



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

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10 March 2017

**FEATURED ITEM: “The Comprehensive Nuclear-Test-Ban Treaty Negotiations: A Case Study”.** By Maurice Mallin, Center for the Study of Weapons of Mass Destruction.

On July 16, 1945, the United States conducted the world’s first nuclear explosive test in Alamogordo, New Mexico. The test went off as planned; a nuclear chain reaction, in the form of an explosion, could be created. Less than a month later, nuclear weapons were used to support Allied efforts to end World War II.

Just 4 years later, on August 29, 1949, the Soviet Union conducted its first nuclear test. The United States intensified efforts to develop the hydrogen bomb, which it tested in 1952. The development of new nuclear weapon designs, as well as the imperative to test these designs, were now inextricably linked. Nuclear tests were considered essential to maintaining confidence in the effectiveness and usability of these weapons.

Since the Alamogordo test, upwards of 2,000 nuclear tests have taken place globally. Of these, 528 were conducted in the atmosphere, with significant environmental consequences.<sup>2</sup> Between 1945 and 1950, seven atmospheric nuclear tests took place. As the Cold War escalated, weapons testing accelerated: 63 such tests occurred between 1951 and 1954.<sup>3</sup> Three of these were conducted by the United Kingdom, who joined the nuclear “club” with a test in 1952 (France tested in 1960, followed by China in 1964).

In 1954, after an unexpectedly powerful and environmentally damaging test called Castle Bravo took place over Bikini Atoll in the Asia Pacific,<sup>4</sup> Indian Prime Minister Jawaharlal Nehru called for a “standstill” in nuclear explosive testing: “Pending progress towards some solution, full or partial, in respect of the prohibition of these weapons of mass destruction, the Government would consider, some sort of what may be called a “standstill agreement” in respect, at least, of these actual explosions.”<sup>5</sup>

In 1958 the United States, the Soviet Union, and the United Kingdom undertook negotiations over a cessation of nuclear testing, but a number of issues, mostly related to verifying compliance, proved intractable.<sup>6</sup> Some success was attained after the Cuban Missile Crisis, as the three parties agreed in 1963 to the Limited Test Ban Treaty (LTBT), which banned all nuclear testing in the atmosphere, in space, or underwater. Nuclear tests would henceforth be permitted only underground. Subsequent efforts to negotiate a complete cessation proved unsuccessful until 1994, when negotiations on a multilateral comprehensive nuclear test ban began in earnest.<sup>7</sup>

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These negotiations were completed in 1996. Shortly thereafter, a treaty text was overwhelmingly supported at the United Nations. However, over 20 years later, the Comprehensive Nuclear-Test-Ban Treaty (CTBT) has not yet entered into force. As such, this case study will consider the following:

- The developments that led to the start of negotiations
- The perspectives of the key actors and their impacts upon the negotiations
- A summary of the negotiations, focusing on key issues and the efforts to reach resolution on them
- The endgame of the negotiations
- A few key lessons learned, which may have utility for future multilateral negotiations, touching on issues associated with leadership, factors that impact decisionmaking, and how a negotiation must balance national interests and negotiating objectives.

[http://wmdcenter.ndu.edu/Portals/97/Documents/Publications/Case%20Studies/cswmd\\_cs7.pdf?ver=2017-02-24-091003-443](http://wmdcenter.ndu.edu/Portals/97/Documents/Publications/Case%20Studies/cswmd_cs7.pdf?ver=2017-02-24-091003-443)

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Yonhap (Seoul, South Korea)

## **Redeployment of U.S. Nuclear Weapons in S. Korea Would Only Make Situation Worse: Expert**

By Chang Jae-soon & Shim In-Sung

March 6, 2017

Redeployment of U.S. nuclear weapons in South Korea would legitimize North Korea's nuclear weapons, bring an end to any chance of a diplomatic resolution, and make the situation more dangerous, a U.S. expert said Monday.

Instead, the U.S. and the South should consider adding more missile defenses, such as the Israeli-made "Iron Dome" system designed to defend against missile and artillery attacks, Robert Manning, a senior analyst at the Atlantic Council think tank, said in an email interview with Yonhap News Agency.

Talk of reintroducing tactical U.S. nuclear weapons to the South has resurfaced after the New York Times reported over the weekend that the administration of President Donald Trump is looking at that possibility as a "dramatic warning" to Pyongyang as it crafted its North Korea policy.

The U.S. withdrew its nuclear weapons from the South in the early 1990s at the end of the Cold War.

"If you redeploy nuclear weapons in the South, then you legitimize North Korea's program and end any chance of a diplomatic resolution. It would be a serious mistake, would not pressure the North, but only bolster Kim Jong Un's position internally, as he would point to the increased foreign threat and use it to exert tighter control and patriotic support," Manning said.

"It would only make a precarious situation more dangerous," he said.

Manning said that U.S. President George H.W. Bush decided in 1991 to pull tactical weapons out of South Korea so as to allow diplomacy toward North Korea to go forward, because it removed a justification for the North's nuclear weapons program.

Nuclear weapons do not have to be in the South for the U.S. nuclear umbrella to be effective, he said.

Bringing nuclear weapons back to the South is one of a wide range of options the Trump administration is considering. Other options reportedly include preemptive strikes, though it was unclear how seriously such extreme case options are being reviewed.

"All new administrations need to do policy reviews and must look at the full spectrum of possible options. That doesn't mean they all are viable or make sense," Manning said.

"Unless you can move Great Seoul and its 28 million people 1000 miles south, there is no preemption option in which the benefit outweighs the risk of war."

In recent weeks, Trump has expressed serious concern about the North's nuclear and missile program, especially after the North fired a newly developed intermediate-range ballistic missile on Feb. 12.

Trump has called the North "a big, big problem," "a world menace" and said he's "very angry" at the North's missile launch. He also effectively ruled out the possibility of a dialogue with the North's leader while pressuring China to rein in Pyongyang.

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His concerns about the North are believed to have deepened in the wake of the Feb. 13 killing by a chemical weapons agent of Kim Jong-nam, the estranged half brother of North Korean leader Kim Jong-un, and Monday's launch of four ballistic missiles.

Manning said the successive missile launches would affect Trump's policy on Pyongyang.

"The North Korea missile tests are part of an on-going effort to rapidly advance its missile and WMD capabilities, and only serve as a reminder of the growing threat as the U.S. tries to rethink its policy toward Pyongyang," he said.

The expert said, however, that Kim Jong-nam's killing is also deeply troubling because the use of the nerve agent VX in the killing has shown that the North has large chemical weapons stockpiles, but has not joined the Chemical Weapons Convention (CWC).

"A new demand that North Korea join the CWC and destroy its chemical weapons needs to be part of any policy not only for the US, but also ROK-Japan-China-Russia," Manning said. "Kim was clearly making a political statement with the VX: I have these weapons and am willing to use them."

Manning also said that whatever a new North Korea policy is, it's important to maintain some channel of dialogue.

"Trump's policy will seek to maximize pressure and undermine Kim's goals," he said of the North's leader. "But that should not preclude some type of dialogue."

When it comes to the North, there is no good policy, he said. But the "least bad strategy" would be to tighten sanctions, strengthen deterrence and defenses, and step up the campaign to send outside information into the North, he said.

"More layers of missile defense are possible, consider, for example, something like the Israeli Iron Dome to protect Seoul, or deploying the new SM3-2A anti-missile system on ROK Aegis cruisers to provide a mobile defense capability," he said.

Manning said the Trump administration shouldn't expect China to resolve the problem.

"Trump has exaggerated China's influence. We need to avoid asking China to solve it," he said.

Five parties of the six-party talks on the North's nuclear program -- South Korea, China, Japan, Russia and the U.S. -- should hold five-party talks to coordinate policies and consult to manage stability in the region, he said.

The expert was highly critical of China's opposition to the planned deployment of the THAAD missile defense system in South Korea. Beijing has taken a number of measures hurting South Korean businesses in retaliation for Seoul's decision to host THAAD.

"If China used economic coercion against North Korea as it is doing to the ROK, the nuclear issue might actually be solved. Privately, they know that THAAD does not compromise their nuclear deterrent," he said. "China can not deny the ROK the ability to defend itself."

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China has made a "mistake" by insulting and angering many in the South with its retaliatory measures, he said.

<http://english.yonhapnews.co.kr/interview/2017/03/07/65/0800000000AEN2017030700500315F.html>

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Russia Today (Moscow, Russia)

### **'US Nuclear Modernization: New Arms Race'**

Author Not Attributed

March 9, 2017

The US, addicted economically to military spending, is greasing the gears of the military-industrial complex as well as provoking Russia, says Bruce Gagnon, from the Global Network against Weapons and Nuclear Power in Space.

The US needs to modernize its nuclear arsenal to maintain strategic superiority over its rivals, according to a senior Air Force and Navy officers.

"Our nuclear deterrent is nearing a crossroads. We are now at a point where we must concurrently recapitalize each component of our nuclear deterrent: the nuclear weapons themselves, the triad of strategic delivery platforms, the indication-and-warning systems to support our decision processes, the command-and-control networks that connect the president to our field forces, and our dual-capable tactical aircraft that can be equipped with nonstrategic nuclear weapons." Air Force Gen. Paul J. Selva said.

The Pentagon is planning to upgrade all three parts of its nuclear triad: air, sea, and land-based over the next 30 years at an estimated cost of \$1 trillion.

RT: The US wants nuclear superiority over Russia but does not want a new Cold War. Do you think there is a contradiction there?

Bruce Gagnon: Absolutely. Nuclear superiority over Russia and China and everyone else on the planet that the US decides is an enemy. Ultimately, the US' economy is addicted to military spending; weapons' production is number one industrial export product in this country. In many communities across this nation it is the only job in town, so to speak. Increasingly America has to continue to turn on new weapon systems to keep this addiction to militarism humming.

At the same time, it is an escalation and provocation aimed at Russia and Europe. Especially as NATO expands into Eastern Europe, moves missile defense systems into Romania and Poland, putting missile defense systems on Navy destroyers in the Mediterranean, the Baltic and the Black Sea. We are seeing this incredible expansion of weapon systems of many different kinds moving eastward toward Russia. The US is not only greasing the gears of the military-industrial complex but also provoking Russia.

RT: Why is nuclear superiority over Russia so important when the Trump administration claims to be seeking a closer partnership with Russia?

BG: I think there is a war between the ruling oligarchies in America going on right now in Washington. I call it the mob versus the mafia. Neither of them are good guys. Many peace activists and progressive people across our country are very confused and think they have

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to pick sides and to support the Democrats who have lately been demonizing Russia in a kind of recycled version of redbaiting. But what we really have to do is be critical of this growing military madness that this country hell-bent, no matter who is in office. So, ultimately I think Trump might want to have good relations with Russia. He said it repeatedly during the campaign. And since I think there is a strong faction - what they call the 'deep state' in American politics, the military-industrial complex, Wall Street. Clinton campaign really represented that...

RT: After Donald Trump announced a 10 percent military spending boost, China followed suit saying it would hike spending by seven percent. Are we seeing a new arms race with multiple players?

BG: I think it is happening for sure. And a lot of it has to do with space technology...The US wants control and domination of space. They want to be able to wage war from and through space down to the Earth below. Russia and China have been going to the UN for years begging for a new treaty to ban weapons in space. And the US refuses even to negotiate such a thing because the US wants domination, they want full-spectrum dominance...

### **'US is the chief aggressor'**

Daniel Shaw, Professor of Latin American and Caribbean Studies at the City University of New York, told RT: "The US has always insisted upon in the words of Donald Trump "being at the top" of the nuclear pack. We've seen in Democratic and Republican administrations the insistence upon nuclear and military superiority."

According to Shaw, "the US has an arsenal of nuclear warheads that is incomparable and unmatched in the world; Russia is the only even close competition."

"The US needs to invent enemies in order to justify the increases in their spending. They try to present themselves as the chief victims when in fact they are the chief bullies across this world with a military apparatus of bases, installations, and soldiers that stretch across the world," he continued.

In Shaw's view, "the US would have us believe that Russia is the aggressor, when in fact, it is the US is the chief aggressor."

<https://www.rt.com/op-edge/380007-us-nuclear-modernization-triad/>

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The Washington Free Beacon (Washington, DC)

### **Top Generals: U.S. Has 'Squeezed' the Life Out of Aging Nuclear Deterrence Systems**

By Natalie Johnson

March 9, 2017

*Nuclear triad depending on 'just-in-time' modernization*

The U.S. military is relying on zero-hour modernization to maintain its aging nuclear arsenal as an effective deterrent against adversaries, according to two top U.S. generals.

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Gen. Paul Selva, vice chairman of the Joint Chiefs of Staff, testified before the House Armed Services Committee that the United States cannot defer nuclear modernization without "significant risk" to its deterrent capabilities, particularly as other countries like Russia and China are working to revolutionize their forces.

"These systems will not remain viable forever. In fact, we are now at a point where we must concurrently recapitalize each component of our nuclear deterrent," Selva testified Wednesday.

"As a result of previous delays and deferrals, all considered, we are currently depending on just-in-time modernization and replacement of many components of our nuclear triad," he continued.

The U.S. nuclear triad is composed of three legs: land-based intercontinental ballistic missiles (ICBMs), strategic bombers, and submarine-launched ballistic missiles. Gen. John Hyten, commander of the U.S. Strategic Command, warned that most of the platforms, weapons, and infrastructure that support the triad, such as the Air Force's ground-based Minuteman III ICBM and B-52 bombers, are several decades old and have already been extended well beyond their intended lifespans.

"We have made several considered decisions over the last decade to defer some modernization of [the U.S. nuclear deterrent] force in order to address urgent needs while still maintaining a safe, reliable, and secure arsenal and delivery capability," Selva said. "But in making those decisions we have squeezed about all the life we can out of the systems we currently possess, and so that places an extra premium on a very deliberate long-term investment strategy to replace those systems as the existing systems age out of the inventory."

The non-partisan Congressional Budget Office projected in February that the current nuclear modernization plan would cost the federal government an estimated \$400 billion over the next decade.

Selva said that while the cost appears substantial, it would ultimately represent less than 1 percent of the nation's anticipated federal spending and approximately 6 percent of the defense budget.

Some work is already underway to upgrade U.S. nuclear forces. Northrup Grumman was awarded a contract to modernize the current B-2 and B-52 bomber force in November. The government also is funding development of the Columbia-class nuclear missile submarine to replace the Navy's current force.

But the government has not yet determined what will replace Boeing's aging Minuteman III under a program called the Ground Based Strategic Deterrent. The Air Force submitted requests for proposals to replace the weapon in July. An Air Force spokesman told CNBC on Tuesday that the first contract award could be announced as soon as the fourth quarter of fiscal 2017.

Pressed by lawmakers to state which piece of the nuclear triad should be prioritized in upcoming budget talks, Hyten equated it to "choosing among your children."

"Under the current construct of what deterrence is, I can't give up any element of the triad," he said. "All three have to be modernized and all three have to be monitored as you go through that."





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President Donald Trump has outlined nuclear modernization as a top defense priority for his administration. A week after his inauguration, Trump directed Defense Secretary James Mattis to initiate a new Nuclear Posture Review to ensure the United States maintains a credible nuclear deterrent.

<http://freebeacon.com/national-security/top-generals-u-s-squeezed-life-aging-nuclear-deterrence-systems/>

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Naples Daily News (Naples, FL)

### **Nuclear Reality: Former U.S. Chief Scientific Officer Gives His Take on World's Nukes**

By Ashley Collins

March 8, 2017

Nuclear weapons can wipe out an entire city and kill millions. That power shouldn't be taken lightly. Yet, several countries, including Iran, Pakistan and North Korea, continue to actively engage in creating and testing nuclear weapons. North Korea just test-launched four ballistic missiles into the sea near Japan Monday.

According to Dr. John Psaras, former chief scientific officer with the U.S. Department of Energy, the threat isn't something to ignore. He spoke to more than 150 curious individuals at the Unitarian Universalist Congregation of Greater Naples late last month during the annual "Progressive Voices Speak Out" lecture series.

His lecture — the fourth in the series — honed in on, "Nuclear Weapons in the Wrong Hands - Terrorism, Iran, Pakistan and North Korea." Other lectures in the series touched on the new presidential administration, rise in sea levels and the 2016 presidential election.

Psaras, now retired, dedicated more than 25 years to the U.S. Department of Energy.

In order to explain the current nuclear weapons situation, Psaras started off with its origin.

The nuclear age began in 1945; the year the U.S. tested a nuclear bomb in New Mexico, and dropped a uranium bomb over Japan's Hiroshima, and a plutonium bomb over Nagasaki towards the end of World War II.

"Plutonium, to give you an idea, is roughly about, pound for pound, three times more vile than uranium," Psaras said to the audience.

During the Cold War, the U.S. and the Soviet Union engaged in a nuclear arms race. At the peak of the war, the U.S. had more than 30,000 nuclear device units, Psaras added.

"Russia had almost double that amount. So we could have blown the world 100 times over with that power," he said.

In order to quell the use and testing of nuclear weapons, an international treaty called Non-proliferation of Nuclear Weapons (NPT) was born in 1968, and was extended indefinitely in 1995.

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The treaty recognized the U.S., Russia, United Kingdom, France and China as nuclear-weapon states, and according to the Arms Control Association, legitimized those states' arsenals. However, not all states' agreeing to the treaty have stuck by the treaty's rules. North Korea withdrew from the NPT in 2003 and has tested nuclear devices since. Iran engages in secret nuclear activities in violation of the treaty's terms.

To date, there are still about 15,000 nuclear warheads worldwide, with more than 90 percent belonging to the U.S. and Russia, according to Psaras.

However, he added, all eyes should be on countries like North Korea, Pakistan and Iran.

Pakistan not only has a weak government, but is the Islamic world's sole nuclear weapons state.

"In those instances you could have a situation where somebody may be able to steal a nuclear device... In the event that they do try to actually hit anybody, either ourselves or alternately our allies, we are ready, having anti-ballistic missiles located strategically in both Southeast Asia as well as Europe and the Middle East," Psaras said.

He added that while he isn't sure what the new presidential administration plans to do against nuclear weapons, it should be placed in high priority.

In a February interview with the Reuters news agency, President Donald Trump said he wants a world free of nuclear weapons, but if it can't be, the United States should be "at the top of the pack."

The lecture series concluded March 8 with Brendan Fischer, associate counsel with the Campaign Legal Center, speaking on the role of gerrymandering and voter suppression during the 2016 presidential election.

The congregation's Rev. Tony Fisher hopes participants take action based on the information learned from the series.

"What we learn in these lectures hopefully just doesn't sit in our brains and make us feel good that we've heard it. But that it motivates us to turn around and go out and do something in the wider world," Fisher said to the audience.

<http://www.naplesnews.com/story/news/local/communities/collier-citizen/2017/03/08/nuclear-reality-former-us-chief-scientific-officer-gives-his-take-worlds-nukes/98054304/>

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Jalopnik (New York, NY)

## **DARPA Wants To Create A 'Soldier Cell' To Fight Biological Weapon Attacks**

By Terrell Starr

March 9, 2017

There really is no remedy against a biological weapon attack, but Johns Hopkins University researchers hope the four-year, \$5.7 million grant DARPA recently awarded them will change that. The aim is for the researchers to create a biocontrol system able to deploy single-cell fighters that will hunt down specific pathogens and destroy their lethality.

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Researchers will start with two forms of bacteria. Legionella, a kind of bacteria that causes Legionnaire's disease and Pseudomonas aeruginosa, which is the second-leading cause of infections in hospitals, according to Johns Hopkins University. If the tests conducted during the grant period prove successful, it is envisioned that these disease-fighting cells could be used to clean contaminated soil and defend against a bioweapon attack.

What makes this biocontrol system unique is that each engineered cell must seek and destroy dangerous bacteria without the help of a human controlling them:

"Once you set up this biocontrol system inside a cell, it has to do its job autonomously, sort of like a self-driving car," said Pablo A. Iglesias, principal investigator on the project. Iglesias, a professor of electrical and computer engineering in the Whiting School, shifted his research focus from man-made to biological control systems about 15 years ago.

"Think about how the cruise control in your car senses your speed and accelerates or slows down to stay at the pace you've requested," Iglesias said. "In a similar way, the biocontrol systems we're developing must be able to sense where the pathogens are, move their cells toward the bacterial targets, and then engulf them to prevent infections among people who might otherwise be exposed to the harmful microbes."

But there are a lot of challenges to fighting off a bioterror attack besides creating a cell that would kill lethal pathogens, which, of course, would be a major breakthrough. And there are so many ways in which a bioterror weapon can be sneaked into a sensitive location, even past the careful eyes of trained federal agents.

Back in 2011, the New York Times asked whether America was ready to defend against a bioterror attack. Not only was the answer clearly no, it was learned that not even White House security was able to detect a biological weapon that was brought directly to the Vice President's feet.

A few days after 9/11, a retired Air Force colonel named Randall Larsen went to the White House to speak with then-Vice President Dick Cheney about bioterror defense. The guards checked him thoroughly, or so they thought. Larsen made his way to a security meeting where Cheney and other defense experts were present. Tara O'Toole, who also served under the Obama administration as the top official for biodefense research at the Department of Homeland Security, was leading a briefing on the findings of a study conducted three months earlier to determine how prepared the U.S. was to fight a bioterror attack:

As O'Toole began the presentation, Larsen studied Cheney's expression. The vice president showed no reaction as O'Toole listed the officials who participated in the simulation, the complications they encountered as they tried to develop an emergency response and the arguments that broke out as they watched the disease spread beyond control. She concluded by telling the vice president that the country was unprepared for a biological attack.

Cheney nodded. "O.K.," he said. "But what are we looking for? What does a biological weapon look like?"

At this, Larsen reached into his briefcase and pulled out a small test tube. "Mr. Vice President," he said, "it looks like this." Inside the tube was a weaponized powder of Bacillus

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globigii, almost genetically identical to anthrax. “And by the way,” Larsen said, “I just smuggled this into your office.”

At one of the most secure buildings in the world, in a moment of unprecedented alarm, the White House guards had searched Larsen’s briefcase — and never even saw the powder. “They were looking for the wrong things,” Larsen says now. “They still are.”

Indeed, getting the science down is one thing, but identifying how a biological weapon will be deployed is a completely different issue. But that doesn’t minimize the important work DARPA is funding.

In 2017, America is still pretty vulnerable to a bioterror attack and there are few ways to fight lethal biological chemicals that could enter our water streams or hospitals without causing massive casualties. Currently, the Johns Hopkins researchers are not testing the biocontrol system on human blood, and instead focusing on bacteria outside of the body.

If the study is successful, the cell fighters could be deployed into hospital ventilation and cooling systems to fight bacteria causing infections. And if they are successful in that mission, America’s defense may finally have a counter against bioterror attack.

<http://foxtrotalpha.jalopnik.com/darpa-wants-to-create-a-soldier-cell-to-fight-biological-1793127965>

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The Richmond Register (Richmond, KY)

### **Retiring Chief: Chemical Weapons Destruction Still Top Military Priority**

By Bill Robinson

March 8, 2017

Conrad Whyne, chief of the Defense Department’s program to destroy chemical weapons by neutralization rather than incineration, addressed the program’s Kentucky citizens’ advisory board for the last time Tuesday.

Demilitarizing America’s last two stockpiles of the now-banned weapons remains a top Defense Department priority, Whyne told the Chemical-weapons Destruction Community Advisory Board.

The Pentagon has requested additional program funding in the current supplemental military appropriations bill as well as in the next fiscal year’s budget that begins in October, he said.

The Defense Department and its partners will eradicate the nation’s two remaining stockpiles of chemical weapons on schedule if they continue to work together with openness and transparency, Whyne said.

The partners have found that not working together only delays the project, he added.

The additional fund requests are needed because of cost overruns last year in the chemical weapons neutralization projects at both the Blue Grass Army Depot near Richmond and the Pueblo Army Depot in Colorado.

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Whyne appeared to take responsibility for the situation that forced layoff of local subcontractors for the current fiscal year. It also delayed a side project to destroy problematic mustard munitions in detonation chambers at the site.

If the undisclosed supplemental funding amount is approved, the project can recoup some of the momentum it lost this year, Whyne added.

The first-of-its kind multi-billion dollar project can expect future surprises and much hard work remains, he said. But Whyne affirmed his belief that all remaining chemical weapons will be demilitarized by the end of 2023.

After 39 years with the Army, 33 of them with AWAC, Whyne is to retire next month.

He was presented with a plaque and a medal by the CDCAB Co-Chair Craig Williams and a framed picture of the Mt. Zion Christian Church from the Madison Fiscal Court. The church that faces the depot was used as a hospital during the 1862 Battle of Richmond. The latter gift was appropriate, said Madison Judge/Executive Reagan Taylor, because of Whyne's interest in Civil War history.

Systemization of the expansive, labyrinthine neutralization plant near Richmond is about 67 percent complete, and neutralization of chemical weapons is expected to begin in 2020, said Jeff Brubaker, the government's site project manager at the depot.

Part of the systemization will include extracting a small amount, 500 ml, of GB nerve agent from a stored projectile to test the equipment that will treat the hydrolysate that results from nerve agent being neutralized with sodium hydroxide.

The extraction and test will take place only after federal and state environmental and safety agencies approve, Brubaker said.

Ron Kink, project manager for Bechtel Parsons Blue Grass, the contractor for building and operating the plant, said that his company's project employment stands at 864. Without the cost overrun, it would have been about 1,100, he said.

Employment will likely remain below 900 until 2019. It will be 1090 when plant operations begin in 2020, peaking at 1,386 in 2022. It will fall to 1,269 the following year, and drop by nearly half, to 668, in 2024. About 270 will be employed in 2025 and only 80 remaining in 2026 as any facilities that came in contract with nerve agent are razed.

[http://www.richmondregister.com/news/retiring-chief-chemical-weapons-destruction-still-top-military-priority/article\\_928dffbc-046d-11e7-89ed-8f3055f1a8d7.html](http://www.richmondregister.com/news/retiring-chief-chemical-weapons-destruction-still-top-military-priority/article_928dffbc-046d-11e7-89ed-8f3055f1a8d7.html)

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Nextgov (Washington, DC)

## **DARPA Tests Dirty-Bomb Hunting Ambulances**

By Mohana Ravindranath

March 2, 2017

For the past seven months, some Washington, D.C., ambulances have been doing double duty: simultaneously responding to emergencies and scanning the city for nuclear threats.

A Pentagon research program aiming to detect “dirty bombs” and nuclear threats recently outfitted fire and emergency medical services ambulances with radiological detectors they used to draw out a map of radiation levels in the city. The Defense Advanced Research Projects Activity's nuclear threat detection program, called SIGMA, wrapped up testing last month.

In its search for radiological phenomena, DARPA installed about 73 detectors on the ambulances, which travel across the city each day responding to medical and fire emergencies. The detectors gathered about 100,000 hours of data and traveled a total of about 150,000 miles.

The detectors were plugged into the ambulance and reported back to DARPA in real time, so ambulance operators didn't need any training.

DARPA may refine the system so it can eventually be deployed in other cities across the country, including to active duty military units and National Guard civil support teams, according to program manager Vincent Tang. The program may also consider incorporating other vehicles in addition to ambulances.

The DARPA program has developed another radiation detector model the size of a smartphone; one day in October, the agency asked about 1,000 volunteers to carry them around the National Mall.

The detection systems may be transitioned to state, local and federal groups as early as this year.

<http://www.nextgov.com/emerging-tech/2017/03/darpa-tests-dirty-bomb-hunting-ambulances/135842/>

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Deutsche Welle (Berlin, Germany)

## **Is US Cyber Defense a Key Weapon Against N. Korea's Missile Program?**

By Wesley Rahn

March 9, 2017

*Amid rising tensions on the Korean peninsula, a recent report indicates that the US has successfully used cyber attacks to disrupt North Korean missile tests, opening a new "invisible front" against the bellicose state.*

There is currently a big show of force happening in Northeast Asia. On March 7, for the second time in a month, North Korea fired missiles into the Sea of Japan, rattling both the nerves of its neighbors and their allies in the West. Pyongyang raised tensions further by adding that the recent launch was a drill for attacking US military bases in Japan.

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It came just a day after the US moved a missile defense system known as Terminal High Altitude Area Defense (THAAD) into positions in South Korea. And last week, the US and South Korean militaries began what is being described as "the largest ever" military drill between the two countries.

China's Foreign Minister Wang Yi said on Wednesday that both sides were racing towards a "head-on collision."

But behind this very public display of hostility is a complex system of information technology - a less visible but crucial strategic element that defense departments and experts are increasingly viewing as the future of warfare.

And an investigative report published on March 4 in the New York Times indicates that the US, under former President Barack Obama, indeed used cyber attacks in an attempt to disrupt North Korean missile tests.

The report came after an eight-month investigation into US Defense Department records and missile defense documents. The curiosity of journalists David Sanger and William Broad was sparked after they noticed that North Korea's medium-range missiles - called "Musudan" - tested during 2015-16 were exploding and veering off course and had a failure rate of 88 percent.

If US cyber attacks contributed to, or were the reason behind these missile failures, it would be a key success for the US in conducting a new type of warfare. However, it is very difficult to independently verify the causal link between US cyber attacks and defective missiles.

"We'll never know for sure, because North Korean missiles crash on their own without any outside help," James Lewis, a leading expert on international cyber security at the Center for Strategic and International Studies (CSIS) and a contributor to the North Korea think tank 38 North, told DW.

"On the other hand, some say the military officers recently executed by Kim Jong Un were killed because they had failed to block the missile hacks."

### **The invisible war**

Regardless of whether the US bugged North Korean missiles, cyber warfare clearly seems to be on the US military's strategic agenda and Washington certainly has the technological capacity to implement cyber attacks.

The Cyber Deterrence Defense Report, released by the Defense Science Board at the US Department of Defense in February, issued recommendations that would "increase US confidence and adversary uncertainty" in areas of cyber defense.

Among specific recommendations in the report, "select cyber offence" and "select long-range conventional strikes" were identified as priorities in coming up with a strategic cyber defense policy.

Whether these capabilities can actually be expanded to continually disrupt North Korea's missile program remains to be seen and this uncertainty highlights the sensitivity and vulnerability of cyber weapons.

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"Once you use it, it's gone," said Lewis. "If it was still a secret, it would have been effective. Now we'll need to do something else," he noted, adding that he doubted the Trump administration would seek to expand cyber attacks on North Korean missiles. "Cyber capabilities will continue to grow, as it's important for any advanced military to have cyber capabilities, but the rabbit is out of the hat on this one."

Riki Ellison, Chairman of the Missile Defense Advocacy Alliance (MDAA), a US-based defense advisory nonprofit, told DW that the new US administration would implement cyber weapons to disrupt supply chains in missile production, but added that effective capabilities would only become apparent if the weapon is activated.

"Once you expose your cyber capability in the network, you no longer are effective," said Ellison.

And the most likely US cyber adversaries, China and Russia, will surely be paying attention to the effectiveness of US cyber deployment. If it becomes clear that the US is successfully using cyber weapons to disrupt conventional defense systems, it could trigger a cyber arms race.

"Both [China and Russia] are very worried about the US hacking their weapons systems," said Lewis. "Their answer will be to try to make their networks more secure, and speaking as a former UN negotiator, they are not interested in 'arms control.' It's a new battlefield in an invisible war."

The level of technical sophistication required to have caused the North Korean missiles to explode or veer off course would be a clear indication that the US either could have somehow introduced malware into the design of the Musudan missiles or was able to remotely disrupt its launch systems. Either would be a major advancement in the use of cyber warfare.

### **North Korean retaliation?**

For North Korea to retaliate against weapons systems hacking, they would first need to recognize the intrusion. According to Ellison from the MDAA, even with Chinese support in evading cyber attacks on critical systems in weapon supply chains, North Korea would find it difficult to identify a cyber attack on its missile systems. "North Korea's systems are antiquated, old, and a lot are not on the network," he said.

However, North Korea has shown the ability in the past to carry out cyber attacks and is considered by the US as a primary international cyber threat. Unsurprisingly, South Korea remains digitally - and physically - the North's primary target.

"The North Koreans routinely hack South Korea," said CSIS's Lewis. "And everyone knows about Sony. They could carry out another Sony-style attack, but Kim will have to decide if retaliating is worth the risk."

Other potential cyber targets could include disrupting US missile systems in the Asia Pacific or another hacking of US companies as seen with Sony in 2014. A direct military response, however, would transform an invisible conflict into a physical one. For now, at least, the regime in Pyongyang has stopped short of using its weapons for large-scale destruction.



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But on March 7, North Korea's official news agency KCNA reported that their missiles were "so accurate that they look like acrobatic flying corps in formation." It seems they may have fixed the bugs from last year.

<http://www.dw.com/en/is-us-cyber-defense-a-key-weapon-against-n-koreas-missile-program/a-37871895>

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DefenseNews (Washington, DC)

### **Democrats Renew Attack on New Nuclear Cruise Missile**

By Aaron Mehta

March 8, 2017

Hours after top Pentagon officials traveled to the Hill to defend the need for a new nuclear-capable cruise missile, a group of nine Democratic Senators has introduced legislation to slow the development of the system, known as the Long Range Standoff Weapon, or LRSO.

The bill, headlined by Sen. Ed Markey of Massachusetts and announced Wednesday, would cap funding for the LRSO and its associated warhead at 2017 levels until the Trump administration submits its Nuclear Posture Review (NPR) to Congress.

"If the United States wants other countries to reduce their nuclear arsenals and restrain their nuclear war plans, we must take the lead," Markey said in a statement. "Instead of wasting billions of dollars on this dangerous new nuclear weapon that will do nothing to keep our nation safe, we should preserve America's resources and pursue a global ban on nuclear cruise missiles."

Capping the LRSO spending at 2017 levels would restrict the Pentagon to spending \$95.6 million for the weapon itself, and hold the Department of Energy's National Nuclear Security Administration to \$220.2 million for the life-extension program on the W-80-4 warhead. Such levels likely mean a log-term delay for the development of the weapon, which is in its early stages of design and development.

The LRSO program aims to replace the air-launched cruise missile (ALCM) program with 1,000 to 1,100 cruise missiles that represent the Air Force's standoff nuclear delivery capability. The ALCM is set to expire around 2030.

The non-proliferation community has pushed against the LRSO, arguing it is an inherently destabilizing weapon, as any nation the U.S. could threaten with conventional cruise missiles could mistake those weapons as nuclear and escalate accordingly.

But Pentagon officials — including a group that made an appearance on the Hill just hours before Markey's announcement — argue that the LRSO is necessary to maintain a credible deterrent against foreign nations.

Joining Markey in backing the bill are Sens. Dianne Feinstein, D-Calif.; Jeff Merkley, D-Ore.; Ron Wyden, D-Ore.; Patrick Leahy, D-Vt.; Al Franken, D-Minn.; Bernie Sanders, I-Vt.; Chris Van Hollen, D-Md.; and Sherrod Brown, D-Ohio. While Sanders is technically an

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independent, he caucuses with the Democratic Party and waged a hard-fought war for the Democratic nomination during the last presidential election.

This is not the first attempt by Democrats to target the LRSO. Last year, Feinstein pledged to hold hearings on her subcommittee about the need for the weapon and blasted it as unnecessary.

More concretely, House Armed Services Ranking Member Adam Smith co-sponsored an amendment to the annual defense authorization bill that would have cut \$95.6 million in authorization by \$75.8 million. That motion was defeated on a largely partisan vote, with five GOP members voted in favor of the amendment and 26 Democrats voted against it.

But those moves came at a time when Democrats believed they would retain the White House and potentially pick up control of the Senate and House. After the results of the election came in, Rep. Jim Garamendi, D-Calif., an opponent of the LRSO, conceded that nuclear modernization will continue under the Republican Congress.

Support for nuclear modernization programs remains strong on the Hill, with many Democrats backing the plans — put forth under the Obama administration — to recapitalize the Pentagon’s nuclear submarines, bombers, ICBMs, missiles and bombs, and the associated command and control structure.

A recent review by the Congressional Budget Office puts the price tag for modernizing the nuclear enterprise at \$400 billion over the next decade, with further costs down the road.

Because of that bipartisan support, it is unlikely Markey’s bill will go anywhere, barring something dramatic — such as the Trump administration threatening the New START nuclear reduction treaty with Russia. Analysts warn that such a move could threaten Democratic support for the LRSO.

Speaking to the House Armed Services Committee Wednesday, Gen. Paul Selva, vice chairman of the Joint Chiefs of Staff, called the LRSO an “integral part of our modernization and replacement strategy” and said the weapon was vital to ensure the current bomber fleet remains a viable threat in an era of modern air defenses, where flying a B-52 into enemy territory to drop a nuclear bomb is unlikely.

“The missile itself imposes a cost on any potential nuclear adversary, because in addition to modernizing their nuclear arsenal they also have to modernize their air defense arsenals,” Selva said, before offering a second reason to support the LRSO — it is the only way to negotiate a world without nuclear cruise missiles.

As counter-intuitive as that seems on the face, Selva argued to the HASC members that unilaterally getting rid of nuclear cruise missile capability, at a time when Russia continues to invest in their arsenal, would make any cruise-missile ban “unlikely”

“The places we’ve had success in negotiating types and classes of weapons out of adversary nuclear arsenals in our strategic reduction talks have been when we possess a similar capability that poses a tactical, operational and strategic problem for our adversaries,” Selva said.



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“We should take that to the table. We should negotiate it in a bilateral, verifiable way, so that we don’t give up the options and strategic leverage we have in the existence of the system.

<http://www.defensenews.com/articles/democrats-renew-attack-on-new-nuclear-cruise-missile>

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The Diplomat (Tokyo, Japan)

### **THAAD and China's Nuclear Second-Strike Capability**

By Ankit Panda

March 8, 2017

Earlier this week, hours after North Korea’s launch of a four-missile salvo into the Sea of Japan, the United States delivered and began deployment of part of the Terminal High-Altitude Area Defense (THAAD) system. “Continued provocative actions by North Korea, to include yesterday’s launch of multiple missiles, only confirm the prudence of our alliance decision last year to deploy THAAD to South Korea,” said the head of U.S. Pacific Command, Admiral Harry Harris, underlining the rationale behind the decision.

China, South Korea’s neighbor and the United States’ great power competitor in Asia, has long been vocally opposed to the deployment of THAAD on the Korean peninsula. In response to the deployment, Geng Shuang, a Chinese foreign ministry spokesperson, noted that China was “resolutely against the deployment of THAAD by the US and the ROK in the ROK, and will take firm and necessary steps to safeguard our security interests.”

For starters, let’s put to rest the misconception that China’s opposition to the THAAD deployment is because it is worried about the interceptor shooting down its missiles. As the “T” indicates in THAAD, the system is only capable of intercepting projectiles in their “terminal” phase (or as they’re hurtling towards the earth in descent). Unless China would consider firing ballistic missiles at South Korea, THAAD will do no good against its missiles (say, it’s intercontinental ballistic missiles going toward the United States in a nuclear exchange).

For China, opposition to THAAD is simple: it’s all about the X-band AN/TPY-2 radar unit that accompanies the interceptor battery and aids in targeting. The radar unit has yet to be delivered; it is expected to arrive in South Korea in April.

To be clear, China hasn’t been coy about specifically pointing to the radar issue. In fact, it has been explicit. Chinese Foreign Minister Wang Yi has made multiple references to the “X-band radar” that accompanies the THAAD battery, pointing out last February that it “goes far beyond the defense need of the Korean Peninsula.” This isn’t a case of Beijing nebulously stating its opposing to the deployment in terms of its national interest.

However, by that same token, China has turned down good faith offers from the United States for technical talks and consultations on the THAAD deployment in South Korea. The Obama administration, looking to assure China that the deployment wasn’t all a ruse to hurt

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China's interests, invited Beijing to talks as early as a year ago. "We will be very glad and hope we'll have the opportunity to sit down and talk with China about those very technical limitations and facts about the system," Rose Gottemoeller, the former undersecretary of State for Arms Control and International Security, had said at the time. China rebuffed those offers. Chinese Foreign Ministry spokeswoman Hua Chunying noted last year that THAAD was "certainly not a simple technology issue" for China.

So, what is it about THAAD — specifically about the X-band AN/TPY-2 radar accompanying the battery in South Korea — that so vexes China? What is it about this radar that drove Beijing to initiate a thorough dismantling of a slowly-but-surely improving bilateral relationship with South Korea through 2015 and early-2016?

## **Two Competing Hypotheses**

There are two possible serious explanations for how THAAD infringes on Chinese national interests. One is less convincing than the other. I'll address both in order, beginning with the less convincing explanation.

The first hypothesis is that China may fear that the AN/TPY-2 radar at the former Lotte Group golf course in Gyeongsangbuk-do will give the United States unprecedented surveillance insight into sensitive Chinese missile testing and development work deep within the mainland.

This may sound convincing at first glance, but there's a few reasons why it doesn't hold water. First, the South Korean THAAD deployment is not the first AN/TPY-2 deployment from the United States; nor is it even the first deployment of an advanced radar by the United States to the region. The U.S. already has two AN/TPY-2 installations in Japan, at the Kyogamisaki Communications Site in Kyoto prefecture and Shariki in Aomori prefecture.

Second, while we have no watertight estimates on just how capable the AN/TPY-2 radar is and in what configurations, even the most generous estimates don't leave the Gyeongsangbuk-do unit capable of any useful surveillance deep into the Gobi desert, where China has its most active and sensitive missile testing ranges. (AN/TPY-2 range estimates go from "several hundred miles" to 3,000 km.) I've mapped out the ranges below with the most generous range estimate of 3,000 km, using a Chinese ballistic missile impact range that Thomas Shugart at War on the Rocks recently revealed as a test-bed for potential People's Liberation Army Rocket Force preemptive warfare tactics (i.e., a site of surveillance interest for the United States).

Adding the westernmost AN/TPY-2 in Japan — the Kyogamisaki Communications Site unit — the map doesn't change drastically, either. (Incidentally, North Korea's latest missile test resulted in three missiles splashing down in Japan's exclusive economic zone, between the two AN/TPY-2s in the country — a less-than-subtle show of confidence.)

Basically, the surveillance explanation doesn't appear to be terribly convincing here. The United States additionally has an older PAVE PAWS installation in Taiwan that adds to its long-range radar capabilities in the region. Given these existing capabilities, the Gyeongsangbuk-do THAAD battery and its accompanying radar won't give the United States a new and potent looking glass into China that it doesn't already possess.

The second hypothesis is, I think, more convincing, and one where Beijing may have legitimate concern about the Gyeongsangbuk-do AN/TPY-2 radar upsetting U.S.-China strategic nuclear stability. Specifically, China may — correctly or incorrectly — fear that its



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nuclear second-strike capability is significantly degraded as a result of a third U.S. AN/TPY-2 radar going up specifically near the southern tip of the Korean peninsula.

To avoid the need for a massive nuclear build-up and to feel comfortable with its several hundred or so nuclear warheads for targeting, China needs to feel comfortable enough its intercontinental ballistic missiles can reliably penetrate U.S. antiballistic missile countermeasures. Pre-THAAD-in-South-Korea, a Chinese ICBM launch would still have been exposed to the AN/TPY-2s in Japan, but that exposure alone wouldn't have been enough to reliably help U.S. ground-based interceptors (GBI) in Alaska get a convincing edge against incoming Chinese warheads. (Set aside GBI's patchy success record for the moment.)

With a third AN/TPY-2 in South Korea, the resolution of U.S. data on incoming Chinese warheads would potentially be greatly enhanced. Specifically, China may fear that penetration aids for its ICBMs — such as decoy warheads — would be degraded, lowering the certitude that its existing arsenal would be sufficient for penetrating past the U.S. ABM apparatus. Theoretically, a triangulated AN/TPY-2 setup between Japan and South Korea could give U.S. midcourse interceptors in Alaska enough warning to have a better shot at an incoming Chinese missile.

Moreover, specifically, a Gyeongsangbuk-do-based AN/TPY-2 would also potentially have a unique vantage point for differentiating real warheads from decoys. Li Bin, writing for the *Kyunghyang Daily*, outlines this case in greater detail: “The THAAD radar to be deployed in the ROK would be in a very special position where it could view the back of the Chinese warheads flying over the northeast part of China when it is deployed to watch missiles from North Korea.”

Li's proposed solution for the United States was simple enough: the United States could “deploy its Green Pine radar or another radar with similar capabilities to guide the THAAD interceptors.” Li add that the “THAAD TPY-2 radar does not provide more capability to protect the ROK from the North Korean missile threat relative to a Green Pine-level radar since the TPY-2 radar's detection range goes too far beyond North Korean territory.” It's unclear also if a Green Pine radar would synergize with the existing AN/TPY-2s in Japan.

### **Instability and Insecurity**

Even without entering technical talks with the United States on THAAD, it's possible that Chinese strategic planners are all-but-certain that the AN/TPY-2 at Gyeongsangbuk-do will severely degrade their confidence in their nuclear second-strike capability. That explains why Beijing's been so vocally opposed to the deployment, why it is dismantling all bilateral momentum with South Korea, and why it shows no signs of budging. In fact, given that many analysts also speculate that China's recent foray into multiple independently targetable reentry vehicle (MIRV) capable ballistic missiles was primarily based around increasing penetration aids, Beijing may see the U.S.-South Korea move as effectively nullifying its investment.

It's unclear how China will choose to maneuver from here if the second hypothesis — insecurity about the status of its second-strike — is what's driving its opposition to THAAD. One solution could be to engage in a massive build-up of its warhead and ballistic missile stockpiles. China's existing arsenal is far more modest than the Soviet Union at the height of

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its Cold War nuclear rivalry with the United States and remarkably asymmetrical with existing U.S. stockpiles.

Interestingly, it is possible that Chinese concerns could have been somewhat assuaged if the Obama administration had moved forward with a declaration of a formal no-first-use doctrine for the U.S. nuclear arsenal. China has repeatedly affirmed its own no-first-use doctrine and some of its concern over second-strike degradation may have been assuaged over this. Of course, with the Trump administration in the White House and determined to ensure that the U.S. “expand its nuclear capability,” this now seems like far from a realistic proposal. Moreover, given the declaratory nature of doctrinal pronouncement, Beijing would still look to shore-up its second-strike capability.

China’s best option, however, simply may be South Korean domestic politics. Moon Jae-in of the Minjoo Party appears to be in a strong position as South Korea’s next election approaches later this year. Moon and his party have vocally opposed THAAD, but Moon changed his tone recently, saying that he didn’t think it would be “easy to cancel the agreement which has already been made between Korea and the United States.” Nevertheless, more so than now-disgraced former President Park Geun-hye, Moon, if elected, may be open to a pragmatic quid pro quo arrangement with China to reverse the deployment of THAAD.

China has invested considerable diplomatic capital in opposing the deployment and it remains to be seen how it will choose to handle the situation once the battery and radar are fully operational. Meanwhile, North Korea shows no sign of abating its ballistic missile testing, which serves to simply underline the point the United States and South Korea have long made in favor of the deployment: it’s necessary to defend South Korea. Whatever comes next, the THAAD saga on the Korean peninsula is certainly far from over.

<http://thediplomat.com/2017/03/thaad-and-chinas-nuclear-second-strike-capability/>

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South China Morning Post (Hong Kong, China)

### **China Vows ‘Resolute’ Measures as US Deploys First Parts of THAAD Missile System to South Korea**

Author Not Attributed

March 7, 2017

*The plans to deploy the missile system by the end of this year have angered not only North Korea, but also China and Russia, which see the system’s powerful radars as a security threat*

China said Tuesday it would “resolutely” defend its security interests as the US began deploying the THAAD missile-defence system in South Korea that Beijing fears will undermine its own military capabilities.

“We are firmly opposed to the deployment of THAAD in the Republic of Korea by the US and the ROK,” foreign ministry spokesman Geng Shuang told reporters at a regular press briefing in Beijing.

“China will resolutely take necessary measures to defend our own security interests. All consequences entailed from this will be borne by the US and the ROK.”





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South Korea and the United States agreed last year to install the Terminal High Altitude Area Defence (THAAD) system, which China has repeatedly denounced as a threat to its security.

The US military began deploying the first elements of the missile system to South Korea after nuclear-armed North Korea on Monday launched four missiles which it said was part of training for a strike on US bases in Japan. Three of the missiles came down provocatively close to Japan.

Deployment of the THAAD system “contributes to a layered missile defence system and enhances the US-ROK Alliance’s defence against North Korean missile threats,” the US Pacific Command said in a statement.

“North Korea’s accelerating programme of nuclear weapons tests and ballistic missile launches constitute a threat to international peace and security, and are in violation of multiple United Nations Security Council resolutions.”

Some South Korean liberal presidential candidates have said that the security benefits of having THAAD would be curtailed by worsened relations with neighbours China and Russia.

China’s condemnation of South Korean plans to deploy THAAD has triggered protests against South Korean retail giant, Lotte, which agreed to provide one of its golf courses in southern South Korea as the site of THAAD.

South Korean news agency Yonhap reported Tuesday that Chinese authorities had shut down 39 of Lotte’s retail outlets in the country, citing fire-safety concerns.

The South Korean government also raised worries about a reported ban on Chinese tour groups visiting the country.

An official from South Korea’s Defence Ministry, who didn’t want to be named, citing office rules, said that the equipment that arrived in South Korea included launchers, but didn’t confirm how many.

While South Korea’s media speculates that the THAAD deployment could be completed by as early as April, the ministry official couldn’t confirm such reports but said the plan was to have the system operational as soon as possible.

The statement from the Pacific Command, which oversees US military operations in the Asia-Pacific, pointed out that the system is “a strictly defensive capability and it poses no threat to other countries in the region.”

The system is meant to intercept and destroy short and medium-range ballistic missiles during their final phase of flight.

<http://www.scmp.com/news/asia/east-asia/article/2076653/us-deploys-first-parts-thaad-anti-ballistic-missile-defence>

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BBC News (London, UK)

## China Calls On N Korea to Suspend Missile and Nuclear Tests

By John Sudworth

March 8, 2017

*China has proposed North Korea suspend tests of missile and nuclear technology to "defuse a looming crisis".*

Foreign Minister Wang Yi said that in exchange, the US and South Korea could halt annual joint military drills, which consistently infuriate the North.

The appeal came after North Korea test-launched four missiles on Monday, breaking international sanctions.

But the US later said it was not "a viable deal", accusing leader Kim Jong-un of "irresponsible arrogance".

The US began rolling out a missile defence system in South Korea in response to the latest tests.

### 'Head-on collision?'

Speaking on the sidelines of China's annual parliamentary meeting, Mr Wang said the Korean peninsula was like "two accelerating trains, coming toward each other with neither side willing to give way".

"Are the two sides really ready for a head-on collision?" he asked.

A mutual halt of military operations would be the first step towards easing tensions and reopening negotiations, he said.

But US state department spokesman Mark Toner later said that China's proposal was not a viable deal.

He said: "This is apples and oranges. What we're doing in terms of our defence co-operation with South Korea is in no way comparable to the blatant disregard that North Korea has shown with respect to international law."

US Ambassador to the United Nations Nikki Haley said that "all options were on the table", but said of Mr Kim: "We are not dealing with a rational person. It is an unbelievable, irresponsible arrogance that we are seeing coming out of Kim Jong-un at this time."

Three of the North Korean missiles came down inside Japan's exclusive economic zone (EEZ) on Monday, prompting Japan's Prime Minister Shinzo Abe and US President Donald Trump to say the region had entered "a new stage of threat".

It is almost certainly not going to work. The US-South Korean joint exercises have been an annual fixture for the best part of two decades and North Korea's demands for the drills to be scrapped are always rebuffed.

At a time when Pyongyang is believed to be inching ever closer to developing nuclear warheads, Washington and Seoul are more than ever unlikely to be in the market for a grand, symbolic gesture.

So why would China join its neighbour's call for such a bargain? And why now? It may be that Wang Yi is conveying a genuine offer from Pyongyang and, in the role of an honest broker, is willing to give it a go however narrow the odds.

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Or perhaps by calling Washington's bluff over the military exercises - casting President Trump as a man unwilling to make compromises in the name of peace - China itself sees some strategic advantage.

The UN Security Council earlier strongly condemned the launch in a unanimous statement, calling it a grave violation of North Korea's international obligations, which risked destabilising the region.

The Council, which will meet later on Wednesday, also threatened to "take further significant measures" against North Korea, which could imply efforts to introduce a fresh round of sanctions.

Meanwhile, the US again sought to reassure Beijing over deployment of an extensive missile defence system in South Korea.

The Terminal High-Altitude Area Defense system (Thaad) is designed to protect South Korea, and US troops based there, from North Korean missile attacks. The first elements of it were moved into place on Tuesday, hours after the North's latest launch.

### **What is the Terminal High Altitude Area Defense System (Thaad)?**

Shoots down short and medium-range ballistic missiles in the terminal phase of their flight

Uses hit-to-kill technology - where kinetic energy destroys the incoming warhead

Has a range of 200km and can reach an altitude of 150km

US has previously deployed it in Guam and Hawaii as a measure against potential attacks from North Korea

### **What impact will S Korea's expanded missile defence system have?**

The enemy launches a missile

The Thaad radar system detects the launch, which is relayed to command and control

Thaad command and control instructs the launch of an interceptor missile

The interceptor missile is fired at the enemy projectile

The enemy projectile is destroyed in the terminal phase of flight

The Thaad deployment, originally agreed under the Obama administration, is controversial.

South Koreans living in areas which will host defence batteries are concerned they could become targets.

China has said its radar capabilities go far beyond what is required for defence and represents an encroachment of US military power and that it will "resolutely take necessary measures to defend our own security interest".

<http://www.bbc.com/news/world-asia-39202088>

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Financial Times (London, UK)

## **North Korean Banks Barred from Swift Transaction System**

By Don Weinland

March 8, 2017

*UN report shows lenders maintained access to global finance despite sanctions*

Three North Korean banks have been barred from Swift, the international transaction system, after the UN found they were using its services in defiance of sanctions.

Swift, based in Brussels, said on Wednesday that Belgian regulators would not allow it to provide services to banks that are subject to UN sanctions.

“As a result, Swift suspended access of UN-designated North Korean entities to the Swift financial messaging service,” it said in a statement.

More than 11,000 banks, securities houses and other organisations use Swift to communicate and verify financial transactions globally. It processes about 25m messages a day involving billions of dollars in transfers.

The ban came just days after North Korea fired four ballistic missiles into the Sea of Japan, and a week after the UN issued a lengthy report on how the country has flouted financial sanctions and maintained ties to international finance.

Tensions between North Korea and several Asian nations have risen in recent weeks following the assassination in Kuala Lumpur of Kim Jong Nam, the elder brother of Kim Jong Un, the North Korean leader.

The killing by nerve agent and the missile launch have drawn in China, whose foreign minister this week likened relations between Pyongyang, Seoul and Washington to “runaway trains” that Beijing was trying to stop.

Despite increased sanctions, North Korea has continued to use formal channels to access the global banking system, according to the report from the UN.

The report detailed how banks in North Korea had maintained correspondent banking relationships abroad through joint ventures and noted that “inadequate compliance” by UN member states had been a contributory factor.

“The panel found evidence that financial institutions in several member states continue to provide both direct and indirect correspondent banking services to banks” in North Korea, a violation of a 2016 resolution, according to the report.

Swift did not name the banks it has dropped but the UN said the company had continued to provide services to Bank of East Land, KKBC and Korea Daesong Bank.

The system had previously provided messaging services to four other UN-sanctioned North Korean banks but stopped at their request, the UN said. Several North Korean banks that are not sanctioned by the UN still use Swift.

The UN report also indicated a conflict between EU regulations and a UN resolution implemented last year. Belgium has noted that under European law Swift was permitted to take up to €15,000 in fees from a UN-sanctioned North Korean bank, while the UN panel said Belgium first needed approval from the UN Sanctions Committee for Swift to collect such fees.

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Early last year, Swift was embroiled in one of the biggest bank robberies in history. Cyber criminals made off with \$81m from the Bangladeshi central bank in February 2016. Hackers had sent fake orders from the Bangladesh Bank via Swift to the central bank's account at the Federal Reserve in New York.

<https://www.ft.com/content/69dd9512-03d9-11e7-ace0-1ce02ef0def9>

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Foreign Policy (Washington, DC)

### **North Korea Is Practicing for Nuclear War**

By Jeffrey Lewis

March 9, 2017

*North Korea isn't testing its missiles. It's preparing for a nuclear first strike.*

On Monday morning, North Korea launched four missiles from the northwest corner of the country that traveled 620 miles before landing in the Sea of Japan.

While none of the launches were the long-awaited test of an intercontinental-range ballistic missile — the sort of weapon that could reach the United States — the salvo was a big deal in its own way. Pyongyang very vividly demonstrated the warnings from Thae Yong-ho, a high-ranking North Korean diplomat who defected last year and described how the country was taking the final steps to arm its missile units with nuclear weapons. North Korea is developing an offensive doctrine for the large-scale use of nuclear weapons in the early stages of a conflict. When combined with what we know about U.S. and South Korean war plans, this fact raises troubling questions about whether a crisis on the Korean peninsula might erupt into nuclear war before President Donald Trump has time to tweet about it.

In the past, North Korea tested all its No-dong missiles out of a single military test site near a village of the same name. (Why, yes, the U.S. analysts did name the missiles after the town. The emasculating quality was a pure coincidence, I am sure.) These tests were designed to demonstrate that the Scud and No-dong missiles worked. They were tests in the literal sense of the word.

In recent years, however, North Korea has started launching Scuds and No-dongs from different locations all over the damn country. These aren't missile tests, they are military exercises. North Korea knows the missiles work. What the military units are doing now is practicing — practicing for a nuclear war.

The North Koreans haven't exactly been coy about this. Last year, North Korea tested a No-dong missile. Afterward, North Korea published a map showing that the missile was fired to a point at sea that was the exact range as South Korea's port city of Busan, with an arc running from the target into the ocean, down to Busan. In case you missed the map, the North Koreans spelled it out: "The drill was conducted by limiting the firing range under the simulated conditions of making preemptive strikes at ports and airfields in the operational theater in South Korea where the U.S. imperialists' nuclear war hardware is to be hurled."

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This time, North Korea launched four “extended-range” Scud missiles that are capable of flying up to 620 miles. The map showed all four missiles landing on an arc that stretched down to the Marine Corps Air Station near Iwakuni, Japan. Once again, the North Korean statement doesn’t leave much to the imagination: “Involved in the drill were Hwasong artillery units of the KPA (Korean People’s Army) Strategic Force tasked to strike the bases of the U.S. imperialist aggressor forces in Japan in contingency.”

So why is North Korea practicing nuking U.S. forces in Japan?

The United States and South Korea are conducting their largest annual joint military exercise, known as Foal Eagle. The exercise, which is really a series of exercises, lasts two months and involves tens of thousands of U.S. and South Korean military personnel, as well as an aircraft carrier, bombers, and — guess what? — F-35 aircraft based out of Iwakuni. Foal Eagle is a rehearsal for the U.S.-Republic of Korea war plan, known as OPLAN 5015, which has been described as a pre-emptive strike against North Korea, including its leadership, as a retaliation for some provocation. Whether that’s a fair description or not, the North Koreans certainly think the annual exercise is a dress rehearsal for an invasion. This year’s menu of fun and games reportedly includes a U.S.-ROK special operations unit practicing an airborne assault on North Korea’s nuclear and missile facilities.

What North Korea is doing is simply counterprogramming the Foal Eagle with its own exercise. If we are practicing an invasion, they are practicing nuking us to repel that invasion.

What is disturbing about the situation, though, is how the war plans of North Korea, South Korea, and the United States might interact. North Korea’s military exercises leave little doubt that Pyongyang plans to use large numbers of nuclear weapons against U.S. forces throughout Japan and South Korea to blunt an invasion. In fact, the word that official North Korean statements use is “repel.” North Korean defectors have claimed that the country’s leaders hope that by inflicting mass casualties and destruction in the early days of a conflict, they can force the United States and South Korea to recoil from their invasion. While U.S. officials usually bluster that Kim would be suicidal to order the large-scale use of nuclear weapons, it’s obvious that a conventional defense didn’t work for Saddam Hussein or Muammar al-Qaddafi when they faced an onslaught of U.S. military power. That was suicide. Of course, that’s where those North Korean ICBMs come in: to keep Trump from doing anything regrettable after Kim Jong Un obliterates Seoul and Tokyo.

Then there is this: Kim’s strategy depends on using nuclear weapons early — before the United States can kill him or those special forces on display in Foal Eagle can find his missile units. Kim’s strategy depends on using nuclear weapons early — before the United States can kill him or those special forces on display in Foal Eagle can find his missile units. He has to go first, if he is to go at all.

But going first is also the U.S. strategy. That means, in a crisis, the pressure will be to escalate. Whatever restraint Kim or Trump might show — and let’s be honest, our expectations here are not high — each will face enormous pressure to start the attack lest his opponent beat him to the punch. Then there is South Korea, which has its own pre-emption plan, separate from OPLAN 5015 and using South Korean ballistic and cruise missiles. Pyongyang, Washington, and Seoul all have plans to go first. Two of them are going to be wrong about that.

I understand why the public is fixated on the possibility of a North Korean ICBM. A nuclear-armed ICBM is North Korea’s ultimate goal and would be its final deterrent. It would be the





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last card that Kim would play. But it is equally, if not more, important to think through how such a war might start. It is important to understand whether the military forces and plans both sides are pursuing make war less likely or more. The launch on Monday might not have been an ICBM, but — in light of Foal Eagle — it was a warning all the same. Not of how a war on the Korean peninsula might end, but of how one might begin.

<http://foreignpolicy.com/2017/03/09/north-korea-is-practicing-for-nuclear-war/>

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38 North (Washington, DC)

### **Preparations for a Future Test Continue at North Korea's Punggye-ri Nuclear Test Site**

By Joseph Bermudez

March 9, 2017

#### **Summary**

New commercial satellite imagery of the Punggye-ri Nuclear Test Site from March 7 indicates activity at the North Portal, Main Administrative Area and Command Center. The sum of these activities supports an assessment that North Korea continues to prepare the tunnels at the North Portal for a future nuclear test. It also suggests that Punggye-ri is capable of handling a sixth nuclear test on short notice once a nuclear device and the associated monitoring equipment are emplaced. However, it is not possible to predict the timing of such a test based on the latest image.

#### **North Portal**

Commercial satellite imagery from March 7 indicates that the changing pattern of equipment and supplies, ongoing at this location since October 2016, continues. Equipment and supplies present at this location on February 18 and 21 have been replaced by what appears to be a large shipping container or crate. A pattern of tracks left by compacted snow indicates movement from the equipment and supplies storage area to the support buildings and tunnel. Additionally, while the February images showed changes in the pattern and texture of portions of the tailings pile, none are visible now.

All of these activities, as well as continuing work at this location over the past six months suggest an ongoing program of maintaining and preparing the North Portal for a new nuclear test should the decision be made to do so. Nothing in the latest imagery provides any insight as to when such a test will take place.

#### **West Portal**

Imagery indicates that the area around the West Portal is snow covered and the only activity of significance is the presence of a single small vehicle (approximately three-meters-long) not previously seen in this area. Although the mine railroad tracks are clearly visible in the March 7 image no changes in the pattern and texture of the tailings pile previously noted are apparent in the current image. The several probable mining carts observed in February are no longer present. While this activity suggests that minor

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excavation has likely taken place recently it does not appear to be ongoing. Whether this activity is for maintenance or ongoing tunnel excavation is unknown.

### **Main Administrative Area and South Portal**

Imagery shows that the courtyards at the Main Administrative Area are covered with compacted snow. While there is a truck—approximately five-meters-long—present in the southern courtyard, the supplies observed on February 18 and 21 in the northern courtyard are no longer present. The nature and purpose of these supplies or equipment is unclear, but they are likely associated with the changing pattern of activity at the North Portal.

No activity of significance is visible at the South Portal.

### **Command Center Area**

Imagery indicates that the Command Center courtyard is free of snow and a single truck—approximately five-meters-long—is present. (A single passenger vehicle was present in the February 18 imagery.) The presence of vehicles on two occasions during the past three weeks is notable since they are not typically observed at this location. This apparent increase in activity may be related to other activities observed at the North Portal and Main Administrative Area. The support area, guard barracks and security checkpoint are generally clear of snow suggesting ongoing activity.

<http://38north.org/2017/03/punggye030917/>

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DefenseNews (Washington, DC)

### **US General Says Russia Has Deployed Banned Missile**

By Robert Burns

March 8, 2017

A senior U.S. general on Wednesday accused Russia of deploying a land-based cruise missile in violation of "the spirit and intent" of a nuclear arms treaty and charged that Moscow's intention is to threaten U.S. facilities in Europe and the NATO alliance.

"We believe that the Russians have deliberately deployed it in order to pose a threat to NATO and to facilities within the NATO area of responsibility," Gen. Paul Selva, vice chairman of the Joint Chiefs of Staff, told a House Armed Services Committee hearing.

Selva said he sees no indication that Moscow intends to return to compliance with the 1987 Intermediate-Range Nuclear Forces Treaty, which bans an entire class of weapons — all land-based cruise missiles with a range between 500 and 5,500 kilometers (310 and 3,410 miles). The treaty was a landmark in arms control in the final years of the Cold War.

U.S. President Donald Trump has said little about the INF treaty but on multiple occasions has questioned the value of a separate, more recent treaty that limits the number of strategic nuclear weapons the United States and Russia can deploy to 1,550 warheads each, starting in 2018. Trump has said it unfairly advantages Russia. And he has said the U.S. should expand its nuclear weapons capability, although he has not explained what he meant.

Even before Trump's election, the Pentagon was weighing implications of a shift in Russian nuclear doctrine that seems to lower the threshold for the combat use of nuclear weapons.

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The Russians have framed their new thinking as "escalate, to de-escalate," meaning possibly using a small number of nuclear weapons to persuade an opponent not to escalate the conflict and possibly lead to all-out nuclear war.

"We have to account ... for what that means," Selva said Wednesday.

"We've begun an investigation of a series of potential strategy changes," he said, in part by conducting war games and military exercises.

The Obama administration had hoped to talk Moscow into returning to compliance with the treaty but seemed to make no progress. Asked how the U.S. might respond now that the cruise missiles are deployed for potential use, Selva said the military is preparing a set of options to be considered this year by the Trump administration as part of a broader nuclear policy review.

Selva said he could not publicly discuss those options. When pressed he said the plan is to "look for leverage points to attempt to get the Russians to come back into compliance," adding: "I don't know what those leverage points are."

The Obama administration had accused Moscow of violating the INF treaty, but Selva's statement was the first public confirmation of recent news reports that the Russians have deployed the nuclear-capable cruise missile.

The New York Times, which was first to report the Russian missile deployment, said last month that the Russians have two battalions now in the field. One is at a missile test site at Kapustin Yar and one was moved in December from the test site to an operational base elsewhere in the country. Russia denies that it has violated the INF treaty.

Some in Congress have expressed alarm at the alleged Russian deployment. Sen. John McCain, the Senate Armed Services Committee chairman, last month called on the Trump administration to ensure that U.S. nuclear forces in Europe are ready.

"Russia's deployment of nuclear-tipped ground-launched cruise missiles in violation of the INF Treaty is a significant military threat to U.S. forces in Europe and our NATO allies," McCain, R-Ariz., said, adding that he believes Russian President Vladimir Putin was "testing" Trump.

In response to questions at the hearing on Wednesday, Selva said U.S. officials have been talking to Moscow about the alleged treaty violation. He seemed unconvinced that the discussions would be fruitful.

"I don't have enough information on their intent to conclude other than they do not intend to return to compliance" with the treaty, he said. "Absent some pressure from the international community and the United States as a co-signer of the same agreement," there is no logical reason to believe that Moscow intends to end its violations, he added.

<http://www.defensenews.com/articles/us-general-says-russia-has-deployed-banned-missile>

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Foreign Policy (Washington, DC)

## **Trump's Silence on Russian Missiles Makes America Less Safe**

By Jon Wolfsthal

March 7, 2017

Russia presents security challenges to the United States and its allies for which the Trump administration has yet to indicate any kind of a policy direction or goals. In the nuclear arena, none of these challenges are more acute than Russia's ongoing violation of the 1987 Intermediate Range Nuclear Force (INF) Treaty. That Treaty, signed by Ronald Reagan and Mikhail Gorbachev, banned the Soviet Union and the United States from having or testing ground-launched missiles with ranges between 312 and 3,428 miles.

The INF Treaty and I kind of grew up together (yes, I am a geek and track my childhood, in part, through arms control agreements). In the 1970s, Russia deployed new nuclear-tipped missiles in Warsaw Pact states that could hit all of Europe. President Jimmy Carter and NATO responded with the dual-track decision, deploying American missiles in NATO states that could hit Russia, some in 15 minutes or less, while simultaneously seeking to negotiate elimination of such weapons on both sides. These missiles were highly destabilizing — they could reach London from Moscow in minutes, creating crisis instability and compressing decision times.

While the missiles were being deployed in Europe, over massive and prolonged protests, I was active in the nuclear freeze movement in New York, and later I did my first real college research on the dual-track decision. So my career came full circle when I became the senior director for arms control at the National Security Council in 2014, just after the U.S. government announced that Russia was violating the INF Treaty. That Russia was blatantly cheating on an agreement that helped end the arms race and was a cornerstone of post-Cold War nuclear stability was bad enough. Russia's steadfast refusal to even acknowledge its actions — reminiscent of its Cold War behavior — made clear how hard addressing this issue with Russian President Vladimir Putin would be.

To this day, Russia's behavior remains the same. Moscow has now reportedly begun to deploy a ground-launched cruise missile known as the SSC-8, while steadfastly denying that any such violation has taken place. At the same time, Russian officials take pains to justifying any hypothetical decision to violate the treaty on U.S. actions, including the deployment of regional missile defenses in Europe. Missile defenses are not constrained by the agreement and the United States goes to great pains to ensure that it remains in full compliance with its arms control treaty obligations.

Under President Barack Obama, the United States pursued three goals with respect to Russia and the INF Treaty: 1) deny Russia any military advantage from its violation, 2) work with and reassure European and East Asian allies that America's commitment to their security remained ironclad, and 3) work to convince Russia to come back into compliance with the INF Treaty. In the end, we were successful in two of the three goals, but clearly unable to convince Russia to fully implement the agreement despite repeated commitment to its goals.

Now, it seems, Putin has decided to press his luck by actually deploying the system, and President Donald Trump must manage this challenge at a time when he and many members of his inner circle are suspected of inappropriate or even illegal ties to Russia. Trump has said little and done less to address this issue, and in this vacuum Congress is already forging

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ahead with a chest thumping piece of legislation. A new pending bill would find Russia in “material breach” of the INF (a decision that can only be made by the executive branch), push the United States to develop its own systems for deployment in Europe, work to sell missiles to European allies to target Russia, and develop cruise missile defenses in Europe to counter Russia’s new missiles. These are all issues that the Obama administration considered, but it was not clear if these decisions would be affordable, improve NATO security, or convince Russia to return to INF compliance. It also seems highly likely that some of these steps would further undermine crisis stability in Europe. In addition, NATO states would not necessarily agree to these steps, which would undermine NATO alliance unity at a time when it is already under pressure — something that advantages Russia and not the United States. Regardless of your analysis of Russia’s actions, Trump’s inaction and Congress’ proposals makes managing the strategic relationship with Russia and reassuring NATO allies much harder.

Dangerously, Russia’s violation of the INF Treaty and noncompliance with other pacts removes — at least for now — new arms control agreements as a way to manage Washington’s burgeoning bilateral strategic competition with Moscow. It is hard to see how even the master of the art of the deal could negotiate a new nuclear deal with Russia when it is violating one of the most important ones ever signed. Even this GOP Senate might have a hard time accepting that gift from Trump.

Why does this matter at all? Well, in one sense — it doesn’t. The SSC-8 can reach targets that were already within range of Russia’s strategic missiles. Thus, the military balance is not dramatically affected by this move.

In the larger sense, however, it matters a lot. With short flight times, stealth, and mobility, the SSC-8 cruise missile is designed to deliver a nuclear surprise attack and undermines crisis stability in Europe. In addition, having these systems frees up Russian strategic missiles to more reliably target U.S. territory and to defeat any missile defenses designed to protect America. More dangerously, it puts metal behind the stated willingness of Moscow to use nuclear weapons early. And deployed in the far east, these systems also present a new way to target Japanese and South Korean allies and defeat U.S. missile defenses in those countries as well.

When the Obama administration left the White House, we left behind a playbook for how to address just this scenario. The legal and intelligence basis for taking a range of actions — including declaring Moscow in material breach of the INF Treaty and taking direct countermeasures that could prevent Moscow from gaining any advantage from its violation — are all available. Whether the Trump administration plans to avail itself of these options or pursue other steps remains unclear, as with so many other aspects of Trump’s Russia policy.

Time, sadly, is not on America’s side. If Russia’s violations go unchallenged, then U.S. allies — already on edge — will increasingly question U.S. commitment to their security. In addition, if Russia cannot be convinced to return to compliance, it is hard to see how the New START strategic arms control treaty that effectively manages America’s strategic nuclear competition can be extended or renegotiated when it expires in 2021.

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America's reaction to this challenge must seek to make the country and its allies more secure, not less. Legally, the United States can find Russia in material breach of the INF and take countermeasures, even including the development and deployment of its own systems that would be otherwise prohibited by the treaty. However, doing so would likely undermine the cause of NATO unity, as the population of many member states, particularly in western Europe, are not ready to consider increasing nuclear deployments to counter Russian moves. However, other steps are possible, such as deploying additional conventional air to surface cruise missiles, such as the JASSM-ER in Eastern Europe, and finding other ways to remind Russia why INF was in its interest back in 1987 and remains so today. If done as part of a process to convince Russia to verifiably destroy the offending missiles and launchers and restore the INF Treaty to full health, these steps would be welcome across the U.S. political spectrum. But silence and the status quo are the worst of both worlds — they encourage Russian bad behavior and undermine both American leadership and European stability.

<https://foreignpolicy.com/2017/03/07/trumps-silence-on-russian-missiles-makes-america-less-safe/>

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The New York Times (New York, NY)

### **Fearing U.S. Withdrawal, Europe Considers Its Own Nuclear Deterrent**

By Max Fisher

March 6, 2017

An idea, once unthinkable, is gaining attention in European policy circles: a European Union nuclear weapons program.

Under such a plan, France's arsenal would be repurposed to protect the rest of Europe and would be put under a common European command, funding plan, defense doctrine, or some combination of the three. It would be enacted only if the Continent could no longer count on American protection.

Though no new countries would join the nuclear club under this scheme, it would amount to an unprecedented escalation in Europe's collective military power and a drastic break with American leadership.

Analysts say that the talk, even if it never translates into action, demonstrates the growing sense in Europe that drastic steps may be necessary to protect the postwar order in the era of a Trump presidency, a resurgent Russia and the possibility of an alignment between the two.

Even proponents, who remain a minority, acknowledge enormous hurdles. But discussion of a so-called "Eurodeterrent" has entered the mainstream — particularly in Germany, a country that would be central to any plan but where antinuclear sentiment is widespread.

Jana Puglierin of the German Council on Foreign Relations said that a handful of senior European officials had "for sure triggered a public debate about this, taking place in newspapers and journals, radio interviews and TV documentaries."

She added: "That in itself is remarkable. I am indeed very astonished that we discuss this at all."

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

### **A Nuclear 'Plan B'**

Jaroslaw Kaczynski, Poland's former prime minister and now the head of its ruling party, provided the highest-level call for a European Union nuclear program in a February interview with a German newspaper.

But the most important support has come from Roderich Kiesewetter, a lawmaker and foreign policy spokesman with Germany's ruling party, who gave the nuclear option increased credibility by raising it shortly after President Trump's election.

In an interview in the German Bundestag, Mr. Kiesewetter, a former colonel who served in Afghanistan, calibrated his language carefully, providing just enough detail to demonstrate the option's seriousness without offering too much and risking an outcry from German voters or encouraging the American withdrawal he is hoping to avoid.

"My idea is to build on the existing weapons in Great Britain and France," he said, but acknowledged that Britain's decision to leave the European Union could preclude its participation.

The United States bases dozens of nuclear warheads in Germany, Italy, Belgium and the Netherlands as both a quick-reaction force and a symbol of its guarantee to protect the Continent. Mr. Kiesewetter said his plan would provide a replacement or parallel program.

This would require, he said, four ingredients: a French pledge to commit its weapons to a common European defense, German financing to demonstrate the program's collective nature, a joint command and a plan to place French warheads in other European countries.

The number of warheads in Europe would not increase under this plan, and could even decrease if the United States withdraws.

"It's not a question of numbers," Mr. Kiesewetter said. "The reassurance and deterrence comes from the existence of the weapons and their deployability."

He envisioned a program designed to deter nuclear as well as conventional threats — a clear nod to Russia's military superiority.

This would require a doctrine, he said, allowing Europe to introduce nuclear weapons to a non-nuclear conflict. He compared it to the Israeli program, which is believed to allow for a nuclear strike against an overwhelming conventional attack.

"These are political weapons. Their use must be unpredictable," he said. Smaller nuclear powers often maintain vague doctrines to deter more powerful adversaries.

The goal, he said, would be to maintain Europe's defense, seen as crucial for its internal unity, as well as its international diplomatic standing.

German lawmakers across the political spectrum worry that Mr. Trump could strike a grand bargain with Russia that excludes Europe, a potential first step toward Washington and Moscow dictating Europe's future. Mr. Kiesewetter believes a European nuclear program would allow Europe to preserve its autonomy.

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### **'A Political Minefield'**

Mostly, Mr. Kiesewetter said he hoped to spur Mr. Trump to end doubts over American security commitments to Europe, rendering unnecessary the nuclear "Plan B."

For now, Mr. Kiesewetter's intention is merely to "trigger a debate" over addressing "this silent, gigantic problem."

It has worked. A small but growing contingent of German analysts and commentators have endorsed versions of a European nuclear program.

Mr. Kiesewetter said he had heard interest from officials in the Polish and Hungarian governments, at NATO headquarters in Brussels and within relevant German ministries, though he would not say which.

But any European nuclear program would face enormous hurdles.

"The public is totally opposed," Ms. Puglierin said, referring to German antinuclear sentiment, which has at times culminated in nationwide protests against the weapons.

In practical terms, the plan would change the flag on Europe's nuclear deterrent from that of the United States to that of France. But this would risk making an American exit from Europe more permanent.

Oliver Thränert, a German analyst with the Switzerland-based Center for Security Studies, warned in a white paper that any plan "would not only be expensive, but also a political minefield full of undesirable potential political consequences."

The biggest challenge may be who controls the French arsenal and where it is based.

The United States currently shares warheads with allies like Germany, whose militaries are equipped to deliver the weapons, granting the program credibility as a Pan-European defense.

But France has shown no willingness to share its weapons, much less put them under a joint European command. If Paris maintains final say over their use, this might cause an adversary to doubt whether France would really initiate a nuclear conflict to protect, say, Estonia.

### **France and 'a Special Responsibility'**

These sorts of problems are why Bruno Tertrais of the Foundation for Strategic Research in Paris said, "In other times I would have told you don't bother, there's no story here."

Similar proposals have been floated before, including by the French government, and always rejected as politically risky and strategically unnecessary. But, he said, that calculus appears to have a potential to change with Mr. Trump.

"There's already a bit more interest in Berlin and in Paris," Mr. Tertrais said, though he emphasized that this talk would become action only if there were "a serious loss of trust in the U.S. umbrella."

But a joint European command or funding scheme would most likely be impossible, he warned. The French government would insist on maintaining "the final decision to use nuclear weapons."

That is also United States policy in Europe, which is why Mr. Tertrais believes a more workable plan would be for France to reproduce American-style practices of basing its warheads abroad, while keeping them under French control.

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While most French warheads are lodged on submarines, a few dozen are fitted to air-launched cruise missiles that could be housed in, for example, German airfields. These are smaller, shorter-range tactical weapons — exactly the American capability that Europe most fears losing.

French policy already allows for, though does not require, using nuclear weapons in defense of an ally.

With Britain's exit from the European Union, "the French might feel they have a special responsibility" as Europe's sole nuclear power.

Vipin Narang, a Massachusetts Institute of Technology professor who studies regional nuclear powers, was initially skeptical but came to see such a plan as both technically and politically feasible.

For France, he said, "it extends their frontier," making it likelier that a nuclear conflict would be fought far from French soil. For Germany and other European states, it would "increase the credibility of the forward deployment against Russian aggression."

### **An Insurance Policy**

Some observers believe that official shows of support are intended only to pressure Mr. Trump into maintaining the status quo, which Mr. Kiesewetter emphasized is his preferred outcome.

But Mr. Narang said that, regardless of intentions, there is a blurry line between mere signaling and actually pursuing a fallback nuclear option.

Nuclear scholars call this "insurance hedging," in which a protectee comes to doubt its protector and responds by taking steps toward, but not actually completing, its own nuclear program. This is meant to goad the protector into staying, and to prepare in case it doesn't.

Japan, for instance, has quietly developed latent capabilities that are sometimes figuratively described as a "screwdriver's turn" away from a bomb.

Because Europe's primary challenges are political rather than technical — France already possesses the warheads — sparking public discussion and exploring options makes those challenges more surmountable and the option more real.

"In order for it to be credible there has to be some sort of workable option," Mr. Narang said.

### **'I Never Thought We Would See This Again'**

Mr. Kiesewetter hopes the United States will come around. He puts particular faith in Jim Mattis, the defense secretary, whom he met in Afghanistan and Brussels while both were military officers.

But Mr. Mattis has echoed Mr. Trump's warnings that the United States could lessen its support for Europe, saying in a recent speech in Brussels, "I owe it to you to give you clarity on the political reality in the United States."

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If Europeans grew more serious about a nuclear program, Mr. Tertrais said, “you would not necessarily see it.” Negotiations would most likely remain secret for fear of giving Mr. Trump an excuse to withdraw — or of triggering a reaction from Russia.

Mr. Narang said he was reeling from the seriousness of the discussion, the first since a failed and now-forgotten effort in the 1950s for French-German-Italian nuclear cooperation.

“I never thought we would see this again. I never thought there would actually be this concern,” he said. But, he added, “You can see where the debate is surfacing from. There is a logic to it.”

<https://www.nytimes.com/2017/03/06/world/europe/european-union-nuclear-weapons.html? r=0>

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Bulletin of the Atomic Scientists (Chicago, IL)

### **US-Russian Space Cooperation: a Model For Nuclear Security**

By Simon Saradzhyan & William Tobey

March 7, 2017

Without the town of Korolev, Russia, Houston would have had a problem. That suburb of Moscow, named after the father of the Soviet space program, produces capsules that are now the only way NASA can transport its astronauts to space and back. America also remains dependent on Russia for engines to power rockets that launch US government payloads—including satellites that spy on Moscow. Russia, too, depends on the United States: Its spacecraft and rocket makers earn billions of dollars launching American astronauts and cargo into space, while Russia’s strategic aviation—part of the force meant to deter America—reportedly continued to use signals beamed by US GPS satellites even after relations between the two countries began to deteriorate in 2012.

This interdependence between the US and Russian space programs persists even though the two countries are now living through what some pundits describe as a new Cold War. There was a time not so long ago, however, when the two nations viewed space solely as an area of strategic competition. The steps that Washington and Moscow took to transform their space rivalry into cooperation can serve today as a model for working together to help prevent nuclear terrorism, no matter how strained relations may seem.

In the early 1960s, manned space flight became emblematic of US-Russian competition, with each country sacrificing blood and treasure to beat the other. Space flight involved the most advanced technologies and sensitive secrets of the time. Bilateral cooperation was unthinkable. Yet, by the summer of 1975, the two countries had launched their joint Apollo-Soyuz mission. Today, the two space programs are not just cooperative but interdependent, although the United States is developing alternatives to Russian space systems.

While continuing to work together in exploring the cosmos, the United States and Russia have all but ended cooperation in a sphere where a failure to work together could lead to catastrophe not only for the two countries but globally. Reacting to Russia’s use of force in Ukraine, the Obama administration restricted nuclear energy and technology cooperation between the two countries. Russia responded by effectively ending a range of projects aimed at improving nuclear security. Russian Deputy Foreign Minister Sergei Ryabkov [called the measures](#) a response to Washington’s “hostile” move to freeze nuclear-

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energy cooperation. Such a rollback is all the more regrettable given that top statesmen on both sides have described nuclear terrorism as one of the greatest threats to their respective countries and humanity as a whole.

Four concrete steps can reestablish the US-Russian partnership to prevent nuclear terrorism:

Set mutually agreed goals. The United States and post-Communist Russia could not have achieved great strides in their cooperation in manned space exploration if they didn't agree about their common goal—the International Space Station. If Moscow and Washington had not agreed to drop their separate space station programs—America's planned Freedom and Russia's aging Mir—in favor of co-leading a multinational effort to build an international station, Americans would not be riding to space on Russian rockets and Russians would not have supplied fuel for American inter-planetary probes. Following the example set in space, the United States and Russia could seek to use templates deployed for effective nuclear security as an example to be discussed with other nuclear-capable states.

Agree to pursue goals in a partnership of equals. US-Russian space cooperation would not have become so comprehensive and mutually beneficial if Washington had not treated Moscow as an equal partner in that endeavor, even though post-Communist Russia was no match for the United States economically, militarily and demographically. Likewise, US-Russian cooperation in the nuclear-security sphere cannot be revived unless it is based on a foundation of equality appropriate to both countries' deep experience in nuclear matters.

Designate agencies and leaders responsible for advancing the partnership. When US-Russian space cooperation began in 1975, NASA had no counterpart in Russia with which to work. A major advance in post-Cold War space cooperation between Washington and Moscow came when the Russian Space Agency was established in April 1992, providing NASA with a direct, single, authorized counterpart. The United States and Russia should again designate lead agencies in nuclear security cooperation as well as revive the Nuclear Security Working Group that functioned as part of a US-Russian bilateral presidential commission until it was suspended. The designation of responsible senior-level officials with specific goals and deadlines also was crucial to the Bratislava Initiative, under which presidents George W. Bush and Vladimir Putin increased the pace and scope of nuclear security work in Russia. The revived working group could focus on coordinating research, development, and deployment of new technologies to improve nuclear security and on sharing information about threats to nuclear security. It could also work to establish empirically based standards for effective security in regard to nuclear weapons and materials and allow for discussion with other states that have nuclear weapons.

Ensure that cooperation yields tangible benefits. One of the factors that drove the United States and Russia to cooperate in space was money. Both sides found it profitable to coordinate their space programs and share costs. NASA has estimated it would have cost more than \$2 billion a year to continue flying space shuttles beyond 2010 until a new US orbiter became operational. And the benefits from cooperation are not just financial. In a 2008 op-ed, NASA Administrator Michael Griffin wrote that using Russian spacecraft would probably save lives. If NASA had continued to fly shuttles instead of sending astronauts to the international space station in Russian-made Soyuz craft, the chances of losing astronauts would have increased from about one in 80 to one in eight, according to Griffin.

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To be sure, such cooperation would necessarily involve the protection of sensitive technologies. But the two sides have managed to do this in their space cooperation.

One way to encourage the emergence of equality and tangible benefits would be for US and Russian entities to pursue joint research and development of nuclear security hardware and concepts of operation for application domestically and in third countries. The United States and Russia could then independently manufacture equipment based on the intellectual property they have jointly developed. Scientists in both countries are best positioned to define the realms of work that would be most useful, but a few examples seem to be worth considering.

On the Russian side:

Technology for remotely detecting explosives (NATO was previously cooperating with Russia in this area).

Robots to guard security perimeters.

Vehicles designed for defending nuclear installations, conducting reconnaissance and fighting saboteurs.

On the US side:

“Physical cryptography” for secure and accurate accounting of the world's nuclear arsenals.

New nuclear-material detectors that operate with greater accuracy and at a lower cost, especially in distinguishing different types of material. Of course, the relatively small nuclear security market won't generate the same scale of profits for either side as the space market, but if cooperation in third countries succeeds, it would generate significant revenue, enable US and Russian entities to use the products of their joint research to improve security in their own countries, and renew opportunities for US-Russian collaboration to enhance each other's nuclear security.

Russia and the United States continue to have real and important differences over national security issues. That, however, does not mean the two countries should not or cannot cooperate on matters in which joint efforts can greatly enhance the security of both countries. Improving nuclear security is one such sphere, and the Trump administration—which has sought to improve relations with Russia—should seize upon it, both as a means to achieve closer cooperation with Moscow and as a benefit to gain from such ties.

<http://thebulletin.org/us-russian-space-cooperation-model-nuclear-security10600>

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The National Interest (Washington, DC)

## **New Iran Sanctions Risk the Threat of War**

By John Glasser

March 9, 2017

For years, hawks argued that the only effective way to deal with the Iranian nuclear issue was with bombs. Georgetown University professor Matthew Kroenig argued in 2014 that it was “time to attack Iran.” Former United Nations ambassador John Bolton in March 2015 insisted that “only military action” can stop Iran's path to nuclear weapons.



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The Obama administration's nuclear deal with Iran and the P5+1 proved those arguments wrong. The Joint Comprehensive Plan of Action not only rolled back Iran's nuclear program, but it effectively quieted the hawks in Washington who insisted that the use of force was the only viable option.

Trump's campaign promises to rip up the deal and take a decidedly antagonistic posture toward Iran threatened to undo that progress. In January, after an Iranian ballistic missile test, Gen. Michael Flynn, then national security adviser to President Trump, announced that the White House was "officially putting Iran on notice." Plans to abrogate the JCPOA seemed to be sidelined in favor of taking confrontational actions that undermined the deal but stopped short of violating it, thereby provoking Iranian leaders to abandon the deal themselves.

Now that Flynn is gone, and the more cautious Gen. H. R. McMaster has replaced him, there are indications that the White House has put their saber-rattling over the inflated Iranian threat on hold. In his first address to a joint session of Congress last week, President Trump barely mentioned Iran.

But that doesn't mean the deal is safe. Its survival depends on Washington adhering to its commitments on Iranian sanctions relief and, to some extent, on Congress refraining from enacting new sanctions.

Iran has seen real benefits from sanctions relief thanks to the deal. Real GDP growth is expected to reach 6.6 percent in 2017 and to ease to 3.3 percent through 2018, a major recovery from the crippling slump caused in part by the U.S.-led international sanctions coordinated in the Obama administration's first term.

Most of that growth comes from the oil and gas industry, as well as a boom in domestic consumption and investment. However, Iran's reintegration into the global economy—through international investment, trade and banking—continues to be hindered by market uncertainty about Washington's commitment to sanctions relief.

"The renewed uncertainty surrounding the JCPOA, and especially relations with the U.S.," according to a new report from the International Monetary Fund, "could deter investment and trade with Iran and short-circuit the anticipated recovery."

Moreover, reimposing additional sanctions or other "counter-measures" would likely "lower direct investment and capital inflows, and disconnect Iran from the global financial system."

That's a recipe for bolstering the voices of Iran's hawks and exacerbating already existing feelings among the people that our end of the deal is not being held up. They've reduced their stockpile of enriched uranium by over 95 percent, cut their number of active centrifuges by two-thirds and subjected what is left of the program to the most invasive inspections regime in the world. If the reciprocal economic relief we promised isn't forthcoming, the survival of the deal is endangered.

Unfortunately, some in Washington are determined to do just that. Following an Iranian ballistic missile test, which the JCPOA does not cover, the Treasury Department last month enacted economic sanctions targeting individuals and companies connected to Iran's

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ballistic-missile program and those providing support to Iran's Islamic Revolutionary Guard Corps' Qods Force.

House Speaker Paul Ryan has said he is in favor of additional sanctions on Iran. And Sen. Bob Corker, the chairman of the Senate Foreign Relations Committee, told reporters that while "it's too early to talk about military options . . . at a minimum we're looking at tougher sanctions on the nuclear issue." What positive effect new sanctions could conceivably produce is left unmentioned, though using sanctions as a stealthy way to destroy the deal is a reasonable explanation.

Republicans would be wise to restrain themselves. The key to avoiding conflict with Iran, and thus another costly U.S. war in the Middle East, lies in the survival of the Iran nuclear deal. And at this point, the survival of the Iran nuclear deal depends on making sure Iran reaps the economic benefits it was promised, through real sanctions relief and reassurance from Washington that it is committed.

<http://nationalinterest.org/feature/new-iran-sanctions-risk-the-threat-war-19685?page=show>

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TASS (Moscow, Russia)

### **Iraqi Authorities Unaware of Chemical Weapons Use Near Mosul - Ambassador**

Author Not Attributed

March 9, 2017

*Last week humanitarian organizations issued reports that hospitals near Mosul had patients undergoing medical treatment against injuries sustained as a result of the chemical weapons attack*

The Iraqi authorities has no information at their disposal regarding the possible use of chemical weapons near the city of Mosul, Iraqi Ambassador to Russia Haidar Mansour Hadi said on Thursday.

"As far as I know, the authorities of Iraq have no information about the possible use of chemical weapons," the ambassador said. "If it was indeed used, it was used by the Islamic State."

Last week, the International Committee of the Red Cross (ICRC) and the UN World Health Organization (WHO) issued reports that hospitals near Mosul had patients undergoing medical treatment against injuries sustained as a result of the chemical weapons attack.

The ambassador also emphasized that Iraq and Syria agree on a need to fight international terrorism:

"We and the Syrian leadership have a common goal," the ambassador marked. He said Iraqi aircraft had taken part in pounding IS positions in Syria. "This has been done with the consent of the Syrian leadership," the diplomat said.

<http://tass.com/world/934585>

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Tehran Times (Tehran, Iran)

### **Iran successfully test-fires Hormuz-2 ballistic missile**

Author Not Attributed

March 10, 2017

*A top Iranian commander confirmed on Thursday the Islamic Republic has successfully test-fired Hormuz-2 ballistic missile.*

Iran "fired Hormuz-2 this week and the missile successfully destroyed a target at a distance of 250 kilometers," commander of the Aerospace Division of the Islamic Revolution Guards Corps (IRGC) Brig. Gen. Amir Ali Hajizadeh said Thursday.

Hormuz-2 is a naval strike ballistic missile that can hit mobile targets at sea with high precision. It has a range of almost 300 kilometers.

The missile is very similar to anti-ship Khalij-e-Fars (Persian Gulf) ballistic missile in appearance.

On Monday, Defense Minister Brigadier General Hossein Dehqan warned that Iran's defensive military power would catch the enemies off guard in the event of an aggression against the Islamic Republic.

The warning came one day after Iran successfully tested the S-300 surface-to-air missile defense system, which the Islamic Republic has purchased from Russia.

Following the test, Brigadier General Farzad Esmaili, the commander of Iran's Khatam al-Anbiya Air Defense Base, said the country was designing and manufacturing an indigenous version of the S-300 system, called Bavar-373.

<http://www.tehrantimes.com/news/411798/Iran-successfully-test-fires-Hormuz-2-ballistic-missile>

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Mehr News (Tehran, Iran)

### **No Evidence of Assad's Use of Chemicals**

By Vahid Pourtajrischi

March 6, 2017

A Russian political analyst believes Russia vetoed anti-Syrian sanctions resolution in the UNSC because evidence was lacking that Bashar al-Assad used chemical weapons.

Mr. Mikhail Alexandrov told in an interview to Mehr News International Service that Egypt had also been a victim of what he believed was Western international support for terrorism; thus, Al-Sisi, upon seeing the Assad success in Syria, tried to become closer to the country and prevent further damage to Egypt's national interests through following a Western line which had been categorically destabilizing the region:

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**Russia and China vetoed anti –Syrian sanctions while the Syrian government of President Bashar Al-Assad is accused of carrying out chemical attacks on its own civilians by other members of UNSC. Why Russian and Chinese states vetoed these sanctions?**

Russia and China vetoed the draft resolution, proposed by the US and its allies, because it was not substantiated by facts. There is no proof that Syrian government used chemical weapons during the war in Syria. It is more likely that these weapons were used by opposition to discredit the government of Bashar Al-Assad. It is also possible that Western special services were involved in organizing these provocations. As such, the above resolution has nothing to do with non-proliferation of weapons of mass destruction. It is aimed at weakening the Syrian government international position in the situation when Bashar Al-Assad is winning the war in Syria.

**Egypt cast a vote of abstention in the case of the resolution against Syrian government. What is the reason behind this vote? Is President Al- Sisi getting closer to Syrian government?**

Egypt understands very well the Western policies in the Middle East aimed at political destabilization and support of international terrorism. Egypt itself was a victim of this policy. That is why Egypt is interested in supporting integrity of the Syrian state and does not want to undermine the positions of the Syrian government.

**The US ambassador to UNSC criticized Russia for its veto on the mentioned sanctions. Could this potentially bring about more tensions and disagreements between president Trump administration and Russia?**

If the current US administration continues the Obama policies of supporting international terrorism and destabilization of the Middle East, the disagreements between president Trump’s administrations and Russia will certainly increase.

<http://en.mehrnews.com/news/124017/No-evidence-of-Assad-s-use-of-chemicals>

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Hindustan Times (New Delhi, India)

**India-Pakistan Conflict Could Escalate Into Nuclear Exchange, Says US General**

Author Not Attributed

March 10, 2017

A top US military general has warned that India’s policy to “diplomatically isolate” Pakistan hinders of the improvement of ties between the countries enhancing the risk, thus, of conventional conflict leading to a nuclear exchange.

General Joseph L Votel told the US Senate’s Armed Services Committee at a hearing on Thursday that attacks in India from terrorists based in Pakistan and the reaction “likelihood for miscalculation by both countries” and “India’s public policy to ‘diplomatically isolate’ Pakistan hinders any prospects for improved relations”.

“This,” he told senators, “is especially troubling as a significant conventional conflict between Pakistan and India could escalate into a nuclear exchange, given that both are nuclear powers.”



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The general spoke of India's concerns about lack of action against India-focused militants based in Pakistan and the surgical strike undertaken by the Indian military against terrorist camps across the border in Pakistan in 2016.

The general's command overseas US operations in Afghanistan and Pakistan and he echoed the country's mounting concern with Pakistan, who he called a critical partner in counterterrorism, when he said that "of particular concern to us is the Haqqani Network (HQN) which poses the greatest threat to coalition forces operating in Afghanistan".

To date, he stressed, "the Pakistan military and security services have not taken lasting actions against HQN" despite repeated calls from to the "Pakistanis to take the necessary actions to deny terrorists safe haven and improve security in the Federally Administered Tribal Areas (FATA) along the Afghanistan-Pakistan border region".

Saying "there are challenges with respect to the US-Pakistani relationship, we have endeavoured to maintain a substantial level of engagement with our Pakistani military counterparts".

<http://www.hindustantimes.com/india-news/india-pakistan-conflict-could-escalate-into-nuclear-exchange-says-us-general/story-0mA5wNhe3f6GEJgPAJBoUN.html>

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The Asian Age (New Delhi, India)

### **India Gears Up to Fight Nuclear Attacks**

By Sanjib Baruah

March 5, 2017

*DRDO hands over to Army recce vehicle to counter chemical, biological hits too.*

The strong possibility that chemical weapons were used in Wednesday's attacks in Afghanistan has brought the dangerous reality to India's doorsteps. Pakistan's growing arsenal of strategic and tactical nuclear weapons and the declared intent of terror outfits like Al Qaeda, Taliban and ISIS to acquire non-conventional weapons, including chemical, biological and nuclear weapons, has resonated very strongly in India and rapid steps are already underway to combat such attacks, be it from state or non-state actors.

"We have not faced nuclear or chemical attacks, but we will have to be prepared at every moment to deal with the issue," defence minister Manohar Parrikar said on Thursday. Alluding to reports of chemical attacks by the Taliban in Afghanistan on Wednesday, he said: "While these reports are yet to be confirmed, I have seen photographs of the local population suffering from blisters and burns and they are quite distressing."

Significantly on Thursday itself, the state-owned Defence Research and Development Organisation (DRDO) handed over to the Army the NBC (nuclear, biological and chemical) Recce Vehicle which is all set to be deployed.

Resembling a battle tank and equipped with GPS navigation, meteorological sensors and radiation sensors, the NBC Recce Vehicle is capable of conducting effective reconnaissance

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of radiological and chemically contaminated areas, demarcation of contaminated zones, real-time communication of digital data after analysing the solid and liquid samples to the supported formation.

"The utility of the NBC Recce Vehicle goes beyond warfare and will prove to be indispensable in any NBC disaster situation too," said a source who has worked on the development of the vehicle.

Going beyond, the DRDO has also introduced a bouquet of radio-protectors and radio-mitigator drugs that are required to reduce the effects of gamma irradiation substantially in the aftermath of a nuclear, chemical and biological attack.

In a nuclear disaster, a person is exposed to gamma radiations. In high doses, radiation syndromes can kill in hours to days to a few months, while in low doses, genetic and cancer disorders may result.

Radio-protectors and radio-mitigator drugs are required to reduce the effects of gamma irradiation substantially. The drugs have been put to Drug Controller General for special approvals, while provisioning to Indian armed forces has already started as these are life-saving drugs.

"The DRDO has also provided a NBC kit to the Indian defence forces although it has been segregated into elements for field use and in the hospital on the advice of the Army authorities," said a top DRDO official on condition of anonymity.

<http://www.asianage.com/india/all-india/050317/india-gears-up-to-fight-nuclear-attacks.html>

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Daily Times (Lahore, Pakistan)

### **India's massive build-up of arms major concern for Pakistan: FO**

By Ijaz Kakakhel

March 10, 2017

Pakistan on Thursday said India's massive arms build-up and testing of inter-continental ballistic missiles was a source of concern for the region, however, Pakistan would not indulge in the arms race.

During the weekly press briefing, Foreign Office Spokesman Nafees Zakaria said Pakistan would maintain minimum deterrence capability to safeguard its national security. He also said that the Nuclear Suppliers Group (NSG) considering membership of India should keep this in mind that it had become one of the largest buyers of weapons.

"India's massive arms buying spree, making it one of the top arms importers in the world, was driven by its desire for regional hegemony and global power status. Pakistan, on the other hand, had been compelled to acquire and maintain a deterrent capability to ensure its national security."

He claimed that Pakistan never wanted to engage in any kind of arms race, nuclear or conventional. "We have long maintained that the two countries need to engage in a meaningful dialogue for mutual restraint measures and conflict resolution for lasting peace and stability in South Asia."



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The international community had a role to play in prodding India to positively respond to Pakistan's proposal for a Strategic Restraint Regime in South Asia, he said.

Several international reports and independent observers had drawn attention to the rapid expansion in India's capability to produce fissile material for military use, which had been made possible by the 2008 NSG waiver granted to India without appropriate non-proliferation safeguards and the subsequent nuclear deals struck with different countries.

Nafees Zakaria said violation of ceasefire along the Line of Control (LoC) was also a source of concern for Pakistan. He said that India tried to deflect world's attention from atrocities being perpetrated by its forces in Held Kashmir by keeping the LoC issue hot. Pakistan condemned repeated instances of 'unprovoked' firing by Indian troops across the LoC and slammed the targeting of civilian population. Pakistani authorities had recorded their protest by repeatedly raising the issue of ceasefire violations with Indian officials, the FO spokesman added. India had violated the ceasefire agreement more than 1,400 times since 2013, Zakaria said. "India violated the ceasefire 400 times in 2016 alone," he added.

To a question, the spokesman said the acquittal of a Hindu radical, accused of masterminding the deadly 2007 Samjhota Express bombing, in a separate case was "regrettable".

An Indian court on Wednesday handed down a rare 'guilty' verdict to three Hindu extremists over the 2007 bombing of the Ajmer Sharif Dargah, but cleared Swami Aseemanand, the alleged mastermind of the attack.

Naba Kumar Sarkar, better known by his nickname Swami Aseemanand, the alleged ringleader behind the religiously motivated attack, was among seven Hindu extremists acquitted after prosecutors failed to prove their guilt. Aseemanand remains in prison pending trial over his role in two separate bomb attacks, one on a mosque and another on the Samjhota Express, that together killed nearly 75 people.

<http://dailytimes.com.pk/pakistan/10-Mar-17/indias-massive-build-up-of-arms-major-concern-for-pakistan-fo>

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India.com

### **'Shameful' if Darfur Chemical Attacks Left Unprobed: Amnesty**

Author Not Attributed

March 7, 2017

Amnesty International today renewed its call for a UN investigation into suspected chemical weapons attacks by Sudanese government forces in Darfur, saying it would be "shameful" if they were not probed.

Amnesty said in a September report it had credible evidence of government forces repeatedly using chemical weapons in a mountainous area of Darfur between January and August 2016 that killed between 200 and 250 people, including many children.

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The UN's Organization for the Prohibition of Chemical Weapons (OPCW) said at the time that it needed more information and evidence to draw any conclusion based on Amnesty's report.

Amnesty timed its fresh call for a full and independent investigation by OPCW to coincide with the start today of a four-day meeting of the UN watchdog's executive council in The Hague.

"Failure by (OPCW) member states to trigger the investigation would be a monumental and shameful abdication of duty," Michelle Kagari of Amnesty International said in a statement.

Some OPCW member states had expressed concerns over these "cruel" attacks but that was not enough, Kagari said.

"They must ensure concrete steps are taken to determine the full nature and extent of Sudan's chemical weapons programme, and demand that Sudan fully cooperates with the OPCW," she.

Amnesty said OPCW members should also request an "on-site challenge inspection" in the Jebel Marra region of Darfur where the alleged attacks took place.

Its nearly 100-page report contained gruesome photographs of children suffering from apparent chemical burns, satellite images of destroyed villages and displaced people, interviews with more than 200 survivors and analysis by chemical weapons experts.

President Omar al-Bashir dismissed the Amnesty report as "just empty lies".

Amnesty said the attacks were part of a military operation against the rebel Sudan Liberation Army - Abdul Wahid (SLA/AW) group, which Khartoum accuses of ambushing military convoys and attacking civilians.

Tens of thousands of people have been displaced in Jebel Marra since January 2016 by fighting between the two sides, the United Nations says.

Deadly conflict broke out in Darfur in 2003 when ethnic minority groups took up arms against Bashir's Arab-dominated government, which launched a brutal counter-insurgency.

At least 300,000 people have since been killed and 2.5 million displaced in Darfur, the UN says.

Bashir is wanted by the International Criminal Court on alleged war crimes and genocide charges related to Darfur, which he denies.

Sudan, a signatory to the Chemical Weapons Convention, insists the Darfur conflict has ended and wants UN peacekeepers deployed in the region since 2007 to leave.

<http://www.india.com/news/agencies/shameful-if-darfur-chemical-attacks-left-unprobed-amnesty-1899281/>

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

allAfrica (Cape Town, South Africa)

### **Sudan Chemical Warfare Killed Hundreds**

By Raji Bashir

March 8, 2017

Organisations advocating against the use of chemical weapons have been called upon to investigate Sudan government forces for allegedly killing up to 250 civilians through such warfare. Rights group, Amnesty International, said it had credible evidence of the repeated use of chemical weapons, against civilians, including young children, from January to August 2016 in the western Jebel Marra region of Darfur. Amnesty called on the Organisation for the Prohibition of Chemical Weapons (OPCW), whose four-day executive council meeting began at The Hague yesterday (Tuesday) to probe Sudan. "These brutal attacks left an estimated 200 to 250 people dead and scores more with horrific injuries, and the OPCW must fully and independently investigate them. Failure by member states to trigger the investigation would be a monumental and shameful abdication of duty," said Michelle Kagari, Amnesty's regional director. Kagari noted some states expressed concern at the use of chemical agents on civilians, but that was not enough. "They must ensure concrete steps are taken to determine the full nature and extent of Sudan's chemical weapons programme, and demand that Sudan fully cooperates." Rights groups have called for the international community must also apply political pressure on Sudan to ensure it permits international peacekeepers and aid agencies, access to Jebel Marra. Some 300 000 civilians have been killed in the conflict in Darfur, which started in 2003.

<http://allafrica.com/stories/201703080175.html>

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RAND (Washington, DC)

### **Death by Nerve Gas: Two Arrests, Many Questions in Attack in Malaysia**

By Bruce Bennett

March 7, 2017

To North Korea, the chemical warfare agent VX may have looked like an ideal weapon for assassination. So little would be required to kill, it could easily be smuggled into Malaysia sealed in a pen cartridge or other small object. The tasteless and odorless oil-like substance also offered the opportunity to kill cleanly and quickly without the immediate appearance of murder.

Two women—one from Vietnam, the other Indonesia—were charged Wednesday in last month's killing of the estranged half-brother of North Korea's leader at the Kuala Lumpur airport in Malaysia. Airport surveillance video caught the attackers dashing up to victim Kim Jong Nam and rubbing his cheeks—even a drop would contain tens of lethal doses, according to tests conducted decades ago.

Many in the national security community suspect North Korea is behind the attack and are taken aback by the use of VX, a chemical weapon once common in superpower military

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arsenals. With the advent in 1997 of the Chemical Weapons Convention, a treaty that bans such weapons and requires their destruction, most of the world complied.

Since it is not a chemical that can be safely concocted in a kitchen laboratory, it likely was not made in Malaysia. Authorities there are trying to determine how the attackers came to possess VX. It could have sprung from North Korean chemical weapons laboratories or been purchased from third parties—perhaps a leftover stash from the Cold War.

One key question at this point: How will China respond to the murder of Kim Jong Nam with an outlawed chemical warfare agent? The country had reportedly provided him protection and warned North Korean leader Kim Jong Un to leave his older half-brother alone. Even though this assassination was carried out in Malaysia, it appears to be a serious affront to China.

Details of the murder are still being uncovered. North Korea may have wanted the death to look like it was due to a heart attack, which is what the North Korean embassy in Malaysia initially claimed. The North Korean embassy sent personnel to the hospital to claim the body soon after the death. They also reportedly tried to claim it before an autopsy was completed, or after only a superficial autopsy that would likely have suggested heart failure as the cause of death.

If the diabolic plan had succeeded, the greater world may have never known that Kim Jong Nam had been murdered. But the plan did not.

Malaysia conducted a thorough autopsy, which showed the nerve agent caused a “very serious paralysis” that killed Kim Jong Nam, the country's health minister said. North Korea has denounced the autopsy results and claimed the two women could not have used such a deadly toxin without harming themselves or those around them. Not true.

Those long-ago tests showed that the cheek was the most lethal place for a drop of VX. And that's what the women did—they applied the viscous liquid on Kim Jong Nam's cheeks and sprinted away. About 20 minutes later, he was dead. He likely experienced some combination of coughing, chest tightness, blurry vision, fatigue and eventually seizures as his nervous system was thoroughly disrupted.

The attackers did have ways to avoid contamination, including simply washing their hands thoroughly. The tests on humans also showed that 25 times as much VX would have to get on someone's hands to have the same effect as it would on the cheek. In addition, the attackers could have taken known antidotes to counter the effects of VX. Meanwhile, VX creates little vapor so it would pose no significant threat to bystanders, unlike other nerve agents.

However, the attackers had little room for error. They reportedly practiced the attack in test-runs at shopping malls. They had to avoid spilling the VX and properly deliver the fatal dose on Kim Jong Nam's face. And they had to avoid putting so much on him that it would affect others—those giving him care or unsuspecting people in the crowd.

Malaysian authorities have yet to assign responsibility to a specific country for this assassination, though the number of North Koreans who are suspects leads to the appearance of responsibility.

If a firm connection to North Korea can be made, Malaysia and other countries in East Asia should want to react strongly to the country's role in the crime. If the response does not pose grave costs for North Korea, Kim Jong Un may conclude that further serious provocations may be worth it because North Korea is unlikely to suffer significant costs.

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The appearance that North Korea is responsible for this assassination with a chemical warfare agent also may have another gruesome upside for the country: It puts all North Korean defectors on notice that any one of them could be the next target of assassination—a threat that may serve to quiet many of them.

<http://www.rand.org/blog/2017/03/death-by-nerve-gas-two-arrests-many-questions-in.html>

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Morning Consult (Washington, DC)

### **Driving Our Commitment to Biodefense**

By Patrick Lucy

March 8, 2017

United States preparedness against the threat of terrorism is a topic widely discussed. As a nation, we take national security seriously and have a shared commitment to protecting the safety and security of Americans. But does our commitment go far enough?

Bill Gates has most recently brought this question to the forefront, raising concerns regarding our preparedness to combat a bioterrorism attack and urging action — calling on governments “to prepare for these epidemics the same way we prepare for war.” These are strong words from one of the brightest minds of our time.

Traditionally, when considering our national security, we tend to think largely about the protection of our people from traditional attacks — those like the horrible atrocities that transpired on Sept. 11, 2001, or in Nice, France, last year. Preparation against these threats is critical, and it is important that our government focus time and attention on developing measures to mitigate such events.

However, the biosecurity of our nation also requires attention and focus. The protection of our country and people against the threat of intentional chemical, biological, radiological and nuclear (CBRN) attacks, is an essential component of a robust national security approach, although it is an area often taken for granted. In fact, according to a study last year from Morning Consult, only half of Americans are confident in the ability of the U.S. government to protect our nation against a significant biosecurity threat. But, according to that same poll, more than 80 percent believe the government should invest more to combat such a threat.

Despite this public support, biosecurity investment lags, leaving the U.S. vulnerable to the next attack. And, as seen with the recent Ebola outbreak, it is nearly impossible to halt the spread of a threat once an attack is initiated. Now, to be clear, the Ebola outbreak was not initiated as an attack, but imagine the impact of the release of a biological agent such as anthrax or smallpox within the U.S. The impact would be devastating and any response would take days to coordinate and execute, leaving millions at risk of infection.

To date, 13 material threats have been identified by the United States Department of Homeland Security (DHS). These threats include both bioweapons, as well as infectious

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diseases which threaten the livelihood of our country. The government has several functions that are focused on mitigating these biosecurity threats, however greater attention and a commitment to long term investment is of paramount importance. Specifically, investment is needed to spur new Medical Countermeasure (MCM) development as well as to provide assurance that the government is prepared to procure these MCMs once they have sufficiently advanced in development.

Companies, such as Pfenex, are committed to protecting our national security, but drug and vaccine development is costly and time-consuming, and no commercial market currently exists for some of these vaccines and therapeutics. In order to make the long-term commitment to develop MCMs, companies rely on government investment and support via funds that are appropriated by Congress consistently and over an extended time horizon. These funds support key organizations such as the Biomedical Advanced Research and Development Authority, and provide resources to the BioShield Special Reserve Fund and the Strategic National Stockpile, to name a few. They also ensure that all necessary stockpiles at the Centers for Disease Control and Prevention remain replenished and up-to-date in the event of an attack. These funds are critical to the safety and security of all Americans, including the men and women bravely serving in our military, many of whom receive essential vaccinations prior to deployment to dangerous regions. It is essential that these funds are appropriated in a timely manner to maintain biosecurity investment, however many remain underfunded.

The recently passed 21st Century Cures legislation identifies specific incentives to attract investment in the development of MCMs. One of these incentives is the availability of a Priority Review Voucher to those organizations that successfully achieve regulatory approval for an MCM to one of the material threats defined by DHS. The PRV can be applied to any other product requiring FDA review; it shortens the FDA review timeline for a new application from 10 months to six months. The PRV can also be sold to a third party, thereby providing a significant financial incentive. The availability of PRVs will encourage greater participation by organizations in the biodefense sector.

This legislation must be implemented, and funds to support BARDA, the SRF, the SNS among others must be allocated via advanced appropriations. Recent legislation has been a positive step, but now congressional action is urgently needed to ensure uninterrupted and long-term funding.

At Pfenex we are committed to leveraging our unique production platform to help fulfill the government's unmet demand for increased quantity, stability, and dose sparing regimens of anthrax vaccine. However, like others in the space, we rely on the US government as a partner with whom we work together to potentially provide top-quality products to the SNS, helping to ensure the future safety of all Americans and our allies against any man-made or environmental biological threats. We encourage Congress to recognize the importance of these public-private partnerships in protecting all Americans and act with urgency to ensure adequate funding for these essential programs.

<https://morningconsult.com/opinions/driving-commitment-biodefense/>

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

Pakistan Observer (Lahore, Pakistan)

### **Anti-Russian Hysteria Benefits NATO**

By MD Nalapat

March 10, 2017

THE Russian Federation has an economy which is three times less the size of Germany, while its spending on defense is far below that of the EU troika (France, UK, Germany) that is fanning the anti-Russia hysteria sweeping across US media. Imaginary scenarios are being passed off as fact, such as that Moscow seeks to re-incorporate the Baltic states into the Russian Federation, or to once again absorb Ukraine. Certainly Vladimir Putin took over Crimea, once it became evident that a regime viscerally hostile to Russia was being installed in Kiev with encouragement and assistance from Washington, London, Berlin and Paris. The loss of Crimea to a hostile power would have severely degraded the security of Russia. It had been given to Ukraine by the USSR leadership at a time when that post-1992 country was part of the union of republics formed after the takeover of the Russian empire in 1917.

The “Russia Threat” is necessary to ensure that the “star officers” in NATO continue to enjoy the comforts of peacetime while collecting salaries and allowances on the presumption that all-out war with Russia is around the corner. Given that even today, a majority of citizens in the US believe that Saddam Hussein was the head of Al Qaeda and that Bashar Assad is the primary patron of ISIS, it is clear that “Fake News” did not begin only during the 2016 US Presidential campaign. That so many tens of millions of citizens hold such views is testimony to the strength of belief in the falsehoods repeatedly expressed over these and other leaders who have been less than respectful to Western commands at different periods of time. This is a list that included the late Muammar Kaddafi of Libya, who paid through his excruciatingly cruel death for having several times ridiculed and challenged US and its major European partners, including in the UN General Assembly even after he surrendered his WMD stockpiles to them.

Given the record, where NATO member-states demonise those leaders they plan to take military action against, it is reasonable to infer that NATO may be looking at a limited war with Russia over Crimea. The calculation may be that a military humiliation at the hands of the Cold War alliance would so weaken the goodwill of the Russian people for Vladimir Putin that the alliance could ignite a “Russian Spring” and bring down his government through paralysing the street. A further calculation would be that a post-Putin leader would be as amenable to “advice” from Washington and its allies as Boris Yeltsin was, or at the very least, be eager to secure the friendship of the Western powers, even if the price demanded was the giving of concessions that would hurt the Russian national interest.

Given that the comforts of a well-paid and tranquil life in Europe together with their families would be at risk were Moscow not to be acknowledged as an enemy power, it is no surprise that so many otherwise rational members of the US military’s higher command repeat the mantra of their European friends. Which is that the greatest threat to the alliance and to the people it is presumed to defend comes from Moscow, thereby making those expensive and comfortable deployments in Europe necessary and indeed desirable in the view of taxpayers. Because of the fact that practically all the journalists reporting on military matters have as their sources members of the US and EU military who have a

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vested interest in playing up the “Russia Threat”, there has for long been a flood of reports that convey an impression of imminent conflict. Indeed, of a conflict already begun between Russia and the NATO powers. Because of such “Fake News” by precisely those television channels and newspapers that excoriate Donald Trump for misrepresenting facts, throughout the US and the EU, there is a growing (and deliberately created) hysteria about Russia that shows little signs of abating. Apart from providing a justification for retaining the hyper-expensive NATO deployments in Europe, the other objective of this propaganda is to steer President Donald Trump away from his stated intention of establishing a more cooperative relationship with Moscow, such that both countries could join together against threats such as ISIS.

However, such a partnership would jeopardize the interests of the huge number of individuals in government and outside whose welfare is anchored to tensions between NATO and the Russian Federation, and hence the use of media to assist in creating a mood of toxicity towards a country that even during the period when the USSR was functioning did not even once challenge the territorial integrity of NATO member-states, and shows no sign of doing so now. Giving a bad name and taking down the career of an individual was demonstrated in the case of the former National Security Advisor, General Michael Flynn, whose crime was that he was supposed to have asked the Russian side not to retaliate after President Obama baited President Putin by expelling dozens of Russian diplomats from the US.

Whether because of General Flynn or because he wanted to show his goodwill towards post-election Washington, Putin refused to swallow the bait and retaliate. Instead, he took no action whatsoever against US diplomats, even those known to be working for the CIA. Had Putin retaliated, public opinion in the US would quickly have been inflamed by the media into a mood of hostility towards Moscow that would have suited the 21st century proponents of a Cold War that in effect vanished in the mid-1980s, after CPSU General Secretary Mikhail Gorbachev adopted the principle of Mahatma Gandhi and refused to sanction the use of force against even those members of the Warsaw Pact that were facing a collapse of the Moscow-friendly regimes that were in place since 1945.

Perhaps because Michael Flynn ensured that such an escalation was avoided, he was punished through a clamour for his scalp that proved too vociferous for the Trump administration to resist. For the duration, it would appear that the comfortable billets of NATO commanders stationed in Europe are safe from the threat of a US President who has understood the folly of having bad relations with Russia, a country that has been eager for good relations with the US since the 1970s, but which has yet not succeeded in the face of the machinations of that immense body of interests that favour the continuation of a Cold War between Russia and NATO.

<http://pakobserver.net/anti-russia-hysteria-benefits-nato/>

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### ABOUT THE USAF CUWS

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

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

In February 2014, the Center's name was changed to the Center for Unconventional Weapons Studies to reflect its broad coverage of unconventional weapons issues, both offensive and defensive, across the six joint operating concepts (deterrence operations, cooperative security, major combat operations, irregular warfare, stability operations, and homeland security). The term "unconventional weapons," currently defined as nuclear, biological, and chemical weapons, also includes the improvised use of chemical, biological, and radiological hazards. The CUWS's military insignia displays the symbols of nuclear, biological, and chemical hazards. The arrows above the hazards represent the four aspects of counterproliferation - counterforce, active defense, passive defense, and consequence management.

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