



USAF Center for Unconventional Weapons Studies (CUWS) Outreach Journal

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Featured Item: "Seven Defense Priorities for the New Administration". Published by the Defense Science Board (DSB); December 2016.

http://www.acq.osd.mil/dsb/reports/2010s/Seven_Defense_Priorities.pdf

This report summarizes the main findings and recommendations of reports published by the Defense Science Board for the Secretary of Defense during the last dozen years. The purpose of this effort is to aid the incoming Administration to make a fast start in addressing pressing national security issues and opportunities.

In particular, the report features a chapter on nuclear deterrence, noting that "nuclear deterrence remains a cornerstone of our national security." Because nuclear weapons have continued to evolve under the stewardship of other nuclear-weapon states, the DSB suggests that the United States must continue to develop nuclear and non-nuclear options to deter the possibility of an attack on U.S. national security interests. To be prepared to respond to future uncertainties, the DSB suggests addressing features such as enhanced platform survivability, open architectures for upgrades to address technological advances, lower-yield, primary-only options, and advanced manufacturing to support timely modifications. Non-nuclear forces need to invest in nuclear survivability in particular if deterrence policy relies on non-nuclear deterrent capabilities. Of particular interest, the DSB suggests that general knowledge in the military regarding nuclear weapons and the environments they generate, outside of a small group of specialists within the Air Force, Navy, and Army, does not exist.

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Foreign Policy (Washington, DC)

America's Nuclear Weapons Infrastructure Is Crumbling

By Robbie Gramer

March 17, 2017

President Donald Trump wants the United States to be at the “top of the pack” with nuclear weapons. But his goal already hit a snag: The infrastructure that supports the country’s nuclear weapons is crumbling to “alarming” levels, a Congressional panel warned Thursday.

Much of the infrastructure that supports the U.S. nuclear weapons programs, including labs, production facilities, and weapons storage complexes themselves were built six decades ago.

The aging buildings require constant upgrades and renovations to ensure the safety of the government employees handling the weapons — and secure the weapons themselves. But it’s not happening.

There’s a \$3.7 billion backlog in deferred essential repairs to the U.S. nuclear weapons infrastructure, overseen by the National Nuclear Security Administration (NNSA), a semi-autonomous arm of the Department of Energy. The maintenance problems are “quite alarming” and “pose the risk of a dangerous nuclear accident,” said Congressman Tom O’Halloran (D-Ariz.), during a House Armed Services subcommittee hearing on infrastructure needs of the nuclear security enterprise.

The warnings come as the U.S. government begins to pour over \$1 trillion into modernizing its nuclear weapons stockpile over the next 30 years. It’s a top priority for Energy Secretary Rick Perry — who once ran a presidential campaign that called for abolishing the Department of Energy entirely — but the sorry state of NNSA facilities may bog down modernization efforts from the start.

Much of the NNSA’s facilities “dat[e] to the Eisenhower Administration and, in some cases, the Manhattan Project era,” said Frank Klotz, administrator of the NNSA and under secretary of the Energy Department. “I can think of no greater threat to the nuclear security enterprise than the state of NNSA’s infrastructure,” he said.

As they maintain or research nuclear weapons, NNSA employees are subject to leaky roofs, faulty ventilation, and even “routine encounters” with snakes and rodents, according to Michelle Reichart, a top managing contractor for nuclear weapons sites.

The NNSA has sounded the alarm bell on its aging infrastructure before, and in years prior Congress set aside funds to curb the ballooning deferred-maintenance issues. But it wasn’t until last year that the NNSA halted the growth of the problem.

Congressional members on the panel appeared willing to earmark further funds, but the NNSA ran into a roadblock of its own making. Congressman Mike Rogers (R-Ky.) asked Perry and the NNSA in January for a list of specific infrastructure projects that in the “intermediate-range” could use stopgap funding. As of Thursday’s panel, the NNSA still hadn’t provided the list to Congress. “That is disappointing,” Rogers told Klotz at the hearing.

“When the president’s budget request is transmitted to Congress in a few weeks’ time, we will then be able to provide additional details,” an NNSA spokesperson told Foreign Policy when pressed on why the agency hadn’t furnished any list.

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Beyond the crumbling infrastructure, security experts worry the weapons themselves could be at risk. History's proved them right in the past.

In 2012, three anti-nuclear activists including an octogenarian nun broke into one of the country's most secure nuclear weapons facilities, the Y-12 National Security Complex in Oak Ridge, Tennessee. In an embarrassing lapse in security, they spent two hours in the facility painting protest signs on buildings that processed weapons-grade uranium inside. The incident sparked immediate rebuke from Congress and the Department of Energy pledged to take action.

Meanwhile, that trillion dollar nuclear weapons modernization program will require thousands of warheads to be shipped across the country. But the office in charge of shipping those weapons is mired in problems, as a new Los Angeles Times investigation revealed. The energy department's Office of Secure Transportation grappled with "widespread alcohol problems" from its workers, who are responsible for driving nuclear bombs in aging semi-trucks across the country.

<https://foreignpolicy.com/2017/03/17/americas-nuclear-weapons-infrastructure-is-crumbling-national-nuclear-security-administration-deterrence-aging-congressional-oversight/>

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Arms Control Wonk (Washington, DC)

Low Yield Nuclear Weapons (Again)

By Michael Krepon

March 19, 2017

Quote of the week:

"The pattern of the use of atomic weapons was set at Hiroshima. They are weapons of aggression, of surprise, and of terror."

— Bernard Brodie, *The Absolute Weapon*

John Donnelly of CQ Roll Call was the first to write about a Defense Science Board report issued last December, "Seven Defense Priorities for the New Administration." This report reached the "worrisome conclusion," widely shared within the "Nuclear Enterprise," that, "the nuclear threshold may be decreasing owing to the stated doctrines and weapons developments of some states, and with the introduction of new technology."

U.S. actions were notably missing among the DSB's list of contributing factors to the increased reliance on nuclear weapons by others.

The DSB then went on to say, "The near exclusive focus on life extension of existing U.S. nuclear weapons was thought... to be limiting flexibility for addressing an uncertain future." Then came the passage that caused significant commotion – the recommendation

"to provide many more options in stemming proliferation and escalation; and a more flexible nuclear enterprise that could produce, if needed, a rapid tailored nuclear option should existing non-nuclear or nuclear options prove insufficient."

The DSB mentioned only one possibility in this regard: "lower yield, primary only options." I presume this means prompt global strike by means of single warhead ICBMs without the big secondary boost. The wording of the DSB report lacks clarity as to whether other low-yield options are deemed worthy of consideration. A primary-only ICBM option doesn't require much work for the labs. Only one DSB member — Bill Schneider — forthrightly came to the defense of this

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recommendation. Bill has long supported new warhead development to counter new threats and to pass along design skills to younger folks at the labs.

This time around, as before, a firestorm ensued to hints of renewed interest in nuclear war-fighting. Powerful rejoinders came from many quarters. Hans Kristensen noted that there are at least 1,000 warheads in the U.S. stockpile that can provide low-yield options. Senator Dianne Feinstein weighed in with a reminder that the American public isn't interested in tailored effects for nuclear war-fighting, and that limited nuclear wars are unlikely to remain limited.

Nor did this aspect of the DSB Report draw support at a House Armed Services Committee hearing where the Vice Chairman of the Joint Chiefs of Staff, Gen. Paul Selva, and the Commander of STRATCOM, Gen. John Hyten, testified. Gen. Selva noted that there are no new requirements "at this time." Gen. Hyten questioned the very concept of a "tactical" nuclear weapon: "I believe that anybody that employs a nuclear weapon in the world has created a strategic effect, and all nuclear weapons are strategic." Indian officials use the same rejoinder when dealing with Pakistan's embrace of low-yield nuclear weapons carried by short-range delivery vehicles. Nor have the U.S. weapon labs reported reasons to resume testing or reasons to certify new, minimal yields.

The only support at the SASC Hearings for the DSB's recommendation was offered by Keith Payne, who testified, "I particularly think that the very low-yield option is something we have to consider." I'm not sure what Keith has in mind here, as the lowest option on the B-61 "dial-a-yield" is reported to be 0.3 kilotons. If the problem he has in mind is deeply buried targets, lower yields than that would not be helpful. If the problem is something else, highly accurate, conventional means of delivery would seem a far better choice.

As trial balloons go for new warhead designs for "tailored" deterrence, the DSB report seems tepid compared to earlier campaigns. As noted in this space, these debates have become hardy perennials. I've come to believe that the primary driver isn't really about yield; it's about honing skill sets at the labs. That being so, this debate seems unlikely to end. More attempts are likely, given the temper of the Republican caucus on Capitol Hill.

There are many strong arguments against tailored nuclear deterrence. Low-yield weapons with short ranges — or no ranges — are inherently the least safe and secure. Belief in escalation control is pure hubris. But for me, the strongest argument is how much effort has gone into preventing the battlefield use of nuclear weapons for the past seven decades. National leaders, people marching in the street and people of quiet resolve, bureaucrats, teachers, renowned physicists, religious leaders, non-governmental experts and countless others have worked their tails off to prevent mushroom clouds. They have known at the cellular level what advocates of tailored nuclear deterrence refuse to acknowledge: The most important threshold in warfare isn't the yield of a nuclear weapon; it's the first use of a nuclear weapon in seven decades — regardless of yield.

<http://www.armscontrolwonk.com/archive/1202952/low-yield-nuclear-weapons-again/>

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The Independent (London, UK)

Donald Trump's Administration to Review Decades-Old US Aim Of World Without Nuclear Weapons

By Lizzie Dearden

March 21, 2017

Policy review under way as US opposes proposed UN treaty on a global nuclear weapons ban

Donald Trump's administration is to review whether the US will keep its policy of nuclear disarmament.

Christopher Ford, the National Security Council's senior director for weapons of mass destruction and counter-proliferation, said an assessment of US policy will examine whether the aim was "realistic".

"Like all administrations we're reviewing policy across the board, and that necessarily includes whether or not the goal of a world without nuclear weapons is in fact a realistic objective, especially in the near to medium term, in the light of current trends in the international security environment," he told the Carnegie International Nuclear Policy Conference.

"It's too early to say what the answers will be – looking at things with fresh eyes is not saying we will necessarily end up with different positions."

Mr Ford said there was a "tension" between the goal of nuclear disarmament and the security requirements of the US and its allies.

He argued that the "headspace" for reducing nuclear arsenals had diminished in the years since the Cold War and cuts by the US and Russia seemed unlikely while other nuclear states continue development.

Mr Trump "will not accept a second place position in the nuclear weapons arena" but is open to broader engagement with Russia on the issue, Mr Ford said.

He added that the current "threat environment" had changed substantially from when the review that established America's current aims took place under Barack Obama in 2010.

The nuclear adviser said the Trump administration would continue American opposition to a "dangerous and misbegotten" proposed treaty to ban nuclear weapons.

UN member states voted overwhelmingly to start negotiations on a "legally binding instrument to prohibit nuclear weapons, leading towards their total elimination" last year.

A conference on the issue will be held in New York starting on 27 March but the treaty was opposed by nuclear powers including the US, Britain, Russia, France and Israel.

Mr Trump has not made any official policy statement on nuclear weapons but has touched on the issue repeatedly in his speeches and tweets.

Questioned about his warm statements towards Vladimir Putin at a press conference in February, the President warned that war between the US and Russia would be a "nuclear holocaust like no other".

Mr Trump has repeatedly hit out at a "dangerous" landmark agreement struck with Iran to limit its capability, accusing the country of being the "number one terrorist state".

But Mr Ford said that unless otherwise decided, the US would adhere to the terms of the Iran nuclear deal.

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The US President has also criticised North Korea in recent days, accusing Pyongyang of “behaving very badly” with continued efforts to develop a long-range nuclear weapon.

Before being appointed as Mr Trump’s top nuclear advisor, Mr Ford was chief council for the Senate Foreign Relations Committee and worked in the bureau of arms control and international security under George W Bush.

Shortly after his inauguration in 2009, Mr Obama declared his ultimate aim of a world without nuclear weapons, saying their spread could “lead to the extermination of any city on the planet”.

In a visit to Hiroshima last year, he told survivors of the atomic bombing: “Among those nations like my own that hold nuclear stockpiles, we must have the courage to escape the logic of fear and pursue a world without them.

“We may not realise this goal in my lifetime but persistent effort can roll back the possibility of catastrophe.”

Mr Obama was the first serving American president to visit the Japanese city, where the US dropped its first atomic bomb in 1945, killing an estimated 140,000 people.

<https://www.independent.co.uk/news/world/americas/us-politics/donald-trump-nuclear-weapons-goal-world-without-reconsider-deproliferation-treaties-white-house-a7641706.html>

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The New York Times (New York, NY)

U.S. General Urges Nuclear Upgrade as Russia Grows ‘More Aggressive’

By Rick Gladstone

March 22, 2017

The general who oversees the United States’ atomic weapons arsenal has expressed concern over what he described as “much more aggressive” behavior by Russia in recent years, saying it justifies the need for a strengthened and modernized nuclear deterrent force in this country.

Lt. Gen. Jack Weinstein of the Air Force made the remarks against the backdrop of a reassessment by the Trump administration of American nuclear policy, including whether nuclear disarmament, as advocated in 2010 under President Barack Obama, is a realistic goal.

General Weinstein, the deputy chief of staff for strategic deterrence and nuclear integration, said in an interview on Tuesday with editors at The New York Times that he believed that history had shown that nuclear deterrence had basically kept the peace between the major powers since the end of World War II.

The general expressed confidence that the United States’ nuclear arsenal remained effective, saying, “I sleep very well at night.” But like an aging vehicle, the general said, the arsenal is overdue for an overhaul.

“When you look at our deterrent, it was really built in the 1960s,” he said, and was last updated in the 1980s. “It should have happened in 2000 and 2001,” the general said, but “obviously our country was a little bit busy in 2001 based on another horrific act.”



Although the Obama administration spoke of its aspiration to eliminate nuclear weapons around the world, it did designate tens of billions of dollars to upgrade nuclear laboratories and prolong the lives of aging warheads.

In 2014, the Pentagon acknowledged it would have to spend additional billions through 2019 to make emergency repairs on missile silos, bombers, submarines and other infrastructure that had been permitted to languish since the Cold War.

General Weinstein, whose career spans four decades, attributed the increased tensions with Russia in large part to its actions under President Vladimir V. Putin, punctuated by Russia's annexation of the Ukrainian territory of Crimea in 2014.

"If you look at the Russian behavior since 2010 to the way they are now, it's much more aggressive — much more, I'll say, bellicose," he said. "I woke up one day, and the Russians had invaded a sovereign nation, which was not something that was on my scope."

When he looks back at the actions of Russia over time and its dealings with the United States, the general said, "For me the most important thing we can really do is maintain a strong nuclear deterrent."

The American approach toward Russia, he said, "has got to be some behavior that gets them to the table."

General Weinstein is among those who have accused the Russians of violating the Intermediate-Range Nuclear Forces Treaty, signed by the United States and the Soviet Union in 1987. That pact was the first time the superpowers agreed to reduce their arsenals.

Russia has denied it is in violation of the accord, but the dispute constituted an additional irritant in the deteriorating relations with the Kremlin under Mr. Obama.

President Trump has sent mixed signals about his stance toward Russia and nuclear weapons. While he has expressed admiration for Mr. Putin — and has been fighting accusations by critics that Russia meddled in the American election to help him win — Mr. Trump has asserted that he wants to increase America's nuclear might.

In December, Mr. Trump said in a Twitter post that the United States must "greatly strengthen and expand its nuclear capability until such time as the world comes to its senses regarding nukes."

On Tuesday in Washington, Christopher Ford, the National Security Council's senior director for weapons of mass destruction and counterproliferation, offered some further insight into the views of the administration, saying it would re-examine the policy of nuclear disarmament.

"We're reviewing policy across the board — we're no exception in that respect — and that necessarily includes whether or not, among many other things, the goal of a world without nuclear weapons is in fact a realistic objective," Mr. Ford said at the Carnegie International Nuclear Policy Conference. "I do not know where we're going to come out on that."

He also said "unrealistic expectations" of denuclearization had increased the appeal of a global treaty to prohibit nuclear weapons and eventually eliminate them.

A United Nations conference on such a treaty is to be held next week in New York. Mr. Ford said he believed that the conference was a "fundamentally misguided ban-treaty-talk process."



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Mr. Ford also said Mr. Trump “has made it very clear that he would not accept a second-place position in the nuclear weapons arena” and that the military personnel managing American nuclear forces must “have the best available tools.”

<https://www.nytimes.com/2017/03/22/world/americas/us-nuclear-weapons-russia.html>

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Newswise (Charlottesville, VA)

Georgetown Global Health Center Receives \$3.5M Grant for Biosecurity and Pandemic Preparedness

Author Not Attributed

March 23, 2017

The Open Philanthropy Project has awarded a \$3.5 million grant to the Center for Global Health Science and Security (GHSS) at Georgetown University Medical Center to support research focused on improving U.S. and international biosecurity and pandemic preparedness policy.

Led by Rebecca Katz, PhD, MPH, and Julie Fischer, PhD, the GHSS conducts research to help build sustainable capacities to prevent, detect, and respond to public health emergencies worldwide.

“We have seen example after example of how quickly an emerging infectious disease becomes a pandemic that leaves thousands dead or critically harmed including recent examples such as the flu, Ebola, the Zika virus, and yellow fever,” says Katz. “Global health policy should be informed by evidence. With this grant, our center can address some of the critical needs in global health security.”

The three-year grant will be used for improving the international community’s ability to respond to biological attacks and researching international best practices for building laboratory capacity of biosurveillance systems. The grant also supports a review and financial audit of donor funding for global health security.

“With Open Philanthropy Project’s support, our research team can amplify the effort to help build capacity for biosecurity and pandemic preparedness analysis and advocacy outside of government,” Katz says.

The Open Philanthropy Project identifies outstanding giving opportunities, makes grants, follows the results, and publishes its findings. Its mission is to give as effectively as it can and share the findings openly so that anyone can build on them.

“Georgetown is committed to global health equity through research, education and service with a special focus on strengthening communities around the world,” says Edward B. Healton, MD, MPH, executive vice president for health sciences at Georgetown University Medical Center and co-leader of Georgetown’s Global Health Initiative. “We are grateful to Open Philanthropy for this grant that elevates the important and very effective work at the Center for Global Health Science and Security.”

<http://www.newswise.com/articles/georgetown-global-health-center-receives-3-5m-grant-for-biosecurity-and-pandemic-preparedness>

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Phys.org (US)

Single Nucleotide Change Responsible for Allowing H7N9 Flu to Jump from Birds to Humans Found

By Bob Yirka

A team of researchers affiliated with several institutions in Hong Kong and mainland China has isolated a change in a single nucleotide that is responsible for allowing the H7N9 flu virus to replicate in both birds and humans. In their paper published in the journal *Nature Communications*, the team describes their efforts in searching for the factors involved when avian flu jumps to humans and what their findings could mean for reducing the spread of future flu epidemics.

Scientists around the world are very concerned about how viruses spread from animals to humans—the fear is that one day, a super-virus may emerge, one that is both easily transmissible and deadly, potentially killing millions of people around the globe. In this new effort, the researchers focused on H7N9, a flu virus that was first found to jump from birds (mainly chickens) to humans as recently as 2000. It has infected people mostly in China, but its recent history offered an opportunity to learn more about how a virus jumps to humans.

To learn more about the virus, the researchers obtained samples and subjected them to genetic analysis looking for any differences between them and other avian flu viruses that do not spread to humans. They found a unique nucleotide (an RNA building block) substitution called NS-G540A in the NS segment—a mutation that allowed the virus to replicate in both avian and human (and other mammalian) hosts. They report that they found the mutation on some other flu variants as well, such as H9N2.

The researchers note that in addition to learning more about how a virus can make the leap between species, the identification of the nucleotide also offers the medical community a biomarker—testing chickens and other fowl infected with a flu variant for the marker would allow for identifying birds carrying a flu variant that can cause infections in the people that handle them. They note also that they found no evidence that the mutation played a role in allowing the virus to spread between humans once it made the leap from an avian source.

More information: Xiaofeng Huang et al. An NS-segment exonic splicing enhancer regulates influenza A virus replication in mammalian cells, *Nature Communications* (2017). DOI: 10.1038/ncomms14751

Abstract

Influenza virus utilizes host splicing machinery to process viral mRNAs expressed from both M and NS segments. Through genetic analysis and functional characterization, we here show that the NS segment of H7N9 virus contains a unique G540A substitution, located within a previously undefined exonic splicing enhancer (ESE) motif present in the NEP mRNA of influenza A viruses. G540A supports virus replication in mammalian cells while retaining replication ability in avian cells. Host splicing regulator, SF2, interacts with this ESE to regulate splicing of NEP/NS1 mRNA and G540A substitution affects SF2–ESE interaction. The NS1 protein directly interacts with SF2 in the nucleus and modulates splicing of NS mRNAs during virus replication. We demonstrate that splicing of NEP/NS1 mRNA is regulated through a cis NEP-ESE motif and suggest a unique NEP-ESE may contribute to provide H7N9 virus with the ability to both circulate efficiently in avian hosts and replicate in mammalian cells.

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Journal reference: Nature Communications

Read more at: <https://phys.org/news/2017-03-nucleotide-responsible-h7n9-flu-birds.html>

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Science Daily (Rockville, MD)

'Lab-on-a-Glove' Could Bring Nerve-Agent Detection to a Wearer's Fingertips

Author Not Attributed

March 22, 2017

Printable, stretchable sensors on protective gloves can detect organophosphate nerve agents and pesticides.

There's a reason why farmers wear protective gear when applying organophosphate pesticides. The substances are very effective at getting rid of unwanted bugs, but they can also make people sick. Related compounds -- organophosphate nerve agents -- can be used as deadly weapons. Now researchers have developed a fast way to detect the presence of such compounds in the field using a disposable "lab-on-a-glove." The report on the glove appears in the journal ACS Sensors.

Organophosphate nerve agents, including sarin and VX, are highly toxic and can prevent the nervous system from working properly. Organophosphate pesticides are far less potent but work in a similar way and can cause illness in people who are exposed to them, according to the U.S. Centers for Disease Control and Prevention. Detecting either type of these sets of compounds accurately and quickly could help improve both defense and food security measures. So, Joseph Wang and colleagues set out to develop a wearable sensor that could meet the requirements of field detection.

The new wearable, flexible glove biosensor carries out the sampling and electrochemical biosensing steps on different fingers, with the thumb finger used for collecting the nerve-agent residues and an enzyme immobilized on the index finger. The researchers created stretchable inks to print the collection and sensing elements on these fingers. Detection of the collected residues is performed when the thumb touches the printed enzyme-based organophosphate biosensor on the glove index finger. So, a user would swipe the thumb of the glove on a surface for testing, then touch the thumb and index fingers together for the electrochemical analysis. For real-time results, the voltammetric data are sent via a reusable Bluetooth device on the back of the glove to a user's mobile device. Testing showed that the glove could detect organophosphate pesticides methyl parathion and methyl paraoxon on various surfaces -- including glass, wood and plastic -- and on produce. The researchers say the sensor could be used in both security and food safety settings.

Journal Reference:

Rupesh K. Mishra, Lee J. Hubble, Aida Martín, Rajan Kumar, Abbas Barfidokht, Jayoung Kim, Mustafa M. Musameh, Ilias L. Kyratzis, Joseph Wang. Wearable Flexible and Stretchable Glove Biosensor for On-Site Detection of Organophosphorus Chemical Threats. ACS Sensors, 2017; DOI: 10.1021/acssensors.7b00051

<https://www.sciencedaily.com/releases/2017/03/170322103708.htm>

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Stars and Stripes (Washington, DC)

US, South Korean Soldiers Practice Taking Out Chemical-Weapons Labs

By Marcus Fichtl

March 23, 2017

Heavy infantry soldiers traded tracks and wheels for a trip through the clouds during air-assault training this week in South Korea.

Four hundred U.S. and South Korean troops took part in the two-day Warrior Strike 6 exercise, which wrapped up Wednesday at Rodriguez Live Fire Range near the tense border with the North.

Soldiers from the 1st Armored Brigade Combat Team, 1st Infantry Division dropped in from Black Hawk and Chinook helicopters to meet local ground forces before assaulting a mock village containing multiple booby-trapped labs suspected of making the lethal nerve agent sarin.

The proliferation of chemical weapons on the battlefield remains a concern, said 1st. Lt. Stephanie Hetland, 25, a chemical officer from St. Augustine, Fla.

“They kill very quickly with very small amounts, and the means to make them has been pretty widespread for a long time,” she said.

Soldiers are trained to clear the sites before calling in chemical-support personnel to identify the agents, Hetland said.

North Korea is thought to possess up to 5,000 tons of chemical weapons and a capacity to create 12,000 tons, according to a December 2015 report by Nuclear Threat Initiative, a Washington-based anti-nuclear proliferation group.

Capt. Shane Murray, 28, a fire support officer, said the soldiers from the Fort Riley, Kan.-based combat team — in South Korea for a nine-month rotational deployment — would be ready to hop on helicopters and do this for real tomorrow.

“We’ve been practicing this since we’ve been here,” the Chicago native said.

Warrior Strike 6 ran alongside Key Resolve and Foal Eagle, bilateral exercises underway on the peninsula.

<https://www.stripes.com/news/us-south-korean-soldiers-practice-taking-out-chemical-weapons-labs-1.460118>

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European Leadership Network (London, UK)

Bringing Europe Back Into the Arms Control Game

By Lukasz Kulesa

March 20, 2017

In the period between the US election and the inauguration of Donald Trump, many commentators predicted that arms control might be an area where the leaders of the US and Russia could make quick progress. Some even suggested that Trump might be so eager to pursue a deal with Russia that he could offer Putin some ‘ice-breaking’ gifts, such as a freeze on further progress of the US European Missile Defence program. Yet, instead of a US-Russia honeymoon, tensions have flared up. Not only is the INF Treaty compliance issue back with a vengeance, but President Trump has



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declared his support for broad US nuclear modernization with his “top of the pack” comment and has deplored New START as a “bad” and “one-sided” deal.

Paradoxically, these troubling developments open space for Europe to insert its own ideas and pursue its own interests in the area of arms control, both nuclear and conventional. If the US and Russia took the lead (as they had done in the past), there would be very little for Europe to do. It could just sit on the sidelines and wait for the results, with some Europeans cheering the bilateral effort and others fearing that the US is making too many concessions to the Russians. In the absence of joint US-Russia leadership on arms control, Europe should use this opportunity to take more responsibility.

This is not just about filling up diplomatic space: some of the current military challenges (that arms control is meant to address) have a direct and negative impact on the security of Europe. For example, the alleged deployment of INF-prohibited cruise missiles in the European part of Russia would mean adding a number of Central and Western European targets - military bases, logistical hubs, decision-making centers - to the prompt strike plans of the Russian military. Also, new Russian and NATO deployments and exercises, and the ‘close encounters’ between Western and Russian ships and aircraft that often accompany them, are taking place in the middle of Europe, including in the Baltic and Black Sea areas. Not to mention that any military potential conflict, no matter how ‘limited’ it may look from the perspective of Moscow or Washington, would surely bring death and destruction to Europe - just look at Eastern Ukraine. Arms control should not be an abstract issue for Europeans.

At the same time, Europe needs to be wise on how it spends its political capital. For example, recent discussion about a “European” nuclear deterrent, while intellectually stimulating, sets us on the wrong path. It rests on two questionable assumptions: firstly, that the U.S. extended nuclear deterrence guarantees to Europe have been de facto invalidated with the arrival of Trump (there’s no evidence of a change of US policy that would justify jumping to such conclusions) and secondly, that this deterrent can be replaced with a “European” solution, built on the basis of the French and British nuclear capabilities. Lots of time can be spent on devising such a European solution, but with little chance of it being accepted by the two European nuclear weapon states, let alone operationalized.

Just as problematic would be an effort to unite Europe around embracing a treaty prohibiting nuclear weapons. Some European states have spearheaded, or at least supported, the effort to start the negotiations on such a treaty, and will be present in New York on March 27 for the first round of talks. Others, however, including almost all NATO members have clearly stated their reservations towards the ban treaty proposal. These are not good conditions for forging a European consensus around nuclear disarmament: the division will likely to be there for years.

What elements of arms control agenda should the European states focus on in 2017?

There is, of course, a list of ‘safe’ topics, including continued support for existing international regimes and agreements in the area of non-proliferation, the Joint Comprehensive Plan of Action with Iran included. While these are popular goals to be pursued further, more needs to be done in two areas directly relevant in the context of the West-Russia crisis.

Firstly, all Europeans have a stake in securing the future of the INF Treaty. The current situation, with US openly accusing Russia of treaty violation (and no European state contradicting it, officially or informally), and Russia rejecting this and counter-accusing the US, represents the worst possible outcome for Europe. The non-compliance charge challenges the rule-based international system



that Europe hopes to maintain. The threat of deployment presents a military challenge to European militaries and NATO.

Europe should invest its own political capital in resolving the INF compliance issues. European leaders, especially those planning to visit Moscow in the coming weeks, including British Foreign Secretary Boris Johnson and German Chancellor Angela Merkel, should bring up Russian INF Treaty compliance in their talks as a major security concern for their countries and an obstacle to improving relations with Russia. European states can also be explicit, when talking to Russia, that they will support a tougher US stance, including deployment of additional defensive and offensive systems to Europe, if no satisfactory solution is achieved regarding the INF. While acknowledging the existence of Russian counterclaims about US non-compliance, Europeans should not be led astray: deployment of INF-prohibited weapon systems by Russia would strike at the very heart of the treaty, while Russian claims are about a set of issues (test missiles, UAVs, missile defence launchers) which can be resolved through expert dialogue.

Secondly, conventional arms control remains an area where all European countries, whether members of NATO or not, have an interest in re-establishing conditions of relative military stability in the continent. These were guaranteed in the 1990s by the Treaty on Conventional Armed Forces in Europe (CFE), but the treaty remains moribund. Granted, the attempt to 'reset' conventional arms control talks proposed by the German Foreign Minister Steinmeier in 2016 has made little progress. Yet, the challenges to European security listed by Steinmeier remain relevant, and the politically-binding Vienna Document cannot substitute for a legal instrument limiting the levels of major weapon systems in Europe.

A new, better prepared initiative may have improved chances of success. The European countries who objected to some details of Steinmeier's plan can probably be persuaded to support a more general initiative which would spell out the mandate for conventional arms control negotiations. Under President Trump's leadership, the US would probably not spend too much time on the details of a European conventional arms control system. At the same time, it may be interested in negotiating a 'good deal', which would keep US Army's military engagement in Europe at relatively low levels. And with the majority of Europeans and the US on board, the Russian response to 'Steinmeier 2.0' initiative might be different than in 2016.

Europe can remain a passive subject of an arms control game played between Moscow and Washington. It can also tinker with grandiose ideas with little chance of implementation. Alternatively, it can identify and pursue new opportunities for increasing its own security through arms control. The choice is ours to make.

<http://www.europeanleadershipnetwork.org/bringing-europe-back-into-the-arms-control-game-4578.html>

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Sputnik (Moscow, Russia)

Trump Would Engage With Russia on Arms Control, But Maintain Nuclear Superiority

Author Not Attributed

March 21, 2017

US President Donald Trump would be interested in engaging with Russia on arms control if he decides Moscow can be trusted, but would ensure the United States enjoys nuclear superiority, National



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Security Council Weapons of Mass Destruction and Counter-Proliferation Senior Director Chris Ford said on Tuesday.

Ford explained the engagement would involve "some kind of discussion... if that were felt to be in the interests of both parties, and if we felt we could trust Russia to keep its word after the problems we've been having with them over the IMF [Intermediate-Range Nuclear Forces] treaty."

"[Trump] has made very clear that he is interested in broader engagement with Russia on matters of mutual interest," Ford said in a speech at the 2016 Nuclear Policy Conference sponsored by the Carnegie Endowment for International Peace.

Russia has tested and deployed a specific type of land-based cruise missile meant to keep off the battlefield in violation of the INF treaty, Ford pointed out.

"The INF violation problem is of great concern to us. We're taking it very seriously," he added.

Russia has repeatedly said to be in compliance with the INF treaty and it is the United States that has violated the agreement by deploying a missile shield in Romania and Poland.

Ford argued the United States should do more to keep Russia from repeating such behavior if there is any possibility of bringing Russia back in compliance with the treaty.

"I think we need to do more to disincentivize violations... and do more to make sure Russia doesn't receive a military advantage from such violations," he noted.

However, Ford claimed Trump will ensure the United States does what is necessary to maintain nuclear forces superiority.

"The President has made very clear that he will not accept a second-place position in the nuclear weapons arena, and he has made very clear that he also wants to ensure that the men and women of our nuclear forces have the very best," he said. "An arms race with American technology and military budgets is not something that [Russia] would find particularly attractive."

The INF treaty was negotiated and signed by the United States and the Soviet Union in 1987. Under the treaty — which Russia is a party to as Soviet successor state. Both countries agreed to give up and no longer develop land-based missiles with ranges between 500 and 5,500 kilometers.

<https://sputniknews.com/politics/201703211051815664-trump-russia-nukes/>

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The Boston Globe (Boston, MA)

While Trump Talks Tough, US Quietly Cutting Nuclear Force

By Robert Burns

March 19, 2017

The Air Force is quietly shrinking its deployed force of land-based nuclear missiles as part of a holdover Obama administration plan to comply with an arms control treaty with Russia.

The reductions are nearing completion despite President Trump's argument that the treaty gives Moscow an unfair advantage in nuclear firepower.

The reduction to 400 missiles from 450 is the first for the intercontinental ballistic missile, or ICBM, force in a decade — when the arsenal came down from 500 such weapons. The Air Force says the

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latest cut in Minuteman 3 missiles will be completed in April, leaving the deployed ICBM arsenal at its smallest size since the early 1960s.

In 2014, President Barack Obama's administration announced the planned ICBM reduction to tailor the overall nuclear force, including bombers and nuclear-armed submarines, to the New START accord that the United States and Russia sealed in 2010. Both nations must comply with the treaty's limits by February 2018.

The shrinking of the ICBM force runs counter, at least rhetorically, to Trump's belief that the United States has fallen behind Russia in nuclear muscle. In December, he tweeted that America must "greatly strengthen and expand its nuclear capability until such time as the world comes to its senses regarding nukes." He has criticized New START as a bad deal.

It's unclear how Trump intends to conduct a nuclear expansion, which critics call unnecessary and a potential drain on funds needed for non-nuclear forces. A long-term plan to replace and modernize the current nuclear force is already underway and will end up costing hundreds of billions of dollars.

As of March 14, the Air Force had 406 Minuteman missiles in launch-ready silos, Major Daniel Dubois, an Air Force spokesman, said Friday. In September the number was 417. Dubois said the number will be down to 400 by April. Also as part of the treaty's compliance process, the Air Force in January finished converting 41 B-52H bombers to non-nuclear status.

Michaela Dodge, a defense policy analyst at the conservative Heritage Foundation think tank, says the United States should get out of New START.

"There should be a way to reverse those decreases," she said, referring to the 50 Minuteman missiles pulled out of their silos. "As long as Russia continues to increase the number of its nuclear warheads under New START, we should not be decreasing."

Russia's warheads have surpassed the treaty limit of 1,550, and the United States is below the limit. But by next February, neither is expected to be above.

Daryl Kimball, executive director of the Arms Control Association, said Moscow would honor its New START commitment.

"It's important for the United States to stay on schedule," he said, arguing that such efforts "will help ensure that Russia does the same."

Based on military calculations, Obama declared in 2013 that the United States could safely reduce its nuclear force by one-third from New START levels. But negotiations to do so never took place. They seem even unlikelier after Russia's military actions in Ukraine and Kremlin rhetoric that US officials have considered reckless and dangerous. However, Trump's suggestions of interest in a grand bargain with Russia, including nuclear reductions, could provide an avenue for fresh talks.

After taking office, Trump ordered a review of nuclear forces, a Pentagon-led process likely to take a year or more.

<https://www.bostonglobe.com/news/nation/2017/03/19/while-trump-talks-tough-quietly-cutting-nuclear-force/UEYAS4XohUzF9vRC5BqwMN/story.html>

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Sputnik (Moscow, Russia)

Russia Ready to Discuss Nuclear Arsenal Reduction - Foreign Minister

Author Not Attributed

March 23, 2017

Russia is ready to discuss possible of reducing nuclear arsenals, Foreign Minister Sergey Lavrov said.

Russia is ready to discuss the possibility of reducing nuclear arsenals, Foreign Minister Sergey Lavrov said at a Russian Armed Forces General Staff Military Academy lecture Thursday.

"We are ready to discuss the possibility of further reducing nuclear capabilities, but only taking into account all the factors and not just the number of strategic offensive weapons," Lavrov said.

Meanwhile, he added that Russia is ready for dialogue with the United States on the reduction of strategic nuclear weapons and believes that more countries need to be involved in the process.

"We are ready, but the conversation must be conducted taking into account all factors that affect strategic stability," Lavrov said at a Russian Armed Forces General Staff Military Academy lecture.

He underscored the need to wait for Washington to finalize its priorities in the area, and stressed the need for more countries' involvement in the reduction of nuclear arms.

Both Russia and the United States agreed in 2010, under the New Strategic Arms Reduction Treaty (START) treaty, to decrease the number of deployed nuclear warheads to 1,550 and the number of deployed missiles and bombers to 700. The agreement will expire in 2021, and could be prolonged for no more than five years.

US President Donald Trump has been critical of the deal that he regards as "bad" and "one-sided," raising concerns.

On February 24, Alexey Pushkov, a senior member of the Russian parliament's upper house, said Trump's pledge to boost US nuclear capacities could send the world back into the 20th century by challenging all treaties on strategic arms reduction. On February 28, Russian Deputy Minister of Defense Alexander Fomin said Moscow and Washington should work together under the existing treaty.

On March 8, head of US Strategic Command (STRATCOM) Gen. John Hyten said a potential cancellation of the New START could lead to an arms race.

EU foreign policy chief Federica Mogherini said on Monday that the European Union favored deeper cooperation between the United States and Russia on nuclear non-proliferation efforts.

<https://sputniknews.com/russia/201703231051871791-russia-mfa-nuclear-arsenal/>

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The National Interest (Washington, DC)

The Ultimate Guide to North Korea's Nuclear Weapons Program

By Kyle Mizokami

March 20, 2017

The Democratic People's Republic of Korea (DPRK) has pursued a nuclear weapons program for decades. In 2006, despite sanctions and economic hardship, North Korea tested its first nuclear weapon. It has since conducted two more successful tests in 2009 and 2013.

That is pretty much the extent of unclassified knowledge about Pyongyang's nuclear arsenal.

North Korea openly admits it has nuclear weapons. In fact, the hermit kingdom brags about its arsenal and regularly threatens to annihilate its enemies. Other than that, North Korea has been vague about its nukes and declines to discuss details.

It's no surprise that little is known about North Korea's nuclear program. Information about a country's nukes can be hard to come by, even in free societies like Israel's. But the Stalinist-inspired North Korean dictatorship is one of the most isolated regimes on Earth, and information coming in and out of the country is tightly controlled.

As a result, almost all discussion about the North Korean nuclear program is based on guesses and estimates. We can make some very good guesses about the country's nuclear goals, but invariably some guesses will be better than others. Here are five guesses we can make about the North Korean nuclear program.

1. Nuclear weapons are meant to guarantee the security of the regime:

The 1991 Persian Gulf War was not just a disaster for Saddam Hussein. On the other side of the world, the North Korean regime stood by and helplessly watched as the Iraqi military — outfitted similarly to the Korean People's Army — was destroyed in a matter of days. A revolution in military affairs, combined with a new generation of weapons and tactics demonstrated the increasing irrelevance of sheer numbers.

The lesson was clear: the days of North Korea's military might protecting the regime were over. Kim Jong Il, who assumed power in 1994, made the production of nuclear weapons — and the means to deliver them — his number one priority.

Being described as a member of the "Axis of Evil" in 2001 undoubtedly added to his sense of urgency. Nor did Allied military action in 2011 against Muammar Gaddafi's Libyan regime after it gave up its program to develop weapons of mass destruction reassure Pyongyang.

Kim succeeded in his plan. Thanks to North Korean nuclear weapons and the uncertainty surrounding them, the United States and South Korea seem unlikely to undertake major military action against Pyongyang, lest it trigger a nuclear response from the DPRK. The North Korean regime is now virtually invulnerable to outside threats.

The North Korean bomb is now a key part of the regime's survival strategy. It may be the survival strategy.

2. The number of North Korean nuclear weapons is unknown:

We know the North has had at least three nuclear weapons — the three it tested. We don't know how many more it has stockpiled. North Korea has not stated how many nuclear weapons it has, and nobody outside of Pyongyang knows for sure. Estimating North Korea's nuclear arsenal is made

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even more difficult because its early weapons may have been inefficient designs with a relatively low explosive yield.

In 2008, North Korea declared it had 38.5 kilograms of weapons-grade plutonium. It also has highly enriched uranium (HEU) that it can use to build a nuclear weapon, but the DPRK has not declared how much of the material it has. North Korea also claims it restarted the Yongbyon nuclear plant in 2013, meaning it has been producing fissionable material for the last two years.

In 2012, analyst David Albright estimated North Korea had enough material to build up to eleven nuclear weapons. In 2015, the US-Korea Institute at SAIS estimated [5] it had between ten and sixteen devices, of those between six and eight were made of plutonium and another four to eight made out of HEU. Further, the institute claimed that under the projected worst case scenario, North Korea could have 100 weapons by 2020.

3. Current methods of delivery for the North's nukes are unknown:

There are a limited number of ways to deliver a nuclear weapon to a target. Bombs, artillery shells, and missiles based on aircraft, ships or ground vehicles are all possible delivery systems. Most, but not all, require miniaturization and ruggedization to allow them to survive the journey to the target.

North Korea may have mastered none of these systems, or it may have mastered all of them.

North Korea has worked for decades to improve its missile force, turning intermediate-range ballistic missiles into something that can hit the United States. It has also been working on making a weapon small and durable enough to arm a missile. North Korea claimed that its 2013 nuclear test involved miniaturizing a weapon.

In its 2014 defense white paper, South Korea stated the North Korean regime has the ability to place a nuclear weapon atop a ballistic missile. Joel Wit and Sun Young Ahn of the U.S.-Korea Institute assess the North as being able to fit a nuclear weapon on a Nodong medium range nuclear missile or Taepodong-2 long-range ballistic missile.

Even if miniaturization has eluded the DPRK, there remain other ways it could deliver a nuclear weapon. It could simply dig a tunnel and set off a weapon somewhere south of the demilitarized zone. Nor is Incheon or Seoul that far away from the border. Another option would be to load it onto a commercial ship and slip it into the port city of Busan.

4. The North's nuclear doctrine is unknown

Under what circumstances would North Korea use nuclear weapons? Does it have a “no first use” policy? Does it consider nukes offensive or defensive weapons? Maybe both? Are Pyongyang's nukes strategic or tactical?

Outsiders — which is everyone outside of North Korea — have no firm answers, a disturbing notion since understanding under what circumstances North Korea would use a nuclear weapon is essential to avoiding a nuclear war.

Other countries are more explicit. China and India, for example, have both made a pledge of “no first use” of nuclear weapons. Neither will use nuclear weapons unless they are nuked first. It's an admirable policy of restraint and pre-tension signaling. North Korea, not surprisingly, has taken a different tack and nuclear ambiguity has become an essential part of the Kim's nuclear strategy.

Not understanding the terms under which North Korea will use nukes has a chilling effect on any potential military action. Tit-for-tat artillery exchanges in retaliation for bombarding South Korean territory might potentially trigger a nuclear war. Rolling the combined might of the South Korean



and U.S. armies up to the entrance of the Ryugyong Hotel might not trigger nuclear war. We really don't know.

Which just might be the whole point.

5. Giving away nukes would probably end the Kim regime

Nuclear weapons have become the guarantor of the Kim dynasty. But by pushing so hard for nuclear weapons, the Kims may have fallen into a trap of their own making.

North Korea has long maintained that it preserves the "real" spirit of the Korean people. It safeguards this gem of Koreanness from the imperialist United States and the puppet government in Seoul. That's the whole point of heavily arming itself and cutting itself off from the outside world.

The Kim dynasty has defined the United States as the antithesis of Koreanness. The Yankee imperialist enemy has helped legitimize multi-generational rule by the Kim family, as well as justify repressive security measures, harsh living conditions, lack of economic progress and the generally low level of prosperity.

If Kim Jong Un were to cut a deal with the United States and other powers to relinquish his nuclear weapons, he would be acknowledging that the existential threat no longer exists. And if there's no longer a threat to North Korea, why should the people tolerate deprivation, sacrifice and the Kims?

North Korea's nuclear arsenal is not going away anytime soon. It will likely continue to grow. Getting to the bottom about the many uncertainties about Pyongyang's nuclear program will help the rest of the world deal with as ever more dangerous and complex situation. Ambiguity may conceal weakness. It may also conceal strength.

<http://nationalinterest.org/blog/the-buzz/the-ultimate-guide-north-koreas-nuclear-weapons-program-19835>

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The Independent (London, UK)

North Korea Appears To Suffer Failed Missile Launch As Nuclear Weapons Testing Continues

By Ju-min Park

March 22, 2017

US and South Korean military intelligence report incident after explosion spotted at air field near eastern city of Wonsan

A North Korean missile appeared to have exploded just after it was launched, the US and South Korean militaries said on Wednesday after detecting the latest in a series of weapons tests by the nuclear-armed state that have alarmed the region.

The launch attempt was made from near the city of Wonsan, on North Korea's east coast, the same place from where it launched several intermediate-range missiles last year, all but one of which failed.

"US Pacific Command detected what we assess was a failed North Korean missile launch attempt... in the vicinity of Kalma," Commander Dave Benham, a spokesman for US Pacific Command, said in a statement, referring to an air field in Wonsan.

"A missile appears to have exploded within seconds of launch," Benham said, adding that work was being carried out on a more detailed assessment.

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A South Korean military official told Reuters the missile appeared to have exploded just after it was launched.

“It may have exploded right after it took off from a launch pad,” said military official, who declined to be identified.

It was not clear what type of missile it was. The South Korean defence ministry said it was conducting analysis to determine further details.

The increasing frequency of the missile tests has fuelled a growing sense of urgency over how to respond to the isolated, unpredictable state.

North Korea launched four ballistic missiles from near its west coast on March 6 and this week conducted a rocket engine test that its leader, Kim Jong-un, said opened “a new birth” of its rocket industry.

The latest launch came as the US envoy for North Korea policy, Joseph Yun, met his South Korean counterpart in Seoul to discuss a response to the North's weapons programmes.

Just last week US Secretary of State Rex Tillerson visited Japan, South Korea and China and how to handle North Korea was a major issue in his talks.

Speaking in Seoul on Friday, Tillerson said a policy of strategic patience with North Korea had ended and all options, including a military one, were on the table if North Korea threatened South Korean or US forces.

North Korea has conducted two nuclear tests and a series of missile launches since the beginning of last year in defiance of UN resolutions. It is believed to be working to develop nuclear-tipped missiles that can reach the United States.

US President Donald Trump rebuked Kim on Sunday, saying the North Korean leader was “acting very, very badly”.

A senior US official in Washington told Reuters on Monday that the Trump administration was considering sweeping sanctions as part of a broad review of measures to counter North Korea's nuclear and missile threat.

The United States is also deploying an advanced missile- defence system in South Korea. But China objects to the Terminal High Altitude Area Defense system, saying its powerful radar can penetrate deep into its territory, undermining its security.

Undaunted by the possibility of even tougher sanctions aimed at cutting North Korea off from the global financial system, a North Korean diplomat said his government would pursue an “acceleration” of its nuclear and missile programmes.

This includes developing a “pre-emptive first strike capability” and an inter-continental ballistic missile, said Choe Myong Nam, deputy ambassador at the DPRK (North Korean) mission to the United Nations in Geneva.

Japan's Nikkei index and South Korean stocks extended losses slightly after news of a North Korean launch broke but trade was steady overall.

<https://www.independent.co.uk/news/world/asia/north-korea-failed-intermediate-range-nuclear-missile-launch-explosion-kalma-wonsan-kim-jong-un-a7642661.html>

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Channel News Asia (Singapore)

Singapore Develops Quick Diagnostic Tools to Deal with Chemical Attacks

By Lee Li Ying

March 21, 2017

Singapore is stepping up its capabilities to handle chemical attacks as such threats become more pervasive. Defence research organisation DSO National Laboratories has developed a tool that uses weather data to inform authorities' decisions to move the public away from toxic plumes, and a rapid diagnostic kit that can ease the load on hospitals in the event of an attack.

The new technologies were showcased at the 8th Singapore International Symposium on Protection Against Toxic Substances (SISPAT) held on Tuesday (Mar 21).

In the event of a chemical attack, the Hazardous Material (HAZMAT) Decision Support Tool gathers data from environment sensors, weather stations and wind fields to detect what chemical components are in a toxic plume and predict how they might travel.

“This information will help responders to first mitigate the source and second, to evacuate the people who are potentially under threat,” said Dr Ma Yifei, programme manager at DSO National Laboratories.

Another tool is the portable Scentmate Kit, which can detect nerve agents and screen up to 96 people within an hour, compared to 16 hours in a lab setting. “Using this kit in a timely fashion can actually filter out those people who don't need medical attention, so that the hospital's limited resources can be reserved for those people (who do),” said Tan Yong Teng, senior defence scientist at DSO National Laboratories.

DSO National Laboratories is looking to deploy these tools for commercial use within the next three years.

Chief defence scientist at the Ministry of Defence, Quek Gim Pew, highlighted that the use of chemical weapons has increasingly shifted from rogue states to transnational terrorist organisations, whose operations are “typically small and unobtrusive”, making detection and monitoring of chemical weapons “difficult”.

Mr Quek also pointed to the growing use of toxic industrial chemicals (TICs). While these are relatively less toxic than chemical warfare agents, these industrial chemicals are often readily available in large quantities, he said.

“When used in sufficient amounts, TICs can achieve the same mass hysteria and health effects as chemical warfare agents ... (TICs) are not as highly regulated as the chemical warfare agents or their precursors. This is a weakness that the terrorists will continue to exploit to aid their nefarious purpose.”

Mr Quek said Singapore will have to remain vigilant to guard against such threats. “We have to accept the fact that CBRNE (chemical, biological, radiological, nuclear and explosives) agents will be ever-present as a borderless threat, fuelled by globalisation and the Internet.”

<http://www.channelnewsasia.com/news/singapore/singapore-develops-quick-diagnostic-tools-to-combat-chemical/3613038.html>

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Nikkei Asian Review (Tokyo, Japan)

China Not to Join U.N. Talks on Treaty to Ban Nuclear Arms

Author Not Attributed

March 20, 2017

China said Monday it will not participate in U.N. negotiations beginning next week in New York on a treaty outlawing nuclear weapons.

China, one of the five major states possessing nuclear arms, sent its officials to a preparatory meeting on the negotiations in mid-February and was weighing up the possibility of it joining them at the U.N. headquarters from March 27.

Foreign Ministry spokeswoman Hua Chunying said "after careful examination" China made the decision to maintain the framework of the Treaty on the Non-Proliferation of Nuclear Weapons.

The four other major nuclear states -- Britain, France, Russia, and the United States -- from the beginning had no plans to take part in the U.N. negotiations.

Speaking at a press briefing, Hua said China's position to support "complete prohibition and thorough destruction of nuclear weapons has not changed," despite its non-participation.

<http://asia.nikkei.com/Politics-Economy/International-Relations/China-not-to-join-U.N.-talks-on-treaty-to-ban-nuclear-arms>

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Newsweek (New York, NY)

Russia's New 'Satan' Nuclear Weapons System Could Wipe Out Texas Or France, But Testing Is Behind Schedule

By Cristina Silva

March 24, 2017

Russia has for months been testing a giant nuclear weapons delivery system that can carry 10 heavyweight warheads—enough power to wipe out Texas or France. But the RS-28 Sarmat intercontinental ballistic missile known in Russia as "Satan 2" has been delayed yet again, suggesting Moscow is having a harder time than expected updating its nuclear arsenal.

Russia began testing the Sarmat last year and had been expected to enter it into service in 2018. It was slated to be Russia's first new intercontinental ballistic missile in decades and much bigger than its U.S. counterpart, the Minuteman III, which carries three warheads.

The Russian weapon was designed to push through U.S. missile defenses. It is expected to replace the RS-36M, which was known as "Satan" by NATO in the 1970s, NBC News reported.

But it's unclear now when the intercontinental nuclear missile will join Russia's fleet. New testing might not happen until later this year, the Moscow Times reported Thursday. The cause of the setback has not been reported.

Russia's Makeyev Rocket Design Bureau declassified in October the first image of the Sarmat. It was accompanied by a short text: "In accordance with the Decree of the Russian Government 'On the State Defense Order for 2010 and the planning period 2012-2013', the Makeyev Rocket Design

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Bureau was instructed to start design and development work on the Sarmat. In June 2011, the Russian Ministry of Defense signed a state contract for the Sarmat's development. The prospective strategic missile system is being developed in order to create an assured and effective nuclear deterrent for Russia's strategic forces."

Russia has the world's most nuclear weapons with 7,300. The U.S. is in second place with 6,970 nuclear weapons. Only seven other nations in the world have nuclear weapons, and combined they have fewer weapons than either the U.S. or Russia. They are France, China, United Kingdom, Pakistan, India, Israel and North Korea, according to the International Campaign to Abolish Nuclear Weapons.

<http://www.newsweek.com/russia-new-satan-nuclear-weapons-system-could-wipe-out-texas-france-573199>

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Sputnik (Moscow, Russia)

Russian Scientists Create Powerful Antidote for the Most Deadly Chemical Weapons

By Regina Konstantinova

March 21, 2017

Chemists from Moscow State University created nanoparticles capable of neutralizing the most powerful types of chemical weapons, such as the VX gas and others similar highly toxic pesticides.

The most toxic types of chemical weapons, which can kill a person in minutes even in minimal concentrations, belong to the class of so-called organophosphorus chemical compounds. These substances were first synthesized in Nazi Germany in the late 1930s, but had been widely spread in the military industry only in the middle of the last century, when the most dangerous types of these substances were created, such as the British nerve gas VX and its Soviet analog, VR.

According to the 1997 Chemical Weapons Convention, all stocks of VX, VR, sarin and other combat gases were to be destroyed in all countries of the world. Only Russia and the United States recognized the presence of such substances on their territories, but international security experts suspect that stocks of these gases exist in a number of countries in the Middle East and South Asia. In addition, other less hazardous versions of organophosphorus compounds are still used as pesticides.

Therefore, the problem of neutralization of poisons and pesticides remains a major problem for scientists. A group of Russian chemists, led by a professor at the University of North Carolina at Chapel Hill and Lomonosov Moscow State University, Alexander Kabanov, suggest using special nanoparticles — "nanozymes."

"In the end of the 1980s, we proposed using 'polymeric micelles' — spontaneously formed polymeric nanoparticles — for delivery of small drugs. This concept further developed by us as well as many others across the globe eventually resulted in several drugs tested in human trials and being approved for human use," professor Kabanov told Sputnik.

"Soon we started working on polymeric micelles that can incorporate biopolymers via electrostatic interactions. Much of this work was done in the University of Nebraska Medical Center in Omaha, Nebraska where I moved in 1994," he said.

By 2010, when the Russian Government announced a program of "Megagrants" to attract foreign scientists to Russia, Kabanov's group had already successfully applied polymeric micelles for

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delivery of enzymes to the brain to treat stroke, hypertension, Parkinson's disease and other disorders. Their Megagrant award was to form a laboratory in Moscow State University, where they focused their work on projects to improve human health.

"Our goal was to apply our nanotechnology, which we called 'nanozyme,' to enable the medical use of enzymes developed by the colleagues in Moscow. One of those enzymes was organophosphorus hydrolase that is capable of degrading toxic pesticides and chemical warfare agents at very high rate," the scientist explained.

However, this enzyme had some disadvantages: because of its bacterial origin, an immune response was observed as a result of its delivery to the organism of mammals. Moreover, organophosphorus hydrolase was quickly removed from the body.

"We discovered that as result of inclusion of this enzyme in a nanozyme particle the immune response becomes weaker and, on the contrary, both the storage stability of the enzyme and its lifetime after delivery to an organism considerably increase. Experiments on rats have proven that such a nanozyme efficiently protects organisms against lethal doses of highly toxic pesticides and even chemical warfare agents, such as VX nerve gas," professor Kabanov said.

According to the scientist, several countries other than Russia are capable of producing the very same enzyme — organophosphorus hydrolase. There are also some attempts to use nanotechnology or chemical modifications to improve the performance of such enzymes in the body. "But the simplicity of our approach is very important for its future practical use," he noted. "You could get an organophosphorus hydrolase nanozyme by the simple mixing of aqueous solutions of an enzyme and a safe biocompatible polymer, which has actually been used in human trials for a different application."

In the experiment held by Kabanov's team, the results of which were published in the Journal of Controlled Release, rats received lethal doses of the two substances, VX and a pesticide called paraoxon. The administration of nanoparticles before and immediately after the administration of the poisons saved all the rats from pesticide exposure and 80% of the animals from nerve gas intoxication, while all the specimens of the control group had died.

"Organophosphorus poisons such as VX act very fast often killing the subject within fifteen minutes after the lethal dose is administered. However, our nanozyme also acts very fast. We report in our scientific paper that animals injected with this nanozyme ten minutes after acute intoxication with a lethal dose of a paraoxon rapidly abolished all signs of intoxication and survived," the professor said.

So, this nanozyme can act as an antidote and could save a poisoned subject if applied fast enough. For example, the brother of North Korean leader Mr. Kim Jong-nam, who apparently was poisoned by the VX gas, could have also been saved, if organophosphorus poisoning was recognized and he was rapidly administered a conventional antidote such as a pralidoxime and atropine mixture, according to the chemist.

"Unfortunately, these antidotes do not guarantee a cure and require a high dose. Because of their toxicity and intolerance of part of the population one would not want to use them unless there was clarity that the nerve gas has been applied," professor Kabanov said. "In this regard, nanozymes or other similar very active enzymatic antidotes may prove to be both more effective and safe. This could make their application in case of emergency easier, and, hopefully, save lives."

The scientists hope that their report will inspire other scientists across the globe to develop similar nanoparticles. "It is a very important matter for humankind. The Chemical Weapons Convention has banned chemical warfare agents, but unfortunately not every country appear to follow it, and some



of these agents are relatively easy to produce, which represents a great threat to societies," the chemist stressed.

"There is a need to protect the general population, emergency responders and military personnel against the use of nerve gases by terrorists or rogue regimes. Less known to the general public is that almost 40% of currently used pesticides are nearly as toxic as CWA and the use of these pesticides, due to self-poisoning, annually results in about 300,000 fatalities across the globe. In addition to protecting people exposed to these pesticides, there is also a significant need to protect livestock, as animals are also often poisoned by the use of the pesticides in agriculture," professor Kabanov claimed.

<https://sputniknews.com/russia/201703211051815082-chemical-weapons-toxic-pesticides-antidote/>

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The Independent (London, UK)

Sweden Preparing Hundreds of Nuclear Bunkers Amid Fears of Russian Attack

By Samuel Osborne

March 23, 2017

The bunkers are designed to protect people from the shock wave and radiation from a nuclear detonation

Sweden is reportedly preparing hundreds of nuclear war shelters to prepare for a potential attack from Russia amid growing concerns in the Baltics.

The Swedish Civil Contingencies Agency (MSB) has ordered a review of 350 civilian bunkers on the Baltic Sea island of Gotland, where Sweden has stationed permanent troops.

The shelters are designed to protect people against the shock wave and radiation from a nuclear detonation, as well as chemical and biological weapons.

Mats Berglund, head of civil protection at the MSB, told Sverige Radio the shelters should be checked by the end of the year.

The island's 350 shelters have capacity for around 35,000 people, although Gotland has a population of nearly 60,000.

Over 65,000 shelters were established during the Cold War to protect the Swedish population from the potential threat of nuclear warfare.

All of the shelters are marked with a distinctive orange and blue logo, along with the word skyddsrum (shelter).

It comes after the head of Sweden's intelligence agency warned there is "a real and serious threat against the security" of the country.

While Sapo head Anders Thornberg did not explicitly mention Russia, the country has been building up its military in response to Russia's annexation of Crimea and its "increasing pressure" in the region.

Non-Nato member Sweden has been upgrading its military with a sharp hike in spending and has urged local governments to prepare their civil defence infrastructure and procedures for a future war.



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It recently reintroduced a military draft for both men and women over concerns about increased military action in the Baltic region.

Defence Minister Peter Hultqvist said the left-leaning government was reintroducing the draft because of a deteriorating security environment in Europe and around Sweden.

<http://www.independent.co.uk/news/world/europe/sweden-nuclear-bunkers-russia-attack-nato-baltic-ukraine-norway-a7642686.html>

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Russia Beyond the Headlines (Moscow, Russia)

Why Did the Soviet Union Develop Its Own Atomic Bomb?

By Alexander Vershinin

Determined not to be left behind in the nuclear race, the USSR went atomic.

Nuclear weapons are a serious concern for mankind today, but their creation brought the era of large-scale world wars to an end. Mutual assured destruction compelled the superpowers to effectively lay down their arms and seek dialogue, whereas before conflict may have prevailed.

In the early years of the atomic era, the U.S. was leading the way. In August 1945 Washington demonstrated the power of the devastating nuclear weapons when it dropped two bombs on Japan, sending a warning to countries outside the Western bloc in the process. However, the situation changed on Aug. 29, 1949 when the Soviet Union tested its own nuclear weapon.

The race begins

The idea that the colossal energy released when the uranium atom was split could be used for military purposes was first mooted by physicists in the late 1930s. The pioneers were the Germans, who made more advances than other countries in developing the theoretical basis for the nuclear program. The German atomic project was already up and running in the summer of 1939. Physicists who fled Germany after the rise of Hitler quickly realized what the successful conclusion of the project could lead to. The Germans had to be pre-empted - and the sooner the better.

In August 1939, U.S. President F.D. Roosevelt was handed a letter from the distinguished scientist Albert Einstein. The Nobel Prize laureate in physics drew the president's attention to the fact that the Nazis were conducting research to develop a nuclear weapon and proposed that implementation of a similar project should begin in the U.S. In the subsequent two years, large-scale work was launched in the U.S., significant funds were invested and some of the greatest minds of the time, including Niels Bohr and Edward Teller, were recruited

The USSR knew full well about all of this. Soviet physicists were aware of the work of their foreign colleagues. Soviet intelligence did not sit idly by, either. In June 1940, they had a close eye on the American's early research into uranium-235. A year and a half later, when the Great Patriotic War had already begun (following Germany's invasion of Russia), even more alarming news arrived: Britain could develop a nuclear weapon as early as 1943. This meant that the Germans, whose troops were already nearing Moscow, must also be close to possessing a primed nuclear weapon. The Soviet Union was seriously lagging behind in the nuclear race.



Physicists and spies at work

Information about the successful advances of Western countries in the development of a nuclear weapon was pouring into the Kremlin. Joseph Stalin rapidly realized it was a vitally important issue for Russia. His verdict was unambiguous: "We don't have the bomb: we're working badly!" The Germans were halted outside Moscow, and a breakthrough in the war was soon to follow. But no one could guarantee the situation would not change if the Germans got their hands on the super-weapon. The achievements of the Americans and British were also viewed with alarm: having acquired the atomic bomb, they could overcome Hitler on their own and subsequently threaten the Soviet Union.

In September 1942, the USSR leadership authorized the founding of a specialist laboratory to work on the nuclear project. It was effectively the start of the history of the Soviet atomic program. It was staffed by a small but highly accomplished group of physicists under the overall leadership of Igor Vasilyevich Kurchatov, who is now regarded as the father of the Soviet atom bomb. The intelligence services cooperated closely with the scientists. The Soviet spy network in the U.S. had a complete picture of the progress of the American atomic project, and even knew the locations of the main research center. Significant assistance was also provided by American nuclear physicists sympathetic to the USSR. Thanks to them the blueprints for the American bomb were already on Kurchatov's desk two weeks after it was created in 1945.

End of American atomic monopoly

Germany was crushed without the use of nuclear weapons. The atom bombs the Americans dropped on Hiroshima and Nagasaki in August 1945 were by and large symbolic. It was Washington's way of proclaiming to the whole world that it had the super-bomb. The message was directed above all to Moscow. After the end of World War II, the former allies in the anti-Hitler coalition found themselves on different sides of the barricades. The American and British military drew up plans for a possible war against the USSR. They proposed the bombing of major Soviet cities using nuclear weapons.

This could only be avoided through the elimination of the American nuclear monopoly. Two weeks after the destruction of Hiroshima a special committee was established on Stalin's orders to coordinate all the work on the atom bomb project. It effectively meant the creation of a super-ministry with enormous resources and emergency powers. It was headed by one of Stalin's closest associates, Lavrentiy Pavlovich Beria.

Under his direct leadership, a new industrial sector was born in the USSR in the space of a few years - the atomic industry. Uranium enrichment plants, reactors, centrifuges and factories to make bombs were set up in a short period of time. In Siberia and the Urals, new industrial complexes were built deep in the mountains, from which hundreds of tonnes of solid rock were extracted. Around them whole cities sprang up excluded from maps. Only people connected to the atomic program knew of their existence.

The American leadership was convinced that the USSR would acquire nuclear weapons no sooner than 1954. A nuclear weapon test at the Semipalatinsk range in 1949 came as an unpleasant surprise for the U.S. The Soviet Union managed to destroy the U.S. nuclear monopoly, and in doing so laid the foundations for the international security that the world order rests on to this day.

<http://rbth.com/arts/history/2017/03/23/why-did-the-soviet-union-develop-its-own-atomic-bomb-725898>

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Benzinga (Ann Arbor, MI)

Israel Uses Advanced Outer-Space Missile Produced With Boeing

By Mark Fritz

March 23, 2017

By knocking out a surface-to-air missile from Syria last week with its newest Arrow 3 interceptor, Israel successfully deployed the latest addition to its packed quiver of air defenses, which might be the most sophisticated in the world.

The Arrow 3 missile, which can take out targets outside the Earth's atmosphere, was launched after Israeli fighter jets attacked a Hezbollah arms convoy in Syria heading into Lebanon, the Jerusalem Post said. Hezbollah fights alongside Syrian government forces opposed to U.S.-backed rebels.

Syrian air-defense systems fired three missiles at the Israeli jets, and the Israeli military revealed that one of the ballistic missiles was taken out by the ballyhooed Arrow 3, which is co-produced by the Boeing Co and Israeli Aerospace Industries.

The Arrow 3's deployment was the first successful use of the latest addition to Israeli air defenses, which once were dependent primarily on Patriot missiles developed by the Raytheon Company. Some Patriots are still in use in Israel, and Raytheon makes other missiles that are part of this cutting-edge system.

"I don't think we can say (which country) has the best individual system, but I think it would be fair to say that Israel has the most comprehensive missile defense of any country when all the different systems, radars and integrated command-and-control are taken into consideration," said Jeremy Binnie, a missile analyst for Jane's Defence, a division of IHS Markit Ltd.

U.S. Defense Contractors Guaranteed A Cut Of Israeli Missile Defense

In exchange for the U.S. contribution to the Israeli defense budget, U.S. firms are guaranteed a slice of the Israeli missile budget. According to Defense News, Boeing received \$100 million for the Arrow production. Congress for this year approved \$416 million for other aspects of the complex missile system, with Raytheon expected to receive half the production funding.

The Arrow 3 is only part of Israel's particular air-defense web developed by the government-owned Rafael Advanced Defense Systems Ltd. Binnie said Rafael is marketing aspects of its system to other countries.

From Iron Dome To David's Sling, Israeli Missile Defense In A Nutshell

Here's how Binnie broke down Israel's layered missile system for Benzinga:

Iron Dome: Missiles used for intercepting artillery rockets from common 122mm Russian Grads to tactical ballistic missiles with a range of sixty miles. The system will even be capable of taking out lightweight enemy drones.

David's Sling: Expected to achieve operating capability next month, it is expected to be a more affordable replacement for the U.S.-made Patriots. It's designed for intercepting heavy rockets. Binnie said Israel chose this system rather than upgrade to the PAC-3-series manufactured by Lockheed Martin Corporation. However, Raytheon helped develop the Stunner missile used in this program.

Arrow Weapon System: The Arrow 2 anti-ballistic missile has been used for years for intercepting longer-range ballistic missiles inside the atmosphere. The Arrow 3 was formally inducted into

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service in January for intercepting missiles such as Iran's Shahab-3 medium-range ballistic missile outside the Earth's atmosphere.

<https://www.benzinga.com/analyst-ratings/analyst-color/17/03/9203912/israel-uses-advanced-outer-space-missile-produced-with-b>

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Arutz Sheva (Beit El, Israel)

Trump to Adhere to Iran Deal

By Elad Benari

March 22, 2017

Trump advisor says the United States will continue to adhere to Iran nuclear deal for the time being.

The United States will continue to adhere to the Iran nuclear deal, a senior advisor to President Donald Trump said on Tuesday.

Trump was highly critical of the Iran nuclear deal during the election campaign, saying it was "disastrous" and pledging to annul it.

After he was sworn in as president, Trump described the nuclear deal as "the worst deal I've ever seen negotiated" and accused the Islamic Republic of "disrespecting" the United States because of the deal.

However, National Security Council Senior Director for Weapons of Mass Destruction and Counter-Proliferation Chris Ford said on Tuesday that for the time being the United States would stick to the deal.

"Until such time as we have guidance from above to do something differently, our marching orders are very clear...we will ensure that the United States adheres strictly to its limits under the JCPOA, and we will also work very hard to make sure that Iran does," Ford said during a speech at the 2016 Nuclear Policy Conference, according to the Sputnik news agency.

He added that the Iran nuclear deal is being looked at as part of an "across the board" review of U.S. international agreements and obligations.

However, in the absence of any formal announcement of a change in policy by Trump, Washington will continue to honor its agreements, he stressed.

Yukiya Amano, the head of the International Atomic Energy Agency (IAEA), said recently he was confident of "very good cooperation" with the United States on Iran's nuclear deal, despite Trump's comments against it.

Iranian officials have downplayed Trump's threats to annul the nuclear deal, insisting he cannot do so even if he wishes.

Iran's Foreign Minister Mohammad Javad Zarif has said that Trump would be "surprised" by his country if he annuls the deal, though he did not explain what he meant by that.

<http://www.israelnationalnews.com/News/News.aspx/227084>

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The Times of Israel (Jerusalem, Israel)

Nuclear Secret Spiller Says Israel Still 'Hounding' Him

Author Not Attributed

March 20, 2017

Mordechai Vanunu, released in 2004 after 18 years jail for leaking nuke secrets to newspaper, awaits new sentence

Mordechai Vanunu, who divulged Israel's nuclear secrets, on Monday accused the Jewish state of unnecessarily hounding him 12 years after he was freed from prison, as he appeared in court over breaches of his release terms.

The 62-year-old former nuclear technician was jailed in 1986 for disclosing the inner workings of Israel's Dimona nuclear plant to Britain's Sunday Times newspaper.

He spent more than 10 years of his sentence in solitary confinement.

Israel is believed to be the Middle East's sole — if undeclared — nuclear power, refusing to confirm or deny that it has such weapons.

Upon his release in 2004, Vanunu was slapped with a series of restraining orders, forbidding him from travel, contact with foreigners or speaking to media.

He has twice been jailed for breaking those orders.

In January, Vanunu was convicted of meeting with two US nationals in Jerusalem in 2013 without having permission to do so.

Monday's appearance was a sentencing hearing over that conviction.

His lawyer told the court the meeting was a chat lasting "minutes" in a coffee shop with doctors visiting Israel.

He was cleared of two other charges, one of which related to an interview he gave to Israel's Channel 2 television in 2015.

"I left prison and they put me in another prison," he told the Jerusalem Magistrates Court. "I performed my punishment and they keep on punishing me."

The court did not pass sentence or set a date for sentencing, but Judge Yaron Mientkavich said he would consider ordering him to perform community service.

Vanunu told AFP outside the courtroom that he was confident that he would not return to jail.

"I knew there was no chance I would be going back to prison because they didn't find me guilty on all the charges," he said.

He added that more than 30 years after he worked in the nuclear plant, he had no more to reveal to anybody.

"All the nuclear secrets have gone," he said in English. "I don't have any nuclear secrets, and everything is on the internet."

"After 18 years in prison it's enough and more... they should let me go. All I want is freedom, that's all."



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Israel has refused to sign the nuclear Non-Proliferation Treaty or to allow international surveillance of its Dimona plant in the southern Negev desert.

<http://www.timesofisrael.com/nuclear-secret-spiller-says-israel-still-hounding-him/>

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Sputnik (Moscow, Russia)

US Anti-Iran Sanctions Act Likely to Kill Nuclear Deal, Provoke War - NGO

Author Not Attributed

March 24, 2017

The National Iranian American Council claims that US lawmakers introduced legislation for new sanctions against Iran that could violate the Joint Comprehensive Plan of Action and trigger a broader conflict in the region.

US lawmakers introduced legislation for new sanctions against Iran that could violate the Joint Comprehensive Plan of Action (JCPOA) and trigger a broader conflict in the region, the National Iranian American Council said in a press release.

A new bill introduced in the Senate to increase economic sanctions against Iran to hold them accountable for alleged support of terrorist activities, Senator Ted Corker said in a press release on Thursday.

"The 'Countering Iran's Destabilizing Activities Act of 2017' would risk killing the JCPOA and undoing the restrictions in place on Iran's nuclear program and could very well provoke a military confirmation between the US and Iran," the release stated.

This legislation is introduced at an inappropriate time, the release claimed, considering the Trump administration has not established a policy towards Iran and Iran's Presidential Elections are within two months.

With respect to the elections, new sanctions could shift the balance of Iranian politics from moderate support of engagement with the West to a preference of a "hardline candidate" such as Mahmoud Ahmadinejad, the release stated.

The bill would designate the Army of the Guardians of the Islamic Revolution, a branch of Iran's Armed Forces, as a terror group, the release stated. The bill would also mandate the re-imposition of sanctions on Iranian entities that were de-listed pursuant to the JCPOA, the release stated.

<https://sputniknews.com/politics/201703241051907653-usa-iran-sanctions-provoke-war/>

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Firstpost (Mumbai, India)

Hullabaloo Over India's No-First-Use Nuclear Policy is a Case Of Making a Mountain of a Molehill

By Jaideep Prabhu

March 23, 2017

There has again been speculation recently about India's nuclear doctrine and the value of its no first-use-posture. The reason for the kerfuffle this time are a couple of sentences in former national security advisor Shivshankar Menon's book, *Choices: Inside the Making of Indian Foreign Policy*. Menon writes,

There is a potential grey area as to when India would use nuclear weapons first against another NWS (nuclear weapons state). Circumstances are conceivable in which India might find it useful to strike first, for instance, against an NWS that had declared it would certainly use its weapons, and if India were certain that adversary's launch was imminent.

This has been interpreted to mean that India's no-first-use posture is not credible, which would implicitly exonerate Delhi from the charge — if it is made — that it has quietly changed its nuclear doctrine. Instead, this understanding of Menon's words suggests that the Indian no-first-use policy was a sham from the very beginning.

Menon also writes,

...proportional responses and deterrence were not the preferred posture in the initial stages of the weapons program, for it might tempt adversaries to test the space available below the threshold for full nuclear retaliation... Instead, the logical posture at first was counter-value targeting, or targeting the opponent's assets, rather than counter-force targeting, which concentrates on the enemy's military and command structures.

Here, the object of interrogation is the past tense (emphasis mine) that Menon uses; does he mean to indicate that India initially settled for a massive retaliation against an enemy's cities but later may have surreptitiously modified its doctrine as its weapons systems became more sophisticated in terms of detection and destruction? However, the context of his objectionable grammar is the historical evolution of Indian nuclear thinking from the mid-1980s. Menon is talking about the inter-test years (1974-1998) when India had not publicly weaponised its peaceful nuclear explosion and therefore obviated the need for a nuclear doctrine.

However, the former NSA is not nuclear-shy once red lines have been crossed. As he explains the rationale,

There would be little incentive, once Pakistan had taken hostilities to the nuclear level, for India to limit its response, since that would only invite further escalation by Pakistan. India would hardly risk giving Pakistan the chance to carry out a massive nuclear strike after the Indian response to Pakistan using tactical nuclear weapons. In other words, Pakistani tactical nuclear weapon use would effectively free India to undertake a comprehensive first strike against Pakistan.

Essentially, under India's massive retaliation strategy, military as well as civilian targets would be considered. A purely counter-value massive retaliation by Delhi would leave Pakistan's nuclear arsenal intact and capable of raining nuclear fire on Indian cities. The sudden realisation that the Indian military could potentially go after Pakistani nuclear assets as well as its infrastructure has caused a bit of a stir in some circles.

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There are several problems with this sudden alarmist tone. The most obvious is that this is not a new observation. Aside from the fact that scholars have gleaned every nuance out of India's nuclear policy already, the doctrine itself — what is publicly available — specifically states that its retaliation only policy is dynamic. In the words of the National Security Advisory Board,

India shall pursue a doctrine of credible minimum nuclear deterrence. In this policy of "retaliation only", the survivability of our arsenal is critical. This is a dynamic concept related to the strategic environment, technological imperatives and the needs of national security. The actual size components, deployment and employment of nuclear forces will be decided in the light of these factors.

India's policy is clearly stated to be to only retaliatory, which is again emphasised in the next section: "India will not be the first to initiate a nuclear strike, but will respond with punitive retaliation should deterrence fail." Nonetheless, this position is dynamic in that it is conceivable that imminent use of nuclear weapons against India - fuelling of missiles, field deployment of tactical nuclear weapons, delegation of launch authority — especially from a state that has repeatedly declared a willingness, almost an eagerness, to strike first with nuclear weapons, will be treated as an attack and liable for Indian retaliation. As many Indian strategists have wondered, what is the morality of awaiting certain destruction just to satisfy a dictionary definition of no-first-use?

Such use — anticipatory self defence — may not be to the satisfaction of semanticists but is nonetheless considered just under international law if it fulfils the criteria of the Caroline rule: instant, overwhelming, leaving no choice of means, and no moment for deliberation. Thus, as Menon himself noted, more flexibility — ambiguity? — has been built into the Indian nuclear doctrine than is realised. As a side note, it is interesting that the same Caroline rule that bears out Indian views on nuclear strikes objects to the dilution of NFU by extending it to chemical or biological weapons as India and other nuclear states have done.

The composition of India's nuclear arsenal and its status should belie any fears about preemptive counter-force targetting. Most nuclear observers agree that the Indian arsenal is still rudimentary compared to mature nuclear states such as the United States, France, or China. By the benchmarks of those in whose footsteps it follows, India has conducted far fewer (hot) tests to confirm design parameters that would affect miniaturisation, maximise yield, or assure successful detonation in unconventional circumstances to be capable of precise, proportionate strikes. Although the exact composition of the Indian arsenal is classified, the mainstay may be assumed to be improved versions of its 1974 prototype that was tested again in 1998, a ~15 kT Hiroshima-style device and hardly an ideal choice for a surgical counter-force strike. The sub-kiloton designs, ideal for mating with the Brahmos missile for tactical strikes, are not as reliable as their larger brother. The real concern, then, and a more familiar one for Indians, is that their bureaucrats and politicians might be promising more than their military can actually deliver.

It is also worth noting that in regions with population density as high as in the Indian subcontinent, it is very difficult to achieve a purely counter-value or counter-force strike. Military bases are almost always near population centres or important infrastructural nodes out of necessity. Even if Delhi's policy of massive retaliation was purely counter-value, it would inevitably damage or destroy vital military assets. Despite such collateral damage, the doctrine can then hardly be called counter-force. Yet, as the former NSA points out, it would be ludicrous to leave the enemy's nuclear arsenal intact for the sake of doctrinal purity.

The newly-rediscovered ambiguity in the Indian nuclear doctrine may perhaps carry more salience because not only does it come from a former official who had a large role in shaping Delhi's nuclear policy but in view of certain "personal" comments former defence minister Manohar Parrikar recently made. Speaking at a book launch in Delhi in November 2016, the then defence minister



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calmly eschewed India's no-first-use policy although he immediately clarified that there had been no change in government policy. With two former senior officials casting doubt on India's intentions, should the international community consider Delhi's NFU to be diluted?

It needs to be stressed that Menon merely explained India's long-existing doctrine and did not reformulate it. With regard to Parrikar's comments, seen in their entirety, there can be no doubt that Indian nuclear policy has not changed. At most, the former defence minister's comments indicate that there may be discussions going on in South Block in very small circles on updating India's nuclear doctrine. Surely, this cannot be a surprise when the Bharatiya Janata Party had even announced its intention to do so in its election manifesto in 2014. Indeed, the present government may change India's nuclear policy but it is absurd to expect that policies are static and eternal — especially when even nuclear warheads are upgraded.

Some observers have wondered at the opportune timing — the Nuclear Suppliers Group plenary is just around the corner in June — of a sudden panic attack on Indian nuclear no-first-use and counter-force posture. This is unlikely to have been a factor for several reasons: First, the US, India's supporter in the forum with the most clout, does not seem willing to twist arms on India's behalf as it did in 2008; second, India has found it difficult to bring into its confidence the several smaller states on the moral high horse; and third, China would be relied upon to veto Indian membership in the consensus-seeking group unless Pakistan were simultaneously admitted. The strategic dimension of NSG membership in South Asia should not be underestimated.

So if not a shift in doctrine, has there been a change in strategy? With improving capabilities, it would be myopic not to expect refinements in strategy. However, none of it — the apprehension about anticipatory self-defence or counter-force targeting — adds up to a new phase in Indian nuclear posture. The nuclear doctrine has long offered these options and at best, India's material realities might be quietly catching up with its lofty ambitions.

No matter, this whole affair has been an exercise in making mountains out of molehills.

<http://www.firstpost.com/india/hullabaloo-over-indias-no-first-use-nuclear-policy-is-a-case-of-making-a-mountain-of-a-molehill-3348372.html>

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The Wire (New Delhi, India)

Is the Indian Nuclear Doctrine Evolving?

By Seema Sirohi

March 22, 2017

India's nuclear doctrine may appear to be undergoing a shift towards conducting a 'counterforce strike' against Pakistan, but some experts see this as "mind games" that could set off a worrying chain of events in the region.

If India fears imminent use of nuclear weapons by Pakistan, will it go first, upending its doctrine of 'no first use', and conduct a comprehensive first strike, taking out Pakistan's nuclear arsenal?

In other words, has India's nuclear doctrine undergone a shift? Vipin Narang, a respected expert, raised the possibility at the Carnegie International Nuclear Policy Conference, causing a stir. The conference, held every two years to discuss nuclear weapons, proliferation and associated topics, is a gathering of the world's top nuclear strategists.

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Narang, a professor of political science at the Massachusetts Institute of Technology who specialises in nuclear proliferation and strategy, said in his prepared remarks that there was increasing “evidence that India will not allow Pakistan to go first”.

India’s opening salvo may not be conventional strikes trying to pick off just Nasr batteries that can carry tactical nuclear weapons, but a full “comprehensive counterforce strike” that attempts to “completely disarm Pakistan of its nuclear weapons” so that India doesn’t have to expose its cities to nuclear destruction, Narang said. A counterforce strike refers to an attack on a country’s nuclear assets.

The analysis caused shock and awe among the nuclear elite, many of whom remain deeply suspicious and wary of India’s nuclear programme. George Perkovich, vice president of Carnegie and an opponent of the 2008 India-US nuclear deal, said ultimately it was about “psychological mind games” and sending signals. He questioned India’s capacity to conduct a “comprehensive” strike while warning of the massive costs involved in developing such capabilities.

Sameer Lalwani, deputy director of Stimson Center’s South Asia programme, said in an e-mail response that the risks of India changing its posture were worrisome. Pakistan would try to find ways to make its nuclear arsenal survive an Indian strike by “expansion of its missile arsenal, putting strategic nuclear weapons at sea, increasing arsenal readiness or reducing the timeline for launch”.

Such countermoves could increase instability in a crisis, rapidly escalate an arms race and eventually “start to erode deterrence stability with China,” Lalwani added.

But has India’s doctrine really changed or is everyone guessing? Narang thinks there are strong indications from key players to show things are no longer as they once seemed. He connects the dots from the writings and statements of India’s former national security adviser Shivshankar Menon, former defence minister Manohar Parrikar and former chief of strategic forces command, Lt. Gen. B.S. Nagal to argue that the strategy has shifted.

Speaking on Monday (March 20) on “Beyond the Nuclear Threshold: Causes and Consequences of First Use,” Narang said conventional wisdom on how nuclear weapons might be used in South Asia no longer applied.

He cited Menon’s recently released book, *Choices: Inside the Making of Indian Foreign Policy*, to argue that India’s doctrine appeared to have moved from “counter-value” strikes to “counter-force” strikes. In other words, from targeting population centres to aiming at Pakistan’s nuclear arsenal.

Menon, who as NSA was involved in decisions on targeting of nuclear weapons, talks of counter-value targeting in the past tense, saying it was the “logical posture at first,” implying it may no longer be. Menon goes on to say that if Pakistan were to use tactical nuclear weapons against India or appeared to be preparing to do so, it would “effectively be opening the door to a massive Indian first strike, having crossed India’s declared red lines.”

“There would be little incentive, once Pakistan had taken hostilities to the nuclear level, for India to limit its response, since that would only invite further escalation by Pakistan. India would hardly risk giving Pakistan the chance to carry out a massive nuclear strike after the Indian response to Pakistan using tactical nuclear weapons. In other words, Pakistani tactical nuclear weapons use [or imminent use] would effectively free India to undertake a comprehensive first strike against Pakistan,” Menon writes.

Narang said that this suggests that the country most likely to go first in South Asia “may not be Pakistan, but India,” if and when it believed that Pakistan was ready to cross the nuclear threshold.



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But Pakistan won't sit idle in this scenario and would want to go first and massively, creating a dangerous instability.

Menon's elaboration adds to what Lt. Gen. Nagal wrote in an article questioning the morality of a no first use policy and how the Indian leadership could accept significant casualties if it knew Pakistan's use of nuclear weapons was imminent. He asked for change.

Last year, Parrikar, who was India's defence minister at the time, said that India should not bind itself to a no first use policy and only stress that it will always act responsibly. He later clarified the comment, saying it was his "personal opinion," further surprising nuclear experts.

The BJP manifesto for the 2014 national elections also hinted broadly at evolution. It promised to "revise and update" India's nuclear doctrine but so far no public announcements have been made.

The publicly stated Indian doctrine remains one of not using a nuclear weapon first and not using one against a non-nuclear state. Pakistan does not have a no first use policy.

More to the point, if India decided to conduct a massive strike now, does it have the capacity to? Narang's answer is "almost certainly not". Currently, India doesn't have the number of required warheads or missile defences but it is working on both fronts.

Narang also says there is little evidence that India can "find, fix and destroy Pakistan's nuclear forces in real time" on land or sea. It's unclear whether India has "a good fix" on all the locations of Pakistani strategic forces.

But it stands to reason that the Indian government would not reveal the exact nature or state of its nuclear arsenal, targeting abilities and quality of intelligence in its possession to outside experts. Ambiguity has been the hallmark of all things Indian.

<https://thewire.in/118062/is-the-indian-nuclear-doctrine-evolving/>

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Hindustan Times (New Delhi, India)

India Could Strike Pakistan with Nuclear Weapons if Threatened, Says Expert

By Yashwant Raj

March 21, 2017

There is increasing evidence that India could launch a preemptive first strike against Pakistan if it feared a nuclear attack was imminent, in a marked reversal of its well-known no-first use policy, according to a leading nuclear strategist.

But this first strike will not be aimed at urban centres and conventional targets of a retaliatory strike intended to punish and prevent an escalation, but against Islamabad's nuclear arsenal, to preempt a nuclear attack altogether.

"There is increasing evidence that India will not allow Pakistan to go first," Vipin Narang, a nuclear strategist from the Massachusetts Institute of Technology, said at a conference on nuclear policy hosted by Carnegie, a think tank, on Monday.

"India's opening salvo may not be conventional strikes trying to pick off just Nasr batteries (launch vehicles for Pakistan's tactical battlefield nuclear warheads) in the theatre, but a full 'comprehensive counterforce strike' that attempts to completely disarm Pakistan of its nuclear

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weapons so that India does not have to engage in iterative tit-for-tat exchanges and expose its own cities to nuclear destruction,” he said. Comprehensive counterforce is an informal phrase used to describe counterattack on a nuclear arsenal.

Relations between the neighbours are at the lowest since a string of militant attacks on Indian military installations which New Delhi blames on Pakistan-based militants. India last year claimed to have carried out surgical strikes against militant launch pads in Pakistan-occupied Kashmir but Islamabad denied any such operation took place.

In February, both countries extended a bilateral pact, dealing with reducing the risk of nuclear weapon-related accidents including a war, for a period of five years. India and Pakistan have fought three full-fledged wars besides the 1999 Kargil hostilities.

As evidence for his theory, Narang cited recent remarks and policy prescriptions from leading Indian strategists and a book by Shivshankar Menon, who oversaw nuclear targeting for India as National Security Adviser to Prime Minister Manmohan Singh. Narang also quoted Menon as telling Ajai Shukla, a defense analyst with Business Standard, that “India’s nuclear doctrine has far greater flexibility than it gets credit for”.

To buttress his theory, Narang cited this para from Menon’s book, “Choices: Inside the Making of Indian Foreign Policy”, which was released in November 2016 but has found a new celebrity recently, to build his case: “There is a potential gray area as to when India would use nuclear weapons first against another NWS (nuclear weapon state). Circumstances are conceivable in which India might find it useful to strike first, for instance, against an NWS that had declared it would certainly use its weapons, and if India were certain that adversary’s launch was imminent.”

New Delhi declared its no-first use strike policy in 2003, undertaking to not start a nuclear war in a neighborhood packed with nuclear actors Pakistan and its hermetically stoic backer China, countries that had fought wars with India.

But it set aside some key exceptions, gray areas, such as reserving the right to strike first if it came under biological or chemical attack, that may have left the door open, for arguments sake, to a latter day switch to a more aggressive stand.

Under its earlier policy India had hoped to use the threat of “massive counter-value retaliation” — read civilian targets such as urban populations mostly — disproportionate in intensity to the attack, as a disincentive for a nuclear attack against it.

But as Pakistan, which has the world’s fastest growing nuclear arsenal, segued to smaller battlefield nuclear weapons, called tactical weapons, to offset Indian superiority in conventional warfare, New Delhi was forced to rethink its choices.

There are also worries in India that New Delhi might not have full information on the whereabouts of Pakistan’s nuclear weapons and tactical warheads that are much smaller and mounted on lorries to be driven around to escape detection through satellite imagery.

<http://www.hindustantimes.com/india-news/india-could-strike-pakistan-with-nuclear-weapons-if-threatened-says-expert/story-P5N8QuKOldxAJ9UPjboijM.html>

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Radio Pakistan (Lahore, Pakistan)

Pakistan's Nuclear, Conventional Capabilities Meant For Peace: President

Author Not Attributed

March 23, 2017

Addressing as Chief Guest the ceremony of Pakistan Day Parade, he expressed the resolve that the nation will not hesitate in rendering any sacrifice for defence.

President Mamnoon Hussain termed Pakistan's defence as impregnable and said the country's conventional and nuclear capabilities were meant to ensure global and regional peace.

Addressing as Chief Guest the ceremony of Pakistan Day Parade, he expressed the resolve that the nation will not hesitate in rendering any sacrifice for defence, security, development, and prosperity of the country.

He said we want peace and friendship with the whole world specially the neighbors. However, he said, India's irresponsible attitude and consistent violations of Line of Control and Working Boundary have jeopardized peace of the region.

Mamnoon Hussain said Pakistan is ready for dialogue with India and wants resolution of the Kashmir dispute, which is unfinished agenda of the partition.

The president said the country's economy is getting stronger and stable due to prudent policies of the government and Pakistan is emerging as a strong economy in the region.

Earlier, the impressive ceremony of Pakistan Day parade kicked off with a splendid fly past of aircraft of Pakistan Air Force and Pakistan Navy led by Air Chief Marshal Sohail Aman.

The formations of F-16, JF-17 thunder, Mirage, AWACs, P3-C Orion and F-7 presented salute to the chief guest by flying over the dais.

Different regiments of Pakistan Army, Pakistan Navy, Pakistan Air Force, Rangers, Police, SSG and girl guides, boy scouts marched past the dais presenting salute to the President.

Mechanised columns including tanks, rocket launchers, indigenously developed short and long range missiles, LYAT defence system, radars and unmanned aerial vehicles were showcased at the parade.

Turkish military band 'Mehter', the world's oldest military band participated and performed at the parade for the first time.

He said in the journey to development, Pakistan enjoys cooperation of its sincere friends especially China. He pointed out that China Pakistan Economic Corridor has opened the doors of development not only for Pakistan but for the whole region.

<http://www.radio.gov.pk/23-Mar-2017/pakistan-s-defence-as-impregnable-president-mamnoon>

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The Heritage Foundation (Washington, DC)

The Strategic Defense Initiative at 34

By Edwin Feulner

March 22, 2017

When a politician promises something that “holds the promise of changing the course of human history,” we naturally assume it’s typical overstatement. But when President Ronald Reagan said that on March 23, 1983, in reference to his Strategic Defense Initiative (SDI), he was exactly right.

His speech that day introduced Americans and the world to SDI, a comprehensive, layered ballistic missile-defense program designed to protect the United States and its allies from a threat that had bedeviled it for more than 20 years. It marked a true turning point in our adversarial relationship with the Soviet Union.

The Heritage Foundation was privileged to lay the visionary groundwork that led to Reagan’s historic announcement. The year before the president’s SDI address, the Foundation published its first missile-defense study, “High Frontier: A New National Strategy.” The study proposed a comprehensive system, including laser weapons capable of intercepting Soviet missiles as they were launched or while they traveled in space toward the United States.

The study was driven by a gap in U.S. defense posture: While we could track the incoming missiles, we were completely unable to do anything about them. Such vulnerability was completely unacceptable to the new commander in chief.

President Reagan’s new policy was truly visionary. At that point, most of the country’s policymaking elite considered Mutual Assured Destruction (MAD, appropriately enough) an acceptable policy to deter the Soviet Union. MAD relied on maintaining devastating second-strike forces, meaning that even if an enemy attacked the United States first, enough U.S. nuclear forces would survive to inflict massive casualties to that enemy.

Most policymakers believed MAD was enough to ensure the Soviet Union would never attack, and that any missile defenses could upset the delicate balance of assured destruction. Additionally, many scientists believed that missile defense was impractical because it was too technologically challenging.

President Reagan was skeptical of the MAD doctrine. He also didn’t believe missile defense was impossible for the nation that had succeeded in putting a man on the Moon more than a decade earlier. The “human spirit,” he said, “must be capable of rising above dealing with other nations and human beings by threatening their existence.”

MAD was problematic during the Cold War, partially because the Soviets never accepted its premises and planned on winning a nuclear war. But it serves us even less today. The theory of assured destruction has grown completely irrelevant to challenges the United States has faced since the Cold War ended.

Adversaries and potential adversaries have chosen to exploit U.S. vulnerability and invested heavily in ballistic missiles, as well as programs researching and developing lethal payloads for them. As Heritage has continued to emphasize, the threat from ballistic missiles is only 33 minutes away.

Building on President Reagan’s legacy, the United States slowly woke to the ballistic-missile threat, withdrew from the Anti-Ballistic Missile Treaty that prohibited missile-defense deployments in 2002, and started an initial missile-defense program designed to protect the country, forward-

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deployed troops and allies from primarily Iranian and North Korean ballistic missiles. With a track record of successful intercepts, the U.S. missile defense program has proven its critics wrong.

But a lot more work remains to be done, especially since the program was hampered at times by the Obama administration. The new administration must invest in space-based missile-defense interceptors, as envisioned under SDI. We must develop and deploy directed-energy weapons, building on the research and development legacy of the SDI program. With ballistic missile-defense technologies becoming more available, the task is more urgent than ever.

Thirty-four years ago, Ronald Reagan described a visionary goal to help secure our country. Now we must build on his vision — and ensure that we have a viable missile defense capability that protects us all well into the future.

<http://www.heritage.org/missile-defense/commentary/the-strategic-defense-initiative-34>

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Bulletin of the Atomic Scientists (Chicago, IL)

A Better Mousetrap?

By David Krieger

March 23, 2017

Albert Einstein noted, “Mankind invented the atomic bomb, but no mouse would ever construct a mousetrap.”

We humans have created the equivalent of a mousetrap for ourselves. And we’ve constructed tens of thousands of them over the seven decades of the Nuclear Age.

In the mid-1980s, the world reached a high of 70,000 nuclear weapons, with more than 95 percent of them in the arsenals of the United States and Soviet Union. Since then, the number has fallen to under 15,000. While this downward trend is positive, the world’s nuclear countries possess enough nuclear weapons to destroy the human species many times over.

In 72 years, nuclear weapons have been used only twice in warfare—at Hiroshima and Nagasaki in August 1945. But the United States and Russia have come far too close to using them on many other occasions, including during the tense days of the 1962 Cuban Missile Crisis.

Nuclear weapons pose an extraordinary risk, one that could result in rapid human extinction. Their use could be triggered by malice or mistake. Either way, the consequences would be catastrophic.

Nuclear weapons and human fallibility are an extremely dangerous and volatile mix. These weapons test our morality, our intelligence, and our capacity for species survival.

Nuclear deterrence is not a shield against nuclear weapons. It is a psychological theory about human behavior. If the leaders of nuclear weapon states truly believed in nuclear deterrence, they would not need to build missile defenses for protection against a nuclear attack. And missile defense systems are far from reliable, often failing in test situations. Sometimes, the tests are cancelled because of bad weather or cloud cover. But there is no international treaty requiring nuclear attacks to be conducted only on sunny days.

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There is no physical protection against nuclear weapons. The only strategy to assure against nuclear war is to negotiate the abolition of nuclear weapons—with inspection and verification procedures to make sure existing arsenals are eliminated and never rebuilt.

Late in March 2017, negotiations for a new treaty to ban and eliminate nuclear weapons will begin at the United Nations. Even though most—perhaps all—nuclear-armed countries will not participate in the negotiations, the talks will be extremely significant for clarifying the illegality of the weapons, and for setting new international norms against the threat or use of nuclear weapons.

In the meantime, Donald Trump has tweeted about wanting the United States to “greatly strengthen and expand its nuclear capability”; he’s also told the world that, when it comes to nuclear weapons, he wants the United States to be at “the top of the pack.” In making such statements, he is demonstrating his lack of knowledge about nuclear dangers and, in fact, risking the instigation of a new nuclear arms race.

Rather than understanding, as President Reagan and other nuclear-armed leaders discovered, that “[n]uclear war cannot be won, and must never be fought,” Trump seems intent on building a bigger and better trap for destroying the human species. His bravado is dangerous. Nuclear weapons are equal opportunity destroyers. Although humans invented the atomic bomb, they are not condemned to being caught in its trap. To avoid the trap, people must demand far more of political leaders, including Trump, insisting that they commence good-faith negotiations now for nuclear zero.

<http://thebulletin.org/better-mousetrap10638>

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Modern Diplomacy (London, UK)

2017: The Year In Which Nuclear Weapons Could Be Banned?

By Tariq Rauf

March 20, 2017

At the end of 2016, the General Assembly of the United Nations voted by a large majority (Resolution 71/258 of 23 December 2016) to convene in 2017 a UN conference to negotiate a ‘legally binding instrument to prohibit nuclear weapons, leading towards their total elimination’. The result of the vote was 113 in favour, 35 against and 13 abstentions.

Four of the five nuclear weapon states—France, Russia, the United Kingdom and the United States—voted against, along with the majority of North Atlantic Treaty Organization (NATO) states plus Australia, Israel, Japan and South Korea, all of which rely on US nuclear guarantees. Interestingly, North Korea voted in favour. Those abstaining included China (the only nuclear weapon state that did not vote against), India, the Netherlands, Pakistan and Switzerland.

An organizational meeting was held at the UN in New York on 16 February 2017, attended by more than 100 states, to plan for this conference. Ambassador Elayne Whyte Gómez of Costa Rica was selected as the president of the conference, which will be convened on 27–31 March and 15 June–7 July in accordance with Resolution 71/258. The meeting also agreed on the conference agenda and rules of procedure. The rules will be those of the UN General Assembly, which require a two-thirds majority for matters of substance and a simple majority for procedural matters, hence no state(s) will be able to block decisions on outlawing nuclear weapons.



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This push to negotiate a legally binding instrument to prohibit nuclear weapons by a large majority of non-nuclear weapon states has opened up stark differences not only with states possessing nuclear weapons, but also within the ranks of the non-nuclear weapon states. States in nuclear-armed alliances such as NATO and the USA's Pacific allies, plus Russia, vehemently oppose any negotiations on a multilateral treaty prohibiting nuclear weapons, while declaring support for achieving a world without nuclear weapons through an undefined 'step-by-step' or 'phased' approach with no defined timeline.

Three previous international conferences (Oslo 2013, Nayarit 2014 and Vienna 2015) drew global attention to the deep concern over the pervasive threat to humanity posed by the existence of nuclear weapons and the catastrophic humanitarian consequences of any detonation of a nuclear explosive. Given these risks, the majority of non-nuclear weapon states stressed the need for urgent action by all states towards achieving a world without nuclear weapons and noted that progress to date towards nuclear disarmament had been very slow. These states also highlighted that the 1968 Treaty on Non-Proliferation of Nuclear Weapons (NPT) had obligated nuclear weapon states to disarm, but nearly 50 years after the NPT entered into force, this obligation has not been met and there are no signs of it being met.

The majority of non-nuclear weapon states also noted that there was a legal gap regarding the prohibition and elimination of nuclear weapons, as there was no nuclear disarmament treaty along the lines of the 1972 Biological Weapons Convention and the 1993 Chemical Weapons Convention that respectively prohibited biological and chemical weapons and mandated their total elimination. Accordingly, these states proposed four distinct approaches for the pursuit of a world without nuclear weapons: (a) a comprehensive nuclear weapon convention; (b) a nuclear weapon ban treaty; (c) a framework agreement; and (d) a progressive approach based upon 'building blocks' of legal and non-legal measures as well as confidence-building measures.

Some NATO states responded that there was no such legal gap and that the NPT provided an essential foundation for the pursuit of nuclear disarmament. They stressed that the international security environment, current geopolitical situation and role of nuclear weapons in existing security doctrines should be taken into account in the pursuit of any effective measures for nuclear disarmament, and as such, a nuclear weapon ban treaty was not in their national security interests. These states also maintained that a nuclear weapon ban treaty would create confusion regarding the implementation of the NPT and complicate fulfilment of the NPT's nuclear disarmament obligations.

In fact, a nuclear weapon ban treaty would not affect the NPT. Those states that are parties to the NPT would still be bound by it and obligated to its full implementation. A nuclear ban treaty could go beyond the NPT and prohibit possession of nuclear weapons and deployment of nuclear weapons (including in foreign states, as for example in Belgium, Italy, the Netherlands and Turkey which host US nuclear weapons under NATO auspices). Just as the 1963 Partial Test-Ban Treaty banning nuclear test explosions in the atmosphere, outer space and under water does not conflict with the 1996 Comprehensive Nuclear-Test-Ban Treaty banning all nuclear test explosions, a nuclear weapon ban treaty would not be in conflict with the NPT.

All the signs are that the negotiations in March and June–July will be fraught with deeply held differences among the participating non-nuclear weapon states. There are fears that those NATO and allied non-nuclear weapon states which might participate will run interference and complicate the discussions on behalf of the nuclear weapon states. Another fault line could be between those non-nuclear weapon states that want a quick, short norm establishing a treaty prohibiting nuclear weapons and those that might prefer a more detailed treaty with provisions on verification.

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Civil society participation at the UN conference in March and June–July could be a prominent feature for the first time in multilateral negotiations on a nuclear weapon treaty. However, some states have already raised concerns at the organizational meeting in February regarding the participation of civil society and may attempt to curtail its influence or involvement.

Whether 2017 will be the year that finally sees nuclear weapons being banned or whether the effort to achieve this objective is stymied remains to be seen.

http://moderndiplomacy.eu/index.php?option=com_k2&view=item&id=2368:2017-the-year-in-which-nuclear-weapons-could-be-banned&Itemid=156

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ABOUT THE USAF CUWS

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

The Secretary of Defense's Task Force on Nuclear Weapons Management released a report in 2008 that recommended "Air Force personnel connected to the nuclear mission be required to take a professional military education (PME) course on national, defense, and Air Force concepts for deterrence and defense." As a result, the Air Force Nuclear Weapons Center, in coordination with the AF/A10 and Air Force Global Strike Command, established a series of courses at Kirtland AFB to provide continuing education through the careers of those Air Force personnel working in or supporting the nuclear enterprise. This mission was transferred to the Counterproliferation Center in 2012, broadening its mandate to providing education and research to not just countering WMD but also nuclear deterrence. In February 2014, the Center's name was changed to the Center for Unconventional Weapons Studies to reflect its broad coverage of unconventional weapons issues, both offensive and defensive, across the six joint operating concepts (deterrence operations, cooperative security, major combat operations, irregular warfare, stability operations, and homeland security). The term "unconventional weapons," currently defined as nuclear, biological, and chemical weapons, also includes the improvised use of chemical, biological, and radiological hazards.

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

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