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Featured Item

"*Legislation Limiting the President's Power to Use Nuclear Weapons: Separation of Powers Implication*". Written by Stephen P. Mulligan, published by the Congressional Research Service; November 3, 2017

https://fas.org/sgp/crs/nuke/separation.pdf

Recent proposed legislation that would place limitations on the President's power to employ nuclear weapons has prompted interest in questions related to the constitutional allocation of power over the United States' nuclear arsenal. This memorandum examines the constitutional separation of powers principles implicated by legislative proposals that restrict the President's authority to launch nuclear weapons.

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US NUCLEAR WEAPONS

The Japan Times (Tokyo, Japan)

Japan Held Drills with Nuclear-Capable U.S. B-52 Strategic Bomber in August

By Jesse Johnson

November 23, 2017

The United States flew two B-52 strategic bombers capable of carrying nuclear weapons for a rare joint mission with Japan's Air Self-Defense Force in the skies near North Korea in August, the U.S. Air Force confirmed Wednesday.

"Two U.S. Air Force B-52 Stratofortress' assigned to 2nd Bomb Wing, Barksdale Air Force Base, Louisiana, flew from Barksdale to conduct training with two Koku-Jieitai (Air Self-Defense Force) F-15 fighter jets over the Sea of Japan, Aug. 22, 2017," U.S. Pacific Air Forces spokeswoman Lt. Col. Lori Hodge told The Japan Times in an email.

The U.S. military said that while it does not maintain log records of past B-52 training operations, the August mission was the first in the last year.

The timing of the mission would put it as North Korea's ramped-up schedule of missile tests hit a crescendo with two launches over Japan and a sixth nuclear test, which was its most powerful.

"The real-time training of these flights enables our bomber force to stay proficient and ready while strengthening integration with other U.S. or coalition forces," Hodge said. "This mission was closely planned with our allies to ensure maximum training and integration opportunities as well as compliance with all national and international requirements and protocols."

Japanese media reports citing anonymous government officials had earlier this week reported the rare flight, saying that the B-52s had flown from the Pacific Ocean side of Japan over the Tohoku region to link up with F-15 fighters based at the ASDF's Komatsu Airbase in Ishikawa Prefecture.

In order to adhere to Japan's three non-nuclear principles of not possessing, producing or allowing the introduction of atomic weapons into the country, the government reportedly confirmed prior to the drill that the B-52s were not armed with nuclear weapons.

The B-52 is a long-range, heavy bomber that can perform a variety of missions, according to the U.S. Air Force. It is capable of flying at high subsonic speeds at altitudes up to 50,000 feet (15,170 meters) and has an unrefueled combat range in excess of 8,800 miles (14,080 kilometers). It can carry nuclear or precision-guided conventional ordnance.

The ASDF has trained regularly with U.S. B-1B bombers in Japanese airspace. The B-1B, originally developed to carry atomic weapons, was converted to its exclusively conventional combat role in the mid-1990s to adhere to nuclear nonproliferation treaties, and is no longer nuclear-capable. It can, however, carry the largest payload of both guided and unguided weapons in the U.S. Air Force's inventory.

The Self-Defense Forces and U.S. military have stepped up their joint training amid North Korea's nuclear saber-rattling in recent months, including a massive show of naval force in the waters near North Korea earlier this month that involved three U.S. aircraft carriers.

https://www.japantimes.co.jp/news/2017/11/23/national/japan-held-drills-nuclear-capable-u-s-b-52-strategic-bomber-august/

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King 5 Television (Seattle, WA)

USS Kentucky: Aboard America's $2 Billion Nuclear Submarine

Author Not Attributed

November 14, 2017

Are we ready for a nuclear attack? The nuclear threat is perhaps more real now than any time since the Cold War.

12 News' Mark Curtis was able to bring viewers on a tour of a nuclear ballistic-class submarine, the U.S.S. Kentucky.

The nuclear threat is why we weren't able to shoot video of a lot of the ship, and everything we did shoot was carefully scrutinized with at least one security officer, constantly looking over photographer Chad Bricks' shoulder.

The U.S.S. Kentucky is part of what is called the "nuclear triad." The triad are the three components of a nuclear defense system: land-based missiles fired from secret silos, B-1 bombers that can drop them from the air, and submarine-launched ballistic missiles.

Four countries have a nuclear triad: China, India, Russia and the United States.

The teeth of the U.S. nuclear triad is the submarine fleet, accounting for 70 percent of the firepower, said Commander James Hurt, of the U.S.S. Kentucky.

"We talk about the ability to reliably respond to any aggression. This leg of the triad is toughest to find," Cmdr. Hurt said. "That's where the majority of the firepower should be."

Inside, she has $2 billion of the latest high-tech equipment. Her heart beats to the rhythm of 165 of the best America has to offer.

This multi-billion-dollar technical marvel is the tip of the spear for America's defense.

Phoenix's Cody Blackburn is one of Kentucky's missile techs. Should the call come, he could be one of the men unleashing the deadliest attack the world has ever known.

"I am here to execute the orders of the president, and I will execute them when called upon," Blackburn said.

The U.S.S Kentucky has two crews. One crew is at sea, usually 70 days at a time, while the other crew trains and keeps their skills sharp on simulators.

A lot of our questions went understandably unanswered.

"Are there actually nukes here?" Mark Curtis asked.

"I appreciate your question, but I can neither confirm nor deny there are actual nuclear weapons on this ship," Cmdr. Hurt said.

http://www.king5.com/features/uss-kentucky-aboard-americas-2-billion-nuclear-submarine/491525508

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Los Angeles Times (Los Angeles, CA)

A Top Secret Desert Plant Starts Ramping Up to Build Northrop's B-21 Bomber

By Ralph Vartabedian, W.J. Hennigan and Samantha Masunga

November 10, 2017

A once-empty parking lot at Northrop Grumman Corp.'s top secret aircraft plant in Palmdale is now jammed with cars that pour in during the predawn hours.

More than a thousand new employees are working for the time being in rows of temporary trailers, a dozen tan-colored tents and a vast assembly hangar at the desert site near the edge of urban Los Angeles County.

It is here that Northrop is building the Air Force's new B-21 bomber, a stealthy bat-winged jet that is being designed to slip behind any adversary's air defense system and deliver devastating airstrikes for decades to come. The Pentagon is aiming to buy 100 of the bombers by the mid-2030s for at least $80 billion, though the exact amount is classified.

Northrop won the bomber contract in 2015, but the pace of activity is ramping up sharply under an Air Force budget that has reached $2 billion for this fiscal year.

Construction crews are getting ready to add 1 million square feet to the plant, a 50% increase over what is already a huge facility that is protected by razor wire-topped fences, electronic sensors and military air space surveillance, according to interviews and government documents.

The project marks a sharp turnaround in the fortunes of the Southern California aerospace industry, which has been atrophying since the end of the Cold War. It was widely assumed that the region would never again be home to a large aircraft manufacturing program and now it has one of the largest in modern history. The program is breathing new life into an industry that once defined the Southern California economy.

The bomber — dubbed the "Raider" — is expected to become Northrop's largest cash cow, which could run for two decades if it does not encounter technical or political setbacks. But it will be competing with other nuclear and nonnuclear modernization programs for limited defense funds — a cutthroat political contest.

Northrop has 3,000 employees at the Palmdale plant and is still hiring at a rapid clip. By late 2019, the operation will have 5,200 employees at the site, Kevin Mitchell, deputy vice president of global operations, recently told a Lancaster Chamber of Commerce meeting.

The facility also produces Northrop's high-altitude surveillance drones, the Global Hawk for the Air Force and the closely related Triton for the Navy, as well as the center fuselage for Lockheed Martin's F-35 Joint Strike Fighter. Company officials declined to be interviewed on the B-21, citing Defense Department restrictions.

The Palmdale factory is part of the Air Force's massive Plant 42 operation, where some of the nation's most secret warplanes have been built, including Northrop's flying wing B-2 bomber.

The B-21 program is not just secret but "special access," setting a much higher bar on who can get a clearance and how data are stored, among much else. An executive conference room at the plant is actually a high security windowless vault, where a massive conference table is surrounded by three dozen leather chairs and the walls are adorned with large photographs of the company's long line of weapons. No cellphones are allowed in the room.

Heavy bombers, particularly those capable of carrying nuclear weapons, have been among the most controversial military projects in U.S. history. When the B-1 bomber was rolled out, pacifists

attempted to throw themselves under its wheels. The Northrop B-2 stealth bomber gave Congress sticker shock with its $1-billion-per-plane manufacturing cost.

By contrast, the B-21 so far is slamming through the political system with few obstacles with a projected cost of $550 million per plane, translating to production costs alone of $55 billion, according to staff at the House Armed Services Committee. The dollar amount for research and development is highly classified, Under Secretary of the Air Force Matthew Donovan said in an in interview.

The service is committed to releasing that cost information as soon as possible, Donovan said, "but we have to balance that with protecting the capabilities of our aircraft against potential adversaries."

Even more highly classified are the technical details of the future bomber.

A crude drawing of the plane released by the Air Force seems to resemble the company's B-2 bomber, but Donovan and others say the new plane is not a derivative but a "clean sheet" design. It is supposed to carry nuclear weapons, though the Air Force does not plan to certify it for such missions until two years after it first becomes operational, a cost-saving decision that the House Armed Services Committee criticized in a 2013 report.

Evading more capable future radar systems is a singular requirement. When the B-2 was built, some experts claimed it looked no bigger than a hummingbird on a radar screen. The B-21 would have to be even stealthier. The preliminary design of the bomber's stealth characteristics was "investigated in detail against current and anticipated threats," according to a Congressional Research Service report released in June.

The plane will be operated either by an onboard crew or autonomously, the report said. Without a crew, the bomber could linger much longer over targets, requiring fewer sorties and holding an enemy hostage much longer. Unlike the B-2, it is planned as part of a "family of systems," implying that it would fly with other aircraft or weapons systems, though government officials declined to say anything about it.

The B-21 will benefit from much more sophisticated, faster and cheaper computer systems, as well as software, said Don Hicks, who was Northrop's senior vice president for research during the B-2 era and later served as the Pentagon's research and engineering chief. He said Northrop developed crucial technology in its X-47B drone, an experimental jet that made history in 2013 with the first autonomous landing on an aircraft carrier.

"The B-21 is much better than the B-2," Hicks said. "It has a lot of capability built into it that the B-2 doesn't have."

The B-21 is being marketed as a replacement for the Air Force's aging bomber fleet, which dates back to the 1960s for the B-52 and the 1980s for the B-1. The Air Force says potential adversaries are improving their air defense systems and it has to find new capabilities to ensure it can hold them at risk. Even if the Air Force gets all 100 bombers now planned, it will end up with a smaller fleet than it has now.

The Pentagon fears a repeat of the B-2 bomber program, in which the nation invested $20 billion in research and development with a plan to buy 132 airplanes. The plan's cost ballooned and the Cold War ended just before production began, leaving even the Defense Department questioning why it was needed. In the end, the Air Force got only 21 aircraft, which forced it to keep using the older bombers.

The B-21 also faces a tough road ahead because of competing programs. The Pentagon has plans to update every leg of the nuclear weapons complex, including warheads, missiles and submarines, at

an estimated cost of $1.2 trillion, according to a Congressional Budget Office estimate released Oct. 31.

The B-21 is getting an early start, but some other programs are scheduled just when the B-21 would enter production in the mid-2020s and could challenge the bomber for funding.

“They don’t have enough money,” said Jeffrey Lewis, a nuclear weapons analyst with the James Martin Center for Nonproliferation Studies in Monterey, Calif. “Building everything at once is the best way to build nothing.”

Unlike many strategic weapons systems, such as submarines or intercontinental ballistic missiles, bombers are in use daily on missions in the Middle East. More than a decade of war in Afghanistan, Iraq and Syria have made clear that bombers play a big role in limited conventional war.

The ultimate success of the program will depend on continued government support and cost controls. The Air Force considers the bomber one of its top three priorities, along with the F-35 and a new aerial refueling tanker.

So far, the program has received all the money that President Obama and President Trump have requested. Last year, two dozen members of the House — a colorful political mix of conservatives and liberals — sent a letter to appropriation committee leaders asking them to maintain funding for the bomber.

The only grumbling has surfaced from Sen. John McCain (R-Ariz.), chairman of the Senate Armed Services Committee, who has pressed for more disclosure about the cost of research and development. The Air Force has resisted, arguing it would disclose the scope of the technology development underway.

To help keep Northrop on schedule, the Air Force is managing the B-21 through its Washington, D.C.-based Rapid Capabilities Office, which is intended to cut red tape, said Donovan, the undersecretary. The Air Force is requiring that any design changes, which often slow progress and increase costs, be approved at a higher level than is typical.

Building bombers under the black budget is not unprecedented. The U.S. government didn't lift the veil on the B-2 program until a decade after it had begun, revealing one of the largest weapons development efforts since the Manhattan Project produced the atomic bomb in the 1940s.

The Air Force and Northrop went to great lengths to conceal even the smallest detail of the B-2 program. Many suppliers had no idea they were making parts for the bomber. The government created dummy companies that ordered the parts, which were often picked up in the middle of the night by unmarked trucks.

Northrop made a bold decision a decade ago when it decided against teaming up with either Lockheed Martin Corp. or Boeing Co., going it alone. That led to Boeing and Lockheed, the nation’s two largest defense contractors, teaming up against Northrop. When they lost that competition, it left Northrop with 100% of the prime contract profits, not having to share it with a partner.

“I said we don’t need either of them,” said a person who was involved.

In addition to the major work in Palmdale, parts of all sizes will pour from factories in California and across the nation. The bomber, like other big-ticket aircraft programs before it, will probably spur new housing and commercial development. Mitchell, Northrop’s vice president, told the Lancaster Chamber of Commerce that the company is working with local leaders to make sure employees have access to services and amenities they want.

The company, for example, is working with Antelope Valley College, which recently developed an eight-week training program for aircraft fabrication and assembly, said Liz Diachun, a college

spokeswoman. The vast majority of the college's aircraft fabrication graduates go to Northrop. The college even has a bachelor's degree program with a course on the theory of "low observable" technologies.

Northrop's website has 272 jobs posted for Palmdale, including flight test engineers, machinists, aircraft electricians, composite technicians and low-observables mechanics. Many postings have multiple openings.

But the B-21 will probably not have the economic power of past defense programs. The industry is more efficient now, with production using more robots and other automated machinery. In 1992 when Northrop's B-2 bomber was near its peak, the company had 9,000 workers at a now-shuttered plant in Pico Rivera and an additional 3,000 in Palmdale. The entire B-2 program employed 40,000 across the nation.

The mix is also changing. In the B-21, Palmdale already has as many workers as the B-2 and is headed higher, suggesting that its role will include not only final assembly but a significant amount of parts or process work. Although the plane is being assembled at Palmdale, the Northrop program office is located at another major company aircraft facility in Melbourne, Fla.

Manufacturing engineering work is being planned in Palmdale, while Melbourne serves as a design center. A longtime aerospace industry veteran said Northrop has also opened a modest B-21 engineering office at its plant in El Segundo, because it is challenged to find all the engineers it needs in Florida.

Mike Blades, a securities analyst with Frost & Sullivan, said he believes that about 30% to 50% of the Air Force's $2-billion bomber budget for fiscal 2018 is flowing through Northrop.

"By far, it is going to be the largest source of their funding," Blades said. "It is going to be a big deal for a long time. You are talking $2 billion and they are just in research and development."

Investors have taken close note. Since the company was awarded the contract in October 2015, Northrop shares have nearly doubled, outpacing industry rivals over the same period.

Northrop Chief Financial Officer Kenneth Bedingfield earlier this year told securities analysts that the company's restricted activities, which refer to secret contracts such as the B-21, made up more than 20% of sales last year.

"I will tell you that it is a nicely growing part of our business," he said.

http://www.latimes.com/local/california/la-fi-northrop-bomber-20171110-htmlstory.html

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Reuters (New York, NY)

Special Report: In Modernizing Nuclear Arsenal, U.S. Stokes New Arms Race

By Scot J. Paltrow

November 21, 2017

WASHINGTON (Reuters) - President Barack Obama rode into office in 2009 with promises to work toward a nuclear-free world. His vow helped win him the Nobel Peace Prize that year.

The next year, while warning that Washington would retain the ability to retaliate against a nuclear strike, he promised that America would develop no new types of atomic weapons. Within 16 months of his inauguration, the United States and Russia negotiated the New Strategic Arms

Reduction Treaty, known as New START, meant to build trust and cut the risk of nuclear war. It limited each side to what the treaty counts as 1,550 strategic nuclear warheads.

By the time Obama left office in January 2017, the risk of Armageddon hadn't receded. Instead, Washington was well along in a modernization program that is making nearly all of its nuclear weapons more accurate and deadly.

And Russia was doing the same: Its weapons badly degraded from neglect after the Cold War, Moscow had begun its own modernization years earlier under President Vladimir Putin. It built new, more powerful ICBMs, and developed a series of tactical nuclear weapons.

The United States under Obama transformed its main hydrogen bomb into a guided smart weapon, made its submarine-launched nuclear missiles five times more accurate, and gave its land-based long-range missiles so many added features that the Air Force in 2012 described them as "basically new." To deliver these more lethal weapons, military contractors are building fleets of new heavy bombers and submarines.

President Donald Trump has worked hard to undo much of Obama's legacy, but he has embraced the modernization program enthusiastically. Trump has ordered the Defense Department to complete a review of the U.S. nuclear arsenal by the end of this year.

Reuters reported in February that in a phone conversation with Russian President Vladimir Putin, Trump denounced the New START treaty and rejected Putin's suggestion that talks begin about extending it once it expires in 2021.

Some former senior U.S. government officials, legislators and arms-control specialists – many of whom once backed a strong nuclear arsenal -- are now warning that the modernization push poses grave dangers.

"REALLY DANGEROUS THINKING"

They argue that the upgrades contradict the rationales for New START - to ratchet down the level of mistrust and reduce risk of intentional or accidental nuclear war. The latest improvements, they say, make the U.S. and Russian arsenals both more destructive and more tempting to deploy. The United States, for instance, has a "dial down" bomb that can be adjusted to act like a tactical weapon, and others are planned.

"The idea that we could somehow fine tune a nuclear conflict is really dangerous thinking," says Kingston Reif, director of disarmament and threat reduction policy at the Arms Control Association, a Washington-based think tank.

One leader of this group, William Perry, who served as defense secretary under President Bill Clinton, said recently in a Q&A on YouTube that "the danger of a nuclear catastrophe today is greater than it was during the Cold War."

Perry told Reuters that both the United States and Russia have upgraded their arsenals in ways that make the use of nuclear weapons likelier. The U.S. upgrade, he said, has occurred almost exclusively behind closed doors. "It is happening without any basic public discussion," he said. "We're just doing it."

The cause of arms control got a publicity boost in October when the International Campaign to Abolish Nuclear Weapons, a Geneva organization, won the Nobel Peace Prize for its role in getting the United Nations General Assembly in July to adopt a nuclear prohibition treaty. The United States, Russia and other nuclear powers boycotted the treaty negotiations.

The U.S. modernization program has many supporters in addition to Trump, however. There is little or no pressure in Congress to scale it back. Backers argue that for the most part the United States is merely tweaking old weapons, not developing new ones.

Some say that beefed up weapons are a more effective deterrent, reducing the chance of war. Cherry Murray served until January as a top official at the Energy Department, which runs the U.S. warhead inventory. She said the reduction in nuclear weapon stockpiles under New START makes it imperative that Washington improve its arsenal.

During the Cold War, Murray said in an interview, the United States had so many missiles that if one didn't work, the military could simply discard it. With the new limit of 1,550 warheads, every one counts, she said.

"When you get down to that number we better make sure they work," she said. "And we better make sure our adversaries believe they work."

An Obama spokesman said the former president would not comment for this story. The Russian embassy in Washington did not respond to multiple requests for comment.

Asked about Trump's view on the modernization program, a spokeswoman for the White House National Security Council said the president's goal is to create a nuclear force that is "modern, robust, flexible, resilient, ready, and appropriately tailored to deter 21st-century threats and reassure our allies."

A BUDGET BUSTER?

The U.S. modernization effort is not coming cheap. This year the Congressional Budget Office estimated the program will cost at least $1.25 trillion over 30 years. The amount could grow significantly, as the Pentagon has a history of major cost overruns on large acquisition projects.

As defense secretary under Obama, Leon Panetta backed modernization. Now he questions the price tag.

"We are in a new chapter of the Cold War with Putin," he told Reuters in an interview, blaming the struggle's resumption on the Russian president. Panetta says he doubts the United States will be able to fund the modernization program. "We have defense, entitlements and taxes to deal with at the same time there are record deficits," he said.

New START is leading to significant reductions in the two rival arsenals, a process that began with the disintegration of the USSR. But reduced numbers do not necessarily mean reduced danger.

In 1990, the year before the Soviet Union collapsed, the United States had more than 12,000 warheads and the Soviets just over 11,000, an August 2017 Congressional Research Service report says. Soon the two countries made precipitous cuts. The 1991 START treaty limited each to somewhat more than 6,000 warheads. By 2009 the number was down to about 2,200 deployed warheads.

Tom Collina, policy director of the Ploughshares Fund, an arms control group, says that both Moscow and Washington are on track to meet the 1,550 limit by the treaty's 2018 deadline. The treaty, however, allows for fudging.

At Russia's insistence, each bomber is counted as a single warhead, no matter how many nuclear bombs it carries or has ready for use. As a result, the real limit for each side is about 2,000. Collina says the United States currently has 1,740 deployed warheads, and Russia is believed to have a similar number. Each side also has thousands of warheads in storage and retired bombs and missiles awaiting dismantlement.

The declining inventories mask the technological improvements the two sides are making. There is a new arms race, based this time not on number of weapons but on increasing lethality, says William Potter, director of nonproliferation studies at the Middlebury Institute of International Studies in Monterey, California.

“We are in a situation in which technological advances are outstripping arms control,” Potter says.

One example of an old weapon transformed into a more dangerous new one is America’s main hydrogen bomb. The Air Force has deployed the B61 bomb on heavy bombers since the mid-1960s. Until recently, the B61 was an old-fashioned gravity bomb, dropped by a plane and free-falling to its target.

THE MOST EXPENSIVE BOMB EVER

Now, the Air Force has transformed it into a controllable smart bomb. The new model has adjustable tail fins and a guidance system which lets bomber crews direct it to its target. Recent models of the bomb had already incorporated a unique “dial-down capacity”: The Air Force can adjust the explosion. The bomb can be set to use against enemy troops, with a 0.3 kiloton detonation, a tiny fraction of the Hiroshima bomb, or it can level cities with a 340-kiloton blast with 23 times the force of Hiroshima’s. Similar controls are planned for new cruise missiles.

The new B61 is the most expensive bomb ever built. At $20.8 million per bomb, each costs nearly one-third more than its weight in 24 karat gold. The estimated price of the planned total of 480 bombs is almost $10 billion.

Congress also has approved initial funding of $1.8 billion to build a completely new weapon, the “Long Range Stand-Off” cruise missile, at an estimated $17 billion total cost. The cruise missiles, too, will be launched from aircraft. But in contrast to stealth bombers dropping the new B61s directly over land, the cruise missiles will let bombers fly far out of range of enemy air defenses and fire the missiles deep into enemy territory.

Obama’s nuclear modernization began diverging from his original vision early on, when Republican senators resisted his arms reduction strategy.

Former White House officials say Obama was determined to get the New START treaty ratified quickly. Aside from hoping to ratchet down nuclear tensions, he considered it vital to assure continued Russian cooperation in talks taking place at the time with Iran over that country’s nuclear program. Obama also feared that if the Senate didn’t act by the end of its 2010 session, the accord might never pass, according to Gary Samore, who served four years as the Obama White House’s coordinator for arms control and weapons of mass destruction.

Obama hit resistance from then-Senator Jon Kyl, a Republican from Arizona. Kyl, the Senate’s minority whip, assembled enough Republicans to kill the treaty.

In e-mailed answers to questions, Kyl said he opposed the accord because Russia “cheats” on treaties and the United States lacks the means to verify and enforce compliance. Moscow’s deployment of new tactical weapons since 2014, he said, was a violation of the 1987 Intermediate Range Nuclear Forces Treaty. (Russia denies violating the treaty.) Kyl also faulted New START for omitting Russia’s large arsenal of tactical nuclear weapons for use on battlefields, a subject the Russians have refused to discuss.

But Kyl proved willing to let the treaty pass – for a price. In exchange for ratification, the White House would have to agree to massive modernization of the remaining U.S. weapons. Obama agreed, and the Senate passed the treaty on the last day of the 2010 session.

Samore, the former White House arms control coordinator, says Obama did not oppose taking steps to refurbish superannuated weapons. He just did not plan the costly decision to do it all at once, Samore said.

DESTABILIZING THE STATUS QUO

While the number of warheads and launch vehicles is limited by the treaty, nothing in it forbids upgrading the weaponry or replacing older arms with completely new and deadlier ones. Details of the modernized weapons show that both are happening.

The upshot, according to former Obama advisers and outside arms-control specialists, is that the modernization destabilized the U.S.-Russia status quo, setting off a new arms race. Jon Wolfsthal, a former top advisor to Obama on arms control, said it is possible to have potentially devastating arms race even with a relatively small number of weapons.

The New START treaty limits the number of warheads and launch vehicles. But it says nothing about the design of the "delivery" methods – land- and submarine-based ballistic missiles, hydrogen bombs and cruise missiles. Thus both sides are increasing exponentially the killing power of these weapons, upgrading the delivery vehicles so that they are bigger, more accurate and equipped with dangerous new features – without increasing the number of warheads or vehicles.

The United States, according to an article in the March 1 issue of the Bulletin of the Atomic Scientists, has roughly tripled the "killing power" of its existing ballistic missile force.

The article's lead author, Hans Kristensen, director of the Federation of American Scientists' Nuclear Information Project, said in an e-mail that he knows of no comparable estimate for Russia. He noted, however, that Russia is making its own extensive enhancements, including larger missiles and new launch vehicles. He said Russia also is devoting much effort to countering U.S. missile defense systems.

The U.S. modernization program "has implemented revolutionary new technologies that will vastly increase the targeting capability of the U.S. ballistic missile arsenal," Kristensen wrote in the article. "This increase in capability is astonishing."

Kristensen says the most alarming change is America's newly refitted submarine-launched Trident II missiles. These have new "fuzing" devices, which use sensors to tell the warheads when to detonate. Kristensen says that for decades, Tridents had inaccurate fuzes. The missiles could make a direct hit on only about 20 percent of targets. With the new fuzes, "they all do," he says.

Under New START, 14 of America's Ohio Class subs carry 20 Tridents. Each Trident can be loaded with up to 12 warheads. (The United States has four additional Ohio subs that carry only conventional weapons.) The Trident II's official range is 7,456 miles, nearly one-third the Earth's circumference. Outside experts say the real range almost certainly is greater. Each of its main type of warhead produces a 475-kiloton blast, almost 32 times that of Hiroshima.

RUSSIA'S DIRTY DRONE

Russia, too, is hard at work making deadlier strategic weapons. Ploughshares estimates that both sides are working on at least two dozen new or enhanced strategic weapons.

Russia is building new ground-based missiles, including a super ICBM, the RS-28 Sarmat. The Russian missile has room for at least 10 warheads that can be aimed at separate targets. Russian state media has said that the missile could destroy areas as large as Texas or France. U.S. analysts say this is unlikely, but the weapon is nonetheless devastatingly powerful.

Russia's new ICBMs have room to add additional warheads, in case the New START treaty expires or either side abrogates it. The United States by its own decision currently has only a single warhead in each of its ICBMS, but these too have room for more.

Russia has phased in a more accurate submarine-launched missile, the RSM-56 Bulava. While it is less precise than the new U.S. Tridents, it marks a significant improvement in reliability and accuracy over Russia's previous sub-based missiles.

A Russian military official in 2015 disclosed a sort of doomsday weapon, taking the idea of a "dirty bomb" to a new level. Many U.S. analysts believe the disclosure was a bluff; others say they believe the weapon has been deployed.

The purported device is an unmanned submarine drone, able to cruise at a fast 56 knots and travel 6,200 miles. The concept of a dirty bomb, never used to date, is that terrorists would spread harmful radioactive material by detonating a conventional explosive such as dynamite. In the case of the Russian drone, a big amount of deadly radioactive material would be dispersed by a nuclear bomb.

The bomb would be heavily "salted" with radioactive cobalt, which emits deadly gamma rays for years. The explosion and wind would spread the cobalt for hundreds of miles, making much of the U.S. East Coast uninhabitable.

A documentary shown on Russian state TV said the drone is meant to create "areas of wide radioactive contamination that would be unsuitable for military, economic, or other activity for long periods of time."

Reif of the Arms Control Association says that even if the concept is only on the drawing board, the device represents "really outlandish thinking" by the Russian government. "It makes no sense strategically," he said, "and reflects a really egregiously twisted conception about what's necessary for nuclear deterrence."

https://www.reuters.com/article/us-usa-nuclear-modernize-specialreport/special-report-in-modernizing-nuclear-arsenal-u-s-stokes-new-arms-race-idUSKBN1DL1AH

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US COUNTER-WMD

The Epoch Times (New York, NY)

Marines Conduct Training in Protective Gear Against Potential Chemical, Biological, or Nuclear Attack

By Matthew Little

November 24, 2017

U.S. Marines in Japan recently trained to keep their F-35B fighter jets running in simulated hazardous conditions like those that could arise during a nuclear war.

The exercises, conducted at Marine Corps Air Station Iwakuni, Japan, required soldiers in Marine Fighter Attack Squadron 121 to don special suits worn to protect soldiers from chemical and biological hazards.

The hot refueling exercise took place Nov. 15 with marines refueling F-35B Lightning II strike fighters while wearing level 4 Mission Oriented Protective Posture (MOPP4).

There are five levels of MOPP gear, ranging from MOPP0, which is used when there is just a threat of chemical or biological hazards to MOPP4, which includes much more gear and is worn during and after an actual attack.

The exercise let Marines refine their procedures and get familiar with working in the bulky suits.

"It's important to practice in MOPP gear because the Marines don't get many opportunities to wear this on a daily basis, so in the instance where they do have to wear MOPP gear in a real-life scenario, it's not going to be a shock or surprise to them of how they are going to operate," U.S. Marine Corps Staff Sgt. Martin Aldrete said in the release.

According to the Pacific Command, it is essential for troops to train for scenarios where lethal agents such as chemical, biological or radiological weapons could be involved.

One such scenario would be a nuclear war, where aircraft are scrambling to counteract enemy aircraft or attack ground forces threatening civilian populations.

One technique the military uses to keep jets in the air as much as possible is the "hot refuel."

This fast-paced refueling method allows the pilot to refuel with the engine still running, allowing them to get them back into the fight more quickly.

For the Marine Corps, being faster than the enemy is seen as vital, as is working quickly no matter the environment, said the release.

"It's important to be proficient with this because on the battlefield there's not much time to put aircraft in the air," said U.S. Marine Corps Gunnery Sgt. Joseph Michael Jones,

"Every second that we can save on that is possibly saving someone's life."

The exercise was conducted on the same day that the squadron got the last F-35Bs needed to complete their squadron.

MCAS Iwakuni, Japan, is now home to the world first operational squadron of the stealth fighter jet.

The jets are part of the U.S. military presence in Japan, a long-standing alliance that the Pentagon routinely describes as the bedrock of security and stability in the Asia Pacific.

The U.S. Pacific Command conducts frequent training exercises with Japan Self-Defence Forces, most recently sending an Avenger-class mine countermeasures ship to join Japanese ships in an annual mine countermeasures operation on Nov. 21.

"By working together, it helps ensure our two nations are jointly postured to maintain peace and stability for Japan and throughout the region," said Lt. Cmdr. Frederick Crayton, Chief executive officer in a statement.

Japan is also an F-35 operator, with plans to build around 40 of the air force variant of the jet in Japan. The first Japanese built F-35A recently crossed the Pacific for testing in the United States.

After testing, Japan can move forward with building the rest of its F35As.

https://www.theepochtimes.com/navy-trains-marines-to-refuel-running-fighter-jets-in-protective-gear-used-in-nuclear-scenarios_2365260.html

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The New York Times (New York, NY)

Downing North Korean Missiles is Hard. So the U.S. is Experimenting.

By David E. Sanger and William J. Broad

November 16, 2017

Buried in an emergency funding request to Congress lie hints of new ways to confront Pyongyang, like cyberweapons and armed drones.

WASHINGTON — Concerned that the missile defense system designed to protect American cities is insufficient by itself to deter a North Korean attack, the Trump administration is expanding its strategy to also try to stop Pyongyang's missiles before they get far from Korean airspace.

The new approach, hinted at in an emergency request to Congress last week for $4 billion to deal with North Korea, envisions the stepped-up use of cyberweapons to interfere with the North's control systems before missiles are launched, as well as drones and fighter jets to shoot them down moments after liftoff. The missile defense network on the West Coast would be expanded for use if everything else fails.

In interviews, defense officials, along with top scientists and senior members of Congress, described the accelerated effort as a response to the unexpected progress that North Korea has made in developing intercontinental ballistic missiles capable of delivering a nuclear bomb to the continental United States.

"It is an all-out effort," said Senator Jack Reed of Rhode Island, the top Democrat on the Senate Armed Services Committee, who returned from a lengthy visit to South Korea last month convinced that the United States needed to do far more to counter North Korea. "There is a fast-emerging threat, a diminishing window, and a recognition that we can't be reliant on one solution."

For years, that single solution has been the missile batteries in Alaska and California that would target any long-range warheads fired toward the American mainland, trying to shoot them down as they re-enter the atmosphere. Such an approach, known as "hitting a bullet with a bullet," remains of dubious effectiveness, even after more than $100 billion has been spent on the effort. Antimissile batteries on ships off the Korean coast and in South Korea protect against medium-range missiles, but not those aimed at American cities.

So the administration plans to pour hundreds of millions of dollars into the two other approaches, both of which are still in the experimental stage. The first involves stepped-up cyberattacks and other sabotage that would interfere with missile launches before they occur — what the Pentagon calls "left of launch." The second is a new approach to blowing up the missiles in the "boost phase," when they are slow-moving, highly visible targets.

President Trump has praised the existing missile defense system, insisting last month that it "can knock out a missile in the air 97 percent of the time," a claim that arms control experts call patently false. In trial runs, conducted under ideal conditions, the interceptors in Alaska and California have failed half of the time. And the Pentagon has warned administration officials that the North will soon have enough long-range missiles to launch volleys of them, including decoys, making the problem far more complex.

That helps explain the rush for new protections.

"They're looking at everything," said Thomas Karako, a senior fellow at the Center for Strategic and International Studies in Washington, who recently led two antimissile studies and closely monitors the administration's planning. "What you're seeing is a lot more options on the table."

The $4 billion emergency budget sought by the White House is on top of the $8 billion that the Missile Defense Agency has already been granted for this fiscal year, as well as what other military services and agencies are putting into missile defense. Another $440 million was moved from existing programs to antimissile work two months ago, as the North Korea threat became more serious.

In the emergency request to Congress, and in documents made public by its committees, the precise use of the funds is cloaked in deliberately vague language.

Hundreds of millions of dollars, for example, are allotted for what the documents called "disruption/defeat" efforts. Several officials confirmed that the "disruption" efforts include another, more sophisticated attempt at the kind of cyber and electronic strikes that President Barack Obama ordered in 2014 when he intensified his efforts to cripple North Korea's missile testing.

Using cyberweapons to disrupt launches is a radical innovation in missile defense in the past three decades. But in the case of North Korea, it is also the most difficult. It requires getting into the missile manufacturing, launch control and guidance systems of a country that makes very limited use of the internet and has few connections to the outside world — most of them through China, and to a lesser degree Russia.

In the operation that began in 2014, a range of cyber and electronic-interference operations were used against the North's Musudan intermediate-range missiles, in an effort to slow its testing. But that secret effort had mixed results.

Defending Against a North Korean Missile

The failure rate for the Musudan missile soared to 88 percent, but it was never clear how much of that was due to the cyberattacks and how much to sabotage of the North's supply chain and its own manufacturing errors. Then Kim Jong-un, the country's president, ordered a change in design, and the test-launches have been far more successful.

The experience has raised difficult questions about the effectiveness of cyberweapons, despite billions of dollars in investment. "We can dream of a lot of targets to hack," said Michael Sulmeyer, director of the Cyber Security Project at Harvard and formerly the director for cyberpolicy planning and operations in the office of the defense secretary. "But it can be hard to achieve the effects we want, when we want them."

Congressional documents also talk of making "additional investments" in "boost-phase missile defense." The goal of that approach is to hit long-range missiles at their point of greatest vulnerability — while their engines are firing and the vehicles are stressed to the breaking point, and before their warheads are deployed.

Defense Secretary Jim Mattis is also weighing, among other boost-phase plans, formulas that draw on existing technologies and could be deployed quickly.

One idea is having stealth fighters such as the F-22 or the F-35 scramble from nearby bases in South Korea and Japan at the first sign of North Korean launch preparations. The jets would carry conventional air-to-air missiles, which are 12 feet long, and fire them at the North Korean long-range missiles after they are launched. But they would have to fly relatively close to North Korea to do that, increasing the chances of being shot down.

A drawback of boost-phase defense is the short window to use it. Long-range missiles fire their engines for just five minutes or so, in contrast to warheads that zip through space for about 20 minutes before plunging back to earth. And there is the risk of inviting retaliation from North Korea.

"You have to make a decision to fire a weapon into somebody's territory," Gen. John E. Hyten of the Air Force, commander of the United States Strategic Command, which controls the American nuclear missile fleet, recently told a Washington group. "And if you're wrong, or if you miss?"

A boost-phase idea getting much notice would be to have drones patrol high over the Sea of Japan, awaiting a North Korean launch. Remote operators would fire heat-sensing rockets that lock onto the rising missiles.

"It's a huge advance," Gerold Yonas, chief scientist for President Ronald Reagan's "Star Wars" program, said of the drone plan. "It's one of those things where you hit yourself on the forehead and say, 'Why didn't I think of that?'"

Leonard H. Caveny, a main planner of the rocket-firing drones and a former Navy officer who directed science and technology at the Pentagon's antimissile program from 1985 to 1997, said an accelerated program could produce the weapons in a year or less.

Dr. Caveny's team is considering use of the Avenger, a drone made by General Atomics that has a wingspan of 76 feet. "This is going to be a game changer," said Arthur L. Herman, a senior fellow at the Hudson Institute in Washington, who collaborates with Dr. Caveny.

The Pentagon's Missile Defense Agency is also developing a drone that would fire potent laser beams at rising missiles. But recent plans would have it make its debut no sooner than 2025 — too late to play a role in the current crisis or the Trump presidency.

Even so, the effort has influential backers. In the recent talk, General Hyten of Strategic Command called lasers much better than interceptor rockets because they avoided questions over firing weapons into sovereign territories, especially to knock out missile test-flights.

A potent beam of highly concentrated light, he said, "goes out into space," avoiding the trespassing issue.

In recent months, Congress has urged Pentagon officials to develop both varieties of drones.

Theodore A. Postol, a professor emeritus of science and national security policy at M.I.T. who has drawn up plans for a missile-firing drone, argued that fleets of such weapons patrolling near the North, threatening to undo its strategic forces, would be extremely intimidating and create new diplomatic leverage.

"We need it now," he said. "My concern is that we get something out there quickly that will pressure North Korea to negotiate."

https://www.nytimes.com/2017/11/16/us/politics/north-korea-missile-defense-cyber-drones.html

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Global Biodefense (Seattle, WA)

DoD Seeks to Develop Advanced Anticholinergic with Increased Efficacy Against Nerve Agents

Author Not Attributed

November 27, 2017

Therapeutic pharmaceuticals against chemical, biological, radiological and nuclear (CBRN) warfare agents are required to support the Joint Forces across a range of military operations. As such, the

U.S. Department of Defense (DoD) has a need for developing and fielding systems that provide treatment for exposure to CBRN agents.

The DoD is repurposing scopolamine hydrobromide trihydrate as a centrally-acting adjunct therapy that would be administered in conjunction with the Antidote Treatment – Nerve Agent, Auto-Injector (ATNAA) upon exposure of an individual to a nerve agent.

Scopolamine readily crosses the blood-brain barrier and acts as a competitive antagonist at muscarinic acetylcholine receptors. It is intended to improve survivability and medical treatment outcomes against the central symptoms of current and emerging nerve agent threats.

If the Improved Nerve Agent Treatment System (INATS) – Scopolamine effort is successful, scopolamine will supplement existing medical countermeasures in a single chambered autoinjector similar to the Atropen.

One objective of the INATS is to develop an improved nerve agent treatment regimen consisting of a centrally-acting anticholinergic to treat the central symptoms of nerve agent poisoning.

This development effort requires the repurposing of scopolamine to include but not limited to:

- Formulation, stability and compatibility studies
- Non-clinical and clinical studies
- Manufacturing process development
- Large-scale manufacturing
- Preparation and submission of a New Drug Application (NDA)

A Request for Information (RFI) has been issued for the INATS effort by the Joint Product Manager for Chemical Defense Pharmaceuticals (JPdM CDP) at the Joint Program Executive Office for Chemical and Biological Defense (JPEO CBD) Medical Countermeasures Systems (MCS).

All capable providers, particularly members of the CBRN Medical Countermeasures Defense Consortium are encouraged to respond. Respondents not already members of the consortium are encouraged to join at www.medcbrn.org.

All written responses must be received by 30 November 2017 11:59 pm Eastern. Further details are available at FedBizOpps Solicitation Number: W15QKN-18-X-00O0.

https://globalbiodefense.com/2017/11/27/dod-seeks-develop-advanced-anticholinergic-increased-efficacy-nerve-agents/

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Defense News (Vienna, VA)

Countering North Korea: Congress Authorizes Major Buildup in Homeland Missile Defense

By Jen Judson

November 18, 2017

WASHINGTON — As fear of missiles from North Korea and Iran reaching U.S. soil heighten, Congress wants to ensure what is already on the ground at Fort Greely, Alaska, and Vandenberg Air Force Base, California, can defeat threats now and into the future.

The conference report of the fiscal year 2018 defense policy bill authorizes the defense secretary — subject to what is appropriated — to increase the number of ground-based interceptors by up to 28.

The 44th and final GBI — under the current requirement — for the GMD system was put in place at Fort Greely Nov. 2.

The Pentagon and the MDA have indicated in recent months a serious move to build up beyond 44 interceptors. In September, the Pentagon proposed reprogramming $136 million in fiscal 2017 to start raising the number of ground-based interceptors from 44 to 64 in a new Missile Field 4 at Fort Greely. The boost was part of a $416 million reprogramming request targeting missile defense needs.

And the White House submitted a supplemental budget request for FY18 on Nov. 6 that asked for further funding to increase the number of ground-based interceptors by 20 and to build an additional missile field at the Alaska base.

The conference report requires the defense secretary to develop a plan to increase the capacity, noting the currently available space in the missile fields could fit 104 GBIs. The secretary should also draft out a plan for future capacity at any site identified in the BMDR.

By the end of calendar year 2021, the Pentagon must execute any construction required to ensure the missile fields at Fort Greely or alternative missile fields there are capable of supporting and sustaining additional interceptors, the report states.

And the legislation requires the Pentagon to deploy up to 20 additional GBIs at Fort Greely "as soon as technically feasible."

The Pentagon will have 90 days after the date the ballistic missile defense review is published to submit a report on options to increase the capacity, capability and reliability of the Ground-Based Midcourse Defense system and infrastructure requirements for increasing the number of GBIs "in currently feasible locations across the United States." The BMDR is due by the end of the year and is meant to be an all-encompassing look at the current and future ballistic missile defense posture to keep pace against anticipated threats, particularly from North Korea and Iran.

That Pentagon report should detail potential sites from existing to new sites on the East Coast or Midwest to accommodate 104 GBIs.

Congress required MDA to study three possible additional GMD sites in its fiscal 2013 National Defense Authorization Act and the MDA was set to choose a preferred site by the end of 2016. However, with the launch of the BMDR, that process has been on hold.

In choosing an additional site, Congress states in the conference report, that the Pentagon must consider strategic and operational effectiveness, including having "the capability to provide shoot-assess-shoot coverage to the entire continental United States."

While capacity is on the rise, Congress also said the Pentagon must ensure the reliability and capability of the current system and its ongoing upgrades.

Lawmakers will withhold up to $50 million for the GMD system until the MDA submits written certification to congressional defense committees that the risk of mission failure of the GBI's enhanced kill vehicle "due to foreign object debris has been minimized," the report states.

https://www.defensenews.com/congress/2017/11/17/countering-north-korea-hill-authorizes-major-buildup-in-homeland-missile-defense/

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US ARMS CONTROL

Reuters (New York, NY)

Special Report – Nuclear Strategists Call for Bold Move: Scrap ICBM Arsenal

By Scot J. Paltrow

November 22, 2017

WASHINGTON (Reuters) - Imagine it is 3 a.m., and the president of the United States is asleep in the White House master bedroom. A military officer stationed in an office nearby retrieves an aluminum suitcase - the "football" containing the launch codes for the U.S. nuclear arsenal - and rushes to wake the commander in chief.

Early warning systems show that Russia has just launched 100 intercontinental ballistic missiles (ICBMs) at the United States, the officer informs the president. The nuclear weapons will reach U.S. targets in 30 minutes or less.

Bruce Blair, a Princeton specialist on nuclear disarmament who once served as an ICBM launch control officer, says the president would have at most 10 minutes to decide whether to fire America's own land-based ICBMs at Russia.

"It is a case of use or lose them," Blair says.

A snap decision is necessary, current doctrine holds, because U.S. missile silos have well-known, fixed locations. American strategists assume Russia would try to knock the missiles out in a first strike before they could be used for retaliation.

Of all weapons in the U.S. nuclear arsenal, the ICBM is the one most likely to cause accidental nuclear war, arms-control specialists say. It is for this reason that a growing number of former defense officials, scholars of military strategy and some members of Congress have begun calling for the elimination of ICBMs.

They say that in the event of an apparent enemy attack, a president's decision to launch must be made so fast that there would not be time to verify the threat. False warnings could arise from human error, malfunctioning early warning satellites or hacking by third parties.

Once launched, America's current generation of ICBM missiles, the Minuteman III, cannot be recalled: They have no communication equipment because the United States fears on-board gear would be vulnerable to electronic interference by an enemy.

These critics recommend relying instead on the other two legs of the U.S. nuclear "triad": submarine-launched ballistic missiles, and heavy bombers armed with hydrogen bombs or nuclear-warhead cruise missiles. The president would have more time to decide whether to use subs or bombers.

Bombers take longer to reach their targets than ICBMs and can be recalled if a threat turns out to be a false alarm. Nuclear missile subs can be stationed closer to their targets, and are undetectable, so their locations are unknown to U.S. adversaries. There is virtually no danger the subs could be knocked out before launching their missiles.

"ANTIQUATED" ARSENAL

Among the advocates of dismantling the ICBM force is William Perry, defense secretary under President Bill Clinton. In a recent interview, Perry said the U.S. should get rid of its ICBMs because "responding to a false alarm is only too easy." An erroneous decision would be apocalyptic, he said. "I don't think any person should have to make that decision in seven or eight minutes."

Leon Panetta, who served as defense secretary during the Barack Obama administration, defended the triad while in office. But in a recent interview he said he has reconsidered.

“There is no question that out of the three elements of the triad, the Minuteman missiles are at a stage now where they’re probably the most antiquated of the triad,” he said.

The risk of launch error is even greater in Russia, several arms control experts said. The United States has about 30 minutes from the time of warning to assess the threat and launch its ICBMs. Russia for now has less, by some estimates only 15 minutes.

That is because after the Cold War, Russia didn’t replace its early warning satellites, which by 2014 had worn out. Moscow now is only beginning to replace them. Meanwhile it relies mainly on ground-based radar, which can detect missiles only once they appear over the horizon.

In contrast, the United States has a comprehensive, fully functioning fleet of early warning satellites. These orbiters can detect a Russian missile from the moment of launch.

The doubts about the ICBM force are circulating as the world faces its most serious nuclear standoff in years: the heated war of words over Pyongyang’s growing atomic weapons program between Trump and North Korean leader Kim Jong-Un. U.S.-Russian nuclear tensions have increased as well.

The questioning of the missile fleet also comes as the United States pursues a massive, multi-year modernization of its nuclear arsenal that is making its weapons more accurate and deadly. Some strategists decry the U.S. upgrade - and similar moves by Moscow - as dangerously destabilizing.

Skeptics of the modernization program also have cited the new U.S. president’s impulsiveness as further reason for opposing the hair-trigger ICBM fleet. The enormously consequential decision to launch, said Perry, requires a president with a cool and rational personality. “I’m particularly concerned if the person lacks experience, background, knowledge and temperament” to make the decision, he said.

This month, the Senate Foreign Relations Committee held a hearing to discuss the president’s authority to launch a first-strike nuclear attack. Democratic Sen. Ed Markey of Massachusetts has called for that authority to be curbed, though such a break with decades of practice doesn’t have broad support.

“Donald Trump can launch nuclear codes just as easily as he can use his Twitter account,” said Markey. “I don’t think we should be trusting the generals to be a check on the president.”

THE NORTH KOREAN THREAT

A spokesperson for the White House National Security Council dismissed any suggestion that Trump lacks the skills to handle the arsenal. “The president is pre-eminently prepared to make all decisions regarding the employment of our nuclear forces,” she said.

Doubts about ICBMs predated the change of administrations in Washington.

ICBMs, detractors say, are largely useless as a deterrent against threats such as North Korea. They argue the land-based missiles can be fired only at one conceivable U.S. adversary: Russia.

That’s because, to reach an adversary such as North Korea, China or Iran from North America, the ICBMs would have to overfly Russia - thus risking an intentional or accidental nuclear response by Moscow. (A small number of U.S. ICBMs are aimed at China, in case Washington finds itself at war with both Moscow and Beijing.)

Despite the rising criticism, for now there is little chance America will retire its ICBM fleet. To supporters, eliminating that part of the triad would be like sawing one leg off a three-legged stool.

Presidents Obama and now Donald Trump have stood by them. There is little interest in Congress to consider dismantlement.

Well before Trump picked him to be defense secretary, General James Mattis raised questions about keeping the U.S. ICBM force, in part because of dangers of accidental launch. In 2015 he told the Senate Armed Services Committee: "You should ask, 'Is it time to reduce the triad to a dyad removing the land-based missiles?'"

In his Senate confirmation hearing as defense secretary, Mattis said he now supports keeping ICBMs. They provide an extra layer of deterrence, he said, in hardened silos.

The National Security Council spokesperson said no decision had been made on keeping ICBMs. She noted that the president has ordered a review by the end of this year of U.S. nuclear policy, and no decision will be made until then.

ICBMs are part of the overall U.S. nuclear modernization program, which is expected to cost at least $1.25 trillion over 30 years. The missiles are being refurbished and upgraded to make them more accurate and lethal. And the United States is building a new class of ICBMs to be fielded around 2030.

The Air Force has confirmed that the current refurbished Minuteman IIIs have improved guidance systems and a bigger third-stage engine, which make them more precise and able to carry bigger payloads.

BRUSHES WITH ARMAGEDDON

The U.S. nuclear missile force dates back to the 1950s. Lacking expertise in making rockets, the United States after World War II scoured Germany for the scientists who had built the V2 rockets Germany fired on England. Under a secret plan, Washington spirited scientists such as Wernher von Braun, later considered the father of American rocketry, out of Germany, away from possible war crimes prosecution, in exchange for helping the United States.

By 1947 the Cold War was on. The former Nazi rocket designers would help America build super-fast, long-range missiles that could rain nuclear warheads on the Soviet population.

The program began slowly. That changed on October 4, 1957. The Soviet Union launched Sputnik, a small satellite, into Earth orbit, beating the United States into space. For the Pentagon, the most significant fact was that Sputnik had been launched by an ICBM capable of reaching the U.S. homeland. The United States put its missile program into overdrive, launching its own ICBM in November 1959.

The ICBMs' advantage over bombers was that they could reach their targets in 30 minutes. Even bombers taking off from European bases could take hours to reach their ground zeroes.

By 1966, once an order was given to missile crews, pre-launch time was minimized to five minutes. This resulted from a change in fuel. Before, liquid fuel powered ICBMs. In a lengthy process, it had to be loaded immediately before launch. The invention of solid fuel solved the problem. It was installed when the missile was built, and remained viable for decades.

One reason arms specialists worry about the ICBM force is that the United States and Russia have come close to committing potentially catastrophic errors multiple times.

In 1985, for example, a full nuclear alert went out when a U.S. Strategic Command computer showed that the Soviet Union had launched 200 ICBMs at the United States. Fortunately, Perry recounts in his book, "My Journey at the Nuclear Brink," the officer in charge realized there was a fault in the computer and that no missiles had been launched. The problem was traced to a faulty circuit board, but not before the same mistake happened two weeks later.

In 1995, then-Russian president Boris Yeltsin had his finger on the button, because the Russians had detected a missile launched from Norway, which they assumed to be American. Russian officials determined just in time that it was not a nuclear missile.

They later learned it was a harmless scientific-research rocket. Norway had warned Russia well in advance of the launch - but the information was never passed on to radar technicians.

https://www.reuters.com/article/us-usa-nuclear-icbm-specialreport/special-report-nuclear-strategists-call-for-bold-move-scrap-icbm-arsenal-idUSKBN1DM1D2

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ABC News (New York, NY)

US: Syria Poses Threat to Global Chemical Weapons Ban

By Mike Corder

November 27, 2017

The United States warned Monday that efforts to uphold the global ban on the production and use of chemical weapons are at a "critical juncture" in the wake of their use during Syria's civil war.

As the Syrian government and its allies seek to discredit conclusions by international investigators that Damascus has repeatedly used such weapons, Andrea Hall of the U.S. National Security Council said the ban on chemical weapons, such as nerve agents and poison gas, is now under threat.

"We must take every opportunity to deter states from using chemical weapons," Hall said. "If we fail to take action now, non-state actors use will also rise."

Hall was speaking on the opening day of the annual conference of state parties to the Organization for the Prohibition of Chemical Weapons, which won the 2013 Nobel Peace Prize for overseeing the global ban on weapons, such as nerve agents and poison gas.

"Chemical weapons use by the Syrian Arab Republic remains the most serious violation of the CWC in the convention's 20-year history and the greatest modern challenge to the global norm against chemical weapons use," Hall told delegates in The Hague.

A joint investigation team made up of OPCW and UN experts has concluded that the Syrian government used chlorine gas in at least two attacks in 2014 and 2015, and used the nerve agent sarin in an aerial attack on Khan Sheikhoun last April 4 that killed about 100 people and affected about 200 others.

The team also accused the Islamic State extremist group of using mustard gas in 2015 and again in September 2016 in Um Hosh in Aleppo.

Russia, Syria's staunch ally, recently vetoed a United Nations Security Council resolution that would have extended the mandate of the UN-OPCW Joint Investigative Mission. That mandate expired earlier this month,

Syrian Deputy Foreign Minister Faisal Mekdad branded the investigation unprofessional and biased.

"So we are always seeing politicized reports, false conclusions aiming to bring even more pressure to bear on Syria," he said.

British Ambassador Peter Wilson echoed U.S. concerns, saying that the chemical weapons convention "is under unprecedented attack."

Hall also rejected Syria's criticism of the UN-OPCW investigation team, saying that the team had produced, "serious, thorough, technical and compelling reports."

http://abcnews.go.com/International/wireStory/us-syria-poses-threat-global-chemical-weapons-ban-51410633

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The War Zone (Tampa, FL)

US Threatens Its Own Treaty-Busting Missile Development in Response to Russian Violations

By Joseph Trevithick

November 18, 2017

The United States hopes the threat will pressure the Russians back into complying with the Cold War deal.

The U.S. government appears to be pushing ahead with plans to at least look into what it would take to build a new ballistic or cruise missile that would violate the terms of the Intermediate-Range Nuclear Forces Treaty, or INF. The ostensible goal of the program is to goad Russia back into compliance with the Cold War-era agreement, but it could simply reinforce the Kremlin's argument that the deal has become increasingly irrelevant.

On Nov. 17, 2017, The Wall Street Journal reporte that U.S. military had started researching a missile that would fit the parameters expressly prohibited under the INF. The United States and the Soviet Union signed the treaty in 1989, which banned the possession of any land-based conventional or nuclear-capable missile of any kind that had a maximum range of between 310 and 3,420 miles.

The United States is already of the view that Russia has violated the deal by deploying a new long-range cruise missile – known variously by its Russian nomenclature 9M729, the U.S. military designation SSC-8, and the NATO nickname Screwdriver – that experts believe has a range of more than 1,000 miles and maybe even more than 1,500 miles. A version of the existing road-mobile 9K720 Iskander transporter-erector-launcher (TEL) is the launch platform for the weapon. In February 2017, The New York Times reported, citing unnamed U.S. government officials, that the Kremlin had two full battalions armed with this weapon, one of which was an operational unit. The Russians swiftly denied the report.

In developing a complementary system, “the idea here is we need to send a message to the Russians that they will pay a military price for violation of this treaty,” an unnamed U.S. government told The Wall Street Journal. “We are posturing ourselves to live in a post-INF world … if that is the world the Russians want.”

Before the INF came into force, both the United States and the Soviet Union operated a variety of missile systems within its range parameters. In complying with its terms, the U.S. Army eliminated its remaining Pershing Ia ballistic missiles in storage and its operational Pershing II systems. The U.S. Air Force scrapped the BGM-109G Gryphon Ground Launched Cruise Missile (GLCM) version of the iconic Tomahawk cruise missile.

Technically, it would likely require minimal effort for the U.S. military to develop, build, and field a new system that matches the basic capabilities of the Pershing II or Gryphon. These are well understood systems at their most basic level. At the same time, the United States is already in the process of developing new close-range and intercontinental ballistic missiles (ICBM), as well as air-

launched cruise missiles, and related technology to make them more less vulnerable physical countermeasures and cyber attacks and more reliable overall.

One relatively easy course of action would be to simply have defense contractor Raytheon increase the range of the DeepStrike missile it is already developing for the U.S. Army for use in its tracked M270 Multiple Launch Rocket System (MLRS) and wheeled M142 High Mobility Artillery Rocket System (HIMARS) launchers. This weapon will already have the maximum allowable range allowed under the INF and will replace the older Army Tactical Missile System (ATACMS).

Another possibility would be to either expand the U.S. Air Force's Long Range Stand-Off (LRSO) cruise missile program to include a ground-launched configuration or plan a parallel project to develop a land-based derivative. At present, Raytheon and Lockheed Martin are competing to build this weapon. LRSO's specific range requirement is classified, but as an air-launched system it is already not subject to the INF.

The United States could also choose to research and develop a sufficiently long-range land-based missile and hold that information in reserve if it ever decided to abrogate the INF itself. It is the position of the U.S. government that simply studying the design for such a weapon or even conducting developmental work does not violate the treaty.

Congress appears to be entirely on board with this plan. The most recent version of the National Defense Authorization Act for the 2018 fiscal year includes $58 million in funds to both develop defensive countermeasures against the SSC-8, but also to establish a program of record for what it describes as an "INF Range Ground-Launched Missile System."

"The conferees note that the INF Treaty prohibits testing and deployment of ground-launched intermediate-range missile systems, but it does not prohibit research and development," the conference report notes. "The conferees do not intend for the United States to enter into a violation of the INF Treaty so long as the treaty remains in force, and nothing in this provision should be construed to force the United States into a violation of the treaty."

But therein lies one of, if not the central issues at play. For more than a decade now, Russia has made it abundantly clear that it no longer feels the missile treaty serves its interests and has in many ways already suggested that it is living in a "post-INF world."

In 2007, Russian President Vladimir Putin openly questioned the future of the treaty and said his country would pull out of the deal if the United States went ahead with plans to install Ground-based Mid-course Defense (GMD) ballistic missile interceptors in Europe. The U.S. government changed course and adopted a plan to deploy sea-based Aegis Ballistic Missile Defense (BMD) and land-based Aegis Ashore systems instead.

At the same time, though, the Kremlin had noted that other countries were not restricted by the INF and the treaty's existence had not slowed world-wide proliferation of missiles that fit its range requirements. The only other party to eliminate part of their arsenal after the arrangement came into force was Germany, which destroyed its Pershing 1a missiles voluntarily in 1991. This was a relatively easy decision on their part, as the United States was no longer positioned to help support and maintain these weapons and with the reunification of East and West Germany and end of the Cold War, there appeared to be little need for the missiles anyways.

The rest of the world has apparently taken a different view. The list of countries that have or are working on weapons that would be banned under the INF is long and includes, but is not limited to China, India, Iran, Israel, North Korea, Pakistan, and South Korea. In a particularly odd juxtaposition, earlier in 2017, the U.S. government offered to help its South Korean counterparts develop new longer-range ballistic missiles that American forces would themselves be unable to employ.

On top of that, Russian authorities have long criticized the eastward expansion of NATO to include numerous former Soviet Republics and countries that were once part of the Soviet-led Warsaw Pact. Also in 2007, Russian Vladimir Putin announced that his country had put a "moratorium" on its participation in the Treaty on Conventional Armed Forces in Europe, or CFE, which limited the number of troops the Kremlin could position directly along its western borders. In 2015, Putin's government announced it had completely abandoned the arrangement.

This followed Russia's seizure of Ukraine's Crimea region the year before and coincided with increasingly active support for a separatist insurgency in that country's eastern Donbass region. Putin subsequently adopted an overarching military doctrine that labeled the United States and NATO as threats.

More recently, the United States has begun to accuse Russia of abusing the terms of the Open Skies Treaty, which allows member states to fly limited surveillance missions with prior notice over each others' territory. The principle is that by allowing foreign countries to observe one's peacetime military movements and strategic posture, they are less likely to fear that a sneak attack could be in progress, helping to promote stability.

Under the agreement, signatories are limited to relatively low-fidelity cameras since the missions are for monitoring, not intelligence gathering purposes. Russia has especially irked the United States by making formal requests to upgrade the sensor packages on its Tu-214ON Open Skies aircraft. Critics of the plan had called for curtailing or ending the deal on the grounds that the Russians are exploiting the goodwill inherent in the deal. The Kremlin denies it is doing anything besides upgrading obsolete equipment and advocates for the treaty say that the United States could easily follow suit and increase its own overflights of Russian territory.

Beyond the camera issue, Russia has outright violated Open Skies basic tenants by restricting flights over its Kaliningrad enclave on the Baltic Sea. As with INF, the United States similarly chose to attempt to coerce the Kremlin into complying with Open Skies by announcing its own restrictions on Russian observation sorties over Washington, D.C. and parts of Alaska in September 2017. The latter are is likely to be more important to the Russians, since it is home to GMD ballistic missile defense interceptors at Fort Greely, which they see as a threat to their nuclear deterrent.

It is into this world that Russia has deployed the SSC-8, which fits with a broad "anti-access/area denial" strategy of attempting to limit its opponents' ability to challenge its revanchist foreign policy moves, especially in Europe. Though some have questioned why the Russian military would even need an INF-breaking weapon given its significant ICBM and air-launched cruise missile capabilities, relatively cheap, road-mobile systems offer greater flexibility and might, in some ways, present a more immediate threat.

In February, amid reports that SSC-8 had become operational, The War Zone's own Tyler Rogoway wrote:

"Russia, which has become an adept player at using their easily deployed missile systems— namely their S-400 air defense system, Iskander short-range ballistic missile system, and Bastion coastal defense system—as strategic "anti-access/area denial chess pieces in Syria, Crimea and in Europe. Yet all these systems have a range of less than 300 miles, treaty defined or not, giving them formidable but still limited reach.

"If the SSC-8 were deployed among these systems, Russia could strike targets across entire continents, not just across a border or two. Considering Russia's missile-heavy foreign policy playbook, you can see why such a capability would be attractive, especially in an effort to level the playing field against a coalition with advanced airpower and naval systems like NATO.

…

"If Russia could deploy large numbers of these missiles, possibly both conventionally and nuclear armed, along their western border, as well as in the enclave of Kaliningrad and in Crimea, it would give Moscow a massive precision strike capability that can range across Europe, something that by and large Russia's tactical air forces continue to lack.

"Fielding large quantities of road-mobile, conventionally armed land-based cruise missiles is also a relatively cheap proposition, at least in terms of the alternative. After the initial acquisition cost of the missiles and their transporter-erector-launchers (TELs), upkeep and training is just a tiny fraction of the cost of a high-end combat aircraft. And even those are not as survivable and do not possess the range of land attack cruise missile."

In addition, there have been reports that the Kremlin is increasingly willing to entertain the use of limited nuclear strikes to try and dissuade opponents from getting involved in or escalating a future crises in Europe or elsewhere, an idea commonly referred to as "escalating to de-escalate." And though experts have disputed just how heavily invested the Russians actually are in such a strategy, a nuclear-capable SSC-8 would certainly mesh well with the concept.

As such, it's hard to see how an American threat to violate the same treaty the Russians have already decided to ignore would necessarily upend this calculus. Whether real or imagined, the Kremlin's decision to field the SSC-8 appears to be a direct response to the threats it sees arrayed around its borders.

This weapon isn't the only such system in the works, either. Since at least 2011, Russia has been testing the RS-26 Rubezh, a truncated version of the larger RS-24 Yars, which it says is also an ICBM and therefore not subject to the INF. However, the Kremlin has reportedly conducted at least two tests at ranges covered under the treaty, implying that the Russians are obscuring its true capabilities.

Given what has already happened with Open Skies and the CFE, the U.S. government has become increasingly worried that this steady eroding of INF could lead to similar Russian actions toward other significant arms control agreements, especially those limiting nuclear weapon stockpiles and delivery platforms. There is some indication that this has already occurred with regards to the RS-24 Yars ICBM itself, which the United States disputes is an all new design.

Under the provisions of the Strategic Arms Reduction Treaty (START), Russia and the United States are limited in how many nuclear warheads can be associated with ICBMs and could not increase the total number of weapons on existing missiles. Though almost certainly just a subvariant of the earlier RS-12M Topol-M, Yars features so-called "multiple independently targetable reentry vehicles," or MIRV configuration, with multiple warheads.

There is still the possibility that the relative proximity of an American INF-violating system, even a conventional one, forward deployed in Europe, could drive them back to working within the deal's parameters. Experts largely understand the threat of a prompt conventional strike on Moscow to have been one of the key reasons for the creation of the treaty in the first place.

"Moscow is most worried about conventional strike systems, particularly intermediate range systems that could decapitate its leadership," Elbridge Colby, then the Robert M. Gates fellow at the Center for New American Security, posited in 2014, shortly after Russian takeover in Crimea. "It won't hurt to remind Moscow that it agreed to the treaty because it feared the U.S. deployment of intermediate range systems that could reach Moscow in only a few minutes."

In May 2017, Colby received an appointment to become Deputy Assistant Secretary of Defense for Strategy and Force Development. The Pentagon now seems to increasingly have a view that this course of action has a good chance encouraging Russia to change its mind on the SSC-8.

"We have a firm belief, now, over several years, that the Russians have violated the INF," Secretary of Defense James Mattis told reporters during a meeting of senior NATO defense officials in Brussels earlier in November 2017. "And our effort is to bring Russia back into compliance."

Since it refuses to officially confirm it has abandoned the INF treaty, denies it has fielded the SSC-8 at all, and insists that the RS-26 is an ICBM, Russia could easily decide to step back from its current plans without losing face politically. At the same time, though, it would have decide it is worth trading these capabilities for an American threat that may or may not even come.

http://www.thedrive.com/the-war-zone/16216/us-threatens-its-own-treaty-busting-missile-development-in-response-to-russian-violations

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The Hill (Washington, DC)

Defense Bill Wouldn't Limit Extension of Arms Treaty with Russia

By Rebecca Kheel

November 9, 2017

The final version of an annual defense policy bill wouldn't limit the extension of an arms control treaty with Russia, but would require a plan to respond to any violations of the treaty.

"While the Russian Federation appears to be moving toward compliance with the limits laid out by the New START Treaty, the Russian Federation cannot be allowed to comply only with treaties that suit its interests and violate those that do not," House and Senate negotiators wrote in a conference report released Thursday. "Treaties are not negotiated and ratified independently but in the context of the range of arms control agreements in force."

The 2010 New START Treaty requires both the United States and Russia to draw down to 1,550 deployed nuclear warheads by February 2018. It's due for extension in 2021.

President Trump has dismissed the treaty as one of former President Obama's "bad deals," calling it "a one-sided deal."

The House-passed version of the National Defense Authorization Act (NDAA) would have banned funds from being used to extend the New START treaty unless the president certifies that Russia is in compliance with a separate arms treaty, known as the Intermediate-range Nuclear Forces (INF) Treaty.

The INF Treaty is a landmark 1987 deal between Russia and the United States that bans ground-launched ballistic and cruise missiles with ranges between 500 and 5,500 kilometers. The United States has accused Russia of violating the deal multiple times, including by deploying a nuclear-tipped cruise missile.

The NDAA would address Russia's violations of the INF Treaty by authorizing $58 million to respond to the violations, including with research and development of a U.S. ground-launched cruise missile system.

But the ban on funding to extend New START was taken out.

A separate provision that was also in the House-passed bill was retained. That provision would require the president to give Congress a plan to address any potential failure of Russia to comply with the treaty by the 2018 deadline, including a look at potential sanctions, diplomacy or redeployment of U.S. nuclear forces beyond New START levels.

The NDAA conference report said that negotiators remain “frustrated” with Russia’s violations of the INF Treaty.

“As the expiration date of the New START Treaty approaches,” the report said, “the conferees urge the president and the members of the National Security Council to carefully consider whether extending the treaty, if Russia is still in violation of the INF Treaty, is in the national interest of the United States.”

http://thehill.com/policy/defense/359709-defense-bill-would-not-limit-extension-of-arms-treaty-with-russia

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ASIA/PACIFIC

Voice of America (Washington, DC)

North Korea Fires Ballistic Missile

Author Not Attributed

November 28, 2017

North Korea launched an intercontinental ballistic missile Tuesday that traveled about 1,000 kilometers (620 miles), the U.S. Department of Defense confirmed.

The department "detected and tracked a single North Korea missile launch today at about 1:17 p.m. EDT. Initial assessment indicates that this missile was an intercontinental ballistic missile (ICBM)," a statement by Pentagon spokesman Colonel Robert Manning said.

The statement added that the missile "did not pose a threat to North America, our territories or our allies."

The United States was "not surprised" by the development, a U.S. intelligence official told VOA.

The White House press secretary tweeted earlier that President Donald Trump "was briefed, while missile was still in the air, on the situation in North Korea."

In Japan, the Cabinet crisis team was summoned for an emergency meeting. Japan's chief Cabinet secretary said Tokyo "strongly protests" the launch.

"We are very concerned and we have condemned them publicly. We told the North Koreans that we criticize their behavior in the strongest terms possible," Japanese Ambassador to the United Nations Koro Bessho said.

The U.N. Security Council has not yet called an emergency meeting to discuss the missile launch.

“Initial reports indicate [it was] a ballistic missile that landed within Japan's EEZ," or exclusive economic zone, an area in which a coastal nation has jurisdiction over natural resources. "I presume this kills off the nascent theory that Kim Jong Un was non-verbally signaling good faith toward the U.S.A. through a self-imposed testing freeze,” said Dennis Roy, senior fellow at the Hawaii-based East West Center.

Japanese news outlet NHK reported that the missile flew for 50 minutes before landing in Japan's EEZ.

The launch would be North Korea's first since it fired a missile over Japan in mid-September. Some experts had indicated North Korea's Kim would hold his fire until around the Winter Olympics in February.

"I am surprised but not shocked when it comes to this move," Harry Kazianis of the Center for the National Interest, told VOA on Tuesday. "North Korea, who did test two missiles in the fourth quarter last year, will have to continue to test its missile capabilities for years to come if it wants a nuclear deterrent that can hit the U.S. homeland."

The latest North Korean launch came as the U.S. and South Korea are preparing a joint exercise called "Vigilant Ace" for December 4-8, with thousands of military personnel and more than 230 aircraft participating, including six F-22 Raptor fighter jets deployed to South Korea for the first time.

Pyongyang routinely condemns such military drills using belligerent language and military threats.

https://www.voanews.com/a/report-nortth-korea-fires-ballistic-missile/4140341.html

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The Diplomat (Tokyo, Japan)

China's Evolving Approach to Nuclear-War Fighting

By James Johnson

November 22, 2017

China is dismantling the barriers impeding a war-fighting posture. Does that spell the end of No First Use?

For decades, minimal deterrence, de-mated nuclear warheads, and a no-first-use pledge have formed the bedrock of China's nuclear posture. China's conventional deterrence posture, in contrast, has been characterized by war-fighting, pre-emption, asymmetry, and the development of offensively configured conventional capabilities. Recent evidence indicates that these postures are far more integrated, flexible, and dynamic than Beijing's official rhetoric suggests, and that during the past decade a de facto shift toward a limited nuclear war-fighting (or the use of nuclear weapons for victory denial purposes at all stages of warfare) posture has already taken place.

The closer alignment of these postures would accomplish Beijing's regional military objectives articulated in its defense strategic concept — including the use of asymmetric and pre-emptive tactics during future "informatized" high-intensity warfare — and link geographically dispersed military forces for joint operations.

If Beijing modified its nuclear forces to meet the operational requirements of a war-fighting doctrine (e.g., sizable deployments of low-yield nuclear weapons and missile-defense capabilities, or the adoption of a launch-on-warning nuclear posture), Washington would indubitably view it as a radical shift in China's longstanding nuclear posture, and thus, a fundamental challenge to the military balance in the Asia-Pacific region.

In a forthcoming article in The Non-Proliferation Review, I argue that the existing literature has painted a relatively benign, static, and isolated (from China's conventional war-fighting capabilities) picture of the evolution of Chinese thinking on strategic deterrence, which risks underestimating the increasingly dynamic, integrative, and flexible features of this shifting security paradigm. In particular, I argue that China's increasingly commingled and diversified strategic missile forces have already been incorporated into a limited war-fighting military posture.

By overemphasizing the gradualist and passive aspects of China's formal nuclear posture, policymakers risk overlooking the very real possibility that as many of the barriers (technological, military-organizational, and arms-control) to adopting a nuclear war-fighting doctrine are dismantled, the gap between China's nuclear capabilities and the modest war-fighting ambitions of Chinese strategists will be reconciled.

Unimpeded by these restrictions, therefore, Beijing's strategic thinking in future regional conflicts will likely reflect more accurately the new options it has amassed in both the nuclear and conventional domains; to maximize the synergies that exist between these domains for local high-intensity "informatized" warfare.

Above all, China's increasingly commingled and diversified strategic missile forces have already been incorporated into a war-fighting military posture. Furthermore, China's renewed interest in developing tactical theater weapons and ballistic-missile defense systems has, in conjunction with its conventional forces, enhanced its nuclear deterrence, and enabled the kinds of early and pre-emptive strike tactics consistent with a war-fighting posture.

Simply put, this approach increasingly strains the credibility of Beijing's official rhetoric that depicts China's nuclear posture as inherently restrained, in contrast to its conventional forces. As a result, Beijing's characterization of its declaratory nuclear posture has become increasingly out of step with China's evolving force structures and military writings. The lip-service paid to this stance by most external observers needs to be adjusted to reflect the more nuanced realities.

Admittedly, only a few Chinese strategists have explicitly advocated a shift in the function of nuclear weapons from minimal deterrence to war-fighting; these minority views, however, reflect broader pressures to assimilate Western nuclear strategies into traditional Chinese approaches to nuclear thinking. Recent evidence suggests that, far from fading into obscurity or being eschewed by Beijing's official rhetoric, Chinese strategic thinking on war-fighting has continued to shape and inform Beijing's nuclear modernization efforts.

Chinese Strategists' Pent-up Interest in Nuclear War-Fighting

Chinese military writings intimate a pent-up interest in an expanded role for China's nuclear weapons, which has yet to be integrated into China's formal doctrine. In short, over the past two decades qualitative improvements to China's nuclear forces have given Beijing the ability to use nuclear weapons (and pre-emptively) in regional wars. This implies a much broader and discriminate use for nuclear weapons than the proponents of minimum deterrence or assured retaliation envisaged.

One of my main findings is that military-technological advancements across a range of capabilities has meant that China's aggregate nuclear posture should no longer be conceptualized independently of the PLA's capabilities and concepts. Rather, these military domains (especially space, cyber, and missile defense) are being synthesized into a force structure that incorporates war-fighting tools, designed to deter both conventional and nuclear wars.

In other words, Chinese offensive-dominant space, cyber, and conventional precision strike capabilities have been inexorably fused into China's nuclear deterrence posture (for integrated strategic deterrence), a trend that is likely to continue as new and increasingly sophisticated capabilities are fielded. During a military parade in 2015, for example, Beijing revealed its new intermediate-range ballistic missile (Dongfeng 26) a dual-payload weapon capable (albeit untested) of targeting land and maritime targets in ranges out to Guam.

In short, several recent technological innovations will likely expedite China's emerging generation of strategic missiles across the entire nuclear triad, which will have profound implications for the trajectory of its nuclear posture and policies. These military-technological advancements have

enhanced the accuracy, speed, precision, ranges, maneuverability, and survivability of Chinese nuclear weapons in a manner that appears incongruous with the requirements of minimum deterrence.

As a corollary, even in the absence of formal changes to China's nuclear doctrine the integration of its nuclear weapons and operations with non-nuclear capabilities in offense-dominant domains, together with the ongoing qualitative advances associated with China's nuclear modernization, risks exacerbating U.S.-China security dilemma dynamics, including most worryingly in the nuclear domain itself.

Beijing's most recent defense white paper touched on planned enhancements to the PLA's strategic early warning and command and control systems, "to deter other countries from using or threatening to use nuclear weapons against China" (emphasis added). This official statement implies that, at a minimum, Beijing is contemplating a first-strike nuclear capacity to enhance China's deterrence — a view that resonates within China's strategic community.

Chinese strategists have often ambiguously declared their general commitment to minimum deterrence, whilst simultaneously arguing in favor of first strikes and pre-emptive warfare in both the nuclear and conventional domains. This apparent contradiction can be explained by the confluence of Chinese conceptualizations of conventional and nuclear war-fighting and deterrence, which contrasts with external observers' overly passive and static perceptions of Chinese deterrence.

It appears President Xi Jinping has also embraced the notion of a war-fighting doctrine for the newly promoted Rocket Force, which is responsible for China's strategic missiles. According to Xi, the core mission of this new service is to build a powerful modernized missile force to enhance China's nuclear and conventional war-fighting tools for "full-area war deterrence."

In short, the promotion of Chinese strategic forces, together with significant qualitative enhancements to its capabilities, has finally aligned China's nuclear and conventional war-fighting tools and the aspirations of its military leaders with a command structure and the political will necessary to formalize a doctrinal shift.

An Evolving, Multifaceted Version of Deterrence

Chinese evolving conceptualization of "strategic deterrence" reflects a multifaceted cross-domain version of deterrence, which lends itself to the blurring of traditional conventional-nuclear and offensive-defense distinctions. This inexorable clouding by shortening the decision-making timeframe during crisis, and compressing the nuclear escalation ladder, will likely negatively affect U.S.-China strategic stability, and in turn, increase the incentives (on both sides) for pre-emptive tactics.

This assessment does not, however, posit that Beijing has adopted or will formalize an actual nuclear war-fighting doctrine; rather that the trajectory of China's military modernization and integration are taking them to a place with many of the same risks and strategic implications.

How Chinese thinking evolves to reflect the linkages that have formed between its increasingly commingled conventional and nuclear capabilities and reorganized military structure remains, however, unknown. Although Chinese strategists frequently discuss cross-domain warfare (to deter adversaries and control escalation), they seldom discuss the inherent risks associated with these tactics.

Furthermore, ambiguities caused by Chinese internal debates relating to China's "no first use" policy will continue to undermine the credibility of China's adherence to this stance, keeping the option open for Beijing to formalize its de facto war-fighting posture. To be sure, issues of this kind

will become more pressing as China's military services synthesize and diffuse its cross-domain war-fighting capabilities, especially in space and cyberspace, for future cross-domain warfare.

Implications

The inexorable blurring of the PLA's conventional and nuclear, and offensive and defense capabilities by shortening the timeframe for crisis decision making, and compressing the (albeit poorly defined) U.S.-China nuclear escalation ladder will pose increasing existential risks to U.S.-China strategic stability in the Asia-Pacific. Under crisis conditions, these risks could exacerbate existing Sino-American misperceptions and misunderstandings that in turn will likely increase the incentives for early and pre-emptive attacks, which are already baked into the competing operational concepts on both sides, e.g. the U.S. Air-Sea Battle Concept (renamed Joint Concept for Access and Maneuver in the Global Commons), and China's anti-access, area-denial strategy.

In short, the mere possibility of China using its nuclear-capable war-fighting tools in limited and tactical missions to deter the United States in nuclear or conventional conflicts and in a manner, timing, and purpose that Washington would unlikely anticipate could harbinger a fundamental shift in Sino-American strategic relations.

If U.S. defense planners concluded, therefore, that China's war-fighting capabilities could presage a fundamental shift in trajectory of China's approach to nuclear deterrence intended to support Beijing's aggressive assertions of sovereignty (e.g. in the East and South China seas, or the Taiwan Strait), the implications for U.S. forward force postures, extended nuclear assurances, and nuclear deterrence would be profound. Moreover, China's propensity for strategic ambiguity and opacity in the nuclear domain (especially the intended purpose for its war-fighting capabilities) will likely reinforce the Pentagon's penchant for worse-case scenario (and zero-sum) assessments of Beijing's strategic intentions.

Several implications and future research topics follow from the findings of this research:

First, research would be beneficial on how the Chinese security community views the U.S.-China relationship in the nuclear domain. In particular, who on the Chinese side is leading this fundamental re-think, is it being challenged, and if so, in what ways and to what degrees of success? How are these views changing in response to U.S. military policies and posture in Asia? Finally, how are the PLA's "new" capabilities likely to affect Beijing's thinking about its nuclear options in future warfare?

Second, defense analysts will need to closely monitor the development of Chinese commingled capabilities that might increase Beijing's future war-fighting options, and especially indications of any changes to the PLA's operational doctrines because of these developments.

Finally, it is unknown whether the PLA emerges from its recent major overhaul as a stronger and more coordinated joint war-fighting force, and many unknowns exist. What, for example, will be the precise responsibilities of the new Rocket Force for China's overall nuclear assets?

Conclusions

Recent evidence indicates that Chinese thinking on war-fighting, rather than being eschewed in favor of a minimal deterrence posture, has continued to influence China's nuclear modernization efforts. Chinese military writings include positions that favor a more flexible and robust nuclear posture than has yet been endorsed in official documents or reflected in China's formal doctrine, which indicates an underlying receptivity for innovation in this domain.

In sum, unimpeded by many of the constraints imposed on previous generations of Chinese strategists, and driven by the ongoing qualitative changes to the PLA's force structure, China's incongruous nuclear posture will likely be reconciled, aligning China's nuclear forces with its

offensively configured conventional stance for high-intensity (or asymmetric escalation), and pre-emptive future warfare.

Several unknowns remain including: How closely will China's nuclear and conventional domains be aligned, and at what levels? In addition, how will hypersonic weapons and glide vehicles affect this dynamic, especially if they are deployed to enhance both conventional and nuclear missiles?

On the future modern battlefield, where the boundaries between war and peace and conventional-nuclear and offense-defense lines are increasingly blurred; where an aggressor is likely to resort to early and pre-emptive tactics to assert escalation dominance; and where states rapidly accumulate, synthesize, and diffuse progressively advanced war-fighting tools, interstate security dilemmas will become more frequent, intense, intractable, and destabilizing.

https://thediplomat.com/2017/11/chinas-evolving-approach-to-nuclear-war-fighting/

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Reuters (New York, NY)

South Korea, Japan Welcome U.S. Relisting North Korea as Sponsor of Terrorism

By Christine Kim

November 20, 2017

SEOUL (Reuters) - South Korea and Japan on Tuesday welcomed U.S. President Donald Trump's move to put North Korea back on a list of state sponsors of terrorism, saying it will ramp up pressure on the reclusive regime to get rid of its nuclear weapons.

The designation, announced on Monday, allows the United States to impose more sanctions on North Korea, which is pursuing nuclear weapons and missile programs in defiance of U.N. Security Council sanctions. (Graphic: Nuclear North Korea - tmsnrt.rs/2lE5yjF)

"I welcome and support (the designation) as it raises the pressure on North Korea," Japanese Prime Minister Shinzo Abe told reporters.

South Korea said it expected the listing to contribute to peaceful denuclearisation, the foreign ministry said in a text message.

North Korea has vowed never to give up its nuclear weapons program, which it defends as a necessary defense against U.S. plans to invade. The United States, which has 28,500 troops in South Korea, a legacy of the 1950-53 Korean war, denies any such plans.

In Beijing, Chinese Foreign Ministry spokesman Lu Kang said China had noted the reports on the U.S. decision.

"Currently, the situation on the Korean peninsula is complicated and sensitive," Lu told a daily news briefing.

"We still hope all relevant parties can do more to alleviate the situation and do more that is conducive to all relevant parties returning to the correct path of negotiation, dialogue and consultation to resolve the peninsula nuclear issue."

The move will further weigh on the "precarious situation" on the peninsula, China's official Xinhua news agency said in an English-language editorial.

"The prospect of a nuclear-free Korean peninsula has been pushed farther away by one after another irresponsible action or blaring rhetoric," it said.

This year's rapid escalation of tension was largely down to a "game of chicken" between Washington and Pyongyang, it added.

Trump's re-listing of North Korea as a sponsor of terrorism comes a week after he returned from a 12-day trip to Asia in which containing North Korea's nuclear ambitions was a centerpiece of his discussions.

"In addition to threatening the world by nuclear devastation, North Korea has repeatedly supported acts of international terrorism, including assassinations on foreign soil," Trump told reporters at the White House.

"This designation will impose further sanctions and penalties on North Korea and related persons and supports our maximum pressure campaign to isolate the murderous regime."

Australian Prime Minister Malcolm Turnbull also backed Trump's decision.

"Kim Jong Un runs a global criminal operation from North Korea peddling arms, peddling drugs, engaged in cyber-crime and of course threatening the stability of region with his nuclear weapons," Turnbull told reporters in Sydney, referring to the North Korean leader.

Trump, who has often criticized his predecessors' policies toward North Korea as being too soft, said the designation should have been made "a long time ago".

North Korea was put on the U.S. terrorism sponsor list for the 1987 bombing of a Korean Air flight that killed all 115 people aboard. But the administration of former President George W. Bush, a Republican, removed it in 2008 in exchange for progress in denuclearisation talks.

Experts say the designation will be largely symbolic as North Korea is already heavily sanctioned by the United States.

On Monday, South Korean President Moon Jae-in's special security adviser, Moon Chung-in, told reporters any such designation would be "more symbolic than substance".

The United States has designated only three other countries - Iran, Sudan and Syria - as state sponsors of terrorism.

North Korea has said it plans to develop a nuclear-tipped missile capable of hitting the U.S. mainland. It has fired two missiles over Japan and on Sept. 3 conducted its sixth and largest nuclear test.

https://www.reuters.com/article/us-northkorea-missiles/south-korea-japan-welcome-u-s-relisting-north-korea-as-sponsor-of-terrorism-idUSKBN1DL07I

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The National Interest (Washington, DC)

Nuclear War: Could China's Mach 10 Hypersonic Weapons Unleash the Unthinkable?

By Dave Majumdar

November 16, 2017

The People's Republic of China is continuing its quest to develop a new class of hypersonic weapons that could strike at the continental United States in less than 15 minutes from launch.

An operational long-range hypersonic weapon is likely years away, but China, the United States, Russia and other states are in a race to field such weapons. In the meantime, China is working on

building the world's fastest hypersonic wind tunnel to help its scientist develop this new class of weapon. The new facility should become operational by 2020.

"It will boost the engineering application of hypersonic technology, mostly in military sectors, by duplicating the environment of extreme hypersonic flights, so problems can be discovered and solved on the ground," Zhao Wei, a deputy director of the State Key Laboratory of High Temperature Gas Dynamics at the Chinese Academy of Sciences in Beijing, told the South China Morning Post.

Wind tunnel testing is an essential phase of aircraft and missile development before prototypes are built and tested in the real world. Thus, the new wind tunnel should greatly enhance China's efforts to develop hypersonic aircraft, weapons and the requisite propulsion systems such as scramjets.

China has already tested hypersonic boost-glide vehicles in the past. Recently, as the SCMP report notes, China has already conducted seven successful test flights of a hypersonic glider called the WU-14—sometimes call the DF-ZF—at speeds of between Mach 5 and Mach 10. It is not clear, how close the new weapons is to entering operational service, but as Franz-Stefan Gady, a senior fellow at the East-West Institute and editor of The Diplomat points out, such a missile would be likely be impossible to intercept with current missile defense technology.

As such a long-range hypersonic weapon could afford Beijing another means of deterring the United States. Right now, Beijing, which does not have long-range strategic bombers, would have to resort to using its nuclear-tipped intercontinental ballistic missiles to retaliate against an American attack on the Chinese mainland. With only a small ICBM force, China's assured retaliatory second strike capability could be threatened as the United States builds up its anti-ballistic missile defense—regardless of if the defenses work or not. Thus, a hypersonic glide weapon fitted with a nuclear warhead would afford Beijing another means of delivering an assured retaliatory strike.

The danger, of course, is that hypersonic weapons—like ICBMs—can be fitted with either a conventional or nuclear warhead(s). In the event of a conflict with China over, for example, Taiwan, the United States essentially assumes that it would be able to strike at the Chinese mainland with conventional weapons without Beijing striking back directly at the U.S. mainland. Right now, Beijing could only hit back with its nuclear-tipped ICBMs or with a cyber-attack since it has no other means to retaliate directly by conventional means.

A conventionally-armed hypersonic weapon could afford Beijing the ability to strike back directly at the U.S. mainland. However, unless there was some sort of agreement or understanding as is generally the case with ICBMs, there is no way for Washington to know that the incoming missiles are not nuclear-tipped. The United States maintains a "launch under attack" posture, which means Washington would launch a counter-strike before the missiles hit and it becomes apparent the Chinese weapons are conventional, leading to an unintended nuclear exchange. The same problem exists in reverse where China or Russia might mistake the Pentagon's Conventional Prompt Global Strike weapon as for a nuclear missile.

Thus, hypersonic weapons could be a new destabilizing factor in the world of nuclear deterrence when these missiles make their operational debut. The United States, Russia and China should consider hammering out some sort of arms control agreement dealing with this new class of weapon sooner rather than later.

http://nationalinterest.org/blog/the-buzz/nuclear-war-could-chinas-mach-10-hypersonic-weapons-unleash-23228

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EUROPE/RUSSIA

Digital Forensic Research Lab (Washington, DC)

#MeanwhileInTheArctic: Prince Vladimir Submarine Sets Sail

By Lukas Andriukaitis

November 27, 2017

On November 17, the submarine Knyaz Vladimir / Prince Vladimir (Князь Владимир) set sail for the first time. The submarine is the first of five upgraded Borei-A class submarines currently under construction. @DFRLab took a deeper look into the newly developed submarine and overall Russian naval-based strategic deterrence trends.

The Russian MoD (Ministry of Defense) posted about the ceremony to launch the ship on November 15 on their official website. On November 17, a video also surfaced on YouTube from the actual ceremony and provided a glimpse into the shipyard where the submarines are built.

The Russian MoD post and subsequent video title suggest that the submarine is built by the SEVMASH company. The poster at the background of the event confirmed. The state-run plant SEVMASH is one of the largest, well-equipped shipbuilding complexes in Russia, located in the city of Severodvinsk. The plant specializes in building and repairing submarines.

The location of the ceremony appeared to be the main shipyard of the SEVMASH in Severodvinsk. This is the same shipyard complex protected by recently upgraded S-400 SAM (Surface-to-Air Missile) @DFRLab previously reported on.

Russia aims to use the five new Borei-A class and three existing Borei class submarines as the basis of its maritime strategic deterrent. According to the Russian MoD, four other hauls are already being used to build the remaining Borei-A class submarines: the Knyaz Oleg, Generalissimus Suvorov, Imperator Alexander III, and Knyaz Pozharsky. Construction on these nuclear submarines is expected to be completed by 2025.

According to the Commander-in-Chief of the Russian Navy Admiral Vladimir Korolev, this upgrade is a crucial step in developing Russian Naval Strategic Nuclear Forces. He said:

This will be a vital practical step in equipping the Russian Strategic Nuclear Forces with the new generation of nuclear submarines.

The main difference between its predecessor (Borei class) submarines is that the Borei-A class is fitted with 20 missile tubes instead of 16. The submarine is armed with the newest intercontinental ballistic missiles (ICBMs)—RSM-56 Bulava (NATO call sign: SS-NX-32). Each of these ICBMs is capable of carrying six independently targetable warheads.

Nuclear-powered ballistic missile submarines traditionally played a smaller role in Russia's strategic deterrence compared to the United States, but current developments indicate a change in this paradigm. @DFRLab recently reported on a Russian ICBM exercise, where out of four ICBMs launched, two were launched from submarines.

Russian submarines are also being used in the Syrian conflict; currently to fire 3M14T (NATO call sign: SS-N-30A) Kalibr missiles. Russia renewed its agreement with Syria regarding the Tartus naval base in 2016, which means Russia will be able to base nuclear submarines in a highly trafficked thoroughfare in the Mediterranean Sea. The previous agreement for the Tartus naval base only accommodated mid-size ships.

The ceremonial ship launching of the new Borei-A class submarine suggests a shift in Russian nuclear deterrence paradigm. The exact deployment location of Knyaz Vladimir, or the three currently existing Borei class submarines, is unknown. @DFRLab will continue to monitor Russian ICBM related military developments and exercises.

https://medium.com/dfrlab/meanwhileinthearctic-prince-vladimir-submarine-sets-sail-71cebd22f77d

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TASS (Moscow, Russia)

Russia Calls North Korea's Claims for Nuclear Power Status 'Unacceptable' – UN Envoy

Author Not Attributed

November 30, 2017

According to the Russian diplomat, Pyongyang's "yet another demonstrative disregard" of the Security Council resolutions is "highly regrettable"

UNITED NATIONS - Russia regrets that North Korea test launched a ballistic missile and finds its claims for a status of a nuclear power unacceptable, Russian Permanent Representative to the United Nations Vasily Nebenzya said on Wednesday at an emergency meeting of the United Nations Security Council.

According to the Russian diplomat, Pyongyang's "yet another demonstrative disregard" of the Security Council resolutions is "highly regrettable" and "deserves the most resolute condemnation."

"Russia finds North Korea's claims for a status of nuclear power unacceptable and has supported all United Nations Security Council resolutions demanding Pyongyang stop its nuclear missile program in the interests of denuclearization of the Korean Peninsula," he said, adding that in the current situation "prospects for normalization of the situation on the Korean Peninsula are still vague."

In the morning on November 29, North Korea conducted a missile launch, the first one since September 15.

According to North Korea's Central News Agency (KCNA), a Hwasong-15 missile covered a distance of 950 kilometers in 53 minutes, reaching an altitude of 4,475 kilometers.

According to the Japanese Defense Ministry, the missile fell into the sea in Japan's exclusive economic zone, 250 kilometers west off the coast of Japan's Aomori Prefecture.

Earlier on Wednesday, US President Donald Trump promised to impose "additional major sanctions" on North Korea on that very day.

US Permanent Representative to the United Nations Nikki Haley called on all countries to sever relations with North Korea and demanded China exert pressure on Pyongyang by means of stopping oil supplies to that country. Otherwise, in her words, the United States will take control of the situation.

The Russian UN envoy, in turn, noted that sanctions are only an instrument for political and diplomatic settlement of the situation and should not be a goal in itself. He stressed that restrictions must not be used to worsen the humanitarian situation in North Korea.

http://tass.com/politics/978185

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Deutsche Welle (Bonn, Germany)

US and Poland Strike $10.5 Billion Missile Defense Deal

Author Not Attributed

November 17, 2017

The US has approved the $10.5 billion sale of a Patriot anti-missile system to NATO ally Poland. Eastern European NATO states have been ramping up their military capabilities in the face of perceived Russian aggression.

In a move likely to irk Russia, the US and Poland agreed on Friday a major arms deal that could see the eastern European NATO member soon begin conducting air and missile defense operations.

As part of the $10.5 billion (€8.9 billion) sale, Poland is expected to receive 208 Patriot Advanced Capabilty-3 (PAC-3) Missile Segment Enhancement missiles, 16 M903 launching stations, four AN/MPQ-65 radars, four control stations, spares, software and associated equipment.

Made by US defense contractor Raytheon, the missiles are reportedly designed to detect, track and engage unmanned aerial vehicles (UAVs), cruise missiles and short-range or tactical ballistic missiles.

In a statement issued following the sale, the State Department said that: "A secure Europe capable of deterring air and missile threats and other forms of aggression promotes peace and stability within NATO and on the European continent."

The transaction still requires congressional approval, since any sale of advanced military technology to another country requires special permission. Congress has 15 days to raise any objections to the deal, although this agreement is expected to pass swiftly, given the close military ties between the two countries.

During US President Donald Trump's visit to Warsaw in July, the US and Poland signed a memorandum of intent for weapons sales.

Poland is one of a handful of eastern European nations that has increasingly built up their military capacity in the face of potential Russian aggression, following the 2014 annexation of Crimea from Ukraine.

Last year Russia deployed nuclear-capable Iskaner missiles on its Kaliningrad exclave bordering Lithuania and Poland. The move rattled NATO members, and prompted members, including the US and Germany, to begin carrying out military drills in the region.

Poland joins the Netherlands, Germany, Spain and Greece as one of the few European countries in possession of a Patriot air-defense system. The US has also recently deployed a Patriot battery in Lithuania as part of the multinational NATO exercises in the Baltic region.

http://www.dw.com/en/us-and-poland-strike-105-billion-missile-defense-deal/a-41433719

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Reuters (New York, NY)

German Greens Want Last Nuclear Weapons Withdrawn: Document

Author Not Attributed

November 15, 2017

BERLIN (Reuters) - Greens want the next coalition government to push for the removal of all nuclear warheads stationed in Germany, a document seen by Reuters showed on Wednesday.

The discussion paper on defence and foreign policy did not mention the United States, which is believed to have 20 nuclear warheads at a military base in Buechel in western Germany, according to unofficial estimates.

Chancellor Angela Merkel is trying to secure a fourth term through an unlikely coalition with the ecologist Greens and pro-business Free Democrats (FDP) after her conservative bloc lost support to the far-right in an election in September.

NATO member Germany is not a nuclear power and in 2011 a Merkel-led government announced plans to shut all nuclear reactors by 2022 after the Fukushima disaster in Japan.

"Within NATO, we want to ensure that the remaining nuclear weapons in Germany are withdrawn and we want to suspend the modernization programme," read a section in the document stating the Greens' position.

Before leaving office former U.S. President Barack Obama announced plans to modernize nuclear bombs, delivery systems and laboratories. His successor, Donald Trump, has said he wants to strengthen and expand his country's nuclear capability.

The conservatives, Greens and FDP are hoping to end exploratory discussions on Thursday and move on to proper negotiations on forming a government.

They remain divided on several key issues, including immigration, reforming the euro zone and climate policy.

http://www.reuters.com/article/us-germany-politics-nuclear/german-greens-want-last-nuclear-weapons-withdrawn-document-idUSKBN1DF39R

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MIDDLE EAST

Newsweek (New York, NY)

Israel and Egypt Pressured Obama to 'Bomb Iran' Before Nuclear Deal

By Jack Moore

November 29, 2017

Former U.S. Secretary of State John Kerry said that Israel, Saudi Arabia and Egypt—three of Washington's key Middle East allies—were pressuring former President Barack Obama to "bomb Iran" before the landmark nuclear deal signed in July 2015.

At a forum in Washington D.C., the former diplomat said that two of Iran's Sunni rivals in the region and Israel, the country it considers to be Tehran's arch-enemy, were angling for the U.S. to launch military action against the Islamic Republic.

"Each of them said to me, you have to bomb Iran, it's the only thing they are going to understand," he said.

He said that Israeli Prime Minister Benjamin Netanyahu, one of the strongest opponents of any deal with Iran, was "genuinely agitating towards action" against the country before the agreement was signed.

Kerry also called it a "trap" because those countries would have only publicly criticized the U.S. for military action, despite supporting it in private.

The deal saw Tehran agree with six world powers the rolling back of its nuclear programme in return for a lifting of crippling sanctions on its economy.

Iran's conservative religious leadership regularly threatens Israel with destruction, and President Donald Trump has railed against the deal and Iranian ambitions in the Middle East during his presidential campaign and during his time in office.

He has argued that it has handed back billions of dollars to an Iranian regime that has sought to sow discord in the Middle East through the funding of proxy groups in Lebanon, Yemen and the Gaza Strip.

In October, Trump refused to recertify the deal, putting the decision on the agreement's status at the feet of Congress. Netanyahu called his decision "courageous" as he had "boldly confronted Iran's terrorist regime."

"If the Iran deal is left unchanged, one thing is absolutely certain. In a few years' time, the world's foremost terrorist regime will have an arsenal of nuclear weapons. And that's a tremendous danger for our collective future."

Speaking at the forum, Kerry maintained that it was the best agreement Washington could achieve, as it restricted Iran's nuclear ambitions for more than a decade to come. But the Israeli government, which had strained ties with the Obama administration, has been critical of both Kerry and Obama for their handling of the issue.

Michael Oren, the former Israeli ambassador to the U.S., criticized Kerry for his comments. "Israel, along with other like-minded governments in the Middle East, understood that a credible American military option was the only way to resolve the Iranian nuclear threat, whether militarily or diplomatically," he told The Jerusalem Post.

The Israeli deputy minister for diplomacy in the Prime Minister's Office said that instead of the deal signed by Obama and world powers, the alternative would have been "a better deal and one of the ways you could get a better deal was to have a credible military threat. The irony was that the more credible the military threat, the less likely you would have to use it."

He said that Kerry "has a particularly acrimonious and sometimes obsessive place for us [Israel], and for the prime minister.

"He also thinks that the Iran nuclear deal was a historic diplomatic achievement. I personally feel that it was the collapse of American credibility in the Middle East and a significant danger to our future and the future of our children. That is a huge difference."

http://www.newsweek.com/israel-and-egypt-pressured-obama-bomb-iran-nuclear-deal-725577

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Tehran Times (Tehran, Iran)

Nuclear Arms in Hands of Israel Threatens Intl. Peace, Iran Says

Author Not Attributed

November 28, 2017

Reza Najafi, Iran's ambassador to the International Atomic Energy Agency, said on Friday that "nuclear weapons in the hands of such regime with a history full of aggression, occupation and state-terrorism is a threat to the international peace and security."

In a statement read out to the IAEA Board of Governors meeting on "Israeli Nuclear Capabilities", Najafi also said, "Ignoring the legitimate international concerns by refraining to adhere to the NPT, this regime with blind support of some countries, continuously advances its unlawful nuclear capabilities with the hidden involvement of certain States, in flagrant breach of all international norms and regulations."

Following is full text of the statement published by IRNA:

Since the issue of Israeli nuclear capability was raised by distinguished Representative of Iraq on behalf of Arab Group, and while sharing their concerns on the issue, I would like to restate the position of the Islamic Republic of Iran.

The Israeli nuclear capability with the exclusive military purpose has always been a source of serious concern for the peoples of the region and international community. The Heads of State or Government of the Non-Alignment Movement (NAM) in the Final Document of its 16th Summit expressed grave concern over the acquisition of nuclear capability by Israel, which poses a serious and continuing threat to the security of neighboring and other States. They also condemned it for continuing to develop and stockpile nuclear arsenals. In the same document, they "reiterated their support for the efforts of the Arab Group in Vienna to keep the question of the Israeli nuclear capabilities under consideration" of the IAEA. They urged that the continued consideration of this issue in the context of the IAEA is completely relevant.

Since 1982, the IAEA has passed several resolutions, made decisions and called upon this regime to promptly accede to the Non-proliferation Treaty (NPT) and put all of its clandestine nuclear facilities under the Agency's full scope safeguards. Furthermore, the Final Document of the 2010 NPT Review Conference recalled "the reaffirmation by the 2000 Review Conference of the importance of Israel's accession to the Treaty and the placement of all its nuclear facilities under comprehensive IAEA safeguards'. Ignoring the legitimate international concerns by refraining to adhere to the NPT, this regime with blind support of some countries, continuously advances its unlawful nuclear capabilities with the hidden involvement of certain States, in flagrant breach of all international norms and regulations. It is crystal clear that such violation not only jeopardizes the regional and global security but also seriously undermines the Agency's verification mechanism.

As it was also called by the NAM, there must be the total and complete prohibition of the transfer of all nuclear-related equipment, information, material and facilities, resources or devices and the extension of assistance in the nuclear related scientific or technological fields to Israel. The Islamic Republic of Iran expresses its deep concern over the serious negative implications on security in the region as well as the reliability of the global non-proliferation regime whereby Israeli scientists are generously provided access to the nuclear facilities of certain Nuclear Weapon States (NWSs). Such access has been provided to scientists of a non-party to the NPT with an underground nuclear military program while nuclear scientists of NPT Parties have been assassinated all over the Middle East by terrorists recruited by this regime. Nuclear weapons in the hands of such regime with a

history full of aggression, occupation and state-terrorism is a threat to the international peace and security.

The failure of the NPT 2015 Review Conference due to the position of 3 countries, in support of a non-party to the NPT is a serious setback and regrettable. States Parties to the Treaty, in the first session of the Preparatory Committee of upcoming NPT Review Conference, held in May 2017 here in Vienna, expressed their concern on such failure.

Therefore, my delegation is of the view that pending the materialization of the international community's call for the adherence of Israel to the NPT without any condition and placement of all its clandestine nuclear facilities under the full-scope safeguards of the IAEA, it is quite reasonable that the issue of Israeli nuclear capabilities, as a real threat to international peace and security remains on the agenda of the IAEA.

http://www.tehrantimes.com/news/418791/Nuclear-arms-in-hands-of-Israel-threatens-intl-peace-Iran-says

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Xinhua News Agency (Beijing, China)

Syria Deplores "Politicized" Chemical Weapon Probe

Author Not Attributed

November 28, 2017

THE HAGUE, Nov. 27 (Xinhua) -- Syria on Monday deplored that "hostile states" have led international investigation to produce reports on the alleged uses of toxic chemical in Syria, charging that the reports "lack professionalism and reach wrong findings".

Syrian Deputy Foreign Minister Faisal Mekdad made this statement at the annual conference of members of the Organization for the Prohibition of Chemical Weapons (OPCW), which opened in the Hague on Monday.

Mekdad reiterated Syria's denial of such accusations, saying the OPCW Fact-Finding Mission (FFM) reports were "without any tangible evidence" and its work needs to be reviewed.

The FFM reported that people were exposed to chemical weapons in conflicts in Syria in recent years. The OPCW-U.N. Joint Investigative Mechanism (JIM) claimed that the Islamic State terrorists and the Syrian military were both involved in the use of chemicals as weapons.

He said that the JIM's work "was not professional and based solely on information provided by state parties suspected of having a close relationship with terrorist groups."

"It is truly laughable that some states parties are helping terrorist groups and avoiding to bring terrorists to accountability and they use the OPCW to their own aims," said the Syrian official.

The United States put a resolution to vote to renew the JIM with the same mandate for an additional year on Oct. 24, but Russia vetoed the resolution, arguing that there is a need to evaluate the effectiveness of the JIM.

Russia had criticized the JIM for falling short of the standards of the Chemical Weapons Convention.

About two weeks ago, the United Nations Security Council failed to pass the resolutions proposed by the United States and Japan on the renewal of the JIM mandate, as Russia, a permanent council member, vetoed.

China abstained, and Wu Haitao, the charge d'affaires at China's Permanent Mission to the United Nations, said, "China is firmly opposed to the use of chemical weapons by whichever country, organization or person for whatever purposes and under whatever circumstances."

Wu also said that any Security Council action must focus on the overall political process in Syria, which faces important opportunities at the moment.

It is imperative for parties to keep calm and exercise restraint and find an appropriate solution acceptable to all through patient consultation, Wu said, noting that there are still significant differences among members over JIM.

The Security Council unanimously approved the JIM in 2015 and renewed its mandate for another year in 2016. The current term expired on Nov. 17, 2017.

The United States recently has proposed extension of the JIM's mandate for another year.

Before Mekdad delivered his speech, Jacek Bylica, special envoy for Non-Proliferation and Disarmament at the EU External Action, on behalf of the European Union (EU) called on Syria "to engage meaningfully with the OPCW to resolve outstanding concerns".

"The EU is deeply concerned about state and non-state actors acquiring chemical weapons which has already become a dark reality in Syria and Iraq," said Bylica.

"It is unacceptable that four years after joining the Convention Syria's declaration can still not be verified as accurate and complete," he added.

Syria became a state party to the Chemical Weapons Convention (CWC) in 2013. Syria submitted its initial declaration of chemical weapon stocks in September 2013.

Syria is working with the OPCW in reviewing the declaration by providing further explanations and supplementary information about its chemical weapon stocks, he stated.

"We have achieved further progress and we will continue cooperating ... in order to make our declaration accurate and complete."

Though almost all declared chemical weapons have been either destroyed or converted for peaceful use, risks of use of chemical weapons remain due to re-emerging uses of such weapons and the threat of chemical terrorism, warned the OPCW as its annual conference opened.

On Thursday, the five-day conference will appoint Ambassador Fernando Arias of Spain as the new Director-General of the Technical Secretariat of the OPCW. Arias will start his four year term on July 25, 2018.

http://news.xinhuanet.com/english/2017-11/28/c_136785246.htm

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Haaretz (Tel Aviv, Israel)

Iran Warns Europe: We Will Increase Missile Range if Threatened

Reuters/Author Not Attributed

November 26, 2017

France has called for an 'uncompromising' dialogue with Iran about its ballistic missile program and a possible negotiation over the issue separate from the 2015 nuclear deal

The deputy head of Iran's Revolutionary Guards warned Europe that if it threatens Tehran, the Guards will increase the range of missiles to above 2,000 kilometers (about 1,242 miles), the Fars news agency reported on Saturday.

France has called for an "uncompromising" dialogue with Iran about its ballistic missile program and a possible negotiation over the issue separate from Tehran's 2015 nuclear deal with world powers.

Iran has repeatedly said its missile program is defensive and not negotiable.

"If we have kept the range of our missiles to 2,000 kilometers, it's not due to lack of technology. ... We are following a strategic doctrine," Brigadier General Hossein Salami said, according to Fars.

"So far we have felt that Europe is not a threat, so we did not increase the range of our missiles. But if Europe wants to turn into a threat, we will increase the range of our missiles," he added.

The United States accused Iran this month of supplying Yemen's Houthi rebels with a missile that was fired into Saudi Arabia in July and called for the United Nations to hold Tehran accountable for violating two UN Security Council resolutions.

Iran has denied supplying Houthis with missiles and weapons.

The head of Iran's Revolutionary Guards, Major General Mohammad Ali Jafari, said last month that Iran's 2,000-kilometer missile range could cover "most of American interest and forces" within the region, and Iran does not need to extend it.

Jafari said the ballistic missile range was based on the limits set by the country's Supreme Leader Ayatollah Ali Khamenei, who is the head of armed forces.

Iran has one of the Middle East's largest missile programs and some of its precision-guided missiles have the range to strike Israel.

The United States says Iran's missile programme is a breach of international law because the missiles could carry nuclear warheads in the future.

Iran denies it is seeking nuclear weapons and says its nuclear program is for civilian uses only.

The United States has imposed unilateral sanctions on Iran, saying its missile tests violate a UN resolution that calls on Tehran not to undertake activities related to missiles capable of delivering nuclear weapons.

https://www.haaretz.com/middle-east-news/iran/1.824980

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INDIA/PAKISTAN

The Express Tribune (Karachi, Pakistan)

US Think Tank Rules Out Possibility of Indo-Pak Nuclear War

By Nashrah Baqi

November 27, 2017

A US-based think tank has ruled out the possibility of an all-out nuclear war between nuclear-armed states in Asia.

Atlantic Council in its new report, 'Asia in the Second Nuclear Age' maintained that Pakistan, China and India, despite being enmeshed in a complex rivalry, "are stakeholders in the existing international order, and are committed to an open economic order and multilateral institutionalism."

Rejecting the nuclear pessimism in Western capitals, the report said the nuclear 'sky is falling' argument, is simply not supported by the evidence, at least when evidence is embedded in its proper context.

However, the report maintained, Pakistan's tactical nuclear weapon programme has the capability of escalating conventional war into an all-out nuclear war.

The difference between China, India and Pakistan's nuclear capability and what drives their programmes has been scribed in detail after conducting workshops in the capitals of those countries.

The Atlantic Council's South Asia Center conducted three workshops in Delhi, Islamabad and Beijing in the the fall of 2016, with the objective of drawing academics, policy practitioners, and analysts in each country to discuss the unfolding nuclear dynamics in the region. All three workshops had a common theme: Assessing Nuclear Futures in Asia.

Under this broad theme, workshop participants tackled three specific subjects: the general nature of the strategic competition in Indo-Pacific region; the philosophical approaches shaping nuclear developments in China, India and Pakistan; and the hardware and operational characteristics of their nuclear forces.

It was maintained that Pakistan is rapidly accumulating fissile material, which could increase to 450 kilogram of plutonium, sufficient for 90 weapons, and more than 2,500-kg of highly enriched uranium (HEU), sufficient for 100 simple fission warheads by 2020.

India, meanwhile, is accumulating approximately 16.6-kg of fissile material annually, sufficient for a force of approximately 150-200 warheads, though all fissile material is probably not converted into nuclear warheads.

China, however, is no longer producing fissile material. It is only modestly increasing the size of its arsenal, from 264 to 314 warheads. The size of the Chinese, Indian and Pakistani arsenals will remain a function of the calculations of damage ratios that each believes essential to achieve deterrence.

Yet, if current trends remain stable, the size of their arsenals should remain comparable to the French and British nuclear arsenals. The arsenals will be large, but will by no means approach the humongous size of the US or Russian nuclear arsenals. Like other regional nuclear powers during the first nuclear age, China, India and Pakistan might also decide to forego one or more vulnerable legs of their nuclear triad. At present, however, there are no indicators of this happening.

Pakistan's nuclear doctrine and operations

As established before, unlike China and India, Pakistan is committed to an asymmetric nuclear strategy of first use. The report said some details had emerged about Pakistan Army's internal thinking on what this might entail.

The much talked out 'red-lines' include: an Indian invasion and a major defeat for army on the battlefield, Indian threats to major Pakistani urban centers, the severing of Pakistan's major internal lines of communication during an invasion, or any attempts by India to internally destabilise Pakistan.

These boundaries are vague in order to keep the enemy guessing while leaving enough room for the military to 'walk back from a crisis of resolve and credibility'.

The confusions, however, remains over the nature of Pakistan's nuclear response. According to analysts, Pakistan may initially demonstrate its nuclear resolve via token strikes against invading and isolated Indian units on Pakistani territory. Thereafter, attacks may escalate to Indian bridgeheads on the border, and area military targets critical to the invasion. Further still, attacks could encompass Indian cities, and portions of the nuclear force itself.

The report conclusively stated that politically, the regional competitors do not find themselves in security dilemmas in which the existence of their political systems is at stake the way it was during the Cold War.

https://tribune.com.pk/story/1569547/1-us-based-think-tank-rules-possibility-indo-pak-nuclear-war/

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Stratfor (Austin, TX)

In Afghanistan, the U.S. and Pakistan Fight a Conflict of Interests

By Faisal Pervaiz

November 21, 2017

The ravages of a seemingly endless war have kept the United States mired in South Asia for over 16 years. In August, U.S. President Donald Trump proposed a new solution to the intractable conflict in Afghanistan. The new strategy would focus not on meeting a specific deadline but rather on achieving the conditions necessary to bring peace to the war-torn country. To that end, Trump urged India to play a greater role in Afghanistan's economic development. He also had a few choice words for Pakistan.

The president took the large nuclear power, home to more than 200 million people, to task for continuing to harbor militant groups such as the Taliban and the Haqqani network. To compel a change in Islamabad's behavior, the Trump administration has threatened to revoke Pakistan's non-NATO major ally status and withhold more of the billions of dollars in aid that the United States has given the country each year since 2002. But the threats aren't working. On Nov. 9, NATO commander Gen. John Nicholson said Pakistan is still offering haven to militants. And even if Washington takes harsher punitive action toward Islamabad, it won't achieve the results it's hoping for. Militancy isn't the only enemy in Afghanistan; the United States is also fighting against the basic forces of geopolitics.

The Struggle for Survival

The foundations of geopolitics lie in the assumption that all nations are trying to survive and that to do so, they employ strategies based on the resources they have available to them. For Pakistan, the fight for survival dates back to its very birth as a country. Just two months after gaining independence in the partition of the British Raj in 1947, Pakistan was embroiled in its first war with India over the disputed territory of Kashmir. Pakistan's founder and first leader, Muhammad Ali Jinnah, was acutely aware that some circles in India expected their fledgling neighbor state to collapse and began diverting resources away from development to national defense. In the process, he bestowed unrivaled power on the Pakistani army. An ineluctable principle soon emerged that guides Pakistan's foreign policy to this day: India is the enemy.

Tempting as it may be to accuse Pakistan of paranoia, it's important to consider the country's position. Pakistan already shares one border with its archrival. The last thing it wants is to have to contend with New Delhi along its western border — an area whose ethnic and linguistic diversity has given rise to unrest and insurgency — as well. With that in mind, Pakistan must keep New Delhi from establishing a presence along the Afghan border, while working to forge friendly ties with the government in Kabul. (India, likewise, uses development funding to try to buy influence with the Afghan administration.)

Bequeathing a Strategy

After the Soviet-Afghan war began in 1979, the United States helped Pakistan project power into Afghanistan through proxy forces as part of its wider struggle against communism. The CIA, along with Saudi Arabia, funneled money and arms to Pakistan's Inter-Services Intelligence agency to train, arm and dispatch the mujahideen, a motley crew of religious and nationalist warriors, against the Soviets. Eager to destroy the godless ideology of communism — which in their view had no place in the devoutly Muslim country — the mujahideen eventually prevailed. The Soviets, beleaguered after a decadelong counterinsurgency war in unforgiving terrain, withdrew from Afghanistan in 1989. Washington soon followed suit, leaving the rival mujahideen to vie for control of Afghanistan. The ensuing civil war paved the way for a new fundamentalist movement known as the Taliban to rise to power in southern Afghanistan in 1994.

For Pakistan, which had grown frustrated backing the mujahideen parties, the Taliban presented an opportunity. By supporting the organization, Islamabad could try to stabilize Afghanistan and to use the country as a conduit for energy from neighboring Turkmenistan. Pakistani Prime Minister Benazir Bhutto's administration began funding the Taliban, helping the group take control through its conquest of Kabul in September 1996. That's where Islamabad's interests in Afghanistan started to conflict with those of Washington.

The Taliban played host to Osama bin Laden and his organization, al Qaeda. From the mountains in Afghanistan, bin Laden plotted the 9/11 attacks that prompted the United States to invade in October 2001. The Pentagon's main objective in Afghanistan was to prevent militant groups from using the country as a base for launching transnational attacks. Pakistan, meanwhile, maintained its links to its proxies in the Taliban to keep its stake in Afghanistan.

The Limits of Power

More than a decade and a half later, the intransigence of the United States' longest-running war has compelled the Trump administration to reassess Washington's relationship with Islamabad. By every measure, the United States is more powerful and influential than Pakistan is. It boasts the mightiest military in the history of the world along with an $18 trillion economy. Pakistan, by contrast, is a poor country, and its military — though a formidable fighting force — is no match for

the U.S. armed forces. Despite the disparity, however, Washington has failed to coerce Islamabad into cutting ties with the Taliban.

The United States' own cost-benefit calculation is partly to blame for this failure. Consider, for instance, bin Laden's discovery in 2011. Finding the world's most wanted man in Abbottabad, a garrison town in northeastern Pakistan, doubtless raised questions in Washington about the Pakistani army's ties with the militants. Nevertheless, the United States continued its aid to Islamabad, which totals $33 billion to date. The Pentagon concluded that the benefits of a security partnership with Pakistan, including access to critical supply routes and help flushing out al Qaeda operatives seeking refuge in the Federally Administered Tribal Areas, outweighed the costs of Islamabad's selective ties with militants. Neither President George W. Bush nor his successor, Barack Obama, would risk jeopardizing those benefits.

That may change under Trump. His administration so far has shown a willingness to question long-standing conventions in U.S. foreign policy as the United States takes a step back from global affairs to focus instead on domestic issues. Washington's alliance with Islamabad could be one of them. But even if Trump and his generals follow through on their threats to punish Pakistan, they are unlikely to change its behavior. So long as the country's survival is at stake in the war in Afghanistan, Pakistan will bear the costs of the United States' rebuke and probably seek alternative sources of funding, namely China. And from Islamabad's perspective, the resurgence of Hindu nationalism in India under Prime Minister Narendra Modi is an existential threat. The movement's hard-line factions, after all, have never reconciled themselves to Pakistan's statehood and still regard it as an affront to their country's territorial integrity. Should Modi win a second five-year term in office in 2019, as he is expected to, his victory would strengthen Islamabad's desire to keep New Delhi from gaining a foothold in Afghanistan — and, by extension, its support for the Taliban.

The View Ahead

Pakistan's actions in Afghanistan derive from the same quest for survival that underlies any country's foreign policy. Ironically, Washington encouraged the very behavior that so vexes it today by helping Islamabad refine its strategy for proxy warfare in Afghanistan during the Cold War. But geography is the real culprit. Even if the last NATO soldier were to vanish from the desolated Afghan landscape tomorrow, Pakistan and India's imperatives to deny each other a space in the land known as "the graveyard of empires" would continue as before.

As part of that mission, the Pakistani army is currently sharpening its country's territorial contours by building a fence along the border with Afghanistan. The initiative is part of a plan to pacify and fully absorb the Federally Administered Tribal Areas, which have defied governance since at least the colonial period, so the army can turn more of its attention toward India. The army has also sponsored a proposal to start giving militants an outlet in mainstream politics as a way to exert greater control over them. (The backlash that the creation of the new Milli Muslim League party inspired from Pakistan's Ministry of the Interior suggests, however, that the effort will be yet another source of contention between the country's military and civilian institutions.) And so, as the United States mulls more serious measures to try to weaken Pakistan's support for the Taliban, it will probably only weaken its partnership with Islamabad instead.

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The Diplomat (Tokyo, Japan)

India Test Fires Nuclear-Capable Cruise Missile from Fighter Jet

By Franz-Stefan Gady

November 22, 2017

The Indian Air Force (IAF) successfully test fired an air-launched nuclear-capable BrahMos-A supersonic cruise missile from a Sukhoi Su-30 MKI multirole air superiority fighter jet on November 22, India's Ministry of Defense announced in a statement today.

"Today, IAF has successfully fired the BrahMos air version anti-shipping [sic] missile from its frontline Su-30 MKI fighter aircraft off the Eastern Coast," the statement reads. "The launch from the aircraft was smooth and the missile followed the desired trajectory before directly hitting the ship target."

The IAF has conducted several tests of the BrahMos-A in 2016 and 2017 ,with two IAF Su-30 MKI fighters converted to launch the new 2.5-ton supersonic air-to-surface cruise missile so far. (A first flight test of a Sukhoi Su-30 MKI with a BrahMos-A took place in June 2016.) Given the size and weight of the BrahMos-A, each Su-30 MKI can only carry one missile in a transport launch canister.

In order for the aircraft to carry and fire the heavyweight cruise missile, their undercarriage had to be reinforced, next to a host of other technical modification and upgrades. "The integration on the aircraft was very complex involving mechanical, electrical and software modifications on aircraft," according to the Indian MoD. "The software development of the aircraft was undertaken by the IAF engineers while the HAL [Hindustan Aeronautics Limited] carried out mechanical and electrical modifications on aircraft," it added.

"One of the major challenges overcome by scientists of RCI [Research Center Imarat], DRDO [Defense Research Development Organization] in the missile development was optimization of transfer alignment of the inertial sensors of the missile." Transfer alignment is a process to initialize and calibrate a missile's inertial navigation system by using data from the aircraft's onboard navigation system to maximize the missile's accuracy.

For its future role as the air component of India's nuclear triad, the Su-30MKIs will also eventually need to be retrofitted with hardened electronic circuitry to withstand the electromagnetic pulses of a nuclear blast.

The missile "operates on a so-called fire and forget principle and can be dropped from 500 to 14,000 meters (1,640 to 46,000 feet)," I explained elsewhere. "The missile's terminal altitude is as low as ten meters. (The ship-launched anti-ship version of the BrahMos can fly 3-4 meters above the sea to avoid detection.) The BrahMos is capable of traveling at speeds of up to Mach 3.0, making it one of the world's fastest cruise missiles."

The BrahMos is a joint venture between India's Defense Research Development Organization and Russian rocket design bureau NPO Mashinostroyeniya. The Indian Army and Navy are already operating ground- and naval-launched variants of the cruise missile, which is a derivative of the Russian P-800 Oniks over-the-horizon supersonic anti-ship cruise missile.

The IAF will modify 50 Su-30MKI aircraft to carry the nuclear-capable cruise missile. In total, the IAF is expected to receive 200 air-launched BrahMos-As in the coming years, with first deliveries likely to commence in January 2018.

https://thediplomat.com/2017/11/india-test-fires-nuclear-capable-cruise-missile-from-fighter-jet/

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War on the Rocks (Washington, DC)

Nuclear Stability, Conventional Instability: North Korea and the Lessons from Pakistan

By Ankit Panda and Vipin Narang

November 20, 2017

Earlier this month, an anonymous senior U.S. administration official offered an explanation for why North Korea pursued nuclear weapons. "North Korea's goal is not to simply acquire these horrific weapons to maintain the status quo in the Peninsula," the official noted. "[I]t is seeking these weapons in order to fundamentally change that status quo. Its primary goal, as stated … is to reunify [with] South Korea. These weapons are part of the plan to reunify with South Korea."

This official articulated a commonly heard explanation for North Korea's acquisition and expansion of its nuclear arsenal: These weapons will provide a shield that emboldens Kim to seize territory of a conventionally (and extendedly nuclear) superior adversary. Ultimately, the thinking goes, North Korea will pursue an offensive agenda, using its nuclear weapons to deter retaliation as it seeks to end the U.S. presence on the Korean peninsula, reunify it under the supreme leadership of Kim Jong Un, and attain what state propaganda has long called the "final victory."

The official's remarks illuminate Trump administration statements implying Kim is irrational and undeterrable. In August, National Security Adviser H.R. McMaster stated "classical deterrence theory" — the idea that states respond to threats of denial or punishment — might not apply to Kim. Some key administration officials clearly believe Kim has expansive, revisionist goals and, having acquired a nuclear shield, cannot be deterred from pursuing them.

But a nuclear deterrent does not guarantee North Korea its "final victory," for two reasons. First, even those who paint the most nightmarish picture of North Korean revisionism would have a difficult time explaining how North Korea could occupy any significant portion of South Korea, given the overwhelming conventional and nuclear superiority of South Korea and the United States. Second, although young nuclear states have sometimes displayed emboldened behavior when they first acquired their arsenals, this has often waned as their revisionist intentions are either thwarted or satisfied. We illustrate these points with the most recent case of a revisionist emergent nuclear power: Pakistan.

This historical comparison is important. If the administration believes Kim will successfully use nuclear weapons for anything more than insurance against regime change, it could make the case for a U.S. first strike — a move which would spark a nuclear war — to disarm North Korea of that shield before it is too late. But India and Pakistan's behavior after both countries acquired nuclear weapons suggest reason to doubt this narrative. Despite persistent revisionist aims, twenty years after acquiring nuclear weapons Pakistan has achieved none of its stated revisionist objectives of acquiring Kashmir or achieving broader geopolitical parity with India.

The Benefits of Nuclear Weapons

While states may believe nuclear weapons confer benefits that allow them to change the status quo vis-à-vis their adversaries, altering the status quo is always more difficult than preserving it. It is true, however, that if nuclear weapons can deter existential threats to a state, they can also be used to attempt at least limited coercion. For instance, if a state gradually encroaches into adversary territory, or otherwise achieves a fait accompli, its nuclear weapons may deter other states from dislodging it or retaliating in other ways. Nuclear weapons powers can enjoy a range of other

benefits, including enhanced status, independence, and even the ability to engage in conventional brinkmanship by deliberately pursuing revisionist objectives through limited offensive maneuvers. Conventional brinksmanship is related to a concept known as the stability-instability paradox. The paradox posits that a condition of mutually accepted destruction (when two nuclear states obtain, and accept, vulnerability to each other's second-strike capability) generates stability at the nuclear level — since strategic nuclear use would be suicidal. But mutually accepted destruction therefore opens space for conflict at lower levels of intensity, such as terrorism or limited conventional wars, because these can erupt without fear of escalation to the nuclear level. In short, nuclear stability can incentivize conventional instability.

What follows from the stability-instability paradox is that new nuclear states that wish to revise the status quo in their favor may believe that their newfound nuclear shield may enable them to wage conventional wars to do so without the fear of nuclear retaliation. This is the fear permeating Washington today: Not that North Korea will fully achieve its aims, but that it will try. But North Korea is not the first state with openly stated revisionist objectives to acquire nuclear weapons. Almost twenty years ago, the same fear gripped India and the world when Pakistan openly tested nuclear weapons, but ultimately turned out to be overblown.

Pakistan's Revisionist Aims and the Subcontinent's Nuclearization

What can Pakistan teach us about the prospects for nuclear emboldenment? Pakistan has long had at least limited revisionist objectives toward India, notably acquiring Indian-held Muslim-majority Kashmir. These objectives, like North Korea's stated goal of reunification, long preceded the acquisition of nuclear weapons. In 1965, Pakistan attempted a fait accompli operation, Operation Gibraltar, to infiltrate Kashmir and spark a rebellion meant to result in Kashmir joining Pakistan. It failed: India retaliated swiftly and severely across the International Border, opening a second front where the terrain and Indian conventional superiority gave it a significant advantage.

The experience of the 1965 war, followed by the amputation of Bangladesh in 1971, hardened Pakistan's desire to obtain nuclear weapons to deter an Indian conventional attack. The specific lesson from Operation Gibraltar was clear: Do not attempt a fait accompli in Kashmir without the ability to deter Indian conventional retaliation with nuclear weapons. Nevertheless, it is important to note that Pakistan's revisionist objectives long preceded the acquisition of a nuclear arsenal.

Pakistan first achieved an untested nuclear weapons capability in the late 1980s. Despite testing a nuclear device in 1974, India's nuclear weapons program had, in fact, largely been on ice until that point and was only weaponized when Prime Minister Rajiv Gandhi received incontrovertible evidence of Pakistani nuclearization. It took India several more years to attain an operational nuclear weapons capability. In this covert nuclear phase, when both states had untested nuclear weapons capabilities, Pakistani emboldenment took on a subtler form than its successive incarnation: It trained and funded insurgents in Kashmir and Punjab, more aggressively inserting irregulars and guns, but otherwise refrained from overt aggression.

The Case of the Kargil War

After India and Pakistan went overtly nuclear in May 1998, Pakistan took its newfound capability out for a test-drive in the Kargil War, attempting a limited fait accompli in Kashmir. Although India's response was more restrained than in 1965 due to the fear of conventional and nuclear escalation, the end result was the same: The status quo ante was restored and Pakistan achieved none of its territorial aims.

Within the first year of becoming an overt nuclear weapons state, Pakistan essentially resurrected the Gibraltar playbook, probing whether the acquisition of nuclear weapons would allow it to this time deter India's attempts to dislodge it. It did not. There is still inconclusive evidence about

whether the Pakistan Army was motivated to attempt the infiltration in the Kargil sector because it now had nuclear weapons or whether it would have done so anyway. Regardless, the comparison with 1965 is instructive. On the one hand, Pakistan may have deterred India from opening a second front and attacking Pakistan across the International Border, and Delhi was careful not to use air power or force across the Line of Control. On the other hand, India was still able to successfully repel Pakistan's Northern Light Infantry, though reversing the infiltration was costly and time-consuming. Pakistan's attempt at emboldenment was thwarted. India has since adapted to the threat of infiltration by building an electrified fence and bolstering its security footprint in Kashmir.

Operation Gibraltar with and without nuclear weapons ended the same way for Pakistan. Nearly twenty years later, Pakistan has not tried to seize disputed territory again. The lesson of Kargil was that while Pakistan may have been tempted to try to repeat Gibraltar with nuclear weapons, India was simply forced to adapt its response, shifting from a punishment strategy to a denial and dislodging strategy. Therefore, the final result, restoring the status quo ante, was the same.

Pakistan-Sponsored Terrorism and the Nuclear Umbrella

Kargil showed that seizing another country's territory does not become magically easy after the acquisition of nuclear weapons. But other forms of provocation, below the threshold of land-grabs, might certainly be possible behind a nuclear shield. Instead of only targeting Kashmir, Pakistan has shifted the form of its revisionism to sponsoring mass-casualty terrorist attacks in India's major cities, such as Delhi and Mumbai. There are various theories about why Pakistan has shifted to sponsoring militant attacks on India, but most agree that these are not primarily about territory. Although India has invested a lot of effort in trying to prevent such attacks, experimenting with concepts such as Cold Start or "surgical strikes,'" and maybe even toying with nuclear counterforce options, it has not yet arrived at a fully satisfactory answer.

As horrific as these attacks are, however, they are not existential threats to Indian security — but overreaction and a war that risks nuclear escalation could be. As former National Security Adviser Shivshankar Menon wrote, after the 2008 Mumbai attack, India had more to gain from restraint than from military retaliation. This is one of the unfortunate implications of the stability-instability paradox. Periodic attacks such as Mumbai are possible under mutually accepted destruction, but they tend to stay limited. And they are a far cry from Pakistan's longstanding revisionist aim of reclaiming Indian territory in Kashmir. Despite acquiring nuclear weapons, Pakistan has, if anything, revised its territorial objectives downwards. Still, it is true that India has been forced to accept — and to try to prevent periodic provocations that it would not have had to do so absent Pakistani nuclearization.

The Pakistani case illustrates three things. First, the acquisition of nuclear weapons is not a silver bullet that suddenly allows states to achieve significant revisionist objectives. The logic of conventional and nuclear deterrence quickly overpowers domestic political rhetoric about reclaiming "lost" territories. Second, attempts at territorial revision are early and short-lived: they are (rarely) satisfied or (more often) thwarted and then not reattempted. Pakistan attempted the Kargil infiltration a year after it acquired nuclear weapons, failed, and then a new status quo set in. It has not attempted a repeat since. Third, limited new forms of emboldenment, such as terrorism or kidnappings, may still be pursued at subconventional levels of the conflict spectrum, where the state's nuclear weapons deter a conventional response. States, like India, however, craft a new normal and innovate ways to prevent and respond to the low-level aggression. There is no reason to expect the dynamics between North Korea, South Korea, and the United States to be substantially different.

Nuclear North Korea's Revisionist Aims

Given the experience in South Asia, how might a newly nuclear North Korea behave? A newly confident North Korea that can deter an American invasion may certainly attempt low-level provocations. But if the Pakistani case is any guide, these will be limited and ephemeral. Moreover, the United States and South Korea are more than capable of adapting to any shift in North Korean strategy, as India has.

What might this look like? North Korea may return to its old ways of limited provocations. Pyongyang hasn't engaged in serious conventional aggression across the Military Demarcation Line, with some exceptions, since 2010, when it sank the ROKS Cheonan, killing more than 40 South Korean sailors, and shelled Yeonpyeong Island. That may start to change with a newly robust and diversified nuclear force. Pyongyang may rely on its long-range ballistic missiles to engage in compellent threats against the United States while it pursues limited conventional provocations against South Korea. But it was engaging in this activity before acquiring nuclear weapons, as was Pakistan. So, at worst, North Korean provocations may become more frequent until the United States devises a prevention or denial strategy to dampen them.

A useful example of how North Korea might try to compel the United States to abandon activities that the regime dislikes is was threat in August to bracket Guam with intermediate-range ballistic missiles should the United States continue B-1B Lancer flights to the Peninsula. North Korea has already threatened to shoot down U.S. bombers outside of its airspace: that's precisely the sort of offensive action it may undertake under its nuclear umbrella. Retaliatory options for the United States and South Korea may be limited by the prospect of unintentionally sparking a nuclear war given North Korea's explicit first-use strategy. It is only natural that with a newfound capability, North Korea may try to compel the United States and South Korea into giving it more breathing room against American conventional activity.

At the broader political level, we do not dispute that North Korea wants the reunification of the Korean Peninsula on its terms. Neither do we dispute the Trump administration official's comment that North Korea's nuclear weapons could be a part of its plan to do so. But there is little evidence or logic to support the claim that North Korea's nuclear forces are primarily designed for blackmail and coercive reunification, or that they are useful tools for forcibly achieving that objective against a more powerful allied force.

There is no doubt that North Korea would prefer the United States out of the Korean Peninsula, which is among its revisionist goals. What is less clear is how nuclear weapons would enable it to achieve that end. The North Korean regime speaks of ending the U.S. "hostile policy," a reference to the forward-based allied posture in East Asia and Washington's deterrent activities in the region, ranging from bomber assurance and deterrence missions to the annual conventional U.S.-South Korea military exercises. Even with a nuclear deterrent, North Korea cannot expel the United States from the Korean Peninsula by force, either through gradual "salami-slicing" or through an outright invasion against a more conventionally and nuclear powerful allied force. The other way it can expel the United States is by driving a political wedge between the United States and South Korea, also known as decoupling the allies. This is undoubtedly one of the primary aims of North Korea's nuclear program. But the United States can deny North Korea this objective by taking steps to augment its presence and reassure South Korea that it has no intentions of abandoning its ally. Nuclear weapons alone will not help North Korea end the "hostile policy."

North Korea itself seems to recognize this, if we take seriously its own words regarding the primary objectives of its nuclear weapons. Although North Korean official statements and propaganda reiterate the reunification objective, they simultaneously go to great pains to clearly state that the primary purpose of its nuclear and missile program is to deter a U.S.-led attack. Speaking to the

United Nations General Assembly in September, North Korean Foreign Minister Ri Yong-ho underlined that North Korea's "national nuclear force is, to all intents and purposes, a war deterrent for putting an end to nuclear threat of the U.S. and for preventing its military invasion." Ri added that North Korea's "ultimate goal is to establish the balance of power with the U.S.," an objective recently reinforced to U.S. Track-II dialogue participants as well. Moreover, a 2013 North Korean law, entitled "On Consolidating the Position of Nuclear Weapons State for Self-Defense," began with the observation that the "nuclear weapons of the DPRK are just means for defense as it was compelled to have access to them to cope with the ever-escalating hostile policy of the U.S. and the nuclear threat."

States do gain a lot from nuclear weapons. In North Korea's case, we have argued that these weapons provide it with important insurance against coercive regime change, invasion, or disarmament. More significantly, North Korea's intercontinental-range ballistic missile capability not only augments this strategy but also opens the space for decoupling the United States from South Korea. However, as long as that alliance remains intact and the U.S. nuclear umbrella remains credible, North Korea's nuclear weapons will buy it regime-change insurance, a larger buffer against American conventional threats, and cover for limited conventional provocations — nothing more.

Yet some in Washington are advocating for a preventive strike against an already-nuclear North Korea based on the theory that the regime will be undeterrably emboldened with a nuclear shield and must therefore be forcibly disarmed before it is too late (or before, they argue, North Korea perfects the ability to hit the continental United States, exposing only Japan or South Korea to nuclear attack). This ignores the logic of deterrence, one that powerfully grips leaders from Mao and Stalin to Trump and Kim, and is borne out by the experience of recent emergent nuclear powers. Indeed, the lesson of India and Pakistan suggests that these advocates are relying on flimsy theoretical and empirical logic. Pakistan's attempts at revising the status quo with India were both short-lived and futile. And even if North Korea attempts similar types of behavior, history shows that Washington and its allies can adapt to, deny, and deter Pyongyang, as Delhi has successfully done with Islamabad.

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COMMENTARY

Defense One (Washington, DC)

Don't Kill the Nuclear Cruise Missile

By Vincent Manzo

November 20, 2017

The CBO's recent cost-cutting option discounts the loss of capability and risks of cancelling the next-generation ALCM.

Critics of the Long Range Standoff Weapon have seized on a recent Congressional Budget Office report that says stripping the nuclear triad of current and proposed air-launched cruise missiles, or ALCMs, would save some $30 billion over three decades. But the office's analysis discounts how this would undermine military capability and incur substantial risk.

For example, CBO concludes that the United States can eliminate the ALCM without shrinking its arsenal of survivable nuclear weapons — the ones that an enemy cannot be sure of destroying, and which therefore help deter large-scale nuclear attack. If CBO is right about the ALCM, giving it up would have no impact on stability with Russia.

Unfortunately, CBO is wrong. It arrived at this conclusion because it relied on the New START Treaty counting rule, which counts each deployed nuclear-capable bomber as a single deployed nuclear warhead. In other words, the nuclear gravity bombs and cruise missiles the United States and Russia can load onto their bombers are not counted against the treaty limit of 1,550 deployed nuclear warheads.

This rule is perfectly fine for the purpose of arms control. Both countries know that each deployed bomber can carry more than one nuclear weapon. But using the counting rule to assess the military implications of eliminating the ALCM is deeply misleading.

The United States can, in theory, arm its 41 nuclear-capable B-52H bombers with 20 cruise missiles apiece, for a total of 820 warheads. To be clear, the real number might be smaller, depending on the actual size of the cruise missile inventory, but it would still range in the hundreds.

Why does this matter? Bombers are difficult for an adversary to destroy in a nuclear attack because they can disperse and conduct airborne alerts. The ability to put hundreds of survivable nuclear weapons on U.S. bombers improves stability. On the other hand, unilaterally eliminating these survivable weapons would create a dangerous disparity with Russia, which can arm its bombers with as many as 600 nuclear ALCMs. In a crisis, this mismatch could provide Russia with coercive leverage and undermine strategic stability. CBO's analysis does not reflect this risk.

The United States could partially regain some of the survivable nuclear weapons it would lose by putting additional warheads on its submarine-launched ballistic missiles. (Doing the same to America's ICBMs would not enhance survivability because silo-based missiles are not as survivable as mobile bombers and submarines.)

Unfortunately, every warhead on a submarine counts against the New START treaty limit of 1,550 deployed weapons. The United States would essentially shift survivable systems from "discounted" ALCMs to treaty-accountable SLBM warheads. Thus, in order to truly regain survivable warheads under the treaty, the United States would need to make proportionate reductions to its ICBMs. Alternatively, it could withdraw from the treaty — at the cost of scrapping an important tool for managing the nuclear relationship with Russia.

The CBO report also concluded that eliminating the ALCM would not reduce the United States' low-yield nuclear options, apparently because bombers and tactical aircraft could still drop gravity bombs. Effective low-yield options are central to U.S. strategy for deterring an adversary from limited nuclear escalation in conventional conflicts. Unfortunately, here too the CBO's conclusion is wrong, both quantitatively and qualitatively.

The United States cannot offset the ALCM's low-yield contribution, provided by the W-80 warhead, by putting more warheads on its ICBMs and sub-launched missiles. As currently configured, U.S. ballistic missiles carry warheads that do not provide low-yield options. Thus, the United States would lose hundreds of low-yield nuclear weapons.

Eliminating U.S. bombers' ability to deliver nuclear weapons from standoff range would also decrease the effectiveness of U.S. low-yield nuclear options. The gravity bomb and the cruise missile are fundamentally different weapons. Put simply, ALCMs are more effective. To deliver gravity bombs against a set of targets, a bomber must fly to each one, sequentially. In contrast, the ALCM allows a bomber to hold multiple targets at risk over a vast geographic area. Even the CBO report notes that "Cruise missiles are more difficult for air defenses to detect and track than bombers." But

for some reason, CBO's analysis did not translate the loss of the cruise missile into an overall decrease in low-yield capability.

There are also longer-term risks to eliminating the ALCM. U.S. nuclear forces do not fulfill their deterrence role in a vacuum. We must assess their attributes relative not only to the strategic forces that potential adversaries field today, but also the forces they might possess in the future. And the United States must hedge its strategic posture against geopolitical and technological changes.

There might not be a replacement arms control treaty when New Start expires in 2021 or 2026, at which point there will be no binding constraints on Russia's nuclear forces. Possessing a significant number of survivable ALMCs to upload if Russia attempts to escape approximate nuclear parity would be valuable. New technologies might make it easier to locate submarines, in which case mobile bombers armed with up to 20 ACLMs would help sustain the survivability of U.S. nuclear forces. Similarly, if air-defense advances make it impossible to deliver gravity bombs, the ALCMs standoff range would sustain the effectiveness of U.S. low-yield options.

These examples demonstrate how the ALCM contributes to the resiliency of U.S. nuclear forces across a range of plausible futures. Policymakers and analysts need to weigh this valuable attribute against saving $28 to 30 billion over thirty years.

http://www.defenseone.com/ideas/2017/11/dont-kill-nuclear-cruise-missile/142668/?oref=d-river

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The War Zone (Tampa, FL)

What We Learned from Congress's Latest Review of the President's Ability to Use Nukes

By Joseph Trevithick

November 15, 2017

With the threat of a nuclear conflict at its highest point in decades, Americans and their representatives in government have become increasingly concerned about what checks and balances there are on the President of the United States' ability to use the most deadly weapons in the United States' arsenal. In a public hearing, U.S. Senators have unfortunately found that it's as difficult as ever to present a credible deterrent threat and impose meaningful restrictions on the Commander in Chief's sole authority to approve a potentially world-ending strike.

On Nov. 14, 2017, the U.S. Senate Foreign Relations Committee spent more than two hours discussing the matter with retired U.S. Air Force General C. Robert Kehler, who formerly headed up U.S. Strategic Command, former Acting Under Secretary of Defense for Policy Brian McKeon, and Duke University Professor of Political Science and Public Policy Dr. Peter D. Feaver. The last time legislators took up the issue in public was in 1976, when what was then the House Committee on International Relations specifically explored the legal underpinnings of a nuclear first strike. Senator Bob Corker, a Tennessee Republic and chairman of the Senate Foreign Relations Committee said that this would be the first in a series of such gatherings that would fully explore the president's authorities with respect to armed conflict and entering and withdrawing from international agreements.

"Only the president, the elected political leader of the United States, has this authority" to order a nuclear strike, Corker stated in his opening remarks. The senator later insisted that the hearing was "not specific to anybody" and that a general review of the authorities and protocols was "long overdue."

But it is impossible to separate the debate over the use of nuclear weapons from President Donald Trump and his many public threats, particularly those directed at North Korea. Trump has repeated alluded to the possibility of employing them against the reclusive country and its leader Kim Jong-un.

“North Korea best not make any more threats to the United States,” Trump said in August 2017 in what are now particularly infamous remarks. “He [Kim] has been very threatening beyond a normal state, and as I said, they will be met with fire and fury and, frankly, power, the likes of which this world has never seen before.”

Then, when speaking to the United Nations General Assembly in September 2017, Trump said Kim, who he called "rocket man," was on a "suicide mission." "The United States has great strength and patience, but if it is forced to defend itself or its allies, we will have no choice but to totally destroy North Korea," Trump said to audible gasps from the assembled world leaders and diplomats.

Most recently, during a state visit to South Korea earlier in November 2017, Trump continued to issue rhetorical challenges to the North Korean regime. In a speech before the South Korean National Assembly, the country's parliament, he described the North as a "hell that no person deserves."

"Today, I hope I speak not only for our countries, but for all civilized nations, when I say to the North: Do not underestimate us, and do not try us," Trump declared. "Every step you take down this dark path increases the peril you face."

Since January 2017, the North Koreans have responded in kind with their own threats, including suggesting they might be planning an unprecedented atmospheric thermonuclear weapon test. In July 2017, the Hermit Kingdom successfully test fired its first intercontinental ballistic missile (ICBM). Two months later they set off their first hydrogen bomb.

“Let me pull back the cover for a minute from this hearing,” Senator Chris Murphy, a Connecticut Democrat, said during the November 2017 hearing. “We are concerned that the president of the United States is so unstable, is so volatile, has a decision-making process that is quixotic, that he might order a nuclear weapons strike that is wildly out of step with U.S. national security interests.”

In October 2017, Corker himself said that Trump could be setting the United States "on the path to World War III." "He concerns me," the Senator continued. "He would have to concern anyone who cares about our nation."

At present, the United States maintains what it calls the "nuclear triad" – bombers capable of carrying nuclear bombs and missiles, land-based ICBMs, and submarines packed with nuclear armed ballistic missiles – to deter other countries from launching their own such strike. The basic principle of this posture is that no opponent would have any reasonable chance of knocking out America’s nuclear arsenal in a first strike and escaping an apocalyptic retaliatory attack.

The U.S. military is in the process of a routine nuclear posture review that could lead to changes in this doctrine. Despite earlier comments to the contrary, Secretary of Defense James Mattis has said that he believes the final decision will be to retain all three legs of the triad, though.

The U.S. Air Force and Navy are also in the midst of a multi-billion dollar effort to modernize their nuclear capabilities, which includes programs to develop and procure new B-21 stealth bombers, nuclear capable cruise missiles, ICBMs, and ballistic missile submarines. Earlier in November 2017, the Congressional Budget Office calculated it would cost more than $1.2 trillion to both improve and maintain America's nuclear triad over the next three decades. Even with that hefty price tag, the Air Force has said it isn't happy with how fast the work is coming along and is looking to congress for help in speeding up the process.

"My sense is that we're in a good place right now in terms of how we're working with industry going forward," U.S. Air Force Chief of Staff David Goldfein told Defense One in an interview. "The question I'll continue to have is: How do I move it left. How do we get this capability earlier. Because if you can actually get it faster, you can get it cheaper sometimes."

Many of the exact authorities and procedures for actually using those weapons are understandably classified. However, in order for the deterrent to be credible, some key details have to be public so as to communicate the risks to any adversary.

Perhaps most importantly, the United States does not have a policy of "no first use," reserving the right to employ its nuclear arsenal in response to an equally threatening or destructive conventional attack. According to the U.S. military's official nuclear war plan, the president can send the order "in the event of a hostile act or intent."

We obtained this document through the Freedom of Information Act and though heavily redacted, it offered many important details about how the United States would go about authorizing and launching a nuclear strike. You can find our full analysis here.

"There is nothing in this [OPLAN] that indicates a constraint on potential nuclear use, except that strikes have to comply with the Law of Armed Conflict, etc," Hans Kristensen, head of the Federation of American Scientists' Nuclear Information Project, told The War Zone in April after review the documents.

"The implication is nuclear use only in extreme conditions," Dr. William Burr, in charge of the nuclear history documentation project at the National Security Archive at The George Washington University, also explained to us at the time. "I would say that in such a circumstance, the decision would be left to the president and his advisers. One size would not fit all so to speak."

The assumption has long been that giving the president full decision making powers regarding the use of nuclear weapons is essential in making sure the order goes out, if necessary. Ballistic missiles fly so fast that the commander in chief could have 30 minutes or less to make a decision after the U.S. military detected a launch and determined whether or not it was threatening.

The fear has been that imposing a requirement to consult congress or hold an official legislative vote could easily prevent American nuclear forces from responding in time. Even giving another senior official or officials, such as the Vice President or Secretary of Defense, a formal say in whether or not to launch the strike could slow down the process to a dangerous degree.

Robust plans to maintain a so-called "continuity of government" in a crisis, something we at The War Zone have previously explored in depth, means that even if something happen to the president or other senior officials, this sole authority is always in the hands of a single individual. A mechanism known as the National Command Authority (NCA) does require the Secretary of Defense to confirm the order, but does not allow them to actively veto it. As such, the president can continue to fire and designate individuals to perform that function until someone approves the strike. The longer officials might attempt to dissuade the command in chief, the less time they would have to react to any incoming threats, though.

And with these procedures in place, specialized command centers and flying command posts such as Air Force One and the E-4B Nightwatch aircraft assure that whoever is in the role of commander in chief, they are always in contact with America's nuclear forces. Above all else, the U.S. has developed and built trillions worth of communications and other command and control infrastructure over the last 70 years to support the president or a designated representative's ability to rapidly order a decisive nuclear strike before they themselves are destroyed. Other nuclear powers have created similar measures for the same reasons.

The established protocol essentially accepts the lack of any real check and balance beyond the president asking for and accepting the counsel their closest advisers as necessary for the United States to offer a realistic threat of massive retaliation. At the same time, though, American military commanders are supposed to have the inherent right to refuse any orders they feel are unlawful. As already noted, the official U.S. military nuclear attack plan makes it clear that the strikes have to be in accordance with the Law of Armed Conflict, which requires any military action to be proportional to the hostile threat and to take all reasonable steps to avoid civilian casualties.

During the hearing, retired General Kehler said that had he received the order to launch a nuclear strike, but believed it to be lacking in legal justification, that he would have consulted his own advisers as to how to proceed. But since the United States is the only country to have ever used the weapons in anger and has only done so twice, there is no precedent whatsoever for how this might play out in an actual crisis.

“Then what happens?” Senator Ron Johnson, a Wisconsin Republican asked Kehler to try and clarify the hypothetical chain of events and understand if the retired officer was truly implying he might have actually disobeyed the command.

“I don't know,” Kehler said to nervous laughter from the assembled Senators.

An individual commander’s decision might not even matter. Bruce Blair, a co-founder of Global Zero, which advocates for the complete elimination of nuclear weapons around the world, and a former U.S. Air Force missile launcher offer, told the Associated Press that the orders would go to officials like Kehler and the crews in missile silos, aboard submarines, or flying bombers simultaneously.

If U.S. military officer felt that the order was illegal, they would have to try and countermand the launch procedures already in progress. By then, “it would be too late,” Blair said.

During the hearing former Acting Under Secretary of Defense for Policy McKeon challenged the notion that any president could simply decide to launch a nuclear strike absent a clear and imminent danger. "Article II does not give him carte blanche to take the country to war,” he said, referring to the part of the U.S. Constitution that establishes the Executive Branch of government and outlines its main authorities.

All three witnesses said they shared the view that without some clear instance of hostile intent for another country, the president would have to seek congressional approval for a nuclear attack. However, as we have noted, this stipulation does not appear to be formalized based unclassified portions of the Pentagon's own nuclear operations plans. In addition, there is already a separate ongoing debate about just what sorts of military action the Executive Branch can and cannot order without Congress formally declaring war – almost certainly something that Senator Corker intends to address in a future hearing.

And this of course isn’t the first time there have been concerns about whether the present system gives the president too much latitude. After North Korea shot down an American spy plane over international waters in 1969, the U.S. military dutifully drafted a set of possible responses for then President Richard Nixon, which included a limited nuclear strike. It is very possible that delays in communicating the details to the White House let tempers cool and prevented a potentially devastating exchange.

"No problem is presently more paramount than that of curbing the terror of nuclear weapons, particularly when one considers that their use could result in the devastation of modern civilization," Clement Zablocki, a Wisconsin Democrat and then Chairman of House Committee on International Relations, said in 1976. "Such was the concern that prompted various members of

congress to introduce legislator which would renounce the first use-first strike of those weapons as part of U.S. strategic policy."

As we noted, the United States did not and still has not adopted such a policy in spite of repeated pressure to do so. In the 2010 nuclear posture review, the U.S. government did adopt language stating that it would not use or threaten to use nuclear weapons against non-nuclear nations that have signed the international Non-Proliferation Treaty (NPT) and are in compliance with their obligations under that agreement. In 2003, North Korea withdrew from the NPT, which it had never been in full compliance with despite having first acceded to the deal in 1985, becoming the first and only country to do so to date.

But there have long been concerns about Trump's particular grasp of the implications of using nuclear weapons and his understanding of the triad in general. In August 2016, MSNBC's Joe Scarborough claimed that the then Republican presidential candidate had repeated questioned why the United States even had deadly arsenal if the president couldn't really use it.

Combined with Trump's clear misunderstanding of the efficacy of the U.S. military's missile defense shield, concerns have only continued to grow about whether he might initiate a nuclear attack believing it to be somehow consequence free for the United States. Even if that were true, the impact on our allies is still likely to be immeasurable.

At the November 2017 hearing, Senators also raised the question about whether publicly debating the president's authority might itself undermine America's deterrent credibility. "Every single word that's been uttered here this morning in this hearing is going to be analyzed in Pyongyang, and they are going to look very carefully at how we, the American people, view this," Senator James Risch, a Republican from Idaho, noted.

This is undoubtedly true. It has long been clear that the North Koreans are inclined to take official U.S. government pronouncements, including Trump's off-the-cuff remarks, very seriously. They, in turn, have stressed that the United States should do the same.

Any potential adversary is likely to be on the lookout for any public changes to America's nuclear doctrine in order to analyze them for vulnerabilities. The U.S. government would have to weight any significant reforms to the highest echelons of the U.S. military's command and control structure against the knowledge that hostile powers would immediately look to exploit weaknesses in the new procedures.

What, if anything, will come of the hearing is unclear though. The discussion seemed to mainly underscore the difficulties in balancing the ability of the president to wield a realistic nuclear threat with policies that would limit them from deciding to use that power on a whim.

"I do not see a legislative solution today," Senator Corker told reporters afterwards. "That doesn't mean that over the course of the next several months one might develop."

The U.S. government, its foreign allies, and opponents such as North Korea are certain to be watching how this debate evolves. More than four decades ago, though, American lawmakers decided that the present system was the least worst option to control the country's nuclear arsenal.

http://www.thedrive.com/the-war-zone/16123/what-we-learned-from-congress-latest-review-of-the-presidents-ability-to-use-nukes

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Defense News (Washington, DC)

Rising Nuclear Threats Require a Modern Deterrent

By Sen. Deb Fischer and Sen. Joe Donnelly

November 8, 2017

America's attention is focused intently on North Korea's nuclear program, and each day seems to bring more information on the Kim regime's continued pursuit of nuclear warheads and new missiles to carry them to our shores. The threat of nuclear attack — something long pushed to the margins of our national security conversation — is once again front-page news.

Our defense against this growing threat relies first and foremost on the capability of our own nuclear deterrent. As the bipartisan leadership of the Senate subcommittee that oversees our nuclear arsenal, our top priority is to ensure our nuclear forces have the resources they need to continue protecting our country. Doing so helps persuade rogue leaders like Kim Jong Un that the costs of doing us harm would far, far outweigh any imaginable gain.

Truth be told, however, our nuclear deterrent is aging and in need of modernization. A changing security environment means we must take stock of our nuclear posture and ensure our forces are properly configured. In fact, such a review is now underway and expected to be completed by the end of the year.

We anticipate this review will share many of the conclusions of the last review in 2010, including the importance of all three legs of the nuclear triad — the land-, air- and sea-based systems that carry nuclear weapons — and the urgent need to modernize our aging systems and infrastructure. It must also take into account how the security landscape has evolved over that period.

Unfortunately, changes in global nuclear threats are not confined to the Korean Peninsula. Russia's nuclear policies are also particularly worrisome. Russia have embarked on an ambitious modernization program of its nuclear forces. Moscow also has combined the development and deployment of new nuclear weapons with aggressive policy statements — including the first use of nuclear weapons and threats of nuclear attack against NATO allies and neutral states that have stood up to its aggression.

Most concerning, Russia has deployed a new ground-launched nuclear cruise missile in clear violation of its obligations under the 1987 Intermediate-Range Nuclear Forces Treaty. China has also embarked on a significant nuclear modernization effort that includes the development of more advanced capabilities and the expansion of its nuclear forces.

Despite the deep reductions in the size of the U.S. nuclear arsenal since the Cold War, as well as the good intentions of Republican and Democratic presidents to reduce the role of nuclear weapons, other countries are expanding their amount and types of nuclear forces, placing greater emphasis on nuclear capabilities in their national security doctrines. These global trends mean our nuclear deterrent will continue to be the bedrock of our national security for the foreseeable future.

After 25 years of near neglect for all of our nuclear systems, the need for modernizing every leg of the nuclear triad is pressing. This includes our intercontinental ballistic missiles, submarines, bombers and air-launched cruise missiles. In describing the aging U.S. nuclear arsenal, former Secretary of Defense Ash Carter said U.S. systems have already been extended decades beyond their original service lives: "It's really a choice between replacing them or losing them. That would mean losing confidence in our ability to deter, which we can't afford in today's volatile security environment."

Congress' strong record of funding nuclear modernization reflects a bipartisan, bicameral understanding of the important role nuclear weapons play in our security.

This across-the-aisle effort traces back at the very least to 2010. That year the Senate ratified the New START Treaty. In its resolution of ratification, the Senate stated that the reductions in deployed nuclear arms achieved under the treaty needed to be accompanied by the modernization of our nuclear triad. Our military leaders have continued to identify both elements of the 2010 agreement as important to national security, and the current versions of the fiscal 2018 National Defense Authorization Act, in both the House and Senate, reflect sustained bipartisan support for this approach.

The fundamentals of America's nuclear posture have remained remarkably constant since the end of the Cold War: maintain a survivable, flexible nuclear deterrent and extend to allies a credible nuclear umbrella while reducing nuclear forces to the lowest numbers required to deter enemies. We believe these principles remain valid.

Opponents of this effort often invoke its cost in their critiques. Although this is an important consideration, it should be viewed in context. As Gen. Paul Selva, the vice chairman of the Joint Chiefs of Staff, has repeatedly testified, we currently spend about 3.5 percent of the defense budget to operate and sustain our nuclear forces. Replacing these systems will increase overall spending on nuclear forces to about 6 percent of defense spending for about 10-15 years. After that time period, we will return to the lower level while being a safer nation. This modest, temporary increase is needed following decades of underinvestment in the nuclear mission.

Modernization of our aged nuclear systems has been delayed for far too long. In an increasingly dangerous world, our nuclear deterrent must be brought up to date.

https://www.defensenews.com/opinion/commentary/2017/11/08/rising-nuclear-threats-require-a-modern-deterrent-commentary/

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Scout Warrior (Brentwood, TN)

The Forgotten Reason North Korea Wants Nuclear Weapons

By Ted Galen Carpenter

November 14, 2017

The United States and its allies continue to cajole and threaten North Korea to negotiate an agreement that would relinquish its growing nuclear and ballistic-missile programs. The latest verbal prodding came from President Trump during his joint press conference with South Korean president Moon Jae-in. Trump urged Pyongyang to "come to the negotiating table," and asserted that it "makes sense for North Korea to do the right thing." The "right thing" Trump and his predecessors have always maintained, is for North Korea to become nonnuclear.

It is unlikely that the DPRK will ever return to nuclear virginity. Pyongyang has multiple reasons for retaining its nukes. For a country with an economy roughly the size of Paraguay's, a bizarre political system that has no external appeal, and an increasingly antiquated conventional military force, a nuclear-weapons capability is the sole factor that provides prestige and a seat at the table of international affairs. There is one other crucial reason for the DPRK's truculence, though. North Korean leaders simply do not trust the United States to honor any agreement that might be reached.

Unfortunately, there are ample reasons for such distrust. North Korean leaders have witnessed how the United States treats nonnuclear adversaries such as Serbia and Iraq. But it was the U.S.-led intervention in Libya in 2011 that underscored to Pyongyang why achieving and retaining a nuclear-weapons capability might be the only reliable way to prevent a regime-change war directed against the DPRK.

Partially in response to Washington's war that ousted Iraqi dictator Saddam Hussein in the spring of 2003, ostensibly because of a threat posed by Baghdad's "weapons of mass destruction," Libyan leader Muammar el-Qaddafi seemed to capitulate regarding such matters. He reconfirmed his country's adherence to the Nuclear Nonproliferation Treaty in December of that year and agreed to abandon his country's embryonic nuclear program. In exchange, the United States and its allies lifted economic sanctions and pledged that they no longer sought to isolate Libya. Qaddafi was welcomed back into the international community once he relinquished his nuclear ambitions.

That reconciliation lasted less than a decade. When one of the periodic domestic revolts against Qaddafi's rule erupted again in 2011, Washington and its NATO partners argued that a humanitarian catastrophe was imminent (despite meager evidence of that scenario), and initiated a military intervention. It soon became apparent that the official justification to protect innocent civilians was a cynical pretext, and that another regime-change war was underway. The Western powers launched devastating air strikes and cruise-missile attacks against Libyan government forces. NATO also armed rebel units and assisted the insurgency in other ways.

Although all previous revolts had fizzled, extensive Western military involvement produced a very different result this time. The insurgents not only overthrew Qaddafi, they captured, tortured and executed him in an especially grisly fashion. Washington's response was astonishingly flippant. Secretary of State Hillary Clinton quipped: "We came, we saw, he died."

The behavior of Washington and its allies in Libya certainly did not give any incentive to North Korea or other would-be nuclear powers to abandon such ambitions in exchange for U.S. paper promises for normal relations. Indeed, North Korea promptly cited the Libya episode as a reason why it needed a deterrent capability—a point that Pyongyang has reiterated several times in the years since Muammar el-Qaddafi ouster. There is little doubt that the West's betrayal of Qaddafi has made an agreement with the DPRK to denuclearize even less attainable than it might have been otherwise. Even some U.S. officials concede that the Libya episode convinced North Korean leaders that nuclear weapons were necessary for regime survival.

The foundation for successful diplomacy is a country's reputation for credibility and reliability. U.S. leaders fret that autocratic regimes—such as those in Iran and North Korea—might well violate agreements they sign. There are legitimate reasons for wariness, although in Iran's case, the government appears to be complying with its obligations under the Joint Comprehensive Plan of Action that Tehran signed with the United States and other major powers in 2015—despite allegations from U.S. hawks about violations.

When it comes to problems with credibility, though, U.S. leaders also need to look in the mirror. Washington's conduct in Libya was a case of brazen duplicity. It is hardly a surprise if North Korea (or other countries) now regard the United States as an untrustworthy negotiating partner. Because of Pyongyang's other reasons for wanting a nuclear capability, a denuclearization accord was always a long shot. But U.S. actions in Libya reduced prospects to the vanishing point. American leaders have only themselves to blame for that situation.

https://scout.com/military/warrior/Article/Libya-The-Forgotten-Reason-North-Korea-Desperately-Wants-Nuclear-Weapons-110484785

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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.