments argued that the capability to strike the Soviet Union with systems based on land in Western Europe was necessary in order to convey to the Soviet Union a real sense of risk from any aggression on the continent.”5

Today, strategic coupling involving nuclear weapons has receded as an issue in Europe, partially as a result of the INF Treaty, which allowed the Soviets to achieve a part of one of their key strategic goals: a significant demuclearization of NATO Europe. Their accomplishment was tempered by what the United States and NATO were able to achieve through the treaty: the dismantlement of a class of highly accurate Soviet missiles that had threatened Europe. Just as in any good treaty, the INF Treaty allowed both sides in the negotiation to succeed.

All that is left in NATO Europe is a small number of nonstrategic nuclear weapons that can be delivered by aircraft; estimates place the number of warheads at about 480.6 To be sure, the United States and its NATO allies have shied away from removing this final nuclear link between them, seeing it as a sign of continuing political ties and a hedge against Russian revanchism. Meanwhile, the Russians continue to deploy a large number of strategic and nonstrategic nuclear weapons that could be delivered against NATO Europe in a conflict.7 In fact, Russian military doc-

trine has in latter years put a greater emphasis on a possible range of nuclear responses to aggression against Russian territory. This resurgence of flexible response, however, this time in Russian hands, has not generated a desire to mirror-image the policy in NATO Europe.

Instead, NATO is today obsessed about its future as an alliance. Members argue about the ways in which it should operate outside of Europe, how far it should enlarge, what to do about terrorist threats, and what the relationship should be with the United States. NATO’s future has little to do with nuclear weapons. They have faded from the policy calculus.8

Public Interest, Public Protest

Another legacy of the INF Treaty is the limited debate on NATO nuclear policy that is now the norm. Nowadays, rather than stumping the strategic value of such arms, European governments prefer to keep quiet about them, concerned that public opinion could be aroused against the continuing deployment of U.S. nuclear weapons “close to home.” This tendency appears to reflect the loud and politically painful protests that took place around the deployment of new intermediate-range missiles in NATO countries during the buildup to the treaty.

The role of the public in the INF debate was quite pronounced from the mid-1970s, when the United States and its European allies first broached the idea of deploying offensive systems to balance the new Soviet SS-20s.9 In part to respond to public concerns, President Jimmy Carter in 1979 suggested a policy that was unique at the time, the so-called dual-track decision. Strobe Talbott described it succinctly: “The U.S. would offset the Soviet missiles by deploying a new generation of its own ‘Euromissiles’—the Tomahawk cruise missiles and Pershing II ballistic missiles—while at the same time making a good-faith effort to negotiate with the U.S.S.R. a compromise that would scale back the missiles on both sides.”10 Thus, the United States and its NATO allies would be deploying weapon systems only to hope to bargain them away in arms control negotiations.

This “bargaining chip” approach was one facet of U.S. and NATO strategy throughout the INF Treaty negotiations, although the dual track was tempered in 1981 by President Ronald Reagan’s offer of a “zero option.” Always the great communicator, Reagan apparently told his negotiators that he wanted a proposal “that can be expressed in a single sentence and that sounds like real disarmament.”11 Reagan did not like the notion of de-
strategy and the zero option that became known as the “interim solution”: the United States would deploy some missiles in Europe, with the goal of negotiating them all away in the future.

In retrospect, Reagan had the right idea in making a proposal that was comprehensible and appealing to the public. His instincts were important because publics in the United States and Europe had been angered over U.S. plans to deploy a new neutron bomb in Europe, and their protests extended quickly and seamlessly to new NATO INF deployments. In the 1980s, this led to well-orchestrated, long-lasting protests. The best known of these took place at Greenham Common, the British air base that was to be the site of the deployments of GLCMs under the interim solution. Colin Powell, who at the time of the protests was national security adviser to President George H.W. Bush, recalled them in a 2002 interview when he was secretary of state for George W. Bush:

Greenham Common...It’s where we put the GLCM, the ground launch cruise missile. And nobody knows what a GLCM is anymore. But in those days...every capital in Europe was in arms over this problem. Remember the ladies at Greenham Common? Surrounding the place and marching—don’t you dare bring these missiles here. We brought the missiles there, and we survived that, and the alliance was strengthened. And what did we do about it four years later? We took the missiles out when the INF Treaty was signed. I was proud to sign that one, to be one of the negotiators in that one.12

As Powell so clearly expressed it, “nobody knows what a GLCM is anymore,” and that is the crux of the difference today. The INF interim solution did produce results, in part because of strong public engagement.

It is interesting to consider how greater indifference to nuclear weapons might also influence legislative decision-making. In the 1970s and 1980s, the interplay between Congress and parliaments in European countries made for some interesting outcomes in the INF debate. In 1979 the German Social Democrats took an explicit decision to tolerate the NATO dual-track approach as long as the West would forgo deployment in exchange for substantial reductions of Soviet INF. The Soviets in their turn attempted to influence this dynamic, proposing a moratorium on INF deployments while negotiations were ongoing. NATO rejected this proposal.13

Reagan’s zero-option decision also produced a powerful dynamic. As Michael Gordon reported, few experts thought that the proposal could actually be implemented, but they welcomed it as an opening gambit in the play for Western European public opinion. Congress, moreover, backed up the effort. “Congress has tended to support a popular president in his first arms control initiative by passing a supportive, nonbinding resolution.”14

Today, such involved interplay among governments, parliaments, and publics is difficult employing some missiles in Europe in exchange for Russian restraint in deploying the SS-20, the proposal that was being touted by the Department of State as “negotiable” with the Soviets. Assistant Secretary of Defense Richard Perle posed a one-sentence idea: the United States would cancel its Tomahawk ground-launched cruise missiles (GLCMs) and Pershing II deployments if the Soviet Union would dismantle its SS-20, SS-4 and SS-5 intermediate-range missiles.

Perle’s rationale was that this zero option would not be negotiable with the Soviets, but it perfectly fit Reagan’s demand for a simple, succinct disarmament proposal. In the next few years, the Soviets did respond angrily to the proposal because it would have required them to give up already deployed missiles for systems that had not yet been built. Thereafter, Undersecretary of State Richard Burt engineered a marriage between the dual-track

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Table 1: Intermediate-Range Nuclear Forces Treaty

<table>
<thead>
<tr>
<th>Signed:</th>
<th>Dec. 8, 1987 by the United States and the Soviet Union</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entered into Force:</td>
<td>June 1, 1988</td>
</tr>
<tr>
<td>Purpose:</td>
<td>To eliminate all ground-launched ballistic and cruise missiles and their launchers, with ranges from 500 to 5,500 kilometers. Parties also agreed not to produce or test short and medium range missiles.</td>
</tr>
<tr>
<td>Total US missiles eliminated:</td>
<td>846</td>
</tr>
<tr>
<td>Soviet missiles eliminated:</td>
<td>SS-20, SS-4, SS-5, SSC-X-4, SS-12, SS-23</td>
</tr>
<tr>
<td>Total Soviet missiles eliminated:</td>
<td>1846</td>
</tr>
<tr>
<td>Missile eliminations completed:</td>
<td>June 1, 1991</td>
</tr>
<tr>
<td>Inspection regime in force:</td>
<td>June 1, 1988 - May 31, 2001</td>
</tr>
</tbody>
</table>

—Jane Vaynman

to imagine. Nuclear decisions, such as they are, are played out in national environments with relatively few interested parties. Examples of this phenomenon were the recent British parliamentary decision on Trident submarine modernization and the congressional decision not to proceed with the new nuclear warhead known as the Robust Nuclear Earth Penetrator, or RNEP. Although they attracted a great deal of attention in expert communities, these decisions generated relatively little public or legislative attention and certainly not much in the way either of protest or celebration. They also did not draw attention among other parliaments, even those who should have been interested, such as the Russian Duma.

Effective Verification: Necessity or Mania?

Verification is a third critical legacy of the INF Treaty that has since faded from view. In his 1988 testimony before the Senate Foreign Relations Committee, Secretary of State George Schultz took care to portray how unique the INF verification regime was at the time:

We are breaking new ground with this treaty. On-site inspection is a major forward step in the U.S./Soviet nuclear arms control agreements. We shouldn’t be surprised if the process is not always smooth.... When differences surfaced we worked them out. Some of these problems were resolved at the working level, others required attention from more senior people.... During my meetings with Foreign Minister [Eduard] Sheverndnadze last week, we ironed out the nine key technical details related to the onsite inspection regime.15

The INF Treaty was helped by the fact that it was a total global ban on short- and intermediate-range nuclear missiles, which made the treaty easier to verify. The Soviet SS-4, SS-5, and SS-20 missiles and the NATO Pershing-2 and GLCMs were to be totally destroyed. Although other long-range, land-attack cruise missiles would remain in deployment in both countries, they could be air- or sea-launched but not ground-launched.

Thus began a rapid move to more intrusive verification, which culminated in the 1991 START and its 500-page Verification Protocol. START came into force in 1994 and played a vital role in the stable downsizing of U.S. and Russian nuclear arsenals during what could have been a chaotic period after the breakup of the Soviet Union. Without the existence of START and its verification regime, the denuclearization of Belarus, Kazakhstan, and Ukraine would have been difficult, perhaps even impossible. The INF Treaty paved the way for this accomplishment, establishing many important precedents, especially in the realm of on-site inspections.

With the advent of the administration of President George W. Bush, however, intrusive verification fell out of favor. Since coming to office in 2001, Bush has essentially embraced two principles in his arms control policy: emphasize unilateral action and be willing to discard arms control mechanisms perceived as outdated.

Verification fell victim to both principles very early, with the president and his top officials stating repeatedly that, unlike during the Cold War, the Russians are currently friends of the United States. The administration argued that legally binding treaties are not needed among friends, nor are strict verification measures. The Strategic Offensive Reductions Treaty (SORT), signed in 2002, was a partial expression of this model. It was a legally binding treaty without any verification measures attached. In 2006 this argument further evolved into a U.S. unwillingness to extend START beyond its expiration at the end of 2009.

Bush was no doubt correct to challenge the arms control assumptions of the Cold War and to consider how to simplify and expedite the U.S.-Russian relationship in this sphere.
There is danger, however, in too much revolutionary activity of this sort. As I have argued in other writings, “[W]ithout broad consensus in both capitals that U.S.-Russian cooperation is vital, the two countries might be tempted to walk away from interaction in sensitive arenas such as nuclear arms reduction once the binding regimes are lost.”16 Today, with the United States willing to let the START regime lapse and Russia taking aim at the INF Treaty and with relations between the two countries at a new post-Cold War low, the two countries seem perilously on the brink of this outcome.

Thus, the concern for effective verification that was a hallmark of the INF Treaty has been forced out in recent years by a strong policy drive that has had some logic to it, needing to balance the stringent verification mechanisms of the Cold War with some recognition that our relationship has changed. Even if the mood between Moscow and Washington has turned sour, we still have far greater mutual access and transparency than we had during the Cold War. That logic, although imperfect and unevenly implemented, in part guided Bush administration policies in the area of verification.

As a result, the policy community needs to look forward, beyond the arms control assumptions of the Cold War—this was the partial accomplishment of the Bush administration—and back, to the major arms reduction agreements achieved during the 1980s and 1990s. The search should be twofold. The first goal should be to look for constants to provide a firm foundation for mutual confidence and cooperation; the second should be to look for innovations that will help the agenda to move forward quickly and efficiently, without the burden on operating flexibility that Cold War-era measures sometimes carried with them. These goals should apply to cooperative efforts regarding arms reduction and control as well as nonproliferation. Here, once again, the legacies of the INF Treaty are important to consider.

Stocktaking on INF Legacies

For most of the years since he uttered the phrase, Reagan’s admonishment to “trust but verify” has been a watchword in U.S. and Soviet/Russian arms negotiations. Both sides recognized the value of the simple concept, but both also recognized its limitations. As Schultz said during his Senate testimony in support of the INF Treaty, “There is no such thing as absolute, 100 percent verification. But it is our judgment that this treaty, through its successive layers of procedures, contains the measures needed for effective verification…. The bottom line is that the verification provisions of this treaty get the job done.”17

Today, with many years of mutual experience in implementing new programs that have taken shape since the Cold War, it makes sense to consider whether we now have the correct layers in place. Some no doubt can be discarded, while others adjusted and still others strengthened. The programs that should be considered for the roles that they already play in enhancing mutual confidence are cooperative threat reduction, military-to-military contacts, and the science and technology programs carried out under the aegis of the Warhead Safety and Security Exchange Agreement and other laboratory-to-laboratory contacts.

Taking stock of the relationship that the United States and Russia have established under these programs would provide some perspective on the greater mutual knowledge accumulated during the 15 years since the breakup of the Soviet Union and would also enable an assessment of continuing problems areas. Military-to-military contacts, for example, have often fallen prey to political differences between the two capitals and therefore might have only a limited value for modernizing verification concepts. Others, however, particularly the science exchanges, might provide some new ideas for verification technologies that could simplify and benefit not only U.S.-Russian verification efforts, but also broader multilateral efforts to enhance safeguards in any number of arms control and nonproliferation regimes. These would
be “new layers” in the model that Schultz described for effective verification.

These new layers, however, should be designed to take account of the new realities, in particular the more open and extensive interactions between Russia and the United States. Even if we are not great friends, our relationship is far more mutually transparent than it was during the Cold War. New layers of effective verification should therefore have one basic characteristic: to ease the burden that Cold War intrusiveness placed on operations in the U.S. and Russian armed forces. For example, a number of notifications of missile and aircraft movements required by START could be streamlined or eliminated at this time.

Yet, the base layers—data exchanges, on-site inspections—will continue to play a role and should not be discarded. In this sense, the INF Treaty was in itself a vital innovation, and its legacy continues intact.

Another important legacy of the INF Treaty is the basic rule that drove the negotiations: asymmetric reductions may result in equal security. Gltman stated it succinctly when he said, “[R]ecognition of the principle of equal rights and limits and of asymmetrical reductions to reach equality can be useful precedents in other arms control negotiations.”

Today, this rule will be important if the United States and Russia are to consider further reductions in nuclear systems that would begin to touch nuclear warhead stocks. Up to this point, the elimination of central strategic weapons as well as intermediate-range nuclear weapons has focused on launch systems rather than on warheads. The two countries have been free to stockpile warheads or eliminate them per national policy, with no impact or influence from arms control negotiations.

This was a judicious approach while the numbers of deployed systems still remained high. As deployed numbers of warheads have come down under successive treaties—the INF Treaty, START, and SORT—imbalance have emerged that have given rise to tension between the two countries. For example, Russia has complained that the United States is converting launchers removed from strategic nuclear missions to conventional missions but stockpiling all of the warheads. According to the Russian argument, the conventional launchers could therefore be returned to nuclear missions at any time.

The U.S. side counters that technical and operational changes to the launchers would preclude this from happening. Furthermore, the United States argues that its policy and budgetary processes are quite transparent and the Russians would have considerable warning if such a reversal were to be contemplated. Both of these arguments have truth to them.

Russian concerns have been exacerbated by decisions they took with regard to their own nuclear warhead elimination program. When negotiating the withdrawal of nuclear weapons systems from Belarus, Kazakhstan and Ukraine in 1993-1994, the Russians committed to eliminate all the strategic nuclear warheads that were returned from Kazakhstan and Ukraine, a number that amounted to more than 3,000 warheads. As a result, the Russian warhead elimination program has focused on strategic warheads, resulting in the elimination of warheads from some of the most powerful and effective Soviet-era nuclear systems, the SS-18, the SS-19, and air-launched cruise missiles.

Now, when the Russians observe that the United States is not destroying but stockpiling warheads from the U.S. counterpart systems, Trident and Minuteman, they are concerned, even though there were no mutual commitments to eliminate particular warheads. The United States, for its part, argues that it has been destroying a large number of nonstrategic nuclear warheads while the Russian Federation has not or at least has not provided information about its destruction program for nonstrategic warheads, as was agreed by Presidents George H.W. Bush and Mikhail Gorbachev and later confirmed by President Boris Yeltsin under the Presidential Nuclear Initiatives (PNI) of the early 1990s.

Thus, with regard to warhead elimination, the United States and Russia have arrived at a complicated juncture in which discussion, never mind negotiation, is difficult. This is a good example of a situation where the INF legacy rule that asymmetric reductions may result in equal security is important. If the United States and Russia could begin a consultation aimed at a better mutual understanding of their warhead elimination programs, they might be able to proceed in the future to agree that reductions will continue in a way that is asymmetric but will produce equal security results.

Such agreement may or may not result in a legally binding arms control treaty. The two sides might come to an understanding that because of continuing sensitivity to access at warhead-elimination facilities, they would proceed on unilateral tracks to eliminate warheads while providing for a greater exchange of information on the activities. They might decide that they are ready to negotiate a transparency arrangement that would accompany such unilateral elimination activities. They might decide that they are ready to negotiate a legally binding treaty with a full verification regime.

The final legacy of the INF Treaty that has powerful resonance today is the understanding that INF systems were never central to deterrent capabilities for the United States or Russia. After all, theater targets can be
at the time that “eliminating American missiles from Western Europe is such a desirable foreign-policy objective (for the Soviet Union) that it is worth accepting a disproportionate cut in deployed weapons that are not central to its deterrent capability.” Gordon also commented that “it would be easy for the Soviet Union to circumvent an INF pact by deploying more strategic missiles.”

Some Russian experts who have been insisting that the country should withdraw from the INF Treaty have ignored this reality, focusing on the fact that other countries around the Russian periphery—China, North Korea, Iran—are acquiring intermediate-range missiles while Russia, constrained by the treaty, has none. More recently, however, the Russian debate on the INF Treaty has begun to recognize the argument and, further, to acknowledge that a Russian withdrawal from the treaty could negate the security gains that the Soviet Union realized in Europe after its entry into force. Whether this realization will prevent the Russians from taking action to withdraw from the treaty is another matter. Much will depend on political dynamics between Moscow and Washington and Moscow and European capitals.

The INF Treaty’s Contribution
Looking back on the INF Treaty, its story mirrors the history of U.S.-Russian relations and European security policy during the transition from the Cold War. Many of the legacy issues of the INF Treaty have faded in importance because of the radical changes in geopolitical circumstances, particularly the breakup of the Soviet Union and demise of the Warsaw Pact. Issues such as the need for strategic coupling, which so drove INF deployments in the 1970s and 1980s, have largely disappeared.

It is possible that they could return to importance if, for example, Russia insists on withdrawing from the INF Treaty and deploying intermediate-range missiles facing Europe. With that step, however, the Russian government would undo one of its great negotiating coups of the Soviet era, which was to have been urged at the ministerial level in September 2007. This date is late in coming, given the looming demise of START, and it behooves the expert community to think urgently and creatively about how to address this problem.

Of course, START’s very complexity underlies a number of frustrations in the bilateral relationship and has led to calls for a simpler approach more in line with post-Cold War realities. Even given current tensions between Moscow and Washington, this is a goal worth pursuing. We should be paring verification requirements to the essence and at the same time considering what additional transparency and mutual confidence can be gained through other mechanisms, such as joint technology cooperation and cooperative threat reduction. How to broker this link-up between some essential verification measures and new, more flexible transparency mechanisms is the critical challenge. Certainly, the INF Treaty is a good place to start, for its verification regime is a proven foundation that led straight to the more developed regime in START. It is a legacy worth preserving.

The INF Treaty could become a source of tension between the United States and Russia, despite its reputation as a major stepping stone on the road to ending the Cold War.
ENDNOTES


2. Previously, arms control treaties had depended on so-called national technical means of verification (NTM), satellites and high-flying aircraft that could see what was going on in a country without setting foot in it. NTM have important limitations, however, that can only be overcome by on-site inspections.

3. This issue surfaced first in 2005, when Minister of Defense Sergei Ivanov asked Secretary of Defense Donald Rumsfeld how the United States would respond if Russia withdrew from the INF Treaty. Reportedly, “Mr. Rumsfeld told Mr. Ivanov that he did not care…but the Pentagon denied this.” See Hubert Wetsel et al., “Russia Confronted Rumsfeld With Threat to Quit Key Nuclear Treaty,” Financial Times, March 9, 2005.


7. Amy F. Woolf, “Nonstrategic Nuclear Weapons,” CRS Report for Congress, January 9, 2007, p. 20. The Congressional Research Service estimates that the total number of Russian nonstrategic nuclear weapons is 3,000-8,000, the lower number being deployed weapons, the higher including those in central storage facilities.

8. For an excellent review of current NATO policy debates, see Martin Butcher, “NATO, Riga and Beyond,” Disarmament Diplomacy, No. 84 (Spring 2007).


11. Ibid.


16. Rose Gottemoeller, “Arms Control in a New Era,” The Washington Quarterly, Vol. 25, No. 2 (Spring 2002), p. 46. I would add that this problem could seriously affect cooperation on important nonproliferation issues, such as nuclear material protection, control, and accounting.


18. Kampelman and Glitman testimony.

19. According to Susan Koch, “A total of 3,300 strategic nuclear warheads have been removed from Ukraine, Kazakhstan and Belarus,” Susan Koch, Statement before the Senate Armed Services Committee Subcommittee on Emerging Threats and Capabilities, March 6, 2000.


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