Arms Control Today

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American Branch of the International Physicians for the Prevention of Nuclear War

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The Arms Control Association (ACAN) founded in 1971, is a nonprofit membership organization dedicated to promoting public understanding and supporting effective arms control policies. Through its media and public education programs and its magazine Arms Control Today, ACA provides policymakers, journalists, educators, and the interested public with authoritative information and analyses on arms control, nonproliferation, and global security issues.

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A Good Deal in the Making

A fter extending talks on Iran’s nuclear program beyond the original July 20 target date, Iran and six world powers are closing in on a long-term, verifiable, comprehensive deal. Such an agreement would block Iran’s potential uranium and plutonium paths to nuclear weapons, removing a major threat to international security for many years to come.

Iran and the six-country group—known as the P5+1 because it comprises the five permanent members of the UN Security Council plus Germany—have worked out solutions on several key issues, including some that appeared to be intractable just a year ago. They agree in principle that the design of Iran’s Arak heavy-water reactor project can and should be modified to drastically cut its output of weapons-grade plutonium and that Iran shall not build a reprocessing facility to separate that material from spent reactor fuel.

Iran is amenable to implementing and ratifying measures that would strengthen International Atomic Energy Agency (IAEA) inspection authority. With the option of short-notice inspections of undeclared sites under the terms of an additional protocol to its safeguards agreement and with regular inspections of Iranian centrifuge workshops, the international community would have the capabilities necessary to promptly detect and disrupt an effort to pursue nuclear weapons in the future, even through a potential clandestine program.

Both sides understand that the ongoing IAEA investigation of past Iranian activities with possible military dimensions will continue after a comprehensive nuclear agreement is reached. At the same time, it is clear that key sanctions, including UN Security Council measures tied to the issue, will not be removed until and unless the investigation is resolved.

The members of the P5+1 agree that the goal is not to extract an admission from Iranian officials that their country engaged in nuclear weapons-related work in the past, but to ensure that the IAEA has sufficient information to determine that no such efforts are taking place now or in the future.

On uranium enrichment, the two sides agree that Iran should limit its enrichment of uranium to normal reactor-grade levels: 5 percent or less of fissionable uranium-235. They agree that Iran’s underground Fordow enrichment plant need not be closed, as the P5+1 originally demanded, but shall be limited to a research-only role.

But as the negotiators have stressed, “nothing is agreed until everything is agreed.” With less than a month before their current Nov. 24 deadline, the two sides still need to hammer out technical understandings and make important decisions on at least two major issues in order to get to “yes.”

Until recently, Iran has sought to maintain its current number of operating centrifuges—approximately 10,200—with the option to increase its uranium-enrichment capacity over time to provide fuel for potential new power reactors. The United States and its P5+1 negotiating partners want Iran to cut the current number of operating centrifuges for several years and to disable machines that are installed but not yet operating.

Given Iran’s past actions, suspicion over its nuclear intentions is justified, particularly when its uranium-enrichment capacity exceeds its needs on the ground. Iran should be willing to accept a reduction in its enrichment capacity for a period of several years. This capacity could be allowed to expand in the future if Iran’s needs for enriched uranium increase.

Reducing Iran’s current enrichment capacity by half, combined with a significant reduction in the size of the country’s enriched-uranium stocks or removal of those stocks to a third country, would increase the time it would take Iran to produce enough weapons-grade enriched-uranium gas for one nuclear weapon to nine to 12 months or more. That is more than enough time to detect and disrupt any effort to develop nuclear weapons.

In exchange for a significant reduction in Iran’s uranium-enrichment capacity, the P5+1 will likely need to agree to allow limited research and development on more-advanced centrifuges. It is unrealistic to expect Iran to agree to a deal that limits it to using only first-generation centrifuges, which are inefficient and unreliable. The agreement can and should put in place verifiable restrictions that block Iran from manufacturing advanced centrifuges for production-scale enrichment for the duration of the comprehensive agreement.

Iran’s current practical needs for enrichment are limited, but to assure Tehran that its needs can be met for the duration of an agreement, the P5+1 may also offer nuclear fuel-supply guarantees, including the shipment of several years’ worth of fuel for Iran’s one operating light-water power reactor, at Bushehr.

To enhance Iran’s incentive to meet its nonproliferation obligations under the agreement, the two sides agree that the P5+1 will phase out and later lift nuclear-related sanctions as Iran meets its nonproliferation obligations and the IAEA investigation of Iran’s nuclear program is concluded.

Policymakers in Washington and Tehran need to recognize a good deal when they see one. An effective, verifiable, comprehensive P5+1 nuclear agreement with Iran is within reach. Such a deal is critical to guard against a nuclear-armed Iran and an escalation of tensions in the Middle East, and it is the only way Iran can obtain relief from further international isolation and sanctions.
InBRIEF

Notable Quotable

“When I was meeting President Obama, I shared two, three things with him…. My message was very simple. I said that instead of sending guns, send books. Instead of sending weapons, send teachers.”


Ten Years Ago in ACT

Weapons in the Heavens: A Radical and Reckless Option

“The weaponization of space was avoided during the Cold War, even though both superpowers jockeyed for military advantage on virtually every other front. Space weaponry can also be avoided now…. The time is ripe to reinforce existing norms in space that have greatly benefited space-aided commerce, scientific exploration, and the U.S. armed forces.”

—Michael Krepon, November 2004

BY THE NUMBERS

Russian and U.S. Strategic Nuclear Arsenals

1,512
Russian warheads deployed, April 2014

1,643
Russian warheads deployed, October 2014

1,585
U.S. warheads deployed, April 2014

1,642
U.S. warheads deployed, October 2014

1,550
Deployed warheads allowed under New START*

*The New Strategic Arms Reduction Treaty entered into force in 2011; Russia and the United States must comply with the treaty limits by 2018. Under the treaty’s counting rules, heavy bombers are counted as carrying one warhead regardless of how many warheads they can carry.

Source: U.S. Department of State
News Briefs

Kahl Tapped as Biden Aide

Vice President Joe Biden announced on Sept. 26 the appointment of Colin Kahl as his new national security adviser.

Prior to joining Biden’s office, Kahl was associate professor in the Security Studies Program in the Edmund A. Walsh School of Foreign Service at Georgetown University and a senior fellow at the Center for a New American Security. While at the center, Kahl authored numerous articles on Iran’s nuclear program, including “The Danger of New Iran Sanctions” in The National Interest in December 2013 and “Still Not Time to Attack Iran” in Foreign Affairs in January 2014.

From 2009 to 2011, Kahl served as deputy assistant secretary of defense for the Middle East.

“As both a scholar and experienced public servant, Colin has a unique perspective on a number of national security issues that our country faces today, particularly in the Middle East,” said Biden in a statement announcing the appointment.

Kahl succeeds Jake Sullivan, who left Biden’s staff in August to teach at Yale Law School. Sullivan remains a senior advisor on talks with Iran on its nuclear program.

The administration recently filled other senior positions dealing with nuclear weapons and nonproliferation policy.

Elizabeth Sherwood-Randall was sworn in Oct. 5 as deputy energy secretary. Sherwood-Randall, who was confirmed by the Senate on Sept. 18, previously served as White House coordinator for defense policy, countering weapons of mass destruction, and arms control.

Adam Scheinman, also confirmed by the Senate on Sept. 18, was sworn in Sept. 22 as President Barack Obama’s special representative for nuclear nonproliferation. In that role, he will represent the United States at the 2015 Nuclear Nonproliferation Treaty Review Conference.

Robert Wood was sworn in Oct. 2 as U.S. representative to the Conference on Disarmament. He had been confirmed by the Senate on July 15.

The administration is still seeking confirmation of Frank Rose to be assistant secretary of state for arms control, verification, and compliance. He was nominated for the position on July 18, 2013. Rose is currently deputy assistant secretary of state for space and defense policy.—KINGSTON REIF

Former Foe Vietnam Cleared for U.S. Arms

The U.S. government will allow the sale of certain types of lethal weapons to Vietnam for the first time, the State Department announced Oct. 2. “This policy supports Vietnam’s efforts to improve its maritime domain awareness and maritime security capabilities,” a State Department official said in an Oct. 17 e-mail to Arms Control Today.

The announcement followed a protracted confrontation between Vietnam and China last summer over the introduction of a Chinese oil rig into a part of the South China Sea claimed by Vietnam. In May, the State Department criticized the move as “provocative,” saying that “this unilateral action appears to be part of a broader pattern of Chinese behavior to advance its claims over disputed territory in a manner that undermines peace and stability in the region.”

As the Chinese and Vietnamese navies jousted for position around the oil rig, ships from the two countries rammed each other, resulting in injuries, according to news reports. Although China withdrew the rig in July, relations between China and Vietnam remain tense.

“Never before have we seen a greater risk for miscalculation and incidents that may escalate to military conflicts than in the past few months,” Pham Binh Minh, Vietnam’s foreign minister, told a New York audience Sept. 24. A week later, Secretary of State John Kerry met with Pham and informed him that Washington’s long-time ban on lethal weapons sales to Vietnam was being partially lifted.

Vietnam’s maritime defense capabilities are “minimal,” according to Richard Aboulafia, an analyst for the Teal Group, which monitors the arms trade. With only four maritime surveillance aircraft, Vietnam is most likely to ask the United States for refurbished P-3 patrol planes, Aboulafia said in an Oct. 17 interview.

Whatever Vietnam requests in the way of lethal maritime security items will be on the U.S. Munitions List, the U.S. official said in the Oct. 17 e-mail. Transfers will be reviewed on a case-by-case basis by the State Department and other U.S. agencies for compliance with the Arms Export Control Act, the Obama administration’s conventional arms transfer policy, and related considerations, the official said.—JEFFERSON MORLEY
France Delays Arms Delivery Decision

The controversial sale of a French amphibious assault ship to Russia remains in limbo after the French government dropped its original deadline for a decision.

On the eve of the NATO summit in early September, French President François Hollande announced he was delaying the scheduled delivery of the first of two Mistral helicopter carriers because of Russian intervention in Ukraine. At that time, Hollande said he had two conditions for approving delivery of the ship—a cease-fire in Ukraine and a political settlement that resolves the country’s crisis. He said he would make a decision in “late October.”

Germany and the United Kingdom had called on France to cancel the contract, which is worth 1.1 billion euro ($1.4 billion), so as not to bolster Russian military capabilities. According to news reports, France may have to pay a substantial penalty if it does not fulfill the contract, which was signed in June 2011.

In an Oct. 17 e-mail to Arms Control Today, a spokesman for the French embassy in Washington pointed to remarks Hollande had made the previous day in Milan. In those comments, Hollande reiterated his conditions for approving the delivery of the first carrier, saying that the cease-fire “needs to be fully respected in Ukraine and the crisis resolution plan...needs to be fully implemented.”

The spokesman said that no date has been set for Hollande’s decision.—JEFFERSON MORLEY

NNSA Reviewing Nonproliferation Work

The Energy Department’s National Nuclear Security Administration (NNSA) is reviewing its approach to its nonproliferation programs and expects to issue the results of that review early next year, the head of the semiautonomous agency said Oct. 29.

Speaking at a briefing for reporters, retired Lt. Gen. Frank Klotz said that, for more than a year, the NNSA has been “going through an assessment of how we view the world situation, how we view technology development, and where we can best have an impact in achieving the overall goals of nonproliferation and implementing safeguards across the globe.”

A major part of the impetus for that review, he indicated, was the end of the four-year period that President Barack Obama established for securing “vulnerable nuclear material around the world.” Obama announced the four-year effort in his speech in Prague in April 2009.

As Klotz noted, Energy Secretary Ernest Moniz has established a task force under the auspices of the Secretary of Energy Advisory Board to take a broad look at the way the department addresses nuclear nonproliferation issues. Klotz said the department is planning to publish a document reflecting the review when the administration’s budget request for fiscal year 2016 is released.

The task force, which is expected to issue its report around the end of the year, produced an interim report in August. According to the report, “The U.S. government does not yet have a compelling vision for the future of its nonproliferation efforts or how [the Energy Department’s] programs fit in that larger picture, though [the department] has launched an effort to develop one.” An important task for the department, the report says, is to “[l]ay out a vision and set priorities.”

The report notes that the Energy Department’s nonproliferation budget has declined by hundreds of millions of dollars in the past several years. Although that is partly the result of “projects being completed or efforts being put on hold while [the department] reviews its approach to them,” in some cases “it appears that important nonproliferation work is being slowed or canceled because of lack of funds,” the report says.

Other observers of the nonproliferation work have reached similar conclusions. In August, 26 senators sent a letter to the Office of Management and Budget seeking increased funding for nuclear nonproliferation programs for fiscal year 2016. (See ACT, September 2014.)

One particular focus of the interim report is U.S.-Russian nuclear security cooperation, which, for a number of reasons, “will not be easy, is likely to encounter delays, and will require creative approaches and sustained attention,” the report says. But the United States should pursue this cooperation in spite of the obstacles because it “remains critical to U.S. national security interests,” the report says.—DANIEL HORNER

On the Calendar

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<td>Meeting of states-parties to the Convention on Certain Conventional Weapons, Geneva</td>
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<td>Nov. 20-21</td>
<td>International Atomic Energy Agency Board of Governors meeting, Vienna</td>
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<td>Dec. 1-5</td>
<td>Conference of states-parties to the Chemical Weapons Convention, The Hague</td>
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<td>Dec. 8-9</td>
<td>Conference on the humanitarian impact of nuclear weapons use, Vienna</td>
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<td>Dec. 24</td>
<td>Entry into force of the Arms Trade Treaty</td>
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<td>Jan. 19-26</td>
<td>Conference on Disarmament, first session, Geneva</td>
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Reports of Note

Iran and Its Neighbors: Regional Implications for U.S. Policy of a Nuclear Agreement

The Iran Project, September 2014

In this report, the Iran Project analyzes relations between Iran and its neighbors and offers suggestions for U.S. policy in the Middle East once the United States and five other world powers have reached an agreement with Iran on Tehran’s nuclear program. In a series of essays, the Iran Project, which states on its website its aim to “reduce misunderstandings” between the United States and Iran, examines the dynamics in the region and how these dynamics affect and are affected by the negotiations on a nuclear deal. The report suggests that a nuclear agreement would give the United States leverage in the region, opening opportunities for U.S. policy with Iran and other countries in the region and providing a “catalyst for change” in an “ever-turbulent region.” The authors argue that the United States is the only “outside power with the interest, leverage, and capacity to play a leading role in the region” and “stands to reap more benefit” than any other country but will also “bear the heaviest burden” if the security situation continues to deteriorate. The report urges the United States to take the lead in the negotiations, arguing that a comprehensive agreement is the most effective way to safeguard against a nuclear-armed Iran. — JENNIFER GINSBURG

Small Arms, Big Picture: Armed Violence Beyond First Committee

Daniel Mack, Reaching Critical Will, September 2014

It is time that civil society efforts to reduce armed violence became “part of the bigger picture,” the broader issues of development, human rights, and security, says Daniel Mack in this briefing paper. Among the suggestions by Mack, of Instituto Sou da Paz in São Paulo, is integrating armed-violence concerns into the review process for post-2015 UN Millennium Development Goals. He recommends “relevant and feasible” targets be written into development plans, such as a 50 percent decrease in the number of homicides. Human rights organizations need to explore applying international law to the use of small arms by state actors, including police, Mack says. He also advocates incorporating considerations of two related issues—small arms proliferation and gun violence—into the work of the UN Human Rights Council. Broader issues of war and peace would also benefit from the closer attention to small arms, Mack argues. The spread of lethal weapons into the hands of nonstate actors may be the cause, not just the effect, of “malign cycles...of state failure and civil war,” he writes. Civil society, Mack concludes, needs to ask “bigger, broader prospective questions...as we attempt to see the entire forest rather than only the single trees we have been accustomed to zoom in on.” — JEFFERSON MORLEY

The Unaffordable Arsenal: Reducing the Costs of the Bloated U.S. Nuclear Stockpile

New report released in October 2014

The United States currently plans to spend some $355 billion to maintain and rebuild its Cold War-era nuclear arsenal over the next decade, even as the overall U.S. defense budget is declining and U.S. military planners and the president have determined that the United States can deter nuclear threats against the United States and its allies with far fewer nuclear weapons.

This report argues that the increasingly high cost of nuclear weapons, combined with shrinking budgets and stockpiles, should compel the executive branch, Congress, and the American public to rethink current plans to rebuild U.S. nuclear forces in the years ahead.

Download this report now at: www.armscontrol.org/reports_list
Arms Control in the Near Term: An Interview With Undersecretary Of State Rose Gottemoeller

Rose Gottemoeller is undersecretary of state for arms control and international security. She previously was assistant secretary of state for arms control, verification, and compliance. While in that position, she served as the chief U.S. negotiator of the New Strategic Arms Reduction Treaty (New START) with Russia.

During the Clinton administration, she held positions in the Department of Energy and on the National Security Council staff dealing with nuclear weapons issues in the former Soviet Union.

Gottemoeller spoke with Arms Control Today in her office on October 9. Much of the discussion focused on U.S.-Russian nuclear relations and U.S. progress in meeting its commitments under the nuclear Nonproliferation Treaty (NPT).

The interview was transcribed by Jennifer Ginsburg. It has been edited for clarity.

ACT: Thank you for taking the time to talk to us. We're going to get into the details of a number of specific issues, but I just wanted to start by asking you to give us an overview of U.S.-Russian cooperation on nuclear arms control, nonproliferation, and nuclear materials security. For example, there was an announcement earlier this month about the successful removal of highly enriched uranium from Kazakhstan, so Russia and the United States appear to be continuing some of their cooperation in that area. On the other hand, the dialogue on further nuclear arsenal reductions and cooperation on missile defense appears to have been suspended. So, how would you broadly characterize the U.S.-Russian relationship in this area and the prospects for the future?

Gottemoeller: There's no question that the current bilateral crisis and international crisis over Ukraine has affected the overarching U.S.-Russian relationship, and that is an extraordinarily serious matter. At the same time, I think it is worthwhile remembering that historically we have, through the 40-year history of our nuclear arms control and limitation relations with the Soviet Union and Russian Federation, strived to continue this cooperation as something that is very much in the security interests of us and our allies. So, I would say that there is a certain element of continuity at the moment, despite a very difficult international situation now surrounding the crisis in Ukraine. That has manifested itself in very solid, businesslike cooperation on implementation of New START, which continues to go forward in a very straightforward way. We’ve had regular inspection activities, exchanges of data—the [most recent] data exchange just occurred a week or two ago. We have had exchanges of notifications, notifying us on the movements of Russian strategic forces. The Bilateral Consultative Commission, the implementing body of the treaty, is now in session in Geneva. They’re tackling a couple of implementation issues, which seem to be pretty straightforward. So, the bottom line is a continuity that I think is healthy and a good thing for our national security.

On the nuclear security side of things, clearly this has been a big focus for President [Barack] Obama with the...
phenomenon of the nuclear security summits. He’ll be hosting the next one here in the United States in 2016 after three successful meetings, first in Washington, then one in Seoul, South Korea, and the last one in The Hague, in the Netherlands. [The 2016 summit] is to address and to continue to address the issues surrounding the security of nuclear materials, fissile materials, [and] the dangers from radiological substances. Here, the cooperation with Russia continues to be very solid as well, and we will continue to have some goals in mind for that joint work.

Recently, the highly enriched uranium was removed from Kazakhstan. There is highly enriched uranium still in Belarus. We would certainly like to be able to tackle that, working together with the Russian Federation. So, nuclear security summit cooperation, getting fissile material under control internationally, minimizing its use—those goals will continue to be shared with Russia.

But again, there are difficulties that have come into play recently. Because of the larger international crisis around Ukraine, we have been quite concerned that the Russians don’t seem to be thinking beyond the end of 2014 about continuing expansive threat reduction cooperation, which we think could really be taking place in third countries, third regions of the world beyond the territory of the former Soviet Union, beyond Russian territory. Certainly, we’d like to be working with the Russians on projects in other areas. But at the moment, that does not seem to be in the cards.

**ACT:** You talked about goals, and you mentioned Belarus. Is there a timetable? Is the idea to get everything out of Belarus by the 2016 summit?

**Gottemoeller:** There will be definitely efforts to work on this issue with the government in Minsk, but I wouldn’t say that there’s a strict deadline or timetable. It’s been a work in progress, but I would say it’s been an area where there’s been some steady progress.

**ACT:** Earlier this year, the United States charged that Russia had violated the Intermediate-Range Nuclear Forces [INF] Treaty, and you said that “the United States is wholly committed to the continued viability of the INF Treaty” and is “asking Russia to return to compliance with the treaty in a verifiable manner.” You and your colleagues met with your Russian counterparts on that issue recently. Can you give us a general sense of any progress you’ve made towards resolving the issue and tell us what the next steps in the process are?

**Gottemoeller:** I would say that the most important result of the talks in Moscow on September 11 was a reconfirmation by both Washington and Moscow of the importance of the Intermediate-Range Nuclear Forces Treaty to our mutual security and a stated desire to see the treaty continue into the future. It’s been interesting to me—there’s obviously a big debate on this topic in Moscow, with voices on both sides. Some voices we’ve known about for well over a decade, raised to say, “Hey, you know, maybe it’s time to get out of this treaty,” but other voices, equally strong, saying that this treaty serves Russia’s national security interests. So, we are conducting diplomacy in the midst of an important national security debate in Russia, and I’m pleased to see so far that we have a kind of stable backdrop in these statements for the need to retain the treaty going forward. Most recently, actually, a high-level voice that was articulating this view was Sergey Ivanov, the chief of staff to President [Vladimir] Putin in the Kremlin, who has been one of the critics of the treaty in the past. But in a recent public interview, he said that, for the time being, the treaty should be preserved. So, I think that it’s an interesting environment [in which] to
conduct this diplomacy, but I also see that there is some time and space to conduct it, and we will see. I can’t tell you what the outcome is, though; so far, it’s too much early days.

ACT: But you get a sense from your

knowledge of the Russian players and the Russian scene that there is a general commitment to staying in the treaty, or is that still not certain?

Gottemoeller: No, I think the important point to say is that there is a debate going on. There are obviously experts as well as authoritative voices on both sides of the debate. I will say that recent comments by Russian officials and by the Russian government overall about the viability and importance of the treaty for the time being give us time and space to negotiate, and I think that’s very important.

ACT: Do you have another meeting scheduled?

Gottemoeller: It’s an ongoing process.

ACT: In 2007, the United States and Russia together called for the globalization of the INF Treaty, presumably to curb missile buildups by China, India, Pakistan, and others. Is that concept still supported by the United States, and is it something the United States and Russia might work on together?

Gottemoeller: Clearly, this is a proposal that was made in the First Committee [of the UN General Assembly] back in 2007 with the support of the Bush administration. We haven’t taken this offer off the table. But by the same token, the First Committee hasn’t had a discussion of it in some time. Frankly, at the moment, our focus has been on the immediacy of this compliance issue regarding a ground-launched cruise missile that we believe was tested at intermediate range. That’s where our focus has been at the present time, and it will be our early focus. But this other aspect is on the table. It needs a lot of discussion if it’s to be developed.

ACT: Can you tell us anything about any kind of progress on the issue of the ground-launched cruise missile? Any acknowledgement by Russia of the U.S. concerns, or can you characterize the discussions on that in any way?

Gottemoeller: No, I’d rather not get into the confidential aspects of the diplomatic exchange.

ACT: Talking more broadly about reductions, in 2013 the United States proposed to Russia that the two countries cut their strategic nuclear arsenals to levels one-third below the ceilings set in New START, and Russia has apparently rejected the proposal. You recently told The New York Times, “I could imagine Putin might well decide it’s in his interest to seek more cuts” and “I don’t discard the notion we could do it again.” Why does it remain in the U.S. and Russian interests to achieve further cuts?

Gottemoeller: Well, first of all, at the very top level of policy, we have a commitment, an obligation, under the nuclear Nonproliferation Treaty, Article VI, to continue a steady process of disarmament, and President Obama has been very articulate that this is indeed the U.S. national policy. In his speech in Prague [in April 2009], he laid out very clearly that de-emphasizing nuclear weapons; tackling the problems of fissile material protection, control, accounting, an up-to-one-third further reduction beyond the New START central limit on operationally deployed nuclear warheads, the president very clearly articulated that we had done the detailed calculations to understand that we could undertake these further reductions without any detriment to our own national security. We believe that it’s a good deal for us. We believe it’s a good deal for the Russians as well, so we have asked them to take a look at it. Those clearly have been our talking points ever since the Berlin proposal went on the table in July of 2013.

Interestingly, you said that the Putin administration rejected it. It’s not ever been officially rejected. I would say that it’s an area that they haven’t really engaged in explicitly since the period around the time of the NPT [Preparatory Committee meeting] in May when they put forward their official position that they are not engaging currently in bilateral arms reductions, but they want to try to turn their attention toward multilateral arms reductions. So, I would say from our perspective the Berlin proposal is on the table, it hasn’t been rejected by the Russians, but they are clearly saying they are more interested in multilateral rather than bilateral reductions at this point.

ACT: I want to get back to the multilateral [aspect] in just a second, but your comment in the Times, I think, seemed more optimistic than many people’s, holding out the possibility that there could be some kind...
of agreement. So just conceptually, what would an agreement look like that could be satisfactory both to the Russians and to the U.S. Congress? It seems in a lot of ways the two sides almost have mutually exclusive demands for what a treaty would look like.

**Gottemoeller:** I don’t know why you would say that. The focus in this case would be a very straightforward and simple one, that is, up to one-third further reductions in the central limits of New START, and New START itself would provide the superstructure in terms of the verification regime and notification regime, the definitional aspects, the data exchange. There wouldn’t have to be a good deal of new negotiation. In short, the battles that were fought over the ratification of New START would not have to be fought again. But of course, the Senate would want to take a very careful look at further reductions and understand what their meaning would be for U.S. national security. So, I don’t see in this case why there would be a juxtaposition of Russian versus Senate views. Of course, the big issue in the debate over New START ratification was the missile defense issue and concerns on Capitol Hill that we were somehow constraining missile defense deployments [although], of course, that is not the case. But I don’t see the necessity of that issue being replayed in this case.

**ACT:** So, the proposal is still on the table, and it’s essentially up to the Russians to decide when they want to respond to it?

**Gottemoeller:** It’s up to the Russians to decide whether it’s in their interests or not to do so.

**ACT:** You mentioned the multilateral cuts the Russians have mentioned. Is the administration pursuing any kind of multilateral initiatives or considering any kind of multilateral initiatives that would involve Russia plus other nuclear-armed states or nuclear-armed states other than Russia in terms of reducing the U.S. arsenal?

**Gottemoeller:** First of all, it’s early days from our perspective to engage in multilateral arms reductions. We and the Russians still have over 90 percent of the nuclear weapons in the world, and there is still room in our view—and we’ve been very open and public about this—for further bilateral nuclear arms reductions. We do have, I would say, a very solid P5 process of discussions among the five nuclear-weapon states, which I know you have just written about, calling it the “art of the possible,” in the October edition of your magazine. We do indeed consider it the art of the possible. It has brought together some very important discussions among a community of P5 actors who never had to grapple with nuclear issues in the way we are now. I think that we are, in that way, laying the foundation for future multilateral arms reductions. But from our perspective, it is early days to be considering them, as there is still plenty of room for bilateral arms reductions between Russia and the United States.

**ACT:** We wanted to ask next about the NPT. What are the overall U.S. goals for the 2015 NPT Review Conference?

**Gottemoeller:** First and foremost, we want to ensure that all three pillars of the NPT are addressed and that all signatories of the NPT are taking the responsibility to fulfill the actions that they took upon themselves in the 2010 action plan. So, the basic point here is that the NPT signatories include both nuclear-weapon states and non-nuclear-weapon states and all signatories of the NPT have responsibilities toward the disarmament pillar, the nonproliferation pillar, and the pillar that is involved with peaceful uses of the atom. We want to ensure that that message gets

![Image](https://via.placeholder.com/150)

President Barack Obama (left) and Russian President Dmitry Medvedev sign the New Strategic Arms Reduction Treaty in Prague on April 8, 2010.
out there and that everybody is pulling their weight in the NPT system. We will be working hard ourselves to make the case that what we are doing is fully serving the interests of the NPT and the nonproliferation regime, and we'll see how it goes.

**ACT:** Among other points, the final document from the 2010 NPT Review Conference “affirmed the need for the nuclear-weapon States to reduce and eliminate all types of their nuclear weapons and encouraged, in particular, those states with the largest nuclear arsenals to lead efforts in this regard.” How well do you think the United States and other countries have done in fulfilling the action plan that was created at the 2010 review conference?

**Gottemoeller:** Oh, I think we’ve done a spectacular job. I just pulled out the table that shows the height of our nuclear weapons arsenal—not just deployed, but deployed and nondeployed—31,000-plus nuclear weapons at the height of the arsenal numbers in 1967, now dropped off to 4,800 at this point. So, we’ve had a really steady reduction in the number of our nuclear warheads in the years especially since the end of the Cold War. In addition, we continue to de-emphasize nuclear weapons in our national doctrine and policy, we continue to imbue that doctrine and policy in our approach to targeting, and we continue to reduce and eliminate nuclear delivery vehicles. So, I think we’ve been doing a pretty good job—not a pretty good job, a spectacular job, let me put it that way.

**ACT:** As you certainly know though, some non-nuclear-weapon states have expressed disappointment or frustration with the pace of nuclear disarmament by the nuclear-weapon states since 2010. You’ve responded in part by pointing out reductions in the size of the U.S. arsenal as you just did, with the table you just referred to. But given that the final document calls for the nuclear-weapon states “to accelerate concrete progress on the steps leading to nuclear disarmament,” isn’t there some merit to their complaints?

**Gottemoeller:** No, I don’t think so. I have concerns, as I mentioned, that we need a willing partner for further bilateral reduction negotiations, and I do believe that they are extraordinarily important. With the Russians and the United States having over 90 percent of the nuclear weapons still in the world, we need to continue to reduce and eliminate our stockpiles. But I think it’s also important for the non-nuclear-weapon states to begin to develop an understanding of how much work it takes to reduce and eliminate nuclear weapons, to get rid of fissile material, and reduce and eliminate delivery vehicles.

So frankly, I think where the problem has been, it’s been inadequate communications between the nuclear-weapon states and the non-nuclear-weapon states, and that’s one area we have been trying to rectify. The reporting exercise that we undertook throughout this review cycle that produced our nuclear report [at the] last [Preparatory Committee meeting] in May, that I think was an important step in the right direction. But frankly, I do think we need to do better. I will say that we do a spectacular job in reducing and eliminating our nuclear arsenals, but we need to do a better job of communicating in a forceful way, in a convincing way, exactly how difficult that is to do and why it takes some time.

**ACT:** So, that’s the part that hasn’t been communicated, that the non-nuclear-weapon states have some unrealistic expectations about how quickly this could be moving? Is that what needs to be communicated?

**Gottemoeller:** I would say yes, they don’t have a good feel for how complicated and difficult it is to get rid of thousands of nuclear weapons and that it takes time and can only be done carefully. Otherwise, it would be very irresponsible for the environment, for public health, and, indeed, for the way we expend our resources.

**ACT:** So, what are you doing to convey that? How are you remedying this communication problem?

**Gottemoeller:** We’re beginning to look at more regularized communications among certain key players [among] the non-nuclear-weapon states. It will be interesting; we have another P5 conference coming up early next year. This time, it will be taking place in London. We are looking for ways, as we’ve done in the past, to even enhance the kind of outreach to other audiences that we have done on the margins of these meetings over the last five years.

**ACT:** You mentioned those P5 meetings a couple of times, and you said they’re proving fruitful. What tangible results do you see so far, and what would you like to see the group discuss or agree to do in the future?

**Gottemoeller:** Tangible results sometimes are the results of the forming
of a community. It’s interesting because the P5 have been grouped together historically as the nuclear-weapon states under the NPT, but to have a community of both experts and policy-level people who regularly meet and talk together and begin to communicate and begin to impart real information and real mutual understanding—it sounds a bit hokey, but actually, I think that that is one of the biggest payoffs so far from the process. I can see it in the progression of the meetings since London in 2009, which was kind of a proto-meeting—I don’t think anybody had any idea what we were about, what we were going about, at that point—up to this new meeting in London in 2015 where we’ve got really deep communication and reports about what we’ve been up to, in things like nuclear terminology with a glossary that will be published in the spring in time for the [review conference] and projects on verification, a working group on CTBT verification, that we’ll be reporting on. There is a lot of tangible communication, which is bearing fruit and laying the foundation for eventual multilateral negotiations.

**ACT:** But I think it’s probably fair to say that a lot of the non-nuclear-weapon states expected this P5 process would actually produce some concrete results in time for the 2015 review conference.

**Gottemoeller:** That’s what I’m saying. We have gotten concrete results. But what do you mean by concrete results?

**ACT:** Something that shows either actual reductions or putting you on a clear path toward further reductions, I think.

**Gottemoeller:** We’ve got further reductions. There are steady reductions going on under New START, and if you dig down and look at trying to structure P5 reductions at this point, it doesn’t make sense because the UK, France, and China have so many fewer weapons than the United States and Russia. So when people kind of wave their arms and say there should be further reductions involving the P5, they’ve got to look inside the balance of numbers between and among the five and think what makes sense. What makes sense is the reductions that are taking place under New START right now.

**ACT:** And what about transparency measures?

**Gottemoeller:** That’s part of what we’re doing. I mentioned the CTBT verification work that we’re doing, and we’re pushing to do more of that.

**ACT:** In an April speech, you said that it is “imperative to make sure that people remember the human impact of nuclear weapons” and that “it is the United States’ deep understanding of the consequences of nuclear weapons use—including the devastating health effects—that has guided and motivated us to reduce and ultimately eliminate these most hazardous weapons.”

A third conference on the humanitarian impact of nuclear weapons use is being held in Vienna in December. Will the United States join its allies such as Japan and participate in the conference?

**Gottemoeller:** We’re considering our options right now. We haven’t made any decision just yet.

**ACT:** Do you have a timetable?

**Gottemoeller:** Our timetable is formed by the fact that the schedule of the meeting is the first week in December. So, we’re going to have to make up our mind between now and then.

**ACT:** Can you tell us about what some of the considerations, in general terms, are?

**Gottemoeller:** The basic consideration all along and the basic worry that we have had is that we don’t have a straightforward or a clear view on the up-and-up about what these conferences are about. We are very supportive of the notion that we need to be educating the public, we need to be informing the international community, we need to be enhancing people’s understanding of the human impacts of nuclear weapons use. That, to me, is near and dear to my heart because we don’t really have that same interest among the public, and especially among young people, that we had historically, in the problem of nuclear weapons and what nuclear weapons mean in terms of devastation. But at the same time that some conference organizers say this is all about informing, educating, getting the story out there, others say this is about establishing a pathway to a convention banning nuclear weapons and outlawing them under international humanitarian law. With that goal, we cannot agree, so we need to understand on the up-and-up what the conferences are about.

**ACT:** Since the beginning of the Obama administration, you have sought to finally reach agreement at the Conference on Disarmament [CD] on negotiations for a global fissile material cutoff treaty [FMCT]. What are the main stumbling blocks at this point?

**Gottemoeller:** Actually, I’m going to take this question in a completely different way, because I just came back from the First Committee in New York. I spent two days there and had a fascinating update on what is going on with this group of governmental experts that’s been meeting on the fissile material cutoff treaty.

You know that this has been a great source of tension and anxiety in the international community that participates in the First Committee, that participates in the CD in recent years, because of concern that we were getting nowhere on an FMCT. But what the group of governmental experts has been able to accomplish is to open the floodgates for substantive discussions on this matter and to air all kinds of issues, from the verification of the treaty to the issue of stocks [of fissile material] to the issue—well, scope is related to whether stocks will be part of the treaty. The United States does not support that notion, but there has been an opportunity for all of these issues to be aired in a very substantive way at an expert level that has renewed the issue for the arms control community in the Conference on Disarmament in a very positive way. So whereas this has been a great source of tension and anxiety in all the years since I’ve been back in government, practically, I would say that I feel this is a year where we have made
some significant progress on the issue.

**ACT:** So, would you lay out for us what we can expect to see as a next step? The experts are developing a proposal, leading to negotiations among the parties, or—

**Gottemoeller:** This will be a normal progression for a group of governmental experts. It will report out—there are a couple more sessions left to go—there will be a process of producing the report of the [group of experts], which will then be taken to the CD, as normal, and after that, we’ll see.

By the way, the CD has had its own so-called schedule of activities going on, with a discussion there also of an FMCT. I think there’s been a beneficial feedback loop between the two sets of discussions, bringing many important and very meaty technical issues to the table for a very welcome airing.

**ACT:** Is the United States working diplomatically with Pakistan, which has been the most public opponent of proceeding with the talks, and any others who might be hesitant, to try to shift their positions or discuss the issues? Is work taking place at that level as well?

**Gottemoeller:** We’re working constantly with the entire CD community on this and with the First Committee community in recent days. So, it’s not only with Pakistan; we’re working with all interested parties.

**ACT:** If progress remains blocked, should the issue remain in the Conference on Disarmament, or are there scenarios in which you would support moving it to another venue?

**Gottemoeller:** No, I don’t see a need to. Again, I see that we’re in a much more hopeful moment on this matter thanks to the beneficial feedback loop between the CD’s discussions and what’s going on in the [group of experts].

**ACT:** With respect to fissile material production, one of the areas of concern has been South Asia, where India and Pakistan are believed to be producing fissile material of which say they support nondiscriminatory disarmament, take to contribute to the overall global nuclear disarmament process, even as the United States and Russia work to reduce their far larger stockpiles?

**Gottemoeller:** Let’s take the example first of Pakistan. Under the nuclear security summit process, they have agreed to establish their regional training center on nuclear security matters as an asset for the IAEA [International Atomic Energy Agency] in the regional context, to provide training courses for regional partners, that type of thing. They can and they will play a role of that kind, and I think that’s very good, that’s very commendable. In the case of all states, whether they’re in or out of the NPT, but since the NPT is most states—this is apropos South Asia—they can also participate in other relevant activities such as the Global Initiative to Combat Nuclear Terrorism. And I think that’s a very positive direction, that states can put up their hands and voluntarily contribute to the nuclear terrorism challenge.

India has just ratified its additional protocol [to its safeguards agreement with the IAEA], and I have heard from Indian colleagues that they plan to be energetically and very actively implementing the measures under their additional protocol. So despite the fact that these countries are not signatories of the NPT, they have pledged to bolster the nonproliferation regime—that’s with small “n” and small “r”—and they have taken certain responsibilities to do so. We continue to urge them, and they have so far taken policy steps, to continue their moratoriums on nuclear testing. That’s a very important measure. So, there are a number of ways in which these countries can bolster the nonproliferation regime although they

**I don’t see a need to [move discussions on a fissile material cutoff treaty out of the Conference on Disarmament].... I see that we’re in a much more hopeful moment on this matter.**
ACT: You and other administration officials, including Secretary of Energy [Ernest] Moniz, have reiterated that the entry into force of the Comprehensive Test Ban Treaty [CTBT] remains a top priority for the United States and you’re working to educate senators as well as the U.S. public on the security benefits of the treaty as well as the dangerous health effects of explosive nuclear testing. You’ve also urged other CTBT Annex 2 states—that is, the other countries that are not party to the treaty—not to wait for the United States to ratify the CTBT. What steps is the United States taking and what arguments is it making in its dialogue with these other states to reinforce the global testing moratorium and bring them on board the treaty?

Gottemoeller: May I also just say it’s not only Secretary Moniz, but also Secretary [of State John] Kerry spoke at the “Friends of the CTBT” ministerial meeting1 making that point very, very clearly. I think that he was very articulate in his way of talking about the CTBT and its goals. Essentially, I just tell them not to wait for us. There’s no reason why the other Annex 2 states can’t ratify this treaty. There has been a slow but steady pace of ratification over the years, and I say, “No need to wait around for us; get on with it.”

ACT: In the first 100 days of President Obama’s time in office, in his Prague speech, he outlined a vision and framework for moving toward a world free of nuclear weapons. What are the major goals for moving forward on the so-called Prague agenda over the next two years of the Obama administration?

Gottemoeller: I think we’ve had a good chance to talk about all of them today. One is continuing to encourage our Russian partners to return to the negotiating table—the president’s Berlin proposal being still on the table for an up-to-one-third further reduction in nuclear weapons; it will be to urge the NPT states, whether nuclear or non-nuclear states, to press forward in vigorous implementation of all of the tasks in the action plan, and that includes bolstering all three pillars of the NPT, whether we’re talking about nuclear disarmament or nonproliferation or peaceful uses. Everyone needs to be pulling their weight.

Then for the United States, there will be a special focus on proceeding toward ratification of the Comprehensive Test Ban Treaty in a proper and deliberate way, developing public awareness and knowledge and understanding and grassroots support, and then we’ll see [about] bringing it back here to Washington for the Senate to consider. And fissile material—everything to do with fissile material, whether we’re talking about the controls and constraints and efforts to limit highly enriched uranium internationally—that’s part and parcel of the nuclear security summit efforts—or whether we’re talking about proceeding with negotiation of a fissile material cutoff treaty, we will be working hard on the fissile material end of the spectrum as well.

I haven’t talked about the nuclear-weapon-free zones. Obviously, we would love to see all the nuclear-weapon-free zone protocols come up and be ratified by the Senate as well. But for that, we have to get them all done. We did achieve at the [Preparatory Committee meeting] last spring [the] signature [by the nuclear-weapon states] of the protocol for the Central Asian nuclear-weapon-free zone; we are now focused on the Southeast Asian nuclear-weapon-free zone.

In addition to those zone protocols, another important goal that came out of our action plan for the NPT was convening a conference on a Middle Eastern weapons of mass destruction-free zone. That has been a very, very difficult lift over the last five years. But I will say I think, at this point, we have moved much closer, and I hope that all countries in the region, the Arab states as well as Israel, will be willing to continue the preparatory process. My view is that we should be able to convene this conference before the [NPT review conference], but it’s going to take all states to really engage on it. So, that’s a very important goal as well.

ACT: Including Iran, in that conference?

Gottemoeller: Absolutely. They’ve been part of the process.

ACT: Thank you. We really appreciate it.
In April 2011, Pakistan declared that it had tested a short-range battlefield nuclear missile, the Nasr. Since then, prominent purveyors of Pakistani nuclear doctrine, including Lieutenant General Khalid Kidwai and former diplomat Maleeha Lodhi, have portrayed the Nasr missile as a counter to India’s “Cold Start” war doctrine.

That doctrine supposedly aims at rapid but limited retaliatory incursions into Pakistan by the Indian army to seize and hold narrow slices of territory in response to a terrorism event in India involving Pakistanis. The rationale is that the seized territory would be returned in exchange for Pakistani extradition of extremists inflicting terrorism onto India. The doctrine is based on the assumption that Pakistan would not resort to the use of nuclear weapons in response to a limited Indian incursion, thereby offering space for conventional conflict even in a nuclearized environment.

Pointing to this Indian war doctrine, Pakistani decision-makers now argue that the deterrent value of their current arsenal operates only at the strategic level. According to this line of reasoning, the gap at the tactical level gives India the freedom to successfully engage in limited Cold Start-style military operations without fear of nuclear escalation. Development of the low-yield, tactical battlefield nuclear weapon, the Nasr missile, is seen as the solution providing “flexible deterrence options” for an appropriate response to Cold Start, rather than massive nuclear retaliation against India. Nasr proponents argue that by maintaining “a credible linkage between limited conventional war and nuclear escalation,” the missile will deter India from carrying out its plan.

This approach might appear to be sensible, but it suffers from two important flaws. First, the Cold Start doctrine has not been actively implemented and therefore does not seem to represent a genuine threat to Pakistan. Second, battlefield nuclear weapons are a key part of the proposed solution, but it may be extremely difficult to establish a command and control system that would effectively preclude the possibility of an accidental or unauthorized launch.

Is Cold Start Real?
The genesis of the Cold Start doctrine goes back to a conference of Indian army commanders held in April 2004. The media claimed at the time that a new Indian war doctrine was presented at that conference. These sources added that although the full details of the doctrine...
remained classified and many issues were still being fine-tuned, a briefing by a senior officer had mentioned the concept of eight integrated battle groups being employed in place of the existing three large strike formations. Yet, there is no evidence of an unveiling at the conference of the Cold Start doctrine as it stands now with its various operational details. In fact, the Indian army doctrine document released in October 2004 following the conference makes no mention of the Cold Start doctrine.

How did the purported Cold Start doctrine gain so much currency? One of the two prime sources to which all writings on the Cold Start doctrine refer is an op-ed piece by Firdaus Ahmed, a writer on security affairs. Writing in May 2004, without citing any evidence, he claims that the doctrine comprises two important elements. The integrated battle groups, being smaller than the current strike corps, could be deployed more quickly, and these groups would be able to undercut Pakistan’s nuclear doctrine of first use by striking at narrow pieces of territory along the Indian-Pakistani border that do not necessarily compel Pakistan to cross its nuclear threshold. Ahmed points out that there was no indication that the idea had originated in the Integrated Defence Staff—the joint body serving as India’s unified armed services headquarters—suggesting that the idea did not have the endorsement of the three services.

The other prime source to which all later discussions of the Cold Start doctrine refer is an article by Subhash Kapila, a strategic affairs analyst. In his piece, Kapila suggests that, in the absence of more details, some aspects of the strategic conceptual underpinnings of India’s new war doctrine can be assumed. One key assumption that he makes is that three of the army’s existing strike corps may be reconstituted and reinforced into eight or so integrated battle groups to launch multiple strikes into Pakistan. Another assumption is that India’s strike corps elements will have to be moved well forward from existing garrisons usually situated deeper inside India. Here again, the author makes assumptions about what he believes to be the elements of an as-yet-undeclared doctrine.

In trying to outline what Cold Start could be, these two sources were at best providing opinion rather than facts. Yet, these pieces have endured and have ended up propagating an idea that apparently does not have support from the armed forces or the political class in India. Recently, the Indian government and military have been striving to deny that Cold Start is an approved doctrine. Timothy Roemer, U.S. ambassador to India from 2009 to 2011, noted in a leaked assessment that “several very high level officials [including the former Indian national security adviser M.K. Narayanan] have firmly stated, when asked directly about their support for Cold Start, that they have never endorsed, supported or advocated for this doctrine.”

The origins of the Cold Start doctrine therefore are highly suspect. More importantly, there have not been any subsequent observable Indian efforts to operationalize the doctrine. In fact, elements of the Indian army and the
Indian air force substantially disagree on how to do this and on whether the doctrine needs to be operationalized at all. The presumed Cold Start doctrine, by design, ties down Indian air force units to missions of close air support in a spatially limited theater of operations in which the army operates rather than allowing country, whereas the Cold Start doctrine advocates breaking them into smaller integrated battle groups deployed at the Indian-Pakistani border.

Furthermore, the Indian army has not equipped its forces in a manner that would enable them to mount rapid and aggressive campaigns against Pakistan. of military action after the Mumbai attack, Lalit Mansingh, a former Indian ambassador in Washington, said that “there is no military option here. India had to ‘isolate the terrorist elements’ in Pakistan not rally the nation around them.”

The absence of official approval,

The origins of the Cold Start doctrine...are highly suspect. More importantly, there have not been any subsequent observable Indian efforts to operationalize the doctrine.

the air force to exploit the quantitative and qualitative advantages it possesses against its Pakistani counterpart and launch a wider campaign of strategic attrition and air supremacy.12

The doctrine also underplays strategic bombing, which is a preferred mission for the air force. The Indian air force has balked at this idea, suggesting that its role in the supposed Cold Start is an artificial and gross underutilization of air power. Making this point, Kapil Kak, a retired air vice-marshall who is deputy director of the air force's Center for Air Power Studies, has said that “there is no question of the air force fitting into a doctrine propounded by the army. That is a concept dead at inception.”13

Furthermore, Kak has argued that there is little necessity for the air force to divert its frontline fighter aircraft to augment the army’s firepower. That task, he says, can be achieved by the army’s own attack helicopters and multiple rocket launchers that now have a 100-kilometer range. Yet, the army’s airborne assets are inferior to those of the air force. In particular, if the Pakistani air force brings its top assets into action in response to a Cold Start-style incursion, the Indian army’s airborne assets will not be able to provide cover for the invading army. Will Cold Start then be implementable?

In addition, Indian military forces have not undertaken any of the changes needed to execute an operation along the lines of Cold Start. The Indian army still maintains its three large offensive corps stationed in the middle of the For example, main battle tanks—a good indicator of progress—increased in number only slightly between 2003 and 2014 from an estimated 3,898 to approximately 4,000 tanks in working condition. Similarly, in 2003, the army had 320 armored personnel carriers. In 2014, there are approximately 336 active armored personnel carriers. The number of armored infantry fighting vehicles was estimated at 1,600 in 2003 and 1,445 in 2014.14 Although equipment numbers do not always represent military intent, the constancy in equipment inventory again points to a lack of concerted effort to actualize Cold Start.

This lack of effort to re-engineer the Indian military along the lines envisioned in the Cold Start doctrine reflects to some measure the limits of coercive military power. For example, after the 2008 Mumbai terrorist attack, Prime Minister Singh had apparently decided against military action. It is believed that Singh had worried that if India were to launch selective strikes, they would likely only deepen Pakistan’s internal turmoil and probably escalate into a war that could include nuclear deployments, which may be precisely what the terrorists hope to provoke. That is a significant problem to which the Cold Start doctrine has no remedy.

Additionally, India possibly recognizes, given the recent spate of terrorist attacks within Pakistan, that Pakistan is now able to exert much less control over the jihadi elements operating inside its territory. Speaking on the limits of military action after the Mumbai attack, Lalit Mansingh, a former Indian ambassador in Washington, said that “there is no military option here. India had to ‘isolate the terrorist elements’ in Pakistan not rally the nation around them.”

The absence of official approval, the divergent interests of the various branches of the armed services, and the lack of observable military progress toward implementation of the Cold Start doctrine in India should give Pakistani leaders pause with regard to further developing and deploying the Nasr missile. These issues, however, are only part of the reason that battlefield nuclear weapons are a poor choice for Pakistan. The difficulties in managing battlefield nuclear weapons are an equally important aspect.

Pakistan Command and Control

The possession of short-range battlefield nuclear weapons poses one major challenge to Pakistan: effective command and control. The Nasr, which has a short range of about 60 kilometers, is a quick-dispersal system that can be forward deployed near the Indian-Pakistani border, thereby providing ready access to the field commander when he needs it. Although a forward-deployed system could give field commanders quick access and obviate the risk of a communication failure with the political leadership in the midst of combat, ensuring such operational readiness might also require the devolution of command and control to the local field commander and possibly even a prior authorization to use nuclear weapons. That poses the risk of unauthorized or unnecessary use.

A field commander has no way to forecast the outcome of a battle; there is a constant risk of being overrun. He has no way to be absolutely sure that
Pakistan’s political and military leaders also should worry about the validity and integrity of any distress signal they would receive in an emerging military crisis or during a war. To illustrate, two days after the 2008 Mumbai terrorist attack began, someone pretending to be India’s foreign minister telephoned Pakistani President Asif Ali Zardari and threatened war unless Pakistan acted immediately against the perpetrators of the attack. Zardari immediately contacted the country’s military leadership, and the country’s army and air force went to their highest alert status.

In subsequent comments to the Dawn newspaper, a senior Pakistani official defended the high-alert status during the incident, saying that “war may not have been imminent, but it was not possible to take any chances.” Zardari also initiated a diplomatic campaign with the United States to put pressure on India to withdraw the apparent threat. Pakistani leaders warned the United States that if the Pakistani government felt threatened, it would move troops engaged in anti-terrorism operations in the Afghanistan border region to its eastern border with India. U.S. Secretary of State Condoleezza Rice had to intervene. Rice called Indian Foreign Minister Pranab Mukherjee in the middle of the night to ask him about the call and inquire about the threatening message. Mukherjee reassured Rice that he had not spoken to Zardari.17

A year later, a report in Dawn revealed that an investigation in Pakistan concluded that the call to Zardari was made by Omar Saeed Sheikh, the terrorist held for the murder of American journalist Daniel Pearl at the Hyderabad prison in Pakistan. Sheikh also seems to have reached General Ashfaq Parvez Kayani, the chief of army staff.

Apparently, Sheikh was using a cellphone with a SIM registered in the United Kingdom.18 It is still unknown if powerful elements within Pakistan were involved in planning the hoax call. How did the call get through without due diplomatic checks?19 Was it just an oversight, or was there internal involvement? Suggestions were made in India that Zardari was “suckered” into taking the call, hinting at the involvement of “elements” in Pakistan that wanted the situation to escalate.20 Tempting as it may be to characterize this incident as an isolated occurrence, it is not. A number of similar incidents have occurred.21 Given these miscommunications, how can a Pakistani decision-maker be sure that a request to approve use of battlefield nuclear weapons is valid and necessary? Pakistan’s discordant military-civilian relationship also poses challenges to the sensible and safe command and control of forward-deployed battlefield nuclear weapons.22

An Alternative for Pakistan
Two factors should compel Pakistan to reassess its plans for further development and deployment of the Nasr. First, the validity and viability of Cold Start—the primary reason for Pakistan’s development of the Nasr—has been highly overrated. There is no evidence to suggest that it is an official doctrine drawing broad political support or generating interservice enthusiasm. Second, operating a battlefield nuclear weapon such as the Nasr in the absence of a real and current Cold Start threat imposes unnecessary additional stresses on the management of Pakistan’s nuclear command and control.

If Pakistan nevertheless intends to
possess a limited battlefield nuclear weapons capability, its current nuclear arsenal can perform that function. There is no particular need to develop new missiles or warheads. Pakistan’s current missile inventory and nuclear arsenal in combination can perform all the intended functions of a battlefield nuclear weapon. Its current long-range missiles can be launched on a lofted trajectory to reach locations near the Indian-Pakistani border where the Nasr is meant to be employed. For example, the Abdali missile, which has an optimal range of 180 kilometers, can travel 60 kilometers, the range of the Nasr missile, when launched at a lofted angle of approximately 80 degrees (fig. 1). Similarly, the Ghaznavi missile, which has an optimal range of 290 kilometers, can be launched at a lofted angle of 84 degrees to travel the same distance as the Nasr. Another option would be to launch the Babar cruise missile and shut off its booster earlier in the flight to achieve a 60-kilometer range.

Similarly, Pakistan’s current nuclear warheads could be used to produce explosive effects that are similar to those of low-yield nuclear weapons. A typical five-kiloton low-yield weapon, for example, produces an air blast with an overpressure of 20 pounds per square inch (psi) felt to a distance of approximately 480 meters when detonated at an altitude of 310 meters. Weapons with higher yields can be made to produce the same overpressure effect by increasing the altitude at which they are detonated.

For example, a 15-kiloton nuclear device can be made to produce the same 20 psi overpressure felt to a distance of approximately 480 meters by exploding it at an altitude of 523 meters. Usually, the maximum distance on the ground to which 20 psi overpressure is felt for a 15-kiloton nuclear device is 690 meters when exploded at an altitude of 450 meters. Therefore, by increasing the explosion altitude, a 15-kiloton weapon is made to function like a five-kiloton weapon. Similarly, a 30-kiloton or even a 50-kiloton weapon could be detonated at a particular altitude—725 meters and 1,200 meters, respectively—to replicate the air blast radius of a five-kiloton device.

Conclusion

The options described above show that Pakistan’s current arsenal already intrinsically possesses the capability to perform the functions of battlefield nuclear weapons. If Pakistani military and government officials decide that the country should have such a capability to offset a sudden invasion by India, they therefore have no need to pursue the development of the Nasr missile.

The larger point of the above analysis, however, is that there is no evidence of a requirement for such a capability. The main impetus for the development of the Nasr was India’s Cold Start doctrine, but it does not appear that this doctrine was fully formed. Perhaps more importantly, India has not taken the key steps for its force posture that would be necessary to implement the doctrine. Pakistan therefore should desist from further pursuit of the Nasr program. Such an action would not only save Pakistan money, but also would help avoid spurring a new nuclear arms race in tactical nuclear weapons in South Asia.

ENDNOTES

1. Inter Services Public Relations, No. PR94/2011-ISR, April 19, 2011 (press release). Since then, the Nasr missile has been tested three times.


8. The one exception that this author could find is a statement by General Deepak Kapoor, the Indian army chief of staff who served from September 2007 to August 2009. During an army war exercise, he is reported to have said, “A major leap in our approach to conduct of operations has been the successful firming-
up of the Cold Start strategy:” For details, see Rajat Pandit, “Army Reworks War Doctrine for Pakistan, China,” The Times of India, December 30, 2009.


14. All data were obtained from the Military Balance database published by the International Institute for Strategic Studies.


19. According to a Dawn report, the staff of Pakistani President Asif Ali Zardari had bypassed standard diplomatic verification protocols in allowing the call because of heightened tensions between India and Pakistan over the Mumbai attack. For details, see “A Hoax Call That Could Have Triggered War,” Dawn, December 6, 2008. Immediately after the incident, however, the Pakistani government claimed that Zardari had received the call only after it had been appropriately vetted. Pakistani Information Minister Sherry Rehman said in a statement that “it is not possible for any call to come through to the President without multiple caller identity verifications. In fact the identity of this particular call, as evident from the CLI (caller’s line identification) device, showed that the call was placed from a verified official phone number of the Indian Ministry of External Affairs.” See Simon Cameron-Moore, “Hoax Call to Zardari ‘Put Pakistan on War Alert,’” December 6, 2008.

20. Interestingly enough, a mistake had also occurred on the Indian side. When U.S. diplomats initiated calls with their counterparts in India, before U.S. Secretary of State Condi Rice had spoken directly with Indian Foreign Minister Pranab Mukherjee, they were alarmed when Indian Joint Secretary (Americas) Gaitri Kumar mistakenly confirmed that Mukherjee had indeed made that call. Later, however, M.K. Narayan, India’s national security adviser, insisted that no such call had been placed. In a later cable, U.S. Ambassador to India Donald Mulford said he “suspects that [Kumar] incorrectly inferred that a Mukherjee-Zardari call took place from the fact that Mukherjee’s office had, as a precaution, prepared points for him to use if Zardari were to phone [Indian] Prime Minister [Mamnoon] Singh when he was unavailable, leaving Mukherjee to receive the call.” This incident shows how, in a tense situation, one mistake could provoke another. For details, see Dean Nelson, “WikiLeaks: Hoax Phone Call Brought India and Pakistan to Brink of War,” The Telegraph, March 23, 2011.


22. In the case of the 1999 Indian-Pakistani Kargil war, for example, there is ample evidence to suggest that the Pakistani military leadership acted without political approval. Nawaz Sharif, the Pakistani prime minister during the Kargil war, claimed that he had no advance knowledge of what the army was planning to do in Kargil. He argued that the “ill-planned and ill-conceived operation was kept so secret that the Prime Minister, some corps commanders and the Chief of Navy and the Air Force were kept in the dark.” In 2010 the chief of Pakistan’s Directorate of Inter-Services Intelligence (ISI) during the Kargil war, retired General Ziauddin Butt, accused General Pervez Musharraf, the chief of army staff, of bluffing Sharif into starting the Kargil war. Similarly, as recently as 2013, Lieutenant General Shahid Aziz, who served as director-general of the analysis wing of ISI during the Kargil war, said that the entire operation was a four-man show, with details known initially only to Musharraf, Chief of General Staff Muhammed Aziz, Force Command Northern Areas commander Lieutenant General Javed Hassan, and 10-Corps commander Mahmud Ahmad. For details, see Jones, Pakistan: Eye of the Storm, p. 101; Sartaj Aziz, Between Dreams and Realities: Some Milestones in Pakistan’s History (New York: Oxford University Press, 2009), pp. 249-276; “Musharraf Responsible for Kargil Conflict: Ex-ISI Chief,” The Siasat Daily, October 31, 2010; Khaleeq Kiani, “Kargil Adventure Was Four-Man Show: General,” Dawn, January 28, 2013.

23. For a given missile, the maximum ground range is achieved when it is launched at a 45-degree angle. When the launch occurs at a higher, or “lofted,” angle, the missile flies higher into the atmosphere and therefore has a reduced ground range, compared to a 45-degree launch angle.

24. Launching missiles at lofted angles forces them to travel to higher altitudes and re-enter the atmosphere at a steeper angle and a faster rate. This, in turn, might impose additional stresses on the missile warhead. In the case of a lofted Ghaznavi missile, which reaches an altitude of approximately 150 kilometers, handling any additional stresses should be within the technological capability of Pakistan’s missile designers. Pakistan’s Ghauri and Shaheen missiles, when launched on their optimal trajectories, already reach altitudes greater than 150 kilometers.

25. Overpressure, measured in pounds per square inch (psi), is one of the standard metrics used to define the destructive potential of nuclear weapons. At 20 psi, most heavily built concrete buildings are severely damaged or demolished. That overpressure also can cause significant damage to military vehicles.
As the 2015 Nuclear Nonproliferation Treaty [NPT] Review Conference approaches, one question many of us have considered for a number of years is how to revitalize the process itself. Transparency is the key. I believe that we need to open it up and make it more accountable.

One way to do that may be to hold a session at the review conference, for example, during which nuclear-weapon states collectively are quizzed by non-nuclear-weapon states on their progress on disarmament and the challenges that they face. There is broad agreement that all states need to reduce the salience attached to nuclear weapons and that it might be useful to have more discussions within formal NPT settings about what this actually means. These discussions could lead to proposals about what both nuclear- and non-nuclear-weapon states could do to facilitate it.

A successful 2015 NPT Review Conference also would require countries to take a series of steps before the conference convened, but we are running out of time to do that. Among them, as proposed by the European Leadership Network in a recent statement, is that Russia, the United States, and the United Kingdom, as the three NPT depositary states, should issue a statement jointly with the UN secretary-general confirming that they will work towards setting up a conference on the weapons of mass destruction-free zone in the Middle East.

Nuclear-weapon states should agree to be more transparent and demonstrate greater commitment to the goal of disarmament. The United States and Russia should reiterate their willingness to maintain a nuclear arms control and disarmament dialogue despite current tensions in their relationship. Somebody has to make the first move in relation to this.

The prompt-launch posture of the U.S. and Russian nuclear forces may be an area ripe for progress too. A quarter of a century after the end of the Cold War, each country still deploys hundreds of long-range ballistic missiles—land and sea based—with roughly 2,000 nuclear warheads promptly set to destroy each other. Each maintains large nuclear forces on day-to-day alert, ready for launch and capable of hitting their targets in less than 30 minutes. This launch-on-warning posture is set to ensure that there can be no advantage from a first strike.

But inherent in this posture is the risk of an accidental or unauthorized launch by either side, as well as the risk that a deliberate decision to use ballistic missiles will be made in haste on the basis of faulty or incomplete data. What’s more, the risks posed by these force postures are increasing as cyber threats and nuclear missile capabilities proliferate in other countries.

So, what can be done? Ultimately, the United States and Russia could agree to mutual, reciprocal steps to reduce dangers by changing the nature of their force postures. These steps could be taken as part of a future process to repair the breach opened between the West and Russia over Ukraine. In the meantime, I strongly believe that other governments and nongovernmental organizations [NGOs] must work to increase awareness of this threat and keep the issue visible with governments and publics. We need to make it possible for Moscow and Washington to see the political and diplomatic benefits, in addition to the security benefits, of acting on this issue, and we need to underscore to the countries that might be considering adopting such force postures in the future that they would decrease their security and have no support in the international community.

There is another interesting idea in conjunction with the third conference on the humanitarian impact of nuclear weapons, which will be held in Vienna in December, and the review conference next year. First, I’ll [say] that it is important for the [five nuclear-weapon states] to attend [the Vienna] conference, which they have not yet agreed to do. In fact, I tell you, from the point of view of the United Kingdom, if the United States agrees to go, we will go. It is no coincidence that we have not made up our mind for each of the last two conferences until immediately after the United States made the decision.
I am optimistic and hopeful that strong voices within the U.S. executive branch are making the argument for [U.S. participation], that this needs to be a cooperative effort. If you want to have nuclear weapons, you have to live with the responsibility of the consequences of them and explain to others how you will deal with that challenge. Both of these conferences on humanitarian impacts concluded that no country in the world can deal with the consequences of the use of nuclear weapons and no country is capable of building the capability to do that.

Now, either we agree with that or we disagree with it, those of us who hold nuclear weapons. If we agree with it, we have to explain then to the rest of the world who does not have these weapons why that is a morally consistent position to be in and why we are not building the capability to do it. If we do not agree with it, then we need to explain why it is wrong. But we are not uninterested in this. We have a responsibility, if we depend for our strategic security on these weapons, to engage with this challenge. Either that is true or it is not, and if it is true, we have to live with the consequence, and we need to be there.

[Second,] the United States and others at the conference should press states not yet engaged in the nuclear disarmament process to freeze the size of their arsenals and their fissile material stockpiles as a first step toward multilateral, verifiable reductions. [There is] a compelling case that a freeze could lead to further disarmament.2

As for the Comprehensive Test Ban Treaty [CTBT], we are a long way away from 1996, when its adoption represented a high-water mark for multilateralism. There’s no question we have made progress since then and the treaty has established a de facto global moratorium on testing, but we need to get the job done. I’m confident that we can do it with a concerted, coordinated effort by governments, civil society, and the international scientific community.

Today, there is a group of eminent persons—senior statesmen, politicians, and experts—who are engaging with leaders in capitals of states that haven’t ratified to press the case [for the CTBT]. All of us, though, can do more to answer arguments against ratification, and we can do it with answers based on not just critical thinking, but also on science. Among the arguments against the CTBT is that verification and monitoring will not work, but now we have a state-of-the-art system in place, and important improvements are still being made. So, let me remind everyone here that we have a very solid answer to the CTBT critics, and we must dedicate ourselves to persuading them and demanding action from them.

So, these are just a few ideas for how to move forward. Let me also briefly describe one of the projects that the Nuclear Threat Initiative has been working on recently. I believe it offers a good example of the kind of innovative and groundbreaking work the NGO community can do, often cooperatively with governments, to make progress on reducing the risks posed by nuclear materials and nuclear weapons. I am referring to a two-year project entitled “Innovating Verification: New Tools and New Actors to Reduce Nuclear Risks.”

The project has involved more than 40 technical and policy experts from a dozen countries collaborating to produce innovative new concepts and confidence-building and transparency measures. In a series of reports issued earlier this year,4 the project calls for the international community fundamentally to rethink the design, development, and implementation of arms control verification. Participants made recommendations on verifying baseline declarations on nuclear warheads and materials, on how to define and take advantage of societal verification methods, and how to build global capacity.

It was important that the project was undertaken with experts from around the world because although it may be a truism, it cannot be said enough: When it comes to nuclear security, global challenges require global solutions, not to mention elevated thinking.

I look forward now to answering questions and hearing any ideas that you may have for us to make progress on these very complex and challenging issues. My own work in this field would not have been possible without steady optimism about the possibility for progress, and the dedication of those of you here today gives me more cause for optimism. Thank you very much.

ENDNOTES


3. For the series of reports outlining the recommendations from the Nuclear Threat Initiative’s Verification Pilot Project, see http://www.nti.org/analysis/reports/innovating-verification-verifying-baseline-declarations-nuclear-warheads-and-materials/.
Iran, P5+1 Press for Deal in November

Negotiators for Iran and six world powers are focused on reaching a comprehensive nuclear deal by Nov. 24 and are not discussing extending the talks, officials representing the two sides said last month after three days of meetings in Vienna.

After little progress was made during talks in September to narrow the remaining gaps between the positions of Iran and the six-country group known as the P5+1, some officials and analysts said a deal may not be possible by the Nov. 24 deadline. (See ACT, October 2014.)

But that sentiment seemed to shift after talks in October. In an Oct. 15 press briefing, a senior U.S. official said that negotiators “have not discussed an extension” and remain focused on a “full agreement” by Nov. 24.

Iranian Foreign Minister Mohammad Javad Zarif said on Oct. 16 that there are “tough decisions” that must be made before the deadline but that there is “no need to even think about” an extension. In August, Zarif had said a deal by the deadline was unlikely.

In July, Iran and the P5+1 (China, France, Germany, Russia, the United Kingdom, and the United States) agreed to extend negotiations on a comprehensive nuclear deal through Nov. 24. An interim deal reached by Iran and the P5+1 in November 2013 originally set a target date of July 20 for reaching a final agreement.

In remarks at the Center for Strategic and International Studies on Oct. 23, Wendy Sherman, U.S. undersecretary of state for political affairs, said that “this is the time to finish the job.”

Sherman, the lead U.S. negotiator, said that Iran “will have no better time” than between now and Nov. 24 if Iran “truly wants to resolve its differences with the international community” and bring about a lifting of sanctions.

Since July, members of the Iranian and P5+1 delegations have met in a variety of formats, including bilateral talks between the United States and Iran in August. The P5+1 and Iran also met for more than a week in New York in September.

Most recently, on Oct. 15, U.S. Secretary of State John Kerry met with Zarif and EU foreign policy chief Catherine Ashton, the lead negotiator for the P5+1. A meeting of representatives from all seven countries took place the following day.

Shift in Iran

According to an Iranian analyst following the talks, there is a “change in tone” and an “increased optimism” in Iran that a deal will be reached by the November deadline.

In Iranian media coverage and political commentary, there
are positive signs regarding the prospects for reaching an agreement that were not present after the September round of talks, the Iran-based analyst said in an Oct. 20 interview. Now, he said, it appears that political leaders in Iran are laying the groundwork to prepare the public for an announcement of an agreement.

But he cautioned that an agreement would be reached only if it “respects the rights of Iran and its nuclear vision.” The analyst was referring to Iran’s plans to build additional nuclear power plants.

Throughout the talks, the size and scope of Iran’s uranium-enrichment program has been the most significant issue.

Iran says it needs to increase its uranium-enrichment capacity to provide fuel for nuclear power reactors it plans to build. Under a contract that runs through 2021, Russia is supplying the fuel for Iran’s only currently operating power reactor, at Bushehr.

The P5+1 wants to reduce Iran’s enrichment capacity and put limits on other elements of its nuclear program, including the stockpiles of enriched material that Iran maintains and the types of new centrifuges that Tehran is developing. These limits would increase the amount of time it would take for Iran to enrich uranium to provide enough weapons-grade material for one bomb. In such material, more than 90 percent of the material is uranium-235. Iran currently is enriching uranium to less than 5 percent U-235, an enrichment level that would make the material usable in power reactors.

In his Oct. 16 comments, Zarif said progress is being made on “all the issues.”

Sherman said in her Oct. 23 remarks that the United States is ready to reach an agreement and that the P5+1 has put forward a “number of ideas that are equitable, enforceable, and consistent with Tehran’s expressed desire for a viable civilian nuclear program and that take into account that country’s scientific know-how and economic needs.”

She said that the United States hopes that “leaders in Tehran will agree to the steps necessary to assure the world that this program will be exclusively peaceful” and thus end Iran’s economic and diplomatic isolation. If an agreement is not reached, “the responsibility will be seen by all to rest with Iran,” she said.

Iran maintains that its nuclear program is entirely peaceful.

**Uranium Proposals**

Citing diplomatic sources, the Associated Press reported on Oct. 17 on a U.S. proposal that would allow Iran to retain a larger number of operating centrifuges than the P5+1 originally proposed if Tehran shipped out a significant portion of its stockpile of reactor-grade uranium for storage in Russia.

Iran currently has about 10,200 operating first-generation centrifuges and an additional 9,000 installed machines that are not enriching uranium. The country has a stockpile of about 7,500 kilograms of uranium gas enriched to reactor grade.

A spokeswoman for the Iranian Foreign Ministry said on Oct. 22 that options for defining the dimensions of Iran’s uranium-enrichment program are being discussed, including the numbers of centrifuges and the transfer of the stockpile out of Iran.

An official based in Vienna said on Oct. 17 that a number of options are being “considered and tweaked” to find a
solution. He said there is no “single proposal” on the table for uranium enrichment. An agreement that “everyone can sell” domestically on this issue is possible, the official said. He declined to elaborate on the description of the U.S. proposal in the press.

In an Oct. 23 interview with Bloomberg, Gérard Araud, France’s ambassador to the United States, said that Iran’s last proposal on uranium enrichment was to “keep what they have right now” and have an option to scale up when its nuclear power program expands.

That position is not acceptable to the international community, Araud said. Araud, who served as the French negotiator for nuclear talks with Iran between 2006 and 2009, said that if Iran does not change its position on the centrifuges, it is difficult to see how a deal can be reached by Nov. 24.

In that case, Araud said that the “preferred scenario” would be prolonging the interim agreement reached last November. (See ACT, December 2013.)

The Iranian analyst, however, said that gathering support for extending the talks will be difficult in Iran. Some political factions do not want Iranian President Hassan Rouhani to succeed in reaching a deal because it could increase his popularity, he said.

In addition, Iran is concerned that the upcoming U.S. elections could result in Republican control of both chambers of Congress, he said. The Republicans currently control the House of Representatives and are seen as having a good chance of gaining a majority in the Senate. This will make some in Iran “less sure that the United States will follow through” on sanctions relief in a deal, he said.—KELSEY DAVENPORT

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**Syria Declares More Chemical Facilities**

Syria has declared four additional chemical weapons facilities, UN diplomats and the Organisation for the Prohibition of Chemical Weapons (OPCW) said last month.

After a UN Security Council briefing Oct. 7 on the status of Syria’s chemical weapons program, Samantha Power, the U.S. ambassador to the United Nations, said in a tweet, “UN’s @SigridKaag said 4 facilities identified that regime failed to declare.” Sigrid Kaag is the Dutch diplomat who has been overseeing the effort to destroy Syria’s chemical weapons program.

Media reports citing anonymous UN diplomats’ accounts of the closed briefing said the declaration comprised three research facilities and one production facility. In an Oct. 27 e-mail to Arms Control Today, Paul Walker, director of environmental security and sustainability for Green Cross International, said the production facility and one of the

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Sigrid Kaag, head of the joint mission of the Organisation for the Prohibition of Chemical Weapons and the United Nations to oversee the removal and destruction of Syrian chemical weapons materials, speaks at Georgetown University on September 30 in this video image.
The other two research facilities were for more general research on chemical weapons, said Walker, a former staff member of the House Armed Services Committee and current member of the Arms Control Association Board of Directors.

OPCW spokesman Michael Luhan confirmed that Syria had made the declaration, but declined to provide details beyond the number of facilities. In an Oct. 27 e-mail to Arms Control Today, he noted that the OPCW in April had established a “declarations assessment team” (DAT) to “clarify anomalies and discrepancies that have arisen with Syria’s initial declaration” of its chemical weapons program. The Syrian government declared the additional facilities “after reaching agreement with the DAT on their declarable status,” he said.

The OPCW is the implementing body for the Chemical Weapons Convention (CWC), which Syria joined a little more than a year ago.

In response to an August 2013 chemical weapons attack on the Damascus suburb of Ghouta, which the United States, other countries, and most independent analysts attributed to the regime of Syrian President Bashar al-Assad, the Obama administration appeared poised to launch punitive military strikes against Syria. But Secretary of State John Kerry and Russian Foreign Minister Sergey Lavrov negotiated a deal under which Syria, which has close ties to Russia, agreed to join the CWC and destroy its chemical arsenal under an accelerated schedule.

According to specialists on the CWC, it is not unusual for countries to make minor revisions to their initial declarations as their chemical destruction progresses. But reports have circulated for months that the Syrian discrepancies went beyond that category.

On Sept. 21, Kerry expressed “deep concerns regarding the accuracy and completeness” of Syria’s initial declaration. Power, in her Oct. 7 tweet, said, “Must keep pressure on regime so it doesn’t hide [chemical weapons] capability.”

At an Oct. 7 roundtable discussion with reporters, Andrew Weber, outgoing assistant secretary of defense for nuclear, chemical, and biological defense programs, said that “[t]he strategic threat of Syria’s chemical weapons has been eliminated” but that there may be “some tactical, small things that were not declared by the Syrian regime.” There is “a system in place to deal with that,” led by the OPCW, he said.

Another ongoing part of Syria’s chemical disarmament is the destruction of 12 production facilities—five underground structures, which are part of a system of tunnels, and seven aboveground hangars. After extended negotiations with Syria, the OPCW on July 24 announced an agreement on a plan for destroying the facilities. (See ACT, September 2014.) Under that plan, destruction was to begin in late September. By late October, however, the work had not started. In his Oct. 27 e-mail, the OPCW’s Luhan said it “has been delayed by contract issues.”

In Sept. 30 remarks at Georgetown University, Kaag said the destruction of the facilities “hopefully” would be completed by April. Kaag was speaking on the last day before the official expiration of the OPCW-UN joint mission that she headed.

The OPCW has responsibility for pursuing the remaining issues related to Syria’s chemical weapons program. Kaag will continue to have a role in this effort as an adviser to UN Secretary-General Ban Ki-moon.

In September 2013, the Security Council adopted Resolution 2118, which approved a plan formulated by the OPCW Executive Council for destruction of Syria’s chemical arsenal. (See ACT, October 2013.)

When it joined the CWC last year, Syria declared about 1,300 metric tons of chemical weapons agents. About 10 percent of the stockpile was destroyed in Syria; the rest was shipped out of the country for destruction elsewhere. About 600 metric tons were neutralized aboard the MV Cape Ray, a U.S. ship, in July and August. The remainder, along with the effluent from the Cape Ray operation, went to facilities in the United States and Europe to be processed.

As of October 20, about 98 percent of the declared arsenal, including all the high-priority chemicals, had been destroyed, according to the OPCW.—

DANIEL HORNER
Russia and the United States are continuing to cooperate on key elements of global nuclear threat reduction, but the future of collaborative efforts between the two countries remains uncertain.

In comments last month, current and former U.S. officials said cooperation in some key areas is in doubt after the end of this year.

In one of the areas of ongoing cooperation, Russia and the United States worked together in late September to assist with the removal of highly enriched uranium (HEU) from Poland and Kazakhstan. The Russian-origin HEU was shipped back to that country for secure storage and elimination.

Janusz Wlodarski, president of Poland’s National Atomic Energy Agency, said in a statement at the International Atomic Energy Agency (IAEA) General Conference in September that Poland’s remaining HEU will be shipped back to Russia in 2016. The Polish research reactors that previously ran on HEU now use only low-enriched uranium (LEU), he said.

Operators of the cargo ship that transported the HEU to Russia reported on Sept. 29 that the material reached Russia and was transferred to railroad cars for transport to a reprocessing plant. Poland did not disclose the amount of HEU in the shipment.

More than 10 kilograms of HEU from a research reactor near Almaty, Kazakhstan, were also returned to Russia for secure storage on Sept. 29, the IAEA said Oct. 2. The agency, which assisted in the removal, said that the reactor is being converted to run on LEU.

According to the IAEA, since 2002, Russia and the United States have worked in cooperation with the agency to transfer more than 2,100 kilograms of Soviet-origin HEU from 14 countries back to Russia, where it is secured or down-blended into LEU.

In an Oct. 9 interview with Arms Control Today, Rose Gottemoeller, undersecretary of state for arms control and international security, cited examples of “very solid” nuclear security cooperation with Russia, but expressed concern that because of the ongoing Ukraine crisis, Russia does not seem to be “thinking beyond the end of 2014 about continuing expansive threat reduction cooperation.”

At an Oct. 29 briefing for reporters, retired Lt. Gen. Frank Klotz, head of the Department of Energy’s semiautonomous National Nuclear Security Administration, said nuclear security cooperation between Russia and the United States beyond the end of the year depends largely on the results of an ongoing internal Russian review.

Matthew Bunn, a former adviser to the White House Office of Science and Technology Policy who is now a professor at Harvard University’s John F. Kennedy School of Government, cited the recent HEU removals as part of “a long-standing effort to reduce the security risks posed by Russian-supplied HEU around the world that would not be possible without Russian cooperation.” Moscow and Washington have so far been saying that this cooperation should continue despite the tensions over Ukraine, but “[c]ooperation within Russia faces more uncertainty at present,” Bunn said in an Oct. 19 e-mail to Arms Control Today.

Since the end of the Cold War, Russia and the United States have cooperated on an array of nuclear weapons dismantlement, material security, and nonproliferation activities inside Russia. These efforts have been pursued primarily under the auspices of the Defense Department’s Cooperative Threat Reduction (CTR) program and the Energy Department’s nuclear material security programs.

In June 2013, Russia and the United States agreed to a pared-down replacement for the old CTR agreement. The new pact allows nuclear security activities in Russia to continue, but discontinues activities involving the Russian Ministry of Defense. (See ACT, July/August 2013.)

Bunn, who is a member of the Arms Control Association Board of Directors, warned that nuclear security cooperation beyond 2014 is now in doubt, as all the work specified in current contracts finishes at the end of the year. “What kind of cooperation will continue after that is very much up in the air,” he said.

For Russian and U.S. security, “[t]he worst outcome…would be no cooperation,” he said.
Funding for U.S. nuclear security work with and inside Russia has been a contentious issue on Capitol Hill this year. The House-passed appropriations bill that funds the Energy Department’s nuclear material security programs “provides no funds to enter into new contracts or agreements in the Russian Federation in fiscal year 2015” until the secretary of energy “reeasses[es]” the Energy Department’s “engagement” with Russia and certifies that cooperative work with Russia is “in the national security interest of the United States.” Also, the bill redirects unspent fiscal year 2014 funds for nonproliferation projects in Russia to nonproliferation work elsewhere.

In addition, the House-passed version of the fiscal year 2015 National Defense Authorization Act includes provisions prohibiting the Defense Department from engaging in “cooperative threat reduction activities” with Russia and bars the Energy Department from funding “any contact, cooperation, or transfer of technology” between Russia and the United States on nuclear security. The provisions include waivers that would allow the executive branch to continue cooperation after certifying that the work is in the U.S. national interest.

The Obama administration strongly opposes House efforts to curtail cooperation with Russia. In statements on the appropriations and defense authorization bills, the administration stated that “[c]ooperation with Russia remains an essential element to the global effort to address the threat posed by nuclear terrorism. Critical bilateral nuclear nonproliferation activities are continuing in a number of key areas, and nuclear security is of paramount importance.”

In contrast to the House, the Senate Appropriations subcommittee that funds the Energy Department’s nuclear security programs provided about $50 million above the fiscal year 2015 budget request of $305 million for the materials protection account.

Meanwhile, the Senate Armed Services Committee version of the defense authorization bill does not impose restrictions on U.S. nuclear security cooperation with Russia. The bill includes a provision restricting all bilateral security cooperation with Russia funded by the Pentagon, but according to a Senate staffer, the provision exempts the department’s CTR work in Russia from this restriction.

The full Senate has yet to pass either bill.

The vast majority of U.S. nuclear security work in Russia is led by the Energy Department. Its cooperative activities with Russia include returning Russian-origin HEU to Russia from third countries and improving security at Russian nuclear material sites. The Pentagon’s nuclear cooperative work with Russia has diminished in recent years, but still includes technical exchanges on nuclear weapons security topics and dismantling retired Russian nuclear submarines.

Congress left Washington in September without reconciling the differences between the House and Senate bills. It is unclear whether and, if so, when Congress will pass final authorization and appropriations legislation for fiscal year 2015.—KINGSTON REIF and KELSEY DAVENPORT

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Lawmakers left Washington for November’s congressional elections without resolving a host of key nuclear weapons policy and budget decisions for fiscal year 2015, which began Oct. 1.

Congress failed to pass a final National Defense Authorization Act, a sweeping bill that establishes spending ceilings and legislative guidelines for Defense Department programs and the activities conducted by the Energy Department’s semiautonomous National Nuclear Security Administration (NNSA). The initial House and Senate versions of the legislation contain different policy provisions on issues ranging from implementation of the New Strategic Arms Reduction Treaty (New START) to nuclear security cooperation with Russia.

Congress also did not approve any fiscal year 2015 appropriations bills, opting instead to extend the previous fiscal year’s funding levels until Dec. 11. The absence of new legislation leaves unsettled a disagreement between the House and Senate about whether to fund the administration’s plans for a new fleet of nuclear-armed air-launched cruise missiles (ALCMs).

Meanwhile, Pentagon officials continue to raise doubts about the feasibility of the overall U.S. nuclear modernization plan in the face of projected military spending reductions mandated by Congress in the 2011 Budget Control Act. Plans to maintain and rebuild the nuclear triad of air-, land-, and sea-based weapons and their associated warheads could cost $355 billion over the next decade, according to a December 2013 analysis from the nonpartisan Congressional Budget Office.

Frank Kendall, undersecretary of defense for acquisition, technology, and logistics, told reporters on the sidelines of the Air Force Association’s annual meeting on Sept. 17 that nuclear modernization is “a big challenge” and “a lot of things [will] have to be paid for at the same time,” according to the Breaking Defense website. Two weeks later, Navy Secretary Ray Mabus stated at a press briefing that the country must begin a debate about how to pay for the cost of building a fleet of 12 new, nuclear-armed ballistic missile submarines. He added that if the Navy is forced to foot the entire bill, it would “break something else” in the Navy’s budget.

In comments at an Oct. 7 roundtable discussion with reporters, Andrew Weber, outgoing assistant secretary of defense for nuclear, chemical, and biological defense programs, said the growing cost of nuclear weapons “causes us to have
to take a hard look at the priorities. What are the trade-offs? Is [the] current strategy affordable and executable, or does it need to be modified?"

The White House is currently overseeing an interagency review of the multibillion-dollar modernization plans, which will inform the administration’s fiscal year 2016 budget request to Congress. (See ACT, September 2014.)

**House GOP Targets New START**

The House version of the defense authorization bill seeks to prohibit funding to implement New START reductions until Russian armed forces “are no longer illegally occupying Ukrainian territory” and Russia “is respecting the sovereignty of all Ukrainian territory.” The bill would also condition funding for New START on a return by Moscow to compliance with the Intermediate-Range Nuclear Forces (INF) and Conventional Forces in Europe (CFE) treaties.

The U.S. State Department determined earlier this year that Russia is in violation of its obligations under the INF Treaty. (See ACT, September 2014.) Russia suspended its implementation of the CFE Treaty in December 2007.

The House passed its version of the defense authorization bill on May 22 by a vote of 325-98. The next day, the Senate Armed Services Committee passed its own version, which does not place constraints on New START implementation. The full Senate has yet to debate the committee measure.

The Republican majority in the House has sought to legislate curbs on implementation of New START in every defense authorization bill it has passed since the treaty entered into force in 2011. But the Democratic-led Senate successfully watered down or blocked these efforts in the final version of the bills.

The pending House legislation also seeks to place certain restrictions on the Pentagon’s and the NNSA’s nuclear material security cooperation programs with Russia (see page 28). In addition, it requires the maintenance of 450 operational Minuteman III intercontinental ballistic missile (ICBM) silos. The provision does not include an end date for that requirement.

The Senate bill, on the other hand, does not restrict nuclear security cooperation activities with Russia. The Senate legislation also does not include a directive on how many ICBM silos the Pentagon must keep.

The schedule for final passage of the defense authorization bill remains uncertain. Senate Armed Services Committee Chairman Carl Levin (D-Mich.) said in late September that he expects Congress to pass a bill when lawmakers return during a postelection session.

Levin also said that members and staff of his committee and its House counterpart have begun meeting behind closed doors to discuss reconciling differences between the two bills.

**New Cruise Missile in Doubt**

Meanwhile, the House and Senate Appropriations energy and water subcommittees allotted different amounts for the ALCM warhead life extension program for fiscal year 2015. The Senate subcommittee did not fund NNSA’s $9.4 million request to study refurbishment of the warhead, citing concerns that the Air Force has yet to identify sufficient funding to design and build a new cruise missile to deliver a life-extended warhead. The Air Force’s fiscal year 2015 budget request delayed the new missile program by three years.

In contrast, the House of Representatives approved $17 million for the study of the cruise missile warhead. The fiscal year 2015 appropriations legislation signed into law by President Barack Obama on Sept. 19 funds all government programs at last year’s levels from Oct. 1 to Dec. 11. According to a congressional staffer, the NNSA cannot spend money on the ALCM warhead study under the law, known as a continuing resolution, because the program is considered “a new start” that was not funded in fiscal year 2014.

At the Oct. 7 discussion, Weber said that the administration is examining whether the United States could “live with perhaps either delaying or forgoing the follow-on to the ALCM,” given that the B61 gravity bomb is undergoing a major upgrade.

It is unclear what kind of appropriations legislation Congress will pass once the current legislation expires on Dec. 11. One option is to approve another short-term continuing resolution. Another option, which Congress chose last year, is to pass an omnibus appropriations bill that provides new funding for Defense Department and NNSA programs.—**KINGSTON REIF**
Cluster Munitions Plague Ukraine, Syria

The use of cluster munitions has spread to battlefields in Ukraine and Syria, according to groups seeking to ban the weapon.

In a report released Oct. 20, Human Rights Watch documented the use of cluster munitions in fighting between Ukrainian government forces and pro-Russian rebels in more than a dozen urban and rural locations. “While it was not possible to conclusively determine responsibility for many of the attacks,” the report said, “the evidence points to Ukrainian government forces’ responsibility for several cluster munition attacks on Donetsk,” the largest city in eastern Ukraine.

In 12 incidents, Human Rights Watch said cluster munitions killed at least six people and injured dozens. The group's investigators and a reporter from The New York Times found evidence in early October of Russian-made, surface-fired 220-millimeter Uragan (Hurricane) and 300-millimeter Smerch (Tornado) cluster munition rockets.

The Ukrainian government denied responsibility. “The Ukrainian military did not use weapons prohibited by international law; this applies to cluster munitions as well,” a spokesman said Oct. 21, according to RIA-Novosti.

The Organization for Security and Co-operation in Europe, which monitors the Ukraine conflict zone, said it had received no evidence that government troops had used cluster bombs, according to an Oct. 22 Reuters report.

Cluster munitions are rockets or bombs that contain dozens or hundreds of smaller munitions. After launch, the container for these submunitions disperses them over a wide area. The submunitions, while designed to explode when they hit the ground, often fail to do so, remaining explosive and dangerous to anyone who touches them.

The Kiev government has not acceded to the 2008 Convention on Cluster Munitions (CCM), joined by 114 countries. The treaty bans the use of cluster munitions because of the danger they pose to civilian noncombatants.

In Syria, the government’s cluster munitions have killed at least 1,600 people in the past two years, by far the deadliest use of the weapon in a decade, according to the annual report of the International Campaign to Ban Landmines-Cluster Munition Coalition (ICBL-CMC), issued in August. Of the reported victims, 97 percent were civilians. Syria is not a party to the CCM.

Syrian forces exploded at least 249 cluster munitions, covering 10 of Syria’s 14 provinces, according to the ICBL-CMC report. The groups found that at least seven types of Russian- and Egyptian-made cluster munitions have been used in Syria, including air-dropped bombs, dispensers fixed to aircraft, and ground-launched rockets, as well as at least nine types of explosive submunitions.

Not since the U.S.-UK invasion of Iraq in 2003 have dispersed small explosives injured or killed so many people. According to a 2003 Human Rights Watch report, the invading forces used nearly 13,000 cluster munitions, containing an estimated 1.8 million submunitions, in three weeks of major combat. UNICEF
estimated that more than 1,000 children in Iraq were killed or injured by U.S.-made cluster munitions in 2003.

The ICBL-CMC report also noted the use of cluster munitions in Ukraine last year, but said its researchers could not determine whether the Ukrainian government or the rebels were responsible.

The use of cluster munitions in Syria and Ukraine “will only prolong the humanitarian consequences of these devastating conflicts in the years to come, with very little, if any, military benefits,” said André Sohrab Cordeiro of the Portuguese Foreign Ministry at the annual meeting of CCM parties in San José, Costa Rica, in September.

Twenty-five countries condemned Syria at the meeting, while another 17 countries condemned the recent use of cluster munitions but did not cite Syria by name.

The use of cluster munitions in Syria and Ukraine has not yet reached the level of use in Laos and Lebanon, the two countries in the world most contaminated by the weapons.

Laos remains by far the world’s most contaminated state as a result of the U.S. military dropping more than 270 million submunitions on the country between 1964 and 1973. Lebanon is second, primarily as a result of Israel’s war against the Shiite militia Hezbollah in July-August 2006, when Israeli forces used as many as 4 million submunitions.

Eleven people have been killed and 31 injured by cluster munitions in Lebanon since 2006, according to a report issued by the Mine Advisory Group, a UK organization that seeks to ban landmines and cluster munitions. Casualties have been reported in Laos, but researchers say there are no reliable tallies of the numbers.

Laos and Lebanon, which are parties to the CCM, also did the most to dismantle and destroy the weapons in 2013, according to the ICBL-CMC report. Together, the two countries accounted for 82 percent of the submunitions destroyed worldwide in 2013 and 72 percent of the land cleared.—JEFFERSON MORLEY

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The United States has not decided whether to attend a December conference in Vienna on the humanitarian impacts of nuclear weapons use, according to a senior U.S. official.

In an Oct. 9 interview with Arms Control Today, Rose Gottemoeller, undersecretary of state for arms control and international security, did not provide a specific timetable for a U.S. decision on attending the conference, which is scheduled for Dec. 8-9.

The Vienna gathering will be the third conference in the past two years focused on the medical and societal impact of nuclear weapons use. The first meeting took place in March 2013 in Oslo and brought together representatives from 127 governments. Delegations from 146 governments attended the second conference held in Nayarit, Mexico.

India and Pakistan attended the Oslo and Nayarit conferences, but the five countries recognized as nuclear-weapon states by the nuclear Nonproliferation Treaty (NPT) did not.

Gottemoeller said the United States does not “have a straightforward or a clear view” of “what the conferences are about.” She expressed concern that some conference organizers believe the meetings are intended to lead toward talks on a convention on the elimination of nuclear weapons.

In remarks delivered Oct. 20 at the UN General Assembly First Committee, which deals with disarmament and other issues, Robert Wood, U.S. ambassador to the Conference on Disarmament in Geneva, said that “any call to move nuclear disarmament into international humanitarian law circles can only distract from the practical agenda set forth” at the 2010 NPT Review Conference.

The Austrian government has said it does not intend the Vienna conference to be the start of a diplomatic process for a ban on possession of nuclear weapons. In an Aug. 30 interview with The Asahi Shimbun, Alexander Kmentt, director of disarmament, arms control, and nonproliferation in the Austrian Federal Ministry for European and International Affairs, said the Vienna conference “will focus on the consequences and on the risks” of nuclear weapons, including the consequences of nuclear weapons tests and the range of human and technical factors that could lead to the use of nuclear weapons.

The draft conference agenda posted on the Austrian ministry’s website lists possible scenarios of nuclear weapons use, plans for response to such use, and the implications of nuclear weapons use under different areas of international law as topics to be addressed at the meeting.

Gottemoeller said in the Oct. 9 interview that the United States is “very supportive of the notion that...we need to be enhancing people’s understanding of the human impacts of nuclear weapons use.”

In the Asahi interview, Kmentt said, “[T]here is a broad range of views” among countries on the need for a treaty banning nuclear weapons. What unites the states that participate in the conferences, he said, is “the belief that we need to do something different” to work toward nuclear disarmament “compared to how we have done it in the past.”

The Vienna conference and the two conferences that preceded it reflect the growing impatience of many states with what they characterize as the slow pace of progress on the 22-point action plan on disarmament laid out in the final document of the 2010 NPT Review Conference. Emphasizing the humanitarian consequences of nuclear weapons use “has the potential to refocus the international community on the urgency of nuclear disarmament,” said Kmentt.

Kmentt said Austria hopes to pull together the key findings of the Vienna, Nayarit, and Oslo meetings and take them to next year’s NPT review conference to push for concrete progress toward nuclear disarmament.

He expressed hope that more countries will attend the Vienna conference than attended the Mexico gathering, including some of the nuclear-weapon states. He said the discussion with the United States about participating in the conference “has been very positive” and that he believes the Obama administration “is exploring ways to participate.”

The issue of the humanitarian impact of nuclear weapons use also was raised at the United Nations. On Oct. 20, New Zealand delivered a statement on behalf of 155 countries at the First Committee, declaring, “It is in the interest of the very survival of humanity that nuclear weapons are never used again, under any circumstances.”—KINGSTON REIF
Satellite images suggest that North Korea may have shut down a nuclear reactor that has been a key part of the county’s nuclear weapons program, according to an analysis by a Washington think tank.

In an Oct. 3 brief, David Albright and Serena Kelleher-Vergantini of the Institute for Science and International Security wrote that images of the Yongbyon site from August and September show that there is no longer steam venting from the reactor or water being discharged from the secondary cooling system. These observations led the two analysts to conclude that the reactor may have been shut down “possibly for either partial refueling or renovations.”

Steam and water discharge are typical indications that a reactor is operating. These signatures were present in past satellite images that the authors analyzed in April and June.

North Korea has not issued any statement on the operational status of the reactor, but a spokesman for the National Peace Committee of Korea said on Oct. 7 in Pyongyang that the North Korean government was continuing to “bolster its nuclear deterrent.”

The reactor produces plutonium, which, when separated, can be used for nuclear weapons. Built in the 1980s, the reactor was shut down and disabled in 2007 as a part of Pyongyang’s negotiations over its nuclear weapons program with six countries, including the United States. Before being shut down, the reactor produced enough weapons-grade plutonium for North Korea’s estimated arsenal of eight to 12 nuclear weapons.

In April 2013, North Korea announced its intention to restart the reactor. (See ACT, May 2013.) Analysis of satellite images from August 2013 indicated that the reactor was likely operational again. (See ACT, October 2013.)

Albright and Kelleher-Vergantini said the reason for the shutdown is unknown but it is unlikely that North Korea is removing the entire core of the reactor. Cores typically last several years, but a partial refueling could have caused the shutdown, the authors wrote. North Korea could also be performing maintenance on or renovating the reactor, they said.

If the reactor was shut down for any of these reasons, it is likely that North Korea will restart it in the future, Albright and Kelleher-Vergantini said.

Satellite imagery from September also shows that North Korea has completed an upgrade to the Sohae Satellite Launching Station, Nick Hansen said in an Oct. 1 piece published by 38 North, a website run by the U.S.-Korea Institute at Johns Hopkins University.

Hansen, a former military imagery analyst, wrote that satellite images of the Sohae site show the completion of a “major construction program” that began in early 2013, including an upgrade of the launch pad. The upgrade will enable North Korea to launch rockets that are larger than the Unha-3 satellite launch vehicle, Hansen said. North Korea launched two Unha-3 rockets, which have three stages and are liquid fueled, from the Sohae facility in 2012.

Citing modifications that increased the height of the tower and widened the access road to the launch, Hansen said rockets that are up to 50 meters tall can now be launched from the site. The Unha-3 is about 32 meters tall.

There is no evidence of preparations for another rocket launch, Hansen wrote, but North Korea is “ready to move forward” and could launch a rocket by the end of 2014 if it chose to do so.

Hansen also said the satellite images indicate the completion of several other construction projects at the site, such as new roads, a railroad spur to the main launch pad, and an underground data cable network that links the major facilities at the site.—KELSEY DAVENPORT
Capt. Richard Dromerhauser

Capt. Richard Dromerhauser of the U.S. Navy led one of the most significant arms control accomplishments in recent years: the maritime destruction of a large portion of Syria’s chemical weapons arsenal in July and August 2014. As commander of the MV Cape Ray, Dromerhauser oversaw the crew of 135 people that neutralized 600 metric tons of dangerous chemicals without mishap.

Arms Control Today caught up with him by phone on September 25 at the headquarters of the U.S. Navy’s 6th Fleet in Naples, Italy.

The interview, conducted by Jefferson Morley, has been edited for length and clarity.

What brought you to the Navy?
My goal was to graduate high school—just kidding. I was looking at a career in an engineering field, and I had looked into the Naval Academy. I had the desire to serve my country, and I thought this was a great opportunity to get an education. I came from a working-class background. I was the oldest child and also the first in my immediate family to go to college.

How did the Cape Ray assignment come to you?
We needed to move the neutralization operations to sea. The technology to do the neutralization was something we had proven. What we did then was to combine the two in a shipboard environment. I was able to bring a lot of experience that I had in past commands and also in different jobs that I had before to bear on this.

Were you following the story about the use of chemical weapons in Syria that led to the mission? A thousand people were killed with chemical weapons.
We follow closely all the activities and the issues that go on around the [Mediterranean] theater. I was following that, just as I was following all the other activities that were occurring at that time. Of course, what a horrible tragedy. And I think also, what a great opportunity that we were given: to remove this [material], from not just the Syrian arsenal, but from the global arsenal.

What does 600 tons of chemical weapons look like?
Like a lot of containers that you see on 18-wheelers. The Cape Ray and all the Cape-class ships are very large and able to carry a lot. We processed 24 hours a day, six days a week.

Was there a most dangerous moment in the transfer of the chemicals?
No, I’m going to say outright I never felt like, “Hey, this is a bad situation.” It’s really a testament to the intense amount of planning and training that we had. When the ship first left the [United] States, there was a period of time where we were waiting for all the material to be [removed from Syria]. Rather than hang our heads and go, “Boy, what are we waiting for?” we jumped up on that.

That was a fantastic opportunity to train, to go over processes, look at the systems, and really chalkboard out how we were going to do this. I had the ability to meet each day with not only the master of the vessel itself, but the lead chemist. We made a point every day to meet at a set time, regardless of what was going on.

One of the best decisions we made was, we said we need to find a way to empower every single person on this [ship]. Whether they’re moving material or whether they’re a lookout, or working to keep the hot water going, [we said,] “If you see something that’s not right, stop everything and let’s reassess.”

How did it feel to get a call afterward from Defense Secretary Chuck Hagel?
That was a great testament to all the hard work and accomplishments of everyone aboard. I was on the other end of the line, but I really wished we were able to get a speaker phone out to not just the ship, but to every one of the folks in the supporting allies, the folks who were out there with us.
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—Paolo Cotta-Ramusino, Secretary General of the Pugwash Conferences on Science and World Affairs

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