

Beyond Deterrence: A Global Approach to Reducing Nuclear Dangers

A Report on US Nuclear Weapons Policy by the New Nuclear Direction Dialogue

a project of the Henry L. Stimson Center

Report No. 38

July 2001

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About the Report

2002 will mark the fortieth anniversary of President John F. Kennedy's famous commencement address at Rice University, in which he challenged his country to face a daunting task—one that would take courage, the application of cutting-edge science and technology, dedication, time, and money. "We choose to go to the moon. We choose to go to the moon in this decade and do the other things—not because they are easy, but because they are hard . . ."

Kennedy spoke these words at a time of great uncertainty and global insecurity. The Cold War was being hotly prosecuted. The Bay of Pigs invasion, which was intended to drive the Soviet-backed Communists out of power in Cuba, had failed miserably, just three months into the Kennedy presidency. The Cuban missile crisis was only a month away, and the leader of the Soviet Union, Nikita Khrushchev, was busy pounding his shoe against the podium in the United Nations General Assembly. There was a real fear that the Cold War might heat up all the way to a nuclear exchange.

2001 marks the tenth anniversary of the historic end of the Cold War and the disintegration of the Soviet Union. The United States stands as the sole superpower with unequalled dominance and power in political, military, and economic spheres. Yet, there continues to be great uncertainty in the global security environment as the United States is still challenged to face a remaining daunting task, reducing the threat of nuclear weapons. Like the challenge that President Kennedy issued America almost forty years ago to go to the moon, this one, too, will take courage, the application of cutting-edge science, diplomatic dedication, time, and money. Now, as then, the task will be hard, but it is one the United States must choose to take on if it is to secure the peace of the Cold War victory. Despite some major successes in the ten years since the end of the Cold War, there is still a great need to chart a course that leads to a similar giant step for humanity by drastically decreasing the threat of nuclear weapons and other weapons of mass destruction (WMD).

The New Nuclear Direction Dialogue (N2D2), a project of the Henry L. Stimson Center, took on this challenge to chart just such a course. This report is the result of that effort. Our approach involved assessing the prospects for reducing the roles of nuclear weapons, and thus their dangers, within a global security context. To assist us in this project, we consulted with over thirty experts on nuclear weapons and national security policy. They were chosen from a wide variety of backgrounds, government service, and regional sub-specialties. Each of the experts was asked to respond to a set of questions that were designed to provoke fundamental reassessments and new approaches to the wide range of issues surrounding US nuclear weapons policy.

This report represents a synthesis of the experts' responses, as well as an analysis of the existing body of research on these pivotal issues and recent events. It reflects the views of the N2D2 project staff only.

It is the hope of the N2D2 project that this report will help to spark policymakers, academics, and the public at large to engage in a much-needed discussion about US nuclear weapons policy. The United States stands at a moment in history of unparalleled possibilities. Without dismissing some very real security threats, never has a nation had such a window of opportunity to rethink and redefine its fundamental security structures. The United States faces no global rival and wields the political, military, and economic wherewithal to reshape the role nuclear weapons play in a global security environment.

Without an overarching framework pointing the way toward greater collaborative security, unilateral decisions on nuclear weapons policy may appear disjointed, out of step, and at odds with the larger purpose of reducing the threat from nuclear weapons—leading to less, not greater security and stability. With the proper course, the United States can lead the global community out of the Pandora's box of nuclear weapons philosophy and toward sensible policies of mutually reinforcing, reassuring security.

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Chapter 1

Introduction

or most of the last half of the twentieth century, the world lived under the threat of nuclear devastation stemming from the ideological competition and nuclear standoff between the United States and the former Soviet Union. Nuclear deterrence was the guiding strategic concept during the Cold War whereby both sides possessed thousands of nuclear weapons to hold each other's high-value targets at risk. Nuclear deterrence also required an operational force posture designed to demonstrate that the use of these weapons against their target sets was credible.

Clearly, a full decade out since the end of the Cold War, nuclear deterrence as it was once practiced is no longer applicable. That is not to say that nuclear deterrence is no longer necessary. For the foreseeable future, ensuring that no nation could believe that it could gain from using nuclear weapons against the United States and its allies must be the basis of US nuclear policy.

However, the dramatic changes that have brought into question the continued relevance of mutual assured destruction have presented rich opportunities for the United States to reduce the presence and prominence of nuclear weapons. The Soviet Union, our former Cold War foe, no longer exists. The challenge for the United States is to build a new security relationship with its successor, Russia, within a new international security framework.

That will require major new thinking within the US nuclear policy establishment about the roles of these weapons not only for the United States, but also globally. It will also require leadership to reduce both the real and perceived reliance on them, while increasing security overall. Fundamental to a reexamination of the roles and utility of nuclear weapons in a post-Cold War environment is an assessment of who is being deterred from what action that could be detrimental to the security of the United States and our allies. That calls for a thorough analysis of, as well as an appreciation for, the security concerns of our friends, foes, and potential foes alike.

The logical place to start is with Russia. While the United States and Russia are no longer enemies, they are not friends, either. The nuclear hangover from the Cold War continues to cloud this relationship. While major steps have been taken to reduce nuclear suspicion and competition, nuclear weapons continue to be a central focus of their bilateral agenda. Visibly increased US attention to Russia's sensitivity about its decline as a political and military superpower could go a long way toward encouraging Moscow to reframe and redefine its nuclear policy objectives and thus its deterrence requirements. Transforming this relationship still holds the promise for establishing stable deterrence at significantly lower levels of nuclear weapons.

US-China relations have the greatest long term potential for a new Cold War. China's security concerns regarding the credibility of its nuclear forces and its relations with Taiwan pose major challenges to the United States. China, as does Russia, is likely to play a prominent role in sustaining a stable global deterrent environment.

The series of tit-for-tat nuclear explosions by India and Pakistan in 1998, adding them to the acknowledged nuclear club, has significantly heightened potential consequences of continuing tensions on the Indian subcontinent. Deterrence is shaky at best, given the spate of military clashes between them since their nuclear tests. China's deterrence goals also figure prominently in this unstable situation.

The emergence of nuclear, chemical, and biological threats from so-called rogue states perhaps poses the greatest challenge to deterrence. North Korea's weapons of mass destruction and ballistic missile programs top the list of these threats, including the proliferation of both weapons and missile technology.

Deterring WMD threats in the post-Cold War era and reducing the presence and prominence of nuclear weapons do not have to be mutually exclusive. As the lone remaining superpower, the United States has the strength—and should have the courage—to lead the way toward reducing dependence on nuclear weapons, and thus enhancing the global security environment.

This report seeks to facilitate US efforts toward charting this course. First, it examines the global roles of nuclear weapons as they pertain to the security environments of nuclear states and recommends US actions regarding each of the states. Next, it looks at nuclear weapons and other weapons of mass destruction and US security. The report then provides a set of core principles that should support and reflect US commitment to a future where the roles, numbers, and salience of nuclear weapons are significantly diminished. It offers specific recommendations, consistent with these core principles, in three areas: nuclear testing, nuclear targeting, and ballistic missile defenses. The report concludes with a description of the end state that these core principles are likely to lead to; the steps that make the transition to the end state possible; and a discussion of the role the public should play in engaging their policymakers on these critical issues.

Chapter 2 Global Roles of Nuclear Weapons

RUSSIA

For the successor to the former Soviet Union, nuclear weapons still confer great power status to a country whose claim to such standing would be hollow otherwise. For that reason, it is highly likely that Russia will have little interest in giving up its status as a major nuclear power in the foreseeable future and will expect to be treated accordingly, especially in its relations with the United States. The psychological impact of Russia's conventional military power deterioration to only a shadow of its former stature will continue to play a major role in its commitment to a shrinking but still powerful nuclear force.

It should come as no surprise then that Russia is moving toward greater reliance on nuclear weapons, not less. The deterioration of its conventional military capability, at a time when the US-led North Atlantic Treaty Organization (NATO) alliance is expanding closer to its borders, has prompted the shift in its nuclear policy. Ironically, this same disparity in conventional capability was the basis for NATO's reliance on nuclear weapons during the Cold War.

In April 2000, the Russian government approved a national security strategy that laid out a new doctrine authorizing Russian troops to be the first to use nuclear weapons in a conflict where they faced large-scale aggression or were attacked with weapons of mass destruction. The document warned of the potential threat from US military pre-eminence and the expansion of NATO closer to Russia's borders.

Viewing US efforts to deploy a ballistic missile defense outside of the provisions of the 1972 Anti-Ballistic Missile Treaty—or possible abrogation of the treaty altogether—as a threat to its nuclear deterrent, Russia's President, Vladimir Putin, has threatened to respond to such a move by Washington by rescinding all other arms treaties, both nuclear and conventional. Moscow has consistently called on the United States to work collaboratively to reduce offensive forces and has more recently acknowledged a growing threat from rogue state weapons of mass destruction. President Putin has suggested that the United States and Russia jointly study the missile threats from rogue states presumably leading to some kind of joint theater missile defense against such threats.

From Moscow's perspective, unless the United States responds favorably to its most basic concerns, it has little incentive to reduce the political, military, or psychological value it attaches to nuclear weapons. While Russian nuclear force levels are all but certain to face dramatic reductions due to economic difficulties, the dangers they pose could increase. Accidental or unauthorized launch of Russian missiles, the theft or sale of weapons and fissile materials, and scientists and technicians selling their services to rogue states or hostile non-state actors still pose an increasing threat to US and

international security. Russian cooperation to address these dangers, as well as those stemming from Russia's large chemical and biological weapons infrastructure, is important to the security of the United States and our allies. The United States should take all practical steps to strengthen the US–Russian cooperative threat reduction programs. An important and eminently practical step is to focus intensely on resolving the differences between Moscow and Washington on approaches to defense against rogue state weapons of mass destruction.

The current roles of nuclear weapons for Russia and the policies reflecting those roles can only lead to the reduction of the security of the United States and that of the global security environment. Prudent action by the United States is needed to change this situation. We recommend that the United States:

- Treat Russia with dignity and in a manner that would make them a true strategic partnercooperate with Moscow to the fullest extent that its leadership is willing to reciprocate. Even though Russia is no longer the threat to the United States it once was, US actions that discount Russia's history and its current status as a major power that still intends to be a player on the world stage could have negative security consequences for the United States as well as the global security environment. Continued marginalization of Russia further alienates the country and undermines the leadership of President Putin, giving Russian hardliners greater political strength than they would have otherwise. The United States should actively engage Russia to address common concerns across a range of security issues. The nature of that engagement will certainly impact future NATO expansion, the transition to a security environment that includes missile defenses, and the future viability of the nuclear nonproliferation regime. Surely the United States must not become so sensitive to Russian concerns as to allow Moscow to unduly influence US policy decisions or to prevent Washington from being openly critical of Russian behavior that conflicts with US positions and values. But by acknowledging Russia's continued status as a major power, and dealing with Moscow accordingly, Washington can avoid both extremes.
- Coordinate further offensive reductions with Russia in a parallel, reciprocal framework that includes agreements on limits on non-deployed warheads and the destruction of excess warheads. The benefits—predictability and stability—of previous mutual agreements between the United States and Russia to reduce their nuclear arsenals must not be lost. While unilateral reductions by the United States may make for expedience and flexibility, they may not be sustainable nor engender confidence by Russia or the international community. Without START II (the second Strategic Arms Reduction Treaty) going into force, the chief accomplishment of that treaty—the elimination of missiles with more than one warhead, or

Multiple Independently Targetable Reentry Vehicles (MIRVs)—is lost. The vulnerability of multiple warheads on a single silo-based missile to a pre-emptive counter-force attack was a primary focus of START II negotiations. Without START II, MIRVed missiles and the technology to produce more of them will persist, perpetuating their destabilizing impact. Unilateral reductions in deployed warheads will not address this key stability issue unless accompanied by mutual agreement with Russia to eliminate silo-based MIRVed missiles. Moreover, unilateral reductions cannot de-link the inextricable relationship between offensive forces and missile defenses. Russia is much less likely to reduce its nuclear forces to the minimum it desires if it cannot reach a satisfactory agreement with the United States on missile defenses. The most economic, and therefore, most likely approach for Russia to maintain higher numbers of warheads is to retain heavy (MIRVed) missiles.

- Continue and increase the funding for cooperative threat reduction efforts. The so-called Nunn-Lugar programs implemented at the end of the Cold War have been arguably the single best use of taxpayers' money in terms of reducing the threat of nuclear weapons, as well as the threat of chemical and biological weapons. Various programs run by the State, Defense, and Energy Departments have provided invaluable service in securing, protecting, and monitoring the excess warheads and fissile materials in the former Soviet Union. Likewise, they have also stemmed the defection of scores of once highly paid and privileged WMD scientists and technicians to rogue states, organized criminal syndicates, and hostile non-state actors. These dangers were characterized as "the most urgent unmet national security threat to the United States" by the highly regarded Russia Task Force's January 2001 paper, "A Report Card on the Department of Energy's Nonproliferation Programs with Russia," cochaired by former Senate Majority Leader Howard Baker and former White House Counsel Lloyd Cutler. These cooperative threat reduction programs make a critically important contribution to defense against this threat. Moreover, this unprecedented cooperation and access to Russia's WMD infrastructure is critical to making the transformation of the US-Russia relationship irreversible. It is pivotal to this relationship and essential to the global security environment that these programs not only continue but that the United States increase its funding for them. US-Russian accommodation on offensive reductions and deployment of missile defenses will also be needed to keep these critical programs on line.
- Fully explore Russia's idea for a joint European missile defense system (also see the Missile Defense section beginning on page 23). As the administration of President George W. Bush has now recognized, cooperation with Russia is essential to making a safe and stable transition to a global security environment that includes missile defenses. Moscow's concern for the continued credibility of its deterrent and its likely response to protect it is simply too important a security issue for both countries for missile defense deployment to be pursued

unilaterally. How any NMD deployment proceeds will greatly influence the future importance attached to nuclear weapons. While the joint system that Moscow has proposed involves a more limited system than the United States envisions—mobile, land-based theater missile defenses—the prospect for beginning a cooperative dialogue on this most contentious issue by engaging them on their plan cannot be discounted. Moscow's announced approach to this issue warrants careful consideration. Acknowledging its differences with Washington over the sanctity of the ABM Treaty and the nature of the rogue state missile threat, it proposed that the two countries conduct a joint assessment of the threat to determine specific remedies should they be warranted. This kind of dialogue would go a long way toward including the Russians in efforts to address rogue state threats. Not only that, such a dialogue would ease the concern of European allies that the United States might simply shut Russia out on this front and move directly to deployment of missiles defenses without taking into consideration Europe's or Russia's concerns. And, given the NATO allies' continued uneasiness over US missile defense plans, as expressed in the NATO foreign ministers' meeting in late May 2001, this dialogue could also make missile defenses less of an issue that Moscow could use to divide the Atlantic alliance. The Bush administration's new emphasis on real consultation with foreign capitals on missile defense makes this dialogue possible. Even if Russia and the United States cannot agree on the nature of the threat or on how to best address it, there will have been a process by which each side got a clear hearing and understanding of the other.

CHINA

China is the only nuclear power that has been threatened with nuclear attack by both the United States and Russia. Thus, China can claim with considerable credibility that its reason for developing nuclear weapons was so that it would never again be subject to nuclear blackmail. That is still the declared role of Beijing's strategic nuclear force—a force that is still small, but is adequate to hold major US and Russian cities at risk.

Considering the history of nuclear threats against China, it is telling that it has found a minimal deterrent—some two-dozen ballistic missiles of intercontinental range—to be adequate for its security needs. At one time, this self-restraint could be attributed to, at least in part, economic considerations. That is much less so today. Thus far, it seems that Chinese operational doctrine continues to be based on limited retaliation. If having nuclear weapons facilitates never having to use them, the thinking goes, then there is no need to build more than a minimal number.

China has been engaged in a strategic modernization program to make its deterrent more survivable for some time. Its current missiles are silo-based, liquid-fueled, with the warheads stored separately from the missiles until an advanced state of alert. Beijing is now working on making its missiles mobile and propelled by solid fuel. The program, as described in unclassified sources, will also accommodate multiple warheads per missile and significantly larger total numbers of warheads. The motivation for this expanded capability is not completely clear to those outside the Chinese decision-making process. Still, it seems highly likely that increased tensions over Taiwan, especially US military sales and potential deployment of a theater missile defense for Taiwan, and possible deployment of US missile defenses are adversely impacting China's quantitative and qualitative goals in its nuclear force.

Beijing has expressed strong concern about US plans to deploy a missile defense. It symbolizes to China a growing inclination by the United States to act unilaterally in global security matters in general, and a willingness to ignore China's strategic concerns in particular. The debate now within the leadership is how large their strategic force must be to remain credible. With missile defenses in the equation, China apparently feels that it now must have a larger force to ensure that its nuclear capability can survive a first strike by the United States and still penetrate a US missile defense system. As the Bush administration considers a range of possible basing modes for a missile defense, China considers significant expansion of its nuclear arsenal. The range of possibilities is reported to include as many as 1,600 weapons, though it would be difficult to rationalize such an increase with the limited capabilities that are the declared goal of US plans.

There is considerable pressure to make research and development decisions now to allow for the necessary lead time to test and deploy new systems at higher levels. Beijing would like to have these new systems in place by the time a US missile defense system is anticipated to come on line, between 2005 and 2008. This compressed time frame could likely force the Chinese leadership into debates about rethinking other aspects of its nuclear doctrine, such as its no-first-use policy. How far these debates will go is uncertain. What is becoming more certain is that unless some parameters begin to surface about the size and scope of the proposed US missile defense system, the future size of Chinese nuclear forces remains an open question.

Despite not being a party to the bilateral ABM Treaty between the United States and Russia, China, like Russia, declares the treaty is the cornerstone of strategic stability and is opposed to any missile defenses pursued outside of the treaty's existing provisions. Unlike Russia, China appears less inclined toward any modifications to the treaty that would allow basing modes currently prohibited by the treaty. That is particularly so regarding space-based components.

Consequently, even if the United States and Russia find some mutual accommodation on the ABM Treaty, China's reaction to US missile defense plans could still raise the profile of nuclear weapons in the Asia-Pacific region and undermine nonproliferation efforts. While Beijing might not expand its

warhead count to as many as a thousand, it would likely increase its deterrent well beyond the tens it currently has.

India would be likely to respond by expanding its nascent force to keep pace. That, in turn, would be highly likely to prompt Pakistan to follow suit. Further, the hopes that Beijing might support the Missile Technology Control Regime, let alone join it, which the West has been encouraging China to do, would be dashed. Moreover, pressure might build inside the government to break the international testing moratorium. India's recent endorsement of US missile defense plans will almost certainly strengthen Beijing's resolve to respond in ways that will increase the role and presence of nuclear weapons in the region.

We recommend that the United States:

- Establish a broader relationship with China that reflects mutual respect. Tensions between Beijing and Washington have increased on several fronts in 2001—the diplomatic standoff stemming from the emergency landing of a US surveillance plane on a Chinese island, the US sale of weapons systems to Taiwan, the visit to the United States by Taiwan's president and his meetings with US officials, and the publicly announced US shift away from its policy of ambiguity regarding the defense of Taiwan. Besides the perennial disputes over Taiwan and human rights, there are other thorny lingering issues of concern, such as the US bombing of the Chinese embassy in Belgrade, Yugoslavia and the alleged theft of US warhead designs by Chinese operatives. A concerted diplomatic effort by the United States that engenders mutual respect for each other's security concerns and sovereignty, and that puts the bilateral relationship on a more solid footing is warranted. That the United States is perceived as respectful of China's interests is particularly important in light of the anticipated changes in the leadership there.
- Assure Beijing that US nuclear weapons are not aboard ships cruising off China's coast. Besides the US nuclear-capable submarines roaming under the Pacific Ocean, Beijing continues to doubt that the United States has removed all nuclear capability from all US surface ships. Thus, China says it has adapted accordingly, anticipating a nuclear confrontation with the United States. Providing even stronger assurances could help keep nuclear weapons from becoming the central focus of the US-China relationship.
- Conduct talks with China on how the United States, Russia, and China can cooperate on
 missile defenses. Beijing and Moscow have indicated that their countries would pursue
 greater defense cooperation should the United States decide to go its own way on ballistic
 missile defenses and the ABM Treaty. Pushing these countries closer together to respond to

US efforts on missile defense would not be in the security interests of the United States. Including China in three-way discussions on this issue could help change Beijing's perceptions that the United States is intentionally ignoring its legitimate concerns regarding its nuclear deterrent. Such talks could also give the United States a better understanding of China's modernization program as well as encourage Beijing not to stop cooperating in nonproliferation efforts.

UNITED KINGDOM/FRANCE

The United Kingdom and France are similar in that they both acquired nuclear weapons in support of the United States, as a NATO counterweight to the Soviet Union's conventional superiority in Europe. Both have a "minimum" deterrent capability—several hundred warheads, most of which are on submarines—for the purpose of protecting their vital interests. Although France has been more vocal in its independence regarding national security and nuclear weapons, both still maintain nuclear stockpiles for a common set of reasons: a hesitancy on the part of Europe, as a whole, to be too dependent on the US military for European security; the Cold War nuclear legacy problem; and, the existence of other nuclear stockpiles.

In the post-Cold War period, issues surrounding NATO—continued expansion, US command questions, force structure, missions, nuclear policy—have often caused uneasiness in the US-European relationship. In addition, the priority that Britain and France, along with Germany, have given to the development of a European Security and Defense Policy (ESDP), fielding a military contingent that is, at least nominally set apart from the integrated command and control structure of NATO, will further test not only the differing perceptions between United Kingdom/France and the United States over new security threats but also how to deal best with those threats. As nuclear weapons continue to be an integrated piece of both NATO planning and UK/France defense planning, the challenge on this front will be to reconcile Europe's view of traditional deterrence as stable—and therefore not to be altered—with the US desire to move beyond mutual assured destruction (MAD).

This, in particular, will most impact future roles of nuclear weapons in British and French doctrines, as US efforts to alter deterrence will determine Russia's relationship with Europe, which is of great concern to both countries. Both are concerned about the US-Russian disagreement over the future of the ABM Treaty, especially the possible US abrogation of the treaty. Russia's threat to rescind key arms control treaties, such as the Intermediate-Range Nuclear Force Treaty (INF) as well as the Conventional Forces in Europe (CFE) Treaty, should the United States quit the ABM Treaty or unilaterally deploy a missile defense system, has a direct impact on European security—reintroducing both nuclear and conventional forces that had been removed.

Against this backdrop, London and Paris are also concerned that the US administration's disdain for arms control treaties, in general, and the likelihood that Washington will abandon the START process for unilateral reductions, will make for less stability by undermining the nonproliferation regime. While they are not looking for a confrontation with Washington, they are hoping that, should the United States abandon the ABM Treaty and START process, it will replace the old arms control framework with some kind of cooperative framework that can provide predictability and stability for the future.

Under these circumstances, neither European nuclear power is likely to change its nuclear posture anytime soon. Neither is likely to consider including its nuclear forces in any multilateral nuclear reductions. Before that can happen, major reductions in nuclear weapons and policy changes that demonstrate less dependence on them must be first carried out in the US–Russia context.

Therefore, we recommend that the United States:

- Reassure France and the United Kingdom by pledging to seek reductions with Russia in a
 coordinated way and adhere to the START/ABM process until a new cooperative framework
 is agreed upon.
- Reinforce its commitment to nonproliferation and to making multilateral arms control treaties such as the Nuclear Nonproliferation Treaty (NPT), Comprehensive Test Ban Treaty (CTBT), Chemical Weapons Convention (CWC), and Biological Weapons and Toxin Convention (BWC) more robust.
- Work within NATO to move the alliance toward a no-first-use policy, as a step toward lowering the salience of nuclear weapons in Europe.
- Engage France and the United Kingdom in discussions on multilateralizing the offensive reductions process and missile defenses to include the P-5 states.

INDIA/PAKISTAN

The role nuclear weapons play in the India—Pakistan military standoff presents extremely difficult challenges. The persistently uneasy political environment between India and Pakistan, exemplified but not limited to the question of Kashmir, binds the nuclear weapons policies of these two states together in ways that are impossible to separate. Following the series of nuclear tests by India and the response tests by Pakistan in 1998, the role of nuclear weapons in the relationship has become more explicit.

Prior to the 1998 tests, India had already demonstrated its nuclear capability nearly a quarter century earlier when it conducted a "peaceful nuclear explosion experiment" in May 1974. Its interest in these weapons dates to its 1962 border clash with China. China conducted its first nuclear weapons test just two years later.

Pakistan's nuclear weapon's program began in 1972 following its 1971 war with India. The Indian blast in 1974 caused the Pakistani nuclear acquisition pace to quicken. It is widely believed that China has played a major role in advancing Pakistan's nuclear program.

India, and to a lesser extent Pakistan, has viewed nuclear weapons as critical to achieving great power status in both a regional and global context. As the region has moved to modernize and grow economically, politically, and militarily, nuclear weapons have been an integrated part of this development.

As India and Pakistan each independently seek to maximize their own security and development, the question of the relationship between the two countries is always in the forefront. The varying levels of cooperation and tension indicative in the Kashmir situation and the Lahore Summit are exemplary. As the frame of reference grows to include the greater Asian continent, the complexities increase. India's fear of China's defense modernization exacerbates tensions and may lead to more shrill responses, possibly leading toward a heightened arms race, complete with a robust nuclear component, between China, India, and Pakistan.

Therefore, we recommend that the United States:

- Assist India and Pakistan in establishing confidence-building measures that assure each side
 of the other's command and control of its nuclear forces so as to minimize miscalculations as
 well as establishing confidence-building measures that increase mutual understanding.
- Assist India and Pakistan in an examination of their security requirements that would make it
 possible for their accession into cooperative multilateral arms control agreements, including
 the CTBT and the NPT.
- Avoid unilateral actions that could have an adverse impact on the nuclear dynamic of the region, particularly any actions that would spark an action/reaction between China and India.

Former Secretary of Defense William Perry said the main objective of US nuclear policy in the post-Cold War period should be "the fewest nuclear weapons in the fewest hands." Indeed, it should be. It should also enable the United States, as former senator Sam Nunn said in a March 2001 speech at the

National Press Club, "to move toward zero the risk that nuclear weapons and other weapons of mass destruction will ever be used anywhere, by anyone, whether by design or accident." The recommendations above help to achieve that objective by providing assurances to other states that the United States is willing to cooperate with them to address these threats in ways that reduce the roles of nuclear weapons, both within the context of their relations with individual countries and within a multilateral context.

Chapter 3 Nuclear Weapons and US Security

or the United States, nuclear weapons have three principal roles: deterring a nuclear first strike, deterring a major conventional war, and deterring a chemical or biological attack. In support of these roles, the United States has deployed thousands of nuclear weapons designed to be survivable and credible. Many more weapons are held in reserve.

In the post-Cold War period, the likelihood of a first strike has significantly diminished since Russia is the only country with the capability to do so. Efforts by the United States and Russia to reduce their respective strategic arsenals through the START process and both sides imposing a moratorium on nuclear testing are reducing the perception of reliance on nuclear weapons.

Likewise, the reliance on both US strategic and forward-deployed nuclear forces to deter the once conventional force advantage of the Warsaw Pact armies in Europe has all but evaporated. Former members of the Warsaw Pact are now members of the Atlantic alliance, and others are in line to join—although the Alliance must exercise caution in its further expansion so as to not increase tensions with Moscow. The prospect of an all-out war between any of the major powers is not very high. Clearly the nuclear umbrella that the United States extends over its friends and allies around the world can continue to deter aggression at much lower numbers.

Moreover, the United States' overwhelming conventional military superiority, both in terms of its technological sophistication and global reach, relative to other major powers and potential adversaries, provides a powerful deterrent effect. The so-called Revolution in Military Affairs has put the United States so far out in front of other countries militarily—and the gap only continues to widen—that the prospect of an aggressor launching a direct attack against the United States or its allies is extremely low.

To be sure, chemical and biological threats, especially the existing and emerging ones posed by rogue states, present a significant challenge. In the post-Cold War era, rogue threats, including nuclear ones, are viewed as more problematic because some analysts argue that the leaders of these states, such as North Korea, Iran, and Iraq, are irrational and therefore more likely to use these weapons without regard to the consequences. These states, they argue, are not subject to the logic of deterrence and therefore new low-yield nuclear weapons, as well as missile defense, are needed to enhance deterrence against them.

While we know less about the motives of the leaders of rogue states, that does not constitute evidence that the leaders of these states would be more prone to using weapons of mass destruction than

other nations' leaders. While the existence of the US nuclear deterrent might have an impact on a rogue nation's decision to use chemical and biological weapons, this is not a credible and reliable approach to dealing with these weapons. US conventional strength allows the United States to control many of the circumstances under which an aggressor might threaten the use of chemical and biological weapons. Consequently, conventional forces serve to deter the use of these weapons of mass destruction. If not, the United States could certainly bring to bear enough conventional firepower to exact an effective and proportionate response to such an attack. A conventional response is inherently more credible than nuclear retaliation simply because that response has been frequently used with lesser provocation, while the nuclear response has not been exercised for more than half a century. Further, such a response violates assurances the United States has given under the NPT not to use nuclear weapons against a non-nuclear aggressor.

General John Shalikashvili, in his January 2001 report, *Findings and Recommendations Concerning the Comprehensive Nuclear Test Ban Treaty*, said: "It would not be in our security interest to assign a high profile to nuclear weapons in the US military posture. Better that they remain in the background, for if the world's strongest conventional power needed new types of nuclear weapons, other nations would have even more incentive to acquire them. Any activities that erode the firebreak between nuclear and conventional weapons or that encourage the use of nuclear weapons for purposes that are not strategic and deterrent in nature would undermine the advantage that we derive from overwhelming conventional superiority" (Section III).

Continuing to attribute a role to nuclear weapons for deterring chemical and biological weapons, let alone their considered use in response to a chemical or biological attack, raises the profile of US nuclear weapons and attributes greater value not only to them but to chemical and biological weapons as well.

The phrase "Weapons of Mass Destruction" is usually taken to include nuclear, biological, and chemical, and weapons. The unifying quality among these different types of weapons is the magnitude of the destruction and lethality they inflict. However, a much more accurate grouping of these weapons would put nuclear and biological weapons in one category and chemical weapons in a second, lesser category, mainly because the lethality of these weapons does not come close to that of the other two. In that case, the answers to the fundamental question of nuclear weapons deterring WMD may turn out to be quite different depending on the category of WMD considered.

As well, the question of other WMD constituting an asymmetric threat against nuclear weapons must be looked at from "both ends of the telescope," as it were, and in the context of the regional environment. If nuclear states maintain their arsenals due to perceived WMD threats from their rivals,

then it is equally true that non-nuclear states maintain WMD stockpiles in many cases due to perceived threats from their nuclear rivals—a phenomenon that is especially notable in the Middle East.

Whether or not chemical and biological weapons constitute an asymmetric threat, chemical and biological weapons are largely understood to have little or no military utility, but rather are only considered terrorist weapons. As such, terrorists, by definition, operate outside of conventional military methods and so normal military responses are unlikely to be effective in countering them.

The global trend has been, and should continue to be, to push nuclear weapons into the political and military background as much as possible and, ultimately, as with existing efforts on chemical and biological weapons, to eliminate them altogether. A functioning Chemical Weapons Convention has been put into place. A Biological and Toxin Weapons Convention is in the midst of ongoing conversations, with broad agreement on the principles. As recently as May 2000, the states party to the Nuclear Nonproliferation Treaty in their Final Document at the Review Conference reaffirmed that, "the total elimination of nuclear weapons is the only absolute guarantee against the use or threat of use of nuclear weapons."

By helping to shore up these agreement, especially the CWC and BWC, the United States can then build an international norm for responding to the use of chemical and biological weapons. That norm would entail the full military weight of the community of nations, short of nuclear retaliation, against any nation that used chemical or biological weapons. Through the NPT, the United States can also set the course for drastic reduction in the numbers of and reliance on nuclear weapons that leads to their ultimate elimination.

WMD threats from rogue states notwithstanding, the security of Russian nuclear forces continues to be a major concern. With thousands of Russian nuclear forces on alert, ready to be fired within only a few minutes notice, and the country's early warning satellite capability steadily deteriorating, addressing this threat must take precedence over all others. Included in this threat is the questionable control and safety of excess warheads and fissile materials located throughout the vast Russian nuclear infrastructure. With a demoralized and underpaid—often times not paid—military and an army of nuclear scientists and technicians, it is critical that the United States help make sure these weapons and the materials to make them do not fall into hostile hands.

Current US levels, policies and roles for nuclear weapons, however, cannot adequately address this threat. While Russia will have to reduce its forces for economic reasons, it will not be able to increase its early warning capability for the same reason. Nor will Moscow reduce the alert levels of its remaining nuclear forces or gain complete control over its weapons and fissile materials on its own. While the United States has little control over the Russian conviction that their conventional weakness increases their need to rely on nuclear weapons, we can work to increase confidence in its place in a

stable and secure security environment. Lowering the alert status of US nuclear weapons will increase Russia's confidence and engaging in coordinated offensive reductions will allow for continued cooperative threat reduction.

US actions that reduce the presence and prominence of nuclear weapons in its own posture and policies send a vital message that Washington is reducing its reliance on them. Such actions are not only necessary for creating a global environment where the role of nuclear weapons are drastically diminished, but also for gaining the much-needed cooperation of other nations to help stem the spread of all weapons of mass destruction.

Chapter 4 Core Principles to Guide US Nuclear Policy

he United States is in a unique position at a unique time. It is the only nation on the planet, according to the Secretary of Defense's 2001 report, "able to organize, lead, and conduct large-scale, effective, joint military operations far beyond its borders." With that unique position comes an extraordinarily important responsibility—working toward a near- to medium-term nuclear future where the roles, numbers, and salience of nuclear weapons across the planet are minimized. Nuclear policy decisions made by the United States over the next year and beyond should reflect a commitment to making that future a reality.

A less nuclear world can serve US interests only if it is pursued in the right way. The core principles below lay out a roadmap for such a way and should shape the overall guidance to the US military. The core principles include:

Less is more. Fewer US nuclear forces will reflect the new post-Cold War reality and can lead to greater US and global security if reductions are coordinated first with Russia and then with the other nuclear powers. Coordinated reductions offer greater stability by moving cooperatively to make sure that non-deployed warheads are captured in the overall reduction regime and excess warheads will be eliminated so that breakout potential is drastically reduced. In this regard, tactical, or non-strategic nuclear weapons would also be included in the overall levels for both deployed and non-deployed weapons. Even under the START II Treaty, which calls for reductions to between 3,000 and 3,500 deployed warheads, both the United States and Russia would retain the capability to restore their arsenals to levels above the treaty's limits because there were no limits on the non-deployed strategic warheads. Tactical, or non-strategic weapons, of which Russia has thousands, are not covered under START II. The START III Treaty, which envisions reductions to between 2,000 and 2,500, would seek to rectify this situation by including a provision for the destruction of excess warheads and transparency of the process, and discussions on limiting and/or destruction of tactical weapons. US ability to reconstitute its arsenal to levels far higher than Russia and its decision to maintain a "hedge" in order to reconstitute its forces should the need arise continues to be a major concern for Russia. On the other hand, Russia's vast arsenal of tactical nuclear weapons, while not a direct threat to the United States, poses a major threat to US allies in Europe. Failure to cooperatively limit excess strategic weapons and tactical weapons means more nuclear weapons overall, and thus less security.

Coordinated reductions both within the bilateral and multilateral context also foster greater cooperation in safeguarding non-deployed weapons and fissile materials—highly enriched uranium and plutonium—enhancing nonproliferation. Reductions under these circumstances could create an atmosphere conducive to concluding a fissile material cutoff, further strengthening the nonproliferation regime.

In addition to lower levels of nuclear forces, the United States, in parallel with Russia, should also lower the alert status of its remaining deployed weapons. Removing weapons from the current alert status, thereby increasing the time it takes to launch strategic missiles, reduces the risk of accidental or unauthorized launch as well as establishes a new psychological dynamic radically different from that of the Cold War. The alert levels of French and British nuclear forces are low. China, at least for the time being, does not appear to have its forces on alert. US action could lead to discussions among the five nuclear states to take all nuclear forces off hair-trigger alert and establish confidence building measures to assure that they stay off hair-trigger alert.

Multilateral reduction agreements are the only way we can achieve maximum stability, maximally lowest number of nuclear forces on the lowest alert level, and have nuclear weapons maximally in the background in our relations with other countries.

• We can't do it alone. Even as the lone superpower, the United States cannot possibly defend and protect itself against all WMD threats without the help of both friends and foes alike. Sustained unilateral action by the United States, despite its expedience and flexibility, will soon come to be resented by its allies—who then would not offer assistance whether requested or not—and challenged by its current and potential adversaries.

For the United States to maintain a decidedly unilateralist posture is to severely undermine cooperative international regimes by providing incentives for other nations to follow our example. If other nations began wavering on compliance with certain agreements they no longer found beneficial to them, or began questioning whether their participation in a collective security action was no longer in their direct security interests, international treaties and organizations would become meaningless. In an atmosphere motivated by each nation seeking its own interests, only instability can be the result.

Moreover, US reliability as an alliance partner becomes seriously questioned. Non-nuclear allies under the US nuclear umbrella may feel that they might have to develop a nuclear capability of their own. Not only that, US credibility to intervene in and mediate regional conflicts is significantly diminished. US leadership, now more than ever, is needed to steer an international security environment that depends more on collective security, not less.

• Arms control still matters, and so do treaties. Arms control has provided for predictability and stability in the management of nuclear weapons where neither would have existed otherwise. Both will be lost should arms control be abandoned. Mistrust and suspicion will be the order of the day because there will be no process to codify understandings and rules of the road. Arms control gives the actions taken in its name credibility and assurance to the international community by holding the parties accountable.

Arms control treaties take time to negotiate and do not always keep pace with events on the ground. That does not mean they should no longer be pursued. The successful history of arms control warrants, at a minimum, that new thinking be applied to this process as well before it is abandoned. One example of new thinking involves just the reverse of the old approach. Instead of years of negotiations to nail down every signal detail of an agreement, parties to the process simply declare what they are going to do and then once these measures have been implemented, the other parties could be invited to verify that what was declared has actually been done. If the parties agree that such arrangements need to be codified in a formal fashion then a treaty documenting the completed measures could be drawn up. Another approach could entail informal agreements that parties agree to follow for an agreed period of time. The parties could then evaluate the arrangement after the allotted time and decide to either continue the arrangement or modify it based on changed circumstances if applicable.

Finally, while existing multilateral arms treaties, such as the NPT, CWC, and BWC, may not be as robust as they could be in stopping the spread of weapons of mass destruction, they have significant value in that they have established international norms stigmatizing these weapons and an ultimate goal worthy of continued pursuit. US and global security are enhanced by the existence of these treaties.

Keep the US deterrent reliable and safe. As long as other nations have nuclear weapons, the United States must maintain a deterrent capability that is reliable. That reliability must never be in question so as to give an adversary reason to believe that the US deterrent is not credible. In a nuclear future where there is less reliance on these weapons, reliability becomes even more critical to deterrence.

Some argue that the importance of reliability should warrant the United States breaking the nuclear testing moratorium established in 1992. The evidence simply does not support that argument. The majority of US nuclear tests prior to the moratorium were conducted for the development of new warheads, not for safety and reliability purposes. Every year since the moratorium, a yearly certification process has attested to the continued reliability and safety of the arsenal. The management of the nuclear deterrent through the US Stockpile Stewardship Program (SSP) has made that possible. According to

the Shalikashvili report: "The SSP tools that are already available have been able to identify defects [in warheads] and suggest remedial measures, make appropriate modifications, and fulfill required lifetime extensions, while maintaining a high level of reliability and safety of warheads that have been the focus of the SSP to date" (Section V).

A well-funded and effectively managed SSP should continue to make a future smaller US nuclear deterrent just as safe and reliable, and therefore, just as credible as the Cold War deterrent. That should not preclude, however, the SSP maintaining the capability to resume testing should confidence in the deterrent begin to erode with no other means to reestablish it, or if there are major destabilizing changes in the international security environment.

Chapter 5

Recommendations on Specific Nuclear Policy Issues

hree nuclear policy areas, in particular, hold great promise for advancing the core principles enunciated in the previous chapter: nuclear testing, nuclear targeting, and missile defenses. Prudent approaches on these key issues are outlined below.

NUCLEAR TESTING

 Demonstrate US commitment to nonproliferation by acting on the recommendations of the Shalikashvili report calling for ratification of the Comprehensive Test Ban Treaty.

President George H. W. Bush signed into law in October 1992 the Congressional amendment suspending US nuclear testing. The United States has honored that moratorium since then. Doing so provided the impetus for the successful completion of the CTBT in September 1996.

Ending nuclear testing has been a long sought after piece in the nuclear nonproliferation puzzle. Not only is it intended to prevent nuclear pretenders from acquiring these weapons (horizontal proliferation) but also to prevent the nuclear powers from developing new weapons (vertical proliferation). US Senate rejection of the CTBT was a major blow to the longstanding effort —dating back to the Eisenhower administration—for ending nuclear testing.

The efforts by General Shalikashvili to address the concerns of the Senate opponents provided sound recommendations in this regard. Acting on those recommendations would send an all-important message to the other 160 signatories to the treaty that the United States has not abandoned this approach, or US leadership on nonproliferation. Encouragingly, Secretary of State Colin Powell left the door open during his Senate confirmation hearing. He told the Senate panel:

"We are mindful of the work that was done by President Clinton's Special Advisor and my colleague General Shalikashvili. We will examine that work, but we believe that there are still flaws with the Treaty as it was voted down in 1999."

"General Shalikashvili gave us some good ideas with respect to the stockpile stewardship program, which we will be pursuing, and at the same time President-elect Bush has indicated he

has no intention of resuming testing as part of our efforts. We do not see any such need for such testing in the foreseeable future."

General Shalikashvili offered a particularly prudent solution to the major concern that many Senators had with the Treaty's indefinite duration clause. He proposed that the US administration and Senate commit to conducting an intensive joint review of the treaty's net value for US national security ten years after US ratification, and at ten-year intervals after that. Such a review regime, plus maintaining the integrity of the US Stockpile Stewardship Program, which is designed to ensure the safety and reliability of the nuclear stockpile, offer the best assurance for preserving the credibility of the US nuclear deterrent under the CTBT.

Forego the development of "mini" nuclear weapons, or low-yield weapons. US law, the National Defense Authorization Act for Fiscal Year 1994, expressly prohibits the research and development of these weapons. But that has not lessened recent enthusiasm within some circles of the nuclear policy establishment for building new weapons for use against underground command bunkers and biological weapons facilities. To build and deploy these weapons would raise the profile of nuclear weapons in the US forces posture, not push them to the background. The new weapons would certainly blur the line between conventional weapons and nuclear weapons. They would also provide incentives for both horizontal and vertical proliferation, as non-nuclear states would increase efforts to acquire them and nuclear states would seek qualitative improvements to their weapons, leading to the collapse of the testing moratorium.

NUCLEAR TARGETING

Move away from counterforce and countervalue. US targeting strategy is based on
counterforce and countervalue. Under a counterforce strategy military assets of a hostile
state, both conventional and nuclear, are held at risk. A key component in the way we
practiced nuclear deterrence during the Cold War, this strategy requires many weapons. A
countervalue strategy holds populations, major industry, and leadership of a hostile state at
risk. It requires fewer weapons than counterforce.

Since we have moved beyond the nuclear deterrence of the Cold War, the United States is moving away from counterforce. But does that mean we should move toward targeting populations only?

As the United States prepares to reduce its nuclear arsenal, the President and his national security team should examine all alternatives for targeting, not just regarding Russia, but also China and any potentially hostile state as well. That will entail determining a strategic personality profile for new adversaries, in particular those with whom we have not had the luxury of a 50-year military standoff. Understanding the strategic calculus each bases its decisions on will require that we customize our targeting strategy for deterring each one.

The common technique of sketching out "alternative worlds" and dozens of possible scenarios for US nuclear forces, and laying out US nuclear policies capable of dealing with the full range of them, turns out to be a dangerous practice in this regard. Too often the process encourages participants to ignore the fact that US actions will help determine which alternative worlds emerge. Building a nuclear force structure capable of responding to scenarios like "great power war" risks sparking exactly the sort of action-reaction cycle that could help cause such a war.

In other words, planning for "every possible scenario" violates the principle of recognizing that we can't do it alone. It looks at US security as an isolated, internally determined thing rather than something shaped by the interplay of interests, others and ours alike.

Make clear to hostile nations what we are targeting. The United States should be explicit in
its pronouncements of a new targeting strategy. Letting adversaries or potential adversaries
know what is at risk inside their countries could serve to bolster deterrence in a future where
nuclear weapons have minimal salience.

MISSILE DEFENSES

Cooperate with friends and allies, as well as former and potential foes. Missile defenses may
well be an appropriate vehicle for helping to create a future where nuclear weapons are given
less presence and prominence. Indeed, missiles defenses could give added assurance, if not
insurance, to all states as the nuclear powers reduce their nuclear arsenals.

At the same time, defenses could also put the international security system in the fast lane to upheaval and instability. If the United States moves beyond a limited system toward a defense-dominant security environment without the cooperation of other relevant states, or at least adequately addressing their concerns, and without a codification of the relationship between offenses and defenses, it would increase the very strategic uncertainty that defenses are intended to reduce.

Cooperation on building up defenses is just as important, if not more so, as cooperation was for controlling the levels of nuclear weapons during the Cold War, reducing the number of nuclear weapons now, and curbing the spread of nuclear weapons in the future. The uneasiness of many of our friends and allies, and especially the hostile reception that Russia and China have given to the US approach so far to deploying missile defenses warrant that the United States take a more cooperative tack in the development and deployment of these systems. The sooner that happens, the sooner a stable transition from an offense-dominant security environment to one involving a mix of offenses and defenses can begin.

• Seek technologies that work and follow a deployment schedule that is realistic. It's more important to get missile defenses right than to get them fast. It will be crucial to deploy a system that works the way it is intended to with acceptable reliability. That means developing and testing technologies that work. Cooperating with our allies, Russia, and China could not only help in evaluating those technologies but also in determining which technologies a system will need to defend against. Thus it will be imperative that enough time is allocated to test these chosen technologies under realistic conditions. Hence, deployment schedules should be driven only by the maturation of the technologies and not by political imperatives.

END STATE

The changing international security environment will make for greater uncertainty in the future and thus present many challenges for US nuclear policy. As the lone superpower, the actions that the United States takes now can have a major impact on the behaviors of other states in the future and thus reduce some of the uncertainty. If the United States and other states are to depend less on nuclear weapons in the future, the United States should make moves in that direction now. By acting to truly transform the US-Russia relationship and rid each side of its Cold War nuclear hangover and constructively engaging China so that nuclear weapons are buried deep in the agenda of each of these bilateral relationships, the United States also sets the example for India and Pakistan in managing their military standoff.

Given this nuclear policy direction we have outlined, we believe that an optimal medium-term nuclear future could entail the following:

- Nuclear weapons, held in much smaller numbers and not on alert, decline in perceived value as instruments of power and prestige
- Universal missile defenses that could protect any country from accidental or unauthorized launch or a rogue state
- Excess weapons would be destroyed and reserved weapons would be tightly controlled

In this nuclear future, the only role for nuclear weapons is to deter the use of other nuclear weapons. The goal of an international security system is to ensure the preservation of the planet, not its destruction. The nuclear states will have agreed on a steady-state system characterized by collective, active discouragement of further acquisition of nuclear weapons. Nuclear states in concert with non-nuclear states will be committed to a swift and overwhelming response against an aggressor who uses or threatens the use of chemical and biological weapons.

Cooperative, collaborative arrangements, beginning with US-Russian nuclear reductions, are the mechanisms for making the transition from where the international security system is now to this nuclear future. Conversely, unilateral actions by the United States, while making for expedience and flexibility, ultimately could create as many challenges for the United States than would be the case otherwise. There is a great risk that such an approach might become a self-fulfilling prophesy, i.e., the United States attributes worst case scenarios to certain states or regions and makes policy decisions that prompts that state or region to respond in the very manner anticipated.

At this unique moment in US and international history, the United States, by its strength, can afford to take a chance on moving the global security environment toward a future where the fewest nuclear weapons are in the fewest hands. Without achieving this medium-term goal, there is little hope of ever getting to the long-term goal of elimination.

ROLE OF THE PUBLIC

Ironically, a full decade out since the end of the Cold War, many Americans believe that much of the heavy lifting for dealing with the legacy of the Cold War has been done. They no longer sense the dangers of nuclear weapons as they did during the Cold War, when the reality is that nuclear dangers are more clear and present now than ever before. Thus, most Americans are not tuned in to the debates over the nuclear posture of the United States, let alone Russia or China, or whether or how missile defenses can be injected into the global security calculus.

Consequently, policymakers either ignore or discount the American people on these critically important issues. To date, they have not had to pay a political price for doing so. Policymakers, then, are free to pursue policies for which they will not be held accountable. Few, if any, US senators who voted against the ratification of the Comprehensive Test Ban Treaty in 1999 believed that there would be political consequences for doing so, despite overwhelming public support for the treaty.

The public, then, through the efforts of this report and others like it, must be informed and fully engaged in the discussions on these very pivotal issues. The role of the public then, is to ask for explanations and justification for having these weapons, and at what levels, from its national leaders. Without this input and feedback from the public, not only is the discussion on these issues conducted within the halls of Congress, the scope of the discussions is limited to the opinions of a handful of lawmakers who follow the issues. Most importantly, not until Americans insist they be heard and accounted for on nuclear policy issues will policymakers begin to be held accountable for not acting on the need for bold steps to leverage existing opportunities to reduce nuclear dangers. These matters are far too important to the lives of all Americans to have decisions and policies made by so few policymakers who act with political impunity.