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UNITED STATES AIR FORCE CENTER FOR  
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WEAPONS STUDIES

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## **Feature Item**

### ***“Strengthening Strategic Stability with Russia”***

Written by Christopher Chivvis, Andrew Radin, Dara Massicot and Clinton Bruce Reach, published by the RAND Corporation; August 2017

[https://www.rand.org/content/dam/rand/pubs/perspectives/PE200/PE234/RAND\\_PE234.pdf](https://www.rand.org/content/dam/rand/pubs/perspectives/PE200/PE234/RAND_PE234.pdf)

This report analyzes trends in strategic stability between Russia and the United States, examines Russian views on the subject, and assesses current prospects for stemming the erosion of strategic stability between the two countries. Such prospects exist, but they would require a sustained effort and greater political will on both sides.

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## US NUCLEAR WEAPONS

Fox News (New York, NY)

### **Nuclear Weapons: These Companies Manage America's Stockpile**

By Matthew Rocco

August 9, 2017

Some of the largest U.S. engineering and defense firms are responsible for managing the nation's nuclear weapons stockpile.

The National Nuclear Security Administration (NNSA), part of the Department of Energy, has three labs that maintain the "safety, security and effectiveness" of the nuclear stockpile. . Engineering giants AECOM (ACM) and Bechtel, one of the largest privately owned U.S. companies, hold contracts to operate two of the labs. BWX Technologies (BWXT), which manufactures nuclear components, and Honeywell (HON), an industrial powerhouse with a large defense business, also help manage America's nuclear weapons.

Los Alamos National Laboratory in New Mexico is run by a joint venture between AECOM, Bechtel, BWX and the University of California. AECOM acquired URS Corp., one of the initial companies involved in the consortium, for \$6 billion in 2014. Los Alamos was founded during World War II as the top-secret location for designing a nuclear bomb.

Lawrence Livermore National Laboratory in California is managed by the same group but includes the Battelle Memorial Institute and Texas A&M University.

Sandia National Laboratories, located on Kirtland Air Force Base in Albuquerque, New Mexico, recently came under the management of Honeywell. The company took over Sandia in May 2017. Sandia labs, including a second campus near Lawrence Livermore, develop some of the non-nuclear parts used in nuclear weapons.

The labs establish the effectiveness of nuclear weapons without the use of tests, according to the NNSA. The U.S. hasn't tested a nuclear weapon since 1992.

The NNSA's broader mission extends to space exploration, renewable energy and other scientific endeavors. It also develops nuclear propulsion for U.S. Navy ships and researches defenses to weapons of mass destruction, including biological weapons.

<http://www.foxbusiness.com/features/2017/08/09/nuclear-weapons-these-companies-manage-americas-stockpile.html>

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Newsweek (New York, NY)

### **Reminder: U.S. Nuclear System Runs On Early Computers and 8-Inch Floppy Disks**

By Max Kutner

August 9, 2017

With concern over North Korea's nuclear capabilities growing, President Donald Trump tweeted on Wednesday, "My first order as President was to renovate and modernize our nuclear arsenal. It is now far stronger and more powerful than ever before."

As Newsweek has reported, Trump's first executive order was actually about Obamacare, not nuclear capabilities. A week later, on January 27, he issued a memorandum to "rebuild the U.S. Armed Forces" that included calling for "a new Nuclear Posture Review to ensure that the United States nuclear deterrent is modern, robust, flexible, resilient, ready and appropriately tailored to deter 21st-century threats and reassure our allies."

The U.S. nuclear program is in need of modernization. As of May 2016, the Department of Defense was running its nuclear system on what was 53-year-old technology, according to a Government Accountability Office report. The report said that the system "coordinates the operational functions of the United States' nuclear forces, such as intercontinental ballistic missiles, nuclear bombers and tanker support aircrafts," and that the "system runs on an IBM Series/1 Computer—a 1970s computing system—and uses 8-inch floppy disks."

The military has defended its use of the antiquated technology. "This system remains in use because, in short, it still works," Army Lieutenant Colonel Valerie Henderson said in a statement following the release of the report. She added that the department planned to replace the floppy drives with newer equipment by the end of 2017, and that other modernization efforts were ongoing. Meanwhile, when President Barack Obama was in office, the government announced plans for a trillion-dollar modernization of the nuclear program, which is expected to take decades to complete.

A Defense Department spokesperson did not respond to a request for comment on Wednesday about whether the agency has updated its technology since the 2016 report. But since Trump took office, U.S. military officials have complained about the aging technology. In March, Air Force General Paul Selva said before the House Armed Services Committee that over the past decade, the military had put off modernizing its nuclear force in order to deal with other needs. "But in making those decisions, we have squeezed about all the life we can out of the systems we currently possess," Selva said. With him on a panel were Air Force General John Hyten, Navy Admiral Bill Moran and Air Force General Stephen Wilson.

Following that panel in March, General Dave Goldfein, chief of staff of the Air Force, tweeted, "The joint force agrees: we must modernize our nuclear deterrent." Goldfein and Air Force General Robin Rand said in a piece for Politico: "Potential adversaries are aggressively modernizing and expanding their nuclear forces and capabilities.... We must modernize our aging delivery platforms, nuclear weapons and supporting infrastructure so that America's deterrent remains credible and effective in the future." That modernization must include technological upgrades, the generals wrote.

Werner J.A. Dahm, chairman of the Air Force Scientific Advisory Board, has told Defense One that future nuclear missiles will contain "some level of connectivity with the rest of the warfighting system" and that they will be "cyber-enabled." In a 2017 study, the advisory board looked into whether the nuclear program should use cyber-elements. In an email to Newsweek, Dahm says the group has completed the study and is now briefing the senior leadership of the Air Force.

Some argue that in an age of computer hacking, having analog nuclear systems could be a boon. The Department of Homeland Security and the FBI recently issued a joint report that said hackers had gained access to the networks of companies that operate energy facilities, including nuclear power stations. After 50 nuclear-armed missiles disappeared from monitors for nearly an hour in 2010 due to a circuitry issue, the Obama administration ordered a review of vulnerabilities. Investigators found that internet connections left the missiles subject to hacking, Bruce Blair, a Princeton scholar and anti-nuclear-weapons advocate, wrote in March in *The New York Times*.

Tensions with North Korea have escalated in recent days, after the U.N. Security Council approved sanctions against the country on August 4 because of its missile tests. On Tuesday, *The Washington*

Post reported that North Korea has produced a miniaturized nuclear bomb capable of fitting inside of a missile, and the country threatened to strike Guam, a U.S. territory.

Also on Tuesday, during an unrelated press event, Trump said in response to a question from a reporter, "North Korea best not make any more threats to the United States. They will be met with fire and fury like the world has never seen."

<http://www.newsweek.com/trump-nuclear-bombs-north-korea-floppy-disks-648874>

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Phys.org (Isle of Man, UK)

## **Analysis Highlights Failings in US's Advanced Nuclear Program**

Author Not Attributed

August 9, 2017

Despite repeated promises over the past 18 years, the US Office of Nuclear Energy (NE) is unlikely to deliver on its mission to develop and demonstrate an advanced nuclear reactor by the mid-21st century.

That is the conclusion of a new study from the University of California, San Diego and Carnegie Mellon University, published today in the journal Environmental Research Letters, which used data obtained through the Freedom of Information Act to reconstruct the program's budget history.

Lead researcher Dr Ahmed Abdulla, from UC San Diego, said: "In theory, advanced, non-light water reactors are a promising carbon-free technology, which could complement or replace light water reactors. Some of these reactors would operate at higher temperatures, providing energy services that existing reactors cannot. Others, meanwhile, could reduce future nuclear waste burdens by operating for decades without refuelling, burning up more of their fuel and generating smaller volumes of waste.

"However, despite repeated commitments to non-light water reactors, and substantial investments by NE (more than \$2 billion of public money), no such design is remotely ready for deployment today."

The researchers investigated how effectively those resources were allocated, and how NE has performed as a steward of nuclear technology innovation. What they found was an office beset by problems and violating much of the wisdom about how to effectively run an applied energy research program.

Dr Abdulla said: "There were often inconsistencies in the annual budget documents. The budget itself varies significantly over the period of study, which is fine if these variations are part of a coherent vision that is being pursued, but that is not the case. At all levels, NE favours existing technologies and fuels over innovation, and, where it does support truly innovative research, it is prone to changing priorities before any concrete progress has been made.

"One example of this lack of vision is the gap that exists between the advanced reactor and advanced fuel programs. Investing in advanced fuels research is critical to developing a new nuclear reactor technology. However, NE has mostly invested in one fuel type while exploring multiple reactor designs, most of which do not use that fuel. This disjunction between the two programs is naturally problematic."

In addition, the team found that large proportions of the NE budget were spent maintaining research infrastructure that only marginally supports advanced reactors. Much of this

infrastructure supports other programs, mainly related to defence, where research expenditures are even more removed from commercial opportunities.

Dr Abdulla said: "Despite substantial expenditure and commitments to this future, NE lacks the funding and programmatic focus required to execute its mission. Even if the program had been well designed, it still would have been insufficient to demonstrate even one non-light water technology.

"It has dedicated only \$2 billion over the past 18 years to all advanced reactor and fuel initiatives. While that may appear to be a substantial sum, by NE's own estimates it is not enough to ready even one such design for commercial deployment."

The authors recommend NE takes a new approach, exercising stricter programmatic discipline by channelling its resources into fewer efforts that are likely to generate a greater impact.

They also argue NE should establish a transparent process for evaluating the various advanced reactor concepts it supports across key performance requirements, in order to enable robust debate on the economic, safety, security and waste implications of various designs. An independent panel of experts should then identify, in consultation with key stakeholders, the one or two that best meet these key performance requirements.

Dr Abdulla said: "If adopted, this would allow NE to better focus its limited funding, and would be in harmony with the industry's desire for risk-informed, performance-based guidance from government."

Overall, the technology's prospects appear grim, with implications that go beyond energy. Dr Abdulla warned: "Without a sense of urgency among NE and its political leaders, the likelihood of advanced reactors playing a substantial role in the transition to a low-carbon US energy portfolio is exceedingly low. From a broader perspective, this failure means that the US will cede its leadership on nuclear matters to other nations, limiting its ability to exert influence in key areas such as safety and non-proliferation as well."

<https://phys.org/news/2017-08-analysis-highlights-advanced-nuclear.html>

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Navy Times (Washington, DC)

## **Fact-Checking Trump's Tweet on the US Nuclear Arsenal**

By Joe Gould

August 9, 2017

Amid nuclear tensions with North Korea, U.S. President Donald Trump tweeted a fiery boast on Wednesday: His first order as president was to "renovate and modernize" the U.S. nuclear arsenal, and now it is "far stronger and more powerful than ever before."

But is that accurate?

The tweet, perhaps meant to back down North Korean leader Kim Jong Un or rally Trump's political base, was met with a quick backlash from arms control and national security experts on Twitter, who refuted the claims as "nonsense" or "a total lie." This, amid boiling criticism that Trump's vow to meet North Korean threats with "fire and fury" was not helping to deescalate the possibility of nuclear war with Pyongyang.

To be clear, efforts to modernize America's nuclear arsenal were long underway before Trump took office and are years from completion. Its nuclear arsenal has actually shrunk over the last seven

months to meet the conditions of New START, the strategic arms reduction treaty, noted defense budget analyst Todd Harrison of the Center for Strategic and International Studies.

“This is patently absurd,” Stephen Schwartz, former editor of the *Nonproliferation Review*, said in a tweet responding to Trump. “Literally nothing has happened in the last 201 days to increase the overall power of the US nuclear arsenal.”

The senior policy director at the Center for Arms Control and Non-Proliferation, Alexandra Bell, called Trump’s claims “a total lie” in her own tweet. “Modernization plans for nuclear arsenal were well underway before [Trump] came into office & his own budget isn’t passed yet,” she said in another.

“The recklessness of his nuclear flaunting aside this is nonsense,” Kingston Reif, the director for disarmament and threat reduction policy at the Arms Control Association, said in a tweet. “[President Barack] Obama set in motion massive upgrade plans, which [are] still being implemented.”

Reif, in an email, noted that the U.S. arsenal is no more powerful than it was when Trump took office and the president’s first budget request largely continues Obama’s approach. The budget won’t take effect until Oct. 1 at the earliest and may be delayed given the appropriations deadlock in Congress.

The Trump administration’s nuclear policy is still in its nascent stage, expected to grow out of the Pentagon’s ongoing Nuclear Posture Review. Trump ordered the review as part of a Jan. 27 memorandum to “rebuild” the U.S. military, but it did not begin until April and is not expected to finish before September.

In the balance is whether Trump will continue or expand Obama’s nuclear modernization plans and spend as much as \$1 trillion over 30 years to replace America’s aging fleets of bombers, submarines and long-range ballistic missiles. Russia and China are in the midst of their own major nuclear modernization efforts.

For the record, Trump’s first official order, signed Jan. 20, minutes after he took the oath of office, was aimed at overhauling Obama’s signature health care law.

In December, Trump made a series of statements that contained his first and clearest support up until that point for the U.S. nuclear arsenal.

“The United States must greatly strengthen and expand its nuclear capability until such time as the world comes to its senses regarding nukes,” he said in a tweet.

A day later, Trump said in a TV interview: “Let it be an arms race. We will outmatch them at every pass and outlast them all.”

Trump had just met with a number of the military’s top policy and procurement officials, including Vice Adm. James Syring, head of the Missile Defense Agency, and Lt. Gen. Jack Weinstein, deputy Air Force chief of staff for strategic deterrence and nuclear integration.

A month after taking office, Trump derided New START in an interview with Reuters as “a one-sided deal,” saying that “if countries are going to have nukes, we’re going to be at the top of the pack.”

Signed in 2010 by Obama and Russian Prime Minister Dmitry Medvedev, the treaty calls for the number of strategic nuclear missile launchers to be reduced by half.

Trump’s statements upset nonproliferation advocates and roiled the delicate political consensus in Washington on nuclear arms. Generally speaking, Obama traded support for nuclear modernization for the support from defense hawks for the treaty.



Nuclear modernization was a hot topic in Washington long before Trump was elected. The arsenal is estimated to cost at least \$400 billion through 2026, and modernizing it faces a so-called bow wave of spending that adds up to \$1 trillion over 30 years, by some accounts.

Defense Department officials have repeatedly made the case to Congress that 40-year-old Minuteman III missiles and Ohio-class nuclear missile submarines need to be replaced, while a new nuclear-capable bomber must be built to retire the venerable B-52.

The nonproliferation community, and some Democratic lawmakers, are pushing back against modernization plans over the cost, and they say a new nuclear cruise missile, the Long-Range Standoff weapon, could fuel a new arms race.

On Tuesday, Trump remarked to reporters that Pyongyang is not to make any more threats against the United States or it will "face fire and fury like the world has never seen."

North Korea published a statement Wednesday saying it was reviewing plans to strike around the U.S. territory of Guam, in the Pacific, including Anderson Air Force Base. It accused the U.S. of provocative flights and tests in the Pacific. Nuclear Regu

<http://www.navytimes.com/pentagon/2017/08/09/fact-checking-trumps-tweet-on-the-us-nuclear-arsenal/>

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## US COUNTER-WMD

Washington Examiner (Washington, DC)

### US destroys ISIS chemical weapons factory

By Jamie McIntyre

August 3, 2017

The U.S. this week bombed a suspected chemical weapons factory in Syria in order to keep increasingly desperate Islamic State fighters from using them on the battlefield, as U.S.-backed Syrian rebels continue to gain ground in the battle to liberate Raqqa.

"We know that ISIS has proven in Iraq that they are willing to use chemical weapons," said Col. Ryan Dillon, a U.S. military spokesman in Baghdad.

"We have not seen the use of chemical weapons in Syria, but we don't want to wait for them to use it either," Dillon said at a Pentagon briefing Thursday.

The U.S.-led coalition says it destroyed the factory near Dayr Az Zawr during an airstrike Monday, as well as nearby oil stills and storage facilities.

The suspected ISIS chemical weapons factory was stockpiling industrial chemicals, not sophisticated nerve agents such as Sarin. To the extent ISIS has been able to fashion chemical weapons, they have been crude, and generally ineffective.

"Largely, they have been rudimentary and have not had a significant effect on the overall campaign," Dillon said.

The chemicals involved were more in the class of irritants than deadly gas. Dillon described them as "largely industrial-type ingredients, nothing that causes so much concern for us."

Still, Dillon says whenever the U.S. identifies a suspected chemical weapons facility, it will take action. "We do not want them to get good at this," Dillon said. "So any time that we find or know that ISIS has stockpiles or have put together anything that can be used to make these weapons, we will strike them."

Two months into the campaign to liberate Raqqa from the grip of ISIS, just over 45 percent of the city is now under the control of the U.S.-backed Syrian Democratic Forces.

Dillon says the fighters remaining in the city are surrounded with no way to escape. "Their chances of leaving are very low. Their chances of dying ... are very high," Dillon said.

<http://www.washingtonexaminer.com/us-destroys-isis-chemical-weapons-factory/article/2630534>

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Intelligencer Post (United States)

### **Watchdog to Confirm Destruction of Last 2 Syrian Chemical Weapons Facilities**

Author Not Attributed

August 9, 2017

Improved security conditions in Syria will allow international experts to confirm conditions at the last two sites of 27 facilities where the Syrian government reportedly produced chemical weapons, according to Organization for the Prohibition of Chemical Weapons. Its director-general, Ahmet Uzumcu, announced that "plans were being made to carry out an inspection to verify the destruction of these two remaining sites."

Syria joined the OPCW in 2013, as part of the deal to destroy its chemical weapons, faced with threat of US military strike following the sarin gas attack in Damascus.

UN Secretary-General Antonio Guterres said in a letter to the UN Security Council on Monday that new developments are encouraging, but expressed doubts over accuracy of data available to OPCW. Uzumcu said Syrian government needed to provide documents that would "clarify a number of outstanding issues about its initial declaration of chemical weapons and precursor ingredients."

In late June, OPCW's fact-finding mission's report confirmed that sarin nerve gas was used in April 4 attack on the Syrian town of Khan Sheikhoun, which left 100 civilians dead. It was also found that mustard gas was used in an attack in Um Hosh in Aleppo in 2016.

A joint OPCW-UN body is still trying to determine who was responsible for the Khan Sheikhoun and Um Hosh attacks, with former blamed on the Syrian government by the United States and European Union.

OPCW fact-finding mission is investigating more than 60 alleged incidents of the use of chemical weapons in Syria between December 2015 and the end of March 2016 and will focus its future work on "credible allegations," Guterres said.

<http://www.intelligencerpost.com/watchdog-confirm-destruction-last-2-syrian-chemical-weapons-facilities/>

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Phys.org (Isle of Man, UK)

## **Trigger For Weapons of Bacterial Warfare Uncovered**

By Hayley Dunning

August 2, 2017

Researchers have been able to switch on and study the mechanism some bacteria use to inject toxins into their rivals.

Bacteria often compete for resources like food and space, and sometimes this competition gets fierce. For example some bacteria can inject toxins into rival bacteria and kill them.

Now the research team of Professor Alain Filloux from the Department of Life Sciences at Imperial College London have uncovered two regulators that control these injection systems in *Pseudomonas aeruginosa*. Their research is published in Proceedings of the National Academy of Sciences.

The bacteria, which can cause pneumonia, sepsis and chronic infections in cystic fibrosis patients, are naturally resistant to multiple antibiotics. One way to tackle *P. aeruginosa* could be to interfere with its weapons and make it more susceptible to attack by the immune system or by other bacteria.

*P. aeruginosa* is an 'opportunistic' pathogen, meaning it is found widely but only causes disease when the conditions are right – such as when a person has their immunity compromised. If researchers know what turns bacterial attack systems on, they could find ways to suppress their weapons or use them to our advantage.

Lead author of the study Dr Luke Allsopp, from the Department of Life Sciences at Imperial, said: "Bacterial competition is active warfare, which is going on all the time in our bodies, such as in our guts and lungs. If we could increase the action of 'good' bacteria, we might be able to fight off more of the 'bad' bacteria that cause infections.

"Alternatively, in the future we might be able to treat infected wounds by adding certain bacteria which excel at killing pathogens but can be easily killed with antibiotics. We could use these to target and destroy bacteria that don't respond to antibiotics, like *P. aeruginosa*. Finally, we could wipe out the bacteria we introduced with simple antibiotics. It's a novel concept for overcoming antibiotic resistance by using bacteria to do our dirty work."

### Firing mechanism

In order to fire toxins, *P. aeruginosa* has to make them inside the cell, then get them past the cell wall. To do this it uses protein secretion systems. The focus of this study was on the 'type VI secretion system' (T6SS), which is like a crossbow that fires the toxins out of the cell and into the target cell, much like a poison arrow.

The team discovered two regulatory proteins that control when these systems switch on and begin to fire. One regulator increases the action of the T6SS and the other decreases the action.

The researchers could also tell when the T6SS crossbow had been 'fired', by detecting proteins outside the bacterial cells.

*P. aeruginosa* has three types of T6SS, which the researchers believe may be used in different environments where the bacteria can live, for example in water, in soil and inside the human body. Since both regulators can control the activity of all three T6SSs, there could be a situation where all

three systems are turned on at once, such as when they are under extreme attack, according to the authors.

For example, previous research showed that when *P. aeruginosa* detect lysis – the splitting of cells – this makes the activity of one of the T6SSs increase. This work suggests that upon detecting lysis the activity of all three systems increases.

Dr Allsopp said: "A lot of cell lysis can mean all their friends are dead, so the bacteria ramp up their attack and fight more, possibly turning all the systems on at once."

<https://phys.org/news/2017-08-trigger-weapons-bacterial-warfare-uncovered.html>

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Science Daily (Rockville, MD)

### **Cheap and Simple Detection of Neurotoxic Chemicals**

Author Not Attributed

August 1, 2017

There is a limited amount of data on the global health impacts of pesticides, but many injuries and deaths worldwide can be attributed to their misuse. Pesticide contamination of food and water sources is a very serious problem, particularly in third world countries. The detection of these chemicals in the body using cheap and simple methods is a high priority.

Relatively easy methods for analyzing fat soluble chemical compounds are already known. Water soluble pesticides, on the other hand, are slightly more complicated. They often need troublesome pretreatments such as extraction and derivatization prior to instrumental analysis such as gas chromatography/mass spectrometry (GC/MS) and liquid chromatography/mass spectrometry (LC/MS), which is why researchers from Kumamoto University, Konan University, and the Nagasaki Prefectural Police in Japan began examining simpler methods for toxin detection. They focused on Nereistoxin (NRT), a natural neurotoxin found in several pesticides. Typical analysis for NRT requires the use of high performance detectors.

The researchers showed that NRTs adsorbed on the surface of a gold electrode (via an Au-S bond) produced an easily distinguishable electrochemical response that, in the presence of a ferricyanide (0.5 millimolar (mM)) marker anion, was more sensitive than a non-treated gold electrode. A critical condition for this electrochemical technique is an abnormally low electrolyte concentration (1.0 mM KCl). Under these low concentrations, the bare electrode measured a current of nearly zero microamps, whereas an electrode with a surface NRT layer significantly accelerated the electrical response. The NRT layer compensated greatly for the handicap that comes with low KCl levels. This research is valuable not only for its usefulness as a simple and practical sensor, but also for providing a new principle in physical chemistry for sensors.

After confirming the feasibility of the method on other NRT-related neurotoxic pesticides (Cartap, Thiocyclam, and Bensultap) the researchers assessed its ability to detect neurotoxins in human serum. "We initially found an unidentified current when we tested the control serum, but it was quickly eliminated after washing the electrode with sodium hydroxide," said Professor Toshihiro Ihara, leader of the research project. "Fortunately, this was the only treatment required for the detection of 1-25 micro-grams of NRT per milliliter of human serum, which is the sensitivity required to detect NRT poisoning from pesticides and other sources. Other techniques are more complicated, take more time, or use much more complicated materials. We hope that our technique will open doors to other cheap and simple detection methods."

This research may be found in the American Chemical Society's online journal Analytical Chemistry.

<https://www.sciencedaily.com/releases/2017/08/170801094339.htm>

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## US ARMS CONTROL

Consortium News (Arlington, VA)

### Endangering a Landmark Nuclear Treaty

By Jonathan Marshall

August 6, 2017

*Official Washington's political game of heightening tensions with nuclear-armed Russia to get better control of President Trump could destroy a landmark nuclear arms control treaty, as Jonathan Marshall explains.*

On Aug. 3, President Trump told millions of Twitter followers to “thank Congress” for the fact that “our relationship with Russia is at an all-time & very dangerous low.” The immediate impetus for his remark was congressional passage of new economic sanctions against Russia, but Trump might just as well have pointed to moves by the body to jeopardize a landmark arms control treaty negotiated in 1987 by President Reagan and Soviet leader Mikhail Gorbachev.

President Reagan meeting with Soviet General Secretary Gorbachev at the Soviet Mission during the Geneva Summit in Switzerland, Nov.20, 1985. (Photo from Reagan presidential library)

The Intermediate-Range Nuclear Forces (INF) Treaty was remarkable for prohibiting an entire class of existing weapons, with ranges between 500 and 5,500 kilometers. Ratified by the Senate in 1988, following one of the darkest periods of the Cold War, it led to the destruction of 2,700 missiles, both nuclear and conventional, over a period of about three years.

The treaty also opened the door to on-site inspections and other verification measures that made possible the first Strategic Arms Reduction Treaty in 1991, under President George H.W. Bush. Greg Thielmann, a former top State Department intelligence official who advised on the INF treaty negotiations, has called its success “unprecedented” and “one of the world’s most dramatic achievements in curbing the nuclear arms race.”

Putting those great accomplishments at risk, the proposed new National Defense Authorization Act, which passed the House in July, authorizes the development of a new land-based missile banned by the INF treaty. A companion Senate bill, which will be considered after the August recess, would fund initial Pentagon development of a similarly prohibited missile.

In each case, the real target of the new missiles proposed by congressional hawks like Republican Sen. Tom Cotton of Arkansas isn’t any particular Russian military capability, but the spirit of cooperation and shared interests that made arms control possible in the years from Nixon to Obama.

### Objections to Risk

“The INF Treaty is fundamental to European security,” declared a team of distinguished U.S., German, and Russian nuclear arms experts in April. “If the treaty unravels, it will open the door to an arms race in ground-launched intermediate-range missiles, which will diminish security in both

Europe and Asia . . . and undermine the entire regime of nuclear arms control between the United States and Russia.”

The missile-rattling by members of Congress is rooted in Washington’s concern that Russia recently began to deploy an upgraded version of an existing ground-launched cruise missile, dubbed the SSC-8, with a prohibited range beyond 500 kilometers. Russia denies any violation of the treaty, but the U.S. responding to a possible violation by blowing up the entire treaty would be an act of strategic folly.

Tom Collina, an arms control expert with the Ploughshares Fund, told me that he and other independent analysts can’t assess the evidence because it’s so highly classified. But he was impressed by the fact that key members of the Obama administration vouched for it: “These were people I know supported arms control with Russia, and finding this [breach] was very inconvenient. The last thing they wanted was to have to tell the U.S. Senate that Russia is cheating.”

Gen. James Mattis told the Senate Armed Services Committee during its consideration of his nomination to President Trump’s Secretary of Defense, “If Russia is permitted to violate the treaty with impunity, such actions could erode the foundations of all current and future arms control agreements and initiatives.”

But the U.S. response doesn’t have to be hasty or extreme. U.S. defense planners aren’t losing any sleep over the limited Russian deployment of its questionable missiles.

“Given the location of the specific missile and the deployment, they don’t gain any advantage in Europe,” said Air Force Gen. Paul Selva, the vice chairman of the Joint Chiefs of Staff, in Senate hearings last month.

#### Evidence and Inspections

A reasonable approach advocated by many experts is to start by confronting the Russians with more specific evidence of their alleged violation. At a press briefing in June, Russian Foreign Minister Sergey Lavrov said his government was ready for an “honest but specific dialogue” and had “no intention to break the treaty.”

The Russians may be using their cruise missile deployment as leverage to force discussion of their own complaint that NATO’s missile-interceptor systems in Eastern Europe have potential offensive uses. Russian military experts claim the launchers used in those systems can house intermediate-range cruise missiles prohibited by the INF treaty.

Russian military leaders have expressed public concerns about the threat of a surprise attack on their command and control centers from such stealthy and precision-targeted missiles. The short flight times of those missiles to Moscow could facilitate the “decapitation” of Russia’s political and military leadership.

Russia’s fears may be misplaced or overblown, but they are fanned by the blatant dishonesty of NATO’s claims that its interceptors are merely designed to defend against ballistic missiles from Iran. Iran has no missiles capable of striking most of Europe. Nor does it have a nuclear weapons program, as confirmed by regular international inspections and the State Department’s own certification.

Moscow’s claims, like Washington’s concerns over Russia’s recent missile deployments, should be amenable to inspection and resolution by panels of technical experts, say nuclear arms experts. The INF treaty created a Special Verification Commission (SVC) to address just such issues.

“U.S. willingness to allow Russian access to deployed [missile interceptor] launchers and Russian willingness to accept on-site monitoring of SSC-8 [cruise missile] launchers at test sites and

challenge inspections at suspect deployment sites could lead to a breakthrough in the current compliance stalemate," writes Thielmann.

#### Political Obstacles

The technical challenges are real, but Thielmann and other experts suggest the political challenges are even greater. Many congressional hawks evidently don't want a cooperative resolution of the issue. Although President Trump has sought to work with President Putin, he has also expressed contempt for arms control. ("Let it be an arms race," Trump told an interviewer in December. "We will outmatch them at every pass and outlast them all.")

Last but not least, the Pentagon is pushing for a trillion-dollar nuclear "modernization" program and a new generation of smaller nuclear warheads it deems suitable for "warfighting." Russia, of course, is not standing still, either.

Jon Wolfsthal, the top White House arms control expert under President Obama, reminds us that in today's poisonous political atmosphere, "The danger(s) of an accidental or unintended conflict . . . are as high as they have been since the collapse of the Soviet Union."

Given the immense stakes for all humanity, Trump should invoke the spirit of Ronald Reagan to quell moves by congressional conservatives to derail the INF treaty. Their misguided attempts to grab a temporary lead in the nuclear arms race, instead of pursuing a mutual end to that race altogether, will only put U.S. security more at risk.

<https://consortiumnews.com/2017/08/06/jeopardizing-a-landmark-nuclear-treaty/>

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Time (New York, NY)

### **Here's How Many Nuclear Weapons the U.S. Has**

By Alana Abramson

August 9, 2017

North Korea on Wednesday threatened to attack the U.S. territory of Guam, the latest in a series of mutual provocations as tensions between the two countries continue to escalate. That development came after President Donald Trump said Tuesday that North Korea "will be met with fire and fury like the world has never seen" if it continues its aggressive behavior.

Trump followed up on Wednesday in a series of tweets boasting about the U.S. nuclear arsenal. "My first order as President was to renovate and modernize our nuclear arsenal. It is now far stronger and more powerful than ever before," he tweeted. "Hopefully we will never have to use this power, but there will never be a time that we are not the most powerful nation in the world!"

Here's what you need to know about the size and reach of the American nuclear arsenal.

#### How Many Nuclear Weapons Does the U.S. Have?

As of July 8, the United States has 6,800 warheads, according to data from Hans Kristensen and Robert Norris at the Federation of American scientists. 2,800 of them are retired, 4,000 are stockpiled, and 1,800 are deployed. The total number of U.S. warheads is second only to Russia, which currently has 7,000 of them.

Aside from North Korea, the other nuclear powers have between 80 and 300 warheads each, and 1,135 in total. As of July, North Korea was thought to have the material for a maximum of 20 warheads.

It was previously thought that North Korea lacked the technical sophistication to make nuclear warheads small enough to be delivered via long-range missile. But as Kelsey Davenport, the Director for Nonproliferation Policy at the Arms Control Association, explains, U.S. intelligence officials believe that's no longer the case, as reported by The Washington Post on Tuesday.

"North Korea has been developing the capability to put a nuclear warhead on the tip of a ballistic missile for years. And what yesterday's intelligence assessment indicates is that the United States now thinks North Korea has achieved this capability," said Davenport. "Essentially the United States is assessing that North Korea can put a warhead onto a ballistic missile and actually deliver it."

#### How Far Can U.S. Nuclear Weapons Reach?

Davenport estimates that the range of a U.S. intercontinental ballistic missile exceeds 10,000 kilometers, or approximately 6,213 miles.

"U.S. ballistic missiles are extremely reliable and very accurate and some of these weapons can be launched within minutes," she explained. "That differs quite a bit from North Korea [where] their missiles are unreliable, they are inaccurate. North Korea has only in July tested a ballistic missile that's capable of reaching the United States."

#### Which Other Countries Have Nuclear Weapons?

Nine countries have or are believed to have nuclear arsenals, according to the Arms Control Association: the United States, Russia, the United Kingdom, France, Israel, Pakistan, India, China and North Korea.

The United States developed and used the first nuclear weapons in 1945, when they dropped the Atomic bombs on Hiroshima and Nagasaki at the end of World War II. This act fueled the start of the "arms race," a competition between the United States and the Soviet Union for the most effective and largest number of nuclear arms.

In 1970, just eight years after the Cuban Missile crisis provoked fears of nuclear war, the Treaty on the Non-Proliferation of Nuclear Weapons, or NPT, was ratified; it was extended indefinitely in 1995. Under the treaty, the five permanent members of the United Nations Security Council — China, France, Russia, the United States and the United Kingdom — were acknowledged as nuclear powers. Other countries that joined the treaty agreed not to pursue nuclear weapons development, although they are allowed to use nuclear technology for non-military purposes, like scientific research.

Israel, India and Pakistan never signed the treaty. Although Israel does not officially acknowledge their arsenal, the country is believed to possess approximately 80 warheads. North Korea signed the treaty but withdrew in 2003. "Certainly North Korea's decision to leave the treaty and pursue nuclear weapons does weaken the treaty," says Davenport. "It's critical that the United States and the broader international community try to ensure that North Korea does not proliferate its nuclear technology to any other state or non-state actors."

<http://time.com/4893175/united-states-nuclear-weapons/>

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Arms Control Wonk (Washington, DC)

## **The More You KN-0W About North Korean Missiles**

By Alana Abramson

August 9, 2017

Whether you've been working on North Korea for awhile or just tuned in, chances are you've heard of a missile called the KN-08. You might have also heard of something called a Hwasong-13. And maybe you've seen a Nodong-C designation floating around online? Frustratingly, they all refer to the same missile — North Korea's ICBM prototype first seen in 2012.

Let me explain: the DPRK designates several of its missiles as "Hwasong" (화성), the Korean name for the planet Mars (literally translated as "Fire Star") followed by a number. Pretty easy to follow. The United States, by contrast, uses a patchwork of two competing designations, one of which refers to the location where it was first tested, and the other uses a KN (Korea, North) number, in a similar style to the Hwasong convention. That's why the Hwasong-13, the Nodong-C, and the KN-08 can all refer to the same missile — the first designation is North Korean; the latter two are American, although in this case the Nodong-C moniker is more of an online nickname than a known government designation. Aside from some outliers which break the Hwasong naming convention (looking at you, Pukkuksong-1 and -2), the DPRK has a much clearer designation system than the United States. This being said, understanding the nomenclature can be mighty confusing, as it's supposed to be — it's in the interests of the DPRK to keep us on our toes when it comes to their missiles programme.

Jeffrey wrote a detailed post on this last year, explaining the origins of these conventions in relation to China, the USSR, and North Korea. However, as far as I'm aware, there is no complete directory of North Korean hardware as it corresponds to the KN naming convention. So I'm making one.

My thanks to the Big Wonk for letting me turn my maddened scriblings into a proper blog post. In doing so I hope to fill a gap in the open-source repository, and satisfy my obsessive love for lists and nomenclature. It's like shooting down two missiles with a single interceptor, or some other wonky maxim. My thanks go out to those who have helped corroborate some of these findings (especially Ankit Panda, who is indisputably the best source on DPRK missile designations).

This post will go down the KN list from 1-20, and include references to alternate names for clarity. A couple notes — I've compiled this list from open-source data, which can occasionally be contradictory (for example, there is some confusion over the true identity of the KN-10, among others). I'll try and reference these caveats where they appear, and I'll do my best to update it as new designations are introduced. Also, this list is mainly intended as a directory, not as an encyclopedia. There's been some excellent analysis on most of these systems already, but armed with the correct designations you'll now KN-0w where to start looking.

### **KN-01**

As reported by Ankit, the US government designates KN-01 as a ship-launched variant of the Russian Kh-35 anti-ship cruise missile, first tested in February 2015. The new ground-based tracked TEL for this system is known as the KN-19. Confusingly, The KN-01 is often identified in open-source materials as an extended range variant of the Soviet P-Termit Styx or the Chinese CSS-C-2 Silkworm ASCM. However, given that the KN system began in the mid-1990s, the Styx/Silkworm variant would be too old to warrant such a designation. The Kh-35, on the other hand, fits the timeline much better. It was first tested in 2003, and the KN-02 was first tested two years later. Jeffrey hypothesizes that somewhat vague early references to the 2003 Kh-35 test as an "anti-ship missile" led to assumptions that it was the much older Styx/Silkworm variant, which would explain the discrepancy.

## KN-02

The KN-02 is a tactical, solid-fuel, single-stage SRBM with a range of approximately 120-220 km. Designed for precision strikes, the KN-02 is the most accurate missile in the DPRK arsenal. The KN-02 is road-mobile and is fired from a locally-constructed variant of a Belarusian MAZ-630308-224 or -243 6×4 or 6×6 commercial heavy utility truck. See CNS' model here. There is probably an extended range version, but it isn't clear whether it actually has a different designation.

Alternate name(s): Toksa ("Viper").

## KN-03

Ankit reports the KN-03 as a variant of the Nodong MRBM, although it remains unclear what sort of mod it might be. It could possibly correspond to the Nodong-1M designation which occasionally floats around online — although as of yet no hardware has been positively ID'd to match the -1M.

## KN-04

This is quite possibly the most frustrating designation. The KN-04 is the ER-Scud, which began cropping up in Korean and US reports in the mid-2000s. With a range of approximately 700-1,000 km, it's a natural follow-up to the older Scud-Bs and -Cs, and slightly smaller in size than the Nodong. Confusingly, the KN-04 is also known as the Scud-D, which is occasionally represented as a different missile than the ER-Scud (they're actually the same). Also, Ankit reports that for some unknown reason the US government has another designation for this: Scud 2. Because everyone loves sequels, right? #NotMyKN04

Alternate name(s): ER-Scud, Scud-ER, Scud-D, Scud 2.

## KN-05

The KN-05 very rarely appears in any open-source material — we needed a break after that KN-04 nonsense anyways. See my note at the end of this list relating to missing designations.

## KN-06

The KN-06 is a long-range surface-to-air missile first seen in a 2010 military parade. It holds a similarity to the Russian S-300 air defence system. It is launched from a TELAR — in this case a 6×6 KAMAZ truck with a linked phased array radar system. It was announced that it would be mass-produced after a test in late May 2017.

Alternate name(s): Pongae-5.

## KN-07

Another unknown. See my note at the bottom of this list.

## KN-08

The KN-08 is a road-mobile ICBM currently under development. Mock-ups of a three-stage version of the KN-08 were first seen in a 2012 military parade, and again in 2013. When they were displayed again in 2015, the newer mock-ups showed that the KN-08 had been shortened to two stages. This variant has been designated the KN-14.

Alternate name(s): Hwasong-13, Nodong-C.

## KN-09

Despite initial reports that the KN-09 might be the designation for the DPRK variant of the Russian Kh-35 cruise missile launcher, it seems that the KN-09 actually refers to a 300 mm rocket artillery system. The KN-09 reportedly has a range of up to 200 km and is fired from a launcher which carries eight rockets in two pods of four.

## KN-10

This is a tough one. The only piece of reporting I've seen on the KN-10 is the Wisconsin Project, which says that it's an enhanced version of the KN-02 with a range of 220 km, first seen in an August 2014 test-firing. However, I'm a bit skeptical that an entirely new designation would be given to the same missile with slightly upgraded range. I think it's more likely that the KN-10 refers to something else entirely — see my note at the end of this list.

## KN-11

The KN-11 is the missile with the nicest paint job, by far (someone seriously needs to do a BuzzFeed-style listicle of DPRK missiles ranked by hotness). First successfully flight tested on a lofted trajectory in August 2016, the KN-11 is a two-stage, solid-fueled SLBM with range estimates between 500-2,500 km. The land-based IRBM variant of the KN-11 is known as the KN-15 (see below). See CNS' model [here](#).

Alternate name(s): Pukkuksong-1 ("Polaris-1").

## KN-12

The KN-12 is a multiple rocket launcher system (MRLS) which carries forty 122 mm rockets in two banks of twenty.

## KN-13

I'm skipping this because of superstition. And also because there is literally no open-source information on the KN-13. See my note at the end of this list.

## KN-14

The KN-14, first seen in 2015, is the two-stage variant of the KN-08 mock-up. The shortened and simplified design led Dave Schmerler, Jeffrey Lewis, and John Schilling to estimate a range of 9,000 km with a lighter warhead of approximately 400 kg.

Alternate name(s): KN-08 mod 2, previously misidentified as Hwasong-14 (KN-20).

## KN-15

The land-based variant of the KN-11 SLBM, the KN-15 is a two-stage, solid-fueled, mobile MRBM first successfully flight tested in February 2017 from a tracked TEL. The KN-15 can be cold-launched, meaning that the missile is gas-ejected from its canister before igniting. After its second successful test in May 2017, Kim Jong-un declared that the KN-15 was ready for mass production.

Alternate name(s): Pukkuksong-2 ("Polaris-2").

## KN-16

The KN-16 is another MRLS, this time carrying twenty-two 240 mm rockets in two banks of eleven. We saw it at #JucheFest2017 with closed canisters.

## KN-17

The KN-17 is a liquid-fueled IRBM first revealed at #JucheFest2017 and successfully flight tested on May 14th on a lofted trajectory. It is likely to be single-stage (although this is unconfirmed). The range is estimated as 3,700-4,500 km, and it is road-mobile, using a MAZ-based launcher similar to that used by the Musudan.

Alternate name(s): Hwasong-12.

## KN-18

The KN-18 is a single-stage, liquid-fuelled derivative of the Scud C with a maneuverable reentry vehicle (MaRV), which could be intended to evade missile defences and strike precision land targets, or potentially to target naval vessels (although this is very difficult due to ISR prohibitions). The potential for use against naval targets created some initial hype around the KN-18 as a 'carrier-killer' ASBM. It was also previously misreported as the KN-17, which turned out to be the Hwasong-12 (see KN-17). See CNS' model here.

#### KN-19

The KN-19 refers to the ground-based version of the KN-01 integrated coastal defence cruise missile launcher, first tested in June 2017. The ground-based TEL was also on display at April's #JucheFest2017, where we saw a tracked vehicle in naval camouflage carrying four missile canisters.

Alternate name(s): Kumsong-3.

#### KN-20

The big one. The KN-20 is the two-stage ICBM that was tested on Independence Day, although John Schilling's technical analysis in 38 North reveals that very little of the missile is actually new hardware. The engine is borrowed from the KN-17 and the second stage of the missile shares a number of similarities to the KN-08. David Wright's latest estimations put the range at over 10,000 km, placing cities like Chicago, Boston, New York, and potentially Washington DC at risk.

Alternate name(s): Hwasong-14.

#### Something's Missing...

As you may have noticed, we have some KN numbers without corresponding hardware. The KN-03, -04, -05, -07, -10, and -13, to be exact.

As Jeffrey noted in his post, the old location-based naming system was likely replaced by the KN system when the Americans started running out of place names in the mid-1990s. As far as I am aware, these older systems were not assigned KN numbers when the new system was introduced, so missiles like the Nodong, the Musudan, and the Taepodong do not have KN designations. The Nodong and Musudan do, however, have corresponding Hwasong designations (Hwasong-7 and -10, respectively), as per the North Korean naming convention. The Nodong, Taepodong-1, and Taepodong-2 also reportedly carry ND01, TD01, and TD02 designations. North Korea's Scud variants (Hwasong-5 and -6) are likely to be too old for KN numbers; however, the US government doesn't exactly have a great track record with logical naming conventions (see: the entire Cold War).

The amount of DPRK hardware greatly exceeds the number of assigned KNs, so the missing numbers could correspond to pretty much anything: The Unha-3 space launch vehicle? The Pongae-6 SAM? And don't forget we still have the DF-31 and Topol-M style canisters seen at #JucheFest2017, still unidentified.

As I mentioned, this list collates data from open-source materials. If you know something I don't, please get in touch. In the meantime, happy wonking.

<http://www.armscontrolwonk.com/archive/1203680/the-more-you-kn-0w-about-north-korean-missiles/>

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Casper Star Tribune (Casper, WY)

## **In Defense Bill, Cheney Pushes For More Deterrence Overseas — Including Nuclear Weapons**

By Arno Rosenfeld

August 9, 2017

A longtime advocate for a more powerful American presence overseas, Wyoming's U.S. Rep. Liz Cheney successfully advocated for taking a tough line with both Russia and North Korea, along with investing in the United States' nuclear weapons program, in a major military spending bill.

The Republican sponsored three successful amendments to the National Defense Authorization Act, which passed the House of Representatives last month and is expected to be debated soon by the Senate.

The amendments focused on ensuring the military maintains a minimum number of intercontinental ballistic missiles, forcing President Donald Trump's administration to penalize Russia if it violates an arms treaty and developing a plan to extend military deterrence in the Asia-Pacific region as a hedge against North Korean aggression.

Tom Donnelly, a security policy analyst with the American Enterprise Institute, said Cheney's amendments presented a cohesive view of a more powerful U.S. military and one that retains strong nuclear capability. He acknowledged that much of the language in the amendments would not require major action to be taken but noted that her advocacy for the issues is meaningful in itself.

"She's raising attention to ideas whose time has come," Donnelly said. "Her voice is a new one on these things and potentially a powerful voice, so that's not nothing."

Donnelly said that Cheney's belief in a stronger and more active military might put her at odds with Trump, who has oscillated between calling for restraint and a focus on domestic issues and promising to crush America's perceived enemies.

While Cheney has disagreed with Trump's stance on Russia in the past, she said in an interview that she supported much of what she's seen from Trump — specifically referencing the decision to bomb a Syrian government airfield following the suspected use of chemical weapons in April.

"The message of those strikes is heard not just in the Middle East or in Syria," Cheney said. "It's something adversaries around the world watch."

### Maintaining missiles

One of Cheney's amendments would require the United States to maintain a minimum of 400 deployed intercontinental ballistic missiles, capable of firing nuclear warheads at targets thousands of miles away.

Cheney said a meaningful ICBM force is part of maintaining the "nuclear triad," which refers to the United States' ability to deploy nuclear weapons from land-based missiles, aircraft and nuclear submarines.

Defense Secretary Jim Mattis has said he is open to reevaluating the need for the triad, possibly moving to a two-legged nuclear force and eliminating the use of ICBMs.

"Having language in the bill that ensures there's a floor below which we won't cut our ICBM forces is very important," Cheney said.

Maintaining a strong ICBM force has local significance in Wyoming because F.E. Warren Air Force Base in Cheyenne is one of just three ICBM launch sites in the country and is a major employer in the area.

Michael O'Hanlon, an expert on American defense strategy at the Brookings Institution, said in an email that Cheney's support for the ICBM program "smacks partly of parochial politics" but was also consistent with her overall foreign policy.

"In fairness to Cheney, she is a consistent and committed conservative/hawk so I'm sure the sentiment is founded in her analysis of military requirements as well as local political and economic considerations," O'Hanlon wrote.

#### Addressing North Korea

In contrast to the requirement to maintain a minimum number of ballistic missiles, Cheney's other two amendments are more symbolic in nature and would require the Trump administration to consult and develop plans, rather than take specific action.

The first is focused on shoring up American military deterrence in the Pacific by requiring the Secretary of Defense to consult with military commanders in the area and comprehensively evaluate existing forces in east Asia as well as ongoing military exercises and arms sales to Asian allies.

Cheney said that the amendment's breadth and flexibility was an asset. She said it was essential that the United States develop a clear plan to manage the threat posed by nuclear-armed North Korea and that commanders in the region are best positioned to do so.

"The deterrent strategy and approach that we've had in place — that worked during the Cold War, for example — I think it's pretty clear that same type of deterrence doesn't work with North Korea," Cheney said. "We need to be in a position where we're looking at a whole range of options."

O'Hanlon said that compelling the Pentagon to consult with regional commanders and develop a strategy was an especially good idea because the Trump administration has been slow to assemble a team at the Defense Department, potentially delaying regular policy reviews.

"As such, calling attention to a crucial region and asking how deterrence can be enhanced is smart and timely," he wrote.

Though Cheney did not outline her preference for how to address the threat from North Korea during the interview, conducted in late July, she said that if the country used nuclear weapons, "our response would be swift and devastating."

Those comments mirror ones made by Trump on Tuesday. While Cheney was describing how the United States would respond to an attack by North Korea, the president told reporters that if North Korea continued to threaten the U.S., "they will be met with fire and fury like the world has never seen."

#### Message to Moscow

The final Cheney amendment addressed the New START arms reductions treaty negotiated with Russia during the Obama administration. It would require the Defense Department to develop a plan for how to respond if Russia fails to comply with the treaty requirements by the mutually agreed-upon deadline of February 2018.

Cheney has long opposed the treaty itself. In her 2015 book "Exceptional," co-authored with her father and former vice president Dick Cheney, the pair wrote that the treaty should be allowed to expire in 2021: "The treaty restricts our missile defense capabilities and limits our deployed launchers ... below the number that the Department of Defense and Department of Energy determined was necessary for purposes of deterrence."

She said the amendment was important to help the Pentagon prepare a response in advance because, while it's clear that Russia is not reducing its arms as required by the treaty, it is not technically in violation until February.

"We don't have time on our side," Cheney said. "I thought it was important not to wait until we get to next February."

Though he expressed concern over Congress interfering with executive branch policy decisions, O'Hanlon said that the benefit of putting Russia on notice that the United States will respond to violations of the New START treaty outweighed the drawbacks.

"It sends Moscow a message that Moscow needs to hear," he said.

'Wider latitude'

Cheney also hinted at exploring a withdrawal from the Intermediate-Range Nuclear Forces, or INF, treaty between the United States and Russia. Signed under President Ronald Reagan, the agreement bars missiles with a range of around 300 to 3,000 miles. Cheney said that the Russians are not abiding by the treaty and that mid-range missiles might aid deterrence in Asia.

Donnelly said advocating a withdrawal from a decades-old treaty might be a risky political move for a junior politician like Cheney, who took office in January, if not for her pedigree.

"If you're a Cheney, you're known to be a skeptic of treaties," he said. "You have a little wider latitude than others may."

Donnelly said the Cheney amendments represented an auspicious start for the representative and will help raise the profile of her foreign policy outlook.

"She's talking about a serious issues in a serious way and elevating it, to some degree, in the public conversation," he said.

[http://trib.com/news/state-and-regional/govt-and-politics/in-defense-bill-cheney-pushes-for-more-deterrence-overseas-including/article\\_682b51f5-b718-5503-8d19-aba859a333f1.html](http://trib.com/news/state-and-regional/govt-and-politics/in-defense-bill-cheney-pushes-for-more-deterrence-overseas-including/article_682b51f5-b718-5503-8d19-aba859a333f1.html)

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## ASIA-PACIFIC

Business Insider (New York, NY)

### **Watch China Debut an ICBM That Can Hit the US With Multiple Nuclear Warheads**

By Alex Lockie

August 1, 2017

At a parade touting Beijing's massive military might on the 90th anniversary of the founding of the People's Liberation Army, China rolled out it's newest intercontinental ballistic missile, the DF-31AG.

Unlike the DF-31 before it, the DF-31AG boasts a range extended to above 6,800 miles, which means that most of the continental US is in range, according to the Center for International and Strategic Studies.

Additionally, the DF-31AG can carry multiple nuclear warheads, or even a conventional warhead.

As Zhou Chenming, a military observer based in Beijing, told the South China Morning Post: “We’re not in the cold war anymore, extremely powerful weapons like nuclear missiles are no longer the mainstream. We’ll still keep our nuclear strength, but when we face some regular threats we don’t need to use nuclear warheads to attack, but will resort to some conventional warheads instead.”

Another upgrade to the survivability and lethality of the missile comes from the truck that carries it. Like the DF-31, it's mobile and therefore can evade attacking forces, hide, and fire from surprising locations. But unlike the previous model, the DF-31AG can actually go off road, further complicating any plans to neutralize China's nuclear might.

<http://www.businessinsider.com/china-df-31ag-icbm-rollout-parade-2017-7>

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The Diplomat (Tokyo, Japan)

## **Today's Nuclear North Korea is Yesterday's China: Lessons From History**

By Yevgen Sautin

August 5, 2017

*North Korea isn't the first Asian communist state to acquire a nuclear ICBM capability of concern to the United States.*

North Korea's recent successful intercontinental ballistic missile (ICBM) tests have put Pyongyang on the cusp of having the means to credibly threaten the continental United States with a nuclear strike. The Trump administration has vowed to “not allow” North Korea to continue on its “destructive path” but so far has not put forth specific new policies to stop Pyongyang. Since the latest test, several senior administration officials have stepped up their rhetoric, labeling the DPRK as the most urgent threat facing the United States and stating that it is “unimaginable” to allow North Korea to have the capability to attack the U.S. mainland.

As U.S. policymakers ponder how to deal with North Korea's nuclear and missile programs, it is important to remember that we are not in uncharted territory. The United States found itself in a similar situation more than 50 years ago, when faced with the prospect of Maoist China going nuclear. Then as now, experts questioned if rational decision makers were behind the nuclear controls of a reclusive communist state and military options — no matter how risky — were seriously considered. Despite initially having great fears about the prospect of a nuclear China, both the Kennedy and the Johnson administrations came to realize that China's modest nuclear arsenal failed to alter the underlying balance of power in East Asia or undermine the confidence of U.S. allies in the credibility of Washington's security guarantees. And even though nuclear-armed China continued to champion global revolutionary causes and provide direct military assistance to North Vietnam against the United States, Chinese rhetoric on nuclear weapons gradually moderated and began to show evidence of calculated restraint vis-à-vis the United States.

### A Rogue China

In December of 1960, the U.S. National Intelligence Estimate (NIE) warned that, “[China's] arrogant self-confidence, revolutionary fervor, and distorted view of the world may lead [Beijing] to miscalculate risks. This danger would be heightened if Communist China achieved a nuclear



weapons capability.” Revolutionary fervor aside, the same assessment could be written about North Korea today. North Korea continues to be one of the most isolated regimes in the world, run by the mercurial Kim Jong-un. In addition, the country engages in kidnappings and assassinations, hurls utterly bizarre imprecations against the United States, and regularly threatens preemptive nuclear strikes against South Korea. When observing North Korea from afar it is easy to mistake it for an exceptional case of obdurate despotism.

As the NIE suggests, however, the same rogue state description fit the profile of China in the 1960s. Throughout the decade, Chinese leaders routinely dismissed the dangers of nuclear war and would stress the inevitable victory of the “people’s war” against U.S. imperialism and Soviet revisionism. At the same time, Chinese leaders greatly exaggerated the capabilities of their own nuclear program and downplayed the risks posed by potential counter force strikes against the Chinese mainland.

In reality, China’s belligerent rhetoric was a strategic bluff to compensate for the great disparity between China and the two superpowers in nuclear capabilities. When looking today at uncannily similar boasts by North Korean state press that their country is now “a strong nuclear power state” and has “a very powerful ICBM that can strike any place in the world” it is important to remember that North Korea continues to have a small nuclear arsenal, has no second strike capability, and will never be able to shift the military power balance in the region on its own. North Korean saber rattling is a screen to deflect from the regime’s weakness and fear of the future.

#### North Korea’s Nuclear Doctrine

The DPRK does not have a publicly available official nuclear doctrine, which leaves analysts the sole option of piecing together a strategy from open-source statements. Kim Jong-un has spoken about the importance of breaking the “nuclear monopoly” held by the United States. Pyongyang has stated that it has a “no first use” policy and that it is in favor of complete global disarmament. Despite the “no first use” language, North Korea has repeatedly threatened to use nuclear weapons in preventive strikes against either the United States or South Korea. Since pulling out of the Six Party Talks, North Korea has effectively rejected efforts to denuclearize the North Korean peninsula.

North Korea’s commentary on nuclear weapons closely parallels China’s official positions on nuclear weapons during the 1960s. Following China’s first nuclear test in 1964, Beijing also stressed three points: China’s goal for developing nuclear weapons was “to break the superpower monopoly;” China holds a “no first use” policy; and that China supports the complete elimination of nuclear weapons. Despite the cautious public stance, China was vehemently opposed to the Limited Test Ban Treaty (LTBT) and did not moderate its hostile position toward nonproliferation until its nuclear program reached a more mature stage in the 1970s. China’s record suggests that North Korea is purposely adopting a hostile stance to compensate for the overall weakness of the North Korean arsenal.

## Dealing with North Korea Effectively

As William Burr and Jeffrey T. Richelson document in *Whether to “Strangle the Baby in the Cradle”: The United States and the Chinese Nuclear Program, 1960-64*, John F. Kennedy viewed a potential Chinese nuclear test as “likely to be historically the most significant and worst event of the 1960s.” The Kennedy Administration was so concerned about the specter of a nuclear China that every measure from direct U.S. strikes to parachuting Chinese Nationalist commandos from Taiwan was considered. Kennedy even authorized officials to approach America’s archrival, the Soviet Union, regarding joint preventive action against China.

Kennedy was hardly alone in his fears that a nuclear China was the greatest threat to world peace. As the Cultural Revolution unfolded, the U.S. Navy was concerned that China would quickly gain submarine-launched ballistic missile (SLBM) technology and would launch them in a way to fake a Soviet strike, triggering a global nuclear war. (See Lyle J. Goldstein in *When China Was a ‘Rogue State’: The Impact of China’s Nuclear Weapons Program on US-China Relations during the 1960s.*) To counter this putative threat, the Navy recommended the sinking of China’s first missile-armed submarine on its maiden voyage. Not only did these fears border on paranoia, they greatly exaggerated China’s technological capabilities. In the case of SLBMs, China would not test its first submarine-launched missile until 1982. The press was also highly critical of Mao possessing nuclear weapons and called for military action to curtail Beijing’s nuclear ambitions.

Kennedy’s fears over the prospect of China going nuclear were not shared by everyone in government. The State Department’s Policy Planning Council produced an influential study that questioned the consequence of China’s nuclear test. The study argued that the Chinese nuclear arsenal could not pose a major threat to the United States and would hardly alter the balance of power in the region. Moreover, China’s nuclear arsenal was vulnerable to a U.S. counter force strike. Hence, a nuclear China would not feel emboldened to further challenge the United States. Although initially controversial, proponents of this view eventually won out in the Johnson administration.

The report acknowledged that there could be some adverse political ramifications of a Chinese nuclear test (i.e., proliferation), but they could be addressed by U.S. reassurances to its allies. Indeed, even though in the wake of China’s first nuclear test Japan expressed a strong desire to develop its own bomb, the Johnson administration was able to provide security reassurances combined with diplomatic pressure to dissuade Tokyo from going down the nuclear path. In the subsequent years, the United States applied similar pressure to block Taiwan and South Korea from going forward with their own nuclear weapons programs.

If China’s nuclear program did not pose a serious threat to the United States in the 1960s, then there is even less reason to fear North Korea’s today. Even with improvements in North Korean missile capabilities, the United States and its allies still enjoy an overwhelming military and economic advantage over the North. Just as during the 1960s, the United States simply needs to be public and credible in its reassurances to its regional allies and partners. Any North Korean effort to split the U.S.-ROK alliance will fail if the United States continues to provide a broad security guarantee to South Korea. As long as the Trump administration continues to offer its public support to Japan, Tokyo too will feel that there is no need for drastic action.

Lastly the United States needs to forcefully come out against the linkage of the North Korean nuclear question with unrelated issues in the U.S.-China relationship to address Taiwanese concerns that Washington will trade away the de facto independence of the island in exchange for Chinese assistance in reigning in North Korea. It has become clear that either due to a lack of leverage or deliberate unwillingness, Beijing will not apply the necessary level of pressure to compel Pyongyang to reverse course. The United States should not fall into the trap of expanding the scope of talks in the hope of eliciting additional Chinese cooperation on North Korea.

## Conclusion

After the 1964 Chinese nuclear test, President Johnson used trade controls and extra intelligence monitoring to slow down the pace of China's nuclear development. Despite continued apprehension, the U.S. learned to live with China's nuclear program. This was made possible in large part due to swift and credible U.S. reassurances to key regional allies such as Japan. Over time, as Chinese leaders decided to shift strategies and pursue greater engagement with the Western world, China's nuclear positions underwent a gradual evolution. North Korea is not China, but a similar policy of strategic patience combined with robust security assurances to South Korea and Japan is the best bet for getting North Korea back to the negotiating table. The alternative is untenable.

<http://thediplomat.com/2017/08/todays-nuclear-north-korea-is-yesterdays-china-lessons-from-history/>

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South China Morning Post (Hong Kong, China)

## **North Korea Considers Missile Attack on Guam, After Trump Vows 'Fire And Fury' Over Nuke Report**

By Robert Delaney

August 9, 2017

*US intelligence report that Pyongyang has miniaturised nuclear warheads will prompt enhanced joint military operations by the US and allies, analysts say*

North Korea said on Wednesday it is considering plans for a missile strike on the US Pacific territory of Guam, just hours after US President Donald Trump told the North that any threat to the United States would be met with "fire and fury".

Pyongyang said it was "carefully examining" a plan to strike Guam, an island of around 162,000 in the western Pacific and the site of a US military base that hosts a submarine squadron, an airbase and a Coast Guard group.

The sharp ratcheting-up of tensions came after the revelation that US intelligence concluded North Korea had successfully developed technology to fire nuclear-tipped intercontinental missiles. That prompted Trump's "fire and fury vow".

Analysts said the development would likely lead to enhanced joint military operations by the US and its allies in the region.

The Washington Post on Tuesday cited a confidential assessment by the US Defence Intelligence Agency that says North Korea crossed “a key threshold on the path to becoming a full-fledged nuclear power” with its ability to make miniaturised nuclear warheads. The new assessment follows a separate US government report estimating that Pyongyang possesses up to 60 nuclear weapons.

“The IC [intelligence community] assesses North Korea has produced nuclear weapons for ballistic missile delivery, to include delivery by ICBM-class missiles,” the DIA report said, according to the Washington Post.

“It’s likely that there will be more visible military components of a response that will be generated by this kind of development. There will be people advocating for military response measures,” said Scott Snyder, a senior fellow for Korea studies at the New York-based Council on Foreign Relations.

Such a response would include “more overflights of nuclear capable aircraft, probably re-deployment of additional forces in the region, and some kind of enhanced naval presence in Northeast Asia” involving the US, South Korea and Japan.

“I don’t see American politicians will be able to accept” North Korea as a nuclear power even if defence strategists recognise that the US had been subjected to nuclear threats from China and the former Soviet Union for decades, Snyder added.

“It’s a political problem with such profound implications for American public perception.”

Comments by Trump shortly after the Washington Post report underscored the political reaction.

Trump lashed out at North Korea during a briefing from his golf course in New Jersey, saying further military provocations by North Korea would “be met with fire and fury like the world has never seen. [Kim Jong-un] has been very threatening beyond a normal state, and, as I said, they will be met with fire, fury and, frankly, power, the likes of which this world has never seen before.”

But Pyongyang appeared undeterred.

A Korean People’s Army (KPA) spokesman, in a statement carried by state-run KCNA news agency hours after Trump’s comments were reported, said the plan to attack Guam would be put into practice at any moment once leader Kim Jong-un made a decision.

In another statement citing a different military spokesman, North Korea also accused the United States of devising a “preventive war” and said any plans to execute this would be met with an “all-out war wiping out all the strongholds of enemies, including the US mainland”.

Trump on Wednesday followed up his warning to North Korea with a statement on the strength of the American nuclear arsenal, and an expression of hope that it would not need to be used.

“My first order as President was to renovate and modernize our nuclear arsenal. It is now far stronger and more powerful than ever before,” he wrote on Twitter. “Hopefully we will never have to use this power, but there will never be a time that we are not the most powerful nation in the world!”

Earlier, US Secretary of State Rex Tillerson said that Trump was trying to send a strong message to North Korea when he said it would face “fire and fury” if it threatened the United States.

Speaking to reporters before landing in Guam, Tillerson said North Korea’s rhetoric had ratcheted up in the face of international opposition to its nuclear programme.

“So I think the president, what the president is doing is sending a strong message to North Korea in language that Kim Jong-un would understand, because he doesn’t seem to understand diplomatic language,” Tillerson said.

Separately on Wednesday, a Canadian pastor serving a life sentence with hard labour in North Korea was released on medical parole as a humanitarian gesture, the official KCNA news agency said.

Hyeon Soo-lim, 61, was freed on “sick bail”, the agency announced after a Canadian government delegation arrived in Pyongyang to discuss the case. A court ordered Lim’s release “from the humanitarian viewpoint”, it said in a brief two-paragraph report.

Lim was arrested in 2015 for allegedly meddling in North Korean state affairs. The South Korean-born pastor had been accused of subversive acts against Pyongyang, an allegation which Canadian authorities strongly denied.

Tension over North Korea’s nuclear capability had already risen to new heights after the United Nations Security Council unanimously passed a resolution over the weekend to expand sanctions aimed at cutting North Korea’s ability to fund its nuclear weapons programme.

The new resolution prohibits UN member states from buying coal, iron ore, and other key commodities from North Korea, a move that’s meant to cut the country’s export revenue by US\$1 billion annually, according to the Security Council members.

Few expect the Security Council’s united front to halt further progress by North Korea in its weapons programme.

The sanctions “would narrow the prospects for the programme, but I don’t think they would eliminate it”, Snyder said. “I have my doubts about the will and capacity of China to implement the sanctions fully, primarily because there will always be shadowy businesspeople willing to be paid for the enhanced risk that they’d be taking by trying to evade the enforcement regime.”

Richard Bush, director for East Asia policy studies at the Washington-based Brookings Institution, agreed that sanctions won’t completely halt North Korea’s nuclear ambitions, even with China’s government more engaged, because the weapons programme is Pyongyang’s highest priority.

However, Bush held out the possibility that China might be willing to cooperate more closely with the US, South Korea and Japan.

North Korea’s nuclear weapons capacity “affects China’s security as much as it does anyone else’s”, Bush said.

“There’s a crying need for more communication between the US and the Chinese on this. As the national security threat grows, the potential grows that China will see the need to communicate and coordinate more closely.”

Whatever the response, both analysts expect more provocation by North Korea if the US intelligence turns out to be true.

“North Korea’s main mechanism for shaping the environment is to continue to test,” Snyder said. “The problem is that it’s going to be more emboldened by the idea that they’re closer to their objectives and that they can induce US acquiescence to the idea of a nuclear North Korea.”

“What we should be most concerned about isn’t the day they get the capability” to hit US cities with nuclear missiles, said Bush. “It’s more the day they use it to destabilise the situation on the Korean Peninsula through conventional means and psychological means.”

Bush cited a possible artillery barrage against a South Korean island as an example.

“They’ve done that before, but they’ll be emboldened to be more reckless.”

<http://www.scmp.com/news/china/diplomacy-defence/article/2106007/trump-vows-meet-north-korea-withfire-and-fury-if>

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Financial Express (Uttar Pradesh, India)

## **China 'Gifted' 50 Kilogram of Uranium to Help Pakistan Make Nuclear Bombs Against India: Know About the Dreaded Chapter of History**

Author Not Attributed

August 9, 2017

*Sikkim standoff: As China tries to push India into a war in Sikkim sector, we take a look at how Beijing helped Pakistan's nuclear programme.*

China's sinister designs against India has been talked about for decades since 1962. As the Communist country, once again tries to push India into a war in Sikkim sector, we take a look at how Beijing helped Pakistan's nuclear programme, despite being one of the permanent members of the United Nations and publicly committed to non-proliferation. On November 13, 2009, the Washington Post published shocking accounts written by Abdul Qadeer Khan, father of Pakistan's nuclear weapons programme.

According to the Post, Khan wrote that China provided 50 kilogram of bomb-grade uranium, which was enough for two atom bombs, to Pakistan in mid-1982. Khan narrated the entire story of sinister China-Pakistan nuclear cooperation, which started right after India tested its first nuclear bomb in 1974.

The terms of nuclear agreement between the two countries were set in mid-1976. India's test in 1974 had "provoked" Khan, who was then working as a metallurgist at a Dutch centrifuge manufacturer, to offer his services to then Pakistan premier Zulfikar Ali Bhutto. After arriving in Pakistan, Khan worked out the details along with two officials – including former secretary Agha Shahi – before visiting Beijing to attend Mao's funeral in 1976.

In China, Khan held talks with three top Chinese nuclear weapons officials and shared his knowledge about European-designed centrifuges, that could "aid China's lagging uranium-enrichment program." According to Khan, Pakistani officials helped China set up a centrifuge plant at Hanzhong in central China. For this Pakistan had sent "135 C-130 plane loads of machines, inverters, valves, flow meters, pressure gauges." The Pakistan team stayed in Hanzhong for three weeks to complete their task. In return for the help, China sent to Pakistan "15 ton of uranium hexafluoride (UF<sub>6</sub>), a feedstock for Pakistan's centrifuges that Khan's colleagues were having difficulty producing on their own."

According to Khan, the uranium hexafluoride gas helped Pakistan to start producing bomb-grade Uranium in 1982. Chinese scientists also helped Islamabad in solving "other nuclear weapons challenges". However, as Pakistanis' competence grew, Islamabad started to fear of a preemptive strike on its key nuclear sites by India or Israel.

In 1982, the then Pakistani military ruler Mohammad Zia ul-Haq talked to Khan about the fears of possible Indian or Israeli strike. Haq sent Khan and a Pakistani military general to Beijing "with a request in mid-1982 to borrow enough bomb-grade uranium for a few weapons." The then Chinese leader Deng Xiaoping okayed Pakistan's request.

"After winning Chinese leader Deng Xiaoping's approval, Khan, the general and two others flew aboard a Pakistani C-130 to Urumqi. Khan says they enjoyed barbecued lamb while waiting for the Chinese military to pack the small uranium bricks into lead-lined boxes, 10 single-kilogram ingots to a box, for the flight to Islamabad, Pakistan's capital," the Washington Post reported in 2009.

Interestingly, Pakistan kept the Chinese material in storage until 1985. By that time, they had developed some nuclear weapons on their own. In the same year, Khan got Zia's approval to ask if the Chinese wanted their material back. However, the Chinese responded to Pakistan that the nuclear material be considered "as a gift... in gratitude for Pakistani help".

Throughout the period, the US was aware of the Chinese-Pakistani collaboration and also of the fact that Beijing and Islamabad were "worried about India", according to the post.

Khan is believed to have passed of nuclear weapons know how to many states including Iran and Libya.

<http://www.financialexpress.com/india-news/china-gifted-50-kilogram-of-uranium-to-help-pakistan-make-nuclear-bomb-against-india-know-about-the-dreaded-chapter-of-history/800966/>

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## EUROPE/RUSSIA

Financial Tribune (Tehran, Iran)

### US Push for Scrapping Nuclear Treaty With Russia

Author Not Attributed

August 8, 2017

As media reported that Congress is preparing several bills, the provisions of which would require the Pentagon to violate the 1987 Intermediate-Range Nuclear Forces Treaty between the United States and Russia.

According to Politico, the US Senate will soon debate a provision in its version of the defense policy bill, which would set aside \$65 million and also require the military to reintroduce a missile with a range of between 500 and 5,500 kilometers, Sputnik reported. The bill in the House of Representatives will point out that while the new missiles would be conventional, they, along with nuclear missiles, would still be considered banned under the nuclear disarmament agreement.

According to analyst Ilya Kharlamov, the agreement marked the first real disarmament step by the two powers and contributed a lot to global stability and security.

<https://financialtribune.com/articles/international/69921/us-push-for-scrapping-nuclear-treaty-with-russia>

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Newsweek (New York, NY)

### Russia to Improve Nuclear Protection Force by Adding New Robots to Deal With Future Threats

By Tom O'Connor

August 7, 2017

A special military unit designed to help defend Russia from the effects of weapons of mass destruction is set to receive a new robotic overhaul, according to the force's commander.

Major-General Igor Kirillov told local media Monday that Russia's Radiation, Chemical and Biological Protection Troops would soon be equipped with the latest generation of robots capable of operating in environments too deadly for their human comrades. The force already uses militarized, mechanical cleanup crews designed to decontaminate sites poisoned by accident or by enemy action; the latest planned deployment is set to help Russia deal with contemporary chemical, nuclear and biological threats.

"By 2020, the emergency units whose task is to eliminate the effects of accidents at hazardous facilities will be equipped with new-generation robots," Kirillov said, according to the state-run Tass Russian News Agency.

"The robots currently available to Russia's armed forces are capable of coping with the whole range of tasks by and large, but they already fail to meet the requirements posed to robots of the future," Kirillov said.

Russia's Radiation, Chemical and Biological Protection Troops were first introduced as the Chemical Warfare Troops under the Soviet Union. In 1977, NATO estimated that each Soviet regiment was fitted with one chemical company, according to The New York Times, and the U.S. Army estimated the branch's numbers at between 70,000 and 100,000 in 1984. The force was doubled in 1996 and operates as an independent branch supporting the entire Russian military, though mostly ground forces, according to a report by the Federation of American Scientists.

The Chemical Warfare Troops worked in the aftermath of the Chernobyl nuclear power plant incident in Ukraine. Considered the worst nuclear incident in history, the 1986 meltdown killed dozens of people, affected hundreds of thousands more and cost hundreds of millions of dollars. Much of the site remains restricted to the public, and the disaster inspired the military to develop remote-controlled robots capable of entering such hazardous environments.

One of the current models, the RD-RHR, was commissioned in 2005. It stands a little over two feet tall, weighs about 441 pounds and can travel up to 2.3 miles per hour on difficult terrain using tracks.

Russia's military is seeking to trump its U.S. and Chinese competitors by pursuing a number of robotic, weaponized projects. In April, Russia showcased its Final Experimental Demonstration Object Research (FEDOR), a high-tech robot designed to drive cars, operate tools and wield two pistols at the same time. Andrey Grigoriev, director of Russia's Advanced Research Fund, said FEDOR would "replace humans in high-risk areas," and Moscow announced plans to send it to space in 2021.

Russia has also joined the U.S. and China in developing railguns, intelligent swarms of drones and missiles that utilize artificial intelligence to perform complex maneuvers and dodge defense systems

<http://www.newsweek.com/russia-improve-nuclear-protection-force-new-robots-threats-future-647500>

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The Diplomat (Tokyo, Japan)

## **Russia: Strategic Bomber Upgrade ‘Top Priority’**

By Franz-Stefan Gady

August 8, 2017

*Russia’s Ministry of Defense continues to emphasize the upgrade of its strategic bomber force.*

The Russian Ministry of Defense will continue to prioritize upgrading its strategic bomber force, Russian Defense Minister Sergei Shoigu said during a conference call with reporters on August 4, TASS news agency reports.

“We’ll continue discussing today how tasks are being solved to develop the fleet of Tu-160 and Tu-95MS strategic bombers. These planes are an important component of the country’s nuclear potential,” the defense minister said.

“That is why extending the service life of the missile carriers and raising their combat efficiency are among our priority tasks,” Shoigu added. “Now the public joint-stock company Tupolev is carrying out modernization of the planes jointly with other industrial enterprises and also repairing aviation engines, onboard equipment and reproducing new units and assemblies.”

The Tu-160 supersonic strategic bomber is an upgraded version of the older Tu-160 heavy strategic bomber, which in 1987 became the last strategic bomber to enter service prior to the collapse of the Soviet Union. The Russian Air Force currently operates 16 Tu-160s. However, around 50 percent are not airworthy and remain grounded.

In 2015, Russian President Vladimir Putin announced his intention to upgrade Russia’s fleet of Tu-160s due to delays in the next-generation strategic stealth bomber project, dubbed PAK DA (an acronym for “Prospective Aviation Complex for Long-Range Aviation”).

The upgraded Tu-160s, dubbed Tu-160M2s, will reportedly be an entire new aircraft aside from the airframe, according to Russian defense officials. As I explained previously:

The bomber will presumably be fitted with new avionics, sensors, displays, and communications systems, as well as new operating software, although Russia has not revealed any specific details about the upgrades save for the aircraft’s engines.

Given the bomber’s limited stealth capability, it will presumably be armed with long-range standoff cruise missiles such as the Kh-101/Kh-102 (nuclear variant) air-launched cruise missile with an estimated range of 2,700 to 5,000 kilometers. The Tu-160M2 will likely carry the missiles internally on a rotary launcher.

Russia intends to induct up to up to 50 new Tu-160M2s at a rate of three aircraft per year beginning in 2020.

The Tupolev Tu-95MS is an improved variant of the older Soviet-era Tu-95, which first entered service in 1956. The four-engine, long-range, turboprop, strategic bomber can be armed with a wide range of weapons including stand-off cruise missiles. Russia plans to field 20 Tu-95MSs by the end of 2016. The upgraded aircraft, along with the Tu-22M3 long-range bomber, will form the core of a new Russian heavy bomber division in Russia’s Far East to conduct patrol Pacific Ocean inside the Japan-Hawaii-Guam triangle.

<http://thediplomat.com/2017/08/russia-strategic-bomber-upgrade-top-priority/>

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Sputnik News (Moscow, Russia)

## **US-Russia INF Treaty Dispute Promotes 'Irrational Competition' - Advocacy Group**

Author Not Attributed

August 4, 2017

*Accusations of Russia over alleged violation of the 1987 Intermediate Range Nuclear Missile Treaty (INF) and the US' quest to research and develop aircraft and ship borne mid-range missiles are immaterial to the fact that more nuclear weapons are perfected by each side, Global Security Institute President Jonathan Granoff told Sputnik.*

On Wednesday, Politico reported that the US Congress is preparing several defense bills, the provisions of which would require the Department of Defense to violate the 1987 treaty through development of medium-range missiles banned under the accord. The Kremlin commented on the reports by saying that Moscow remains committed to its INF Treaty obligations.

"Regardless of whether Russia violated the INF Treaty or whether the US legislation will lead to further impairment of the nonproliferation regime, any further developments of nuclear weapons exemplifies a universal principle: the more nuclear weapons are perfected the less security is obtained," Granoff said on Friday. "Nuclear weapons ventures bring irrational competition rather than stability."

Reason for Concern: Why US-Russia INF Treaty Dispute Goes 'Against Europe's Interests'

Granoff explained that more nuclear weapons or more modern nuclear weapons both bring less security and that "an arms race is the wrong bus." He noted there are more pressing issues for the United States and Russia to address.

"We need to identify our shared interests and begin cooperating on protecting the climate, ending poverty, and ensuring sustainable global economic development," Granoff said.

Granoff is also a senior advisor to the Nobel Peace Laureate Summit and served as Vice President and United Nations Representative of the Lawyer's Alliance for World Security.

The United States announced an initiative on revising the INF Treaty for the first time in February in order to stop alleged Russian violations of the agreement. The Intermediate-Range Forces Treaty Preservation Act was proposed by Republican Senators Tom Cotton, Ron Johnson and Marco Rubio and supported by Republican members of the House of Representatives Ted Poe and Mike Rogers, who introduced the bill to the lower chamber.

The Russian Foreign Ministry has repeatedly expressed concern over the use of unsupported facts by the United States as a pretext for possible restrictive measures against Russia.

Russian Foreign Minister Sergei Lavrov has repeatedly said that the Russian leadership had reaffirmed its commitment to the INF Treaty, and that Moscow has never violated the agreement. The minister pointed out that Washington had not provided any data that can be verified, adding that Russia had serious questions concerning US compliance with the INF Treaty.

The INF Treaty, signed in 1987, significantly reduced the arsenal of non-strategic missiles available to the United States and Russia by prohibiting all nuclear and conventional missiles and their launchers with range between 310 and 3,420 miles. The United States and Russia have repeatedly accused each other of violating the INF treaty.

<https://sputniknews.com/politics/201708041056195099-russia-us-inf-treaty/>

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## MIDDLE EAST

Chemistry World (London, UK)

### **The Return of Chemical Weapons?**

By Maria Burke

August 7, 2017

*Recent events in Syria have raised questions over the control of chemical weapons*

Civilians in Syria were exposed to the nerve agent sarin in April, the Organisation for the Prohibition of Chemical Weapons (OPCW) confirmed at the end of June. This was the second documented use of sarin in Syria, and follows cases of chlorine and mustard gas being used as weapons. So can the world expect to see more chemical warfare?

‘There is a lot of concern within the OPCW,’ says Alastair Hay, professor of environmental toxicology at the University of Leeds, UK. ‘If the Chemical Weapons Convention (CWC) can’t be upheld, and perpetrators held accountable, then that is a problem.’

Syria crossed President Obama’s ‘red line’ in 2013 when it used chemical weapons in Ghouta, and, although the threatened US retaliation did not happen, the result was that Syria reluctantly joined the CWC. Hay doesn’t think that Syria will use chemical weapons again, because it will be wary of triggering further US missile attacks following those ordered by President Trump in response to the April attack. ‘The gains are marginal, while the outcry is huge,’ he says.

Tim Eaton, research fellow with the Middle East and North Africa Programme at Chatham House, agrees that Trump’s military response will make Syria hesitate before using chemical weapons again. ‘Now Trump has threatened heavy retaliation if they use sarin again. This is the first time that the Assad regime has been punished materially for human rights abuses in this conflict.’

However, security consultant Dan Kaszeta believes Syria will use chemical weapons again, eventually. ‘Trump is a roulette wheel, the least predictable leader on the world stage at the moment, and so he has no deterrent value.’

Weapons expert Richard Guthrie also worries that there are significant implications if no one is held to account for the use of sarin in Syria. ‘As it stands today, one lesson of Syria that could be drawn by other dictatorships is that a chemical weapons programme may buy you time within a civil war. If fear of being deposed, or getting caught and brought to trial, are the major disincentives to using chemical weapons, then the Syria case has illustrated neither of them.’

#### Chemical terrorism

Another security threat, says Eaton, is the potential of ‘non-state actors’, such as terrorist organisations, to obtain chemical weapons technology, particularly in ungoverned or contested areas. ‘This is seen as a greater threat than a state using chemical weapons.’

Hay agrees that there are indications that some terrorist organisations are considering using chemical weapons, but so far there is only one instance verified by the OPCW which was ISIS using mustard gas.

While the threat of countries using chemical weapons has diminished, 'chemical terrorism is no longer a theoretical proposition or even imminent threat, but a stark reality', says OPCW Director General Ahmet Üzümcü. The OPCW describes various scenarios for chemical terrorism including non-state actors acquiring chemical weapons through the black market, illicit trade or theft; acquiring or producing chemical agents then deploying them with improvised devices; finding ways to disperse industrial chemicals, or contaminating the food chain, for example with ricin.

The organisation notes terrorists still need to overcome the challenges of producing chemical agents, which involves having the right expertise, equipment and facilities, and sufficient funds. The least scientifically demanding scenario involves the use of industrial toxic chemicals, such as chlorine, which is widely available on the commercial market in large quantities and is relatively easy to disperse.

Hay agrees that, in terms of making new weapons, such as nerve agents, there are several barriers. Turning them into weapons requires expertise that is not widely available outside the military. While chlorine is easier to obtain, non-state actors are limited by their lack of aircraft or weaponry with which to deliver it as a weapon. What's more, it would be hard for them to get hold of sufficient quantities to have an effect. The OPCW has destroyed almost 95% of global stockpiles, and is working with the chemical industry to secure and police their stocks. Hay believes access to major stocks is now reasonably well controlled.

For *Kaszeta*, the main reasons that both states and non-state actors are unlikely to use chemical weapons in future are because they are impractical, unaffordable and ineffective. 'To make one ton of nerve agent you need 9-10t of precursors – which OPCW control – and then you're left with 8t of toxic waste. You need a testing and evaluation programme, and military-trained personnel ... Chemical weapons are obsolete for a reason. The message should be: they just aren't worth the bother.'

But Guthrie is not so positive. He highlights four key risks and threats around future chemical weapon use: governments outside of the CWC possessing weapons (Egypt, Israel, North Korea and South Sudan are all non-signatories); national controls on relevant materials and technologies varying between countries; 'lack of capacity' to attribute attacks to the perpetrators; and a complacency that international conventions will deal with problems.

But perhaps the greatest political challenge, he says, is maintaining political focus. '[Syria's sarin attacks] brought a huge amount of political attention, but most of this has faded now.

'The challenge of preventing the use of [chemical weapons] will go on for longer than the lifetime of individual governments.'

<https://www.chemistryworld.com/news/the-return-of-chemical-weapons/3007822.article>

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Al Arabiya (Dubai, UAE)

## **ANALYSIS: Iran's Quest for Nuclear Weapons and Regional Domination**

By Tony Duheume

August 4, 2017

Besides their policing duties within Iran's borders, the Iranian Revolutionary Guard Corps (IRGC) was put in charge of the country's clandestine nuclear program in the 1980s, taking full charge of

the regime's quest for nuclear weapons. With its hard-line commanders determined to lead the most powerful army in the Middle East, it needed sophisticated weapon systems to achieve this, and nuclear weapons soon became an obsession.

The full achievements made in the construction of these devices, will never be allowed to come to light, until those weapons are ready to be unveiled to the world; although, throughout the years, much intelligence has come to light to show the IRGC are well on course to achieving their goal.

With nationalistic fervour having always been at the forefront of the Guards revolutionary goals, they would never give up the quest for such a weapon. They feel that by possessing such an arsenal of weapons, they could steer Iran toward full control of the Middle East, as well as a handy tool for warding off an attack from the US or Israel, who would fear the catastrophic retaliation from Iran over such an attack.

With the Guards in total control of the procurement of weapons of mass destruction, they have supervised the construction of a vast network of underground facilities across Iran. The Iranian regime has claimed for decades that their nuclear program will be used to produce isotopes for medical purposes, and not to pursue a bomb. But with a vast amount of intelligence to prove otherwise, with all evidence pointing to a nuclear weapons program, it has to be assumed that Iranian boffins have been working on such weapons since the early days of Khomeini setting up the Islamic Republic of Iran.

#### Substantial documentation

There is substantial documentation to show that the Iranian regime has been for many years seeking equipment and expertise with which to build a nuclear device. Over the years, vast amounts of intelligence have come from many sources when it comes to Iran's nuclear program.

In 2005, it came to light through the National Council of Resistance of Iran (NCRI), how Iran was in possession of quantities of polonium-210 and beryllium, plus the know-how to make a "neutron generator" that is needed to trigger a fission chain reaction, all key elements that are essential in the construction of a nuclear weapon.

With so much secrecy behind its nuclear program, plus the fact that underground nuclear facilities have been uncovered by the Iranian opposition group the MEK, and indisputable evidence that the Iranians have been building nuclear capable missiles, which they have been testing in recent months, this all seems to point toward the regime seeking a full nuclear capability for its military forces, and they could reach their goal in the very near future.

#### The deal

So as far as International Atomic Energy Agency (IAEA) policing its nuclear program as part of the Iran Deal is concerned, with the Iranian regime refusing the IAEA full access to secret bunkers such as Parchin, and its nuclear program just stalled and not dismantled, the agreement isn't worth the paper it is printed on.

At the time of the Iran Deal, it was strongly believed that Iran's nuclear weapon was close to completion, with already an arsenal of missiles capable of carrying them stored in underground bunkers ready to launch, many aimed at the Gulf states, and American military facilities in the area.

But such were the derisory sanctions placed against the regime by the West, headed by the Obama administration; Iran's nuclear program has in effect only been suspended, which makes it possible for its boffins to restart it at any time. So, with Iran having received continued assistance from North Korea, a country that already has a functional nuclear device, as well as the capability to fit one to a missile, the scenario of full cooperation becomes ever scarier.

#### Defense systems

Also, through the millions of dollars handed back to Iran, the regime has strengthened both its internal defenses through the application of new air defense systems, as well as updating arms and equipment for its armed forces, making it a much bigger threat to its neighbors than ever before. As well as this, the amount of money it has had returned through the Iran Deal, has helped tremendously in bankrolling its military campaigns in Iraq, Syria and Yemen.

So, by participating in this new game of diplomacy, which it has been playing very well, Iran's clerical leadership is planning to be in the nuclear deceit game for the long haul. If they can keep the West playing along with them, the mullahs will be able to build up Iran's inner security, and with its new strengthened military, it will have the ability to repel both internal dissent, and any outside invader, showing its neighbours that it is a country to be both feared and reckoned with.

Then no sooner is its economy booming, with its armed forces the most sophisticated in the Middle East, and its air defences second to none, the regime will finish building its long sought after nuclear weapon. Having reached the stage where it feels no outside force can stop it, the true belligerence of its leadership will take over, and their long sought after nuke will be revealed to the world.

But at least, now that Donald Trump is in charge of the White House, fresh sanctions have been put in place; but only time will tell how far the new president will go in confronting Iran, and in what form this confrontation will take.

<http://english.alarabiya.net/en/perspective/features/2017/08/04/ANALYSIS-Iran-s-quest-for-nuclear-weapons-and-regional-domination.html>

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The Algemeiner (Brooklyn, NY)

## **Is Iran Using Nuclear Deal Sanctions Relief to Fund Terrorism?**

By Ariel Ben Solomon

August 9, 2017

As the Trump administration considers its options regarding Iran, how much of Iran's sanctions relief from the 2015 nuclear deal is funding Tehran's support for sectarian conflict and terrorism across the Middle East?

Last week, President Donald Trump imposed new sanctions against Iran over its ballistic missile program and its human rights violations. The sanctions come amid Iran's reported efforts to fuel the Temple Mount crisis, and its agreement to bolster relations with Hamas.

Iran and its terror proxy Hezbollah also continue to back President Bashar al-Assad's regime in the Syrian civil war, although Russia's military support for Assad is far more important for Iran's involvement there than the sanctions relief that Tehran obtained in the nuclear deal.

"I think what has been crucial for the expansion of Iran's role in Syria, more than anything, has been the air support [Assad] has received from Russian President Vladimir Putin," said Meir Javedanfar, a lecturer on Iranian politics at Israel's IDC Herzliya research college.

Javedanfar estimates that, so far, Iran has received less than \$20 billion of the \$150 billion in sanctions relief that it secured in the nuclear deal. Even if all of the sanctions relief money had been released immediately, he said, it "wouldn't have been enough to save Syria."

While the released funds have aided the Iranian regime, Javedanfar said that President Hassan Rouhani's government is plagued by around \$100 billion in debt carried over from former President Mahmoud Ahmadinejad's tenure. The new sanctions leveled by the Trump

administration will hamper Rouhani's ability to attract foreign investment, but hardline entities such as Iran's Islamic Revolutionary Guard Corps (IRGC) "will be happy since less economic growth will give them more ammunition against the government," he said.

"The IRGC is responsible for these additional sanctions that were imposed," Javedanfar said. The sanctions were levied after Iran fired a ballistic missile with a banner calling for Israel's destruction. Javedanfar added: "The real intention of this launch, in practice, was to target Rouhani's economic achievements."

Behnam Ben Taleblu, a senior Iran analyst at the Foundation for Defense of Democracies in Washington, said that it remains unclear how much of Iran's sanctions relief funds have been diverted to causes such as Palestinian terrorism. But he said that "sanctions relief coupled with the campaign to 'normalize' Iran has enabled its fighters, money and weapons to go largely unchecked throughout the region."

The Trump administration's new sanctions are part of "a desperately needed strategy, since for over a decade, Iran's regional ambitions and military programs took a back seat to the nuclear issue," Taleblu said.

Ronen A. Cohen, an Iran expert and the chair of the Department of Middle East Studies at Israel's Ariel University, said that "Iran will promote terror with or without the sanctions." Cohen added that since 2015, Iran has spent less on regional terrorism due to Rouhani's strategy to strengthen the Iranian economy through trade.

"Iran has a pragmatic strategy in the Middle East, and will invest money only where it gains something in return, irrespective of sanctions," Cohen said.

Last week, Israel Hayom quoted a Palestinian Authority security official as claiming that Iran invested "millions of shekels" to inflame the tensions surrounding the Temple Mount. According to the report, tens of thousands of Muslim protesters received prepackaged meals along with notes citing a quote attributed to 1979 Iranian Revolution leader Ayatollah Ruhollah Khomeini: "With the help of Allah, Palestine will be liberated! Jerusalem is ours."

Iranian Foreign Minister Mohammad Javad Zarif expressed his country's support for the Palestinians amid the Temple Mount tensions, and more recently, Hamas said on August 7 that it has reached an agreement to improve relations with Iran.

Taleblu said that Iran's Shiite regime "uses the Palestinian issue to drive a wedge between the Arab world and Israel, as well as to mask ... ethno-sectarian differences with its Sunni Arab neighbors, and bolster its Islamist standing in the region."

Iran has championed the Palestinian cause since its inception, and an Israeli-Palestinian peace deal "would rob Tehran of that card and render naked its regional aspirations," said Taleblu.

"Iran's longstanding provision of money and weapons to Palestinian terror groups tells you one thing: Iran has more to gain from perpetual conflict in the Levant and eastern Mediterranean than peace," he said.

IDC Herzliya's Javedanfar said that he has seen no real evidence that Iran was behind the recent tensions in Jerusalem. Rather, he said, Iran exaggerated its role in the Temple Mount crisis since "it feels isolated in the region because of its support for Syrian President Bashar Assad and his atrocities against Sunni Muslims."

Iran's claims regarding the Temple Mount, Javedanfar said, show "how desperate the Iranian regime has become."

<https://www.algemeiner.com/2017/08/09/is-iran-using-nuclear-deal-sanctions-relief-to-fund-terrorism/>

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Mondoweiss (Detroit, MI)

## **Israel Would Use Nuclear Weapons to Keep Refugees From Returning — Noam Chomsky**

By Philip Weiss

August 8, 2017

In April, Noam Chomsky spoke at length on his opposition to the BDS (Boycott, Divestment and Sanctions) campaign and said that advocating for the right of Palestinian refugees to return to their homes in Israel is “not a... moral position.”

BDS campaigners create false hope because return will never happen, Chomsky said; Israel would use nuclear weapons to prevent the return of the Palestinian refugees, if it came to it:

“If there ever were serious support [for the right of return], Israel would go all out– using nuclear weapons, anything else– to prevent it. So it’s not going to happen.”

We are continually told that Iran and North Korea cannot be trusted with the bomb. What does it say about Israeli leadership and political beliefs that the most prominent leftwing scholar in the U.S. says they would deploy nuclear weapons to defy global pressure re return of refugees?

Chomsky was interviewed last April by Doug Richardson, the executive director of the American Association of Geographers, after the AAG gave Chomsky an award. I’ve transcribed his comments in full below because Chomsky is a legendary leader in leftwing thought; and his position has been at odds with the Palestinian solidarity movement.

Richardson brought up BDS (minute 50). “You were quoted in the Chronicle of Higher Education recently, noting that you had come out against the BDS, Boycott, Divestiture, and Sanctions, arguing that failed initiatives, which is how you characterized much of the BDS movement, harm the victims doubly, by ‘shifting attention away from their plight to other issues, such as anti-Semitism and academic freedom, and by wasting opportunities to do something meaningful.’”

Richardson asked Chomsky to elaborate. Chomsky said:

In mentioning boycotts, we shouldn’t overlook the fact that, again, as you all know, there is a boycott movement right here of distinguished geographers who have called for a boycott of the American Geographical Association in protest against the kind of regulations and procedures that the Trump administration is instituting. The case of the Syrian, actually British writer of Syrian origin who I mentioned before is an indication of what’s happening. That’s an issue to certainly be thought about. How should professional societies react to this sort of thing. For example, should professional society meetings take place in the United States.

It’s a serious question. Should they take place in a country where people from designated countries, designated by the authorities, are not allowed to come freely? The Latin American Studies Association years ago began to have conferences elsewhere because of the restrictions against Cuban scholars. I think those are all things to be thought about.

Now the BDS movement is a different matter. First of all, we have to make a distinction between the BDS tactics and the BDS movement. They happen to be quite different things. So, BDS tactics in the



Israel Palestine case, were actually initiated in 1997 by an Israeli group, Gush Shalom, Uri Avnery's group, a strongly anti-occupation, militantly anti-occupation group played a very significant role, still do. They proposed boycott of the settlements and divestment from anything involving the settlements. And I myself have been involved in– it's really BDS activities, there are no real sanctions, that's a state matter. But I've been involved in these things since the late '90s, when it took off, aimed at the settlements.

Now here questions arise. The BDS movement, which developed in 2005, has a different approach. That's the movement, not the tactics. Their approach calls for– if you read the list of principles, there is a set of principles, if you take it literally, they're calling for boycott of Israel, divestment from Israel, and sanctions on Israel until, and then comes a long list of conditions, some of which everyone knows are totally unrealizable. Like one of the conditions that's listed in this almost-catechism is return of the refugees, in accord with international law. Well, first of all, it's not in accord with international law, that's a separate question. But return of the refugees. You can think whatever you like about the morality of that, but everyone knows it is not going to happen. There's no international support for it. If there ever were serious support, Israel would go all out– using nuclear weapons, anything else– to prevent it. So it's not going to happen. And dangling this hope in front of people living in miserable refugee camps in Lebanon and Jordan is not a good idea or a moral position in my view...

BDS is not a principle, it's a tactic. Just as it was in the case of South Africa, it's a tactic. Now tactics have to be designed so that they're going to have favorable effects for the victims. Tactics aren't designed so that the person who undertakes them can feel good, that's not a way to design tactics. At least if you have ethical imperatives, you ask yourself, What's the impact on the victims? And if you take a look, there's a record of significant success, very significant success, of really BDS tactics aimed at the settlements. Say the Presbyterian church, for example, big organization– has taken a very strong stand on divestment and boycott of anything having anything to do with the settlements and, crucially, they aim also at US institutions, US multinationals that are involved in the occupied territories. That's very significant, both for educational reasons and tactical reasons. And that's been a big success, and there are other successes like that. And I think those are very good, sensible tactics. The European Union has taken some steps in that direction. The human rights groups, like Human Rights Watch and Amnesty International have advocated similar things. All of that makes a lot of sense I think in principle, and it's tactically effective, and it should go way beyond–

If there's ever going to be any significant progress in Palestinian rights, it's going to require a major change in the United States. As long as the United States continues, as it has been doing for decades, to provide economic, diplomatic, military, even ideological support for the settlement projects, they're not going to end. They may use different words, but they're not going to end, they're going to continue.

And the U.S. does not have to do that, American citizens can prevent that. In fact, one critical tactic that I think ought to be pursued, I've been advocating this for years, is simply imposing American law. American law, the so called Leahy amendment, bans any military aid to any military unit or group that is involved in systematic human rights violations. Well, I don't have to go through the record, but anyone who's looked at the wars in Gaza and what goes on in the West Bank, and Lebanon as well, has no doubt that the Israeli army has been engaged in systematic human rights violations. So therefore by American law we ought to cancel military aid to them. Even a move in that direction could have significant implications, very significant. It's a little bit like the [Bernie] Sanders story. Or the press [rise of alternative media].

There are plenty of things we can do if you think them through, ask what the consequences are, what the possibilities and opportunities are, and then pursue them, seriously. Not because

something makes you feel good, but because it's beneficial to the victims. That's the question that should be uppermost, all the time.

Folks on the left will have many responses to this answer. For my part, I'd observe that Chomsky, now 88, exhibited a range of attitudes in the interview from liberal to conservative. For instance, he endorsed a progress narrative of recent American history in celebrating the civil rights movement and the waning of anti-Semitism, and when he lauded the ability of students to read about the real nature of U.S. slavery and the extermination of Native Americans, a history that he said was not taught in the 1960s. "It's now possible... to learn what really happened." We have become a more civilized society as a result, he said.

Chomsky's comments about the role of the military in fostering the internet, and the use of the internet to foster the alternative press, such as Glenn Greenwald and Amy Goodman, was also a progress narrative. And he noted that his own department at MIT was a hotbed of anti-Vietnam War organizing during the 1960s, though it drew much of its funding from the Pentagon (something, I would say, that it is impossible to imagine in the context of the Israel lobby on campus). Chomsky's BDS commentary strikes me as conservative.

<http://mondoweiss.net/2017/08/nuclear-refugees-returning/>

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## INDIA/PAKISTAN

Firstpost (New Delhi, India)

### **'India-Pakistan Nuke War Not a Realistic Possibility', Says Leading Nuclear Expert Ramamurti Rajaraman**

By Rashme Sehgal

August 1, 2017

Ramamurti Rajaraman, Emeritus Professor of Theoretical Physics at Jawaharlal Nehru University, believes that Pakistan's growing nuclear arsenal is a matter of grave concern for India. He points out that the development of their NASR tactical missile, which can be loaded onto trucks and lorries, is especially worrisome.

The co-chair of the International Panel on Fissile Materials and a member of the world scientists permanent panel on Mitigation of Terrorist Acts, Rajaraman elaborates on the alarming nuclear story unfolding across the globe, with special emphasis on the sub-continent.

The conflict between India and Pakistan has intensified in the last three years. If the situation worsens, is there a likelihood that India could launch a pre-emptive first strike against Pakistan if it feared an imminent nuclear strike? Of course, this could mean a marked reversal of our no-first use (NFU) policy. On the other hand, if India goes in for more surgical strikes, can Pakistan use a conventional attack as a pretext to attack India?

The conflict between India and Pakistan during the past three years has been limited to Jammu and Kashmir. These conflicts may continue and may also occasionally intensify. There may also be a lot of heated rhetoric from both sides. But I don't think there is any realistic possibility of those conflicts developing into a full-scale war, let alone one with any serious chances of a nuclear strike by Pakistan.

Notice that there has been no mainland attack by Pakistan based terrorists since the 2008 Mumbai attacks. I feel that this is because Pakistan military and its Inter-Services Intelligence do appreciate the fact that the next time there is an attack of that magnitude, India would have to retaliate in a serious manner.

It is true that the Pakistan Army maintains a hostile posture towards India as a matter of policy. But that is done largely for domestic consumption and for maintaining its pre-eminence in the Pakistani power structure.

If push comes to shove, the leadership in both countries are too responsible to let matters go anywhere near a nuclear threshold. So, there is no question of India conducting a pre-emptive strike on Pakistan in anticipation of a nuclear attack from them.

I don't think India will reverse its NFU policy, even though some analysts, for the want of anything better to write about, keep harping on it. That would be a very unwise thing to do diplomatically.

Pakistan has one of the fastest growing nuclear arsenals in the world. Is it receiving active help from China?

Yes, Pakistan is growing its nuclear arsenal fast. That is thanks to their four plutonium producing reactors at Khushab. The Chinese may have helped in the design and construction of those reactors. I don't know one way or the other. But China is helping Pakistan in building a civilian reactor. That is official.

Pakistan's smaller nuclear weapons, including the NASR missile, are being mounted on trucks and lorries to escape detection by satellite imagery? Could these tactical weapons fall into the hands of terrorists?

Yes, the whole NASR program of Pakistan is fraught with new hazards. It represents a very unwise move which raises the level of nuclear danger in the subcontinent for two reasons. Because NASR is a battlefield nuclear weapon, its command and control are in danger of being less rigorous than those of the other 'normal' weapons.

It is not clear if, in order for it to be effective as a battlefield weapon, the field commander would be given some level of on-the-spot decision making on its launch. This also increases the probability of an accidental or hasty launch. In addition, there is also, as you mention in your question, an increased possibility of terrorists getting hold of it in transit or in the heat of battle.

The recent spate of attacks in Europe has highlighted concern about jihadis endangering nuclear facilities. How serious is this threat?

I expect that the Pakistani warheads are stored deep within their military bases and installations. Even if the jihadis knew where they are stored, I don't think there is much chance of their overcoming the rings of security that must surround the nuclear assets of Pakistan.

It is one thing for terrorists to be able to breach the outer gate of a military base, as they have done once or twice, but an entirely different matter to be able to force their way deeper in and capture the weapons.

How much enriched uranium does Pakistan possess?

According to the latest available information from IPFM (The International Panel on Fissile Materials), the most reliable source I know of, Pakistan had about  $3.1 \pm 0.4$  tons of highly-enriched uranium and is continuing to produce more at its plants in Kahuta and possibly a new one at Gadwal.

Some strategists claim Pakistan has built an arsenal of over 200 nuclear warheads. Is that correct?

I don't know which strategists said that, but I doubt it.

How serious is the nuclear threat from China?

The Chinese do make border incursions periodically and are generally aggressive towards India in a lot of ways. We have also had a war with them in 1962. There are reports that some of their intermediate range missiles are pointed towards India. Despite all this, I don't think that there is any real danger of a nuclear threat from China, as things stand now.

It is unlikely that China would attempt anything remotely like that. After all, we also have nuclear weapons and are improving our ability to deliver them on to China. They are unlikely to go beyond constant pinpricks to a regular war, let alone one involving nuclear weapons.

India embarked on its biggest expansion of nuclear capability with the government clearing the construction of ten new nuclear power plants, each with a capability of 700 MW. At present, we have 22 operating nuclear reactors. How many of these can be used for military purposes?

As far as I know, they will be part of the "civilian sector" – in the language of the India-United States nuclear deal. But the deal also allows India to have a military sector which it will not be safeguarded and India is free to decide to place some of the new reactors in the military sector.

Our record of the functioning of nuclear plants can hardly be described as satisfactory. Official records confirm that the Kudankulam facility is functioning at 20 percent capacity.

Yes, the Kudankulam Unit-I has had problems and had to be shut down longer than expected. But such teething problems can arise in the first year of operation. They don't necessarily indicate a permanent problem with the reactor. As far as Kudankulam Unit-II is concerned, it is too early to judge its quality. These Kudankulam reactors are prestige symbols of India-Russian cooperation and I am sure that both sides will try to ensure that these reactors function well.

There is no transparency about the leaks that developed in the Kakrapar plant in Gujarat. Is being opaque a deliberate part of government policy? What is the situation like in Pakistan as far as providing information about their civilian nuclear facilities?

Yes, it is true that our nuclear agency is not famous for its transparency. That is true of some other countries too. The Fukushima reactor tragedy exposed similar problems with the Japanese nuclear establishment. The French have had serious problems with their famous nuclear agency, Areva. I would imagine that the Pakistan nuclear energy establishment is even more opaque than ours.

<http://www.firstpost.com/india/india-pakistan-nuke-war-not-a-realistic-possibility-says-leading-nuclear-expert-ramamurti-rajaraman-3880145.html>

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Hindustan Times (New Delhi, India)

## **Pakistan says not bound by treaty on prohibition of nuclear weapons**

Author Not Attributed

August 7, 2017

*Over 120 countries in the United Nations voted to adopt the first-ever global treaty to ban nuclear weapons. None of the nine countries that possess nuclear weapons — the United States, Russia, Britain, China, France, India, Pakistan, North Korea and Israel — took part in the negotiations or the vote.*

Pakistan on Monday said that it was not bound by the recently concluded treaty on the prohibition of nuclear weapons as it failed to take into account the interests of all stakeholders.

Foreign Office (FO) said in a statement that the Treaty on Prohibition of Nuclear Weapons, adopted by a vote on July 7 did not fulfil these essential conditions - both in terms of process and substance.

It said Pakistan, therefore, like all the other nuclear armed states, did not take part in its negotiations and cannot become a party to the treaty.

Over 120 countries in the United Nations voted to adopt the first-ever global treaty to ban nuclear weapons. Eight other nuclear-armed nations, including the US and China did not participate in the negotiations for the legally binding instrument to prohibit atomic weapons.

“Treaties that do not fully take on board the interests of all stakeholders fail to achieve their objectives..Pakistan does not consider itself bound by any of the obligations enshrined in this treaty,” it said.

Pakistan stressed that the treaty neither forms a part of, nor contributes to the development of customary international law in any manner.

Pakistan reaffirmed its commitment to nuclear disarmament in a way that promotes peace, security and stability at the regional and global levels.

It said that it is committed to the goal of a nuclear weapons free world through the conclusion of a universal, verifiable and non-discriminatory, comprehensive convention on nuclear weapons.

The Geneva-based Conference on Disarmament (CD), the world’s single multilateral disarmament negotiating body, remains the most ideal forum for concluding such a convention.

[http://www.hindustantimes.com/world-news/pakistan-says-not-bound-by-treaty-on-prohibition-of-nuclear-weapons/story-DhFw4PjWBkqeDa3Lz1viw\].html](http://www.hindustantimes.com/world-news/pakistan-says-not-bound-by-treaty-on-prohibition-of-nuclear-weapons/story-DhFw4PjWBkqeDa3Lz1viw].html)

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The Express Tribune (Karachi, Pakistan)

## **India’s Ambitious Nuclear Modernisation Plan**

By Usman Ali Khan

July 31, 2017

The nuclear race in South Asia is intensifying due to New Delhi’s fear that its military is lagging behind China or Pakistan. However, there arises a question that merits further scrutiny: is the true purpose of nuclear weapons for India merely deterrence?

Over the past decade, South Asia has been alarmed by India’s increase in nuclear weapons and its ability to wage conventional war. India’s massive military expenditure has taken an asymmetric approach in building up its nuclear arsenal.

In September 2009, Financial Times published an article titled ‘India Raises Nuclear Stakes’, in which it argued that India can now build nuclear weapons with the same destructive power as those in the arsenals of the world’s major nuclear powers. A recent report shows India’s heavy reliance on nuclear weapons with an increased estimation programme in the near future.

Brigadier Naeem Salik in his book titled The Genesis of South Asian Nuclear Deterrence: Pakistan’s Perspective, traces the origin of India’s nuclear programme and its nuclear double standards. He provides a comparative study of the dynamics of South Asian nuclearisation, which concludes that former prime minister Jawaharlal Nehru, and, father of the Indian bomb, Dr Homi Bhabha, recognised the dual nature of nuclear technology, and believed it could be beneficial for India.

India's nuclear programme is moving forward steadily. It secretly pursued nuclear weapons, as declared in the late 1990s. Yet the international community is still engaged with Delhi, constantly extending a hand of friendship, exemplified by different diplomatic measures such as the Indo-US nuclear deal.

In order to mainstream Fast Breeder Reactor (FBTR), the department of atomic energy in India is gearing up to commission a nuclear reactor at Kalpakkam. But the safety inadequacies of India's FBTR still need to be questioned. This oscillatory approach of India guarding its vested nuclear interests is something that the international community must be wary of, shaking hands with India through nuclear diplomacy, probably does not know everything India has done to protect its obsessive nuclear secrecy.

New Delhi continues to sign nuclear deals, 16 in number until present, without being hindered by any of the nuclear non-proliferation purists. Despite not signing the Non-Proliferation Treaty, India has signed a uranium deal with Australia which has raised various important questions regarding the use of Australian uranium in India. As of 2016, India has signed civil nuclear agreements with 16 countries. Has India succeeded enough to bury its proliferation record over decades and shove it under the carpet?

Under these circumstances, it's also astonishing how India is seeking membership in the Nuclear Suppliers Group (NSG), which is a creation of its own disconcerting pursuit of nuclear weapons. Interestingly, India has been building its case for international recognition as a (normal) nuclear weapon state for years, seeking admission to the group, wherein the permission of an NPT-outlier like India would ostensibly to create a domino effect — it would become a compulsion for states like Pakistan to opt for strategies commanded by their security concerns. On the other hand, it was also revealed that India has been busy developing a secret nuclear city. As a result, it is important for the NSG to abide by its criteria and remember that its decision would affect strategic stability in South Asia.

Delhi's decision to rely on nuclear weapons as a means of warding off potential attacks from a more powerful neighbour has increased the chance of nuclear warfare breaking out in South Asia. Indian pursuit for increased nuclear deterrence is hardly startling; it is an obvious example of an alarming pattern that nuclear powers in the region demonstrate, the consequence of a long and volatile history of hostility towards one another. Thus, the threat of a potentially more aggressive Indian nuclear posture has put an additional strain on an already rocky situation in South Asia.

<https://tribune.com.pk/story/1470350/indias-ambitious-nuclear-modernisation-plan/>

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Firstpost (New Delhi, India)

## **Neighbours In Arms: The Time India And Pakistan Almost Came to a Nuclear Exchange**

By Larry Pressler

August 5, 2017

Editor's note: As chairman of the US Senate's Arms Control Subcommittee, Larry Pressler advocated the now-famous Pressler Amendment, enforced in 1990 when President George HW Bush could not certify that Pakistan was not developing a nuclear weapon. Aid and military sales to Pakistan were blocked, including a consignment of F-16 fighter aircraft, changing forever the tenor of the United States' relationships with Pakistan and India, and making Pressler "a temporary hero throughout India and a devil in Pakistan". In a new book, *Neighbours in Arms*, Senator Larry Pressler reveals

what went on behind the scenes in the years when the Pressler Amendment was in force, through a cast of characters that includes presidents, prime ministers, senators and generals in the US, India and Pakistan. The following excerpt is from a chapter titled 'The Enforcement of the Pressler Amendment', reproduced here with permission from Penguin Random House.

'It was the most dangerous nuclear situation we have ever faced since I've been in the US government. It may be as close as we've come to a nuclear exchange. It was far more frightening than the Cuban missile crisis.'

— Richard J Kerr, former deputy director of the CIA, in an interview with reporter Seymour Hersh, describing the 1990 nuclear standoff between India and Pakistan.

In June 1989, Pakistan's new prime minister, Benazir Bhutto, addressed a joint session of Congress in the US, where she said, 'Speaking for Pakistan, I can declare that we do not possess, nor do we intend to make, a nuclear device.' I was present when she made that public testimony. It was an outright lie to Congress. But she just did not know it. When she was accused of lying, I came to her defence. She did not know about the nuclear weapons because the ISI never told her. They had developed a bomb without the approval or the knowledge of the prime minister and Parliament. Incredible!

The incident testifies to the power that the ISI wields in the Pakistani political system. When I spoke privately with her at a prayer breakfast during that same visit, she told me how hopeless she felt trying to govern when the ISI, with American generals coaxing them on, controlled everything in Pakistan. Consequently, I was disappointed when President Bush followed Reagan's lead and, once again, issued a certification that Pakistan did not possess a nuclear weapon, in October 1989. An exasperated Senator Glenn took to the floor of the Senate in November of that year to protest this certification, asserting that:

'I must conclude that the President had to make the most narrow possible interpretation of law to conclude that Pakistan does not possess the bomb — a statement I find very difficult to accept and really believe. To me, the President's action represents both bad policy and a disservice to a good law.'

Almost a year after the Soviet Army had withdrawn from Afghanistan, why did we feel the need to continue to funnel aid to Pakistan? I could not understand it. In October 1990, five years after the Pressler Amendment became law, President Bush finally invoked it. Why did President Bush enforce the law when President Reagan did not? Maybe it had something to do with the nuclear face-off between India and Pakistan in May 1990, a nuclear catastrophe narrowly avoided but kept largely under wraps by the US government until journalist Seymour Hersh revealed the details in an article in the New Yorker magazine on 29 March 1993.

Hersh was a controversial journalist, but on matters of Pakistan and the South Asia region, he was dead on. In this article, Hersh described how the American intelligence community witnessed in horror the fast-rising tensions between India and Pakistan in the spring of 1990, originating where it always seemed to, in Kashmir. Protests, rioting and an Indian police crackdown resulted in hundreds of Kashmiri civilian deaths. The Pakistanis' reaction was frightening: intelligence analysts believed that Pakistan was training Muslim Kashmiri 'freedom fighters' on the border and outfitting a nuclear bomb that could be placed under the wing of an F-16.

The National Security Agency (NSA) had intercepted an order from the Pakistan Army's chief of staff, General Mirza Aslam Baig, to actually assemble a nuclear weapon. The situation quickly escalated as India prepared an offensive ground strike into Pakistan and Pakistan planned to preempt this ground invasion with a nuclear hit on New Delhi. A quick intervention by American diplomats, including Robert Gates (who later served as President George W Bush's and President Obama's secretary of defense), was planned. Gates and his team were dispatched to the region to

meet with the leaders of both India and Pakistan. They convinced both countries to stand down and move their troops away from the border. India agreed to improve the human rights conditions in Kashmir, and Pakistan agreed to shut down insurgent training camps in Kashmir. All sides agreed and war was averted, but many involved in the event consider it to be the closest the world has come to a nuclear exchange since the Cuban Missile Crisis in 1962.

Everyone in Washington who was involved in non-proliferation knew about this crisis before Hersh's article was published a few years later, but no one talked about it publicly. After this crisis, making the certification required under the Pressler Amendment was going to be very difficult and the State Department knew it. In August 1990, the department sent a 'Top Secret' memorandum to Brent Scowcroft, the President's national security adviser. In it were recommendations that President Bush send letters to both Pakistan's Prime Minister Bhutto and President Ghulam Ishaque Khan. The memo and draft letters, recently declassified and released, outlined a proposed diplomatic strategy that would allow President Bush to rationalise the Pressler Amendment annual certification. 'We believe that non-certification would spark an accelerated Indo-Pak nuclear race, putting the pronuclear elements in both governments under highly public and emotional pressure to move ahead full tilt.' Weren't they already moving ahead 'full tilt' — with American taxpayers' support?

The memo went on to recommend asking Pakistan,

to demonstrate tangibly that it is complying with the three steps we had earlier told them are essential for certification (cease production of highly enriched uranium, refrain from production of highly enriched uranium metal, ensure that Pakistan does not possess any highly enriched uranium metal in the form of nuclear device components).

The State Department made it clear they believed that Pakistan would never allow US officials to inspect its nuclear facilities:

Demanding inspection of all Pakistan's HEU [highly enriched uranium] has almost no chance of acceptance. In these circumstances, if we believe the Pressler standard can be met with less than [an] inspection of HEU, we should not limit the President's ability to certify by setting our standards at an unrealistically high level.

Essentially, the State Department was arguing that President Bush should be satisfied with Pakistan's stated intentions. I could not understand how we could ever be satisfied by Pakistan's promises. They were empty. President Bush obviously agreed. Two months later, he finally invoked the Pressler Amendment and refused to certify to Congress that Pakistan did not have a nuclear weapon. He bucked the State Department. How could he ever have made any other choice? Bush's action stunned the world — and particularly the Octopus\*. I was so happy and proud that Bush took this bold action. It was risky, because he might have incurred the wrath of all those who stood to gain from arms sales to Pakistan, including the delivery of numerous fighter jets with a nuclear delivery capability.

\*By the Octopus, what is being referred to, is Washington, or the Military Industrial State. Andrew J Bacevich Sr, a professor at Boston University, and respected American military historian, wrote about the 'Octopus' in his book titled 'American Rules':

As used here, Washington (the Military Industrial State) is less geographic expression than a set of interlocking institutions headed by people, who, whether acting officially or unofficially, are able to put a thumb on the helm of state. Washington (the Military Industrial State), in this sense, includes the upper echelons of the executive, legislative, and judicial branches of the federal government. It encompasses the principal components of the national security state — the Departments of Defense, State, and more recently, Homeland Security, along with various agencies comprising the intelligence and law enforcement communities. Its rank extends to select think tanks and interest



groups. Lawyers, lobbyists, fixers, former officials, and retired military officers who still enjoy access are members in good standing. Yet Washington (the Military Industrial State) also reaches beyond the Washington 'Beltway' to include big banks and other financial institutions, defense contractors, and major corporations, and television networks . . . With rare exceptions, acceptance of the Washington (the Military Industrial State) rules forms a prerequisite for entry into this world.

<http://www.firstpost.com/india/neighbours-in-arms-the-time-india-and-pakistan-almost-came-to-a-nuclear-exchange-3897481.html>

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## COMMENTARY

Bulletin of the Atomic Scientists (Chicago, IL)

### **Nonproliferation across the generations**

By Adam Scheinman

August 7, 2017

My father, Lawrence Scheinman, passed away this year. He'll be hugely missed on a personal level, but his death also has me contemplating a more global topic—the place of the United States in the world nuclear order. Let me explain.

My father was a specialist on nuclear nonproliferation—the sensible idea that nations without nuclear weapons should not acquire them, not least because these weapons may one day be used again. Because nuclear weapons are unlike any other weapon devised in human history, blocking their spread to any state, whether friend or foe, came to be viewed as vital to US national interests and to the larger project to stabilize the international system after World War II.

Nonproliferation is a familiar concept today, but this was not always so. The discipline was a novelty around the time of the Cuban Missile Crisis, worked on by a small coterie of academics and government experts. Long before North Korea's Kim Jong-un appeared on the scene rattling his nuclear saber, these folks were busy assessing the military risks that new entrants into the nuclear weapons club would pose and designing policies to prevent that outcome.

By the late 1960s, a light came on for the world's two superpowers as they realized that a wave of new proliferation could entangle them in unwanted nuclear war. It may surprise some to learn, given present difficulties in US-Russia relations, that the 1968 Nuclear Non-Proliferation Treaty (NPT)—the most significant anti-proliferation agreement ever reached—was the product of US and Soviet cooperation. The treaty and the rules built up around it wouldn't exist absent that partnership.

The NPT changed the game, moving nonproliferation into the mainstream of US national security concerns. It transcended party politics at home—this was a Johnson treaty that Nixon moved to the Senate for ratification in one of his first acts as president. Successive administrations used it to catalyze global action and encourage others to adopt US policies as their own. Nonproliferation scholarship also ramped up, building on the work of experts such as my father, who wrote a first-of-its-kind book tracing the French decision to go nuclear. Similar nuclear histories by many other authors were to follow.

Over its nearly 50-year history, the NPT has made the world safer. Consider that nations such as South Korea, Taiwan, Brazil, Argentina, South Africa, Ukraine and others at one time or another

pursued but turned away from nuclear weapons. The door was slammed shut on Iraqi, Libyan, and Syrian efforts to acquire the Bomb. A.Q. Khan's nuclear black market was put out of business. And thankfully, it is now 70-plus years since the last use of a nuclear weapon in war.

Yet the treaty's record is far from perfect. From the nuclear build-up under way in South and Northeast Asia to Iran's uncertain nuclear ambitions, cause for concern clearly remains. Of particular urgency, North Korea is racing ahead with nuclear and missile programs that so obviously threaten the security of the United States and its allies.

Some wonder whether the NPT is now a largely spent force. That wouldn't have been my father's judgment, knowing his confidence in the treaty—and in nations to uphold a rules-based system. Later in life, he was gratified to see the world join in forcing Iran to the negotiating table. I'm sure he would have applauded efforts to treat the North Korean challenge as a high priority, while he'd have waved off fanciful ideas such as the newly negotiated international treaty banning all nuclear weapons. That treaty might come into force, but without the participation of any state that actually has nuclear weapons. So what's the point?

It is true that the NPT created an obligation for nuclear weapon states to pursue nuclear disarmament, but it set no timetable or road map for disarmament to be achieved. Given how far the world remains from the disarmament end-line, energy would be better spent dealing with today's challenges—Iran, North Korea, nuclear terrorism, and the stalemate on nuclear arms control brought about by Putin's Russia.

History suggests that the atomic bomb will continue to tempt rogue states seeking security on the cheap, as well as terrorists with their twisted, apocalyptic aims. Even close US allies such as Japan and Germany may one day revisit their decisions to forego nuclear weapons if their security ultimately seems to require it. Taboos can be broken, as we've seen with Syria's shameful use of chemical weapons.

Because the threat of nuclear proliferation can never totally expire—after all, nuclear science cannot be unlearned—US leadership in this business must never go wanting. The fact is that no other nation has the interest, resources, or influence to take Washington's place. Leadership in nonproliferation is a role that for decades the United States embraced because it's so completely in the US national interest. Nuclear weapons in the hands of additional adversaries, or even allies, would endanger populations in the United States and everywhere else, and ultimately upend an international order that has delivered many decades of relative peace and prosperity.

Leadership on multilateral issues can be a thankless, frustrating business, and nonproliferation is no exception. It's a tough undertaking. As I know from my own experience, negotiations are time-consuming and difficult, and reaching agreement requires compromises. Why bother with all this? Because a United States in retreat on nonproliferation, or openly dismissive of the NPT's promise to one day create a world at peace and without nuclear weapons, would only deprive Washington of the moral and political standing to challenge violators such as North Korea—the very function for which credible leadership is most important.

The good news is that the nonproliferation regime still enjoys incredibly broad political support from governments and civil society. That support is rooted in years of US initiatives, policies, and persistence. It's also a living legacy of my father's generation—one that I hope future generations take seriously and commit to improve upon. That first generation of experts would be pleased knowing that those who followed them tried.

<http://thebulletin.org/nonproliferation-across-generations10994>

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War on the Rocks (Washington, DC)

## **Is the Treaty Banning Nuclear Weapons Immoral?**

By Charles Dunlap

August 2, 2017

If there was a lawful way to inflict terrible harm on a ruthless enemy bent on the enslavement or even the extermination of your citizenry, would you use it even if there was great risk involved? Do you agree with legendary Mexican revolutionary Emiliano Zapata, who famously said, “It is better to die on your feet than to live on your knees”? I suspect many War on the Rocks readers do, but around the globe there are significant numbers who seem to disagree. There are, apparently, 122 nations who would submit to a merciless enemy before allowing a legitimate weapon to save them.

That’s the number of countries that agreed to the text of the newly-drafted Treaty on the Prohibition of Nuclear Weapons (which opens for formal ratification in September). Among other things, it says that each party “undertakes never under any circumstances to...[u]se or threaten to use nuclear weapons or other nuclear explosive devices.” (Emphasis added.)

As someone who served in three commands focused on nuclear operations, I have no illusions about the horrific destructiveness of these weapons. Unquestionably, any use of them would be a terrible event and raise deep moral questions. Yet I would never agree that a treaty is “moral” if it forbids, even as a last resort in the most extreme situation, a defensive measure that both law and ethics permit.

Can you support a treaty that seeks to close off any usage of nuclear weapons, even to stop, for example, a genocidal maniac bent on the destruction of humankind?

That is what this treaty could do by outlawing weapons international law has never prohibited. In 1996, the International Court of Justice concluded in an advisory opinion on the legality of nuclear weapons that there is in “neither customary nor conventional international law any comprehensive and universal prohibition of the threat or use of nuclear weapons as such.” Further, the court could not say “whether the threat or use of nuclear weapons would be lawful or unlawful in an extreme circumstance of self-defence, in which the very survival of a State would be at stake.”

Of course, the moral issue matters. While absolute pacifists may think otherwise, most of the world looks to Just War theory for the moral underpinnings of the use of force. There are various formulations of Just War theory, but all include some expression of this concept found in Catholic Just War theory:

The use of arms must not produce evils and disorders graver than the evil to be eliminated. The power of modern means of destruction weighs very heavily in evaluating this condition.

The moral arguments of the treaty advocates seem to center around this part of Just War theory. For example, the International Campaign to Abolish Nuclear Weapons (ICAN) argues:

Any use of nuclear weapons would have catastrophic consequences. No effective humanitarian response would be possible, and the effects of radiation on human beings would cause suffering and death many years after the initial explosion. Prohibiting and completely eliminating nuclear weapons is the only guarantee against their use.

Along similar lines, ICAN also claims that “any use of weapons would violate international humanitarian law because they would indiscriminately kill civilians and cause long-term environmental harm.”

But it is simply not true that “any” use of nuclear weapons would inevitably violate international humanitarian law. As former National Security Council staffer Paul Miller points out, “nuclear bombs come in a wide range of sizes” and certain uses may result in little or no civilian harm. He says:

Although any nuclear weapon would have a high likelihood of causing some civilian casualties unless used in open desert or the ocean, the degree of civilian harm might be relatively small if the nuclear warhead is small enough and the location relatively remote (i.e., not a city). If the target is a major enemy asset, such as a tank division, an aircraft carrier, a headquarters bunker, or a nuclear weapons arsenal, the military value might outweigh the potential harm to civilians.

In such a scenario, nuclear weapons could meet the Just War theory criterion that the weapon not cause more destruction than the harm it is addressing.

And there is more to Just War theory. It also mandates efforts to defend the helpless. In their 2016 book, *Necessity in International Law*, Jens Ohlin and Larry May point out that “[t]raditional Just War theory argues that some wars can be justified, even required, out of respect for the protection of innocent life.” (Emphasis added.) This comports with Catholic Just War Doctrine, which says:

Legitimate defense can be not only a right but a grave duty for one who is responsible for the lives of others. The defense of the common good requires that an unjust aggressor be rendered unable to cause harm. For this reason, those who legitimately hold authority also have the right to use arms to repel aggressors against the civil community entrusted to their responsibility. (Emphasis added.)

Some ethicists like Michael Walzer argue that “[n]uclear war is and remains unacceptable” because the weapons create a “new kind of war.” However, philosopher Alexander Moseley counters with a stronger analysis:

Against Walzer, it can be reasonably argued that although such weapons change the nature of warfare (for example, the timing, range, and potential devastation) they do not dissolve the need to consider their use within a moral framework: a nuclear warhead remains a weapon and weapons can be morally or immorally employed.

Furthermore, the employment of nuclear weapons may actually support another key tenet of Just War theory: To be moral, the use of force must have a reasonable chance of success. Could there be situations in which the use of nuclear weapons is the most feasible way to produce a reasonable chance of military success? Could there be legitimate military targets that actually require nuclear weapons for their destruction? In fact, yes.

Imagine that the only way to halt the genocidal depredations of an enemy leader is to neutralize him in his command post tunneled deep into a mountain. In its 2005 study, *Effects of Nuclear Earth-Penetrator and Other Weapons*, the National Research Council of the National Academies concluded:

Many of the more important strategic hard and deeply buried targets (HDBTs) are beyond the reach of conventional explosive penetrating weapons and can be held at risk of destruction only with nuclear weapons.

Nuclear weapons may also be the only practical means of achieving the high temperatures needed to assure the timely destruction of a virulent and lethal pathogen that an enemy might develop. Additionally, some believe that nuclear weapons could be the “best answer” to destroy or divert a cataclysmic meteor or asteroid hurtling towards earth.

To be sure, the legal and moral use of a nuclear weapon must comply with the targeting principles of international humanitarian law, such as the requirement of distinction (which means that except in the case of belligerent reprisal, you must target combatants and not noncombatants or their property). The law – like Just War theory – also requires strict observance of the principle of proportionality, that is, any civilian losses must not be excessive in relation to the anticipated military advantage sought from the attack. The Department of Defense Law of War Manual is in accord, insisting that the “law of war governs the use of nuclear weapons, just as it governs the use of conventional weapons.”

Obviously, non-legal but essential real-world considerations such as escalation control have to be taken into account in any contemplated use of nuclear weapons. But the point is that it is wrong to categorically preclude use of the weapons in all cases, even when doing so would be strategically, politically, and ethically prudent, and fully consonant with the law.

Moreover, from a moral perspective, ban advocates have to confront this inconvenient fact: As military historian Martin Van Creveld pointed out in 1996, as “the power of nuclear weapons grew—from 20,000 kilotons in 1945 to 58 megatons in 1961—and their numbers increased, wherever they made their appearance large-scale interstate war came to a halt.” The United States, Britain, and France reiterated that point in their recent statement, saying “the ban treaty is incompatible with the policy of nuclear deterrence, which has been essential to keeping the peace in Europe and North Asia for over 70 years.” Isn’t a just peace the ultimate aim of Just War theory?

Beyond the conceptual moral issues, there are practical and political problems with the treaty as well. According to reports, “some states have expressed hope that [the treaty as a] normative statement might contribute to the development of parallel customary international law.” Customary international law ordinarily operates to bind all nations, even those who are not parties to a given treaty.

Customary international law already governs much of the United States’ military conduct. Although not a party to Protocol I of the Geneva Conventions, (which includes various rules about targeting), the United States nevertheless considers itself bound by a significant part of it. However, the United States, France, and Britain have already taken steps to prevent the ban treaty from evolving into customary international law. Their statement established themselves as “persistent objectors” to the treaty (which means they would not be bound if a customary norm emerged.) The three nations said:

We do not intend to sign, ratify or ever become party to it...we would not accept any claim that this treaty reflects or in any way contributes to the development of customary international law.

The statement also recognizes the proverbial “elephant in the room” by pointing out that the treaty offers “no solution to the grave threat posed by North Korea’s nuclear program.” It argues that instead of enhancing peace and security, the treaty creates “even more divisions at a time when the world needs to remain united in the face of growing threats” like those posed by Kim Jong Un.

This is not to suggest that the United States or its allies consider these weapons in anything but the gravest terms. For example, in the Nuclear Posture Review, the Department of Defense said the United States “would only consider the use of nuclear weapons in extreme circumstances to defend the vital interests of the United States or its allies and partners.” Yet under the treaty, parties would be unable to seek the protection of the U.S. nuclear umbrella with its implicit threat to use the weapons if necessary.

Why? Under the pact each country also agrees “never under any circumstances to...[a]ssist, encourage or induce, in any way, anyone to engage in any activity prohibited to a State Party under this Treaty.” The United States, according to the Washington Post, has “some form of defense pact” with 69 countries whose populations comprise about a quarter of humanity.

In a very fundamental way, the premise of the treaty – that nothing, even freedom, presumably, is worth using nuclear weapons to defend – is at odds with what many Americans believe. In a 2016 poll, only 17% of Americans agreed with language very much like that of the treaty: that the “U.S. should never use nuclear weapons under any circumstances.” And let’s not forget that there are some seventy nations – including, interestingly, Japan – who are not signing the treaty.

Americans are not naïve about the risks nuclear weapons pose, but they have long valued freedom over safety. Nuclear weapons can defend not just lives, per se, but a way of life. But it seems treaty advocates prefer to avoid the risks that nuclear weapons might pose, even at the possible cost of freedom. Even accounting for the very real perils nuclear weapons entail, is there really nothing worth defending with them? No circumstance worthy of their use? Philosopher John Stuart Mill’s observation that leads this essay remains apropos today.

The millions of people in those 122 nations should hope there are others willing to make the exertions to rescue them should the “any circumstances” referred to in the treaty become a cruel reality in which their freedom, or their very existence, is imperiled by the worst kind of malevolence.

<https://warontherocks.com/2017/08/is-the-treaty-banning-nuclear-weapons-immoral/>

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The Mainichi (Tokyo, Jpn)

### **Editorial: Countries must not neglect responsibility for nuclear weapons abolition**

Author Not Attributed

August 7, 2017

On Aug. 6, 1947, on the second anniversary of the U.S. atomic bombing of Hiroshima, then mayor of the city Shinzo Hamai read out the city's first ever Peace Declaration in the blazing sun.

In the statement, Hamai underscored the need for a "Revolution of Thought" toward getting rid of what he called "horrible weapons" (atomic bombs) in order to achieve lasting peace. He then said, "... because of this atomic bomb, the people of the world have become aware that a global war in which atomic energy could be used would lead to the end of our civilization and extinction of mankind," according to his memoir, "Genbaku Shicho" ("Mayor of the atomic-bombed city").

Probably because of the sense of tension with which he addressed the world from a corner of a country that was defeated in World War II, Hamai recalled that he felt as if his voice were not his own.

Seventy years later, on the occasions of the 72nd anniversaries of the atomic bombings of Hiroshima and Nagasaki on Aug. 6 and 9, respectively, one cannot help but wonder whether the "Revolution of Thought" has since progressed.

The Treaty on the Non-Proliferation of Nuclear Weapons (NPT), which came into force in the 1970s, allows the five nuclear powers -- the United States, Britain, France, China and Russia -- to possess such arms. However, India and Pakistan acquired nuclear weapons in the 1990s, and Israel is widely viewed as a de-facto nuclear power.

In addition, North Korea has repeatedly conducted nuclear and missile tests and even threatened to use nuclear weapons against Japan and the United States, highlighting the deadlock in the "Revolution of Thought" and the NPT regime.

Amid such moves, about 120 countries adopted the Treaty on the Prohibition of Nuclear Weapons at the United Nations this past July. However, not only the United States and other nuclear powers, but also Japan and South Korea -- both under the U.S. nuclear umbrella -- as well as NATO members opposed the pact.

This is apparently because the treaty not just bans the possession and use of nuclear arms but is also critical of the traditional nuclear deterrence theory. Tokyo appears to have deemed that the country could not support the pact amid the growing threat posed by Pyongyang.

In May 2016, however, Japan invited then U.S. President Barack Obama to Hiroshima, where the world's only atomic-bombed country renewed its vow for a world without nuclear weapons. Even though Obama's successor Donald Trump is pursuing nuclear arms expansion, it appears out of place for Japan to put the brakes on moves toward nuclear weapons abolition.

It is only natural that organizations of A-bomb survivors, or "hibakusha" in Japanese, expressed displeasure with the Japanese government's response to the Treaty on the Prohibition of Nuclear Weapons. Setsuko Thurlow, a hibakusha who participated in the talks on the treaty, lamented that she deeply felt that she had been betrayed and abandoned by her home country.

"The Japanese government is rigidly tied down" by many countries, according to Yasuyoshi Komizo, secretary-general of the "Mayors for Peace." Japan has faced pressure from the United States and the threat posed by North Korea. Moreover, it is difficult for nuclear powers and their allies to support the pact that prioritizes a ban on the possession and use of nuclear arms.

To make it easier for nuclear powers to sign the pact, Komizo proposed to incorporate "verification measures," to which nuclear powers attach particular importance, in the pact, during discussions on the draft of the treaty at the United Nations.

"There is some criticism, but the fact that the treaty was created is a major achievement. The wording of the pact is something that is difficult to criticize. I hope countries that have not participated in the treaty would boldly transform their policies," Komizo said.

In deciding not to participate in the pact, the Japanese government appears to have sided with the United States rather than hibakusha. If the Japanese government were to say it is a misunderstanding, then Tokyo should take concrete action to demonstrate its will to rid the world of nuclear stockpiles. The ultimate goals of both the NPT and the Treaty on the Prohibition of Nuclear Weapons are nuclear abolition. Japan should endeavor to ease the international conflict over these two pacts and facilitate international cooperation toward elimination of nuclear arms and reconsider its own response to the Treaty on the Prohibition of Nuclear Weapons.

In response to the threat posed by North Korea, some people might say, "Countries threatening the world with nuclear weapons should be countered with nuclear weapons." However, as long as nuclear arms exist, similar crises could occur. It should be realistic for and sincere of Japan to make its utmost efforts toward nuclear abolition while not ruling out nuclear deterrence as-is.

The Treaty on the Prohibition of Nuclear Weapons is not the only way to rid the world of nuclear arms.

But have nuclear powers opposing the treaty fulfilled their responsibility for nuclear arms reductions provided for by the NPT? Non-nuclear powers moved to adopt the Treaty on the Prohibition of Nuclear Weapons because little progress had been made in nuclear disarmament. Nuclear powers' negligence and lack of a sense of crisis should be called into question.

With regard to the "security of all humanity" mentioned in the nuclear weapons ban treaty's preamble, Mitsuru Kurosawa, professor at Osaka Jogakuin College, said, "The time has come when

countries should consider security arrangements on a global scale in addition to those between individual countries. We should change our way of thinking." A second "Revolution of Thought" is now apparently necessary while keeping in mind risks involving nuclear weapon detonation by accident.

In a message he contributed to the 1947 Hiroshima Peace Declaration, Douglas MacArthur, supreme commander for the Allied Powers, warned that weapons that could annihilate human beings could be used in war and that Hiroshima served as a warning to all people against such a situation, emphasizing that the warning should not be ignored.

The United States should take to heart the meaning of MacArthur's message as the only country that has used nuclear weapons in war.

<https://mainichi.jp/english/articles/20170807/p2a/00m/0na/026000c>

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The Daily Caller (New York, NY)

### **Pakistan Could Become China's South Asian North Korea**

By Lawrence Sellin

August 9, 2017

That astute observation is not mine, but Indrani Bagchi's writing for the Indian Economic Times:

Pakistan could end up as a version of China's North Korea exercise in South Asia, kind of like screen villain Ajit's 'liquid oxygen' punishment: its nuclear weapons would keep it 'alive', but its economy would not let it 'live', and the Inter-Services Intelligence (ISI)-terror establishment would be a permanent cause of worry for India. And China would retain just enough control to make it worth its while.

She also had this to say:

At some point, China will have a greater say in Pakistan's foreign affairs, particularly with regard to India, Afghanistan, terrorism, etc. China would probably be happier if Pakistan divests itself of its terror shield, but would not mind India coming under Pakistani terror pressure. That will only perpetuate Pakistan's essential dilemma of keeping the terror factory going against India and Afghanistan, but hoping to insulate itself from it.

For the Trump Administration, that means don't expect Pakistan to stop supporting the Taliban in its war against Afghanistan and be aware of China's intentions in South Asia.

Expect Chinese naval and air force bases to be built in Gwadar, Balochistan Province, Pakistan, which would dominate the entrance to the Persian Gulf and complement its base in Djibouti at the entrance of the Red Sea and the Suez Canal scheduled for completion next year.

As Pakistan strives to maintain Afghanistan as its client state, China is making Pakistan its client state and consequently China can become the geopolitical superpower of South Asia.

That is, as Ms. Bagchi correctly notes, if Pakistan can insulate itself from its own radical Islamic groups it uses to suppress ethnic separatism internally and as an instrument of its foreign policy.

The ability of the Pakistani military and its intelligence service, the ISI, who represent the real government of Pakistan, to contain its radical Islamic proxies is increasingly in doubt.



The “charitable” arm and front organization of the terrorist group Lashkar-e-Taiba (LeT), Jamaat-ud-Dawa (JuD), believed to have up to 500,000 members, has just launched a new political party, the Milli Muslim League. LeT is widely believed to be an operational element of the ISI and responsible for the bloody attack in Mumbai in 2008.

The JuD and the LeT have long represented the backbone of the radical Islamic terrorist network in Pakistan. Although initially Punjabi in origin and operating mainly in Kashmir, they have now spread throughout Pakistan. They are deeply embedded in Balochistan and its members have links to the presumed leader of the Islamic State in Pakistan, Shafiq Mengal, a former ISI asset, last located living in Wadh, Balochistan.

In many respects, Balochistan can be considered the geopolitical center of gravity to thwart Pakistan’s policy of Islamic terrorist proliferation and China’s attempt at regional hegemony.

The Baloch people have their own language, tribal structure and culture, and a reputation for secularism and tolerance. Balochistan has also been the home of a festering ethnic insurgency since the partition of India in 1947, when the Baloch were promised autonomy and briefly gained independence from August 1947 to March 1948, but were then forcibly incorporated into Pakistan by the invasion of the Pakistani Army.

The China-Pakistan Economic Corridor and, more broadly, the Belt and Road Initiative are China’s attempt to extend its strategic reach to the Indian Ocean, East Africa and the Middle East. The success of the CPEC and Chinese regional military ambitions in Pakistan depend on the stability of Balochistan, and, thus, presents a possible lever to influence a strategic environment that directly affects U.S. involvement in Afghanistan and our national interests in South Asia.

One North Korea is enough.

<http://dailycaller.com/2017/08/09/pakistan-could-become-chinas-south-asian-north-korea/>

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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.