



# USAF Center for Unconventional Weapons Studies (CUWS) Outreach Journal

Issue No. 1121, 27 June 2014

Welcome to the CUWS Outreach Journal! As part of the CUWS' mission to develop Air Force, DoD, and other USG leaders to advance the state of knowledge, policy, and practices within strategic defense issues involving nuclear, biological, and chemical weapons, we offer the government and civilian community a source of contemporary discussions on unconventional weapons. These discussions include news articles, papers, and other information sources that address issues pertinent to the U.S. national security community. It is our hope that this information resources will help enhance the overall awareness of these important national security issues and lead to the further discussion of options for dealing with the potential use of unconventional weapons.

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**FEATURE ITEM:** *"The Evolution of Cooperative Threat Reduction: Issues for Congress"*. Authored by Mary Beth D. Nikitin; Specialist in Nonproliferation and Amy F. Woolf; Specialist in Nuclear Weapons Policy. Report published by the Congressional Research Service on June 13, 2014; 57 pages.

<http://fas.org/sgp/crs/nuke/R43143.pdf>

The United States uses a number of policy tools to address the threat of attack using chemical, biological, radiological and nuclear (CBRN) weapons. These include a set of financial and technical programs known, variously, as cooperative threat reduction (CTR) programs, nonproliferation assistance, or, global security engagement. Congress has supported these programs over the years, but has raised a number of questions about their implementation and their future direction.

Over the years, the CTR effort shifted from an emergency response to impending chaos in the Soviet Union to a broader program seeking to keep CBRN weapons away from rogue nations or terrorist groups. It has also grown from a DOD-centered effort to include projects funded by the Department of Defense (DOD), the State Department, the Department of Energy (DOE), and the Department of Homeland Security (DHS). Together, these agencies sought nearly \$1.65 billion for these programs in FY2014.

This report summarizes cooperative activities conducted during the full 20 years of U.S. threat reduction and nonproliferation assistance. Many older programs have concluded their work, while more recent programs continue to expand their scope and their geographic reach.

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DoD Buzz.com

## **B-2 Bomber Set to Receive Massive Upgrade**

By Kris Osborn

Wednesday, June 25th, 2014

The Air Force's B-2 Spirit is receiving a technological upgrade to allow the service's bat-winged, nuclear capable bomber to fly through 2058.

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Air Force officials have started planning the modernization overhaul to include digital nuclear weapons and a new receiver that allows the bomber to receive messages in the event of a nuclear detonation, said Eric Single, chief of the Global Strike division for Air Force acquisition.

Northrop Grumman, the lead defense contractor on the B-2, owns a contract with a \$9.9 billion ceiling to complete maintenance and modernization on the fleet of 20 stealth bombers. The fleet upgrade will also include new computer processors, avionics, radar warning receivers and communications gear.

The B-2, which costs about \$2.2 billion per plane, can reach altitudes of 50,000-feet and carry 40,000-pounds of payload. First produced in 1989, the stealth bomber was engineered to deliver weapons behind enemy lines and evade Soviet air defenses.

The Air Force had expected to field a fleet of over 130 B-2s, but failures by Northrop Grumman and the Air Force to keep it under budget along with the end of the Cold War led the Pentagon to cut the fleet to 21.

The Air Force will add a Common Very Low Frequency Receiver to improve communication in the event of a nuclear detonation, or what is called a high altitude electro-magnetic pulse environment.

The connection with the new receiver uses Very Low/ Low Frequency, or VLF/LF, waveform. It is secure and beyond line of sight, however it will only transmit data and it is receive only, Single said. This means an air crew could receive targeting instructions from the president, but not be able to transmit information, Single added.

Single explained that there are only two waveforms that would be survivable in this kind of scenario – one of them is EHF which would rely upon the AEHF satellite constellation and the other is VLF, he explained. Adding VLF waveform technology to the B-2 is expected to cost \$160 million, Single said.

The new receiver will be added onto the B-2's existing communications infrastructure which includes UHF-based satellite connectivity and something called the high-performance waveform, which comes from an on-board radio called the PRC 117.

"The B-2 has a large suite of communications systems on board that enable you to do line of sight and beyond line of sight voice and data. You have always had UHF connectivity which means you have always had a beyond line of sight data link," Single said.

UHF connectivity, which is able to send and receive voice and data beyond line of sight, is recoverable in the event of a nuclear detonation but could be substantially degraded, he explained.

The B-2 is also being engineered with a new flight management control processor designed to expand and modernize the on-board computers and enable the addition of new software.

"We're re-hosting the flight management control processors, the brains of the airplane, onto a much more capable integrated processing unit. We're laying in some new fiber optic cable as opposed to the mix bus cable we are using right now. The B-2's computers from the 80s are getting maxed out and overloaded with data," Single said.

The new processor increases the performance of the avionics and on-board computer systems by about 1,000-times, he added. The overall flight management control processor effort, slated to field by 2015 and 2016, is expected to cost \$542 million.

"This is a Cold War machine with 1980's computers. The Cold War was great for aerospace but the computers are still stuck in the 80s. It is amazing the level of performance you can get by modernizing those systems," said Richard Aboulafia, vice president of analysis, Teal Group, a Virginia-based consultancy.

The comprehensive B-2 upgrades also include efforts to outfit the attack aircraft with next generation digital nuclear weapons such as the B-61 Mod 12 with a tail kit and Long Range Stand-Off weapon or, LRSO, an air-launched, guided nuclear cruise missile, Single said.

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The B-61 Mod 12 is an ongoing modernization program which seeks to integrate the B-61 Mods 3, 4, 7 and 10 into a single variant with a guided tail kit. The B-61 Mod 12 is being engineered to rely on an inertial measurement unit for navigation, Single said.

In addition to the LRSO, B83 and B-61 Mod 12, the B-2 will also carry the B-61 Mod 11, a nuclear weapon designed with penetration capabilities, Single explained.

The LRSO will replace the Air Launched Cruise Missile, or ALCM, which right now is only carried by the B-52 bomber, Single said.

Alongside its nuclear arsenal, the B-2 will carry a wide range of conventional weapons to include precision-guided 2,000-pound Joint Direct Attack Munitions, or JDAMs, 5,000-pound JDAMs, Joint Standoff Weapons, Joint Air-to-Surface Standoff Missiles and GBU 28 5,000-pound bunker buster weapons, among others.

The B-2 can also carry a 30,000-pound conventional bomb known as the Massive Ordnance Penetrator, Single added.

The upgrades are also improving something called the Defensive Management System, or DMS, a radar warning receiver which helps detect and report threat information.

The \$2.2 billion effort, which will replace some of the processors in the DMS system, is slated to be finishing up for delivery by 2021, Single said.

The upgraded DMS is designed to enable the B-2 to have more success against modern, high-tech air defenses, Single explained.

“Advances in integrated air defenses have made it more difficult for anybody to operate in more contested areas. As you know being stealthy or low-observable gives you a lot of advantages as it shrinks the detection ranges of all these systems and creates holes you can use. What the DMS system does is it gives air crews real-time data of where threats are,” he added.

The DMS technology is able to detect emissions coming from enemy air defenses and help display their location, allowing the air crew to avoid threatening air defenses and change course as needed.

<http://www.dodbuzz.com/2014/06/25/b-2-bomber-set-to-receive-massive-upgrade/>

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Great Falls Tribune – Great Falls, MT

## **Commander Says Air Force Should Empower Young Nuke Leaders**

By Robert Burns

June 26, 2014

MINOT AIR FORCE BASE, N.D. – The key to improving morale in the Air Force’s nuclear missile corps is to put more responsibility in the hands of junior officers and enlisted airmen, the commander of the missile corps said Wednesday.

In an Associated Press interview at Minot Air Force Base, which operates one-third of the nation’s 450 Minuteman 3 intercontinental ballistic missiles, Maj. Gen. Jack Weinstein said that in addition to devoting more resources to the mission, he is pushing to empower those who maintain, operate and secure the missiles.

“They were being micromanaged,” he said.

Their morale has suffered, Weinstein said, in part because they are told their work is important but they are not permitted to make even basic decisions about how to perform it. He said that over time this has tended to detract from their sense of purpose.

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He said he first realized the extent of this problem last fall when he took command of the intercontinental ballistic missile force. While visiting a missile crew in the field, he learned that the decision to permit a “camper alert team,” or temporary security force, to leave a missile launch facility after resolution of whatever security issue had prompted the team’s deployment, could only be made by a squadron commander, a lieutenant colonel, back at the home base rather than by the officer in the missile field.

This, he said, showed him that “we had elevated decisions to an unhealthy level.” He said that when he was a lieutenant and a Minuteman 3 missile launch crew officer he was allowed to make the kind of decision that would release the “camper alert team.”

“The best way to produce leaders of the future is to make sure than when they are junior you properly educate and train them and you let them make decisions,” he said.

A string of recent training failures, security missteps, leadership lapses, morale problems and stunning breakdowns in discipline has prompted Defense Secretary Chuck Hagel to demand action to restore public confidence in the nation’s nuclear force.

Weinstein was in Minot for a change-of-command ceremony at the 91st Missile Wing, which operates 150 Minuteman 3 missiles that are in launch-ready status in underground silos spread across 8,500 square miles in the northwestern corner of North Dakota.

At Tuesday’s ceremony, Col. Michael Lutton took command, succeeding Col. Robert Vercher, whose two years in charge here included a poor showing by the 91st on a nuclear inspection in March 2013. That setback led to the unprecedented sidelining of 19 missile launch control officers for performance and attitude problems.

In his formal remarks at Tuesday’s ceremony, Weinstein said it was time to “fundamentally change the culture” in an ICBM force that has changed relatively little during its 50-plus years of existence.

He said he thinks missile crew members believe in what they are doing and want to perform well.

“The problem they had was they weren’t allowed to do the mission,” he said, adding, “When you don’t allow them to do that, then all of a sudden you have a morale problem.”

<http://www.greatfallstribune.com/story/news/local/2014/06/26/commander-says-air-force-empower-young-nuke-leaders/11397531/>

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RT (Russia Today) – Moscow, Russia

## **First in 6 Years: Troubled US Missile Defense System Hits Test Target**

June 23, 2014

After more than six years of failures and billions of dollars spent the US missile defense system managed by Boeing has successfully hit a mock enemy warhead over the Pacific, the US Defense Department confirmed.

*“This is a very important step in our continuing efforts to improve and increase the reliability of our homeland ballistic missile defense system,”* said Missile Defense Agency Director Vice Admiral James Syring, after a successful test of the Ground-based Midcourse Defense (GMD) system – the only US defensive system theoretically capable of intercepting intercontinental ballasting missiles midcourse.

Syring added that all components involved in the test performed as designed. The performance of the system in Sunday tests will now be analyzed for several months using data obtained during the intercept.

The target hit was an intermediate-range missile launched from the Marshall Islands. The simulated launch was then tracked by the US radar systems that communicated the coordinates of the target to the ground-based interceptor, located at Vandenberg Air Force Base in California. The warhead – EKV Capability Enhancement II ‘kill vehicle’ – built by Raytheon Co, was successful in destroying the target.

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Three previous attempts to test GDM's ability to hit the simulated enemy target failed despite the scenarios being specifically scripted for success. In fact the last time the US Missile Defense Agency (MDA) had something to brag about was in December 2008, when the system intercepted and destroyed a missile launched from Kodiak. The government funded project is estimated to cost the American taxpayer over \$40 billion by 2017.

Chicago-based multinational Boeing Corporation partnered up with the MDA back in 1998. The system was upgraded to "operational" in 2004 to counter the "North Korean threat." In December 2008, the MDA awarded the company a \$397.9 million contract to continue development of the program. Boeing is responsible of managing the team of other subcontractors, as well as integrating and testing the GDM system under the Development and Sustainment Contract, awarded in December 2011.

Boeing is tasked to provide the US government with round the clock operational capability through the use of multiple land, sea and space-based sensors to detect and track missile threats during their boost phase.

In order to annihilate the threat, the system is designed to launch a three-stage solid booster Ground-Based Interceptors (GBIs) equipped with an Exo-atmospheric Kill Vehicle (EKV) towards the target while it's still in space, outside the planet's atmosphere. The EKV is then supposed to destroy the hostile missile "using only the kinetic force of direct collision," the company says.

Before Sunday tests, only 8 of the total 17 hit-to-kill intercept tests have succeeded. With 47 percent success rate. In response to the repeated failures, the Pentagon had previously demanded a budget increase for the program.

The National Defense Authorization Act for Fiscal 2014 requires MDA to improve the kill assessment capability and the hit assessment capability of the GMD system as early as 2018. The bill authorizes \$100 million for design and development of common kill vehicle technology for an upgraded enhanced exo-atmospheric kill vehicle for the GMD system, an increase of \$30 million above the budget request, the Center for Arms Control and Non-Proliferation reports.

"Would you spend \$1 billion on an insurance policy that only worked one third of the time?" said Tom Collina, research director at the Arms Control Association. "We need to put the money into making the system better, not bigger," Reuters reports.

MDA currently has 30 ground-based interceptors in California and Alaska. Twenty of the interceptors carry an early version of the kill vehicle that separates from the rocket and hits the incoming missile. The other 10 carry the upgraded version of the EKV.

In March 2013, the Obama administration announced plans for an additional 14 at Fort Greely in response to North Korean threats. The deployment of a second TPY-2 radar to Japan was announced at the same time.

"What makes the recent intercept test failures especially disconcerting is that these tests have occurred under highly scripted and controlled conditions. For example, the GMD system has never been tested against an intercontinental range missile. In addition, the system has yet to prove effective against decoys and countermeasures that an adversary could deploy to fool our defenses," Kingston Reif from The Center for Arms Control and Non-Proliferation said earlier this year.

Pentagon's Director of Operational Test and Evaluation, Dr. Michael Gilmore in his Fiscal Year (FY) 2013 report to Congress also questioned the capabilities of the GMD.

"Ground-based Midcourse Defense (GMD) has demonstrated a partial capability to defend the US Homeland from small numbers of simple intermediate or intercontinental ballistic missile threats launched from North Korea or Iran," Gilmore's report to congress states.

Phil Coyle, a former Pentagon chief tester and a long-time critic, called for accelerated work on a new design. "We need to make sure we have a system that works, not expand a system we know to be deeply flawed," Reuters quotes him as saying.

<http://rt.com/usa/167728-gmd-launch-successful-failure/>

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Chicago Tribune, Chicago, IL

## Raytheon to Resume Production of Warhead after Successful Test

By Andrea Shalal, Reuters  
Monday, June 23, 2014

WASHINGTON (Reuters) - Raytheon Co on Monday said it expects to soon resume production of an updated warhead, or "kill vehicle," used for U.S. homeland missile defense after the system successfully intercepted a dummy target over the Pacific.

"There are no other hurdles that we're aware of, so we expect that we will go into production shortly," Wes Kremer, vice president of air and missile defense systems at Raytheon, told reporters on a teleconference.

Raytheon is a subcontractor to Boeing Co on the Ground-based Midcourse Defense (GMD) system, which defends the United States against long-range ballistic missiles and is projected to cost a total of \$41 billion.

The system hit a simulated enemy missile on Sunday for the first time since 2008.

Kremer said Raytheon had not been officially notified by the Missile Defense Agency about resuming production, but the test had clearly validated the revamped design of the kill vehicle, which separates from the ground-based interceptor and hits an incoming warhead.

The Exoatmospheric Kill Vehicle Capability Enhancement II, EKV CE-II, is already carried by 10 of the 30 U.S. interceptors already in silos in Alaska and California, but it had failed to hit its target in two previous flight tests in 2010.

The earlier version of the kill vehicle, the CE-I, which is on the remaining 20 interceptors, failed its last intercept test in July 2013, but the government says it expects to correct the problem that caused that failure by year's end.

Kremer said he was not aware of any plans to test the CE-1 kill vehicle.

He said Raytheon is keen to compete for work on a new kill vehicle design that the agency has said it plans to pursue and field by 2017 or 2018.

"This test ... does not negate the need to do a redesign to improve the overall reliability of the kill vehicle," Kremer said, adding that Raytheon would use its experience with the Standard Missile-3 to improve the GMD warhead's reliability.

He said the kill vehicles in use now were designed to be autonomous, but technology advances since then would allow the new warhead to be more tightly integrated into the overall U.S. missile defense system. Reuters reported on Friday the Pentagon is restructuring its \$3.48 billion contract with Boeing for management of the missile defense system to put more emphasis on maintenance and reliability.

Kremer confirmed the report but declined comment on negotiations between the government and Boeing, or the possible timing of a new agreement.

"Clearly, in general, the wise thing to do is to write contracts in a manner that reflects the priorities of the government such that everybody is working toward the same goal, and I think that's what they're focused on," Kremer said.

*Reporting by Andrea Shalal; Editing by Paul Simao*

<http://www.chicagotribune.com/news/politics/sns-rt-us-usa-military-raytheon-20140623,0,2807870.story>

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The Times of Trenton – Trenton, NJ

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## Princeton Lab's Device Could Eliminate Close-Up Weapon Inspections

By Brielle Urciuoli, The Times of Trenton  
June 24, 2014

PLAINSBORO — A new device proposed by scientists at Princeton Plasma Physics Laboratory could help verify that when the Russians and Americans claim to be destroying nuclear warheads, they really are.

A team of scientists at the lab are building what they call a “zero-knowledge protocol” device, which can beam neutrons into a warhead to determine whether it is the real thing.

The advantage of the device, said scientist Rob Goldston, is that it doesn’t require a close-up inspection of the warhead that would reveal advanced weaponry secrets.

In 2010, the United States and Russia signed a new Strategic Arms Reduction Treaty for the destruction of hundreds of deployed strategic nuclear warheads. The problem, Goldston said, is that the process carries no guarantee of honest results: “There has never been verified warhead dismantlement, ever.”

The treaty calls for each country to reduce its deployed strategic nuclear weapons inventory to 1,550 by 2018. There are 1,600 operational in Russia, and 1,920 in the United States, according to a PPPL spokesman.

There are thousands more nuclear weapons on both sides that are not included in the reduction treaty, but PPPL officials said the zero-knowledge device could make it possible for opposing sides to agree to further reductions.

“This idea is to facilitate later rounds of negotiations. It’s not about the current START treaty,” Goldston said.

The zero-knowledge machine would beam neutrons into the suspected warhead and count how many pass through. This number would then be compared with the number of neutrons that passed through an established warhead.

If the numbers match, then a blank grey screen would appear on the monitor, confirming that the subject is indeed a warhead. This procedure would enable inspectors to know if a country was presenting fake warheads for disarmament, as well as allowing the United States to conduct inspections with less opposition.

The verification device will be discussed in Nature Magazine this week.

PPPL scientists Goldston and Alexander Glaser worked with Boaz Barak, an expert in disguising secret information, and others to devise the system.

The project started in 2011 thanks to funding from the Department of State and the Simons Foundation, which funds projects in mathematics and science.

Goldston noted that other worldwide superpowers, such as China, are working on similar technology. These systems, if put on an international stage, have great potential to decrease the amount of nuclear weapons in existence, he said.

[http://www.nj.com/mercer/index.ssf/2014/06/princeton\\_labs\\_device\\_could\\_eliminate\\_close-up\\_weapon\\_inspections.html](http://www.nj.com/mercer/index.ssf/2014/06/princeton_labs_device_could_eliminate_close-up_weapon_inspections.html)

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National Journal – Washington, D.C.

## Quantifying Progress in Reducing WMD Threats Getting Tougher: Report

By Rachel Oswald  
June 26, 2014

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A recent congressional report sees growing difficulty ahead in quantifying progress in U.S. efforts to secure and eliminate weapons of mass destruction.

Changing circumstances -- including some notable successes -- are the culprit, according to a June 13 report by the Congressional Research Service posted online by the Federation of American Scientists.

After more than 20 years, many U.S. programs authorized by the Nunn-Lugar Act to dispose of Soviet-era nuclear and chemical arms are almost done with their work. Thousands of nuclear warheads and hundreds of long-range ballistic missiles have been destroyed as part of the Cooperative Threat Reduction initiative.

But as disarmament work in the former Soviet Union winds down, the United States increasingly is focused on the less quantifiable goal of reducing the potential for nonstate actors operating in the Middle East and Africa to acquire unconventional arms.

"As the United States has expanded its threat reduction assistance to nations outside the former Soviet states, and as the programs have emphasized cooperative engagement, capacity-building, and best practices instead of weapons dismantlement and facility security, the problem of measuring progress has grown more complicated," concludes the CRS report.

Recent examples of this new capacity-building work include a U.S.-financed project to build a high-security biological laboratory in Kazakhstan, the deployment of radiation scanners at Azerbaijan's Baku Airport, and the training of Kenyan and Ugandan armed forces to respond to a WMD terrorist attack.

"While participants in the [CTR] program may be confident in their ability to share knowledge and build cooperative relationships, they may be less confident in their ability to measure the relationship between funding and progress in cooperation," the report by Congress' internal think tank notes.

"However, most of the threat reduction assistance currently under way is more difficult to quantify," the congressional analysts explained. "In many cases, progress is evident in access to decision makers and operators, and success is reflected in the growth of relationships."

The report said that metrics could potentially be developed for threat-reduction efforts, based in part on survey tools used in related projects that attempt to gauge progress in such fields as "a country's licensing, enforcement, industry outreach, and nonproliferation regime adherence."

Meanwhile, U.S. Cooperative Threat Reduction initiatives have played high-profile roles in recent international nonproliferation wins. CTR funding was used to repair a chemicals destruction facility in Libya that was disabled by the 2011 revolution, paving the way for the North African country last year to finally destroy the last of its chemical arms. Similarly, the U.S. *MV Cape Ray*, which is set to shortly begin destroying Syria's chemical warfare materials, was also equipped using CTR funds.

<http://www.nationaljournal.com/global-security-newswire/quantifying-progress-in-reducing-wmd-threats-getting-tougher-report-20140626>

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Center for Infectious Disease Research and Policy (CIDRAP) – Minneapolis, MN  
University of Minnesota

## **Initial Tests Show No Anthrax Contamination at CDC Labs**

By Lisa Schnirring, Staff Writer

June 23, 2014

Early results of environmental tests at labs at the US Centers for Disease Control and Prevention (CDC) where workers were possibly exposed to *Bacillus anthracis* after a lapse in safety protocols are negative, suggesting contamination or release was unlikely, a spokesman for the agency said today.

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Benjamin Haynes, senior press officer for the CDC's infectious disease team, told CIDRAP News that the CDC will continue monitoring the samples until the end of the week before confirming the lack of contamination. He said the affected labs will not be reopened until they have been cleared for safe operation.

The CDC's probe of the incident will conclude in early July, and a US Department of Agriculture (USDA) investigation will go on throughout this week, Haynes said.

### **Report of reassignment**

In other developments, Michael Farrell, PhD, director of the CDC lab involved in the possible anthrax exposure, has been reassigned while the agency investigates the event, Reuters reported today, attributing the information to scientists at the lab who are not authorized to speak on the subject. CDC officials have declined to comment on Farrell's reassignment, and Farrell has not responded to queries from Reuters.

The CDC is monitoring the health of and has offered prophylactic treatment and anthrax vaccination to 84 employees who may have been exposed to *B anthracis*. Haynes said so far none of them have reported symptoms consistent with infection.

### **Senate request**

In a related development today, a US Senate committee today asked the CDC for information about the lapse in safety protocols that led to the possible exposure, along with steps the agency plans on taking to prevent future incidents. The request came from a bipartisan group of four members of the Committee on Health, Education, Labor, and Pensions.

In a letter to CDC Director Tom Frieden, MD, MPH, the committee members said they had serious concerns and questions about the lab's procedures.

"Of additional concern is the fact that the HELP committee, which has jurisdiction over the CDC, the select agent program, and biomedical research generally, did not learn of this incident until nearly after a week after it was detected," the group wrote. They requested a briefing and written explanation from Frieden.

<http://www.cidrap.umn.edu/news-perspective/2014/06/initial-tests-show-no-anthrax-contamination-cdc-labs>

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The Japan Times – Tokyo, Japan

## **Defense Ministry to Study New Missile Defense Systems**

JJI

June 21, 2014

The Defense Ministry will conduct full-fledged studies on new missile defense systems that would better equip Japan to intercept North Korean ballistic missiles, officials said.

The ministry has started consultations with the United States on introducing the Terminal High Altitude Area Defense (THAAD) system and a ground-based version of the Standard Missile-3 interceptors mounted on Aegis destroyers, according to the officials.

Currently, the Self-Defense Forces employs a two-stage system to intercept ballistic missiles. In the first phase, Aegis ships launch SM-3 missiles to destroy in outer space a missile or its debris believed to be targeted at Japan. If that fails, the ground-based Patriot Advance Capability-3 surface-to-air missile system is used for interception.

The studies by the ministry will focus on missile interception between the two current stages.

THAAD, a new system that the United States is putting in place, is capable of intercepting ballistic missiles re-entering the atmosphere from outer space. In tests conducted 11 times between 2006 and 2013, all THAAD interceptors took out mock missiles. The U.S. forces are considering THAAD deployment to South Korea.

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As for a ground-based SM-3 system, the U.S. military has been conducting tests as part of a missile defense shield in Europe. After a successful launch test in May, the United States plans to deploy the system to Romania in 2015.

That system has a high rapid response ability and is superior in maneuvering capability to the sea-based SM-3 because there is no need to deploy Aegis ships.

The ministry hopes to establish a four-stage anti-missile shield by incorporating the THAAD and ground-based SM-3 systems in the future.

In preparation for a full-scale introduction, the ministry will collect information from the United States on the expense, training of personnel and operational challenges that need to be addressed, the officials said. The ministry will include some of the related spending in its budget request for fiscal 2015.

<http://www.japantimes.co.jp/news/2014/06/21/national/defense-ministry-to-study-new-missile-defense-systems/#.U6rHDCzjhDw>

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Yonhap News Agency – Seoul, South Korea

## **China's Top Diplomat Urges 'Larger Picture' to Resume N. Korea Nuke Talks**

June 21, 2014

BEIJING, June 21 (Yonhap) -- Nations involved in the long-stalled multilateral talks aimed at ending North Korea's nuclear weapons program must bear in mind a "larger picture" for its resumption, China's top diplomat said Saturday, as diplomatic efforts to bring new life into the talks have made little headway.

Chinese State Councilor Yang Jiechi, whose rank is higher than the country's foreign minister, also vowed to spare no efforts to resume the six-party talks ahead of an upcoming state visit by Chinese President Xi Jinping to South Korea, a trip widely expected to take place in the first week of July.

"China calls on all parties to proceed with a larger picture to work together to create conditions for the resumption of the six-party talks," Yang told the third World Peace Forum, hosted by Tsinghua University in Beijing.

China will "make unremitting efforts to achieve durable peace and security on the Korean Peninsula and in the Northeast Asian region," he stressed.

"China is committed to achieving the denuclearization on the Korean Peninsula, to keeping the peninsula peaceful and stable, and to solving relevant issues through dialogue and consultation," Yang said.

Time and patience were running short for diplomacy to resume the six-party forum. Pyongyang's unpredictable regime, which has threatened to conduct its fourth nuclear test, has shown no signs of abandoning its nuclear ambitions.

Although South Korea and the United States have called on China to play a greater role in leading North Korea to demonstrate with action its commitment to denuclearize before any resumption of nuclear talks with the North can take place, Beijing's efforts have still been more accommodating toward North Korea, South Korean diplomats said. China has been focused on reopening the talks first, while urging Seoul and Washington to lower their bar for talks.

North Korea conducted its third nuclear test early last year. Since then, Pyongyang has repeatedly expressed its willingness to reopen the six-party talks "without preconditions."

The six-party forum, which includes the two Koreas, the U.S., China, Russia and Japan, has been dormant since late 2008.

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Sino-Japanese relations had never been good because of their shared history, but they have deteriorated further because of a simmering territorial dispute involving a group of uninhabited islands in the East China Sea.

Yang called for Japan to develop "sound and steady relations in the spirit of taking history as a mirror."

An increasingly assertive China has also been locked in bitter disputes with the Philippines, Vietnam and other Asian neighbors over the South China Sea.

Commenting on the country's disputes in the South China Sea, Yang said China will firmly maintain its territorial sovereignty but that he expects the disputes to be settled through dialogue.

"We will never trade our core interests or swallow the bitter fruits that undermine our sovereignty, security and development interests," Yang said.

<http://english.yonhapnews.co.kr/northkorea/2014/06/21/69/0401000000AEN20140621001300315F.html>

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Want China Times – Taipei, Taiwan

## **US Missile Defense System in Asia Opposed by PLA Thinktank**

By Staff Reporter

June 21, 2014

United States is currently promoting the idea of a Theater Missile Defense system consisting of PAC-3 surface-to-air-missiles, Aegis Combat System and PAVE Phased Array Warning System to prevent a forced unification of Taiwan with mainland China, according to a report entitled 2013 Strategic Assessment published by the Academy of Military Sciences of China's People's Liberation Army.

The report said the missile interceptors the United States has deployed to the Far East are major obstacles to China successfully carrying out a war of unification against Taiwan as they have the capability to neutralize the limited nuclear capability the PLA's Second Artillery Corps has to complete its mission of unification. The PAVE PAWS long-range radar system allows the United States and its regional allies to detect incoming Chinese medium-range and long-range missiles right after their launch.

With a range of 5,550 kilometers, the PAVE PAWS radar system sold to Taiwan allows the Republic of China armed forces to detect Chinese missile activity. In addition, the United States is planning to sell PAC-3 missiles to Taiwan for US\$1.1 billion. From the perspective of the report, this represents an encouragement to supporters of Taiwan independence and increases the pressure on China to prevent Taiwan from declaring formal independence by any means at its disposal.

In addition, the Aegis Combat System used by US, Japanese and South Korean surface combat vessels can also intercept Chinese missiles from the sea. The report gave the view that the sale and deployment of the Theater Missile Defense in East Asia will ultimately bring instability to the region as CHina will be more likely to achieve its goal of unification by non-peaceful means.

<http://www.wantchinatimes.com/news-subclass-cnt.aspx?cid=1101&MainCatID=11&id=20140621000097>

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Yonhap News Agency – Seoul, South Korea

## **Former U.S. Official Expects 4th Nuclear Test by North Korea**

June 22, 2014

BEIJING, June 22 (Yonhap) -- Former U.S. deputy secretary of state Richard Armitage predicted Sunday that North Korea would proceed with its fourth nuclear test in what would be a "key moment" in its efforts to arm a ballistic missile with a nuclear warhead.

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North Korea, which has threatened to carry out a "new form of nuclear test" since early this year, has conducted three nuclear tests since 2006, but outside experts doubt Pyongyang has mastered the miniaturization technology needed to mount a nuclear warhead on a missile.

However, a leaked Pentagon report stated last year that there is "moderate confidence" that North Korea has succeeded in miniaturizing a nuclear warhead for a missile. South Korea's defense ministry cast doubts over the U.S. assessment.

"I do believe that there will be a fourth nuclear test," Armitage told a session of the 3rd World Peace Forum hosted by Tsinghua University in Beijing. "I can't tell you when, but this will be a key moment in North Korea's nuclear weapons program."

Citing assessments from nuclear experts in the United States, South Korea and Japan, Armitage said, "Four tests would probably give enough information to North Korea so they can well develop the way of miniaturization."

"And if they can miniaturize nuclear weapons, that means that they will put it on a warhead," he said. "This means, frankly all of us, something to fear."

If North Korea puts a nuclear-armed missile in launch position, Armitage said top leaders of South Korea and the U.S. would have no choice but to "take actions."

Time and patience are running short to resume the long-stalled six-party talks aimed at ending North Korea's nuclear weapons program before another test. The six-party forum, which includes the two Koreas, the U.S., China, Russia and Japan, has been dormant since late 2008.

Although South Korea and the United States have called on China to play a greater role in leading North Korea to demonstrate its commitment to denuclearize before any resumption of talks, Beijing's efforts have been more accommodating toward North Korea, South Korean diplomats said.

Armitage said North Korea won't give up its nuclear weapons programs.

"I think denuclearization is the last thing, if ever, North Korea will give," he said. "There is a very little chance of the DPRK (North Korea) really and voluntarily giving up their nuclear weapons."

There have been general views that China could exert its influence on North Korea, but Armitage said Pyongyang won't listen to Beijing.

"They don't like China any much more than they don't like the United States. It's a fact," he said.

During the session, Miyamoto Yuji, who served as Japan's ambassador to China between 2006 and 2010, expressed his frustration in dealing with North Korea.

"We, the international community, did every possible efforts to persuade North Korea to abandon nuclear weapons," Yuji said. "But we failed to get results."

"Nuclear weapons even become a symbol of legitimacy to govern in North Korea," Yuji said. "My diplomatic knowledge is exhausted and I can't find a new way."

Yuji said a new sense of urgency is needed for North Korea to give up its nuclear weapons.

If North Korea "comes out with a missile with a nuclear warhead, we have to take countermeasures," Yuji said. "And the war would start. It is a very, very serious matter in this part of the world. Therefore, I really hope that denuclearization should be a priority."

<http://english.yonhapnews.co.kr/national/2014/06/22/77/0301000000AEN20140622002900315F.html>

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Want China Times – Taipei, Taiwan

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## DF-41 Missile Can Wipe Out 3 US Cities in One Attack: Report

By Staff Reporter  
June 26, 2014

China's DF-41 solid-fueled road-mobile intercontinental ballistic missile is capable of wiping out three American cities in just one attack, according to the Kanwa Defense Review, operated by Canadian military analyst Andrei Chang, also known as Pinkov.

With an attack range of between 11,500-12,000 kilometers, the article said that the DF-41 missile is capable of reaching any target within the continental United States.

From the missile base in northwestern China's Gansu province, the distance to Washington is 11,856 km, to New York is 11,667 km and to Los Angeles is 11,127 km. From Henan in central China, the distance a missile would travel to reach Washington would be 11,982 km, to New York would be 11,815 km and to Los Angeles would be 10,911 km.

From Qinghai in western China, the distance to Washington is 11,597 km, to New York it is 11,390 km and to Los Angeles it is 11,126 km. From Jilin in northeastern China, the distance to Florida is about 11,598 km.

This suggests that the DF-41 is capable of hitting every major city within the United States. Sooner or later, the article said, China will be able to develop its own multiple independently targetable re-entry vehicle.

Once China is capable of launching three warheads simultaneously, the magazine said that a single DF-41 missile would be capable of wiping out three American cities in one go. With other strategic offensive weapons such as the JL-2 submarine-launched ballistic missile and the DF-31A intercontinental ballistic missile, China will be able to gain more of an advantage in arms limitation talks with the United States.

<http://www.wantchinatimes.com/news-subclass-cnt.aspx?cid=1101&MainCatID=11&id=20140626000172>

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The Japan Times – Tokyo, Japan

## North Korea Claims 'Breakthrough' Guided Missile Tested Successfully

AFP-JJJI, Kyodo  
June 27, 2014

SEOUL – North Korea announced Friday the successful test of a high-precision, tactical guided missile, and its army threatened a “devastating” retaliation against South Korea for carrying out live fire drills near their maritime border.

The launch of the “cutting-edge” missile was watched by North Korean leader Kim Jong Un, according to the official Korean Central News Agency, which hailed the test as a “breakthrough” in national defense capability.

North Korea is not known to have a tactical guided missile, but analysis of a recent propaganda film suggested it may have acquired a variant of a Russian cruise missile, the KH-35.

KCNA did not specify the timing of the test, but it appeared to coincide with the firing Thursday of what South Korea described as three short-range projectiles into the Sea of Japan. South Korean defense officials said the projectiles flew about 190 km (120 miles).

The Rodong Sinmun, the official newspaper of the North's ruling party, on Friday published pictures Kim attending the test of the new missile.

Kim reportedly stressed the weapon's importance in providing a credible “pre-emptive” strike capability.



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In Tokyo, Defense Minister Itsunori Onodera said Friday that North Korea's latest launch of projectiles will not prevent the two countries from holding talks next week on the issue of North Korea's past abductions of Japanese nationals, saying, the projectiles "have not affected the security of Japan."

In Tuesday's meeting, North Korea is expected to inform Japan of the leader and members of its special unit to investigate Japanese abducted by North Korean agents.

Some analysts have suggested that North Korea might seek to raise tensions ahead of an expected visit to South Korea next week by Chinese President Xi Jinping.

But others said Friday's announcement was simply aimed at talking up the North's military capabilities as the international community seeks ways to curb Pyongyang's nuclear weapons program.

<http://www.japantimes.co.jp/news/2014/06/27/asia-pacific/north-korea-claims-breakthrough-guided-missile/>

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ITAR-TASS News Agency – Moscow, Russia

## **Russia's Newest Nuclear Submarine to Join Navy before Yearend**

*On June 11, the Vladimir Monomakh began sea trials in the White Sea*  
June 23, 2014

ARKHANGELSK, June 23, 21:00 /ITAR-TASS/. Russia's second serial Borei-class strategic submarine Vladimir Monomakh (Project 955), built by the Sevmash shipyard, will join the Navy before the end of the year, the company's press service said on Monday, June 23, quoting its Director-General Mikhail Budnichenko as saying.

He said the submarine would be handed over to the Navy after the end of the current sea trials. "In strict compliance with the schedule we are building two new craft for the Navy and upgrading the heavy cruiser Admiral Nakhimov," Budnichenko said.

On June 11, the Vladimir Monomakh began sea trials in the White Sea. The submarine will make one more voyage in July to test all systems before it goes into service later in the year.

The Vladimir Monomakh is the third Project 955 craft built by the Sevmash shipyard. The fourth one, Knyaz Vladimir, is now under construction. The fifth one, Knyaz Oleg, will be laid down on July 19.

The Knyaz Oleg will become the first serial upgraded version of Project 955A submarines. They will have smaller hulls and cons, better acoustic characteristics and lower noisiness.

The first two Borei-class submarines joined the Navy late last year. The Alexander Nevsky was the first serial Project 955 ship of the Borei Class. It was laid down on March 19, 2004. The leading submarine of the series, Yuri Dolgoruky, went into service in January 2013.

The Defense Ministry plans to build at least eight new Borei-class submarines that should become the main naval component of Russia's strategic nuclear forces.

Borei-class submarines are designed by the St. Petersburg-based Naval Design Bureau Rubin. Each submarine can be armed with 12 ICBMs with MIRVs. They will also have an escape capsule for all crewmembers. A Borei-class submarine is 170 meters long and 13.5 meters wide, it can sink to a depth of 450 meters and has a crew of 17 sailors.

The Borei claims to be a state-of-the-art submarine, featuring characteristics superior to any submarine currently in service, such as the ability to cruise silently and be less detectable to sonar. Advances include a compact and integrated hydrodynamically efficient hull for reduced broadband noise and the first ever use of pump-jet propulsion on a Russian nuclear submarine.

The submarine will be armed with Bulava missiles. The Bulava carries the NATO reporting name SS-NX-30 and has been assigned the GRAU index 3M30. In international treaties, the common designation RSM-56 is used.

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The Yuri Dolgoruky was the 129th nuclear-powered submarine built by Sevmash and the first one in the past 12 years. Prior to that, in December 2001, the shipyard handed over the multirole submarine Gepard (carrying no ballistic missiles) to the Navy.

The Alexander Nevsky is the second Borei-class submarine. Its construction at the Sevmash shipyard began in 2004 and the submarine is a fourth generation strategic underwater missile cruiser.

The Project 955 submarine is the first serial strategic rocket carrier of the Borei class. It is 170 meters long, 13.5 meters wide, maximum operating depth is 450 meters, and underwater speed is 29 knots.

Borei class submarines are designed to serve as the basis of Russia's strategic nuclear capabilities for the decades to come.

Sevmash, Russia's largest shipyard, is now building two sets of new-generation nuclear submarines - attack craft (Yasen class, Project 855) and strategic craft (Borei class, Project 955) - for the Russian Navy.

<http://en.itar-tass.com/russia/737445>

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The Moscow Times – Moscow, Russia

## **Russia Blinded By Loss of Missile Detection Satellite**

*The Moscow Times*

June 25, 2014

Russia has lost contact with one of three military satellites responsible for detecting intercontinental ballistic missile launches, leaving Moscow blind to possible nuclear attacks, Kommersant reported Wednesday, citing a source in the Defense Ministry.

The Oko-1 satellite, otherwise catalogued as Kosmos-2479 — a euphemistic designation often given to Soviet and Russian military space hardware or spacecraft that fails after reaching orbit — was intended to act as the Defense Ministry's eye in the sky for a period of five to seven years after its launch in March 2012.

The satellite began malfunctioning soon after coming online but maintained some level of functionality until April, the source told Kommersant.

In order to provide global coverage with the Oko system, Moscow needs to have two functioning satellites of this type in orbit, and now there are none.

Only two of the eight 1.5 million ruble (\$45 million) Oko-1 satellites deployed since 1991 have functioned for more than five years.

The Oko-1 satellite was located in geostationary orbit, meaning that it circles the globe in such a way as to constantly hover above a fixed point on the Earth's surface, in this case the U.S. The Defense Ministry in 2005 said publicly that these types of satellites were "hopelessly outdated."

Russia does have two older types of missile detection satellites in highly elliptical orbits, meaning that location relative to the Earth often changes. In order to provide constant coverage with these types of satellites, Russia would need to maintain six of them in space at any given moment. As a result, Moscow can now only monitor U.S. missile launches for three hours a day.

In 2011, then-commander of the Russian Space Forces, Oleg Ostapenko — now head of the Federal Space Agency — said that Russia would no longer replace failing satellites, but instead focus its efforts on creating an entirely new early warning system. Information on the program is scarce.

<http://www.themoscowtimes.com/business/article/russia-blinded-by-loss-of-missile-detection-satellite/502518.html>

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Want China Times – Taipei, China

## Russia, China to Combine Efforts in Satellite Battle with US

By Staff Reporter

June 26, 2014

Russia and China are likely to sign a cooperation pact regarding ground operation stations for Russia's GLONASS satellite and China's Beidou satellite, reports Huanqiu, the website of China's nationalistic tabloid Global Times, citing Sergei Savelyev, deputy head of the Russian space agency Roscosmos.

Savelyev said that Russia expects an agreement with China, which will allow the countries to build three ground operational stations in each other's territory, with the number potentially increasing in the future.

At the St Petersburg International Economic Forum 2014 held in late May, Savelyev also said that Russia is preparing to discuss construction of GLONASS ground operation stations with both China and India and expects to reach an agreement of equal number construction by the end of the year.

The Moscow-based Voice of Russia reported that the number may be more than three, as China initially proposed setting up about a dozen Beidou stations in Russia from the Urals to the Far East, and to host a similar number of GLONASS stations.

A Russian researcher told Huanqiu that China and Russia are highly likely to cooperate in a joint satellite navigation system, given that they share a common competitor — the US Global Positioning System (GPS). The wise choice would be for Beijing and Moscow to install each other's devices on the counterparts satellites, the researcher said.

During the 2nd Technoprom International Forum held in Novosibirsk in Russia on June 5-6, Russian deputy prime minister Dmitry Rogozin said that cooperation between Russia and China in the field will not be limited to ground operational stations, but will also include reception devices and related infrastructure. "Our system is more suitable for northern, polar latitudes. The Chinese system is more southern. Their complementary natures would result in a biggest and most powerful competitor to any navigation system," he said.

Meanwhile, Sergei Ivanov, chief of staff of the Presidential Administration of Russia, said that in addition to ground operational stations in China, Russia plans to construct 50 GLONASS ground operation stations with 36 countries. He said that negotiations with Nicaragua, Vietnam, Iran and Indonesia are underway, while agreements with Cuba and Spain have already been reached.

Roscosmos also proposed to construct six ground operational stations in the US, but the plan was turned down due to national security concerns, while the US has already set up 11 GPS stations on Russian soil.

However, Russia announced in May that it would suspend the operation of all 11 GPS stations from June 1 due to poor progress in Russia-US talks over the construction of Russian ground stations in the US. The GPS ground operational stations will be permanently shut on September 1 if the two countries fail to reach a consensus by then, according to Huanqiu.

<http://www.wantchinatimes.com/news-subclass-cnt.aspx?id=20140626000125&cid=1101>

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RIA Novosti – Russian Information Agency

## Russia in Continued Military Overhaul – Putin

26 June 2014

MOSCOW, June 26 (RIA Novosti) – Russian President Vladimir Putin said Thursday it was his government's priority to defend the nation against potential military threats, with the help of improved armed forces.

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"We are bringing [the military] to a whole new level to keep it on par with the requirements of the 21st century," Putin said in a speech to military academy graduates in the Kremlin.

"It's evident that only a mobile, highly effective army and fleet are capable of solving the strategic task of securing Russia's safety, sovereignty and national interests. The main goal is to defend our citizens against potential military threats," Putin said.

The Russian president vowed to continue surprise checks in the military, saying no unit, including peacekeeping forces, would be exempt from unannounced inspections.

Putin pointed out a sharp increase in military spending, which has resulted in higher basic pay and better social protection for army personnel.

"Military personnel are being provided with housing. Starting this year, accommodation is being distributed according to a plan, we are arranging mortgage subsidies and perfecting the accumulative mortgage system," the president said.

On Monday, peacekeeping troops in central Russia were alerted to a spot check, which came as part of a comprehensive inspection of Central Military District forces ordered by President Putin.

The tests are to run from June 21 to June 28, with progress and completion reports provided daily. The combat readiness checks are to cover about 65,000 troops of all branches of the armed forces. The checks also involve over 180 aircraft, 60 helicopters and more than 5,500 units of weaponry and military equipment.

<http://en.ria.ru/russia/20140626/190720536/Russia-in-Continued-Military-Overhaul--Putin.html>

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FARS News Agency – Tehran, Iran

Saturday, June 21, 2014

## **Official: Iran-G5+1 Talks Focusing Merely on Technical Issues**

TEHRAN (FNA) - Iranian President's Chief of Staff Mohammad Nahavandian underlined that the ongoing talks between Iran and the Group 5+1 (the five permanent UN Security Council members plus Germany) will not deal with anything outside the nuclear framework.

"The talks on nuclear issue are currently within the framework of technical issues," Nahavandian said addressing a joint press conference with the Norwegian foreign minister Borge Brende in Oslo on Friday.

He noted that the current talks can serve as a trust building test though and if the nuclear negotiations would lead to a final comprehensive agreement.

Representatives of Iran and the G5+1 continued talks on Thursday and Friday over a final agreement on Tehran's nuclear program.

Iranian Foreign Minister Mohammad Javad Zarif and his accompanying team of negotiators arrived in Vienna Monday morning to participate in the fifth round of talks between Tehran and the six major world powers in the Austrian capital from June 16-20.

Iran and the world powers have said that they are resolved to start drafting a long-awaited final deal in this round of talks.

Iranian Deputy Foreign Minister Seyed Abbas Araqchi accompanied by Iranian Deputy Foreign Minister for European and American affairs Majid Takht Ravanchi and EU foreign policy deputy chief Helga Schmidt had another round of talks in Vienna on Friday morning.

Iran and the G5+1 have started writing the text of final agreement, Zarif said on Wednesday night.

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Noting that the two sides had tough discussions over the past two days of talks in Vienna, he said, "Some stances of the other side are completely unacceptable."

<http://english.farsnews.com/newstext.aspx?nn=13930331000378>

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Xinhua News – Beijing, China

## Iran May Return to Former Nuclear Policies if Talks Fail: FM

June 22, 2014

TEHRAN, June 22 (Xinhua) -- Iran may return to its nuclear policies before the interim deal last November if nuclear talks between Iran and the world powers fail to end in "proper results," Iranian Foreign Minister Mohammad-Javad Zarif said here on Sunday.

"It is very likely that the talks will bear results, if the other party comes to the negotiations with serious will," Zarif said at a press conference.

However, if the sides cannot reach an agreement, Iran could return to its former nuclear policies, the minister added.

It is too early to say whether the nuclear talks have been successful or failed, he said, adding that there are still steps to be taken before July 20.

"Our words have been logical from the beginning and we do not demand beyond our legal (nuclear) rights. To this end, we are ready to remove legitimate concerns (of the world)," he said.

The fifth round of Iranian nuclear talks concluded on Friday in Vienna with some progress on drafting the framework of a final deal, while gaps over some topics remained.

In the latest talks, Iran was asked to decrease the number of centrifuges to ensure that it cannot quickly produce enough material for a nuclear bomb. But Iran said it needs more centrifuges to produce uranium to fuel more nuclear plants for electricity. Iran also demanded total removal of international sanctions, including the oil embargo, which is biting its economic lifeline.

Under the interim Geneva deal last November, Iran undertook to freeze some controversial nuclear activities in six months in exchange for a limited easing of western sanctions.

The world powers and Iran will meet again on July 2 in Vienna for the next round of talks.

[http://news.xinhuanet.com/english/world/2014-06/22/c\\_133427973.htm](http://news.xinhuanet.com/english/world/2014-06/22/c_133427973.htm)

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Deccan Chronicle – Secunderabad, India

## Iran Signals may Accept Snap Nuclear Inspections

Associated Press (AP)

June 23, 2014

Tehran: An Iranian nuclear official says the country may accept snap inspections of its atomic facilities should Iran and world powers reach a final agreement over Tehran's contentious nuclear programme.

In 2003, Iran accepted the so-called "additional protocol" of snap inspections for two years, but parliament never ratified it.

Quoted by official IRNA news agency, atomic energy organization spokesman Behrouz Kamalvandi said: "The government may accept the additional protocol based on its expediency and progress in the nuclear talks, but Iranian parliament makes the final decision."

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Iran and world powers - the five permanent members of the UN security council plus Germany - are negotiating to reach a final deal, with the next round convening July 2.

The West suspects Iran's nuclear programme has a military dimension, a charge Iran denies.

<http://www.deccanchronicle.com/140623/world-middle-east/article/iran-signals-may-accept-snap-nuclear-inspections>

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The London Guardian – London, U.K.

## Syria Hands over Final Chemical Weapons for Destruction

*Remaining 8% of Assad's acknowledged chemical weapons and precursors arsenal sent to Italy as UN deadline draws near*

By Julian Borger, diplomatic editor

Monday, 23 June 2014

Syria has handed over the last of its declared stockpile of chemical weapons, which will be destroyed at sea over the next two months, the UN's chemical weapons watchdog has said.

The Organisation for the Prohibition of Chemical weapons (OPCW) announced that the final 8% of Syria's acknowledged arsenal of chemical weapons and precursors had been loaded on to a Danish freighter.

The ship, the Ark Futura, is now sailing to the Italian port of Gioia Tauro for a rendezvous with an American vessel, the MV Cape Ray, which is specially equipped to neutralise the most dangerous of the chemical agents at sea.

"The mission to eliminate Syria's chemical weapons programme has been a major undertaking marked by an extraordinary international cooperation," said Ahmet Uzumcu, the OPCW's director-general. "Never before has an entire arsenal of a category of weapons of mass destruction been removed from a country experiencing a state of internal armed conflict. And this has been accomplished within very demanding and tight timeframes."

However, Uzumcu added that the OPCW was not in a position to certify that Syria no longer had any chemical weapons. The materials removed were those that the regime had declared.

Western governments claim to have intelligence suggesting that Damascus has not admitted to all its chemical arms. An OPCW investigation team has found evidence that chlorine gas was used against civilians in recent months "in a systematic manner", but the team has been unable to reach the site for further investigation because it came under attack.

Possession of chlorine is not a violation of the chemical weapons treaty, as it is a commonly used chemical, so Syria was not required to list chlorine on its declared inventory. But its use as a weapon is a violation of international law.

"While a major chapter in our endeavours closes today, OPCW's work in Syria will continue," Uzumcu said. "We hope to conclude soon the clarification of certain aspects of the Syrian declaration and commence the destruction of certain structures that were used as chemical weapons production facilities."

The delicate operation to remove Bashar al-Assad's declared chemical stockpile overran significantly. The deadline laid down by the UN security council for the complete destruction of all Syria's chemical agents was 30 June, but that will be missed by about two months.

The Cape Ray, a 648ft converted car ferry, has been waiting at the Spanish port of Rota for four months for the extraction of chemical weapons from Syria to be completed. After taking custody of the cargo in Italy, it will take the US chemical weapons specialists on board about 60 days, depending on sea conditions, to complete the neutralisation of sulphur mustard blistering agent and DF, a dangerous precursor to sarin nerve gas, using two hydrolysis units bolted to the Cape Ray's vast cargo deck. The Syrian government told the OPCW that the last batch of chemicals had been in a military base in territory being fought over in the country's civil war, and that it

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therefore took more time than expected to transport it to a staging area east of Damascus where it was sealed, verified and repackaged under OPCW oversight before being driven to the Syrian port of Latakia for loading on the Ark Futura.

After hydrolysis is completed, the Cape Ray is due to sail to Ellesmere Port, in Cheshire, where about 150 tonnes of effluent from the DF precursor will be unloaded for incineration by the French-based environmental services corporation Veolia.

A second freighter, the Norwegian ship Taiko, is taking 500 tonnes of less dangerous, priority two chemicals from Latakia straight to Finland and then to Port Arthur in Texas, for destruction in commercial facilities.

<http://www.theguardian.com/world/2014/jun/23/syria-chemical-weapons-final-destruction-un-deadline>

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The Daily Star – Beirut, Lebanon

## **Iran: Deal Soon on Russian New Nuclear Reactors**

Reuters

June 24, 2014

DUBAI: Iran said Tuesday that it expected to sign a deal with Russia in late August on the building of two new 1,000-megawatt nuclear reactors in the Islamic Republic, potentially boosting its case that it is refining uranium for civilian energy, not atom bombs.

Russia is one of six world powers negotiating with Iran on a long-term agreement to end a decade-old dispute over Tehran's nuclear program, which the country says is peaceful but the West fears may be aimed at developing a nuclear arms capability.

Ali Akbar Salehi, the head of Iran's atomic energy organization, will go to Moscow to finalize the reactor contract and construction may start early next year, according to the official news agency IRNA.

There was no immediate comment from Russia.

Iran has long argued that it needs to enrich uranium - which can have both civilian and military uses - to fuel a planned network of atomic power stations and that any contract on new reactors with Russia may help it back up its case.

But Russia - which built Iran's so far only nuclear reactor, at Bushehr on the country's Gulf coast - is providing the enriched fuel for that plant and may want to do that also for any future facilities it will build in Iran.

The world powers - also including the United States, France, Germany, Britain and China - want Iran to significantly scale back its enrichment of uranium to deny it any capability to quickly make bomb-grade fuels. Iran denies any such aims.

IRNA said that senior Iranian and Russian nuclear energy officials - including the deputy chief executive of state-owned Rosatom, Nikolai Spassky - met in Tehran this week to discuss commercial and technical details of the planned reactors.

Behrouz Kamalvandi, a spokesman for Iran's atomic energy organization, said that the reactors would be built next to the first unit of the Bushehr nuclear power plant.

"It is very likely the trip (Salehi's to Moscow) will take place at the end of August," he said, adding that construction of the reactors could start by the end of the Iranian year which runs until March 2015.

Longstanding Western fears that the Bushehr project could yield spent fuel of use in nuclear weapons - something it denies it is seeking to do - receded after Iran promised to send the material back to Russia.

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Talks between Iran and the world powers will resume on July 2 in Vienna, with the sides aiming to clinch a deal ending the nuclear stand-off by a self-imposed July 20 deadline.

<http://www.dailystar.com.lb/News/Middle-East/2014/Jun-24/261398-iran-deal-soon-on-russian-new-nuclear-reactors.ashx#axzz35bz8FiTN>

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The Washington Free Beacon – Washington, D.C.

## Iran Nuke Reactor Hits Capacity

By Washington Free Beacon Staff

June 24, 2014

Iran's Russian-built nuclear power plant in Bushehr hit capacity on Tuesday and was hooked into the country's national power grid, according to Iranian officials.

The contested power plant, which the West suspects could be used to fuel a nuclear weapons program, hit its top capacity and is now generating electrical power across Iran, according to these officials, who said that the construction of more nuclear plants has been approved.

"Two days ago, the necessary measures were taken and today the electricity generated by the nuclear power plant was transmitted into the circuit and 1,000MW of the electricity would enter the national grid tomorrow (Tuesday)," Behrouz Kamalvandi, the spokesman for Iran's Atomic Energy Organization (AEOI), announced Tuesday, according to reports in Iran's state run press.

The Bushehr plant is running at full steam, producing 1,000 mega-watts of electricity following a successful refueling, according to Iran.

"The process of reloading fuel into the Bushehr nuclear power plant ended successfully and the facility joined the national grid at 5:30 Tuesday morning with 50 percent of its nominal power after accomplishment of relevant technical tests," AEOI head Ali Akbar Salehi was reported as saying on Tuesday.

<http://freebeacon.com/national-security/iran-nuke-reactor-hits-capacity/>

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Press TV – Tehran, Iran

## Excessive Demands Would Block Iran Nuclear Deal: Zarif

Thursday, June 26, 2014

Iran's foreign minister says excessive demands from six world powers would prevent a final accord on the Islamic Republic's nuclear energy program.

"Iran is ready to reach solution and it has presented reasonable proposals, but the opposite party may block an accord by maximalist demands," Mohammad Javad Zarif said in a meeting with First Deputy Minister of Foreign Affairs of Cuba Marcelino Medina Gonzalez in the Iranian capital, Tehran, on Wednesday.

Iran's Deputy Foreign Minister for European and American Affairs Majid Takht-e-Ravanchi said on Thursday that Iran and the P5+1 group can reach a final nuclear deal if the latter respects Tehran's nuclear rights and refrains from making excessive demands.

Iran is in talks with the five permanent members of the UN Security Council - the United States, France, Britain, Russia, and China - plus Germany over Tehran's nuclear energy program.

Iran and the six powers have been discussing ways to iron out differences to achieve a final deal that would end the decade-old dispute over Tehran's nuclear energy program.

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The two sides inked an interim accord in Geneva, Switzerland, on November 23, 2013. Under the deal, the six countries agreed to provide Iran with some sanctions relief in exchange for Iran agreeing to limit certain aspects of its nuclear activities during a six-month period. The six-month deal expires on July 20.

<http://www.presstv.ir/detail/2014/06/26/368729/excessive-demands-would-block-iran-ndea/>

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Oregon Herald.com – Salem, OR

## **World Powers Plan Strategy to Rescue Iran Nuclear Deal**

Reuters

Thursday, June 26, 2014

BRUSSELS - Senior diplomats from six world powers met in Brussels on Thursday to search for ways to resuscitate negotiations with Iran over its contested nuclear program, with less than four weeks left until a late-July deadline to strike an accord.

Western officials have said very little progress has been made after five rounds of talks since February towards striking a deal that could end years of hostility, and defuse the risk of a new war and a nuclear arms race in the Middle East.

Iran, for its part, accused the powers - the United States, Russia, China, France, Britain and Germany - after the latest round of talks ended on June 20 of making "excessive demands" and torpedoing chances of a historic deal.

In the coming weeks, the sides will have to decide how far they are willing to go, if at all, to compromise on major sticking points such as the extent of uranium enrichment capacity Iran would be allowed to keep under any deal and the future of its atomic sites.

For the six powers, the overarching goal is to extend the time Iran would need to assemble an atom bomb, if it chose to do so, and to achieve this, they want it to cut down the number of uranium centrifuges in operation.

Iran denies seeking nuclear weapons and wants to construct more of the machines, which spin at supersonic speed to increase the ratio of the fissile isotope in uranium, to meet its stated goal of energy production.

Both sides have said publicly their goal is to have a deal by July 20 and avoid a difficult extension of an interim accord which expires then and grants Iran modest relief from crippling economic sanctions in return for some curbs on its atomic work.

"The meeting affirmed the determination of the (six nations) to reach a comprehensive agreement by July 20," EU foreign policy chief Catherine Ashton's spokesman, Michael Mann, said in a statement.

Privately, Western diplomats say they would be willing to consider extending the interim deal and continuing talks beyond July 20 only if an agreement was clearly in sight.

Some say talks may be extended by a few days or weeks, but only if the sides need more time to iron out technical details of an otherwise clear deal. Even a full, six-month extension envisaged as a possibility under the interim agreement may be acceptable only if a deal is in sight, according to others.

A new round of talks starts on July 2 and will continue until at least July 15.

Other than Iran's enrichment capacity, other issues that will need to be part of the final deal are the schedule of sanctions relief, the timeframe of the deal and the extent of monitoring in Iran by the United Nations' nuclear watchdog.

Diplomats have said there is little clear agreement on any of the main issues but some have cited the length of a future deal - which can run for years - as one of those easier to solve.

<http://www.oregonherald.com/news/show-story.cfm?id=429563>

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FARS News Agency – Tehran, Iran  
Friday, June 27, 2014

## Zarif: No Talks on Additional Protocol Yet

TEHRAN (FNA) - Iranian Foreign Minister Mohammad Javad Zarif underlined that Iran and the Group 5+1 (the US, Russia, China, France and Britain plus Germany) have not yet discussed the issue of Iran's acceptance of the Additional Protocol to the Non-Proliferation Treaty (NPT).

"One of the issues in the comprehensive nuclear accord with the G5+1 is sign up Additional Protocol, but we have not reached that stage in negotiations yet," Zarif said on Friday.

Earlier this week, Spokesman of the Atomic Energy Agency of Iran (AEOI) Behrouz Kamalvandi stressed that any decision about endorsement or rejection of the Additional Protocol to the NPT only falls under the authority of the Iranian parliament.

"If the sanctions are removed, animosities will end and all issues pertaining to (Iran's) nuclear dossier are resolved....we will be ready to sign the Additional Protocol; however, the parliament will be the final decision-maker in this regard," Kamalvandi said.

Yet, Kamalvandi said that under the Geneva interim deal, the signing of the Additional Protocol is "part of and one of the key elements of a comprehensive nuclear energy program" of Iran.

Tehran voluntarily signed the Additional Protocol in December 2003 and remained committed to it for over two years, but suspended its implementation after the UN Security Council imposed sanctions on the Islamic Republic.

Iran and the Group 5+1 (the five permanent UN Security Council members plus Germany) sealed an interim deal in the Swiss city of Geneva on November 24, 2013 to pave the way for the full resolution of the decade-old dispute with Iran over the country's nuclear standoff with the West. The deal came into force on January 20.

Under the Geneva deal, dubbed the Joint Plan of Action, the six countries undertook to provide Iran with some sanctions relief in exchange for Tehran agreeing to limit certain aspects of its nuclear activities during a six-month period.

The sixth round of talks between Iran and the G5+1 over a comprehensive final deal is slated for early July, diplomatic sources said.

"Iran and G5+1 will start their next round of talks in Vienna on July 2," an Iranian diplomat told FNA in Vienna.

<http://english.farsnews.com/newstext.aspx?nn=13930406000619>

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The Times of India – Mumbai, India

## US Dismisses Report on India Covertly Increasing Nukes

Press Trust of India (PTI)  
June 21, 2014

WASHINGTON: The US on Friday dismissed a report suggesting that India is covertly enriching its nuclear weapons capabilities, describing it as "speculative".

"We're not in a position to speculate on its conclusions," state department spokesperson Jen Psaki told reporters at her daily news conference when asked about a report which alleged India is covertly enhancing its nuclear weapons capabilities.



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"We remain fully committed to the terms of the 123 agreement and to enhancing our strategic relationship. Nothing we provide to India under the civ-nuke agreement may be used to enhance India's military capability or add to its military stockpile, but we don't have enough information or confirmation of the report to speak to that," Psaki said.

Nothing provided to India can be used to enhance their military capability, she reiterated.

"I'm not certain and...that would be highly speculative about this, given there's only one external report that's not a reflection of a US government report," Psaki said.

In a report today the IHS Jane's defence and security intelligence experts claimed that they have identified a possible new uranium hexafluoride plant at the Indian Rare Metals Plant (IRMP) near Mysore.

The report alleged that this site in India will support new centrifuges that will substantially expand India's uranium enrichment capacity, most likely to facilitate the construction of an increased number of naval reactors to expand the country's nuclear submarine fleet, but also, to potentially support the development of thermonuclear weapons.

IHS Jane's experts assess that the new uranium enrichment facility could become operational by mid-to-late-2015.

"The expansion of India's uranium enrichment facilities allows the country to press ahead with the introduction of its ballistic missile nuclear submarine fleet, part of an effort to enhance its existing nuclear deterrent in the face of perceived threats from both China and Pakistan," said Matthew Clements, editor, IHS Jane's Intelligence Review.

Robert Kelley, consultant to IHS Jane's Intelligence Review, said the US continues to treat India as a bona fide nuclear weapons state despite India's failure to ratify the nuclear nonproliferation treaty (NPT).

"Mysore's original centrifuge plant was constructed in 1992, although in 2010 site clearance for a new, even larger, suspected centrifuge hall began. It is this new facility that could soon be operational.

"India is generally vocal in publicising its defence industry successes, but has revealed little about operations at Mysore, possibly to reduce attention to its nuclear trade agreements with the US," he said.

<http://timesofindia.indiatimes.com/India/US-dismisses-report-on-India-covertly-increasing-nukes/articleshow/36914478.cms>

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The Hindu – Chennai, India

## **IAEA Gets Greater Access to India's Nuclear Programme**

*Narendra Modi government signals continuity in implementing the India-U.S. nuclear deal*

Press Trust of India (PTI)

June 22, 2014

NEW DELHI -- Signalling the continuity of policy, the new government has ratified the Additional Protocol, a commitment given under India-U.S. nuclear deal by the previous dispensation to grant greater ease to International Atomic Energy Agency to monitor India's civilian atomic programme.

The Additional Protocol was ratified last week and this has been conveyed to the Vienna-based IAEA, the global watchdog of nuclear activities, sources told *PTI* in New Delhi.

The IAEA had in March 2009 approved an additional protocol to India's safeguards agreement consequent to a pact reached with the agency the previous year to place its civilian nuclear facilities under IAEA safeguards.

That agreement had paved the way for the 45-member Nuclear Suppliers Group to grant India-specific waiver for it to have commercial relations with other countries in the civilian atomic field.

The waiver was necessary as India, despite being a nuclear-armed state, is not a signatory to the NPT.

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The ratification is a signal by the Narendra Modi government to the world, particularly the U.S., that it is serious in continuing to implement the India-U.S. nuclear deal.

This assumes significance since Mr. Modi is scheduled to travel to Washington to meet President Barack Obama in September.

The sources pointed out that India wants to send a strong signal to the international community that it is a “serious and responsible” nuclear weapons state amid its keenness to become a member of the NSG.

President Pranab Mukherjee, in his address to Parliament earlier this month, had said, “The international civil nuclear agreements will be operationalised and nuclear power projects for civilian purposes will be developed.”

As External Affairs Minister in September 2008, Mr. Mukherjee had given a commitment to the NSG on behalf of the government on peaceful uses of nuclear energy that was significant in ensuring the waiver.

In its communication to the IAEA in July 2008, India had told the agency under the joint statement on “Implementation of the India-United States” in July 2005, it will file a declaration regarding its civilian facilities with the IAEA and also place its civilian facilities under IAEA safeguards.

“India will undertake signing and adhering to an Additional Protocol with respect to civilian nuclear facilities,” it had told the IAEA.

The Additional Protocol, signed between India and the IAEA on March 15, 2009, involves a high degree of scrutiny of nuclear facilities, including its reactors and fuel cycle sites by the inspectors of the atomic energy body. India has already listed 20 of its sites as agreed between the two.

These includes six facilities in the Nuclear Fuel Cycle in Hyderabad, unit 1 and 2 and two more facilities in Tarapur in Maharashtra, units 1-6 of the Rajasthan Atomic Power Station, units 1 and 2 of Kudankulam Nuclear Power Plant and the Kakrapar Atomic Power Station.

The move will help in facilitating multiple entries for the IAEA inspectors for conducting necessary inspections. Even the data transmitting that happens can be done with remote transmitting. Information about the nuclear exports would also be given to the IAEA so that cross verification could be done in an easier way.

<http://www.thehindu.com/news/national/iaea-given-greater-access-to-monitor-indias-nuclear-programme/article6138587.ece>

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Las Vegas Review-Journal – Las Vegas, NV

## **Ebola Virus Plagues West Africa**

By SARAH DiLORENZO, Associated Press (AP)

June 21, 2014

DAKAR, Senegal — The Ebola outbreak ravaging West Africa is “totally out of control,” according to a senior official for Doctors Without Borders, who says the medical group is stretched to the limit in responding.

The outbreak has caused more deaths than any other of the disease, another official with the medical charity said. Ebola has been linked to more than 330 deaths in Guinea, Sierra Leone and Liberia, according to the World Health Organization.

International organizations and the governments involved need to send in more health experts and increase public education messages about how to stop the spread of the disease, said Bart Janssens, director of operations for the medical group in Brussels.

“The reality is clear that the epidemic is now in a second wave,” Janssens said. “And, for me, it is totally out of control.”

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The Ebola virus, which causes internal bleeding and organ failure, spreads through direct contact with infected people. There is no cure or vaccine, so containing an outbreak focuses on supportive care for the ill and isolating them to limit the spread of the virus.

The current outbreak, which began in Guinea either late last year or early this year, had appeared to slow before picking up pace again in recent weeks, including spreading to the Liberian capital of Monrovia for the first time.

“This is the highest outbreak on record and has the highest number of deaths, so this is unprecedented so far,” said Armand Sprecher, a public health specialist with Doctors Without Borders.

According to WHO, the highest previous death toll was in the first recorded Ebola outbreak in Congo in 1976, when 280 deaths were reported. Because Ebola often touches remote areas and the first cases sometimes go unrecognized, it is likely that there are deaths that go uncounted during outbreaks.

The multiple locations of the current outbreak and its movement across borders make it one of the “most challenging Ebola outbreaks ever,” Fadela Chaib, a WHO spokeswoman, said.

But Janssens’ description of the Ebola outbreak was even more alarming, and he warned that the countries involved had not recognized the gravity of the situation.

“There needs to be a real political commitment that this is a very big emergency,” he said. “Otherwise, it will continue to spread, and for sure it will spread to more countries.”

But Tolbert Nyenswah, Liberia’s deputy minister of health, said the highest levels of government are working to contain the outbreak, adding Liberia had a long period with no new cases before this second wave.

Governments and international agencies are definitely struggling to keep up with the outbreak, said Unni Krishnan of Plan International, which is providing equipment to the three countries. But he said the disease is striking in one of the world’s poorest regions, where public health systems are already fragile.

With more than 40 international staff on the ground and four treatment centers, Doctors Without Borders has reached its limit to respond, Janssens said. It is unclear, for instance, if the group will be able to set up a treatment center in Liberia, like the ones it is running in Guinea and Sierra Leone, he said.

Janssens said the only way to stop the disease’s spread is to persuade people to come forward when symptoms occur and to avoid touching the sick and dead.

He said this outbreak is particularly challenging because it began in an area where people are very mobile and has spread to even more densely populated areas, like the capitals of Guinea and Liberia. The disease typically strikes sparsely populated areas in central or eastern Africa, where it spreads less easily, he said.

<http://www.reviewjournal.com/life/health/ebola-virus-plagues-west-africa>

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The Wall Street Journal – New York, NY

OPINION

## **Iran Could Outsource Its Nuclear-Weapons Program to North Korea**

*Pyongyang helped Syria build a secret reactor. What's to stop it from assisting Tehran?*

By Claudia Rosett

June 20, 2014

As the Iran nuclear talks grind toward a soft July 20 deadline in Vienna, U.S. negotiators and their partners seem oblivious to a loophole that could render any agreement meaningless. Tehran could outsource the completion of a bomb to its longtime ally, North Korea.

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As a venue for secretly completing and testing a nuclear bomb, North Korea would be ideal. North Korea is the only country known to have tested any nuclear bombs since India and Pakistan both performed underground tests in 1998. Despite wide condemnation, it has gotten away with three nuclear tests, in 2006, 2009 and 2013.

Pyongyang threatened to carry out a fourth test in March, which it said would take an unspecified "new form." North Korea's first test was plutonium-based. The composition of the next two remains unconfirmed, but in 2010 North Korea unveiled a uranium-enrichment plant at its Yongbyon nuclear complex. If North Korea's next test is uranium-based, that could be neatly compatible with Iran's refusal at the bargaining table to give up its thousands of centrifuges, which could be used to produce weapons-grade uranium.

Citing Pyongyang's proliferation in years past of nuclear materials to Libya and nuclear reactor technology to Syria, the Defense Department noted in a report this March to Congress that "One of our gravest concerns about North Korea's activities in the international arena is its demonstrated willingness to proliferate nuclear technology." The report did not say to whom North Korea might next proliferate.

After North Korea's Feb. 12, 2013, nuclear test, there were a number of media reports that Iranian officials had flown in for the detonation. At a State Department background press briefing following a round of the Iran nuclear talks in Vienna this February, I asked a senior U.S. administration official what is being done to address such issues. That official ducked the question, saying only that the U.S. "is always concerned about reports of shared technology and proliferation of technology and of nuclear weapons technology." Declining to talk about specifics, the official described North Korea as "an ongoing concern all on its own."

But the pieces have long been in place for nuclear collaboration between the two countries. North Korea and Iran are close allies, drawn together by decades of weapons deals and mutual hatred of America and its freedoms. Weapons-hungry Iran has oil; oil-hungry North Korea makes weapons. North Korea has been supplying increasingly sophisticated missiles and missile technology to Iran since the 1980s, when North Korea hosted visits by Hasan Rouhani (now Iran's president) and Ali Khamenei (Iran's supreme leader since the death of Ayatollah Khomeini in 1989).

North Korea and Iran were both part of Pakistan's A.Q. Khan nuclear proliferation network, which spread nuclear blueprints and material among its clients until it was exposed by the U.S. a decade ago. In July 2013, a Pentagon report on global missile threats warned that "North Korea has an ambitious ballistic missile development program and has exported missiles and missile technology to other countries, including Iran and Pakistan." On April 11, 2013, nuclear expert David Albright, president of the Institute for Science and International Security, testified to Congress that given the Iranian-North Korean cooperation on missile delivery systems, the lessons for Iran of North Korea's work to deploy nuclear warheads on its missiles are "apparent."

For both countries, versed in dodging sanctions, the illicit networks run through China, Pyongyang's patron and a hub of illicit procurement. In April the U.S. government offered a \$5 million reward for help in apprehending a Chinese national, Li Fangwei, accusing him of running a sanctions-violating international procurement network out of China that has sold Iran both missile and nuclear-related materials. The U.S. has asked China to shut down this network since at least 2006, to no avail.

In February of this year, when Iran's chief nuclear negotiator and foreign minister, Javad Zarif, returned to Tehran from the first round of Iran nuclear talks in Vienna, one of his first meetings was with a visiting North Korean deputy foreign minister. Iran's Fars News Agency reported that the meeting was devoted to "bolstering and reinvigorating the two countries' bilateral ties," as well as mutually assuring each other of their right to "peaceful nuclear technology." Less than five weeks later North Korea issued a threat to conduct its fourth test of a nuclear bomb.

North Korea has a record of proliferating nuclear technology even in the midst of its own nuclear climb-down agreements. In February 2007, at the Beijing-hosted six-party talks, North Korea agreed to shut down the plutonium-producing reactor at its Yongbyon nuclear complex. In exchange, it reaped aid and U.S. concessions that greatly eased sanctions.

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Meanwhile, North Korea was quietly helping Syria build a secret copy of the Yongbyon reactor, near a remote area called Al Kibar, on the Euphrates River. The project had been going on for years. North Korea helped with the design and by using its networks to help procure materials. The Syrian reactor was nearing completion with no visible purpose except to produce plutonium for nuclear weapons when the Israelis destroyed it with an airstrike in September 2007.

The Bush administration was so eager to salvage a deal to freeze North Korea's nuclear program that it waited until April 24, 2008, to confirm the nature of the Israeli target, finally disclosing that "the Syrians constructed this reactor for the production of plutonium with the assistance of the North Koreans." Instead of penalizing Pyongyang, the U.S. offered further concessions, taking North Korea off the list of state sponsors of terrorism.

North Korea made a Potemkin gesture of blowing up an irrelevant cooling tower at Yongbyon but refused to provide the promised full access to its nuclear program. The nuclear-freeze deal collapsed entirely by the end of 2008. In May 2009 North Korea carried out its second nuclear test. In 2013 it conducted a third test and restarted its Yongbyon reactor, alongside the uranium-enrichment facility it had divulged in 2010.

Were Iranian officials present at North Korea's 2013 nuclear test, or for that matter the earlier ones? Perhaps. But that may not be the relevant question. According to Olli Heinonen, the former deputy director of the International Atomic Energy Agency, all they'd need is the resulting data on a thumb drive.

*Ms. Rosett is journalist-in-residence with the Foundation for Defense of Democracies, and heads its Investigative Reporting Project.*

<http://online.wsj.com/articles/iran-could-outsource-its-nuclear-weapons-program-to-north-korea-1403303442>

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The Diplomat – Tokyo, Japan

OPINION/Article

## **Is India Building Thermonuclear Weapons?**

*A new uranium enrichment facility is fueling concerns that India is intent on building thermonuclear weapons.*

By Zachary Keck for *The Diplomat*

June 21, 2014

India may be embarking on a covert uranium enrichment project aimed at producing thermonuclear weapons, a number of sources have recently speculated.

This week, *Reuters* reported that analysts at *IHS Jane's* believe that the uranium enrichment facility at the Indian Rare Metals Plant is able to produce about twice as much weapons-grade uranium as New Delhi will need to fuel its nuclear powered ballistic missile submarines in the future.

"Taking into account all the enriched uranium likely to be needed by the Indian nuclear submarine fleet, there is likely to be a significant excess," said Matthew Clements, editor of *IHS Jane's Intelligence Review*, according to *Reuters*. "One potential use of this would be for the development of thermonuclear weapons."

The report goes to explain that it has made this assessment based on new commercial satellite images of the Mysore-based facility in southern India. These images revealed a new uranium hexafluoride plant that would significantly increase the uranium enrichment capacity of the plant. Specifically, India would be able to produce about 160 kilos of uranium enriched to 90 percent levels, about double the amount it needs to power its submarine fleet. The plant is expected to become operational sometime next year.

The plant's excess uranium—which is enough to make about five nuclear bombs—could be used to produce thermonuclear weapons. *Reuters* explains: "By blending the uranium with its existing stock of plutonium, India could develop thermonuclear weapons that have a more complex detonation process and greater force than simpler weapons."

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This assessment has been seconded by the Stockholm International Peace Research Institute (SIPRI). In a recent research brief, SIPRI noted, “A new unsafeguarded gas centrifuge facility appears to be under construction at the Rare Metals Plant near Mysore. India’s expanded centrifuge enrichment capacity has been motivated by plans to build new naval propulsion reactors, but the potential excess capacity could also signify its intent to move towards thermonuclear weapons by blending the current plutonium arsenal with uranium secondaries.”

China already has thermonuclear weapons and, given that India usually measures its strategic deterrent against China’s arsenal, this would likely be Delhi’s rationale for seeking a thermonuclear capability. Pakistan does not have any thermonuclear weapons, however, and Pakistan officials are already warning that India’s acquisition of them would lead to a nuclear arms race that Islamabad does not want.

Thermonuclear weapons have far more destructive power than nuclear bombs that rely solely on nuclear fission. As the Union of Concerned Scientists explain, thermonuclear weapons “derive their explosive energy from the combined power of nuclear fission and fusion. An initial fission reaction generates the high temperatures needed to trigger a secondary—and much more powerful—fusion reaction.” The yield on the first U.S. thermonuclear weapon was roughly 10 megatons or 10,000 kilotons.

India claims that the first device it detonated in its 1998 nuclear tests, Shakti I, was a two-stage thermonuclear weapon that ignited successfully and produced a forty-five kiloton yield (0.045 megaton), which was considerably below the two hundred kiloton yield expected. However, most foreign analysts believe this figure was highly inflated by India and many doubt that the thermonuclear device even successfully ignited the second, fusion stage of the explosion. The view that the thermonuclear test failed is also held by former senior level Indian scientists.

As a result, if India does build more thermonuclear devices it could be tempted to conduct more nuclear tests to ensure their reliability.

*Zachary Keck is Managing Editor of The Diplomat where he authors The Pacific Realist blog. He also writes a monthly column for The National Interest.*

<http://thediplomat.com/2014/06/is-india-building-thermonuclear-weapons/>

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The Daily Beast.com – New York, NY

OPINION/Article

## Death at Five Times the Speed of Sound

*The latest in push button warfare, hypersonic weapons have launched a new arms race among the big powers—emphasis on the race.*

By Kyle Mizokami

June 23, 2014

The Department of Defense recently awarded a \$44 million contract to the Miltec Corporation, of Huntsville, Alabama. A low-key defense contractor located in the heart of American rocket country, Miltec produces very fast things: hypersonic weapons for the U.S. Army. Hypersonic weapons—missiles that can go five or six times the speed of sound—promise a uniquely American answer to warfare: a purely technological, pushbutton solution to the need to kill something.

The U.S. isn’t the only power developing hypersonic weapons. Hypersonic weapons are the new arms race, with the United States, Russia, India and China all racing to develop them. Some hypersonic weapons are boosted to target atop intercontinental ballistic missiles, the same missiles designed to carry nuclear warheads in a nuclear war.

What could possibly go wrong?

Hypersonic is the new supersonic, a frontier of speed dreamed of but not yet conquered. Hypersonic weapons travel at extremely high speeds, anywhere from 3,840 to 16,250 miles an hour. A hypersonic weapon launched

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from New York could reach Moscow in less than 40 minutes. (By comparison, a Boeing 777 would make the same trip in eight and a half hours.)

Miltec's contract is for development of the so-called Advanced Hypersonic Weapon (AHW). The "weapon"—a cone-shaped object with winglets—is launched on top of a repurposed Poseidon nuclear missile. Using the "boost glide" method, the weapon is boosted 60 miles high, then glides at five times the speed of sound to within 30 feet of the target.

A 2011 test flew 2,400 miles—from Hawaii to the Marshall Islands—and was considered a partial success. A new test is scheduled in August, and we can look forward to another in 2019.

Washington's hypersonic obsession—part of a larger concept dubbed Prompt Global Strike—is not new. Oddly enough, it was initially conceived as a weapon for the Global War on Terror. "PGS was conceived in the early 2000s to deal with a very specific problem," explained Brian Weeden, technical advisor at the Secure World Foundation, "how to attack a high priority, time-sensitive target such as a meeting between high-level terrorists or theft of nuclear weapons anywhere in the world." The Army's Advanced Hypersonic Weapon is being developed under the Prompt Global Strike umbrella.

There are problems operating at such incredible speeds. Friction between air and the weapon creates temperatures of up to 3,500 degrees Fahrenheit, hot enough to melt steel. Air itself becomes an obstacle—as the Defense Advanced Research Projects Agency inelegantly puts it, "Air doesn't travel around you—you rip it apart." Finally, traveling at speeds of up to 3.6 miles per second makes guidance, navigation, and control tricky problems.

Outside of Prompt Global Strike, NASA is developing a separate system for the Air Force that straps a hypersonic weapon onto a powerful jet engine and launches it from an aircraft. This is the technology behind NASA's X-51A Waverider, which in 2010 reached Mach 5, or roughly 3,700 miles an hour for approximately 200 seconds.

Hypersonic drones, like the drones before them, are the latest innovation in push-button warfare. Both kill the enemy remotely at long distances with minimal human involvement. A hypersonic weapon operator may be a thousand miles from the weapon he or she launches, and thousands more from the target.

But like drones, there is a trade-off involved, one not as apparent to the operator than to those that risk becoming collateral damage. As convenient as drone warfare has been, the distance between the operator and the target is part of the reason more than 400 civilians have been killed in drone strikes in the last decade. Used in battle, hypersonics could exact a similar toll.

The United States was the first to conduct large-scale hypersonic weapons research, but other nations are racing to catch up. The U.S. has shown that such weapons are technically feasible, but in doing so has also created a situation where rivals must research their own... or risk being outclassed in wartime. "Ultra-fast hypersonic weapons may be able to reach Russian territory virtually in no time to accurately hit strategic facilities, and we shall have nothing to fight back with," a Russian deputy defense minister told Itar-TASS in 2013.

Unsurprisingly, Russia has started work on hypersonic weapons. In 2012, Russian Deputy Prime Minister Dmitry Rogozin stated, "I think we need to go down the route of hypersonic technology and we are moving in that direction and not falling behind the Americans." Russia has announced that PAK-DA, Russia's next-generation long-range bomber, will carry hypersonic missile, and Russia plans to develop a working model by 2020. That's unlikely; hypersonics is a notoriously tough science to master; but the declaration speaks to Moscow's ambitions.

China has also entered the hypersonic race. On January 9, China tested a hypersonic boost glide system conceptually similar to the Army's AHW, known to U.S. intelligence as the WU-14. China is already developing DF-21D "carrier killer" missiles, ballistic missiles modified to attack American aircraft carriers and create a "no go" zone for the U.S. Navy. Both types of weapons are difficult to shoot down, and adding hypersonic glide weapons to China's arsenal would make the U.S. Navy's job of keeping carriers afloat much harder.

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Even India is developing hypersonic weapons, with the development of the Brahmos II missile. Brahmos II is expected to fly at speeds of up to Mach 7, but is limited by international agreements to relatively short ranges, making it primarily useful against ships and ground targets.

The result of all this is a classic arms race. As the Russian defense minister noted, the big powers all have to either develop hypersonic weapons or risk becoming outclassed. Nuclear weapons could prove the only way for it to retaliate in-kind, and nobody wants that.

Another worry with hypersonic weapons is that the launch of ICBMs carrying hypersonic weapons would—at least initially—look identical to the launch of ICBMs carrying nuclear weapons. A frightened country could be prompted to quickly retaliate with nuclear weapons. Proponents claim there are ways to distinguish a conventionally-tipped boost glide missile from a nuclear-tipped ICBM in flight, but asking a country to wait and observe the trajectory of a possible nuclear missile without retaliating, especially in a crisis, may be unrealistic.

Hypersonic weapons are here to stay. Proponents claim that hypersonic weapons will eventually become “socialized”—that is, we’ll all get used to them and the new dangers they bring. It will be up to American people to reconcile the likelihood of innocents killed with the need for a speedy, time-critical weapon system.

In the meantime, Miltec owes the U.S. Army a working missile by June 5, 2019.

*Kyle Mizokami writes on defense and security issues in Asia, particularly Japan. He is the founder and editor for the blogs Japan Security Watch, Asia Security Watch and War Is Boring. Contributor at Medium, The Atlantic.com, Salon, The Japan Times and The Diplomat.*

<http://www.thedailybeast.com/articles/2014/06/23/death-at-five-times-the-speed-of-sound.html>

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Nukes of Hazard.com – Washington, D.C.

OPINION/Blog

## **Assuring Our Allies? What a Pentagon Bomber Mission Says about Tactical Nukes in Europe.**

By Gabrielle Tarini

June 24, 2014

In early June, the U.S. Air Force announced the deployment to Europe of three B-52 and two B-2 bombers capable of delivering nuclear weapons to partake in military exercises with allies in the region. During the deployment, which will span approximately two weeks, the bombers will conduct training flights in the U.S. European Command area of operations.

The announcement of the Pentagon’s training mission comes in the wake of tensions between the United States and Russia after Moscow’s annexation of Crimea and continued threats against eastern Ukraine. The deployment of the bombers is largely seen as a means of reassuring our NATO allies alarmed by Russian actions, particularly the newer members in Central Europe bordering Russia.

In a press release announcing the deployment, U.S. Strategic Command head Adm. Cecil Haney stated, “The training and integration of strategic forces demonstrates to our nation’s leaders and allies that we have the right mix of aircraft and expertise to respond to a variety of potential threats and situations.”

But wait a minute.

Don’t we already have 180 tactical B61 nuclear bombs deployed in five European nations, the primary mission and *raison d’etre* of which is to assure our NATO allies?

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If the answer is “Yes” (and it is), it begs the following question: If B61s in Europe are in fact fulfilling their mission of calming the nerves of our allies in the face of Russian threats, what is the need for additional assurance provided by strategic bombers?

The only logical conclusion to draw is that the B61s stationed in Europe do not in fact provide assurance to our NATO allies because they are militarily useless and politically divisive.

Almost everyone agrees that tactical nuclear weapons in Europe have no military value. This argument is not new and has been advanced by military and government officials for decades. Colin Powell favored abandoning them in the 1990s, when he was the chairman of the Joint Chiefs of Staff. In 2010, when asked if there was a military mission provided by tactical nuclear weapons in Europe that could not be provided by either U.S. strategic or conventional forces, General James Cartwright, then-vice chairman of the Joint Chiefs of Staff flatly stated, “No.”

But the question that still ignites a fierce debate is whether or not the bombs in Europe retain any *political* value that justifies their continued deployment and modernization.

Those who support keeping B61s deployed in Europe argue that the bombs are a political symbol of Washington’s commitment to NATO, and that their removal would signal a reduced U.S. commitment to the alliance. But what kind of political signal do B61s send when the U.S. tacitly admits that those weapons no longer have much value and feels the need to deploy the assurance of long-range bombers?

There is disagreement within NATO itself about the continued need for the deployment of tactical nuclear bombs, a reality which is likely to grow more controversial as the five host nations near difficult and expensive decisions about whether and how to replace the aging aircraft that would deliver these weapons.

As Barry Blechman and Russell Rumbaugh argue in a fantastic piece in the July/August edition of *Foreign Affairs*, “What ultimately deters NATO’s foes are the United States’ substantial strategic nuclear forces: the long-range bombers, strategic submarines, and land-based intercontinental ballistic missiles (ICBMs) that are based in the United States and stand ready to deliver nearly 2,000 nuclear bombs and warheads within a matter of hours. Even a small portion of this force could devastate any nation foolish enough to test U.S. resolve. Although they are not located on European soil, these weapons provide the actual basis for the U.S. nuclear umbrella.”

At a time when President Obama has lessened U.S. dependence on nuclear weapons in our national security policy, there is a separate and very legitimate question about whether the U.S. should be using nuclear bombers to send signals to allies and adversaries in Europe and Asia.

However, the Air Force’s recent deployment of nuclear-capable bombers to Europe is a not-so-subtle reminder of the uselessness of the forward deployed tactical weapons.

*Gabrielle Tarini is a rising senior at Boston College and a Summer 2014 intern with the Center for Arms Control and Nonproliferation.*

<http://nukesofhazardblog.com/story/2014/6/23/173159/188>

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The National Interest.org  
OPINION/Article

## **A Scary Scenario: Fewer Nukes, Lots of Missiles**

*“Not a single nuclear warhead has been delivered by any delivery system to an enemy target since 1945. By contrast, in a thirty-year period that ended a decade ago, ballistic missiles were employed in at least six different conflicts.”*

Christine M. Leah  
June 24, 2014

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Nuclear disarmament is not necessarily a smart idea. The purpose of any arms-control arrangement should be to improve international security, not worsen it. If we are to be properly concerned about stability and security, then controlling the proliferation of the *delivery systems* of the warheads becomes just as important as controlling the proliferation of the warheads themselves.

Although recent growing tensions between the United States, Russia and China have squashed some of the life out of the Global Zero movement, it still soldiers on—like the black knight of *Monty Python and the Holy Grail*, who, in spite of repeated blows that sever successive limbs, declares, “It’s just a flesh wound.” But developments in 2014 have further highlighted the fact that it’s not just the proliferation of nuclear warheads that we should be worried about, but ballistic and cruise missiles as well. And this issue becomes even *more* important for the mission to lower nuclear numbers.

There are new debates over whether Tehran’s missile capabilities must be addressed in negotiations over its debated nuclear-weapons program. Senior Fellow of the Arms Control Association Greg Thielmann said in a recent op-ed that Iran’s missile capabilities should be kept out of current negotiations on its nuclear-enrichment program, arguing that it would likely hurt negotiations and constitute a humiliating surrender for Tehran of the country’s right to self-defense. Iran’s various activities, in turn, seem to have sparked interest by other regional powers in such capabilities. There are new concerns over Saudi Arabia’s thirty or so CSS-2 missiles (or Dong Feng 3). These have a 2500-kilometer radius (which covers the whole Middle East) and are currently capable of delivering a 2000-kilogram conventional warhead. In the Asia-Pacific, whilst China does not seem to have made substantial changes to its nuclear posture, its (debated) conventional buildup is certainly having repercussions, with Japan and Australia recently agreeing to cooperate on submarines and perhaps other types of military technology in the future.

All these developments illustrate the fact that it is not just nuclear weapons that are destabilizing; they are only one component of the *overall* military balance. This raises important questions about the real usefulness and effectiveness of the Nuclear Nonproliferation Treaty in international security, including what the relationship between nuclear and conventional arms control is: don’t we also need to think about *conventional* arms control?

The world is unlikely to be rid of nuclear weapons anytime soon, but if the nuclear disarmers are to be taken seriously, they must think through the desirability of a “second conventional age.” We tend to overlook the fact that the development of nuclear warheads coincided roughly with the development of short, medium, intermediate and eventually, intercontinental missiles. We need to think differently about the contribution of missile technology to the deterrence equation. In other words, what happens to strategy when you take away the warhead, but the missiles remain? In a recent article in the *Journal of Strategic Studies*, Robert Ayson and I argue that a world with missiles, but without nuclear weapons, could be one in which war becomes much more thinkable and, while less destructive, much more likely.

A world without nuclear weapons would graphically expose conventional imbalances, which in many instances have remained partially hidden in the current nuclear age. But it is upon these imbalances that any remaining system of deterrence would rely. There are problems here. Conventional weapons of the same weight (in hundreds of kilograms) fall demonstrably short in terms of crude high explosive capacity. Relying on these less-damaging conventional systems may raise the likelihood of war by making deterrence less feasible. With that in mind, Conventional Prompt Global Strike as an attempt at conventional deterrence doesn’t look so good anymore. In deciding whether or not to use force, it might be more tempting for a state to risk the relatively high probability of relatively small effects (from conventionally armed missiles), rather than risk the moderately low probability of much greater damage (from nuclear ones).

Neither do conventional weapons carry the same taboo against their use, or threatened use, that is often claimed for nuclear weapons. Not a single nuclear warhead has been delivered by any delivery system to an enemy target since 1945. By contrast, in a thirty-year period that ended a decade ago, ballistic missiles were employed in at least six different conflicts. In addition, the detonation of 100 kilograms of high explosives is something that even small countries might not consider unbearable. In 1991, Steven Fetter suggested that “conventionally armed missiles

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[could not] be decisive militarily...a truly strategic threat would require a capability to launch tens of thousands of [these] missiles.”

The idea that it might be easy to control a conventional missile war in a post-nuclear environment could also, ironically, be a problem. One can reasonably argue that a conventional missile war would be thought to be much more controllable than a *nuclear* missile war. This, coupled with the absence of the threat of massive nuclear destruction in the escalation ladder, could make conventional war a not-so-unlikely prospect. And after nuclear weapons, would the proliferation of ballistic and cruise missiles suddenly become more “acceptable”? Could we see a nonnuclear arms race try to fill a nuclear-shaped gap? Would we fear that race less, because advanced conventional missile systems are less destructive, when we should fear it more, because of the lower threshold to the use of armed force that they might involve? In an age without nuclear weapons, it is also conceivable that deterrence relationships will simply not work without boosting some aspects of conventional arsenals. Kenneth Waltz and Scott Sagan’s “more may be better” logic, which echoes Thomas Schelling’s controversial approach to nuclear weapons, may also be applied in an entirely conventional era. Although, here we get a variation of the famous Waltz-Sagan debate: is having fewer nuclear weapons better because there are more conventional forces?

These are the issues we need to think about much more seriously on the so-called road to Zero, and Iranian, Saudi Arabian, and Chinese behaviors highlight this. Could, for example, the current Missile Technology Control Regime be tacked onto the NPT? Herman Kahn once argued that “The objective of nuclear weapons policy should not be solely to decrease the number of nuclear weapons in the world, but to make the world safer—which is not necessarily the same thing.”

*Christine M. Leah is a Stanton Postdoctoral Fellow at MIT.*

<http://nationalinterest.org/feature/scary-scenario-fewer-nukes-lots-missiles-10727>

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The Diplomat – Tokyo, Japan  
OPINION/Feature

## Time to Actively Deter North Korea

*“It’s time to make North Korea have to worry more about deterring us rather than the other way around.”*

By Patrick M. Cronin for *The Diplomat*

June 25, 2014

It is only a matter of time before North Korea flaunts its ability to miniaturize a nuclear warhead, deploy intercontinental ballistic missiles and road-mobile missile launchers, and expand its plutonium nuclear arsenal with highly enriched uranium warheads. The cumulative failure of diplomacy to rein in Pyongyang’s nuclear and missile programs begs the question as to whether it is time to turn the tables on North Korea. Rather than buy into a losing competitive strategy, hasn’t the time come for the United States and the Republic of Korea (ROK), with the support of others, to pursue a strategy of active defense that alters the North’s cost-benefit calculus?

The North Korean threat is inherently volatile and far more dangerous in the near-term than the sea skirmishes in the East and South China Seas. Because the North threatens to escalate, however, democracies are reluctant to accept risk. Former Secretary of Defense William Perry backed off possible strikes on Yongbyon reactor in 1994 because, as he put it, he was seeking to avert a general war rather than to cause it.

Without throwing caution to the wind, the U.S.-ROK alliance needs to introduce more risk into its approach. Our risk aversion grants North Korea wide latitude for mischief. Pyongyang uses an array of asymmetrical means—from unmanned aerial vehicles (UAVs) and cyber warfare to mini submarines and nuclear weapons—to poke holes through the superior conventional capabilities of the U.S.-ROK alliance. This is because the main purpose of the North’s asymmetric threats is not to use these weapons but to coerce benefits by threatening to use them.

The United States and the Republic of Korea have responded to the growing uncertainty surrounding the Kim Family Regime under the young Kim Jong-Un. They have doubled down on readiness, counter-provocation plans,

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exercises, deployments and missile defenses. These are important and welcome steps. But at some point the alliance needs to understand the math: North Korea is capable of posing more asymmetrical threats than the alliance can afford to counter with 100 percent effectiveness. Instead of trying to counter each specific threat, Seoul and Washington need to balance *deterrence by denial* with *deterrence by punishment*.

Such an active defense strategy has at least three essential defense components. The first is an upgraded intelligence, surveillance and reconnaissance (ISR) network, capable of early detection of ballistic missiles, as well as low-altitude cruise missiles and UAVs. The second is an upgraded missile defense system that includes deployment of better point defense systems (PAC-III) and wider-range defenses that include not only Standard Missiles on Aegis-equipped destroyers but also land-based Terminal High-Altitude Area Defense (THAAD) batteries. Third, there must be a stronger offensive capability, one that poses a “kill chain” threat capable of preempting missile launches before they happen. The aim is not to actually preempt but rather to pose the threat of preemption, thereby forcing North Korea to be more circumspect before threatening to turn South Korea into a sea of fire with every whim.

One way to threaten preemption even without missiles is to further develop a non-nuclear electromagnetic pulse (EMP) weapon that could neutralize missiles on the launcher. Because North Korea will soon develop road-mobile missiles capable of firing nuclear weapons, the further development of non-nuclear EMP systems capable of taking out, say, a 50-square-kilometer joint fire area, would also shift the cost-benefit calculus against North Korea.

Let’s also consider the recent North Korean deployment of three UAVs into South Korea. It boggles the mind to imagine how much leverage North Korea appeared to gain in South Korea by deploying what amounted to toy drones that pose no direct threat to the country. After all, the United States and South Korea have two huge advantages over the North: they are both open democracies with advanced technology. North Korea, on the other hand, is a closed society fearful of information, which forces it to smuggle in whatever technology it can buy through clandestine channels and the black market.

In addition to direct defense investments, the UAV incident suggests that the alliance should be making far greater use of its information advantage. While North and South Korea agreed some years ago to forego psychological warfare against each other, the North is a flagrant purveyor of vitriol and falsehood. Surely the alliance can better saturate the North with uncomfortable facts—from pictures of Kim Jong-Un’s luxury houses side by side with North Korean gulags, to video lectures by North Korean refugees who have managed to escape the world’s most oppressive regime.

The bottom line is this: in addition to shoring up deterrence with more defense, the alliance can gain greater leverage against North Korean brinkmanship and coercion by adding an element of active defense and information warfare. It’s time to make North Korea have to worry more about deterring us rather than the other way around.

*Dr. Patrick M. Cronin is senior advisor and senior director of the Asia-Pacific Security Program at the Center for a New American Security in Washington, DC. He is the author of *If Deterrence Fails: Rethinking Conflict on the Korean Peninsula* (Center for a New American Security: 2014).*

<http://thediomat.com/2014/06/time-to-actively-deter-north-korea/>

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Jerusalem Post – Jerusalem, Israel  
OPINION/Editorial

## **Iranian Threats**

*As the Islamic Republic becomes over-extended in Syria and Iraq, and continues to face sanctions, it might be more willing to make concessions on its nuclear program.*

By JPost Editorial  
26 June 2014





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US President Barack Obama assured outgoing President Shimon Peres, who was at the White House for a farewell visit this week, that the United States will not allow Iran to develop a nuclear weapon, and will continue to remain steadfast on topics central to Israel's security in the nuclear negotiations.

This is a reassuring message as representatives of the P5+1 (the US, Russia, China, France and Britain plus Germany) get set to sit down with their Iranian counterparts in Vienna this coming Wednesday for the sixth round of talks on stopping the Islamic Republic's nuclear weapons program.

Besides Obama's promises, however, there are very few reassuring signs that Iran is willing to comply with even the most basic demands made by the US and other members of the P5+1.

The two sides have reached tentative understandings on reducing the amount of plutonium – a second route to fuel for a bomb besides enriched uranium – that will be produced by a heavy-water reactor under construction near the town of Arak. And there are reports of a possible compromise that would turn a deep underground facility called Fordow, where there are 3,000 centrifuges, into a "research facility."

But there is no agreement on almost every other relevant issue. While the US and other P5+1 members want to reduce the number of centrifuges Iranians currently have to enrich uranium, the Iranians want to actually increase the number of centrifuges by over 10,000 from the current number of 19,000. Even if the number of centrifuges remain unchanged, Iran would be able to make a "dash" for a bomb in a few months, as US Secretary of State John Kerry noted in comments made to the Senate in April.

There are other unresolved disputes, including whether Iran would have to reveal to international inspectors work that it is suspected of doing on weapons design in the absence of conclusive proof.

Senior American negotiator Wendy R. Sherman, undersecretary of state for policy, was diplomatic yet clearly pessimistic when she said she doubted whether "Iran is really ready and willing to take all the steps necessary to assure the world" it has no desire or ability to produce a nuclear weapon.

Iranian duplicity regarding its nuclear arms program is nothing new. But perhaps never before have the potential dangers of an Islamic Republic with nuclear capabilities been so evident. The Islamic Republic's aspirations to expand its influence throughout the region are not just hypothetical. Iran is capitalizing on the dissolution of old national borders. The Iranians are providing troops, weapons and advice to Bashar al-Assad's regime in Syria and expanding their influence in Lebanon via their proxy, Hezbollah.

In Iraq there are reports that Iranian drones are being used against Al Qaeda-affiliated, Islamic State in Iraq and Syria (ISIS) forces. And if it has not already begun to send troops into Iraq to carve out territory for a Shia state, Iran might begin to do so soon. There are reports that Shia forces fighting in Syria against Sunni opposition groups are now heading to Iraq. Hezbollah, meanwhile, may be sending more militants to Syria to replace them.

The US and Israel actually have an interest in seeing Iranian-backed militants battle it out against ISIS forces and weaken one another. In fact, as the Islamic Republic increasingly becomes over-extended in Syria and Iraq, and as sanctions continue to take a toll on the Iranian economy, Iran might be more willing to make concessions on its nuclear program.

At the same time, however, the Iranians are even more desperate than ever to attain nuclear weapons capability.

They realize that having a nuclear bomb would be a game changer in the Sunni-Shia clash. They already have the missile capability to hit almost every capital in the Middle East, but the Iranians would not have to actually use their nuclear weapons. The very fact that they have them would provide the Islamic Republic and their proxies in Syria, Lebanon, Iraq and the Gaza Strip 'a nuclear umbrella.' Any group or state attacked by Iran or one of its proxies would think twice before striking back against so powerful an enemy.

That's why it is imperative for the P5+1, who convene in Vienna next week for the sixth round of negotiations with the Islamic Republic, to keep in mind precisely what is at stake.

<http://www.jpost.com/Opinion/Columnists/Iranian-threats-360741>

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#### **ABOUT THE USAF CUWS**

The USAF Counterproliferation Center was established in 1998 at the direction of the Chief of Staff of the Air Force. Located at Maxwell AFB, this Center capitalizes on the resident expertise of Air University, while extending its reach far beyond - and influences a wide audience of leaders and policy makers. A memorandum of agreement between the Air Staff Director for Nuclear and Counterproliferation (then AF/XON), now AF/A5XP) and Air War College Commandant established the initial manpower and responsibilities of the Center. This included integrating counterproliferation awareness into the curriculum and ongoing research at the Air University; establishing an information repository to promote research on counterproliferation and nonproliferation issues; and directing research on the various topics associated with counterproliferation and nonproliferation .

The Secretary of Defense's Task Force on Nuclear Weapons Management released a report in 2008 that recommended "Air Force personnel connected to the nuclear mission be required to take a professional military education (PME) course on national, defense, and Air Force concepts for deterrence and defense." As a result, the Air Force Nuclear Weapons Center, in coordination with the AF/A10 and Air Force Global Strike Command, established a series of courses at Kirtland AFB to provide continuing education through the careers of those Air Force personnel working in or supporting the nuclear enterprise. This mission was transferred to the Counterproliferation Center in 2012, broadening its mandate to providing education and research to not just countering WMD but also nuclear deterrence.

In February 2014, the Center's name was changed to the Center for Unconventional Weapons Studies to reflect its broad coverage of unconventional weapons issues, both offensive and defensive, across the six joint operating concepts (deterrence operations, cooperative security, major combat operations, irregular warfare, stability operations, and homeland security). The term "unconventional weapons," currently defined as nuclear, biological, and chemical weapons, also includes the improvised use of chemical, biological, and radiological hazards.

The CUWS's military insignia displays the symbols of nuclear, biological, and chemical hazards. The arrows above the hazards represent the four aspects of counterproliferation - counterforce, active defense, passive defense, and consequence management.

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