



USAF Center for Unconventional Weapons Studies (CUWS) Outreach Journal

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FEATURED ARTICLE: Non-Strategic Nuclear Weapons (Amy Woolf, Congressional Research Service, 21 February 2017)

Recent debates about U.S. nuclear weapons have questioned what role weapons with shorter ranges and lower yields can play in addressing emerging threats in Europe and Asia. These weapons, often referred to as nonstrategic nuclear weapons, have not been limited by past U.S.- Russian arms control agreements, although some analysts argue such limits would be of value, particularly in addressing Russia's greater numbers of these types of weapons. Others have argued that the United States should expand its deployments of these weapons, in both Europe and Asia, to address new risks of war conducted under a nuclear shadow. Both the Trump Administration and Congress may address these questions during a new review of the U.S. nuclear posture

<https://fas.org/sgp/crs/nuke/RL32572.pdf>

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International Business Times – New York, NY

Russia, US Nuclear Weapon Totals 2017: Russian Defense Minister Said Military Not Focused on Nuke Deterrents

By Greg Price

February 22, 2017

Despite possessing one of the world's two largest nuclear weapons arsenals, Russia's Defense Minister said his country has turned focus to more conventional weapons while also keeping the nuclear deterrent as a top priority, the Associated Press reported Tuesday.

"The development of strategic nuclear forces will remain an unconditional priority," Sergei Shoigu said while speaking at a conference focus on security issues according to Russian news agencies. "Russian nuclear weapons ensure the guaranteed deterrence of aggression by any foreign power."

But Shoigu also added that "the role of nuclear weapons in deterring a potential aggressor will diminish, primarily thanks to the development of precision weapons."

Shoigu pointed to Russia's Kalibr and long-range cruise missiles as well as the short-range Iskander missiles as key "non-nuclear deterrents," according to the report. However, each can also carry a nuclear warhead.

The comments come several months after Russia's nuclear arsenal, even over the United States, led the world in 2016. Russia had a total of 7,300 nuclear weapons compared to the U.S.'s stockpile of 6,970, totals that pale in comparison to the height of the Cold War when the U.S. reached a peak of 31,255 nuclear warheads, according to USA Today. France's 300, China's 260 and the United Kingdom's 215 weapons rounded out the top five.

Still, much of Russia and the U.S.'s total weapons have been retired. Arms Control Association's data showed that 2,510 Russia warheads were retired, meaning they are awaiting dismantlement, while the U.S. had retired 2,800.

The dwindling numbers are credited to former President Barack Obama's treaty with Russia in 2010 called New Start, which called for each country heavily reduce their nuclear stockpiles over a seven-year period ending in 2018.

Shoigu, who has held his current top post since 2012, also alluded to a previously unknown deal between Moscow and China that would send anti-ship missiles to Beijing, and also mentioned other deals involving Su-35 fighters and S-400 air defense missiles. In November, the countries announced the first four fighter jets would be delivered at the end of 2016 as part of a \$2 billion deal for 24 total jets over three years, Financial Times reported.

<http://www.ibtimes.com/russia-us-nuclear-weapon-totals-2017-russian-defense-minister-said-military-not-2495948>

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Researchers Find New Clues For Nuclear Waste Cleanup

By Tilda Hilding

February 23, 2017

A Washington State University study of the chemistry of technetium-99 has improved understanding of the challenging nuclear waste and could lead to better cleanup methods.

The work is reported in the journal *Inorganic Chemistry*

(<http://pubs.acs.org/doi/abs/10.1021/acs.inorgchem.6b02694>). It was led by John McCloy, associate professor in the School of Mechanical and Materials Engineering, and chemistry graduate student Jamie Weaver. Researchers from Pacific Northwest National Laboratory (PNNL), the Office of River Protection and Lawrence Berkeley National Laboratory collaborated.

Technetium-99 is a byproduct of plutonium weapons production and is considered a major U.S. challenge for environmental cleanup. At the Hanford Site nuclear complex in Washington state, there are about 2,000 pounds of the element dispersed within approximately 56 million gallons of nuclear waste in 177 storage tanks.

The U.S. Department of Energy is in the process of building a waste treatment plant at Hanford to immobilize hazardous nuclear waste in glass. But researchers have been stymied because not all the technetium-99 is incorporated into the glass and volatilized gas must be recycled back into the melter system.

The element can be very soluble in water and moves easily through the environment when in certain forms, so it is considered a significant environmental hazard.

Because technetium compounds are challenging to work with, earlier research has used less volatile substitutes to try to understand the material's behavior. Some of the compounds themselves have not been studied for 50 years, said McCloy.

"The logistics are very challenging," he said.

The WSU work was done in PNNL's highly specialized Radiochemical Processing Laboratory and the radiological annex of its Environmental Molecular Sciences Laboratory.

The researchers conducted fundamental chemistry tests to better understand technetium-99 and its unique challenges for storage. They determined that the sodium forms of the element behave much differently than other alkalis, which possibly is related to its volatility and to why it may be so reactive with water.

"The structure and spectral signatures of these compounds will aid in refining the understanding of technetium incorporation into nuclear waste glasses," said McCloy.

The researchers also hope the work will contribute to the study of other poorly understood chemical compounds.

<https://news.wsu.edu/2017/02/23/research-nuclear-waste-cleanup/>

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DefenseNews – Washington, DC

Trump Threats to New START Could Imperil Nuclear Modernization Programs

By Aaron Mehta

February 23, 2017

U.S. President Donald Trump's comments Thursday about the New START treaty could imperil the political consensus in Washington on modernizing the Pentagon's nuclear arsenal.

In a Thursday interview with Reuters, Trump called the New START treaty a “a one-sided deal” and a “bad deal,” and pledged that “if countries are going to have nukes, we’re going to be at the top of the pack.”

Signed in 2010, the New START treaty limits both the U.S. and Russia agreed to limit their deployed forces to 1,550 warheads over 700 delivery systems, including intercontinental ballistic missiles (ICBMs), submarine-launched ballistic missiles (SLBMs) and bombers, by 2018.

The deal has been praised by both the non-proliferation community and former Pentagon officials as one that increases global security, but has drawn the ire of Trump previously, with media outlets reporting that he railed against the deal during his first call with Russian president Vladimir Putin.

That set off alarm bells for non-proliferation experts such as Kingston Reif of the Arms Control Association, who discussed the issue during the Feb. 19 episode of Defense News TV.

“Any effort to undo the agreement or suggest the administration is not interested in an extension or negotiating a new agreement to replace New START when it expires in 2021 would negatively impact U.S. security and negatively impact an already shaky global nuclear order.”

Notably, both Reif and Rebecca Hersman of the Center for Strategic and International Studies expressed the belief that if New START were to be imperiled, the political consensus in Washington over nuclear modernization could fall apart.

That consensus, Hersman explains, is based on tradeoffs that were made by both sides when New START was being negotiated – in essence, nuclear modernization support for treaty support. And indeed, democrats have largely been supportive of the current nuclear modernization plan, much to the delight of defense contractors who are lining up to take advantage of the expected spending spree.

A recent estimate from the Congressional Budget Office put the cost of modernizing the nuclear enterprise over the next decade at \$400 billion, with other estimates putting the overall nuclear modernization at over \$1 trillion when all is said and done.

Among the programs that need funding are the new Columbia-class nuclear submarines (designed by Electric Boat and Newport News Shipbuilding), the B-21 Raider bomber (produced by Northrop Grumman), and the new Ground Based Strategic Deterrent (GBSD), which will replace the Minuteman III ICBMs (Lockheed Martin, Boeing and Northrop Grumman are all in competition for the right to build GBSD, with various other companies

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attached to their bids.) In addition, the nation's selection of nuclear warheads and its command and control structure are being rebuilt.

"The trick here is that consensus can be frayed from either the right or the left," Hersman explained. "Either a push to not follow through on modernization on one of the key elements, or similarly to add too many new things or threaten the New START treaty or go too far down the road in perhaps new capabilities or warheads. Both sides can start to pull blocks out of the Jenga, game and with that the whole consensus can come down.

Adds Reif, "if there is an effort to pull back from New START, I think you're likely to see many Democrats and some Republicans who would be deeply concerned by that move, and I think that would raise question about the viability of the modernization projects, as well."

If the political consensus does fail around nuclear weapons, the Long Range Standoff Weapon (LRSO) will likely be the one to find itself in the crosshairs. The replacement of the current nuclear-capable cruise missile, the program is still in a nascent stage where it could be more vulnerable.

The non-proliferation community has targeted LRSO as the most destabilizing of nuclear weapons, and Democrats in both the House and Senate have launched attempts to scuttle it. If Democrats sought a way to strike out as a result of any New START break, the LRSO would be a logical target.

The Pentagon is currently beginning a formal Nuclear Posture Review for the Trump administration, which is expected to continue forward with modernization plans, including on LRSO. There is no formal timetable for that report, which may also call for investments that had not been supported under the Obama administration.

<http://www.defensenews.com/articles/trump-threats-to-new-start-could-imperil-nuclear-modernization-programs>

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Financial Times – London, UK

Trump Vows to Maintain US Nuclear Weapons Dominance

By Demetri Sevastopulo and Sam Fleming

February 23, 2017

President says he will keep country 'top of the pack' among countries with arsenals

Donald Trump vowed to ensure that America remained at "the top of the pack" of nuclear powers, as the US president on Thursday warned that the nation had "fallen behind" in terms of weapons capacity.

In an interview with Reuters, Mr Trump said he would prefer a world with no nuclear weapons, but would make sure the US was the dominant nuclear power. His first remarks on nuclear forces as president come two months after a tweet that the US should "greatly strengthen and expand its nuclear capability". Asked about the tweet at the time, he reportedly told an MSNBC anchor: "Let it be an arms race".

"It would be wonderful, a dream would be that no country would have nukes, but if countries are going to have nukes, we're going to be at the top of the pack," Mr Trump said



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on Thursday. “I am the first one that would like to see ... nobody have nukes but we’re never going to fall behind any country even if it’s a friendly country.”

His comments were met with criticism from arms control experts, who also expressed concern that he called the New Start nuclear arms reduction treaty — agreed by the US and Russia in 2010 — as “one sided”. During the campaign, he raised concerns among US allies by urging Japan and South Korea to consider developing nuclear weapons to counter the threat from North Korea.

Darryl Kimball, head of the Arms Control Association, an advocacy group, said Mr Trump was “tripling down” on his previous comments. “I think the guy is getting very bad advice about the [New Start] treaty. Every US military leader who has looked at this has said New Start is in our interest.” He said Cold War history had shown that “no one comes out on ‘top of the pack’ of an arms race and nuclear brinkmanship”.

Asked about the issue, Sean Spicer, White House press secretary, said Mr Trump was making clear that the US “will not yield its supremacy in this area to anybody”.

“What he has been clear on is that our goal is to make sure that we maintain America’s dominance around the world, and that if other countries flout it, we don’t sit back and allow them to grow theirs,” Mr Spicer said at a regular press briefing.

Mr Trump also raised pressure on China to tackle the nuclear threat from North Korea, saying Beijing could resolve the issue “very easily” if it wanted to. Michael Flynn ordered a review of North Korea policy before his ousting as national security adviser.

The president also gave a favourable signal about a controversial tax measure being pushed by Republicans in the House, after weeks of mixed messages. He said the so-called border adjustment tax proposal — a key component of corporate tax reforms championed by Speaker Paul Ryan — could lead to “a lot more jobs”.

The tax plan has attracted a hostile response from large swaths of the corporate world, including retailers, and faces very uncertain prospects in the Senate. But to have any chance of seeing the light of day, it will need enthusiastic backing from the White House, which to date had been lacking.

Under the reforms, export revenues would be exempt from a new cash flow tax that would be imposed on imports. Supporters believe it would persuade companies to locate production in the US, levelling the playing field with foreign jurisdictions.

The measure would be coupled with a sharp reduction in the corporate tax rate to 20 per cent. But many economists argue it would prompt import-focused companies, such as retailers, to raise prices to consumers, while some exporters worry that it would trigger a sharp appreciation in the dollar.

Mr Trump has previously said the plan was “too complicated”. But he struck a more positive note on Thursday. “I certainly support a form of tax on the border,” he said. “What is going to happen is companies are going to come back here, they’re going to build their factories and they’re going to create a lot of jobs and there’s no tax.”

<https://www.ft.com/content/a218dc56-fa25-11e6-9516-2d969e0d3b65>

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US Counter-WMD

Council on Foreign Relations – Washington, DC

A Lethal Bird Flu Returns to China

By Laurie Garrett

February 17, 2017

An especially virulent form of bird flu has taken a record-breaking toll this year in China, raising alarms in Beijing and at the World Health Organization (WHO) headquarters in Geneva. The H7N9 form of influenza, which first emerged in China in March 2013, has killed eighty-seven people between January 1 and February 12, 2017, more than in any previous season since the original outbreak, in 2013. On February 11, health authorities identified this year's first acute case, in Beijing, raising national concerns in China.

The H7N9 virus circulates in wild birds, which may pass it on to domestic poultry and songbirds by contaminating food and water with virally infected feces or through competition over food that leads to pecking and fighting. The original outbreak spread from wild birds to live poultry markets and songbird sales centers and then on to people, so it is worrying that more than a third of the chickens and other poultry randomly screened in live animal markets that serve a population of seventeen million in the southern city of Guangzhou tested positive for H7N9 this month. Though most of the patients caught their infections directly from handling birds, there were clusters of human-to-human transmission, raising the prospect that H7N9 could become an epidemic, or even a pandemic, among people.

A common feature of H7N9 outbreaks is transmission within families and inside hospitals, where there is intimate contact between patients and caregivers. But so far the virus has not taken on a form that can be spread from one stranger to another, via coughing or handshakes, as is the case with seasonal, routine flus. That's a good thing, given how deadly H7N9 is. The U.S. and Chinese centers for disease control have worked together closely since 2013, tracking cases and trying to anticipate changes in the virus that might make it more contagious among human beings (So far, the virus has not mutated dramatically since 2013.)

Prospects for Pandemic

The prospect of an H7N9 pandemic has caused great concern since the first human cases emerged five years ago because the virus is far more virulent than the type of influenza that killed an estimated fifty to seventy-five million people in 1918 and 1919. That strain is estimated to have had a fatality rate of about 2 percent. In contrast, 30 to 40 percent of the more than 1,100 people who have been identified with H7N9 since 2013 have died. On January 10, before this latest surge in China, the United Nations Food and Agriculture Organization identified 1,040 human cases since 2013, 368 of them fatal. A few days later, Dr. Margaret Chan, director-general of the WHO, warned her agency's executive board, "Since 2013, China has reported epidemics of H7N9 infections in humans, now amounting to more than one thousand cases, of which 38.5 percent were fatal."

Since January 23, the WHO has been on official "high alert" for H7N9. The status constitutes a global warning but does not require specific actions beyond heightened surveillance. If the H7N9 situation were to become more serious, the director-general could designate it a "public health emergency of international concern," which would trigger a chain of events including global calls for funding and vaccine production. Three days after the WHO raised

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its alert, the U.S. Centers for Disease Control and Prevention issued a travel advisory, warning Americans destined for China and neighboring nations to avoid live animal markets and exposure to birds while in the region.

Cases of H7N9 in people have been identified since December 2016 over at least six Chinese provinces, from the nation's southernmost regions to north of Beijing. For the first time, human cases have appeared in Sichuan province. The deadly H7N9 virus also emerged this year in Taiwan, Japan, South Korea, Hong Kong, and Macau.

The H7N9 situation is further complicated by the apparent rise in pathogenic bird flu of various types all over the world. Since November 2016, more than forty nations have reported such outbreaks, some involving human cases and deaths. In China, for example, H7N9 is but one of five avian influenza outbreaks circulating simultaneously in various parts of the country, prompting mass cullings of infected flocks and some human deaths. A less-virulent form of H7N9 is spreading among birds in the Netherlands and China, further complicating surveillance efforts. There is some cross-reactivity in antibody tests for various flu strains, even mild forms of season influenza, slowing down surveillance and patient diagnosis. Two types of bird flu, H3N2 and H5N6, have claimed large numbers of chickens and domestic birds in South Korea and the United States this year, and have spread to domestic cats. Last year, U.S. poultry producers and government agencies spent some \$4 billion trying to control the spread of the viruses in livestock, and the mass cullings of flocks pushed egg prices to record highs in the United States.

Seasonal flu is also spreading widely in the United States; it is now reported in forty states. More than one type of flu strain is circulating in the United States, but not the H7N9 form.

Seeking Vaccines

There are some hopeful, but not definitive, signs that people who had the H1N1 swine flu that swept across the world in 2009 are more likely to survive H7N9 infection, perhaps because of a form of partial immunity, but old stockpiles of H1N1 vaccine will not prevent infection.

In laboratory studies, mice that have survived H7N9 infection make antibodies that can be used to treat other infected animals. These findings, however, are purely experimental and are , not of practical use for humans. Experimental H7N9 vaccines have been developed, but none have been commercially produced. Though the virus has circulated in Asia for years, no significant countermeasures, either for treatment or prevention, have been manufactured and stockpiled in any country.

Across Asia, authorities are scrambling to identify infected birds and slaughter exposed flocks to stem the spread of H7N9 and other flus. Several Chinese cities, including Changsha, the capital of Hunan province, have closed their poultry markets in response to the outbreak. (Such a measure was first taken in 2003, to stem the tidal wave of a different deadly virus, SARS, which spread from live market civets to people.) But all over Asia, consumers purchase live animals, which they slaughter in their homes and restaurants. The preference is based both on culture and the lack of adequate home refrigeration for safely storing supermarket-purchased packaged meat.

No medical innovations have been found to treat the H7N9 virus, even though it has been a threat to birds and people for at least five years. Control measures are no different than they were in 2013. Authorities have yet to develop a rapid, point-of-care diagnostic to

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identify H7N9 infections in people, including asymptomatic carriers, should they exist, so population health measures remain crude. If there were an outbreak, everybody presenting with respiratory problems and high fevers would be presumed an H7N9 case, regardless of whether they were actually infected with the virus.

For now, international authorities can aid public health leaders in China and other affected nations in their efforts to limit spread within bird flocks and track human cases. An influenza pandemic can only occur if the virus acquires the genetic capacity to infect the upper human lung and spread, via coughing and sneezing, from one person to another. University laboratories in Madison, Wisconsin, and in Rotterdam have, over the last few years, deliberately forced mutations to allow mammal-to-mammal spread. Their controversial work identified that fewer than five molecular changes in the viral genetic material would be sufficient, suggesting such an event is possible in nature.

<http://www.cfr.org/diseases-infectious/lethal-bird-flu-returns-china/p38832?cid=soc-twitter-A+Lethal+Bird+Flu+Returns+to+China-021717>

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Healio.com – United States

New Point-of-Care Diagnostic Test Rapidly Detects Infectious Bacteria

By Savannah Demko

February 23, 2017

A researcher at Michigan State University has created a molecular, point-of-care diagnostic system, known as In-Dx, that can quickly identify infectious bacteria within 2 hours, potentially offering a way to improve antibiotic stewardship, according to a press release.

“Right now, multiple antibiotics are typically used because doctors don’t know what specific infection they have to fight until days later,” Brett Etchebarne, MD, PhD, assistant professor of emergency medicine at Michigan State University’s College of Osteopathic Medicine, said in the press release. “This way of treating patients is what helps create the drug-resistance problem.”

The results are promising 1 year into the clinical trial to validate this new diagnostic method. In-Dx, compatible with microchip and smartphone technology, can produce positive culture results in 2 hours, as opposed to the days it takes in a hospital setting.

To detect the bacteria, Etchebarne concentrates a collected sample into a smaller amount, then applies heat to break down the cells. The sample is placed into the In-Dx testing panel, and after 20 minutes, the positive sample changes color, showing the invading organism.

After analyzing approximately 300 clinical blood, urine, spit, wound, stool or cerebral fluid samples, In-Dx identified nearly 85% of exact bacteria. For infections like sepsis that are life threatening if not treated properly and rapidly, definitive diagnosis can save millions of people globally each year.

“In-Dx has high sensitivity and specificity for detection of the most common infectious organisms, which will help physicians quickly rule in or rule out specific offending bacteria,” Etchebarne said in the release. “By singling out the offending bacteria at the point-of-care,



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we can immediately improve a doctor's ability to prescribe the right antibiotic, help minimize the drug-resistance problem that we face today and save lives."

<http://www.healio.com/infectious-disease/antimicrobials/news/online/%7B14b23d4e-2e21-4ac3-b753-ff15f2a9b430%7D/new-point-of-care-diagnostic-test-rapidly-detects-infectious-bacteria>

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The Guardian – London, UK

Kim Jong-nam Killed by VX Nerve Agent, a Chemical Weapon, Say Malaysian Police

By Oliver Holmes

February 23, 2017

Investigators identify substance used to murder Kim Jong-un's half-brother as an agent that UN calls a weapon of mass destruction

Malaysian police have said the substance used in the killing of Kim Jong-nam was a "VX nerve agent", a highly toxic liquid used only in chemical warfare.

The finding follows a preliminary analysis of swabs taken of the face and eyes of the victim, who is the half-brother of the North Korean leader, Kim Jong-un.

The substance – also known as ethyl N-2-Diisopropylaminoethyl Methylphosphonothiolate – is classified by the United Nations as a weapon of mass destruction.

Kim Jong-nam died on 13 February from a seizure on his way to hospital after complaining that a woman had sprayed chemicals on his face at Kuala Lumpur airport. Leaked CCTV footage show a woman grabbing his face. Malaysian police had said earlier two attackers rubbed a liquid on Kim Jong-nam before walking away and quickly washing their hands.

Asked about the possibility that North Korean agents may have imported the world's most toxic nerve agent and deployed it in an international airport, a source close to the Malaysia government commented: "Not very diplomatic".

The US government's Centers for Disease Control and Prevention describes VX as the most potent of all nerve agents and one that would be lethal on contact with the skin unless it was immediately washed off. Its only known use is in chemical warfare, it says.

The agency says exposure to a large dose of VX may result in convulsions, loss of consciousness, paralysis and fatal respiratory failure. Kim Jong-nam is reported to have complained of pain in his face shortly after the attack. A leaked photo at the medical centre shows him laid back on a chair with his eyes closed.

VX is a clear, colourless liquid with the consistency of engine oil. A fraction of a drop, absorbed through the skin, is enough to fatally disrupt the nervous system, according to the Council on Foreign Relations. It was developed in the 1950s in the UK during research into pesticides but was later found to be too toxic to be used safely.



Saddam Hussein was accused of using VX during the Iran-Iraq War and there are concerns that stockpiles also exist in Syria. Only the US and Russia have said they possess VX or a similar agent.

North Korea is thought to have among the world's largest stockpiles of chemical weapons, and is one of six countries not to have signed or acceded to the Chemical Weapons Convention (CWC), according to the US non-profit organisation the Nuclear Threat Initiative.

South Korea believes the North is able to produce most types of chemical weapons and Pyongyang is thought to be concentrating upon sulphur mustard, chlorine, phosgene, sarin and the V-agents, of which VX is one. Defectors have accused North Korea of testing its chemical agents on people.

Malaysian police said its Centre for Chemical Weapons was still analysing other items related to Kim Jong-nam, who lived most of his life outside his home country.

As a weapon, VX does not quickly dissipate and can remain on material or the ground for long periods.

Raymond Zilinskas, who directs the chemical and biological nonproliferation program at the Middlebury Institute of International Studies in California, said it seemed unlikely the killers applied VX directly.

"Even if they or her were wearing gloves, the fumes would have killed them," he said. He suggested the assassins may have used a "binary concoction", smearing two non-fatal elements of VX which mix on the victims face to form deadly VX.

He added that as North Korea does not belong to the Chemical Weapons Convention, Malaysia may ask the UN secretary general to investigate the matter.

"Whether North Korea would allow UN inspectors to enter the country is of course a big question. But the matter certainly could be taken up by UN security council and/or general assembly."

Four people of different nationalities have been arrested and seven North Koreans are wanted in connection with the attack. Malaysian police have not directly pinpointed North Korea as being behind the death.

On Thursday, North Korea accused Malaysia of having a "sinister purpose" and collaborating with South Korea over the killing. In the first report from state-run KCNA news agency since the attack, the government accused Malaysia of breaking international law by conducting autopsies on a diplomatic passport holder and withholding the body.

"This proves that the Malaysian side is going to politicise the transfer of the body in utter disregard of international law and morality and thus attain a sinister purpose," it said.

According to people who knew him, Kim Jong-nam spent his last few years highly paranoid, hiding from the regime run by his dictator half-brother while struggling with a sense of powerlessness over the fate of his homeland.

The killing has led to a diplomatic face-off between Malaysia and North Korea and refocused attention on Pyongyang, one of the world's most isolated regimes with nuclear capabilities.

Nerve agents cause their toxic effects by preventing the proper operation of an enzyme that acts as the body's "off switch" for glands and muscles. Without that switch, the glands and



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muscles are constantly being stimulated, and eventually tire and become unable to sustain breathing.

<https://www.theguardian.com/world/2017/feb/24/kim-jong-nam-north-korea-killed-chemical-weapon-nerve-agent-mass-destruction-malaysian-police>

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Defense Web – Johannesburg, South Africa

SAAB to Deliver CBRN Equipment to INTERPOL

Author Not Attributed

February 24, 2017

The CBRN sampling equipment and a certified transport packaging container will be delivered to INTERPOL's BioTerrorism Prevention Unit.

Defence and security company Saab has received an order for delivery of specially customised CBRN (chemical, biological, radiological and nuclear) sampling equipment and a certified transport packaging container to INTERPOL's BioTerrorism Prevention Unit.

Under the agreement with INTERPOL's BioTerrorism Prevention Unit, Saab will supply a total of six sampling units, to be used in the field to combat bio-terrorism. The delivery also includes a certified packaging container designed for safe transportation of CBRN samples and other hazardous materials from the field to the laboratory. Delivery will take place in March 2017.

"With this order, Saab further strengthens its position as a supplier of advanced CBRN solutions, while contributing to increased preparedness and keeping people and societies safe. Saab's CBRN equipment provides first responders with all the tools they need to conduct efficient, proper and secure field collection, and safe transportation, of all types of toxic materials," says Jonas Hjelm, head of Saab business area Support and Services.

Bio-terrorism refers to the malicious use of bacteria, viruses or biological toxins to threaten or cause harm to humans, animals or agriculture, and there is a number of terrorist groups demonstrating an interest in and intent to use biological materials as weapons.

Saab offers a complete CBRN solution for protecting people and securing operational capabilities. Early warnings to units and personnel are a key factor in limiting CBRN threats. With Saab's integrated solutions, CBRN specialists and decision-makers will have effective tools for detecting and identifying a wide range of threats and will receive all the support needed for fast and accurate early warning. Saab will assist the customer's organisation in evaluating and integrating CBRN capabilities. Saab's CBRN solutions include systems for automatic warning and reporting (AWR), sampling equipment, certified transport packaging and a wide range of services and CBRN training and support solutions for individual protection.

INTERPOL is the world's largest international police organisation, with 190 member countries. INTERPOL's BioTerrorism Prevention Unit works with law enforcement, health, academia and industry to tackle bio-terrorism. Over the last few years, INTERPOL has increased its capacity to assist member countries in minimising and counteracting threats

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of a bio-terrorism and establish effective countermeasures as part of a global security strategy. INTERPOL's BioTerrorism Prevention Unit will primarily utilise Saab's CBRN products to train its various member countries.

http://www.defenceweb.co.za/index.php?option=com_content&view=article&id=46905&Itemid=116&catid=

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US Arms Control

The National Interest – Washington, DC

China Rattles the Nuclear Saber

By Lyle Goldstein

February 22, 2017

Subtle hints that Beijing's new mobile ICBM is operational are widely ignored in frenetic Washington.

Browsing a highly reputable bookstore the other day, I was somewhat surprised to come upon a pile of books set for display in a prominent location near the cashier titled Nuclear War Survival Skills: Life-saving Nuclear Facts and Self-help Instructions. Figuring the volume was sure to be some sardonic humor related to our contemporary national predicament, I was a bit disturbed to see that it was more than three hundred pages, chock full of intricate diagrams and checklists assembled by “revered civil defense experts.” Maybe I’m not the only one who stays up late watching Chinese news programming?

Peering into my phone on the night of January 25, I was perturbed to see my customary Chinese talk show about diplomacy 今日关注 (Focus Today) focusing on the South China Sea, but also alluding to an image of a very large transport erector launcher in the middle of a map showing northeast China. To be sure, most of the show focused on the White House spokesman’s recent characterization of the South China Sea issue: “Yeah, we’re going to make sure that we defend international territories from being taken over by one country.” Now, it’s not unusual for that particular show, which features retired People’s Liberation Army Navy Rear Adm. Yin Zhuo on most days, to discuss the latest developments regarding the South China Sea. But it is unusual for the show to discuss Chinese nuclear weaponry, and especially to connect these developments to the evolution of the situation in the South China Sea.

This unique segment said that reports (including foreign news media) suggested that the Dongfeng-41, a solid-fueled road-mobile intercontinental ballistic missile, had been deployed to the city of Daqing (大庆) in the northeast province of Heilongjiang, close to the Russian border. Graphic material accompanying the reporting illustrated one of the few relatively high-quality photos of the massive DF-41 on a transport erector launcher. These graphics strongly implied:

- planned rail-basing system for the new ICBM, a theme taken up in some detail below
- a range sufficient to target the entire United States, including the East Coast; and
- multiple independent reentry vehicle warhead configuration.



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Admiral Yin reliably observes in the segment that the missiles “are not targeted against any single nation,” and insists that they only constitute retaliatory forces. As if to emphasize the veracity of the report, a Russian senior official was interviewed. The official asserted that Russia was not concerned about the movements of Chinese missiles near the Russian border, because the obvious target of the missiles was not Russia, but rather the United States. In a bizarre twist, a Russian military analyst suggested the DF-41 deployment actually demonstrated trust between the Asian giants, since the Chinese missiles could be vulnerable to Russian weaponry in that particular area.

Another troubling part of the news segment was its accusation that a particular U.S. nuclear-attack submarine, USS North Carolina, had been monitoring Chinese naval activities. That observation alone might raise some significant operational-security questions, but let us concentrate here on the connection between China’s new nuclear weapons and the South China Sea situation. Showing the clip to colleagues, one analyst made the logical observation that genuine Chinese nuclear signaling would not be done in Chinese. This must be some kind of “morale boosting” for Chinese audiences, right? But then an article appeared on the official site of the Chinese defense ministry in English. True, the article and the CCTV-4 report suggested above both quoted foreign sources, but the fact that the article was given a prominent place among the “top stories” on the official PLA site demonstrates a clear intention by Beijing to send a message, even if it was one with some “plausible deniability.”

Let’s examine the Global Times (环球时报) story posted as a “top story” in English on the official site of China’s Defense Ministry, though this will be a cursory summary since TNI readers should read it themselves and make up their own minds about its content and significance. The article suggests that the DF-41 can strike “targets anywhere around the world” and that perhaps the second brigade of DF-41s has been deployed now to Heilongjiang Province. In a bit of vitriol, the piece asserts: “The US has not paid enough respect to China’s military. Senior US officials of the Asia-Pacific command frequently show their intention to flex their muscles with arrogance. The Trump team also took a flippant attitude toward China’s core interests after Trump’s election win.” In the rather unmistakable tone of a nuclear threat, the piece suggests, moreover, “China’s nuclear capability should be so strong that no country would dare launch a military showdown with China under any circumstance.”

In the Dragon Eye column series, the emphasis has not been on analyzing English-language articles, such as the important piece discussed in the paragraph above, but rather on Chinese-language sources, so let us examine very briefly a couple of recent articles from the Chinese defense press regarding rail-basing for its new, mobile ICBM force. One such Chinese analysis followed a test launch during late 2015 that also received a little attention in Western news outlets. In explaining why Beijing might pursue the rather complex approach of rail-basing for ICBMs, the Chinese-language analysis states that “air basing and sea basing for nuclear strike capabilities remain weak points” (在空基和海基的核打击能力建设上仍显短板) for China. In other words, Beijing must continue to prioritize the land-based deterrent for the near- and medium-term, or at least until the other triad legs are more established. The author contends that China has “a huge rail network . . . [and therefore] mobility and survival are guaranteed” (龙大的铁路网... 机动性,生存性是可以保障的). Among the advantages of rail-basing for China discussed in this article are a “reduced



time for launch preparation” (缩短... 发射准备的时间), a related ability to “shoot and scoot” (打了就跑), the “stability advantage” (平稳性的优势) (vice road-dependent transport erector launchers) and, perhaps above all, the fact that the launch trains “look the same as regular trains” (与普通列车一样). Yet another benefit of rail-basing, according to this discussion, is the fact that a single train can easily carry command, communications, maintenance and personnel-support cars to accompany the actual missile launch car. Perhaps, it is not too surprising that China Defense News (国防报) published a 2015 piece mainly about Russia’s rail-based nuclear-armed missile system under the title: “The train missile that terrifies the West” (让西方胆寒的导弹列车).

It is troubling, to state the obvious, that Beijing would resort to such nuclear saber-rattling. Undoubtedly, it is not easy to square such threats with “peaceful development.” On the other hand, the last two months may have revealed a new and stark nadir in post-1978 U.S.-China relations, so regrettably this set of somewhat subtle signals may well be a harbinger of coming attractions. It is also rather disturbing that the nation’s leading papers have not seen fit to cover these latest nuclear threats emanating from Beijing. For example, the Washington Post has written about other short-range missiles (DF-16, DF-26) over the last year, but seems strangely oblivious to the DF-41 that can actually hit Washington, DC with a high probability. Likewise, the New York Times has not written about the DF-41 warning, and its last article about Chinese nuclear forces (almost two years ago) made no mention whatsoever about the new mobile ICBMs capable of hitting New York.

Let’s hope this is not a deliberate effort by U.S. media outlets to minimize Chinese nuclear capabilities. We’ll put it down instead to the fact that both papers are currently obsessed with pursuing Russian hacking stories to the detriment of reporting on rather more vital strategic issues, such as Chinese nuclear capabilities. The danger, of course, is that neither the American public, nor even foreign-policy elites, have a clue regarding the true risks of pursuing a confrontational course with China. This is how misperception leads to cataclysm on an unprecedented scale.

No, this is not the Cuban Missile Crisis, of course, and we should not exaggerate the nature of the threat. At the same time, this low-level nuclear signaling still needs to be understood by American leaders.

<http://nationalinterest.org/feature/china-rattles-the-nuclear-saber-19536>

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The Hill – Washington, DC

Arms Control Group Slams Trump's 'Alternative Facts' on Nukes

By Rebecca Kheel

February 23, 2017

Nuclear nonproliferation groups are sounding the alarm after President Trump in an interview Thursday said he thinks an arms control treaty with Russia is a “bad deal” and that the United States should build up its nuclear arsenal to be the “top of the pack.”

The Center for Arms Control and Non-Proliferation issued a press release “correcting Trump’s alternative facts.”



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"President Trump's assertions about nuclear weapons policy conveniently ignore the facts," former Rep. John Tierney (D-Mass.), the executive director of the center, said in a statement. "Every world leader on Earth except for President Trump knows that the United States already has the 'top of the pack' nuclear arsenal. No U.S. military leader would trade our nuclear weapons for the Russian stockpile, let alone any other nuclear power's arsenal."

"Once again, President Trump has called for a new nuclear arms race — signaling a dangerous turn for global security," Bruce Blair, a former nuclear launch officer and co-founder of Global Zero, said in a separate statement Thursday. "This would be an alarming reversal of decades of nuclear weapons reductions that should scare everyone."

In an interview with Reuters on Thursday, Trump said that while it would be "a dream" for other countries to be without nuclear weapons, since they have them, the United States should be "at the top of the pack."

He also claimed the U.S. has "fallen behind on nuclear weapon capacity," according to Reuters.

Further, he said the New START Treaty with Russia that caps the number of nuclear warheads the U.S. and Russia can deploy is "a one-sided deal."

"Just another bad deal that the country made, whether it's START, whether it's the Iran deal," he said. "We're going to start making good deals."

The interview follows a tweet in December in which Trump said the U.S. should "greatly strengthen and expand its nuclear capability."

That tweet also prompted alarm in the arms control community, which said existing warheads and modernization efforts are more than enough.

In response to Thursday's comments, Blair said a buildup of the kind Trump is proposing would lead to a "nightmare scenario."

"The use of even a single nuclear weapon, anywhere in the world, would be a global humanitarian, environmental and economic disaster," he said. "A nuclear build-up in the U.S., which would be followed by similar build-ups in other countries, only makes that nightmare scenario more likely."

Blair also said it's worrying that Trump "understands so little" about New START.

"New START imposes equal obligations on both the United States and Russia," Blair said. "The idea that it's one-sided is one more 'alternative fact' from this administration that must be loudly rejected."

The Arms Control Association said Trump needs to "get smart and avoid reckless statements" about nuclear weapons.

"The history of the Cold War shows us that no one comes out on 'top of the pack' of an arms race and nuclear brinksmanship,"



the group said in a post on its website. "President Trump needs to work with Russia's President Putin to build down, not build up their excessive nuclear arsenals and stop stirring up nuclear tensions."

<http://thehill.com/policy/defense/320927-arms-control-groups-slam-trumps-alternative-facts-on-nukes>

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The Economic Times – New Delhi, India

THAAD: The Fear of China, Anxiety of Russia

By Akash Sinha

February 21, 2017

An indomitable North Korea has confirmed that it had successfully test-fired a new medium to long-range ballistic missile Pukguksong-2 on February 12 (Sunday), which is capable of carrying a nuclear warhead. It also claimed advancement in its weapons programme, which other countries alleged a violation of UN resolutions.

Meanwhile, the US is rushing to deploy its Terminal High Altitude Area Defense (THAAD) system in South Korea before the next elections as it thinks that if current opposition party wins, they might overturn the decision.

Russia and China have thrown their weight against it. Russia has said the US missile system will negatively affect global strategic stability, while China has opposed it because it believes that the THAAD deployment will seriously damage its security interest. China's agitation arises from its belief that the THAAD radar system will invade Chinese territory. China is also of the view that THAAD is not conducive to settle the nuclear issue on the Korean Peninsula.

What is THAAD and its strength?

Lockheed Martin's Terminal High Altitude Area Defense (THAAD) is an anti-ballistic missile system that can destroy short to intermediate-range enemy missiles in their terminal phase, but it can't detect missiles when they are in boost or mid-course phase. [Ballistic missile trajectories are divided into three phases - boost (When it is fired), midcourse (When it is in the middle of its route), and terminal (The target where it terminates)] It uses hit-to-kill technology to destroy enemy missiles by kinetic energy. It has a range of 200 km and can reach altitudes of 150 km. It is equipped with a X-Band Active Electronically Scanned Array (AESA) radar, THAAD Fire Control and Communication Support Equipment (TFCC) and a truck launcher.

How does it work?

The working of THAAD can be classified into four stages post enemy missile launch:

1. The radar detects the enemy missile
2. The TFCC identifies and engages the target
3. The launcher truck is instructed to fire the interceptor missile
4. The interceptor missile uses kinetic energy to destroy the enemy missile



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Drawbacks

THAAD is less efficient against missiles with an unstable trajectory. THAAD's radar collects its data based on the exterior properties of a missile like its shape and brightness. If enemy fires a decoy missile among the real missile, it may easily deceive THAAD system.

Let's take a detail look at the THAAD and why Russia, China are opposing it, while the US and South Korea want it at earliest

Russia's anxiety

Russia has said time and again that the US plan of THAAD deployment remains a cause of concern for them. Russian Ambassador to Seoul Aleksandr Timonin has said that Russia regards this move as the US's effort to create a new regional segment of Washington's global missile defence strategy. Timonin has said also said that THAAD is a direct threat to Russian security as the main aim of US global missile defense is to minimize the effectiveness of Russia's missile potential.

Russian Defence Minister Anatoly Antonov has also criticised THAAD, saying that it will escalate the regional tension. Antonov has clearly said that THAAD deployment goes beyond the task of deterring the North Korean threat.

"During the meeting, Antonov stressed the importance of political-diplomatic resolution of the situation on the Korean Peninsula aimed at preventing the escalation of tensions in North Eastern Asia," stated a Sputnik report quoting Russian Defence Ministry statement .

China's fear

China has gone tough on South Korea after the latter jointly announced THAAD deployment with the US. China has taken over 40 retaliatory actions against South Korea since then and recently, it has denied South Korean air carriers the permission to add charter flights between the two countries - a move that will drastically hit the South Korean tourism sector.

Chinese foreign ministry spokesman Lu Kang has strongly opposed the proposed move. "I want to stress again that the deployment of THAAD will in no way help achieve peace and stability on the Peninsula and still less contribute to the resolution of the nuclear issue of the Peninsula. China is strongly opposed to the decision because it in particular severely undermines China's strategic security interests. We strongly ask the US and the ROK to change course," said Lu Kang .

China has said that THAAD poses threat to its security interests in the region, while the US has said that no other country needs to fear THAAD, because it is solely aimed at North Korea's growing nuclear and missile threat. Though the THAAD will be deployed in the Korean Peninsula aimed at North Korea, its ability to trace Chinese missile is negligible. However, China fears that it can be relocated/refocused against it. It also fears that THAAD's X-band radar can look deep into China if configure to 'Look mode', said a report in Center for Strategic & International Studies attributing Chinese Foreign Minister Wang Yi.

'Serious' Japan

Seeing THAAD's defence capabilities, Japan is getting serious about it and may soon start its plan to procure the dreaded missile system. Japanese Defence Minister Tomomi Inada has also said that the country is exploring possibilities of acquiring an intercepting missile

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system. Japan already has advanced missile defense systems in place with the deployment of PAC-3 and Standard Missile-3 (SM-3) interceptors. The SM-3 interceptors are based on the Block 1A system and can shoot down missiles at an altitude of more than 100 km while the PAC-3 Patriot rockets has a range of 20 km. The PAC-3 missiles are slower, has a shorter range and are less capable interceptor. Therefore, THAAD will only add strength to its existing system.

South Korea's aspiration

North Korea's defence policy is very aggressive as its nuclear arsenal with new missiles is spiralling aggressively. According to a recent report, South Korea claimed that North Korea could own 45 nuclear weapons by 2020. And that is where the thought of a strong missile defence system comes.

As Pyongyang is rapidly piling up weapons, South Korea felt a strong need of a robust missile intercepting system and that existed in the form of THAAD. South Korea already has some narrow and low-altitude missile defence system such as PAC-2 and 3 and therefore, THAAD will give South Korea a higher-altitude defence system to counter North Korean threats. The range of PAC-2 system is 160 km and falls under low-high altitude air defence system.

The US was also concerned about the rising North Korean arsenal and then it joined hands with South Korea to deploy THAAD at its own cost as the latter has refused to bear the same. It will only provide the land and other facilities required to deploy the THAAD while the US will bear the cost of single THAAD system that costs around \$1.3 billion.

After Donald Trump became the president, he said South Korea should take care of its defence expenses instead of a free ride from the US. "Donald Trump has suggested that the United States should allow South Korea and Japan to go nuclear rather than continue to rely on American security guarantees. He generally argued that our allies gain a competitive economic advantage by shifting their defense burdens onto the United States," said a Vox.com news report. However, US Secretary of Defence James Mattis assured South Korea of full cooperation and reaffirmed the ties between the two countries.

<http://economictimes.indiatimes.com/news/defence/thaad-the-fear-of-china-anxiety-of-russia/articleshow/57273866.cms>

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Russia Beyond the Headlines – Moscow, Russia

Will Washington Use the SM-3 Missiles to Threaten Russia?

By Nikolai Litovkin

February 22, 2017

In early February the U.S. Navy successfully tested the Standard Missile 3 (SM-3) Block IIA interceptor, which will become the backbone of air defense systems in Poland and Romania. While the SM-3 doesn't pose a threat to Russia, experts say the next generation of such missiles will be able to hit Russian warheads at launch from Russian territory, thus posing a mortal danger to the country.



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In early February, the U.S. Navy destroyer USS John Paul Jones successfully tested the new Standard Missile 3 (SM-3) Block IIA interceptor off the coast of Hawaii. The missile will be deployed at NATO air defense installations in Poland and Romania starting in 2018.

The new weapon's warhead is an improved kinetic-action interceptor, designed for precision strikes against missile warheads. The SM-3 has also been equipped with advanced radar, enabling it to single out a warhead in a cloud of decoy targets released by a nuclear warhead on approach to its target.

The American designers have also increased the guided missile's flight time, and it can now reach targets in near-earth orbit. The SM-3 flies at a speed of Mach 14 and has a range of 600 miles. From Poland it can hit targets in the skies over the European part of Russia.

Hit a fly in the eye

"The SM-3's abilities can be compared to hitting a fly in the eye when it is already approaching you," said Vadim Kozyulin, professor at the Academy of Military Science. "The missile's radar system still doesn't allow it to hit a nuclear warhead or ballistic missile in a cloud of decoy targets on approach to the target."

While these missiles are currently no threat to Russia's nuclear deterrent, the situation could dramatically change tomorrow.

"The American defence industry complex is working on hypersonic technologies, and the fourth version of the SM in 15 years will be able to knock out our nuclear missiles on Russian territory at the moment of launch," said Kozyulin, adding that the boost phase of Topol-M missiles prior to entry into space is a little under five minutes.

"This is going to be a major problem in 15 years," said Professor Kozyulin. "Therefore, the issue of the European Missile Defence System needs to be dealt with now."

That is not the only problem worrying experts.

Intermediate range missiles

The U.S. accuses Russia of violating the treaty on intermediate range missiles (600 to 3,000 miles range) and short-range missiles (300 to 600 miles range). In 1987, Moscow and Washington agreed to eliminate such missiles under the Intermediate-Range Nuclear Forces Treaty (INF Treaty).

Citing unidentified sources in the U.S. government, the New York Times accused Russia's Defense Ministry of developing cruise missiles with nuclear warheads that have a strike radius of 1,500 miles.

Neither this influential newspaper nor American politicians furnished any evidence to back up their accusations. Kremlin press secretary Dmitry Peskov said that Russia is compliant with the international treaties it has signed, including INF.

Despite the lack of evidence, American politicians hastened to go on the warpath.

"If Russia is going to test and deploy intermediate range cruise missiles, then logic dictates that we respond," declared U.S. Republican senators before sending to the House of Representatives a bill allowing the U.S. to develop intermediate range missile systems and to transfer the relevant technologies to allies in circumvention of the INF treaty.



Russian analysts said the Americans want to play their trump card. In addition to the SM-3 missile interceptors, MK-41 launchers in Poland and Romania can fire Tomahawk cruise missiles with a strike radius of 1,500 miles.

"The Tomahawks, like our Kalibr (sea-launched cruise missiles), can be rewired," said a source in the Russian defense industry complex, adding that to develop a ground-launched version is relatively simple. The guidance system, which is designed for flight over water surfaces, can be replaced with a land-based version.

"I don't rule out that the Americans have already developed such a system with the Tomahawk, but they're just not speaking about it," he added.

<https://rbth.com/defence/2017/02/22/will-washington-use-the-sm-3-missiles-to-threaten-russia-707931>

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The Diplomat – Tokyo, Japan

China's Strategic Support Force: A Force for Innovation?

By Elsa Kania

February 18, 2017

The new PLA branch might be China's key to leapfrogging the United States on military technology.

Chinese President Xi Jinping has tasked the new People's Liberation Army (PLA) Strategic Support Force (SSF) with pursuing "leapfrog development" and advancing military innovation. The SSF, which has consolidated the PLA's space, cyber, and electronic warfare capabilities, has consistently been characterized as a "growth point" for the construction of "new-type" forces, while also considered an important force in joint operations. The SSF not only possesses the capabilities to contest space and cyberspace, the "new commanding heights of strategic competition," but also may take responsibility for the PLA's initial experimentation with and eventual employment of a range of "new concept weapons." Looking forward, the SSF could become a vital force for innovation through which PLA may seek to leapfrog the U.S. military in critical emerging technologies.

In its design, the SSF is intended to be optimized for future warfare, in which the PLA anticipates such "strategic frontiers" as space, cyberspace, and the electromagnetic domain will be vital to victory, while unmanned, "intelligentized," and stealthy weapons systems take on an increasingly prominent role. According to its commander, Gao Jin, the SSF will "protect the high frontiers and new frontiers of national security," while seeking to "seize the strategic commanding heights of future military competition." Through its integration of space, cyber, and electronic warfare capabilities, the SSF may be uniquely able to take advantage of cross-domain synergies resulting from the inherent interrelatedness and technological convergence of operations in these domains. The frequent characterization of the SSF as responsible for the construction of "new-type" or "new-quality" combat forces does allude to these known capabilities, which are often characterized in such terms. However, the concept is also used to refer expansively to a variety of forces based on advanced technologies. For instance, the SSF will likely incorporate unmanned aerial vehicles (UAVs), including for electronic warfare.



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Beyond its established space, cyber, and electronic warfare missions, the SSF's responsibilities may incorporate the research and development (R&D) and perhaps also the initial testing and fielding of certain of the PLA's "new concept" weapons systems. The PLA's official definition of this term alludes to high-technology weapons, such as directed energy weapons, kinetic energy weapons, and cyber weapons. In some instances, the notion of "new concept" weapons might act as a subtler reference to the concept of "assassin's mace" or shashoujian (杀手锏) capabilities, intended to target U.S. vulnerabilities and achieve an asymmetric advantage. Indeed, the development of "disruptive weapons" has been characterized as a major task for the SSF, which appears focused on the military applications of multiple emerging technologies, from big data to nanotechnology. In the foreseeable future, it is also plausible that the SSF may experiment with and eventually field directed energy weapons, which could include high-energy lasers, high-power microwave weapons, and/or railguns. For instance, there have been reports of recent advances in the PLA's high-power microwave weapons by researchers with the Northwest Institute of Nuclear Technology.

The SSF will undertake its own cutting-edge R&D through a number of research institutes that could also take responsibility for its agenda of civil-military integration. At this point, there are initial indicators that the 54th, 56th, 57th, and 58th Research Institutes, which were previously under the aegis of the former General Staff Department (GSD), have all been transferred to the SSF. According to Lü Yueguang, deputy director of the 54th Research Institute, the SSF's "core tasks" include "relying on technological innovation to raise war-fighting capabilities," while seeking to achieve "leapfrog development" in crux domains. This pursuit of technological innovation will be enabled by the SSF's related role to advance civil-military integration, which Xi's initial commentary and subsequent remarks on the SSF have emphasized. The focus on civil-military integration is also perceived as necessary to the SSF's missions due to the nature of informationized warfare itself, given that civilian information systems have become increasingly critical to military technology. To take advantage of dual-use technological advances, these research institutes may engage extensively with the defense industry and broader scientific community.

Inherently, the SSF's prospects for success in its ambitious agenda for innovation will also depend upon the human, cultural, and organizational aspects of this new force. The SSF has produced an "Innovation-Driven Development Strategy" that incorporates efforts to advance the construction of a cadre of innovative, talented personnel and to "cultivate the spirit of innovation." Similarly, Chu Hongbin, political commissar of the China Satellite Maritime Tracking and Control Department, which is now subordinate to the SSF, argues that the key to the formation of new-type combat forces is the "collection of talent." He notes that over 70 percent of personnel in his department have at least a master's degree. However, the effective utilization of these talented personnel will depend upon the SSF's capability to create a culture that embraces and enables innovation. There have been initial indications of its attempts to do so, such as organizing brainstorming sessions and seminars.

Although the PLA has typically been characterized as an organization resistant to change, the SSF, as a specialized, technical force with a mandate and an identity that center upon innovation, might be better poised to advance defense innovation than the PLA at large. If successful, the SSF could ultimately become a catalyst for changes in the PLA's way of warfare. However, it will be difficult to measure or estimate its progress in such an

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amorphous, yet vital endeavor. Presumably, the SSF will face considerable constraints to achieving organizational cohesion and original innovation. As Chu Hongbin observes, “although the institutional barriers have already been broken, changing inherent, inertial ways of thinking still requires a process.” In practice, that process could prove painful.

At this point, the SSF’s prospects for success remain uncertain, against the backdrop of a reform agenda that continues to be characterized as a protracted war. The construction of new-type forces and development of new concept weapons will certainly be a complex, challenging endeavor that will demand innovation not only in technology but also in training and doctrine. Ultimately, the SSF’s future trajectory may thus constitute a vital determinant of the PLA’s ability to innovate to confront the challenges of future warfare.

<http://thediplomat.com/2017/02/chinas-strategic-support-force-a-force-for-innovation/>

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The Diplomat – Tokyo, Japan

Would China Use Nuclear Weapons in a War with Taiwan?

By Ben Lowsen

February 17, 2017

China insists on “No First Use” of nukes, but the threat remains.

On October 28 of last year, the Carnegie Foundation in Washington, D.C. hosted a panel of Chinese scholars and officials to discuss Chinese nuclear thinking. During the event, two former officials—retired diplomat Sha Zukang and retired PLA major general Yao Yunzhu—offered their opinions on how China might react to a U.S. military intervention if a crisis were to take place concerning Taiwan.

Yao was quite direct: “China’s No First Use policy will not change, not only in the Taiwan scenario but in other scenarios as well, and we have 100 percent confidence that we can deal with the Taiwan independence issue by peaceful means and, if necessary, non-peaceful means.”

Unsurprising, but then Sha drew legs on the snake: “And, to add [to] what General Yao said, at any cost we will certainly do the job on our own. ... I wish it would never happen, but it’s a wish. But we have to think of the worst scenario ... [if] this scenario appeared and China were cornered, as I said earlier, we had no choice but to do the job at any cost.”

Had this been a discussion of a Taiwan scenario, Sha’s comment may have passed with little notice, simply an expression of national resolve. But in a discussion of nuclear policy, it led the audience to a very different and chilling conclusion, expressed in the next audience member’s comment: “It seemed like there was an implied threat to use nuclear weapons in a scenario with China.”

China’s public policy seems clear enough: it will not use nuclear weapons without first absorbing a nuclear attack. It claims that its arsenal is not constructed to target an opponent’s nuclear or command and control capabilities, but rather to deter a nuclear attack by punishing the enemy populace (countervalue targeting). There are undoubtedly details China keeps guarded, but that does not change its outward policy.

Whether intended by Sha or not, the audience’s inference reminds us that a country with nuclear weapons can decide to use them at any time, regardless of policy. Ironically, the



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very emergencies envisioned by a nuclear policy would be so traumatic as to call any previous policy into question. Thus the threat of nuclear attack always remains as a deterrent to preventing governmental collapse, regardless of policy.

There is however a human instinct to prevent annihilation, such that even under the threat of regime collapse leaders would think twice before launching a senseless strike. They would trust that our better angels would win out in the future, even if they themselves weren't around to see it. For these leaders, nuclear weapons may be a deterrent only, not a usable weapon.

Sadly and frighteningly, in contrast, the ruthlessness of a regime like North Korea's makes it less likely to acknowledge others' humanity. Its paranoia and readiness to employ any means in its own survival should make all other nations wary of the possibility of a nuclear attack out of spite, even in response to a purely internal threat.

China by all accounts, however, is well beyond the stage of needing such desperate measures to stave off collapse. Quite apart from the debate over whether a leader would actually use nuclear weapons, it is possible that a nation seeking to become a "great nation" might very well have an impulse to upgrade its nuclear arsenal and policy commensurate with its new status. Thus Sha's apparent equivocation may not have been a snake's legs, but rather a glimpse at a hidden dragon.

<http://thediplomat.com/2017/02/would-china-use-nuclear-weapons-in-a-war-with-taiwan/>

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The Hankyoreh – Seoul, South Korea

Due to THAAD Deployment, Lotte Told to Go "Far Away From China"

By Kim Oi-hyun

February 22, 2017

Chinese newspaper hints at broad boycott of Lotte, the company's main overseas markets

The Lotte Group, which is planning to provide South Korea's Defense Ministry with the site for deploying the THAAD antimissile system, has been told by the Chinese media to "go far away from China," with the media effectively declaring the need for a nationwide boycott of the group.

"Lotte can't change its decision, but Chinese society is also firmly resolved to make it pay the price for supporting the THAAD deployment. A company that has deliberately supported the THAAD deployment, causing harm to China's interests, should go far away from China. The world is very large, and we won't be jealous at all if Lotte sets up many stores in other regions and has a pleasant time there," said Chinese newspaper the Global Times in a Feb. 21 editorial.

"Although Lotte considers China its most important overseas market, the company can survive without the Chinese market. Therefore, there is little chance that pressure from China could change Lotte's decision," the editorial said.



While acknowledging that “it’s unlikely that China could persuade South Korea to give up the THAAD deployment,” the editorial noted that China is firmly committed to greatly reducing the level of economic cooperation with South Korea, hinting at the possibility of other sanctions in addition to Lotte.

Despite its insinuations about economic retaliation, the editorial is noteworthy because of its prediction that the South Korean government is unlikely to reverse its decision to deploy THAAD. Such pessimism is rare in China, which has been consistently demanding such a reversal. With the governments of South Korea and the US moving forward with the steps required to deploy THAAD, the Chinese government has been refraining from commenting about the actual likelihood of the decision being reversed.

The editorial also offered a harsh warning: “South Korea has decided to stand with the US in deploying the THAAD system, which makes China a target. So, how can it be still called a friend of China? Most Chinese will consider South Korea an accomplice of the US in impairing China’s national interests.”

Arguing that China doesn’t want anything from South Korea other than friendly relations, the editorial disparaged South Korea as having “neither advanced technology nor the resources that China desperately needs.”

In regard to the Korean wave, known as Hallyu, the editorial argued that “when mixed with the THAAD issue, it has become nothing to the Chinese.”

During a meeting of the board of directors on Feb. 3, Lotte International, which owns the Seongju golf course designated as the THAAD deployment site, discussed a motion to transfer the site but failed to reach a decision. While Lotte is reportedly taking into account the controversial nature of the plan, some newspapers are citing sources close to Lotte as saying that the transfer of the THAAD site will ultimately go ahead.

It seems significant that the Global Times is basically hinting at a boycott at this point in time. This newspaper sometimes takes the lead in punishing other countries on the grounds of China’s “national interest,” as is illustrated by the experience of Japan’s APA hotel chain, which has been under fire following a recent report in the newspaper about a book on the far-right of the political spectrum that the chain had displayed in its guestrooms. The report caused South Korean and Chinese athletes to decide not to stay at the hotel chain during the Asian Winter Games in Sapporo.

http://english.hani.co.kr/arti/english_edition/e_international/783727.html

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The National Interest – Washington, DC

The Ultimate Bad Idea: A Nuclear Armed Japan

By Robert Farley

February 20, 2017

The biggest immediate impact of a Japanese nuclear weapon would have been raw panic in Beijing. Nuclear weapons gave China a deterrent against three powers: the United States, the USSR and Japan. As it happened, Japan’s conventional weakness and pacifist political approach made the latter unnecessary. However, the development of Japanese nukes would have forced China to worry greatly about the political independence of Tokyo from Washington. As long as



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Japan relied on the United States for its nuclear deterrent, Washington held the reins; Japanese nukes might open the door for a return to the pursuit of regional military hegemony. This, consequently, might have driven the Chinese back into the arms of the Russians, or at least accelerated the development of their own nuclear deterrent force.

During the Cold War, the United States supported selective nuclear proliferation as a means of deterring a Soviet invasion of Europe. The Russians might not believe that the United States would trade Berlin for New York, but they might find a British or French threat more credible.

Washington did not pursue the same strategy in Asia. Although Japan could easily match Britain or France in economic power and technological sophistication, the United States didn't see fit to support Japanese nuclearization. Instead, the United States quashed Japanese nuclear ambitions whenever they appeared.

This decision was well considered, given the effect that Japanese nukes might have had on the course of global nuclear proliferation. But had the balance of power in East Asia shifted in a different direction, arming Japan with nukes might have made more sense. Such a development would have had huge implications for the spread of nuclear weapons across the world.

The Legacy of World War II:

Japan briefly pursued atomic weapons during World War II, although its efforts came nowhere near matching those of Germany, much less the United States. However, the United States destroyed the project's infrastructure early in the occupation, making clear that Japan would not soon rejoin the community of nations, at least in terms of self-defense. The precedent of Pearl Harbor rested heavily on American minds, and the idea that Japan might acquire weapons that would enable it to undertake a far more devastating sneak attack was deeply unpopular. While the United States supported British and tolerated French nuclear efforts, Japan was different; Britain and France were part of the victorious Allied coalition in World War II, while Japan was a defeated aggressor state.

As the only victim of a nuclear attack, Japan's domestic politics made a nuclear turn difficult. However, during the 1960s, the Japanese government actively considered the development of a nuclear weapons program. Japanese Prime Minister Eisaku Sato argued that Japan needed nuclear weapons to match those of China; however, the United States demurred. Instead, the Johnson administration pressed for Japanese accession to the Nuclear Non-Proliferation Treaty, ending, for then, Japan's nuclear ambitions.

Nuclear Decisions in Washington and Tokyo:

What could have changed Washington's mind, and consequently Tokyo's calculations? The Sino-Soviet split undoubtedly played a role in U.S. wariness. A Japanese nuclear weapon might have quickly driven China back into the arms of the USSR, solidifying the Communist front in East Asia. But if the two socialist giants had not fallen out with one another, a Japanese nuclear deterrent might have looked much more appealing.

Japan's constitution prohibits the acquisition of offensive weapons, leading to an endless series of linguistic obfuscation about the defensive nature of particular systems. Aircraft carriers, for example, become "helicopter destroyers." There is little question that Japanese and American legal authorities would have found ways around the constitutional



prohibition. Indeed, nuclear weapons intended primarily for deterrent purpose (rather tactical or strategic) arguably have an intrinsic “defensive” nature. And given the advanced nature of Japan’s economy, the Japanese Self-Defense Forces could have deployed nuclear weapons very soon after any decision to begin development.

In terms of delivery systems, Japan would likely have developed (or purchased from the United States) intermediate-range ballistic missiles, capable of striking the Asian mainland but not the United States. Eventually, the United States could have shared Polaris and Trident SLBM technology; nuclear submarine propulsion would have proven no obstacle after the development of nukes themselves. Long-range bombers might have been a stretch, but tactical aircraft (such as the F-4, and eventually the F-15) would have taken on a tactical nuclear role.

Impact:

The biggest immediate impact of a Japanese nuclear weapon would have been raw panic in Beijing. Nuclear weapons gave China a deterrent against three powers: the United States, the USSR and Japan. As it happened, Japan’s conventional weakness and pacifist political approach made the latter unnecessary. However, the development of Japanese nukes would have forced China to worry greatly about the political independence of Tokyo from Washington. As long as Japan relied on the United States for its nuclear deterrent, Washington held the reins; Japanese nukes might open the door for a return to the pursuit of regional military hegemony. This, consequently, might have driven the Chinese back into the arms of the Russians, or at least accelerated the development of their own nuclear deterrent force.

Japanese nukes would have created similar alarm across the region. While Seoul, deeply dependent on the United States for security guarantees, would likely have adopted a “grin and bear it” attitude in the short run, it likely would have pursued its own program over the long term. Similarly, Japanese proliferation would have made it far more difficult for the United States to restrain Taiwan’s nuclear ambitions. Not wanting to be left behind, India would have pursued its own program with greater vigor and less political reticence.

More broadly, a nuclear Japan could not have managed the key role that Tokyo played in the development of the global nonproliferation regime. As history’s only victim of a nuclear attack, Japan’s diplomacy and money carried heavy weight in worldwide antinuclear efforts. These efforts would have suffered with a lack of Japanese participation, possibly with dire effects for the spread of nuclear weapons around the world.

In the long view, the decision on Washington’s part to curtail Japanese nuclear ambitions played out well. China moved farther and farther from Russia, Japan remained dependent on the United States, and both the regional and global nonproliferation regimes made critically important achievements. However, had the United States misread Sino-Soviet relations, or had certain segments of the Japanese government pressed harder, a much different reality might have ensued—one in which not just Japan, but many states across the region and the world, held nuclear weapons.

<http://nationalinterest.org/blog/the-buzz/the-ultimate-bad-idea-nuclear-armed-japan-19512>

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The Independent – London, UK

US 'Nuclear Sniffer' Plane Deployed in Europe Amidst a Mysterious Spike in Radiation

By Katie Forster

February 22, 2017

The WC-135 Constant Phoenix landed at air base in Surrey and has reportedly taken off for Norway

A 'nuclear sniffer' plane has been sent to monitor radioactivity levels in Europe following the detection of mysterious spikes of radiation across the continent.

The US military plane, called the WC-135 Constant Phoenix, landed at an air base in Surrey, a spokesperson at RAF Mildenhall confirmed to The Independent.

It is now on its way towards Norway and the Barents Sea north of Russia in the arctic circle, according to The Aviationist.

The WC-135 can detect and identify nuclear explosions from the air and is also used to track radioactivity after nuclear incidents such as the 1986 Chernobyl disaster.

A US air force spokesperson said the aircraft is in Europe "on a preplanned rotational deployment scheduled far in advance," adding: "anything contrary is completely baseless."

"The WC-135 routinely conducts worldwide missions and we are not going to get into further details," they said.

Man-made radioactive material Iodine-131 was found in Norway in early January and has since been detected in small amounts across Europe, officials have said.

It isn't clear where Iodine-131 would ever have been released from, but conspiracy theorists have pointed to the fact that the spread appeared to emanate from northern Norway, where Russia may have run a secret nuclear test.

Iodine-131 is perhaps most closely associated with atomic bombs, and was found throughout the world after those were tested. It is usually found alongside other radioactive materials, but in this case it wasn't.

And it has a short half-life – the time required for one half of the atoms of a radioactive substance to disintegrate – but a significant amount of it was found, meaning that it is likely that it was introduced very recently.

The material is also being used to treat some cancers and other illnesses. The fact that the material was found on its own likely suggests that it had been isolated, and so makes it more likely that the leak came from a pharmaceutical company that hasn't reported it to authorities.

The WC-135, sometimes known as the "sniffer", can carry up to 33 personnel, but often carries fewer in an attempt to lessen the risk of exposure to radioactive materials.

Two devices on either side of the aircraft collect atmospheric gases, filtering them to detect particles from nuclear fallout.

There is no imminent threat from the amount of material that is currently being found in Europe, according to the French IRSN, or nuclear security body.

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United States Air Force Center for Unconventional Weapons Studies | Maxwell AFB, Alabama

<https://cuws.au.af.mil> \ https://twitter.com/USAF_CUWS

Phone: 334.953.7538



The IRSN said that it had shared the findings with the “Ring of Five” – a group of similar bodies across Europe – so that they can be further investigated.

<http://www.independent.co.uk/news/uk/home-news/wc135-nuclear-sniffer-plane-europe-spike-in-radiation-us-military-raf-uk-landed-monitor-radioactive-a7593871.html>

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Phys.org – Isle of Man, UK

Russian Military Acknowledges New Branch: Info Warfare Troops

By Vladimir Isachenkov

February 22, 2017

Along with a steady flow of new missiles, planes and tanks, Russia's defense minister said Wednesday his nation also has built up its muscle by forming a new branch of the military—information warfare troops.

Sergei Shoigu's statement—which came amid Western allegations of Russian hacking—marked the first official acknowledgement of the existence of such forces.

Speaking to parliament, Shoigu said that the military received a sweeping array of new weapons last year, including 41 intercontinental ballistic missiles.

He added that the wide-ranging military modernization will continue this year, with the air force set to receive 170 new aircraft. The army will receive 905 tanks and other armored vehicles, and the navy will receive 17 new ships.

Also this year, three regiments of Russia's strategic nuclear forces will receive new intercontinental ballistic missiles, Shoigu said. Each regiment has up to 10 launchers.

The rising number of new weapons has raised demands for new personnel. Shoigu said the military currently needs 1,300 more pilots and will recruit them by 2018.

Declaring the formation of the dedicated information warfare troops, Shoigu noted that "propaganda needs to be clever, smart and efficient." He wouldn't describe the troops' mission.

Retired Gen. Vladimir Shamanov, the head of defense affairs committee in the lower house of parliament, was equally vague, saying that the information warfare troops' task is to "protect the national defense interests and engage in information warfare," according to the Interfax news agency. He added that part of their mission is to fend off enemy cyberattacks.

Viktor Ozerov, the head of the upper house's defense and security committee, also told Interfax that the information troops will protect Russia's data systems from enemy attacks, not wage any hacking attacks abroad.

U.S. intelligence agencies have accused Russia of hacking Democratic emails to meddle in the U.S. election, a claim Moscow has denied. Some EU officials also voiced concern that the Kremlin could seek to influence this year's elections in the Netherlands, France and Germany.

Retired Col. Gen. Leonid Ivashov, the former head of the Defense Ministry's international cooperation department, said that Russia should rely on information warfare troops to fight back against what he described as Western propaganda.



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"We must stop offering excuses and force the West into the defensive by conducting operations to expose its lies," Ivashov said in remarks carried by RIA Novosti news agency.

A severe money crunch after the 1991 collapse of the Soviet Union left the military in tatters, with most of its planes grounded and ships left rusting at harbor for lack of funds. As part of President Vladimir Putin's military reforms, the armed forces have received new weapons and now engage in regular large-scale drills.

Russia has used its revived military capability in Syria, where it has launched an air campaign in support of Syrian President Bashar Assad and used the conflict to test its new weapons for the first time in combat.

The weapons modernization effort has seen the 1-million strong Russian military narrow the technological gap in areas where Russia had fallen behind the West, such as long-range conventional weapons, communications and drone technologies.

Shoigu said the military now has 2,000 drones compared to just 180 in 2011. He also noted that Russia has now deployed new long-range early warning radars to survey the airspace along the entire length of its borders.

Shoigu also said the military will complete the formation of three new divisions in the nation's west and southwest, and also deploy a new division on the Pacific Islands, which have been claimed by Japan.

The dispute over the Kuril Islands just north of Japan, which the former Soviet Union seized in the closing days of World War II, has prevented the two countries from signing a peace treaty.

Russia previously has deployed new long-range anti-ship missiles on the Kurils to protect the coast. The deployment of a full-fledged Russian army division there appears intended to stake Moscow's claim to the islands, which have strategic importance and are surrounded by fertile fishing grounds.

<https://phys.org/news/2017-02-russia-military-acknowledges-info-warfare.html>

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Russia Today – Moscow, Russia

Russia's New ICBMs Can 'Rip Apart' US Anti-Missile Systems - Deputy PM Rogozin

Author Not Attributed

February 23, 2017

Russia is constantly improving its nuclear deterrence and is very close to deploying new technologically-advanced intercontinental ballistic missiles which can defeat any US missile defense systems, a Russian deputy prime minister said in an interview.

"These weapons will soon appear in our armed forces," Dmitry Rogozin told Rossiya-1 TV on Sunday. While not naming the new ICBM, the deputy PM in charge of the defense industry said the missile will have the capacity to penetrate any American air defenses.



“These weapons are able to clear the United States’ missile defense both of today and of tomorrow – and even of the day after tomorrow,” Rogozin said.

Rogozin also noted that the existing Russian nuclear deterrent forces, made up of various missiles including the Soviet-era R-36M2 Voevoda (SS-18 Satan) ICBMs, which he described as “very reliable,” will remain in use until the latest arsenal becomes operational.

While the weapon of the future wasn’t named, media were quick to allege that Rogozin was most likely describing the RS-28 Sarmat heavy intercontinental ballistic missile, which is being introduced as part of Russia’s nuclear modernization.

Currently Sarmat is undergoing the final stages development at the Makeyev Rocket Design Bureau in the city of Mias. According to reports, the new missile, weighing at least 100 tons, will be capable of carrying a payload of up to 10 tons on any trajectory.

“We can rip their air defenses apart; at the moment [the US defense shield] poses no serious military threat to us, except for provocations,” Rogozin said.

Last summer the US activated an \$800 million missile shield base in Romania, which will form part of the larger Aegis-based missile defense system in Europe.

While the officially-stated purpose is to counter a potential threat from Iran, the system’s proximity to Russian borders threatens Russia’s national security by tipping the global balance of power. Moscow has taken counter measures including the deployment of Iskander missile system to its western exclave, Kaliningrad, in the wake of concerns over potentially multi-purpose “defense” installations in Europe.

The land- and sea-based Aegis Ballistic Missile Defense System provides the US with missile defense against short to intermediate-range ballistic missiles. Short, medium, and intermediate missiles can also be intercepted using Terminal High Altitude Area Defense (THAAD) system.

For intercontinental ballistic missiles the US uses the Ground-Based Midcourse Defense (GMD). GMD missile-defense system was developed to intercept enemy warheads prior to their entry into the atmosphere. The system consists of ground-based interceptor (GBI) missiles based throughout the West coast of the US and a radar in the state of Alaska.

In the lengthy interview about Russia’s military capabilities, Rogozin also mentioned Moscow’s state-of the art tank.

“Speaking of tanks, we definitely have an advantage, because [the T-14 Armata tank] today leaves American and Israeli tanks, not to mention European tanks, behind in terms of technical characteristics.”

First presented at the Victory Parade in Moscow on May 9, 2015, the mass production of T-14 Armata is expected to begin in 2018.

One of tank’s main advantages is its fully-automated and unmanned turret, as well as HD cameras that provide an outside view. It is capable of moving at an estimated speed of up to 90kph, more than 20kph faster than the US mainstay Abrams M1A2.

The Russian military and Uralvagonzavod engineers also promise to turn the T-14 into a completely automated system that can be operated on the battlefield using only a remote control.

<https://www.rt.com/news/377916-rogozin-russian-new-icbm/>

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Tehran Times – Tehran, Iran

Iran Says Has Increased Precision of Its Long-Range Ballistic Missiles

Author Not Attributed

February 23, 2017

Iran now has long-range ballistic missiles with greater precision, its defense minister said on Thursday, rejecting reports that Tehran has halted its missile program after a recent missile launch that drew a response from Washington.

“We have increased the range and precision of our long-range, ground-to-ground ballistic missiles,” Hossein Dehqan was quoted as saying in an event in Noushahr, northern Iran.

“We have achieved greater precision in longer ranges,” he added.

The Iranian army has also managed to increase shelf life of its missiles up to 20 years, Dehqan explained.

On Jan. 29, Iran launched a new type of medium-range ballistic missile prompting an emergency meeting of the U.N. Security Council on Jan. 31.

A day later the White House issued a strongly worded statement from National Security Adviser Mike Flynn putting Iran “on notice.” President Trump tweeted a similar statement soon after.

Days after the missile test, American intelligence officials claimed that Iran had quickly cleaned up the same site and prepared another missile on the same launchpad near Semnan, about 140 miles east of Tehran, before it was removed.

Washington called on the Security Council to look into the missile launch, arguing that it violated UNSC Resolution 2231, which backs an international nuclear deal between Iran and six world powers.

The resolution calls upon Iran “not to undertake any activity related to ballistic missiles designed to be capable of delivering nuclear weapons, including launches using such ballistic missile technology,” until eight years after the implementation of the deal.

This while Tehran insists that its missiles are not capable of carrying nuclear warheads and are for defense only.

Iran uses its “conventional” missiles to “legitimately” defend its territory, Iranian Foreign Minister Zarif stated.

<http://www.tehrantimes.com/news/411375/Iran-says-has-increased-precision-of-its-long-range-ballistic>

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USAF Center for Unconventional Weapons Studies

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Maxwell AFB, Alabama

Gulf News – Dubai, UAE

UN Eyes Syria Sanctions for Chemical Weapon Use

Author Not Attributed

February 24, 2017

Vote expected next week by security council likely to be vetoed by Syria ally Russia

The UN Security Council is likely to vote next week on a draft resolution that would slap sanctions on Syria over the use of chemical weapons, but Russia is almost certain to veto the measure, diplomats said Thursday.

Britain, France and the United States are pushing for a ban on the sale of helicopters to Syria and sanctions on 11 Syrians and 10 entities linked to chemical attacks in the nearly six-year war.

The measure follows a joint investigation by the United Nations and the Organization for the Prohibition of Chemical Weapons (OPCW) which concluded in October that the Syrian military had carried out at least three chemical attacks in 2014 and 2015.

“This is the significant response that the Security Council committed to do in the event of proven use of CW in Syria,” said the diplomat, who spoke on condition of anonymity.

“The US, UK and France are very clear that this is an issue of principle,” he said. Russia’s ambassador said at a meeting last week that Moscow would block the measure, said the diplomat.

Russia has used its veto six times to shield its Damascus ally from any punitive action.

China, another veto-wielding Security Council member, is expected to abstain in the vote.

France and Britain presented a first draft on imposing sanctions on Syria in December, but held off on action to give the new US administration time to study it.

Another Security Council diplomat said the trio was moving ahead now that US President Donald Trump’s administration was fully on board with the push for sanctions against Syria.

The vote could take place as early as Monday or Tuesday.

“We hope it will come to a vote as quickly as possible,” a US official told AFP.

Blacklisting Syrian commanders

The draft resolution, seen by AFP, would impose a global travel ban and assets freeze on 11 Syrians, mostly military officials including the head of Syrian air force intelligence and the commander of air operations in areas where attacks occurred.

These commanders are said to have been involved in an assault by helicopters that dropped chlorine barrel-bombs on the villages of Qmenas, Talmenes and Sarmin.

Among the entities that would be blacklisted is the CERS research center in Damascus, described as responsible for developing and producing chemical weapons, and five firms said to be front companies for CERS.

The draft resolution would also ban the sale, supply or transfer to the Syrian armed forces or to the government of helicopters or related materiel including spare parts.

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Phone: 334.953.7538



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The proposed measure would set up a sanctions committee that would report to the Security Council on designating individuals and entities to a new blacklist.

Syria has denied using chemical weapons while Russia has dismissed the investigative panel's findings as "inconclusive." The panel also found that Daesh had used mustard gas in an attack in 2015.

The Security Council is due to discuss chemical weapons use in Syria during a meeting on Friday.

The United States in January blacklisted 18 senior Syrian military officers and officials over the use of chemical weapons, but there have been no UN sanctions imposed on Syria due to Russia's opposition.

<http://gulfnews.com/news/mena/syria/un-eyes-syria-sanctions-for-chemical-weapon-use-1.1983475>

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Asharq Al-Awsat – London, UK

UN Demands Details from Damascus on Commanders' Suspected of Using Chemical Weapons

By Jordan Dakamseh

February 21, 2017

The International Security Council will listen Thursday to a briefing by High Representative for Disarmament Affairs Kim Won-soo, who will provide updated information on joint mechanism between the United Nations and the Organization for the Prohibition of Chemical Weapons (OPCW) on investigations that started to determine responsibility for the use of chemical weapons in Syria.

The Council will also discuss on Thursday the report submitted by U.N. Secretary General Antonio Guterres, which is the fifth report prepared by Head of Security Council JIM Virginia Gamba and was issued on Monday.

A U.N. investigative panel has been pressing the Assad regime to hand over the names of commanders, military units and other entities suspected of carrying out chemical attacks in Syria, according to a report released Friday.

In its latest report to the Security Council, the joint panel of the U.N. and OPCW said it had formally asked Syria to provide details of air operations, specifically at two air bases from which helicopters carrying the chlorine bombs lifted off.

Investigators are seeking the "names of specific Syrian Arab Armed Forces units and any entity outside the Armed Forces" listed on flight plans, said the report by the U.N.-OPCW Joint Investigative Mechanism (JIM).

"Such information is of great importance, given that commanders are responsible for any assets under their control," said the report.



The panel said it was awaiting further determinations from the OPCW, which carries out fact-finding missions to establish whether chemical attacks took place, but does not attribute blame.

<http://english.aawsat.com/2017/02/article55367887/u-n-demands-details-damascus-commanders-suspected-using-chemical-weapons>

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BBC News – London, UK

The Rising Risk of Showdown Between Trump and Iran

By Kambiz Fattahi

February 21, 2017

Are the US and Iran heading for a new confrontation? After a turbulent first three weeks in which President Donald Trump described Iran as "the world's number one terrorist state" and put it "on notice", it is a question many are asking.

For Iranians with connections in the United States, these are worrying times.

Of the seven majority Muslim countries named in President Trump's January travel ban (frozen pending a legal review), Iran is the one with the largest US-based diaspora, the most overseas students and the highest number of people travelling on visitor visas.

After the ban was announced, BBC Persian received hundreds of messages from anxious Iranians whose lives have been plunged into uncertainty.

They come from all walks of life - research students, LGBT (lesbian, gay, bisexual and transgender) refugees and grandparents on family visits - and many are worried the story is far from over.

"Last year our family applied to migrate to the US," wrote Bardia, a 16-year-old from the persecuted Bahai religious minority. "Now there's a big hold-up in the process."

But since President Trump moved into the White House it is not just Iranians with travel plans who are feeling unsettled.

Across the country people are asking themselves if he will really deliver on his promise to "rip up" the 2015 Iran nuclear deal and "triple-up" sanctions.

And if the war of words between Washington and Tehran continues, what will the impact be on Iran's presidential elections this May?

Deal in danger?

On the campaign trail Donald Trump dismissed the Iran nuclear deal as "disastrous", but Iran experts say comments by his new Secretary of Defence James Mattis are probably the best indicator of what lies ahead.

"I think it is an imperfect arms control agreement," Mr Mattis told a Senate committee in January. "But when America gives her word, we have to live up to it."

It is possible the Trump administration could push to toughen up the deal, says Gary Samore, former Obama White House Co-ordinator for Arms Control,



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"But they will quickly find out any renegotiation of the agreement will require the US to offer additional sanctions relief."

Many point out the US is not the only signatory to the deal.

If Mr Trump walks away he will risk alienating the European Union, the United Kingdom, France, Germany, China and Russia, which would make enforcing any new sanctions more difficult.

But there are more subtle ways of undermining the agreement, says Nader Hashemi, of the Centre for Middle East Studies at the University of Denver.

"I suspect Trump will try to strictly enforce the nuclear deal, hoping that Iran will break the agreement and thus be blamed internationally for it."

Filip to hardliners

Iran's Supreme Leader Ayatollah Khamenei and his hardline supporters have been relatively muted in their response to President Trump.

It has lead some to suggest it might actually suit them to have a more confrontational president in the White House.

For someone used to rallying his supporters with denunciations of the "Great Satan", Mr Khamenei clearly feels on familiar ground responding to tougher rhetoric from Washington.

"We appreciate Trump! Because he largely did the job for us in revealing true face of America," he Tweeted recently.

Some hardliners actually see Mr Trump as a man they could do business with, says Mohsen Milani, an Iran specialist at the University of South Florida.

"They believe he is a practical, non-ideological businessman and a good deal-maker who would be willing to negotiate with Tehran."

Elections impact

One person for whom Mr Trump's ascendancy is less welcome is President Hassan Rouhani.

He is standing for re-election in May, and the accelerating war of words between Washington and Tehran casts a long shadow over his two biggest achievements - securing the nuclear deal and improving relations with the US.

As the election campaign gets under way Mr Rouhani's hardline opponents will seek to use the Trump administration's actions to undermine him.

"If the [travel] ban is a sign of a general line towards Iran with additional measures, then it certainly could affect the elections," says Trita Parsi, of the National Iranian-American Council.

But whether the hardliners will succeed is open to question.

Even if the tangible benefits of the end of sanctions have yet to be widely felt in Iran, the prospect of the country returning to the international stage and opening up for business has given hope to millions of ordinary voters.

It is clear they do not want to see these achievements reversed.



Since Mr Trump's travel ban thousands of young Iranians have taken to Twitter using the hashtag #LoveBeyondFlags to reach out to Americans.

And among the traditional anti-American slogans on display at the annual rally to commemorate the Revolution in Tehran last week there were some in English with a rather different message: "Americans are welcome and invited to Iran".

Courting Russia

In the months to come foreign policy concerns will also influence US-Iranian relations.

Both the US and Iran are currently supporting Iraqi forces in the crucial battle to recapture Iraq's second city of Mosul from so-called Islamic State. It is not in the interests of either side to jeopardise this.

If President Trump delivers on his pledge to mend fences with Russia that could also impact on the US relationship with Iran.

"Tehran's biggest fear is that Trump will seek to move Russia away from Iran in order to open space for Russia-America co-operation in Syria and across the Middle East," says Alex Vatanka of the Middle East Institute.

Going forward there will be many possible flashpoints for tension between Iran and the US.

Iranian ballistic missile tests, more unilateral US sanctions, stand-offs between the Iranian and US navies in the Gulf, and between US-backed and Iran-backed militia forces in Iraq will all test the relationship.

"Over time the [nuclear] deal may unravel because of these," says Gary Samore.

"But I think it's unlikely either side will immediately abrogate the agreement. The US benefits from the constraint on Iran's nuclear programme and Iran benefits from the sanctions relief."

<http://www.bbc.com/news/world-middle-east-38961027>

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The Diplomat – Tokyo, Japan

Will Pakistan Buy Russia's S-400 Missile Air Defense System?

By Franz-Stefan Gady

February 17, 2017

The Pakistan military is purportedly toying with the idea of procuring the S-400 missile air defense system.

Responding to the recent news that India and Russia will ink a contract in 2017 for the procurement of four to five regiments of Russian-made S-400 Triumf advanced Air Defense Systems (NATO reporting name: SA-21 Growler), the Pakistan military is now purportedly considering purchasing a number of S-400 units as well, a high-ranking Pakistan military official told Russian state media on February 15.

"Russia has good tanks, helicopters, electronic equipment, air defense systems that Pakistan may consider. S-400 is a big ticket number and it will all depend on our budget," the military official told Sputnik News, the foreign language arm of Russian news agency RIA Novosti.



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Pakistan officially spends about \$7 billion annually on defense, although the real number may be substantially higher, and is in the process of modernizing its military forces.

Yet while the country's economy has grown a solid 4.7 percent in 2016 and is expected to continue to expand by 5 percent in 2017 (partially due to Chinese investments under the Chinese-led China-Pakistan Economic Corridor) allowing for a modest military spending increase, the Pakistan military's big ticket budget priorities are clearly on new combat aircraft, submarines, surface warships, and the country's various indigenous missiles programs.

To adequately defend Pakistan airspace, the military would need to deploy at least three regiments of S-400 with total procurement cost potentially as high as \$2.5 billion. ("One S-400 regiment is usually divided into two battalions each of which capable of deploying eight launchers and a total of 32 surface-to-air missiles," I explained elsewhere.) Given that Pakistan was not able to or willing to pay \$700 million for eight F-16 fighter jets (a clear budgetary priority) from the United States in 2016 following Washington's refusal to provide Foreign Military Financing (FMF) support, it is highly doubtful that the country's defense ministry would allocate \$2 billion or more for a new missile air defense system in the near future given other defense priorities.

As an alternative to the S-400, Pakistan could perhaps opt for the cheaper Chinese-made HQ-9 (export designation FD-2000) surface-to-air missile (SAM) system, a derivative of the Russian-made S-300 long-range SAM system that can engage aircraft, cruise missiles, and theater ballistic missiles at a range of up to 200 kilometers and a flight ceiling of around 27 kilometers. China and Pakistan first started negotiations over a possible HQ-9 deal in early 2015. However, little progress has been made so far and it is unclear whether Pakistan is still interested in the SAM system.

Furthermore, the unnamed military official told Sputnik News that Pakistan might be interested in procuring additional combat helicopters from Russia. "Pakistan considers expending the existing Mi-35 helicopters contract with Russia, a number of additional machines will depend on our budget. According to the existing contract, Russia will supply four pieces to Pakistan," he said.

Pakistan's military is slated to receive four Russian-made Mi-35M attack helicopters in 2017 for a purchasing price of \$153 million. This number could increase to a total of 20. "Given the cost of building the necessary Mi-35M logistics and maintenance infrastructure, expanding the fleet beyond four aircraft would financially be a sound decision for the Pakistani military," I explained elsewhere (See: "Pakistan to Receive 4 Attack Helicopters From Russia").

Russia lifted a longstanding arms embargo against Pakistan in 2014 and has been seeking closer defense ties with Islamabad ever since. This has been accelerated by India's burgeoning defense relationship with the United States and the Russian defense industry's loss of market share in India, although Moscow remains by far New Delhi's biggest military hardware supplier overall.



Given the importance of the Indian market to the Russian defense industry, Moscow has to walk a careful balancing act in its dealings with the two South Asia rivals and it will continue to do so for the foreseeable future.

<http://thediplomat.com/2017/02/will-pakistan-buy-russias-s-400-missile-air-defense-system/>

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The Express Tribune – Islamabad, Pakistan

Pakistan, India Extend Nuclear Safety Agreement

By Franz-Stefan Gady

February 24, 2017

Pakistan and India have agreed to extend their bilateral agreement on reducing the risk from accidents relating to nuclear weapons in a move suggesting the two rivals are still mindful of nuclear dangers despite currently strained ties.

The key agreement was extended for the next five years (2017-2022), said a statement issued by the Foreign Office on Tuesday.

The agreement came into force in 2007. It was subsequently extended for a period of five years in 2012. The accord is part of the nuclear confidence building measures agreed between Pakistan and India. The aimed of the agreement is to promote a stable environment of peace and security between the two countries, reads the official handout.

“It is premised on the recognition that the nuclear dimension of the security environment of the two countries adds to their responsibility for avoidance of conflict,” the statement added.

India’s NSG membership will damage non-proliferation efforts

The agreement provides for immediate exchange of information between the two countries in the event of any accident relating to nuclear weapons, under their respective jurisdiction and control, which could create the risk of radioactive fallout, with adverse consequences for both sides, or create the risk of an outbreak of a nuclear war.

FO spokesperson Nafees Zakaria, commenting on the renewal of the agreement, said: “Pakistan believes in the need for both sides to stay engaged for strategic stability in South Asia.”

The development came at a time when relationship between the two countries is currently at their lowest point due to months of tensions along the Line of Control (LoC) and working boundary. The dip in their ties first started in July last year because of the uprising in Indian Occupied Kashmir following the killing of prominent Kashmiri leader Burhan Wani.

The two countries were on the brink of war after India claimed to have carried out so-called surgical strikes inside Pakistani Kashmir just days after 19 Indian soldiers were killed when their base was stormed by militants in the disputed Kashmir region.

<https://tribune.com.pk/story/1334606/pakistan-india-extend-nuclear-safety-agreement/>

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Value Walk – New York, NY

India vs. Pakistan Military Comparison

By Polina Tikhonova

February 22, 2017

As the Pakistan Army vows to protect its people from all forms of “aggression” from India, how serious a threat is it?

On Tuesday, Pakistan Chief of Army Staff Qamar Javed Bajwa vowed to protect the people of Pakistan against all forms of “Indian aggression.” His vow comes as Islamabad accuses India of being involved in a string of terrorist attacks that rocked Pakistan last week, leaving more than 100 Pakistanis dead and several hundreds of others injured.

While tensions between the two South Asian countries are running high, there’s a high chance the Pak-Indian conflict could spiral out of control and lead to war — possibly involving nuclear weapons. The two nations have fought three wars since gaining independence in 1947, and fighting their fourth could bring disastrous consequences to the whole world, experts warn.

Will India and Pakistan go to war over terrorism claims?

While visiting troops along the Line of Control (LoC), Bajwa accused India of “committing ceasefire violations across the Line of Control” and said Islamabad is fully aware of “the Indian designs and its support to terror in Pakistan and the region.”

Several other high-ranking Pakistani officials and political figures have accused India of being responsible for last week’s brutal terrorist attacks across Pakistan. Bajwa claims that India’s ceasefire violations on the border are an attempt to distract the Pakistani Army from fighting against terrorism in the country.

As India recently renewed its diplomatic push to get the international community to declare Pakistan a terrorist state, reported Indian firings along the LoC resulted in the deaths of three Pakistani soldiers last week. The alleged ceasefire violations from India’s side coincided with a series of violent terrorist attacks across Pakistan last week.

“Indian spy Kulbhushan Yadev is one such evidence of these efforts and his case will be taken to the logical conclusion,” Gen. Bajwa said, referring to a spy who was arrested last March and confessed that India’s Research and Analysis Wing (RAW) was responsible for destabilizing Pakistan by supporting the Baloch separatist insurgency.

India vs. Pakistan: which military is stronger?

While one can argue that Pakistan could easily retaliate for the deaths of its people as a result of last week’s terrorist attacks, there’s a chance it could go to war with India if it finds evidence that New Delhi was responsible for the brutal terrorist acts that left at least 100 people dead.

India, which has 1.3 million active military personnel, seemingly has a serious advantage against Pakistan’s 620,000-strong army. While one can argue that India is militarily better-equipped than Pakistan, Islamabad also has ties to China – one of the strongest militaries in the world.

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United States Air Force Center for Unconventional Weapons Studies | Maxwell AFB, Alabama

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Although India has strong relations with the U.S., it cannot rely on Washington's support in a military confrontation – especially during Donald Trump's presidency. Pakistan can most certainly rely on China's military support, however. China and Pakistan share deep military ties and have a long history of friendship lasting for decades. Additionally, protecting Pakistan in any military conflict would be of top priority for China because protecting Islamabad would equal protecting their joint multi-billion dollar China-Economic Corridor (CPEC) project.

Naval advantage goes to China over India

While Pakistan loses to India in terms of naval power (its fleet strength is 197 against India's 295), China could offer its long-time ally a serious advantage on the sea, providing a 714-strong fleet (that's 911 Pak-China combined). Pakistan's aircraft strength is about half the size of India's: 923 aircraft units of all types versus India's 2,086.

However, Pakistan has nearly three times more attack helicopters than India, at 52 versus 19. If China is added into this equation, the Pak-China military alliance would hold 3,865 aircraft units of all types in total and 252 attack helicopters combined to go to war against India.

India also has a significant shortage of self-propelled artillery. Even without military assistance from China, Pakistan dominates India in the number of self-propelled guns (462 versus India's 290). The navy is a weak spot for India, which has only one functional nuclear Akula-class Chakra. China, for its part, boasts five nuclear attack submarines and four nuclear ballistic missile submarines.

Nuclear war would bring disastrous consequences

Although India holds the status of being the largest arms importer in the world, the modernization of its own armed forces has been rather slow in the past few years.

When it comes to nuclear strength, Pakistan has a slight advantage, boasting between 100 and 130 warheads against India's 90 to 110 nukes. In the 1990s when the two countries were also close to fighting a nuclear war, Pakistan's nuclear-equipped planes were reportedly left with their engines running 24/7, allowing them to attack the enemy at any given time.

Last month, Pakistan and India participated in a war of nuclear tests when they carried out missile tests on the same day, sending shivers down the planet's spine. While Islamabad successfully tested its surface-to-surface ballistic nuclear-capable missile Ababeel, which is capable of reaching targets at a range of 2,200 kilometers (that's three times the distance between Islamabad and New Delhi), India unveiled its own guided Pinaka multi-barrel launcher.

While the mere mention of nuclear war is rather chilling, a 2006 study by climatologists confirmed that a nuclear war between India and Pakistan would result in disastrous and irreparable consequences for the planet. The study estimated that if Islamabad and New Delhi used 50 nuclear warheads against one another, at least 20 million people would be killed from the explosion and its aftereffects in the first seven days.

The study further found that "the firestorms generated by these nuclear explosions would loft about 5 million tons of black soot high into the atmosphere." As a result, surface temperature across the world would decrease by an average of 1.3 degrees Celsius.



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Neither Pakistan nor India has signed the Non-Proliferation Treaty. Further, New Delhi is adamant to increase its military power. Researchers found that India purchased \$34 billion worth of weapons between 2008 and 2015, which is more than any country in the world except Saudi Arabia.

<http://www.valuewalk.com/2017/02/india-vs-pakistan-stronger-army/>

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The Hindu – New Delhi, India

India, Israel to Develop Missile for Army

By Dinakar Peri

February 24, 2017

Ahead of the first visit of an Indian Prime Minister to Israel later this year, India has approved a deal to develop jointly a medium range surface-to-air missile (MR-SAM) system for the Army in a ₹17,000-crore deal.

This is the latest in a series of other variants of SAM systems for the Navy and the Air Force being jointly developed with Israeli help under deals estimated at billions of dollars.

Joint development

The Cabinet Committee on Security (CCS), headed by Prime Minister Narendra Modi, which met on Wednesday, gave the go-ahead for the deal to be executed by the Defence Research and Development Organisation (DRDO) and Israel Aircraft Industries (IAI). A source said Mr. Modi is likely to visit Israel in June, and preparations were currently under way in both countries.

The deal is for five regiments of the missile, which consists of 40 units and 200 missiles. It has a range of 50-70 km.

“The system will be based on the older Barak system of Israel, which is in use in India. It is being changed as per requirements,” a defence source said on Thursday.

The systems will be manufactured in India and would have an 80% indigenous content.

The DRDO would play a crucial role in developing the target homing system. Deliveries would begin in 2023, a source said.

The two countries are also in an advanced stage of negotiations for the purchase of two more long-range Phalcon Airborne Warning And Control System (AWACS). The CCS had approved the deal for additional AWACS last year expected at a cost of ₹7,500 crore.

Russian partnership

India currently operates three Phalcon AWACS Israeli radars mounted on Russian IL-76 transport aircraft, under a \$1-billion tripartite deal with Russia, signed in 2003.

Russian officials said at the recent Aero India that India had already ordered two IL-76 aircraft to be converted to AWACS. Officials said they were hopeful of a deal during Mr.



Modi's visit, and added that discussions were under way for additional long-range drones. India and Israel have stepped up their defence relations since Mr. Modi came to power.

<http://www.thehindu.com/news/national/india-israel-to-develop-missile-for-army/article17356342.ece>

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The Guardian – Abuja, Nigeria

At Comprehensive Nuclear Test Ban Treaty

By Sunday Jonah

February 23, 2017

The Comprehensive Nuclear-Test-Ban Treaty (CTBT) bans nuclear explosions by everyone, everywhere on the Earth's surface, in the atmosphere, underwater and underground. The treaty has a unique and comprehensive verification regime to make sure that no nuclear explosion goes undetected. To achieve this, the CTBT has designated over 300 facilities in its International Monitoring Stations (IMS) around the world. These facilities employ state-of-the-art technologies, which include seismic, hydroacoustic, infrasound and radionuclide monitoring. It also deploys on-site inspection and collects and analyzes data from the IMS stations at its International Data Centre at its headquarters in Vienna.

The CTBT makes it very difficult for countries to develop nuclear bombs for the first time, or for countries that already have them, to make more powerful bombs. It also prevents the huge damage caused by radioactivity from nuclear explosions to humans, animals and plants. Since the treaty is not yet in force, the organisation responsible for its activities is known as the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organisation (CTBTO). It was founded in 1996, has over 260 staff from over 70 countries, and is based in Vienna.

On the 24th September 2000, the then President of Nigeria, Chief Olusegun Obasanjo signed the Treaty in New York, USA. The article for ratification was deposited on the 8th of September, 2001 making Nigeria the 84th state signatory worldwide and the 12th from Africa to have ratified the CTBT.

The CTBT came into existence to synergise several efforts at bringing nuclear weapons tests to an end. The United States of America ushered in the age of nuclear explosions in the world, when it carried out its first nuclear test on July 16, 1945 at Alamogordo, New Mexico. One month later, following Japanese attack on Pearl Harbour in December 1941, the U.S. dropped two nuclear bombs on Japan – on Hiroshima on August 6 and on Nagasaki on August 9, 1945. Japan surrendered on August 15, 1945, bringing an end to World War II. However, nuclear testing did not end. Instead, five decades (until the

CTBT in 1996) of efforts to “put the nuclear genie back in the bottle” began.

In the five decades between that fateful day in 1945 and the opening for signature of the Comprehensive Nuclear-Test-Ban Treaty in 1996, over 2,000 nuclear tests were carried out all over the world. The breakdown is as follows:

The United States being the first country in 1945 conducted 1,032 tests between 1945 and 1992.

The Soviet Union, the second country in 1949 carried out 715 tests between 1949 and 1990.

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The United Kingdom was the third country in 1952, it carried out 45 tests between 1952 and 1991.

France joined the race in 1960 in the Sahara desert as the fourth country in the world and has carried out 210 tests between 1960 and 1996. It should be noted that the test by France in 1960 in the Sahara desert resulted in the establishment of the Radiation Protection Service at the Department of Physics, University of Ibadan to monitor its effects in Nigeria.

China, the fifth country entered the race in 1964 and it has carried out 45 tests between 1964 and 1996. India became the sixth state and carried out its first test in 1974, which was labeled “for peaceful purposes.”

Concerned over the threat posed by the escalation of nuclear testing around the world and the increasing yields of these tests, the United States, the Soviet Union, the UK and 58 other countries signed the treaty on the Non-Proliferation of Nuclear Weapons (NPT) on 1 July 1968. Nigeria is signatory to all treaties and additional protocols on the safe, secure and peaceful use of nuclear energy including the NPT. The Treaty defined nuclear weapon States (NWS) as those countries that tested nuclear weapons before 1967 and all others as non-nuclear weapon States (NNWS). There are three pillars of the NPT: nuclear nonproliferation, nuclear disarmament and the peaceful use of nuclear energy. The Treaty prohibits NWS from transferring nuclear weapons, other nuclear explosives or nuclear weapon technology to NNWS. Likewise, NNWS are obligated to refrain from acquiring nuclear weapons or other nuclear explosive devices. Each NNWS undertakes to accept safeguards agreement with the International Atomic Energy Agency (IAEA). At the same time, NNWS have an inalienable right to nuclear energy for peaceful purposes.

Prior to the NPT in 1968 and alarmed at the prospect of nuclear technology proliferating around the world and the number of States with atomic bomb making capabilities increasing beyond US control, the then US President, Dwight Eisenhower proposed the “Atoms for Peace” programme to the General Assembly of the United Nations on December 8, 1953. In accordance with President’s Eisenhower’s initiative, the IAEA was created in 1957 in response to the deep fears and expectations generated by the discoveries and diverse uses of nuclear technology. The IAEA monitors the “upstream” dimension of nuclear weapons development while the CTBT is intended to monitor the “downstream” final proof of a State’s intention to develop nuclear weapons—that is, the actual nuclear test explosion.

Even after the CTBT was opened for signature in September 1996, nine nuclear tests have been conducted:

India which conducted its first test earlier in 1974 carried out additional two tests in 1998. Thereafter, Pakistan conducted two tests in 1998, while the Democratic People’s Republic of Korea announced that it conducted one nuclear test in 2006, 2009 and 2013, and two in 2016 including hydrogen bomb. Even in the New Year, the country has renewed its interest to continue with additional tests.

Although, there are no NWS in Africa, but as the Chernobyl and Fukushima accidents have demonstrated, nuclear crises do not respect borders, African nations have prominent roles to play in the monitoring of nuclear weapons tests. There are network of monitoring stations in the world, including the ones in Africa. A breakdown of the CTBT monitoring stations in Africa, which are categorized as certified, installed, those under construction and planned indicate that there are 18 seismic, 8 infrasound and 11 radionuclide stations. These



stations are scattered all over the continent and with deployment of trained experts they can assist in the detection of nuclear weapons tests.

Africa provides a valuable contribution to the treaty and many African countries participate in the meetings of the Preparatory Commission in Vienna. Africa is already a Nuclear Weapon-free Zone with the coming into force of the African Nuclear Weapons Free Zone Treaty on July 15, 2009. Known as the Pelindaba Treaty and in conformity with Article 12 (i.e. mechanism for compliance) the African Commission on Nuclear Energy (AFCON) has been established to help member states in their non-proliferation obligations as well as promote cooperation in the peaceful, safe and secure uses of nuclear science and technology. Other Nuclear Weapons Free Zones in the world are the Latin America and the Caribbean, the Central Asian Nuclear Weapon Free Zone, Zones of the South Pacific Nuclear Weapon Free Zone, and the South East Asian Nuclear Weapon Free Zone. These zones cover virtually the entire southern hemisphere.

With these Nuclear Weapons Zones and the activities of the CTBT in the world and especially, in Africa, it is hoped that the world would one day be free of nuclear weapons and devastating consequences.

This article is written under the auspices of the International Coalition of NGOs, think tanks and academics to promote the CTBT and move towards entry into force, the prohibition of nuclear weapon test explosions with focused action by civil society aimed at achieving universal adherence to the CTBT.

<https://guardian.ng/opinion/at-comprehensive-nuclear-test-ban-treaty/>

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The Chosunilbo – Seoul, South Korea

THAAD Can No Longer Be a Political Football

Author Not Attributed

February 23, 2017

The mid-range ballistic missile North Korea test-fired on Sunday was a sea-launched projectile upgraded to be launched on land and propelled by solid fuel, which makes it a lot more efficient as a weapon. Launched at a high angle it would have all of South Korea within target range and slam down on targets at a speed of mach 10, rendering Seoul's current PAC-3 Patriot missiles useless.

The only weapons system capable of intercepting it is the Terminal High-Altitude Area Defense battery from the U.S. because, as the name indicates, it intercepts incoming missiles at high altitudes.

The U.S. and South Korea decided last July to deploy a THAAD battery here after observing how advanced North Korea's ballistic missiles have become. But the opposition here is against out of fear of irking China, which is afraid that the powerful radar mounted on the THAAD battery is intended to spy on it.

That has raised fears that now that President Park eun-hye has fallen, the deployment could be delayed if a new president turns tail. Minjoo Party presidential hopeful Moon Jae-in, in particular, remains opposed to the THAAD deployment. He has called on the government to "reconsider" its decision to deploy it and "listen to public opinion." Now he says the next



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administration should make that decision, even though Seoul and Washington already agreed on the deployment.

South Chungcheong Province Governor Ahn Hee-jung, another presidential hopeful, voiced his "respect" for the decision but is calling for a more thorough review of the weapon's technology. And Seongnam Mayor Lee Jae-myung is staunchly opposed to the deployment, calling it a demonstration of South Korea's "dependency" on the U.S.

All of them say the North Korean nuclear impasse must be resolved through dialogue. Of course peaceful negotiations are by far the best option, but if there is to be any hope of success, North Korea must be persuaded that it cannot win by military means. If Pyongyang thinks that South Korea and the U.S. are completely defenseless against its missiles, it will never be persuaded to give them up. It will just keep making demands.

That is why diplomacy can only come after military preparations have been made. The principle has been repeatedly proven throughout human history.

South Korea's Patriot missiles have already become useless against even North Korea's Rodong-class missiles, and now the North Korean menace will only grow worse. One side continues to bolster its punch, while the other side grows increasingly defenseless. This is as good as surrender.

North Korea has stated clearly that it has no intention of giving up its nuclear weapons and missiles. Thae Yong-ho, the former North Korean deputy ambassador to the U.K. who defected last year, said the North will not give them up even if it is paid US\$10 trillion. This means South Korea's presidential hopefuls must urgently rethink their position on the THAAD deployment. Voters need to know exactly what each candidate thinks.

When the North test-fired its upgraded missile, U.S. President Donald Trump and Japanese Prime Minister Shinzo Abe, who was visiting Washington, held a joint press conference the same night. But here acting president Hwang Kyo-ahn did not even convene a National Security Council meeting.

Hwang was briefed by security officials but instead attended scheduled meetings to deal with the bird flu and foot-and-mouth outbreaks. Hwang's office said he was simply following regulations that require the president, who heads the NSC, to convene a meeting in case of a North Korean nuclear test or long-range missile launch, but the NSC chief oversees meetings in other events.

Under normal circumstances that would perhaps be enough, but with the president suspended and the chaotic new U.S. administration just a few weeks old, the latest North Korean missile test comes amid anything but a normal situation.

Politicians here still suffer from the traditional habit of burying their heads in the sand, while presidential hopefuls are busy making populist comments without looking at the actual problems in hand. As Seoul wallows in its ineffectiveness, Japan is fast emerging as the key regional player on strategic matters. Everyone needs to wake up, and fast.

http://english.chosun.com/site/data/html_dir/2017/02/14/2017021401539.html

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Disarmament While the Chance Remains

By Mustafa Kibaroglu

February 22, 2017

Here's the question I can't help but ask as I read through this roundtable, including some readers' responses to it: What's so wrong with discussing a nuclear weapon ban treaty?

This seemingly simple question can be understood in at least two ways. First, it's a reaction to certain critics of the ban treaty initiative who believe that the initiative has little chance of forcing disarmament and therefore is a futile waste of time.

Well, when you get right down to it, does anyone use his or her time in the most effective way possible, at all times, throughout life? Probably not! So how come engaging in intellectual discussion about a nuclear weapon ban treaty is an especially egregious waste of time?

Imagine for a second, even if you find it difficult, a world from which nuclear weapons have vanished. Imagine a world in which no country can bully its neighbors with nuclear threats; no nation can act with impunity simply because it possesses a nuclear arsenal; and no terrorist organization can acquire sophisticated nuclear weapons or the material necessary to build a crude nuclear device. Would such a world be a better place to live? Probably so!

So what's wrong with dreaming of a world without nuclear weapons and their associated dangers? Nothing is wrong with it! It doesn't cost anyone anything.

Even if others characterize it as a waste of precious time, I'm willing to invest some of my own time in this "futile" exercise of pursuing disarmament. Throughout history, many "futile" exercises have ultimately achieved their objectives. My roundtable colleague Joellen Pretorius has provided the excellent example of the 19th-century campaign to abolish slavery. In those days, ending human bondage seemed no less hopeless a cause than nuclear disarmament seems in the 21st century!

Now for the second reason that I ask what's so wrong with discussing a nuclear weapon ban treaty—it's a way of pointing out that critiques of the ban treaty initiative often encompass issues bearing little relation to the treaty itself. One such critique involves the ban treaty's purported negative implications for existing arms control and disarmament arrangements.

When the UN First Committee voted in October to convene negotiations this year on a "legally binding instrument to prohibit nuclear weapons, leading towards their total elimination," it interfered in no way with the implementation of existing arms control and disarmament structures. If a ban treaty is indeed negotiated and approved, it will mean only that the time for negotiating a ban treaty was ripe—not that the treaty would be imposed on parties to existing treaties by aliens from outer space! Criticizing the ban treaty over the harm it would allegedly cause to existing arms control and disarmament structures only demonstrates how hard it is to find convincing arguments against the treaty initiative.

Even worse weapons?

In her third essay, my colleague Polina Sinovets argued that "If humanity gets rid of the Bomb, it ... may not be a good thing." She believes that "The world could return ... to the old, familiar search for an 'ultimate weapon.'" According to Sinovets, because nuclear



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disarmament could lead to the emergence of even worse weapons, it's better to be satisfied with the weapons we already have.

I disagree. A graph showing advancements in military technology through human history might show a slowly ascending curve—until the advent of nuclear weapons, at which time the curve would begin to exhibit a steep slope. Therefore one should expect worse weapons to come—unless a ban treaty can halt the production, stockpiling, and use of nuclear weapons, and unless the global community demonstrates the resolve to stop the rapid development of military technologies.

Now is the time to show that resolve. The nuclear taboo has held since 1945, but if it's ever transgressed, humanity's ability to even contemplate issues such as disarmament will be very deeply compromised.

<http://thebulletin.org/can-treaty-banning-nuclear-weapons-speed-their-abolition/disarmament-while-chance-remains>

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The Sydney Morning Herald – Sydney, Australia

Australia's Unprecedented Decision to Snub Nuclear Talks is Irresponsible

By Paul Barratt and Sue Wareham

February 22, 2017

Australia is about to do something unprecedented in the conduct of our international relations.

We are about to boycott major UN multilateral nuclear disarmament negotiations. On March 27 in New York, negotiations will commence on a treaty to ban nuclear weapons, following a strongly supported resolution passed in the General Assembly last December – with 123 nations in favour, 38 against and 16 abstentions – for "a legally binding instrument to prohibit nuclear weapons, leading towards their total elimination".

The UN resolution and the forthcoming negotiations are the result of intense government and civil society action in recent years that has highlighted the catastrophic humanitarian impacts of these most terrifying and destructive of all weapons, and the imperative to prevent any further use.

However, Australia has consistently maintained that we must rely on US nuclear weapons to "protect" us ("extended deterrence"), and therefore will not rule out their use on our behalf. Exactly how or under what circumstances that protection would manifest, or against which populations a nuclear bomb might be launched on our behalf, has never been explained.

Australia's boycott of the disarmament talks, a decision that was made public just last week, will have grave implications, quite apart from the unconscionable act of snubbing the most promising disarmament initiative in decades. It calls into question our commitment not only to the UN but also to the 1968 nuclear non-proliferation treaty, article 6 of which obliges all member states – not just those with the weapons – to "pursue negotiations in good faith on effective measures relating to ... nuclear disarmament".

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The key to a ban treaty's effectiveness lies in its power to delegitimise and stigmatise weapons that kill and maim whole populations indiscriminately. Which nation would boast of a "smallpox deterrent" or a "nerve gas deterrent"? Yet despite the existence of treaties to ban these other weapons of mass destruction, there is still no equivalent treaty to ban the only weapons that can destroy a city in an instant and leave human suffering and environmental devastation on a scale we can't imagine.

The US, which has been the strongest opponent of the ban treaty process, with Australia as our ally's most active and vocal supporter, has conceded behind closed doors that a ban treaty will have exactly its intended purpose. A letter from the US mission to NATO to its NATO allies on October 17 last year, expressed alarm that a nuclear weapons prohibition could, among other things, "make it impossible to undertake nuclear planning or training". Indeed; that's the whole point of the thing.

Australia's boycott will also render our advocacy in other areas less credible. Foreign Minister Julie Bishop's frequent pronouncements on the need for a rules-based international system will ring hollow if Australia actively undermines this historic effort to strengthen international law and give effect to the disarmament obligation written into the non-proliferation treaty.

How will Australia be able to condemn nuclear missile tests by, say, North Korea, or other possible future proliferators, when we support a nuclear apartheid and oppose efforts to place all nuclear-armed nations on the same legal footing?

And in the region, Australia will yet again stick out as merely an appendage to the US rather than an independently minded nation that considers global interests and its own interests above those of its ally. Every south-east Asian nation, and all Pacific island nations (save Micronesia, which is still vulnerable to US pressure) support the delegitimising of nuclear weapons via a treaty banning their development, testing, manufacture, deployment and use. New Zealand has, again, been a leader in the process. China is considering attending the negotiations.

Australia's approach to nuclear disarmament was best summed up in Senate estimates in October last year, when a Department of Foreign Affairs and Trade representative was questioned on it. The response was that "In order to be able to effectively carry forward disarmament, you need to have a world in which there is not a threat of nuclear weapons and people feel safe and secure". In other words, Australia will look at the need to get rid of the weapons when they no longer exist.

Australia's decision is irresponsible and unworthy of a nation that – notwithstanding our support for extended nuclear deterrence – has had a long history of engaging with UN disarmament initiatives. Whatever we have to say about this vital issue, we should be at the table saying it. The decision should be reversed.

<http://www.smh.com.au/comment/australias-unprecedented-decision-to-snob-nuclear-talks-is-irresponsible-20170221-gui3dd.html>

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RealClear Defense - US

The Real Nuclear News

By Peter Huessy

February 23, 2017

Is the world getting closer to war between the nuclear-armed superpowers? And should the United States exercise restraint, and radically change its foreign policy to lessen the dangers?

First, let us look at a common narrative that is fueling this concern.

The Union of Concerned Scientists moved its nuclear clock 30 seconds closer to doomsday fearing reduced arms controls. Former Secretary of Defense Perry thinks our nuclear missiles are ready to be launched by computer if we receive even a false warning of an attack. Lee Hamilton, a leading foreign policy former Democratic House member, thinks the new administration might be prone to launch nuclear weapons in a crisis recklessly. Moreover, the Ploughshares Fund says it is unfair for the United States to have five ICBM based states that could be targeted by the Russians-- although they are silent about the other bomber and submarine basing states with far larger populations that are in the target mix as well, to say nothing of Washington, D.C.

The common theme for all these developments?

If American deterrent policy just changes, the nuclear dangers will recede.

Is this true?

No, it is not. While there are indeed many nuclear dangers we should worry about, their origin does not lie with the United States, although it is perfectly reasonable to criticize past American policy as inadequate to meet these challenges.

However, whether we are concerned with the Russians moving nuclear capable Iskandar missiles to Kaliningrad or the Chinese threatening war if anyone challenges their illegitimate and dangerous deployment of missiles on artificial islands in the South China Sea, these actions are part of a strategy by our adversaries to rewrite the rules of international relations to use military coercion to get their way.

While the Russians and Chinese are deploying their nuclear-capable missiles, the North Korean regime is also building more nuclear weapons and testing more capable ballistic missiles. Meanwhile, given the strong cooperative military work between the two countries, Iran's terrorist activity should also be of growing concern. Already its Houthi terror allies are launching missile attacks on U.S. and allied ships in the Gulf, as well as Saudi Gulf oil facilities, even as its patron supplier of weapons, Iran, boasts that "No-one can challenge us," while testing nuclear-capable ballistic missiles.

These threats are nothing new, and are not America's "fault." Moreover, they are not a challenge to any particular American President or administration. They are threats to the sound order the U.S. and its allies have tried to build since the end of World War II, and at the end of the Cold War, to bring more peace and prosperity to the U.S., allies and the rest of the world.

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In short, these threats affect all of us.

Thus when the Russian military and diplomatic leadership explicitly threaten to use nuclear weapons against the United States and its allies, more than two dozen times since 2009, that is a threat to our national security, not just one party or administration.

The Russian deployment of nuclear-capable missiles in Kaliningrad was first threatened in 2013.

The Chinese have been expanding their territorial reach in the South China Sea with illicit island building for over a decade.

The North Korean's first sought to build nuclear weapons and companion missile delivery systems in the 1990's during the Clinton Administration.

Moreover, the Iranians have been attacking Americans since 1979 when they seized our embassy in Tehran, attacking our embassy and Marine barracks in Lebanon in 1983, Khobar Towers in 1996, the African embassies in 1998, and culminating in their support for the 9-11 attacks. Followed by the killing hundreds of American soldiers with IED's in Iraq and Afghanistan.

Altogether, Iran and its terror allies have indeed killed more Americans than any other entity since the end of the Cold War.

In short, these nuclear dangers are not the fault of the current administration, and cannot be changed through rhetorical sleight of hand or American "restraint" or "soft power," and they are not in response to American bad actions.

However, the disarmament community continues to push "unilateral" restraint by the United States as the key to reducing nuclear dangers. In the nuclear field alone, they repeatedly argue to eliminate the long-range strike option (cruise missile) for our bombers, the 400 new land-based ICBM missiles, one third of our new submarine force, a number of our warhead types and to top things off, enact a unilateral reduction of our deployed nuclear warheads by one-third.

The apparent prevalent idea is that a series of American gestures of "good behavior" or "restraint"—such as unilaterally stopping key elements of our nuclear modernization effort—will somehow set the table for a decline in nuclear dangers. Restraint advocates seek an end to our military exercises with the Republic of Korea, describe China's military assertiveness in the South China Sea as nothing but a "peaceful rise" of a regional power, and accept a certain level of state-sponsored terrorism from Iran as pay-back ("chickens coming home to roost") for our aggression against Iran decades ago.

This gesture of "good behavior," is based on the flimsy idea that our good "moral standing" in the world will turn the hearts and minds of totalitarian rulers away from threatened aggression or would-be nuclear proliferators from their hegemonic goals.

Unfortunately, the recommendations made by many in the disarmament community for US "restraint" would make the world even more dangerous. For example, killing our land-based missiles would cut our nuclear assets by 97%, making it far easier to attack and disarm us.

Unilaterally withdrawing all our small number of nuclear weapons from Europe (a long-standing Russian demand) would uncouple the United States from NATO, hardly in our security interests.



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Moreover, continuing the mantra that our nuclear missiles are ready to be launched by computer warning (and thus should be taken down to avoid such a catastrophe) is no more accurate description of reality than are the chances of fitting six giraffes into a Manhattan phone booth.

Although claimed otherwise, the new administration did not call for a new nuclear arms race. In fact, they said any new arms race would not work out for our opponents because it is a race they would lose. And ironically it was President Putin of Russia who declared he wanted no part of a nuclear arms race, no doubt mindful of the failure of the Soviet Union to match the Reagan administration defense build-up.

As for North Korea, it poses a serious threat to the Republic of Korea and the continental United States and seeks to reunify the Korean peninsula by force. But a strong US alliance with the ROK—which the Trump administration has just said is rock solid-- is the deterrent we need. Both regional allies—Japan and ROK—have recently increased their defense budgets just as the US has cemented its commitment to deploy the THAAD missile defense in Korea and Aegis missile defenses with Japan, exactly the reciprocal actions envisioned by then-candidate Trump.

As the new administration has noted in the call for a missile defense review, a robust, layered missile defense is the technology required to stop a North Korean nuclear warhead from being launched successfully and detonated on US soil, a point the new President also recently made when he said “North Korea will not be allowed to do that”. [This nuanced point may have passed over the heads of some political commentators as some thought the administration was threatening to pre-empt any missile launch as opposed to shooting down any incoming North Korean warhead with an American deployed missile defense.]

So how can one argue that American restraint can end these nuclear dangers?

In reality, what are the facts?

We have hardly got our nuclear running shoes on, let alone gotten out of the starting blocks. Russia, on the other hand, is sprinting down the track, now having successfully modernized nearly two-thirds of its nuclear forces despite falling government revenue and western economic sanctions.

In fact, early in the next decade, around 2021-1, Russia will have modernized close to 100% of its bombers, land-based missiles and submarines. And China will by the end of the next decade have a fully modernized and expanded nuclear deterrent as well with mobile ICBMs, a new missile-armed submarine, and long-range cruise missiles. New data now indicate China can build 1000 new nuclear warheads quite rapidly.

If the US stays its current projected course, we will at best, fully modernize our nuclear deterrent by the mid-2030's, some two decades hence. Although we are going in the right direction, any further delay or cuts in our modernization plans will be more expensive than sustaining the old systems we have. On top of which we would be paying more money for less security.

Even if we keep to the current modernization plan, Russia will have completed its nuclear modernization effort before the United States has deployed a single new nuclear bomber, land-based missile or nuclear-armed submarine.



Not only is the US not in any arms race, but we also are not “expanding” our nuclear weapons as is now being claimed by the disarmament community.

In fact, we are ninety percent below our peak deployed level in 1989 of over 13,000 strategic nuclear warheads.

While the Russians have also significantly cut their strategic or long-range missiles and warheads under the START I and Moscow treaties, they have built up their weapons since the 2010 New Start Treaty. And Russia has upwards of 2000-4000 additional theater nuclear weapons not counted under New Start while the US has around 500 such theater weapons.

In short, the only nuclear arms race is being run by the Russians, not the Americans. New Start facilitates, in part, that arms race, it doesn’t prevent it.

Extending such a bad bargain hardly makes strategic sense, something the new Trump administration understands.

As for deployed strategic weapons today, the US does not have the 7000 number often referenced. We actually have a combined 1590 nuclear warheads on our submarines, bombers, land based missiles and theater airplanes in Europe, while the Russians may have as many as 2600 deployed strategic nuclear weapons alone. These numbers are not strictly comparable to the START treaty accountable numbers because for both countries are 1367 and 1800, respectively, bombers count as one weapon irrespective of how many cruise missiles or gravity bombs are on board.

The START treaty’s accountable numbers for both countries are 1367 and 1800, respectively, because bombers count as one weapon irrespective of how many cruise missiles or gravity bombs are on board.

Another way to look at it is that Russia deploys at least 1000 more strategic weapons than America’s strategic and tactical nuclear weapons combined, a balance that does not include 2000-4000 Russian theater or tactical nuclear weapons.

What then should the US and its allies do to push-back on Russian nuclear threats, Chinese military expansion, heightened North Korean nuclear capabilities, and Iranian missile terrorism?

First and foremost, we should modernize our nuclear deterrent as Congress has approved. The prospective Nuclear Posture Review will hopefully underscore the need for our nuclear modernization effort now underway but call for any required acceleration of the nuclear modernization effort as well.

We should understand our adversaries are increasing their nuclear capability. They wish not only to check-mate our nuclear forces but primarily to counter what they perceive as our greater conventional force strength. Unilaterally cutting our nuclear forces, as disarmament advocates now want, will only make us weaker as our adversaries will see this as an invitation to change the balance of power in their favor.

Some disarmament advocates seek to pit one element of our nuclear Triad against the other. For example, one disarmament group now claims it is unfair that missiles in some states if destroyed would kill a lot of nearby Americans but submarines at sea if destroyed would spare Americans here at home. So they advocate getting rid of all the land based missiles that could be targeted by our adversaries.



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We also must embrace the nuclear and conventional build-up as proposed by Senator McCain's white paper, as well as the reportedly forthcoming FY17-18-19 readiness and force modernization being sought by the new administration. Particularly important is to sustain and improve the extended conventional and nuclear deterrent in Europe and the Pacific.

Keith Payne, the President of NIPP, in a January 30 an essay titled "New Threat Realities and Deterrence Requirements," succinctly and eloquently lays out the case for both. It is a good policy guide for going forward.

Our conventional force over the past decade has suffered serious deterioration in their readiness when the proper metrics are used. The USAF is the oldest and smallest in its history, and the Navy is the smallest it has been in 99 years, or just after WWI.

It is true that airplane and ship technology has vastly improved and can with fewer platforms carry out missions that old technology could not.

However, a Navy ship or USAF fighter plane cannot be two places on the globe simultaneously. Nearly half or more of our conventional Air Force and Navy fighter aircraft cannot fly due to a lack of spare parts and needed maintenance according to February 7 testimony of the two services before the House Armed Services Committee.

A strong and superior conventional American and allied military means that to successfully use military force against the United States, our adversaries have to seriously consider fighting us by breaking through the nuclear barrier, a prospect that a strong US nuclear deterrent further prevents.

As former OSD official Brad Roberts has argued, this is precisely the current Russian and Chinese strategy—to threaten in a crisis the early use of nuclear weapons to overcome American and NATO conventional superiority and get the United States to stand down in the face of aggression.

In summary, China's assertion of hegemonic control over the South China Sea and other areas of the Pacific cannot be allowed to stand. Russia has to remove its military "green men" from eastern Ukraine and restore the independence of the Crimea. North Korea cannot be allowed to attack the ROK or successfully strike the US or our allies with a nuclear-armed missile. And we have to remove the terror masters from the regime in Iran.

However, to achieve these goals, strong deterrence backed up by smart diplomacy is called for.

A serial policy of "carrots and more carrots" won't work.

We have tried that.

As Dr. Henry Kissinger once said, "A free standing diplomacy is an ancient American illusion. History offers few examples of it. The attempt to separate diplomacy and power results in power lacking direction and diplomacy being deprived of incentives."

George Washington said if you want to establish peace, prepare for war. Ronald Reagan called such a strategy "peace through strength." That combination of military capability and diplomatic smarts won the Cold War. It can win the peace again.



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The Russian, Chinese and North Korean threats are real indeed and need to be taken seriously. We cannot just stand still or go backward. As the new administration says, it is about making America great again. A strong military—both conventional and nuclear-- is part of that effort.

http://www.realcleardefense.com/articles/2017/02/23/the_real_nuclear_news_110856.html

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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.