

NPT Review Conference Represents Decisive Opportunity for United States

Matt Buongiorno and Alicia Godsberg
April 2010

For the last forty years, the Treaty on the Non-Proliferation of Nuclear Weapons, or the Nuclear Non-Proliferation Treaty (NPT), has endured as the cornerstone of the non-proliferation regime and remains the only legally binding multilateral agreement on nuclear disarmament. The twin NPT goals of nuclear non-proliferation and disarmament rest on the “three pillars” of the Treaty’s essential bargain: (1) non-nuclear weapon states parties (NNWS) agree not to acquire nuclear weapons, (2) states parties will work to promote of the peaceful uses of nuclear energy, and (3) states parties will pursue negotiation in good faith on nuclear disarmament. Subsequent to the NPT’s entry into force in 1970, states parties have met every five years at NPT Review Conferences (RevCons) to discuss the Treaty’s implementation. The next RevCon is scheduled for 3-28 May 2010 at the United Nations in New York and will provide the U.S. a critical opportunity to advance the vision President Obama laid out in Prague of a world free of nuclear weapons. Below are recommendations for the U.S. delegation to the RevCon – arranged by the “three pillars” of the Treaty – that FAS believes will help promote President Obama’s vision and lead the world toward its realization.

Pillar I: Non-Proliferation of Nuclear Weapons

The section of the NPT bargain referred to as the nuclear non-proliferation pillar has three components: NNWS agree not to import, build, or acquire nuclear weapons (Article I); nuclear weapons states parties (NWS) are required not to transfer nuclear weapons to NNWS (Article II); and all parties to the NPT must conclude safeguards agreements with the International Atomic Energy Agency (IAEA) (Article III). While these basic tenets remain as important as they were when the Treaty entered into force in 1970, today’s world is faced with the added threat of the possibility of a terrorist organization acquiring a nuclear weapon or other radioactive material for use in a dirty bomb.¹ Thus, nuclear non-proliferation diplomacy cannot remain confined to the traditional exchange between NWS and NNWS at the next RevCon; discussion must transcend these original understandings and account for non-state actors.

The Obama administration has continually emphasized the need to secure nuclear weapons and fissile materials to prevent their acquisition by terrorists. Secretary of State Hillary Clinton went so far as to recommend ‘preventing terrorist acquisition of nuclear materials’ as a fourth pillar for the NPT.² Most recently, the U.S. Nuclear Posture Review (NPR), released 6 April 2010, reiterates that preventing nuclear terrorism is a top priority for the Obama administration.³ Finally, to advance his nuclear security agenda, President Obama hosted a Nuclear Security Summit in Washington, D.C. from 12-13 April 2010. This conference was attended by 47 heads

¹ A “dirty bomb” is one type of a “radiological dispersal device” (RDD) that combines a conventional explosive, such as dynamite, with radiological material. See: United States Nuclear Regulatory Commission, Fact Sheet on Dirty Bombs, retrieved 7 April 2010 from <http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/dirty-bombs.html>

² Remarks by Secretary Clinton at the United States Institute for Peace, 21 October 2009, retrieved 2 March 2010 from <http://www.state.gov/secretary/rm/2009a/10/130806.htm>

³ From the NPR: “As President Obama has made clear, today’s most immediate and extreme danger is nuclear terrorism.” Also: “the United States will lead expanded international efforts to rebuild and strengthen the global nuclear non-proliferation regime and to accelerate efforts to prevent nuclear terrorism.” Nuclear Posture Review Report, United States Department of Defense (April 2010), retrieved 7 April 2010 from <http://www.defense.gov/npr/docs/2010%20Nuclear%20Posture%20Review%20Report.pdf>

of state and other high-level delegations, and focused on securing nuclear materials as a way to increase global security and promote nuclear disarmament and non-proliferation objectives at the upcoming NPT Review Conference.

Several Summit accomplishments testify to the power of diplomacy and international cooperation for solving common problems, including declarations from Chile, Mexico, and the Ukraine of their intentions to give up their entire stocks of highly enriched uranium (HEU) as a step toward securing global weapons-grade fissile material from terrorists. Another positive outcome of the Summit was the pledge by the U.S. and Russia to eliminate 68 metric tons of plutonium through the Plutonium Disposition Protocol,⁴ further reducing the global stockpile of nuclear weapon material. To hold themselves accountable to reaching the goal of securing all of the world's fissile material in four years, attendees agreed to meet for another nuclear security summit in 2012 in Seoul, South Korea. At the conclusion of the Summit, President Obama expressed his desire to continue working toward improving the non-proliferation regime at the upcoming NPT RevCon, particularly as it relates to inhibiting terrorist acquisition of nuclear materials. Measures such as increasing and reaffirming security measures at nuclear reactors and storage sites, pressing UN Member States to meet their Resolution 1540 obligations,⁵ and decreasing the importance of nuclear weapons in national security policies may help to alleviate the threat of nuclear proliferation; these are all areas in which the United States can lead and effect results at the next NPT Review Conference.

While working to prevent the threat of terrorist acquisition of nuclear weapons and materials is a profound challenge, other more traditional nuclear proliferation threats remain. The Democratic People's Republic of Korea's (DPRK) withdrawal from the NPT and two nuclear test explosions, for example, represents a dangerous precedent and challenge to the Treaty's non-proliferation regime. Similarly, the Islamic Republic of Iran continues to enrich uranium despite United Nations Security Council resolutions requiring the program to cease until compliance issues over Iran's NPT obligations are resolved. The United States should support dialogue at the RevCon to peacefully resolve these state-related Treaty issues.

Recommendation #1: Continue to advocate for multilateral measures that will prevent terrorist acquisition of nuclear weapons and materials.

One of the most important issues that should guide the United States' agenda on nuclear non-proliferation at the NPT Review Conference is preventing nuclear terrorism and terrorist acquisition of nuclear materials. The Nuclear Posture Review (NPR), released on 6 April 2010, places these goals at the top of the U.S. security agenda, stating, "The United States will lead

⁴ Signed by Secretary of State Hillary Rodham Clinton and Russian Foreign Minister Sergey Lavrov on 13 April 2010.

⁵ All states have three primary obligations under UNSCR 1540: to prohibit state support of non-state actors; to adopt and enforce effective laws prohibiting the proliferation of fissile material to non-state actors, and to prohibit assisting or financing such proliferation; and to take and enforce effective measures to control fissile materials, including controlling the provision of funds and services that contribute to their proliferation. See: U.S. Department of State, UN Security Council Resolution 1540, retrieved 14 April 2010 from <http://www.state.gov/t/isn/c18943.htm>

expanded international efforts to rebuild and strengthen the global nuclear non-proliferation regime and accelerate efforts to prevent nuclear terrorism.”⁶

Indeed, terrorist acquisition of a nuclear weapon or nuclear materials threatens every country, and combating such an international threat will require an equally international cooperative approach. Radiological materials must be better secured at civilian sites (such as hospitals and universities) and security measures must be increased to protect fissile materials and nuclear weapons themselves. Several measures have been employed to secure nuclear materials including, *inter alia*: the Convention on the Physical Protection of Nuclear Material (1987), which criminalizes the unlawful possession, use, transfer or theft of nuclear material; the International Convention for the Suppression of Acts of Nuclear Terrorism (2007), which encourages states to cooperate in preventing terrorist attacks by sharing information and assisting each other with criminal investigations; the Proliferation Security Initiative (PSI) (2002), which uses existing national and international authorities to prevent weapons of mass destruction (WMD) trafficking; the Nunn-Lugar Cooperative Threat Reduction Program (1992), which seeks to secure and dismantle WMD and their associated infrastructure in former Soviet Union states; United Nations Security Council (UNSC) Resolution 1540 (2004), which establishes obligations on all UN Member States to enforce measures against the proliferation of WMD; and UNSC Resolution 1887 (2009), which seeks to secure all vulnerable nuclear materials worldwide and recognizes the necessity of international cooperation to curb the threat of nuclear proliferation and nuclear terrorism.

Yet without a clearly defined plan addressing how each of these initiatives can work independently and in tandem, these initiatives’ effectiveness will not reach their full potential. While at least some of these initiatives have seen modest success, countries are not sufficiently coordinated in their efforts. For example, the latest UNSC Resolution 1540 Committee report from 2008 states that, “the Committee concludes that Member States need to do far more than they have already done to implement resolution 1540 (2004)... achieving the goals of the resolution requires further attention by the Security Council and more intensive action, particularly on capacity-building and sharing lessons learned.”⁷ Further, the U.N.’s 1540 oversight committee wrote in its January review that many governments had failed to submit their reports on measures to implement the Resolution.⁸ Additionally, the PSI – which commits Member States to follow interdiction principles to stop shipments of WMD and related materials – has not fully precluded the transfer of certain enrichment-related materials, such as high strength aluminum, maraging steel, magnets, and other components used in the manufacture and operation of gas centrifuges. Indeed, one of the sharpest criticisms of these initiatives is that states need to do a better job of sharing information and implementing measures, thereby facilitating better outcomes.

⁶ Nuclear Posture Review Report, United States Department of Defense (April 2010), p. iv, retrieved 7 April 2010 from <http://www.defense.gov/npr/docs/2010%20Nuclear%20Posture%20Review%20Report.pdf>

⁷ Security Council, S/2008/493: Letter dated 8 July 2008 from Chairman of the Security Council Committee established pursuant to resolution 1540 (2004) addressed to the President of the Security Council, retrieved 7 April 2010 from <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N08/409/78/PDF/N0840978.pdf?OpenElement>

⁸ NTI, “Many Nations Disregard U.N. Antiterror Mandate.” retrieved 7 April 2010 from http://gsn.nti.org/gsn/nw_20100405_3244.php

At the upcoming RevCon the United States should: support and contribute funding to the establishment of a UNSC 1540 ‘fund’ under which financial aid would be granted to Member States to assist in meeting Resolution 1540 obligations; advocate for establishing the PSI as a durable international institution with its own Board of Directors, international staff, mandate, signatories, and accountability measures to enable Member States to actively work together to enforce interdiction measures; encourage and assist NPT states parties in tightening export controls to impede the illicit transfer of nuclear and/or enrichment-related materials; lead an effort to create an international standard for securing radiological materials at civilian sites, such as hospitals and universities; and propose mechanisms for the sharing of information between non-proliferation initiatives in order to strengthen the NPT’s non-proliferation regime. These are all ways the U.S. can assume a leadership role and instigate change in the enforcement of non-proliferation initiatives to prevent acts of nuclear terrorism.

Recommendation #2: Better enforce security at nuclear weapon sites.

Perhaps one of the most significant measures that the United States can take is to urge all states with nuclear weapons, including our European allies, to endorse and meet stringent nuclear weapon site security requirements. An internal U.S. Air Force investigation determined that most sites currently used for deploying U.S. nuclear weapons in Europe as part of NATO’s nuclear sharing doctrine do not meet U.S. Department of Defense security requirements.⁹ A recent security breach at Kleine Brogel Air Base in Belgium, where the U.S. Air Force currently deploys 10-20 nuclear bombs, is one example of an unacceptable breakdown of security at a nuclear weapon facility. Peace activists managed to breach a double-fenced security perimeter and walk into the center of the base (where nuclear bombs might be stored in underground vaults) penetrating nearly one kilometer onto the base before being approached by security.¹⁰

Fortunately the people who breached the base were only political activists; yet this egregious event demonstrates the importance of increasing efforts to ensure that nuclear weapon sites and other facilities containing nuclear materials are sufficiently protected against the threat of terrorists.

The United States has witnessed its own share of nuclear weapon mishandlings, two of which led to the forced resignations of Air Force Chief of Staff General T. Michael Moseley and Secretary Michael W. Wynne. One incident began at Minot Air Force Base in North Dakota in September 2007, when six AGM-129 ACM cruise missiles, each loaded with a W80-1 variable yield nuclear warhead, were mistakenly loaded on a U.S. Air Force B52-H heavy bomber at Minot and transported to Barksdale Air Force Base in Louisiana. The missiles with warheads were not reported missing and remained mounted to the aircraft at Barksdale for ten hours. During this period, the warheads were not protected by the mandatory security precautions required for U.S. nuclear weapons.

⁹ Kristensen, Hans, “USAF Report: ‘Most’ Nuclear Weapon Sites in Europe Do Not Meet US Security Requirements.” Federation of American Scientists Strategic Security Blog (19 June 2008), retrieved 6 April 2010 from <http://www.fas.org/blog/ssp/2008/06/usaf-report-“most-nuclear-weapon-sites-in-europe-do-not-meet-us-security-requirements.php>

¹⁰ Kristensen, Hans, “US Nuclear Weapons Site in Europe Breached.” Federation of American Scientists Strategic Security Blog (4 February 2010), retrieved 23 March 2010 from <http://www.fas.org/blog/ssp/2010/02/kleinebrogel.php#more-2510>

The mishandling of the nuclear weapons at Minot highlights the danger of keeping U.S. nuclear weapons on high-levels of alert. De-mating nuclear warheads from missiles would increase decision time on the use of nuclear weapons, creating greater stability during a potential nuclear crisis. If the warheads had not been mated to the missiles in a state of readiness at Minot, those warheads would not have gone missing, and the dangerous incident would not have occurred. Similarly, continuing the policy of sharing nuclear and conventional weapon delivery systems at the same military bases creates the potential for another nuclear incident like the one at Minot to occur. Nuclear weapons could be made more secure by changing this basing method, moving them instead to a secure location separate from their missile delivery systems from where they would not accidentally be loaded on to missiles with conventional missions.

The second recent U.S. nuclear weapon-related security incident was the United States' shipment of nuclear missile fuses (instead of helicopter batteries) to Taiwan. The erroneous shipment of four nose-cone fuse assemblies was made in 2006, but the U.S. was not aware the fuses were missing until 18 months later, after Taiwan discovered the mistake.

Each of these examples gives testament to the vital importance of securing both nuclear weapons sites and fissile material stockpiles. Until nuclear weapons are dismantled and fissile materials eliminated, adequate security measures for nuclear weapons and materials that are properly enforced represent the best defense against the threat of nuclear terrorism. At the NPT RevCon the U.S. should acknowledge its own security failures and actions taken to remedy them, while at the same time reaffirming the importance for all relevant states of enforcing stringent security standards at weapons sites and for fissile material stockpiles.

Recommendation #3: Phase out forward-deployed U.S. nuclear weapons.

While the long-term solution to security issues at nuclear weapon sites is the outright elimination of all nuclear weapons, one near-term solution is repatriating U.S. nuclear bombs currently based in Europe as part of the North Atlantic Treaty Organization's (NATO's) nuclear sharing doctrine. Because these nuclear bombs are part of the collective defense of NATO, their removal will require consultation with our allies. At the upcoming RevCon the United States should state it will advocate for the inclusion of a timeline to gradually phase out forward deployment of U.S. nuclear weapons in NATO's upcoming new Strategic Concept.¹¹ In pushing for the repatriation of forward deployed U.S. nuclear weapons in Europe, the United States should reaffirm the validity of its Article V collective security pledge, noting this includes both strategic nuclear forces as well as the entirety of our conventional forces. As the new NPR states, "Strengthening the non-nuclear elements of regional security architectures is vital to moving toward a world free of nuclear weapons."¹²

¹¹ The Strategic Concept is an official document that outlines NATO's enduring purpose and its fundamental security strategy. See: Strategic Concept, NATO, retrieved 6 April 2010 from http://www.nato.int/cps/en/natolive/topics_56626.htm

¹² Nuclear Posture Review Report, United States Department of Defense (April 2010), p. 33, retrieved 7 April 2010 from <http://www.defense.gov/npr/docs/2010%20Nuclear%20Posture%20Review%20Report.pdf>

Withdrawing and/or retiring forward deployed weapons while continuing to assure allies is possible, as evidenced by the NPR's announced plan to retire the Tomahawk nuclear-equipped sea-launched cruise missiles (TLAM-N) that were formerly deployed to defend the U.S.'s East Asian allies. The new government of Japan was consulted prior to this decision; as a result, despite this change in U.S. nuclear force structure it has been reported that the Japanese government remains assured of the U.S. security guarantee.¹³ The Japanese government has in the past studied the desirability of a domestic nuclear weapon capability, but has always concluded remaining a NNWS and relying on the security guarantee of the U.S. was in its national interest.¹⁴ Since the decision to retire the TLAM-N has been announced, the government of Japan has made no indication that this position has changed.

A declaration at the upcoming RevCon by the U.S. that it wants to repatriate its forward-deployed nuclear weapons in Europe will further demonstrate a redirection of U.S. nuclear policy away from Cold War thinking and toward lowering the value of nuclear weapons to address the security concerns of the 21st century. Changes in U.S. nuclear force structure and policy can be effected without jeopardizing security relationships with allies if these allies are consulted before changes are implemented, as evidenced by the TLAM-N retirement and the U.S. relationship with Japan. Thus, lowering the reliance on nuclear weapons in extended deterrence of U.S. allies does not in fact lead these allies to automatically reconsider their own nuclear options, but rather it strengthens the NPT regime by consolidating and securing nuclear weapons and by showing good faith to NNWS that the U.S. is indeed working to devalue nuclear weapons in its national and extended security policies.

Likewise, the U.S. should make clear to its allies that high-level statements would be welcome to initiate the process of repatriating U.S. forward deployed nuclear weapons and/or to decrease reliance on the nuclear aspect of U.S. extended deterrent commitments. With the initiative coming from allies, the U.S. can further reduce reliance on nuclear weapons in extended deterrence commitments with confidence that allies remain assured of security guarantees and would not seek to acquire a domestic nuclear weapons capability for their own security.

Recent statements by Secretary of State Hillary Clinton, however, illustrate that the U.S. is not actively seeking to repatriate U.S. nuclear weapons deployed in Europe as part of the extended deterrence of NATO allies.¹⁵ These statements come despite the call from some of these governments to remove U.S. nuclear weapons from the continent, and despite the lack of military utility of these weapons for the defense of the Alliance. Secretary Clinton has suggested that these nuclear weapons will be useful as a bargaining chip in future nuclear arms reduction and

¹³ "We reached a point of mutual confidence that the TLAM-N was a redundant system not necessary for effective, extended deterrence for North-east Asia." James Miller, principal deputy undersecretary of defense for policy, quoted in *The Straits Times*. "US to retire Tomahawk nukes." 8 April 2010. retrieved 14 April 2010 from http://www.straitstimes.com/BreakingNews/Asia/Story/STIStory_511947.html

¹⁴ Kase, Yuri. "The Costs and Benefits of Japan's Nuclearization: An Insight into the 1968/70 Internal Report." *The Nonproliferation Review*. Summer 2001. pg 55 – 68. See also: Kamiya, Mataka. "Realistic Proactivism: Japanese Attitudes," p. 17-56 in *Unblocking the Road to Zero – Brazil, Japan, and Turkey*. Stimson Center, September 2009.

¹⁵ Remarks by Secretary of State Hillary Rodham Clinton in Tallinn, Estonia. 23 April 2010. retrieved 28 April 2010 from <http://www.state.gov/secretary/rm/2010/04/140724.htm>

nuclear policy talks with Russia,¹⁶ even though Russia deploys approximately ten times as many non-strategic nuclear weapons as the U.S. and it is unlikely Russia will reduce or reposition its tactical nuclear weapons on a 10:1 ratio. The actual political value of these weapons as bargaining chips is therefore not clear, and the future of NATO nuclear weapons will ultimately be decided at NATO's Strategic Concept Review later this year.

Pillar II: Access to Nuclear Technology for Peaceful Purposes

To convince the vast majority of states to forgo nuclear weapons and join the NPT as NNWS, the Treaty not only calls for nuclear disarmament, but also includes the incentive of access to nuclear technology for peaceful purposes. There are many civilian uses for nuclear technology, including: hospitals (medical isotopes); agriculture (food irradiation for preservation); and nuclear power.¹⁷ However, certain aspects of the nuclear fuel-cycle can also be used to create fissile material for use in nuclear weapons with the political decision to do so. Specifically, both uranium enrichment and spent fuel reprocessing technology (which separates out plutonium) can be used to create weapons-grade fissile material.

Access to nuclear technology for peaceful purposes - the “inalienable right of all the Parties to the Treaty” in Article IV of the NPT – could increase the global stockpile of fissile material, which then must be secured against theft or sale to states or terrorists. Similarly, an increase in the number of states with access to these sensitive parts of the nuclear fuel-cycle means more states that could – given the political decision – produce the fissile material for a nuclear weapon. To prevent peaceful nuclear technology from being used for military purposes, access to this technology is governed by export control regimes and bilateral trade agreements, and (as mandated in the NPT) monitoring of civilian nuclear programs performed by the International Atomic Energy Agency (IAEA) through safeguards agreements. At the upcoming NPT RevCon the United States should advocate for multilateral fuel supply assurances and commit to strengthening the IAEA.

Recommendation #4: Continue to advocate for multilateral fuel supply assurances and other multilateral efforts to manage the nuclear fuel-cycle.

The “inalienable right” to produce and use nuclear energy for peaceful purposes is one of the most divisive concepts within the entire non-proliferation regime.¹⁸ NNWS read Article IV as codifying their right to nuclear technology and – in paragraph 2 – as obligating NWS to share

¹⁶ Landler, Mark. “U.S. Resists Push By Allies For Tactical Nuclear Cuts.” New York Times. 22 April 2010. retrieved 22 April 2010 from <http://www.nytimes.com/2010/04/23/world/europe/23diplo.html>

¹⁷ The IAEA helps promote peaceful uses of nuclear energy through its Department of Technical Cooperation, but access to the means to produce nuclear energy is governed by export guidelines from states with developed nuclear technology, or nuclear supplier states. For more information: <http://www-tc.iaea.org/tcweb/default.asp>

¹⁸ The first paragraph of Article IV of the NPT states, “Nothing in this Treaty shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with Articles I and II of this Treaty.”

that technology;¹⁹ additional qualifications to this right are neither necessary nor legal. NWS, however, read Article IV as a conditioned right (conditioned upon upholding non-proliferation obligations, both Treaty and non-Treaty related), arguing the further spread of technology without additional safeguards runs counter to the spirit of nuclear non-proliferation, disarmament, and the NPT as a whole. Further, NWS believe this right is collective, not a right to each country, per se. Such views do not necessarily preclude access to nuclear technology, which President Obama continues to support, but concerns remain regarding the spread of sensitive aspects of the nuclear fuel-cycle, which can be operated in a way that develops fissile material for nuclear weapons.²⁰

The discovery of covert nuclear programs in Iraq and Libya (and suspicions regarding Syria and Iran), along with the nuclear test explosions and withdrawal from the NPT by the DPRK, have brought attention to potential proliferation risks from the spread of advanced fuel-cycle technology. Because of this, the United States and others in the international community have been working to develop initiatives that will ensure Article IV is not used by NNWS as a “cover” for a covert nuclear weapon program. These efforts are complementary, not competitive, and the U.S. – as a potential nuclear fuel supplier state - should continue to advocate for the adoption of multilateral nuclear fuel guarantees best suited to the needs of each customer state.²¹

The creation of a nuclear fuel bank managed by the IAEA is one such proposal. Its goal is to make nuclear fuel supplies from the international market more secure by offering customer states (that are in full compliance with their non-proliferation obligations) access to nuclear fuel reserves under impartial IAEA control, should their normal market supply arrangements become disrupted.²² The U.S. has already contributed \$50 million to this initiative, which currently has all of its requisite funding. However, agreement has not been reached on how to manage this fuel bank, and it is not yet in operation. Recently, a fuel-supplying center has been approved by the IAEA in Angarsk, Russia, representing a great step forward in the effort to safely manage the nuclear fuel-cycle. The recently released U.S. NPR also endorses “cradle-to-grave” arrangements – in which supplier states agree to take back spent nuclear fuel – to be part of the international cooperative fuel-cycle management effort.²³ By supporting multilateral and bilateral mechanisms at the RevCon, the U.S. can continue to promote the benefits of nuclear

¹⁹ Paragraph 2 of Article IV states, “All the Parties to the Treaty undertake to facilitate, and have the right to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy. Parties to the Treaty in a position to do so shall also co-operate in contributing alone or together with other States or international organizations to the further development of the applications of nuclear energy for peaceful purposes, especially in the territories of non-nuclear-weapon States Party to the Treaty, with due consideration for the needs of the developing areas of the world.”

²⁰ France may be an exception to this line of thinking about access to sensitive fuel-cycle technology, as the French public-private company AREVA promotes spent fuel reprocessing and associated technology for peaceful purposes.

²¹ Some of the many ideas for multilateral nuclear fuel supply assurances include: establishing an international consortium of government or mixed public-private management that would administer a supply of Low Enriched Uranium (LEU); IAEA administration of LEU; creating new internationally administered fuel-cycle centers; and fuel assurance bonds between supplier and recipient states. To be politically acceptable, new centers need to be administered in a globally representative manner, but technology can be operated under “black box” rules to prevent spreading sensitive scientific knowledge.

²² Gwin, Cathy, “NTI/IAEA Fuel Bank Hits \$100 Million Milestone; Kuwaiti Contribution Fulfills Buffett Monetary Condition.” 5 March 2009. http://www.nti.org/c_press/release_Kuwait_Fuel_Bank_030509.pdf

²³ Nuclear Posture Review Report, United States Department of Defense (April 2010), p. 10, retrieved 9 April 2010 from <http://www.defense.gov/npr/docs/2010%20Nuclear%20Posture%20Review%20Report.pdf>

technology while minimizing the potential risk of nuclear weapon or fissile material proliferation.

All dual-use nuclear technology will have to eventually come under multilateral control if the spread of nuclear technology for peaceful purposes is to continue without also increasing the threat of the proliferation of nuclear weapons or fissile material. The U.S. could greatly contribute to the strengthening of the NPT regime at the upcoming RevCon by calling for all states parties that operate enrichment and/or reprocessing facilities (including the U.S.) to commit to this idea in principle and to actively begin the complicated process of building the necessary institutions and frameworks for operating such technology in a way that does not further spread the knowledge on how it can be used for weapons purposes.²⁴ Some nuclear fuel guarantee proposals recognize this fact and envision the internationalization of the nuclear fuel cycle as happening in a phased manner, starting with confidence-building measures among states parties. The long-term enjoyment of the right to benefit from the peaceful uses of nuclear technology that is afforded all NPT states parties must be approached in a way that recognizes these benefits as scientific advances belonging to the common heritage of mankind; as such, the benefits of peaceful uses of nuclear technology are not to be used for the profit or political advantage of possessor states, but rather must be used for the improvement of the human condition. The most lasting and stable way to approach nuclear fuel supply guarantees therefore is to work toward full multilateral control of all aspects of the nuclear fuel cycle, engaging as many interested states parties as possible.

Recommendation #5: Strengthen the IAEA.

The International Atomic Energy Agency is a member of the United Nations family. One of its functions, mandated by the NPT, is to monitor the civilian nuclear programs of NNWS to ensure that nuclear materials are not diverted for military purposes.²⁵ Each NNWS is obligated to conclude a safeguards agreement with the IAEA in order for the Agency to perform this vital function. However, the Agency faces a few complications in carrying out this safeguards work, and the U.S. should continue to promote measures that will strengthen the IAEA.

Perhaps the most important measure that the U.S. should promote at the RevCon is for states parties to increase their support for the IAEA's budget. The Agency currently does not have enough funding or personnel to adequately serve its monitoring function. With any future expansion of nuclear power, this problem will become exacerbated and affect the IAEA's ability to ensure nuclear material is not diverted for military purposes or sold to state or non-state actors. To strengthen the IAEA's ability to monitor nuclear facilities, contributions to the IAEA must increase and effort must be made to recruit and train more experts. The U.S. can take the lead in this effort by pledging to increase its contributions to the IAEA and urging other states parties to do the same.

Another important measure that the U.S. should support to strengthen the IAEA is to continue to advocate for all states parties to adopt the Additional Protocol (AP) to their safeguards

²⁴ *Op Cit* 21.

²⁵ The IAEA is also tasked with promoting all the peaceful uses of nuclear energy through its Technical Cooperation Program. For information, see <http://www-tc.iaea.org/tcweb/default.asp>

agreements. The AP enables inspectors, *inter alia*, to gain greater and more frequent access to nuclear facilities and information and simplifies their visa procurement process, all of which enhances the Agency's ability to provide assurance about declared and possible un-declared nuclear activities.²⁶

As a way to prevent NNWS from having the capability to establish covert nuclear weapon programs, the U.S. and other members of the Nuclear Suppliers Group (NSG) have promoted the mandatory adoption of the AP as a condition for any future NNWS that wants to import certain nuclear technology or materials. This idea has been viewed by many NNWS as a politically motivated abuse of power and a breach of Article IV, which states NWS shall cooperate in contributing to the development of peaceful nuclear programs.²⁷ However, the IAEA has said that without the AP they cannot guarantee their inspectors will be able to detect the diversion of nuclear material to military purposes. At the RevCon, the U.S. should support the creation of incentives for NNWS to adopt the AP as a means of increasing its adoption and as a way to recast the AP as a necessary tool for international security and not as a punitive measure for potential non-compliance with non-proliferation obligations. One such initiative could be the creation of a committee that sets policy and adjudicates claims on compliance with non-proliferation and/or disarmament obligations. States that have ratified an AP would automatically receive representation on this committee, creating a tangible advantage for undertaking the voluntary measure of adopting the AP while strengthening the IAEA's ability to conduct its monitoring activities.

Pillar III: Nuclear Disarmament

The NPT is best known for its non-proliferation objective – to prevent the spread of nuclear weapons – but this is only one part of the Treaty's bargain. To convince the vast majority of the world (now 184 out of 189 states parties) to commit to remaining free of nuclear weapons, the NPT provides states parties an “inalienable right” to nuclear technology and its benefits for peaceful purposes (Article IV) and obligates NWS to work in good faith on nuclear disarmament and ending the nuclear arms race (Article VI).

The third pillar of the NPT, nuclear disarmament, represents the legal obligation to reduce and eliminate all nuclear weapons. In the 1996 Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons, the International Court of Justice decided unanimously that this is an obligation not only to negotiate in good faith toward nuclear disarmament under strict international control, but also to bring such negotiations to a successful conclusion.²⁸ Article VI

²⁶ IAEA. “Factsheets & FAQs.” Publications. retrieved 5 April 2010 from http://www.iaea.org/Publications/Factsheets/English/sg_overview.html

²⁷ All NWS have adopted the AP to their safeguard s agreements, but this is merely a symbolic gesture. That is, safeguards are meant to ensure peaceful programs are not converted for military purposes, but the IAEA does not have access to military nuclear facilities due to national security concerns. Therefore, the AP cannot serve its original purpose with the NWS but its adoption by them is meant to underscore the AP's importance for non-proliferation efforts.

²⁸ International Court of Justice. “Legality of the Threat or Use o Nuclear Weapons: Advisory Opinion of 8 July 1996.” Paragraphs 99-103 and 105, section 2F. retrieved 29 March 2010 from <http://www.icj-cij.org/docket/files/95/7495.pdf?PHPSESSID=a174592a0fc8524302520966c7231950>

of the NPT obliges states parties to undertake “to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a Treaty on general and complete disarmament under strict and effective international control.” Some NWS have conflated “general and complete disarmament” (GCD)²⁹ with nuclear disarmament, but the two undertakings are clearly demarcated in Article VI; the nuclear disarmament obligation is neither contingent upon GCD nor on the total disarming of all nations.

Many concrete steps have been taken by the U.S. toward fulfilling its Article VI obligation, especially in the reduction of deployed nuclear warheads. However, many of these weapons are removed to storage and not dismantled, leaving them available for redeployment. Further, assurances not to use nuclear weapons against NNWS (negative security assurances) remain qualified, thousands of nuclear weapons remain on high alert, and nuclear weapons remain the centerpiece of the U.S.’s national security policy and for the extended deterrence commitments to allies. Despite the fact that the U.S. and other NWS have committed themselves at past RevCons to changing these policies, they continue, even in the new NPR. Thus, the trust and confidence that should be engendered from nuclear disarmament measures is severely diminished by the implementation of policies and practices that seem to run counter to the NPT’s nuclear disarmament obligation. At the upcoming RevCon, the U.S. needs to acknowledge and address the view of many countries that its nuclear disarmament obligation and commitments have been unfulfilled, while at the same time promoting its recent arms control successes as a way to strengthen the Treaty and its non-proliferation regime. As President Obama said at the conclusion of the Nuclear Security Summit, “When the United States fulfills our responsibilities as a nuclear power committed to the NPT, we strengthen our global efforts to ensure that other nations fulfill their responsibilities.”³⁰

Recommendation #6: Support the negotiation of a further nuclear arms reductions with Russia and later with other nuclear-armed states.

The U.S. and Russia have approximately 95% of the world’s estimated 23,360 nuclear weapons.³¹ Between them, the former cold war rivals have approximately 7,750 nuclear weapons, many of which are ready to launch within 15 minutes of a given order.³² The reduction of these arsenals is not only an obligation under the NPT, but is in the security interest of all nations, and is in particular of great concern to NNWS who have forsworn such weapons.

²⁹ GCD itself is widely misunderstood – it refers to the elimination of all WMD along with the reduction and limitation of conventional arms and armed forces to levels sufficient enough to maintain order within a nation and to enable that nation to contribute to international peace operations, while not diminishing the security of any other state. Reductions and limitations in these armaments would be subject to international verification and control, accompanied by strengthened dispute resolution mechanisms. For more, see http://www.isodarco.it/courses/andalo10/doc/andalo10_Rydell_GCD-chapter.pdf

³⁰ The White House. “Obama’s Closing Remarks, Press Conference at Nuclear Summit.” 13 April 2010. retrieved 14 April 2010 from <http://www.america.gov/st/texttrans-english/2010/April/20100413195648ihecuor8.899653e-02.html>

³¹ Norris, Robert S. and Hans M. Kristensen. “Nuclear Notebook: Worldwide deployments of nuclear weapons, 2009.” Bulletin of Atomic Scientists, November/December 2009. retrieved 1 April 2010 from <http://thebulletin.metapress.com/content/xm38g50653435657/fulltext.pdf>

³² *Ibid.*

The U.S. and Russia have recently concluded a successor agreement to the expired START I treaty, the New Strategic Arms Reduction Treaty (New START), which enumerates reduction requirements in nuclear warheads and strategic delivery vehicles under strict verification. The Obama administration should assure all states parties at the upcoming RevCon that it is working to achieve ratification for the New START in the Senate by the end of 2010. In addition, the U.S. should announce that once ratification takes place, it is ready to begin negotiations on a new, more far reaching nuclear arms control treaty with Russia – one that addresses the issues of missile defense, tactical nuclear weapons, and nuclear weapons held as a “hedge” in storage. These public declarations will show the U.S. is working in good faith to fulfill its Article VI obligation and help promote a successful outcome to the RevCon.

As the nuclear stockpiles of the United States and Russia get smaller in the future, nuclear arms reduction negotiations should include other NWS and later also states possessing nuclear weapons outside the NPT. Doing so will maintain stability in the global security environment while reliance on nuclear weapons declines. At the upcoming RevCon, the U.S. should encourage NWS to draft and sign a statement, to be included in the Final Document of the Conference, committing themselves to ongoing nuclear weapon reductions with the expressed aim of their elimination. Such leadership from the U.S. on nuclear disarmament will show a good faith effort toward fulfilling its Article VI disarmament obligation.

Recommendation #7: Support the negotiation of a Nuclear Weapons Convention and urge other NWS to do the same.

The NPT has mechanisms for ensuring the compliance of NNWS with their obligation not to acquire nuclear weapons (i.e. IAEA safeguards) but the Treaty does not have a similar mechanism to ensure compliance with the nuclear disarmament obligation of NWS. A Nuclear Weapons Convention (NWC) would be the most comprehensive mechanism to ensure compliance with Article VI.

A NWC would offer a phased, transparent, irreversible, time-bound, and verifiable approach for the elimination of nuclear weapons. International stability and security would therefore be maintained while states with nuclear weapons decreased their arsenals and their reliance on nuclear weapons. Such an approach has been outlined in the Model NWC submitted by Costa Rica and Malaysia to the United Nations (UN) in 2007. UN Secretary General Ban Ki-moon called for the negotiation of a NWC on 24 October 2008 as part of his 5-point proposal for nuclear disarmament.³³ An internationally negotiated NWC that provides a phased approach for the abolition of nuclear weapons under verifiable, irreversible, and secure steps would be the best way to fulfill NWS’s Article VI obligation, and the good faith engendered would greatly reinforce the other two pillars of the NPT.

³³ United Nations Department of Public Information. SG/SM/1181 DC/313. 24 October 2009. “Contagious Doctrine of Nuclear Deterrence Has Made Non-Proliferation More Difficult, Raised New Risks, Secretary-General Says in Address to East-West Institute.” Retrieved 1 April 2010 from <http://www.un.org/News/Press/docs/2008/sgsm11881.doc.htm>

Recommendation #8: Renew effort to fulfill past RevCon commitments.

In 1995 the NPT was extended indefinitely, removing the only power NNWS had to pressure NWS into fulfilling their nuclear disarmament obligation – discarding the Treaty. At the 1995 RevCon, NWS made several commitments to NNWS to get the Treaty indefinitely extended, which were later renewed at the next RevCon in 2000. The 2000 RevCon produced a consensus Final Document that included support from all states parties on the 13 Practical Steps toward nuclear disarmament.³⁴ However, many of these commitments remain unfulfilled, and in 2005 the Bush administration rejected these commitments at that year’s RevCon, further frustrating NNWS. Expressing this frustration, in March 2010, Egypt’s ambassador to the UN, Hisham Badr, stated, “We in the Middle East feel we have, short of a better word, been tricked into giving concessions for promises that never materialized.”³⁵ The U.S. can strengthen the NPT at the upcoming RevCon by renewing its effort to fulfill these past commitments and urging other NWS to join them.

The first of the 13 Practical Steps calls for the ratification of the Comprehensive Nuclear Test Ban Treaty (CTBT). President Obama has already publicly committed himself to pushing the Senate to achieve this objective. The Stockpile Stewardship Program (SSP) at the U.S. national labs has been able to certify the reliability of U.S. nuclear weapons for almost two decades, further obviating the need for returning to nuclear testing. The call to support negotiations on a verifiable Fissile Material Cutoff Treaty (FMCT) is another one of the 13 Practical Steps for which President Obama has already expressed his support.

The United States can discourage the further proliferation of nuclear weapons by substantially decreasing the importance of nuclear weapons in its national security policy, another one of the 13 Practical Steps. As the new NPR states, “By working to reduce the salience of nuclear weapons in international affairs and moving step-by-step to eliminating them, we can reverse the growing expectation that we are destined to live in a world with more nuclear states, and decrease incentives for additional countries to hedge against an uncertain future by pursuing nuclear options of their own.”³⁶

While some have argued that maintaining an ambiguous nuclear declaratory policy allows for more discretion and flexibility in making decisions pending the outcome of political events, many are now recognizing the benefits of clarifying U.S. policy. Remaining clear and consistent in nuclear posture and continually demonstrating the decreased salience of nuclear weapons in U.S. security policy will also alleviate the sending of “mixed signals,” something the United States has been accused of by NNWS. Perception that NWS are not living up to their side of the Treaty’s bargain may lead some NNWS to lose confidence in the NPT regime, with devastating proliferation consequences.

³⁴ Reaching Critical Will. “Promises of the 2000 NPT Review Conference.” Retrieved 14 April 2010 from <http://www.reachingcriticalwill.org/legal/npt/13point.html>

³⁵ “Mideast feels ‘tricked’ by nuclear arms treaty.” AP (10 March 2010), retrieved 28 March 2010 from http://www.google.com/hostednews/afp/article/ALeqM5jpMIPizIXr95Vvxrm_m6KxRRgZvA

³⁶ Nuclear Posture Review Report, United States Department of Defense (April 2010), p. vi, retrieved 7 April 2010 from <http://www.defense.gov/npr/docs/2010%20Nuclear%20Posture%20Review%20Report.pdf>

The Obama administration has made efforts to change this perception. For example, the new NPR has made an effort to shift U.S. nuclear employment policy away from the preemption embraced by the previous administration. The new NPR states that the “fundamental purpose” of U.S. nuclear weapons is to deter nuclear attack on the U.S., our allies, and partners. This new U.S. policy removes (for NNWS in compliance with their non-proliferation obligations) nuclear retaliation as an option in response to a chemical, biological, or conventional attack on the U.S. or its allies. The “fundamental purpose” policy is thus a much less qualified negative security assurance than has ever been issued by the U.S. This assurance removes the U.S. as a potential nuclear threat to NNWS, one they might believe they need their own nuclear weapons to combat. While the NPR did not go so far as to commit the U.S. to the “no first use” pledge, it does state that a “no first use” policy is the eventual goal. This part of the NPR represents a modest step forward in sensible nuclear policy. The U.S. should work at the upcoming RevCon to clarify the international security conditions under which a “no-first use” policy would be possible.

Irreversibility in reductions and transparency in nuclear armaments are additional past commitments the U.S. should renew support for this May. The U.S. should declare it will increase the rate of dismantlement of decommissioned nuclear warheads, adding that all future nuclear arms reductions will not just remove the weapons to storage, but ensure the warheads will be dismantled. To verify irreversibility, the U.S. should promote transparency in nuclear disarmament by declaring its nuclear weapon stockpile to the IAEA and committing to the submission of regular reports to the Agency. This declaration and reporting should apply to fissile materials as well. Such reports should be declassified, so as to further increase transparency and build trust among states. Doing so will help build confidence that the U.S. is willing to be held accountable in its effort to reduce and secure nuclear weapons and materials, and that the U.S. is working toward irreversible, verifiable nuclear disarmament. The U.S. should encourage other NWS, nuclear-armed states outside the NPT, and all states with stockpiles of fissile materials to join them in these efforts.

Reducing the operational readiness of deployed nuclear weapons was another one of the 13 Steps, one that was left specifically unchanged in the new NPR. For now, U.S. policy will continue to keep its deployed nuclear weapons on high alert, leaving little decision time for the president during a potential nuclear crisis. This unfulfilled commitment will likely be brought up by NNWS at the RevCon as an illustration that NWS are not working toward lowering the salience of nuclear weapons in their security policies. FAS recommends that in the future the U.S. reduce the operational readiness of all its nuclear weapons, for example by de-mating warheads from delivery systems or taking steps to explore new modes of ICBM basing, as was called for in the new NPR. Reducing operational readiness greatly increases stability and international security, as it allows for extended decision time in a crisis, averts potential nuclear responses to errant warning data, and eliminates the possibility of accidental launch.

Recommendation #9: Assure states parties that the U.S. will abstain from developing improved nuclear weapons while executing Life Extension Programs.

Despite a commitment to nuclear weapon reductions, the Obama administration has made clear that it will maintain a safe, secure, and effective nuclear stockpile as long as other nations have nuclear weapons. Because components age over varying lifetimes in nuclear weapons, the

warheads must undergo routine inspection to detect any defects. Maintaining an enduring stockpile requires funding, training, human capital, and dependable refurbishment methods. Maintenance through Life Extension Programs (LEPs) should take a minimalist approach and replace aging components with newer components based only on legacy designs so as to obviate the need for resuming nuclear testing.

To maintain the enduring stockpile, nuclear weapon LEPs engage in one of three methods: (1) refurbishment (individual nuclear components are replaced before they degrade with components of nearly similar design or that meet the same “form, fit, and function”), (2) reuse (using existing surplus pit and secondary components from other warhead types), or replacement (replacing some or all tested nuclear components with components that have been tested but perhaps not previously deployed).³⁷ Each weapon is evaluated and maintained through one of these methods based on its unique maintenance requirements.

It is therefore possible that newly designed components (from tested but previously un-deployed designs) will be incorporated into modifications during LEPs, which presents several problems for the U.S. First, there are those in Congress who believe there should be a return to nuclear testing to ensure the reliability of modified warheads with replaced components. Second, it may in fact be desirable to replace certain non-nuclear components of warheads with designs that make them safer (i.e. less likely to produce a significant nuclear yield if detonated accidentally or in an unauthorized manner). Lastly, the U.S. must consider that any LEPs, especially those that choose the replacement method, are seen by some in the international community as evidence of the U.S.’s continued emphasis on the reliance of nuclear weapons in its security strategy and a means to indefinitely hold on to a nuclear weapon capability, in contravention of the U.S.’s NPT Article VI obligation and other NPT-related commitments. As previously stated, such a view engenders frustration from NNWS and complicates progress on U.S. non-proliferation objectives. FAS recommends that at the upcoming RevCon the U.S. clearly state how it defines a “new” nuclear weapon.³⁸ This will demonstrate the U.S.’s commitment to maintaining a safe, secure, and effective nuclear stockpile for domestic and extended security commitments without simultaneously raising suspicions about the purpose of ongoing LEPs.

Maintenance of U.S. nuclear weapons does not necessitate altering their military capabilities. FAS recommends the U.S. support the current Congressional definition of a “new” nuclear weapon (i.e. one that contains a pit or canned sub-assembly not in the stockpile before 2002) and add to it that a “new” nuclear weapon is also one with improved damage capabilities (i.e. through yield or burst height modification within an existing design), even if the pit or canned sub-assembly has not been replaced.³⁹ This recommendation is based on the fact that it may be

³⁷ The MITRE Corporation. JASON Program Office. JSR-09-334E. “Lifetime Extension Program (LEP) Executive Summary.” 9 September 2009. <http://www.fas.org/irp/agency/dod/jason/lep.pdf>

See also: Collina, Tom, “News Analysis: What Is a ‘New’ Nuclear Weapon?,” *Arms Control Today* (April 2010).

³⁸ Congress’s current definition of a “new” nuclear weapon is one that “contains a pit or canned subassembly” not in the stockpile or in production as of 2002. See: Collina, Tom, “News Analysis: What Is a ‘New’ Nuclear Weapon?,” *Arms Control Today* (April 2010). The B61-11 modification, for example, created a varying height burst detonation capability, thereby changing the military capability of the weapon.

³⁹ The new NPR states that the U.S. will “not support new military missions or provide for new military capabilities” while performing LEPs on the nuclear stockpile. A statement of what is considered a “new” nuclear weapon from the U.S. government separate from the NPR, however, would bring weight and clarity to the claim that the U.S. is not developing new nuclear weapons.

desirable in some cases to replace non-nuclear components of nuclear warheads - such as the arming, fuzing, and firing components - with new designs aimed to improve the safety, and not the military capability, of the weapons. In addition, this definition would allow for replacement modifications that *decrease* the damage capabilities of nuclear weapons, such as removing the weapon's secondary. Further, the independent JASONS group of scientists have certified that plutonium pits in U.S. nuclear weapons are viable for at least 100 years;⁴⁰ any redesigning of these pits is therefore unnecessary and would in fact constitute a "new" nuclear weapon.

At the upcoming NPT Review Conference the United States needs to make clear that LEPs will only be designed and executed to maintain the current capabilities of the U.S. enduring stockpile without the need to resume nuclear testing, not to improve military capabilities or develop new nuclear weapons. The U.S. should state that LEPs will not yield "new" nuclear weapons (as defined) and strongly reaffirm that the goal of LEPs is to maintain safe, secure, and effective nuclear weapons while working toward the realization of President Obama's vision of a world free of nuclear weapons. In this way, the U.S. can hope that NNWS at the RevCon will focus on the devaluing of nuclear weapons in the new NPR and the nuclear arms reductions in the New START as good faith efforts by the U.S. toward fulfilling its NPT disarmament obligation and related commitments, even while continuing to aggressively fund its nuclear weapon complex.

⁴⁰ The MITRE Corporation. JASON Program Office. JSR-09-334E. "Lifetime Extension Program (LEP) Executive Summary." 9 September 2009. <http://www.fas.org/irp/agency/dod/jason/lep.pdf>

Appendix

I. Non-Proliferation of Nuclear Weapons

- a. Recommendation #1: Continue to advocate for multilateral measures that will prevent terrorist acquisition of nuclear weapons and materials.
 - i. Propose the establishment of a UNSC 1540 ‘fund’ under which financial aid would be granted to Member States to assist in meeting Resolution 1540 obligations.
 - ii. Propose establishing the PSI as a durable international institution with its own staff and mandate.
 - iii. Work to assist UN Member States in tightening export controls meant to impede illicit transfers of nuclear and/or uranium enrichment-related materials.
 - iv. Lead an effort to create an international standard for securing radiological material at civilian sites.
 - v. Work with other states to define how non-proliferation initiatives can share information and work together to strengthen global non-proliferation goals.
- b. Recommendation #2: Better enforce security at nuclear weapon sites.
 - i. Urge all states with nuclear weapons, including European allies, to endorse and meet stringent nuclear weapon site security requirements.
 - ii. State U.S. nuclear weapon site security failures and the measures taken to remedy them as an example of how tighter security at nuclear weapon sites can be attained.
 1. Lessons of Minot incident:
 - a. De-mating nuclear warheads would have prevented this incident from occurring and highlights concerns over keeping U.S. nuclear weapons on high-levels of alert, such as keeping warheads mated to missiles.
 - b. Sharing nuclear and conventional weapon delivery systems at the same military bases creates the potential for another nuclear incident like the one at Minot to occur. Nuclear weapons could be made more secure by changing this basing method, moving them instead to a secure location separate from their missile delivery systems from where they would not accidentally be loaded on to missiles with conventional missions.
- c. Recommendation #3: Phase out U.S. forward-deployed nuclear weapons.
 - i. Despite recent remarks from Secretary Clinton to the contrary, FAS recommends the U.S. declare its desire to repatriate nuclear bombs currently based in Europe as part of the North Atlantic Treaty Organization’s (NATO’s) nuclear sharing doctrine. Emphasis should be given to discussions with NATO allies on the future of NATO security commitments at the upcoming Strategic Concept Conference later this year.

- ii. Emphasize the successful dialogue with Japanese counterparts that assured them of the continued U.S. security commitment while simultaneously retiring the TLAM-N weapon system.
- iii. Make clear to allies that high-level statements would be welcome to initiate the process of repatriating U.S. forward deployed nuclear weapons and/or to decrease reliance on the nuclear aspect of U.S. extended deterrent commitments.

II. Access to Nuclear Technology for Peaceful Purposes

- a. Recommendation #4: Continue to advocate for multilateral fuel supply assurances and other multilateral efforts to manage the nuclear fuel-cycle.
 - i. Emphasize President Obama's commitment to the promotion of the peaceful uses of nuclear energy, but recognize the proliferation risks associated with the spread of enrichment and reprocessing technology. Support incentives for NNWS to participate in multilateral nuclear fuel supply assurances to address these concerns.
 - ii. Encourage NPT states parties to pressure the IAEA Board of Directors to adopt rules and regulations for an already fully funded nuclear fuel bank to be managed by the IAEA.
 - 1. Emphasize that the goal of this fuel bank is to make market-based nuclear fuel supplies more secure by offering customer states in compliance with non-proliferation obligations access to nuclear fuel in the event of a disruption in supply.
 - 2. Further emphasize that fuel guarantees are not punitive, but rather in the interest of all states to prevent the risk of nuclear terrorism.
 - iii. Encourage all multilateral nuclear fuel supply guarantees, emphasizing different proposals are not in competition, but can meet the different needs of customer states.
 - iv. Call on all states parties that operate enrichment and/or reprocessing facilities (including the U.S.) to commit to a long-term, phased plan of putting them under multilateral control and to begin building the necessary institutions and frameworks for operating such technology in a way that does not further spread the knowledge on how it can be used for weapons purposes. Engage as many interested states parties as possible in this process.
- b. Recommendation #5: Strengthen the IAEA.
 - i. Announce the U.S. will substantially increase its funding of the IAEA in order for the Agency to carry out its expanding safeguards monitoring obligations and future nuclear fuel supply management capacity. Encourage other NPT states parties to do the same.
 - ii. Continue to advocate for all states parties to adopt the Additional Protocol (AP) to their safeguards agreements. Create incentives for adopting the AP in order to recast the AP as a necessary tool for international security and not as a punitive measure for potential non-compliance with non-proliferation obligations.

- iii. Initiate work with other states parties on establishing objective criteria for violations of IAEA safeguards and other nuclear cooperation agreements. Creating a committee for this work and its enforcement, on which states that have adopted the AP are represented, could be one incentive for states to adopt the AP.

III. Nuclear Disarmament

- a. Recommendation #6: Support the negotiation of further nuclear arms reductions with Russia and later with other nuclear-armed states.
 - i. Stress the Obama administration is working to ratify the New START treaty by the end of 2010.
 - ii. Announce readiness to begin negotiations on a new bilateral nuclear arms control treaty with Russia that addresses the issues of missile defense, tactical nuclear weapons, and nuclear weapons held as a “hedge” in storage.
 - iii. Emphasize that such negotiations are meant to further progress toward President Obama’s vision of a nuclear weapon free world, and that this vision will necessarily include similar nuclear arms control negotiations with other nuclear-armed states as the arsenals of the U.S. and Russia substantially decrease.
- b. Recommendation #7: Support the negotiation of a Nuclear Weapons Convention and urge other NWS to do the same.
 - i. Support the Model Nuclear Weapons Convention - already submitted to the UN and endorsed by the Secretary General – as a way to fulfill its Article VI obligation to work toward nuclear disarmament in a phased, time-bound, irreversible, transparent, and verifiable manner.
- c. Recommendation #8: Renew effort to fulfill past RevCon commitments.
 - i. Reaffirm President Obama’s commitment to U.S. ratification of the CTBT and to achieving the other necessary ratifications for that Treaty to enter into force at an early date.
 - ii. Continue to call for the negotiation of an effectively verifiable FMCT.
 - iii. Emphasize the de-valuing of nuclear weapons in the new NPR’s “fundamental use” declaratory policy and stress that the NPR states the U.S.’s goal is to work toward an international security environment in which a “no first use” policy would be acceptable.
 - iv. Clarify the international security conditions under which a “no-first use” policy would be possible.
 - v. Irreversibility in nuclear disarmament should be pursued by verifiably destroying nuclear warheads removed from operational status. The rate at which the U.S. decommissions nuclear warheads should be increased, and all future nuclear arms reduction agreements should send warheads to be decommissioned instead of removing them to storage.
 - vi. To verify irreversibility, the U.S. should promote transparency in nuclear armaments by declaring its nuclear weapon stockpile to the IAEA and committing to the submission of regular reports to the Agency. This declaration and reporting should apply to fissile materials as well. Such

reports should be declassified, so as to further increase transparency and build trust among states.

- vii. Consider alternative basing for ICBMs as a means to increase decision time on nuclear use, as advocated in the new NPR, until ready to reconsider more substantial stabilizing de-alerting measures, such as demating warheads from missiles.
- d. Recommendation #9: Assure states parties that the United States will abstain from developing improved nuclear weapons while executing Life Extension Programs.
 - i. Declare the definition of a “new” nuclear weapon is one with no improved military capabilities and one that does not have a pit or canned sub-assembly designed after 2002.
 - ii. Reassure NPT states parties that LEPs will maintain the U.S. stockpile without producing any “new” nuclear weapons, as defined, in order to obviate the need to return to nuclear testing.

About the Authors

Matt Buongiorno is a Herbert Scoville Jr. Peace Fellow with the Strategic Security Program at the Federation of American Scientists, where he is currently working on conventional weapons issues with the Arms Sale Monitoring Project, U.S. nuclear policy and non-proliferation issues, and Iran's illicit nuclear procurement.

Matt graduated first in his class from Texas Christian University in 2009 with degrees in Political Science and Economics and was actively involved in TCU's Model United Nations program. In addition to his work with FAS, he is now a junior staff with National Model United Nations, the world's largest collegiate United Nations simulation.

Alicia Godsberg is the Research Associate for the Strategic Security Program and UN Affairs at FAS. She has opened an office for FAS in New York City to further advance FAS's advocacy on nuclear disarmament and nonproliferation issues and to engage FAS with the United Nations on a regular basis. Alicia will be attending, blogging from, and presenting at UN conferences and annual meetings, including the 2010 NPT Review Conference.

From October 2007 - May 2008 Alicia took a leave of absence from FAS to work as the research assistant for Dr. Ellen Williams on the Strategic Posture Review Commission. One of Alicia's writings for the Commission was published in the 2009 US Institute of Peace publication of Commission papers, *In The Eyes of the Experts*.

Prior to working at FAS Alicia worked as a research associate for the Lawyer's Committee on Nuclear Policy in New York. She is a graduate of The Graduate Center at the City University of New York (2007) with a master's degree in political science and of the University of Michigan with a B.S. in political science.