

**Annex 1**  
**Key Observations & Judgments**  
**from**  
**Military Issues Working Group Meeting**  
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*What is the Security Context Issues for Military Issues?*<sup>1</sup>

The post-9/11 security environment is rapidly changing with systemic uncertainty. Doubts surrounding the future of U.S. relations with other major powers (namely Russia and China), the prospect of a “cascade” of nuclear proliferation, and “wild card” systemic shocks (e.g., 9/11) that radically upset the nature of the security environment demand a U.S. nuclear posture that is robust to surprise.

The U.S. remains the pre-eminent global power, but limits of that power are continually underscored by asymmetric strategies of adversaries (e.g., terrorism, irregular warfare) and counter-balancing of other states. 21<sup>st</sup> century U.S. national security strategy will almost certainly have to adapt to the emergence of hostile, autocratic regimes in the Middle East and East Asia with the capability to (at minimum) produce a nuclear weapon in a short period of time. Weak international regimes and surging interest in nuclear energy will usher in more “latent” nuclear powers, such as Japan and South Korea, and weaken the security incentives for U.S. friends and allies to pursue policies consistent with U.S. interests. Nuclear weapons – once the core element of U.S. military primacy – now increasingly serve the opposite role, providing the ultimate security guarantee to adversaries that seek to neutralize U.S. conventional superiority.

**Nuclear Threats and Challenges in the Post-9/11 Era**

During the Cold War, the military requirements for the U.S. nuclear deterrent were dictated by nuclear threats to U.S. targets, consisting primarily of threats from the Soviet Union. By contrast, 21<sup>st</sup> century requirements for U.S. nuclear weapons have a much less direct and less symmetric relationship with 21<sup>st</sup> century nuclear threats. In a post-Cold War, post-9/11 security environment dominated by asymmetric threats, the deliberate (and deterrable) use of nuclear weapons by another major power is not among the most urgent threats to the U.S. from nuclear weapons. In approximate order of urgency, as reflected in the workshop discussion, today’s nuclear threats consist of:

- Nuclear terrorism. In an era of suicide bombers, non-state actors are, almost by definition, non-deterrable by the threat of nuclear retaliation. While the U.S.

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<sup>1</sup> Before the 11 April 2008 meeting of the Military Issues Working Group, which was chaired by Franklin C. Miller, a list of questions was sent to participants, who were asked to provide answers either before or during the working group discussions. These questions, expressed in large italic type, provide the structure for this report. This report also tries to capture the nature of the 11 April discussion, including areas of agreement and disagreement, even though some of these views differ from those expressed in the final report.

might be able to deter the states that may provide sanctuary, weapons or financial support to would-be nuclear terrorists, direct U.S. efforts to cope with nuclear terrorism must focus on denial (e.g., securing “loose” weapons and materials to deny access), defenses (e.g., making it harder for terrorists attacks to succeed) and prevention (e.g., disrupting terrorist groups or preempting attacks).

- Nuclear proliferation. Preventing the spread of nuclear weapons, particularly to states such as Iran that could spark more regional proliferation, is imperative. As the number (and types) of nuclear powers increases, so does the potential for transfer to non-state actors as well as the danger of use in a regional crisis. The likely growth in the use of nuclear energy also carries the risk of proliferating fuel cycles and nuclear weapons programs.
- Nuclear threats against regional allies and friends from regional nuclear-armed states. The credibility of U.S. security assurances, including nuclear assurances, may be critical to protecting critical U.S. regional interests. Not only do they prevent hostile regional powers from using their nuclear status to coerce U.S. allies and friends, an effective U.S. extended nuclear deterrent is a key factor in the decisions that many nations make about their own nuclear futures.
- Nuclear threats against the U.S. from regional nuclear-armed states. Regional nuclear-armed adversaries, particularly those with revolutionary ideologies (the so-called “nuclear Caliphate”), may be significantly less deterrable than past adversaries, but the credibility of the threat of an overwhelming U.S. retaliation to a direct, attributable nuclear attack from a nation-state is still likely to high. Regional wanna-be hegemon acquire nuclear weapons to deter the U.S. from attacking them with conventional forces or intervening in regional conflicts, not primarily to deter nuclear attacks from the U.S.
- Emergence of a Cold War-like threat from a nuclear-armed major power. The apparent increase in Russia’s reliance upon nuclear weapons in its security policy (e.g., the recent nuclear threats against Poland and the Czech republic for hosting U.S. ballistic missile deployments) coupled with its on-going nuclear modernization program is cause for concern. The increased saliency of nuclear weapons in Moscow also makes it harder to address the “loose nukes” threat from Russia’s inventories of “tactical” nuclear weapons. Moreover, China is a latent major nuclear power and could significantly increase its nuclear capabilities if it should choose to do so. While that might not significantly change U.S. deterrence calculations vis-à-vis China, a Chinese nuclear build-up would certainly indicate that U.S.-Chinese relations had become much more adversarial.

*What are assurance-dissuasion-deterrence (ADD) contributions of U.S. nuclear weapons (NW) in the 21<sup>st</sup> Century?*

**Role of Nuclear Weapons in International Affairs and U.S. Security**

Since the dissolution of the rival hegemon that dictated a half-century of U.S. thinking on nuclear weapons, and the emergence of asymmetric non-state and regional state-based threats, it has been increasingly difficult to form a consensus on the central role of nuclear weapons in international affairs and U.S. security. In the Cold War, nuclear weapons certainly reduced the likelihood of major conventional war between the superpowers, although some analysts believe now that the U.S. and the Soviet Union were closer to a nuclear war during the Cuban Missile crisis than many believed at the time. Today, this caution-inducing role still seems operative (e.g., India and Pakistan during the Kargil crisis), but this is a systemic impact of nuclear weapons, not the reason why nations seek weapons.

There is a (nearly) universal interest in preventing any use of nuclear weapons, but contemplating the post-next-nuclear-use world is increasingly important as the number of nuclear-armed states increases and the risk of breaking the taboo against nuclear use increases. The effects of the “day after” the next nuclear use depends, however, the context: if used in a regional context that kills tens of thousands but does not affect the outcome of the conflict, it could reinforce the nuclear taboo; if used “successfully” by a regional power (e.g., by deterring a U.S.-led intervention), it could stimulate further proliferation.

The political effects (e.g., war prevention) of nuclear weapons in peacetime are much more important than their military effects during wartime. Nevertheless, many believe that these political effects (of a *credible* deterrent) depend - in the final analysis - on the perceptions that the weapons will actually be used (if deterrence fails). As one working group participant observed, “in order for there to be credible deterrence, there has to be real risk (for all) that the nuclear weapons will be used.” Others, however, believed strongly that one “should deeply discount the military utility of nuclear weapons.”

### **Missions for U.S. Nuclear Weapons**

”The end of the Cold War has changed the dynamic but not the missions, requirements and assurance/dissuasion/deterrence. What has changed is the nature of asymmetrical warfare. Having said that, the underlying premise and value of nuclear weapons is to *deter* ... if deterrence fails ... *employ*.”  
-- *Military Working Group Participant*

“Although the strategic landscape has dramatically shifted since the end of the Cold War, the concept of deterrence and the need to deter adversaries from attacking our vital interests is just as important in the 21<sup>st</sup> Century as it was in the last century”  
-- *General Kevin P. Chilton, STRATCOM Commander*

In descending order of consensus, participants at the working group identified the following missions for the U.S. nuclear deterrent:

- Deter the use of weapons of mass destruction (WMD) against the United States. All agree this should include nuclear weapons and most would include genetically-modified biological weapons (BW). There is a lack of consensus on whether this mission should extend to deterring the use of chemical weapons (CW) and catastrophic attacks on U.S. computers, infrastructure and satellites (“mass disruption” vs. “mass destruction”).
- Underwrite security guarantees and deter WMD attacks on U.S. allies. A credible extended deterrent is a critical nonproliferation tool vis-à-vis U.S. allies, in large part to prevent latent nuclear powers (e.g., Japan and South Korea) from becoming declared ones. There is uncertainty, however, surrounding the relative importance of *nuclear* weapons within the broader set of U.S. policies and capabilities that contribute to these security assurances: “assurances of the U.S. commitment rest on more than just nuclear weapons; U.S. conventional forces, basing arrangements, and treaty commitments all can contribute to the U.S. effort to assure its allies. Nuclear weapons are just part of the package, and then, only in the few cases of those nations who actually sit under the nuclear umbrella and desire protection (Japan, maybe Turkey).”
- Crisis stability at the major and regional-power level. Nuclear weapons cast a “long shadow” (fatal vision) on conflict and suppress escalatory pressures.
- Control intra-war escalation and war termination. The proven utility of nuclear weapons as a means to terminate a major conventional war (namely WW II), may not be applicable to 21<sup>st</sup> century conflict.
- Shape the international security environment. Nuclear weapons are a core requirement for the steady-state international security environment; they inhibit risk taking by those who possess them and those who are deterred by them; overwhelmingly superior U.S. nuclear forces may dissuade minor nuclear powers (e.g., China) from joining the ranks of nuclear superpowers.
- Preserving the status of the United States as a nuclear power “second to none.” From a broader functional perspective, being “second to none” in nuclear capability is believed by many to be a critical element of U.S. global leadership and of how Americans view their international status. While a minimum deterrence strategy “worked” for the UK and France during the Cold War, it is still debatable whether the U.S. (or the American people) would embrace a minimum deterrence strategy with significantly-fewer nuclear weapons than Russia has. Virtually all agree that what constitutes “unacceptable damage” is much lower now than during the Cold War.

### **Capability needs for the U.S. nuclear deterrent**

“At the end of the day, we face the familiar but inescapable paradox: if we can’t articulate credible nuclear *employment* concepts (for at the end of the day it is the

possibility of *use* that makes deterrence credible) nuclear weapons policy will continue to atrophy. But the more successful we are at articulating credible use options, the less politically sustainable our nuclear forces will become.”

-- *Military Working Group Participant*

“[W]e do need to demonstrate and articulate that our weapons are in capable hands, are safe, secure, reliable and that if attacked we will respond. Our specific plans for employment should remain ambiguous but we should have plans....if we decide to maintain no plans or just keep an arsenal of off-alert, barely maintained weapons, then our deterrence equation (capability X will) and the stability and deterrent impacts of such an arsenal are zero.”

-- *Military Working Group Participant*

Although there was little agreement on what it should say, most participants agreed that the next Administration needs to issue a clearly articulated policy statement on how U.S. nuclear weapons contribute to U.S. national security. Such a statement ought to outline what the desired characteristics of U.S. nuclear capabilities are and U.S. declaratory policy for how nuclear weapons might be employed. As one working group participant explained, “if the President doesn’t say it, Congress won’t support it. It may be risky for the President to do this; it’s riskier if he doesn’t.”

The perceived willingness to employ nuclear weapons, pursuant to whatever doctrine is ultimately adopted, is a critical element to a credible deterrent. Statements by military and civilian leadership since the end of the Cold War have undermined the credibility of threats and, in other cases, implied that nuclear weapons are no longer “useful.” Participants agreed that the seriousness with which U.S. leadership treats the deterrent (in statements and actions) is crucial to its perceived credibility abroad (by adversaries or allies) and to motivating and ensuring competence in the U.S. nuclear enterprise:

- “It’s not the country but the attitude of the regime that matters. Others see nuclear weapons as effective instruments, but everybody here assumes that no one will use them, since nuclear use [in the U.S.] is viewed as non-legitimate.”
- The lack of national consensus on the contributions of nuclear weapons to U.S. security makes anti-nuclear views of key officials (e.g., a senior OSD-Policy official stated: “I cannot conceive of any scenario in which the U.S. would use a nuclear weapon.”) particularly troubling.

Participants agreed that how the next Administration “markets” U.S. nuclear policy to the American people, the Congress, and U.S. allies, is highly important:

- Criticism of how poorly the Bush Administration marketed the 2001 Nuclear Posture Review (NPR) was so pervasive that the issue was ruled out of order during the meeting of the Military Issues Working Group. The failure of the 1994 and 2001 NPRs to produce unclassified reports greatly complicated U.S. assurance efforts.

- Nuclear recapitalization initiatives (e.g., in terms of sustainment, refurbishment and modernization) should avoid words like “new” and “improved” and even concepts like the Reliable Replacement Warhead (RRW). Instead, the U.S. should pursue the W76-x, W-76-y, etc. in a fashion similar to earlier modernizations to weapons platforms.<sup>2</sup>
- The next Administration has to proactively engage in meaningful consultations with its key Allies (particularly Japan) as part of the 2009 Nuclear Posture Review (NPR) process and not simply report the results of the NPR to them afterwards.

In descending order of consensus, working group participants identified the following capability-based requirements for the U.S. deterrent in the 21<sup>st</sup> century:

- A safe, secure and reliable nuclear stockpile. Despite disparate visions about the nature of the U.S. stockpile in the long run, there is a consensus that as long as the U.S. possesses a deterrent, the stockpile must be safe, secure and reliable. Nevertheless, significant disagreements over the military and technical requirements for an acceptable level of *reliability* – and the extent to which current trend lines affect this today and in the future – make it difficult to draw meaningful policy solutions from this consensus.
- A healthy nuclear infrastructure. Recruiting and retaining a capable and motivated workforce across the nuclear enterprise (DoD, DoE, the national laboratories, and the services) is a critical military requirement. Many participants see the decay in competence across the nuclear mission as a growing challenge that may already have reached crisis proportions.
- Tailored nuclear capabilities to hold at risk 21<sup>st</sup> century targets of value. Although many participants saw value in new, low-collateral nuclear capabilities (e.g., Robust Nuclear Earth Penetrator or RNEP), the widespread opposition (domestically and internationally) to “new” nuclear capabilities has reinforced anti-nuclear sentiments and has led advocates to reinvest their time and energy in more politically feasible initiatives.

There was little consensus regarding the following areas of U.S. nuclear policy:

- Declaratory policy. Many participants cited reasons for maintaining “strategic ambiguity” about when, and in response to what, the United States might use nuclear weapons.
- No First Use (NFU) vs. Use Only as a Last Resort. Advocates argue that adopting NFU would strengthen international coalitions and nonproliferation

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<sup>2</sup> This is consistent with the idea presented at the Technical Issues WG of a spectrum of Live Extension Programs (LEPs) running from “incremental” LEP (slight improvements to replacement components) to “extensive reuse” LEP (assembling weapons out of stockpiled components, which have modern sensing devices embedded in them) to RRW

norms by signaling that the U.S. has accepted the end of a “world in which one rule set applies to the U.S. and another set to everyone else.” Pursuing a global NFU (as opposed to a unilateral one) could help in this respect. Critics counter that NFU would undercut the ability to deter non-nuclear WMD attacks and, in the words of one participant, the only benefit would be “to make a few NGOS happy.”

### **Restoring focus, competence, and accountable leadership across the nuclear enterprise**

Washington’s decade-plus erosion of top-level focus and interest in “things nuclear” sends messages to multiple audiences – allies and friends; current and future adversaries; aspiring nuclear power; men and women in the nuclear Air Force & Navy; the American people. The lack of high-priority status and focus on the nuclear mission undermines the credibility of the U.S. nuclear deterrent. While organizational status may not affect the ability to deter direct nuclear attacks on the U.S. (by state actors), it could affect the perceived credibility of extended deterrence assurances to regional allies and friends.

Participants agreed that the following issues ought to be addressed:

- Lack of accountability and attention from senior-level officials. There have been minimal responses to repeated reports of decline by many commission reports since 1995. The nuclear mission is often given low-priority or viewed as bill-payers by the Military Services. The corrosive effect of senior-level negligence on competence throughout the enterprise was made alarmingly clear by recent events (the Minot incident and the shipment of fuses to Taiwan).
- Organizational Atrophy. The nuclear mission has declined in organizational status within the Services, the Joint Staffs, STRATCOM and OSD Policy, although positive developments have been made within STRATCOM under General Chilton – and within the Air Force post-Minot – to reverse some of this.

*To what extent should the nuclear policies of Russia and China have bearing on U.S. nuclear strategy, policy and force structure?*

“Given that the primary role of U.S. nuclear weapons should be to deter/disrupt/defeat nuclear and other catastrophic attacks on the United States, the United States should consider the nuclear policies of potential adversaries when determining the size, structure and doctrine governing the use of its nuclear weapons.”

-- *Military Working Group Participant*

“Our forces and concepts were not created in a vacuum. What others say and do will affect us. Indeed, these other nuclear policies might be the Wild Card that would force U.S. leaders to pay closer attention to nuclear matters.”

*-- Military Working Group Participant*

In the 21<sup>st</sup> century international security environment, deterrence is only one piece of the U.S. nuclear relationship with other nuclear-armed major powers. U.S. nuclear strategy vis-à-vis Russia, China, and other nuclear-armed major powers today must take into consideration the mutual interest in lower global inventories as well as with other political benefits to engaging in strategic arms control negotiations. Nonetheless, decision makers in the next Administration will have to think seriously about if (and at what point) increasing Russian and Chinese interest in things nuclear ought to affect U.S. nuclear policy and strategy.

## **Russia**

Russian capabilities still pose an existential threat to US, although nuclear use is extremely unlikely due to Mutual Assured Destruction (MAD) and the non-ideological, conservative tendencies empirically demonstrated by the Russian Regime. Russia, however, is modernizing its nuclear arsenal and, at least diplomatically, relying more heavily on nuclear weapons (in part to compensate for its loss of conventional power). The extent of and real purpose of Russian nuclear modernization is still unclear, but certainly cause for concern in light of its recent use of nuclear coercion with its neighbors (Ukraine and Georgia over joining NATO; Poland and the Czech republic over hosting US missile defenses).

**Issues for the U.S.:** At what point does having fewer numbers of nuclear weapons than Russia (25%, 50%, etc.) matter? For example, the U.S. has fewer nuclear weapons now than the Russians (particularly when Russian tactical weapons are included), but few would dispute that the U.S. as a nuclear power is “second to none.” At what point would this perception change? What if the Russians make some breakthroughs on “fourth generation” or exotic nuclear weapons concepts – or decide (in line with their doctrine) to deploy some new type of “theater” nuclear capability? What about Russia’s modernization spending as a factor?

## **China**

The extent to which China will shape the next Administration’s decision making concerning U.S. nuclear strategy, policy and force posture will depend upon a fundamental strategic decision on China’s status as a nuclear power vis-à-vis the U.S. “The Bush Administration could never make up its mind”<sup>3</sup> on whether to accept a mutually assured destruction (MAD) relationship with China or treat it as a large regional rogue with nuclear weapons.

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<sup>3</sup> During the campaign, then-candidate George W. Bush said China was our “strategic competitor,” not (as the Clinton Administration said) our “strategic partner.” Talk of China as a “strategic competitor” ended after the EP-3 incident and 9/11 ushered in China (and Russia) as “strategic partner.” More recently, the Bush Administration has said it wanted to encourage China’s evolution as a “responsible stakeholder.” An early draft of 2006 QDR report reportedly had chapter on “Shaping the Choices of Countries at a Strategic Crossroad” that portrayed a much stronger hedging policy vis-à-vis China, but the NSC threw it out, saying there was only one policy towards China and that was the President’s.

Experts in Chinese nuclear modernization have added “mutual assured vulnerability (MAV)” and “mutual assured security (MAS)” to the lexicon of deterrent concepts. One participant noted that if the United States and China can accept MAV in the economic sphere (Chinese hold a trillion-plus dollars of U.S. security; U.S. market critical to Chinese growth), why can’t they in the nuclear? Others countered that such a relationship would complicate U.S. assurances extended to Japan and would require intensive consultations with the Japanese, which in recent history have not been very fulsome.

There is significant uncertainty about how a rising China will evolve. The U.S. tries to shape its evolution as a “responsible stakeholder” but hedges against downside risk, even though obvert hedges (e.g., improved missile defense) risk becoming self-fulfilling prophecies (by stimulating Chinese strategic nuclear modernization). The advocacy of “unrestricted warfare” by some Chinese military analysts troubling because it might lead some leadership elements to believe that China could launch unrestrained cyber attacks on the U.S. without risking a U.S. nuclear response.

In the status quo, U.S. conventional preeminence is understood to be a more significant motivator for China’s pursuit of enhanced nuclear status than the U.S.-Sino nuclear relationship. Experts believe Chinese nuclear modernization is driven by its desire to maintain a secure second strike capability in the face of improving U.S. missile defenses and conventional global strike capabilities (“they appear to be taking the New Triad pretty seriously”). A more aggressive U.S. nuclear policy and strategy vis-à-vis China could thus intensify Chinese nuclear modernization or dissuade them by offsetting the perceived U.S. reliance on the capabilities China seeks to neutralize. In either case, the nuclear piece must be evaluated within a broader set of U.S. policies and capabilities that can be adapted to shape China’s evolution as a nuclear power.

**Issues for the U.S.:** As China continues its moderately-paced nuclear modernization, should the U.S. counter in an effort to deny China a MAD capability vis-à-vis the United States? Given the low tolerance of the U.S. for mass casualties, the number of Chinese weapons necessary to inflict “unacceptable damage” on the U.S. is quite small (perhaps in the tens of weapons), which suggests that China has a MAD capability now and would find it relatively easy to sustain it.

*How relevant are Cold War-era concepts such as nuclear parity, mutual assured destruction (MAD), and “second to none” nuclear status to 21<sup>st</sup> U.S. National Security Strategy?*

Statements about which there was little disagreement:

- Cold War concepts that emphasized “numbers” are relevant but in novel ways. Building a more compelling definition of “nuclear parity,” one that encompasses

a more expansive set of capabilities and dynamic net assessment, would be helpful to the next Administration.

- “Today, parity matters less as a quantitative concept and more as a qualitative one. MAD matters in the major power nuclear relationships, but it matters less than MAV (mutual assured vulnerability) and MAS (mutual agreed security).”
- “Mutual assured destruction is not a policy; it is a reality. The United States and Soviet Union did not set out to create this condition; it existed because each side had deployed such large numbers of nuclear weapons.”
- The U.S. deterrent has lower total inventory stockpile requirements. The number of nuclear weapons needed to threaten “unacceptable damage” to potential adversaries is much, much lower today than in the Cold War era. Although it more require more than tens of weapons (as some have argued), most agree that multiple thousands of warheads are no longer needed for a credible U.S. deterrent. Asymmetries in adversaries’ willingness to accept damage (see North Korea vs. U.S.) make possible MAD relationships between states with significantly unequal nuclear capabilities.
- As the stockpile gets smaller, the need for safety, security, reliability and a healthy, responsive infrastructure increases. As a thought experiment, one participant argued that if the U.S. did “go to zero” nuclear weapons, it would need a very robust nuclear infrastructure so that it could respond very quickly to a break-out or cheating by another “latent” nuclear power.
- Mutually Assured Destruction is insufficient to underwrite 21<sup>st</sup> century security. U.S. policy might not have been branded as such (“MAD never was U.S. policy; rather it was the use of the smallest option to deter further escalation”), but MAD was the nature of the U.S.-Soviet nuclear standoff. While it “worked” by historical standards, few are willing to entrust global security to MAD in dealing regimes like Iran and North Korea.
  - Even if these regimes could be deterred, it is unclear whether MAD “is the policy we want *vis a vis* rogues. A live issue only with China, but more complex – and less acutely urgent – than the Cold dynamic with Russia. Shaped by factors such as Taiwan, U.S. missile defense, the broader web of political-economic relationships and interdependencies.”
  - One participant asked: “Are we moving from counter-force to counter-value by default?”

Debatable Assertions included the following:

- The U.S. will want to remain “second to none” in nuclear weapons capability. Put differently, the U.S. will not accept “less than parity with the 2<sup>nd</sup> largest nuclear power” (though it is not clear what this means without context and a more precise definition of parity). In part, “second to none” status is sought because of

U.S. history and status; in part, it is due to the U.S. role as a security provider via its extended nuclear deterrent.

- The “second to none” nuclear status concept was most widely endorsed in areas of nuclear safety, reliability and command and control. This status is not strictly derived from the size and shape of the deterrent, but also from having: modern, credible and capable forces; a trained cadre of dedicated, professional people; credible weapons & responsive infrastructure; and associated international policies to shape potential adversaries view of U.S. capability and will.
  - Not all of those who accept the importance of the U.S. being “second to none” in nuclear capability would accept such a fulsome definition of what is required to maintain that status.
- Numbers are an *output* of military requirements; “second to none” is not an objective
    - “If nuclear weapons are intended to destroy [or, preferably, hold at risk] targets that are critical to an adversary’s war aims, the United States needs enough forces to do this. The number depends on the forces needed to credibly threaten the targets; it is not dependent on maintaining “parity” with potential adversaries or on having forces that are “second to none.” While the psychological effect of those measures might have mattered during the Cold War, they would lead to an excessive force in the current environment.”
  - Numbers still matter in the deterrence calculus. The U.S. must maintain nuclear parity with Russia and avoid nuclear parity with China. Adherents of this viewpoint also contend that “minimum deterrence” could affect the ability to extend the U.S. nuclear deterrent to its allies.

*What do the 21<sup>st</sup> century security threats demand of U.S. nuclear capabilities (given international and domestic political constraints)?*

Because deterrence is only one piece of U.S. strategy to counter contemporary threats to the U.S. from nuclear weapons, the desirability of optimizing nuclear capabilities to hold at risk 21<sup>st</sup> century targets of value must be evaluated against the perceived risks these capabilities pose to diplomatic policies designed to address the same threats.

Arguments made in favor of new, tailored nuclear capabilities (e.g., Robust Nuclear Earth Penetrator or RNEP):

- The credibility of the U.S. deterrent requires a credible operational concept for employment, thus requiring more “usable” weapons to (paradoxically) strengthen the credibility of deterrence by lowering the nuclear threshold.
- “Our deterrent, to be effective, must be seen as capable of responding to any level of attack.”

Ultimately, however, initiatives to fund these capabilities are perceived as politically impossible. The widespread belief that these capabilities would undermine nonproliferation goals and have exactly the opposite of the intended affect (intensifying pressures to “use” by antagonizing adversaries and blurring the distinction between conventional and nuclear weapons) has energized anti-nuclear sentiments at home and abroad. Because these sentiments spill over to other, more modest refurbishment or modernization options, most advocates have recognized that endorsing these initiatives is not worthwhile and perhaps counterproductive.

- “It’s really a matter of political reality – absent a COCOM statement that we need a new nuclear military capability, there’s zero chance of getting it.” A recent survey of active/retired officers revealed that only 3% of them think the U.S. needs more nuclear capability.
- “You talk about employment; you lose the debate, domestically and internationally.”

*What are the requirements for a credibly extended nuclear deterrent and how does it contribute to 21<sup>st</sup> century U.S. national security?*

The broad range of stability benefits brought by extending the U.S. nuclear deterrent to allies (deterring the outbreak of regional conflict, dissuading allies from pursuing an independent deterrent, projecting America’s power and influence globally, etc) make the “nuclear umbrella” perhaps the most widely agreed upon contribution made by U.S. nuclear weapons to 21<sup>st</sup> century security (although some contend it is a residual contribution and not a “role” or “mission” for the deterrent). Disagreements emerged among working group participants concerning the relative importance of *nuclear* weapons to these security assurances and the requirements for restoring or preserving their credibility.

Key observations included:

- Confidence in assurances relies upon the perception of U.S. power.
  - The nuclear umbrella “remains vitally important and could become even more so in the future. We must be thinking now to avoid anticipate new demands on extended deterrence and how to respond to them. . . .I would add here my belief that “assurance anxiety,” even if manifested in contemplation of going nuclear, in some cases may be rooted less in concerns about U.S. nuclear policy or capabilities than a more general unease about U.S. influence and power (e.g., bogged down in Iraq, unable to stop Iranian nukes, etc.). I don’t think we have as comprehensive an understanding of allies’ perceptions of these things as we need.”
- Nuclear weapons are not sufficient but are necessary to assure U.S. allies.
  - “[A]ssurances of the U.S. commitment [to allies’ security] rest on more than nuclear weapons; U.S. conventional forces, basing arrangements, and

treaty arrangements all can contribute to the U.S. effort to assure its allies. Nuclear weapons are just part of the package, and then, only in the few cases of those nations who actually sit under the nuclear umbrella and desire nuclear protection (Japan, maybe Turkey).”

- Nevertheless, “allies under the umbrella want the U.S. to maintain nuclear security guarantees while doing its best to ensure nuclear weapons never in fact have to be used in anger. So they welcome the non-nuclear capabilities (including defense) that reduce reliance on nuclear weapons, but would not entrust their security to a form of deterrence that did not in fact rely on such weapons.”
- U.S. nuclear requirements are affected by demands on the extended deterrent.
  - “Although U.S. “minimum deterrence” probably would work against direct nuclear attacks even if the U.S. had significantly fewer nuclear weapons than its adversary, it could affect its ability to extend nuclear deterrence to its allies and friends.”

*To what extent can non-nuclear capabilities (conventional and non-kinetic) replace nuclear weapons in the U.S. military “toolbox”?*

Statements about which there was little disagreement:

- Conventional munitions can hold many, but not all, targets at risk. In terms of target coverage, U.S. advanced conventional munitions (ACMs) increasingly will be able to substitute for nuclear weapons, but there will always be some targets that ACM will not be able to destroy or hold at risk (hard and deeply buried targets or HDBTs, mobile targets) against which nuclear weapons have more capability.
  - In considering the extent to which conventional weapons can “replace” nuclear ones, it is important to distinguish “between deterring aggression or the use of WMD and the killing of targets. Clearly, if you can do the latter without resort to nukes, it is morally, strategically, and operationally preferable. If you can do that on a significant scale, it may justify nuclear stockpile reductions.”
- Threats of conventional retaliation are more credible than nuclear threats. Historically, however, the track record of conventional deterrence is not a good one.
- Nuclear weapons are unique.
  - “Nuclear weapons are different in kind, not degree. A nuclear weapon can produce 100,000 dead in 30 minutes. That’s different than taking three months to kill that many.”
  - “There’s something qualitatively different about producing weapons effects with nuclear weapons than with conventional ones.”

- “It is likely non-nuclear capabilities will replace [nuclear weapons for] most if not all military requirements. They are not capable of replacing any psychological or political benefits that policy makers at one time might have seen as beneficial insofar as they might signal a difference in kind, not just degree.”
- Nuclear weapons are “significantly [unique] for purposes of assurance and defeat but arguably less so for purposes of dissuasion and deterrence. There are some unique remaining military and political roles for nuclear weapons – speed and decisiveness of effect.”

Debatable assertions included the following:

- Conventional weapons cannot “replace” nuclear weapons as guarantors of security. Conventional weapons, though increasingly capable of destroying targets, do not show the same U.S. will/commitment to deterrence that nuclear weapons do. As one participant said, “We need to make war horrible, so that fear of it will stop nations from crossing red lines. The threat of conventional war has never been compelling enough.”
  - “I come back to the basic questions... What do adversaries fear? What conveys incalculable risk and fatal vision? What best conveys our seriousness of purpose where vital stakes are at play? Here it is harder to see conventional weapons replacing nuclear ones – thought it is worth noting again the anxiety induced among Chinese strategists, for example, by the potentially disarming combination of U.S. global strike and missile defense.”
- A purely conventional deterrent is insufficient to hold at risk 21<sup>st</sup> century targets of value.
  - “For the foreseeable future, it’s prudent to expect that some adversaries may present some important targets that cannot be destroyed or held at risk with conventional weapons. For these we need to preserve a nuclear option and be able to plan adaptively to strike such targets in the smartest way possible.”
  - “I would reserve nuclear weapons for those targets whose destruction is critical to U.S. war aims and targets that can only be disabled or destroyed to a high degree of certainty with nuclear weapons. Given this very limited role, the opportunities to substitute conventional weapons for these missions are likely to be limited.”
- Increasing reliance on conventional weapons will erode confidence in nuclear assurances. Some Japanese officials have commented privately that the U.S. efforts to increase conventional prompt global strike capabilities are perceived as an attempt to “back away” from its extended nuclear guarantee.
- Disagreements concerning dedicated vs. dual-use nuclear systems. Critics of initiatives such as Conventional Trident Modification (CTM) contend that the

Minot incident underscores how the multi-mission bomber force lost the bubble on the nuclear mission because of its conventional role whereas ICBM and SSBM forces have kept their operational culture and focus. Advocates claim that force modernization would be easier with dual-capable systems because of the lack of operational and political support for dedicated systems.

*Under what conditions could the United States (as it did with chemical and biological weapons) renounce the use of nuclear weapons and destroy its nuclear arsenal?*

“The United States might be able to renounce nuclear weapons and destroy its arsenal in a global environment where most, if not all, major sources of regional conflict had been resolved, and where all other nuclear states had agreed to eliminate and renounce their nuclear weapons. U.S. security might actually improve, even without its nuclear deterrent, because the probability of a nuclear attack on the United States would diminish. However, I don’t see a path to achieving the first of the two conditions (global harmony).”

*-- Military Working Group Participant*

While most participants agree that the U.S. will continue to reduce its nuclear stockpile, there was a consensus that “there will be no nuclear abolition for the foreseeable future.” Even proponents of the “vision” of disarmament (including the most radical nuclear “abolitionists”) cannot offer a feasible technical, military or diplomatic means to “get to zero.” As one participant said, “we’ll give up nuclear weapons when there is a fundamental change in the nature of man or nukes go the way of the long bow.”

The “vision” of a world without nuclear weapons (reinvigorated in part by the Nunn-Perry-Schultz-Kissinger op-ed in early 2007) nevertheless incites considerable debate even among those that seriously question its practicality. Beliefs about the value of the “impossible demand” of a world free of nuclear weapons (in an effort to mobilize support for near-term policies that reduce nuclear threats) reveal important differences about how individuals perceive the salience of nuclear weapons to 21<sup>st</sup> century security.

- Do nuclear weapons make the world more or less safe? Nuclear weapons have been a crucial factor in keeping the world safe, most importantly in the second half of the 20<sup>th</sup> century. Advocates of the “vision” counter that, today, nuclear terrorism and nuclear proliferation are the top two threats to the U.S. and its allies and thus U.S. national security is best served by pursuing a nuclear-free world.
- Is the U.S. doing enough with respect to its arsenal to reduce the global nuclear threat? Skeptics of the disarmament “vision” maintain that the U.S. has led the way as responsible world leader and steward of the nuclear era (the U.S. has undertaken huge decreases in weapons numbers, taken a third of its nuclear Triad off alert, de-targeted alert forces, etc.).

- Is the disarmament vision an appropriate response to 21<sup>st</sup> century nuclear threats?
  - “Many of the ‘new abolitionists’ are driven by a belief that the threat of nuclear terrorism (a threat in turn driven by failure to comprehensively secure weapons and materials) leads inescapably to the conclusion that we will in fact be safer without nuclear weapons than with them. That is a huge sea change in attitude. If can significantly reduce the threat posed by nuclear terrorism and rogue state nuclear blackmail, then we can make the world demonstrably safer and more stable – even without abolition. I think that should be our goal – to create a safer and more stable nuclear order. It is fundamentally defined by a reduction in nuclear threats. Can such an outcome also be enabled by what we refer to as reduced reliance on nuclear weapons/deterrence by the nuclear powers? I’d argue this is a proposition worth testing.”

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