



# **USAF Center for Unconventional Weapons Studies**

## **(CUWS) Outreach Journal**

CUWS Outreach Journal 1234

23 September 2016

**Feature Item:** *“North Korea-Iran Missile Cooperation.”* Authored by Michael Elleman; Published by 38 North.org; 22 September 2016.

[http://38north.org/2016/09/melleman092216/?utm\\_source=38+North+Bulletin+092216&utm\\_campaign=38+North&utm\\_medium=email](http://38north.org/2016/09/melleman092216/?utm_source=38+North+Bulletin+092216&utm_campaign=38+North&utm_medium=email)

North Korea’s ground test of a powerful, liquid-fueled engine on September 20, and the launch of three modified-Scud missiles earlier this month renewed allegations that Pyongyang and Tehran are collaborating on ballistic-missile development. The accusations are mostly speculative, based largely on the apparent similarities of ballistic missiles and satellite launchers appearing in both Iran and North Korea. A detailed examination of the designs employed by the two countries casts doubt on claims that the two countries are co-developing missiles and satellite launchers, exchanging detailed design data, and testing prototypes for each other. Pyongyang and Tehran may share test data on a limited basis, and perhaps trade conceptual ideas. But there is little evidence to indicate the two regimes are engaged in deep missile-related collaboration, or pursuing joint-development programs.

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

The Washington Examiner – Washington, D.C.

### **Air Force Announces Name of Next Long-Range Strike Bomber**

By JACQUELINE KLIMAS

September 19, 2016

The Air Force announced on Monday that the new B-21 long-range strike bomber will be called the Raider.

Retired Lt. Col. Richard Cole, the last surviving airman of the Doolittle Raiders, announced the name at the Air Force Association's Air, Space and Cyber conference at National Harbor in Oxon Hill, Md.

The Doolittle Raid in 1942 was the first U.S. strike against the Japanese mainland in World War II following the attack at Pearl Harbor. It was planned by then-Col. Jimmy Doolittle.

The name was selected from more than 2,100 entries submitted by airmen. More than one advocated for the new bomber to be called the Raider, but the two official winners, Lt. Col. Jaime Hernandez and Tech Sgt. Derek White, were selected based on their justification for the name.

Northrop Grumman received the contract for the new long-range strike-bomber last year and will produce about 80 to 100 of the planes. Six other contractors will work on the airframe or different missions systems: BAE, GKN Aerospace, Janicki Industries, Orbital ATK, Rockwell Collins and Spirit Aerosystems. Pratt and Whitney will make the engine.

Air Force Secretary Deborah Lee James announced in February that the new bomber would be designated as the B-21, since it is the first bomber of the 21st century.

<http://www.washingtonexaminer.com/air-force-announces-name-of-next-long-range-strike-bomber/article/2602177#!>

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Breaking Defense – Washington, D.C.

### **B-21 Bomber Estimate by CAPE: \$511M a Copy**

By COLIN CLARK

September 19, 2016

NATIONAL HARBOR: The Air Force's new bomber, the B-21 Raider, should come in almost \$40 million below the official \$550 million a copy official estimate, says Randall Walden, director of the Air Force's Rapid Capabilities Office. So, \$511 million is the new \$550 million.

After his panel here at the Air Force Associations 2016 annual conference, Walden said the Pentagon's office of Cost Estimate and Program Analysis (CAPE) has produced a new estimate of \$511 million a plane, which matches earlier estimates by the plane's builder Northrop Grumman.

CAPE has been regularly performing cost estimates of the plane since 2012.

CORRECTION Lt. Gen. James Holmes, deputy chief of strategic plans and requirements, CORRECT ENDS Walden made clear the Air Force will probably pursue a deep penetrating fighter to accompany the bomber to heavily defended targets deep inside a country. He didn't say it but my

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understanding is war games have shown the B-21 is incapable of making it to western China to destroy the missile and artillery units there.

The aircraft concept is called Penetrating Counter-Air (PCA). The program, I understand is called PCAP.

Here's what Air Superiority 2030 Flight Plan says about PCA:

“PCA will focus on maximizing tradeoffs between range, payload, survivability, lethality, affordability, and supportability. While PCA capability will certainly have a role in targeting and engaging, it also has a significant role as a node in the network, providing data from its penetrating sensors to enable employment using either stand-off or stand-in weapons.”

This seems consistent with rumors that the Air Force is pursuing a new program to build an aircraft to accompany the bomber deep into western China, where the Second Artillery has its facilities and many of China's most important capabilities.

I've spoken with a number of industry experts who assume PCAP will be a program. They also decline to discuss it any detail, saying the threats and capabilities are classified.

Walden also told reporters after the panel ended that Northrop and its suppliers are encouraged by their contract to deliver airplanes on time and on budget, with the fees pegged mostly to the end of the contract. That, he said forces them to do a really good job in the early parts of the program since schedule problems in the beginning simply cascade outwards. The fact that the incentives also apply to the program's suppliers is intriguing.

In a note sure to be read closely by Sen. John McCain, who has pressed for more openness on the B-21 program, Walden said the program is working closely with the Intelligence Community to assess what portions of the program can be declassified. He said they meet at least once a year with the IC. He also noted that professional staff on the House and Senate defense committee with the necessary clearances, as well as some senior lawmakers, have been briefed in detail about the plane's costs, capabilities and programmatic.

Gen. Robin Rand, head of Air Force Global Strike Command, said the service is in the midst of discussions about which bombers to replace as the B-21 bombers come online. I asked him about this during a later Q and A. He revealed that a study he called “bomber vector” — a “very elaborate study” — is underway. The results will be briefed to Air Force Chief of Staff David Goldfein before the results are released.

<http://breakingdefense.com/2016/09/b-21-bomber-estimate-by-cape-511m-a-copy/>

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Defense News – Springfield, VA

## **Planned ICBM Replacement to Move Forward without Consensus on Cost**

By Aaron Mehta

September 20, 2016

National Harbor, Maryland – An unresolved discrepancy in cost estimates between the Air Force and the Office of the Secretary of Defense over the next-generation intercontinental ballistic missile replacement will not keep the program from moving forward, the secretary of the Air Force said Tuesday.



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Deborah Lee James told reporters at the Air Force Association conference that the delta between the cost estimates for the Ground Based Strategic Deterrent (GBSD) program is “not that high” and indicated she was not surprised by the difference in numbers, given how long it has been between the last ICBM program and its replacement.

“We haven’t done this in 40 years. There were different approaches used to build up the costs,” James said.

In the short term, the Air Force and OSD's cost assessment and program evaluation (CAPE) office will compute, potentially with input from Deputy Defense Secretary Bob Work, the funding needed to keep the program moving forward in the fiscal 2018 budget request, which is currently being formulated inside the Pentagon.

In the longer term, James is confident a more accurate cost estimate will come when industry submits their offers in late October. Lockheed Martin, Northrop Grumman and Boeing are all expected to make bids on the GBSD program, with a down-select to two companies planned for late 2017.

“We are not going to know with better certainty until after we get the information and it comes back from industry on the [requests for proposals]. We believe that will provide some additional insights to ultimately refine these cost estimates, and with that refinement can come a new service cost position at some point in the future,” James said.

“So we’re going to do whatever we need to do in order to get through these next few months and settle on whatever we’re going to put in the [budget] in the next cycle, but the real issue will be over the next year and beyond we will be continually refining as we learn more from industry and put in better estimates.”

<http://www.defensenews.com/articles/james-new-icbm-cost-question-will-not-impact-next-budget>

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The Washington Examiner – Washington, D.C.

### **Nominee to Be Next Nuke Chief Supports the Triad, but Not the Cost**

By JAMIE MCINTYRE

September 20, 2016

The Air Force general nominated to take over U.S. Strategic Command gave a full-throated endorsement of the Pentagon's plans to rebuild all three legs of America's nuclear triad. But he raised questions about the price tag: an estimated \$1 trillion over 30 years.

Testifying Tuesday at his confirmation hearing before the Senate Armed Services Committee, Air Force Gen. John Hyten, said "I agree we have to modernize all three elements of the nuclear triad. I can't state my support any stronger."

But while committed to all three legs of the triad, Hyten is not committed to the eye-popping cost.

"I think the nuclear triad is affordable as we go forward in the future, but it should not be looked at as a blank check," Hyten testified. "I don't like it when I see the numbers that show up in the paper



of \$1 trillion, or \$85 billion, or \$500 billion. I don't like to see those numbers because they tend to be self-fulfilling prophecies."

The triad refers to the three platforms the U.S. launches nuclear weapons: strategic bombers, ballistic missile submarines and land-based missile silos.

In 2011, President Obama committed to build new bombers, submarines and replacement missiles, but some critics, including former Defense Secretary William Perry, and former U.S. Strategic Commander Gen. James Cartwright have argued that the land-based intercontinental ballistic missiles could be phased out, because submarines can perform the same mission.

Hyten expressed unwavering support for all three delivery systems. "If I'm confirmed I will continue to state that [support] in all forms."

"Each element provides such a significant different attribute that is so important to the security of our nation," Hyten said. "The bombers are the most flexible. The submarines are the most survivable. And the ICBMs are the most ready and responsive."

<http://www.washingtonexaminer.com/nominee-to-be-next-nuke-chief-supports-the-triad-but-not-the-cost/article/2602335>

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Sputnik International – Russian Information Agency

## **Despite Budget Woes, US Air Force Pushing for Nuclear Missile Modernization**

22 September 2016

Faced with an aging nuclear arsenal, the US Air Force (USAF) is seeking funds to modernize its intercontinental ballistic missile (ICBM) stockpile and develop a new nuclear cruise missile known as the Long Range Standoff (LRSO).

The US government has known for years that it's Minuteman III ICBM arsenal is in danger of falling behind. While the Air Force was granted approval to develop up to 400 new missiles, that effort stalled last month in response to budget concerns.

*Air Force officials continue to push for Minuteman replacements. Speaking during the Air Force Association's Air, Space & Cyber Conference 2016 on Monday, Lt. Gen. Jack Weinstein argued that updating the Ground Based Strategic Deterrent is critical.*

He also discussed the need to replace the Air Launched Cruise Missile to be replaced with the nuclear LRSO.

"I think the LRSO is the most critical piece of the modernization effort," he said, according to Defense Tech.

The cruise missile could, in theory, be launched from any American bomber.

Weinstein added that he preferred to discuss the cost of the two programs on another day, which is odd given the budgetary problems that have plagued the Air Force's missile proposals in the past.

The USAF originally estimated that replacing the Minuteman IIIs would cost \$62.3 billion. Last month, the Pentagon was forced to delay the program after a cost assessment report from its Defense Acquisition Board found that figure to be a severe underestimate.

The program is now expected to cost roughly \$85 billion, a 36% increase.



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Additionally, development of the LRSO is expected to cost at least \$20 billion. The USAF has already released a statement calling on defense contracting firms to submit bids.

"The LRSO weapon system will be a cost-effective force multiplier for B-52, B-2, and B-21 aircraft to credibly deter adversaries and assures US allies of our deterrent capabilities," the statement said.

In addition to costs concerns, a number of Congressional lawmakers have fought to abandon the LRSO program on humanitarian grounds, arguing that a new nuclear weapon puts world peace at risk.

*"Nuclear war poses the gravest risk to American national security," ten Democratic senators wrote.*

US officials seem unlikely to bow to these concerns, however.

"Releasing this solicitation is a critical step toward affordably recapitalizing the aging air leg of the nuclear triad," Maj. Gen. Scott Jansson told Defense One last month.

<https://sputniknews.com/military/20160922/1045571855/usaf-nuclear-modernization.html>

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Yonhap News Agency – Seoul, South Korea

### **U.S. Should Consider Offering to Withdraw THAAD if China Imposes Serious Sanctions on N.K.: U.S. Experts**

September 20, 2016

WASHINGTON, Sept. 19 (Yonhap) -- The United States should consider offering to call off the planned deployment of the THAAD missile defense system to South Korea if Beijing imposes serious sanctions on North Korea, U.S. experts said Monday.

Eric Heginbotham and Richard J. Samuels of the Massachusetts Institute of Technology's Center for International Studies made the suggestion, arguing that flexibility on THAAD deployment is worth an end to the North's nuclear and missile programs.

"U.S. leaders should not only point out the downside of Chinese inaction. They should put an offer, or set of offers, on the table. If China agrees to impose a serious and graduated set of sanctions on North Korea -- ones that the North cannot ignore -- the United States might agree to freeze the deployment of GBI at their current number (and reduce the number as North Korea reaches milestones in dismantling its weapons programs)," the researchers said, referring to ground-based interceptors.

"The United States might also agree, after consulting South Korea, to withdraw THAAD from the peninsula when North Korean nuclear weapons no longer pose a threat," they said in a joint article published on the website of the National Interest magazine.

But both GBIs and the THAAD deployment to South Korea have been justified exclusively on the basis of the North's nuclear and missile threats, and "flexibility on the deployment of those systems would be well worth a verifiable end to the North's WMD programs," they said.

Their suggestion came amid concern that China could be lukewarm about efforts to impose fresh sanctions on Pyongyang for its fifth nuclear test in retaliation of the decision by Seoul and Washington to deploy the Terminal High Altitude Area Defense battery to the South.



Beijing has strongly protested the decision, claiming that the advanced missile system, especially its powerful "X-band" radar, can be used against it, despite repeated assurances from the U.S. and the South that the system is purely defensive and designed only to cope with North Korean threats.

"Beijing, which suspects that X-band radar associated with U.S. THAAD in South Korea might also track Chinese missiles, is unlikely to change course based solely on U.S. assurances about future moderation of U.S. strategic deployments. The bargain outlined above is not meant to change China's perspective or its view of its own national interests," the researchers said.

"Rather, it presupposes that North Korea's most recent provocations may bring Beijing to recalculate the costs of its inaction. We believe that a forthright U.S. acknowledgment of China's own security equities and a willingness by Washington to compromise might help tip the balance in Beijing and pacify the Korean Peninsula," they said.

<http://english.yonhapnews.co.kr/national/2016/09/20/52/0301000000AEN20160920000400315F.html>

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The People's Daily Online – Beijing, China

## **Li Tells Obama of Opposition to THAAD Deployment Plan**

(China Daily)

September 21, 2016

Premier Li Keqiang voiced Beijing's opposition to the plan by Washington and Seoul to deploy an advanced missile-defense system in the Republic of Korea while meeting with US President Barack Obama in New York.

Li said "it is hoped that all parties will avoid taking actions that lead to escalation of the tense situation".

He and Obama met on the sidelines of the 71st session of the United Nations General Assembly on Monday.

Earlier this year, Washington and Seoul agreed to deploy the Terminal High Altitude Area Defense system, angering Beijing and Moscow. The system's radar has a maximum reach of 2,000 km and could cover parts of China and Russia.

Earlier this month, tension rose anew on the Korean Peninsula after the Democratic People's Republic of Korea conducted a nuclear test in an area near the China-DPRK border.

Li said China endorses the UN Security Council's plan to further respond to the nuclear test by the DPRK.

Beijing remains committed to denuclearization of the peninsula, ensuring peace and stability, and resolving the issue through dialogue and consultation, Li said.

A White House statement released later on Monday said Obama and Li "resolved to strengthen coordination in achieving the denuclearization of the Korean Peninsula".

Zhang Tuosheng, director of the research department at the China Foundation for International and Strategic Studies, said China should continue tackling two tasks simultaneously — counteracting the THAAD deployment plan as well as strengthening cooperation with the US and the ROK in boosting denuclearization of the peninsula.



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"No efforts should be spared to resume the Six-Party Talks, and even if the resumption is unlikely, support should be given to other dialogue promoting peace on the peninsula and denuclearization," Zhang said.

Jia Xiudong, a senior researcher in international affairs at the China Institute of International Studies, said the DPRK nuclear tests and the US-ROK plan to deploy THAAD are "pushing the peninsula situation to a deadlock, which serves no interest of any party".

The root cause of the nuclear issue is the mutual distrust between the US and the DPRK, and the only way out is to resume dialogue, Jia said.

During their talk, Li and Obama also touched upon bilateral trade and investment, as well as global issues including sustainable development, refugee crises and peacekeeping.

<http://en.people.cn/n3/2016/0921/c90883-9117412.html>

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The Guardian (U.S. Edition) – New York, NY

### **Obama to Decide on Cuts to US Nuclear Arsenal in October**

*Limited politically feasible options on table for president to cement a disarmer legacy, most far-reaching of which is a one-third cut to deployed strategic arsenal*

By Julian Borger, World affairs editor

Saturday, 17 September 2016

Barack Obama is expected to make a final decision next month on possible cuts to the US nuclear arsenal, in an attempt to consolidate his legacy as a disarmer before leaving office.

Options on the table include reducing the number of deployed strategic warheads, slimming down the reserve stockpile, cutting military stores of fissile material available for making new warheads, and putting off some modernisation plans, including the controversial air force programme for developing an air-launched cruise missile.

The president is due to consult his principal national security officials in October on which, if any, of the options are still feasible in the time left before he leaves office.

Some more radical options, like changing the US nuclear posture to rule out first use of nuclear arms in a conflict and taking some of the nation's intercontinental ballistic missiles off hair-trigger alert, have faced such strong opposition from allies abroad and the Pentagon that they are no longer being seriously considered.

"We have paid a lot of attention throughout the administration," an administration official said, pointing to the New Start Treaty with Russia in 2010, changes to US nuclear posture the same year that ruled out strikes on non-nuclear states, work on improving the security of nuclear stockpiles around the world, and last year's agreement limiting the scope of Iran's nuclear programme.

Unable to persuade the Senate to reconsider ratification of the Comprehensive Test Ban Treaty, the White House has backed a United Nations security council resolution, due to be passed on Thursday, that reaffirms member states' commitment not to conduct explosive nuclear testing. The



administration official said there might be more steps to come before Obama leaves office in January.

“There are a whole lot of other steps the administration is looking at, and right now it is an open book as to what will be decided,” he said.

Nuclear disarmament was one of the signature ambitions of Obama’s first months in office. In a speech in Prague in April 2009, he pledged US commitment “to seek the peace and security of a world without nuclear weapons”. However, he approaches the end of his eight years in office having made fewer reductions to the US arsenal than any president since the end of the cold war.

Furthermore, part of the price of persuading the Senate to accept the New Start Treaty was agreeing to a modernisation programme of air, land and sea delivery systems, as well as warheads, that is expected to bring the cost of the US deterrent to \$1tn over 30 years.

Robert Einhorn, the state department’s special adviser on non-proliferation and disarmament from 2009-13, argues that Obama did the best he could in difficult circumstances.

“He has good a record on the nuclear issue but it probably falls short of his own hopes for progress,” said Einhorn, now a senior fellow at the Brookings Institution. “He was operating in an environment that was not at all conducive. Unfortunately the whole Prague agenda has become so politicised there is little room for manoeuvre and you have an international climate that is not terribly conducive.”

He added: “The US has been prepared to reduce our deployed stockpile a third below New Start. Russia has said it has zero interest.”

Disarmament advocates like Daryl Kimball, executive director of the Arms Control Association, say unfavourable circumstances at home and abroad are only a partial excuse.

“Obama has missed multiple opportunities to realise lasting change in nuclear weapons policy,” Kimball said. “He has adjusted but not transformed the issue. Part of that is a failure of leadership and imagination. He now has a disappointing legacy.”

However, Kimball said it was not too late to improve that legacy, even in the last months of the Obama presidency.

The most far-reaching option still under active consideration is a one-third cut to the US deployed strategic arsenal, from the 1,550 warheads agreed with Moscow in the New Start Treaty to just over 1,000. Obama offered to make the reduction in a 2013 speech in Berlin, on condition Russia did the same. But Vladimir Putin has shown little interest in disarmament, instead emphasising his country’s nuclear might.

The Berlin offer was based on a US assessment that it could reduce its nuclear missile arsenal by a third and still “maintain a strong and credible strategic deterrent”. On the basis of that assessment, disarmers inside and outside the administration have argued that Washington should make the cut unilaterally for cost-saving reasons and to make a more convincing argument to non-weapons states that the US is sticking to its side of the bargain in the Non-Proliferation Treaty.

“What Obama could and should do now is act on our own determination on what it is that we need, and that we’re not going to tie our budget decisions and arsenal to Russia’s decisions,” Kimball said, pointing out that both presidents Bush made unilateral reductions to US nuclear force levels without being blocked by Congress. However, the current Obama proposal is strongly opposed by the Department of Defense, which is concerned it would send a message of weakness to Moscow.



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“There would have been a small chance of that before, but what happened in Crimea and the Donbass wiped that off the table,” said Steven Pifer, a former senior state department official deeply involved in past relations with Moscow and arms control.

More politically palatable options on the table are a reduction to the “hedge” stockpile of more than 2,500 reserve warheads and military stores of hundreds of tons of plutonium and highly enriched uranium (HEU) held for the production of future warheads. Both are widely considered being surplus to requirements.

In a 2013 Nuclear Employment Strategy document, it was decided that the warheads held in reserve as a hedge against technical failures in deployed weapons could also serve as a hedge against geopolitical surprises, rather than having two separate reserves. However, the consequent cut to the stockpile has not yet been made.

“I think there’s a chance they will announce a reduction of the hedge,” said Hans Kristensen, director of the Nuclear Information Project at the Federation of American Scientists. “But they would in any case not cut the whole hedge, perhaps about 50% of it.”

Zia Mian, from the programme on science and global security at Princeton University, said fissile material stocks could also be cut. They are now believed to constitute 243 tons of HEU and 38 tons of plutonium.

“If say, a typical US warhead has 25kg of HEU and 4kg of plutonium, then if the US were to reduce to 1,000 operational warheads (as Obama says they can) and say 1,000 reserve warheads, it would need only 50 tons of HEU and eight tons of plutonium for its nuclear arsenal and the rest could be declared excess,” Mian said.

A further option known to be under consideration would be delaying some of the ambitious nuclear modernisation programmes that are still in their very early stages. A planned air force fleet of nuclear-capable B-21 stealth bombers is priced at \$80bn, while proposed nuclear long-range stand-off cruise missiles are estimated to cost \$30bn.

Critics have said it is unclear how such weapons will be funded when the major expenditure is due in the 2020s, and that each makes the other redundant. The cruise missiles have been described as potentially destabilising because they can be launched without warning and are impossible to distinguish from their conventional counterparts.

“If you now have the B-21 coming online able to penetrate enemy defences, why do you need a cruise missile, and if the B-21 is not going to penetrate, why is it being developed? The military is asking for things it may not need,” Pifer said.

“I would like to see them cancel the cruise missile. It would be a useful change, but I just can’t see them doing it in the last few months of the administration.”

Even staunch arms control advocates such as Joseph Cirincione of the Ploughshares Fund said the administration may have left it too late to make meaningful changes.



"They took their eye off the ball," Cirincione said. "If last year they wanted to do some of these things, it would have been easier. Now it's not outside elements that are the only problem, but the politics during the presidential election. I would be surprised if they did anything controversial."

<https://www.theguardian.com/world/2016/sep/17/obama-nuclear-arsenal-disarmament-russia-congress>

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TASS Russian News Agency – Moscow, Russia

### **Moscow Sees Deployment of US Interceptor Missiles in Romania as INF Treaty Violation**

*The launchers are similar to those US naval ships use to launch Tomahawk intermediate range cruise missiles*

September 22, 2016

MOSCOW, September 22. /TASS/. The deployment of interceptor missile launchers in Romania is a violation of the Intermediate Nuclear Force (INF) treaty, Russia's Deputy Foreign Minister Sergey Ryabkov told Russia's Public Chamber.

"The new feature of the situation in Europe is the deployment of interceptor missile launchers at the air defense base Deveselu, in Romania. In the longer term a similar project will be implemented in Poland. The launchers are similar to those US naval ships use to launch Tomahawk intermediate range cruise missiles," he said. "The emergence of such launchers on the ground is a direct violation of the INF treaty by the United States."

On May 12, speaking at the military base Deveselu (Olt county 180 kilometers away from the Romanian capital Bucharest) NATO's Secretary-General Jens Stoltenberg officially declared the US missile defense system Aegis, deployed there, was fully operational. The next day the Polish community of Redzikowo saw an inaugural ceremony at the construction site of a future US missile defense base, scheduled to go operational in 2018.

"NATO is going ahead with the buildup of its anti-missile potential in Europe within the framework of the so-called phased adaptive approach," he said. "We've repeatedly expressed concern over the deployment of strategic infrastructure elements near our borders, which directly affects our security interests," Ryabkov said.

He described creation of a global US missile defense, including its European segment, as a destabilizing factor, because at a certain phase the so-called European missile defense may begin to cause adverse effects on the effectiveness of Russian strategic deterrence weapons. This point has not been achieved yet, but the potential of the US and NATO anti-missile shield will keep growing.

"We see as a rather telling sign Washington and Brussels remain reluctant to revise their anti-missile defense plans regardless of the agreements that settled tensions over the Iranian nuclear program. We will remain tightly engaged with the Europeans to promote their awareness of the inevitable undesirable consequences the US project will entail," Ryabkov said.

According to Ryabkov, Russia and NATO are knowingly distorting facts by saying Russia itself has allegedly wrapped up the dialogue on antimissile defense.

"Russia has been and remains open for a constructive and trust-based dialogue on the issue of missile defense. We are not only speaking about this, we have been acting respectfully, including making proposals on concrete cooperation," the diplomat said.



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### **US plans to deploy nuclear weapons in Europe**

Moscow is concerned over Washington's plans to deploy new nuclear bombs in Europe.

"The US plan to deploy in Europe new nuclear aerial bombs with reduced capacity but greater accuracy arouses serious concerns," the high-ranking diplomat said. Such bombs can be used not as a means of political containment but as weapons on the battleground, he added.

Ryabkov rejected the claims of Washington that Russia is more relying on nuclear weapons in its military planning. "The US clearly distorts the provisions of Russia's military doctrine concerning the nuclear weapons," he said.

### **NATO forces at Russian borders**

According to the diplomat, deployment of NATO forces near Russia's borders would be in violation of the Founding Act on relations between NATO and Russia.

"We know about US plans to deploy additional forces in Europe close to the Russian borders, all this is sold as an initiative to bolster allies' confidence," he said. "In fact, these plans will mean a buildup of NATO's troops near our borders, and these plans are sold to us as not violating the Russia-NATO Founding Act," he went on.

However, it is planned that Alliance's units will be rotating, while hardware will stay. "Thus, the demands of the Act to refrain from deploying sizable warfare means are violated," he said.

### **US, NATO don't plan to find areas of common interest with Moscow**

Ryabkov has stressed that the US and NATO are not planning to find areas of common interest with Moscow at the moment.

"A discussion on the military and political situation in Europe and the causes of its deterioration is being held in various formats," Ryabkov said. "This is the OSCE and the dialogue in the format of the NATO-Russia Council which has gained some dynamics over the past months, and of course our bilateral contacts."

"During this discussion we are convinced that at this stage our opponents from the US and NATO don't pursue the goal of finding the real areas of common interest," Ryabkov stressed.

"The containment, which is one of two key elements of NATO's policy towards Russia, is gaining its own dynamics while the openness to dialogue, according to our assessment, has a back-seat role," he said.

### **Conventional arms in Europe**

Moscow is prepared to discuss with NATO the situation on the control over conventional weapons in Europe based on equality and taking into account mutual interests.

Ryabkov reminded that preparation for the possible talks on the issue was put on hold and instead of this NATO intensified accusations against Moscow over its suspended participation in the Treaty on Conventional Armed Forces in Europe (CFE).

Russia has repeatedly called to renew the regime of control over conventional weapons in Europe and bring it in line with the current military and political reality on the continent, Ryabkov said.

"This is because the previous treaty is hopelessly outdated and returning to it is impossible," Ryabkov said. "The adapted version of it in 1999 finally did not enter into force."



One of the signals that the Europeans show interest in this is the article of German Foreign Minister Frank-Walter Steinmeier published in late August with the title "More Security for All in Europe: Re-launch of Arms Control," Ryabkov said.

Although Germany's views on a number of aspects significantly differ from Russia's assessments, "still we are breaking logjam," he said. "We will carefully watch how Germany's call is answered by its allies "whose efforts led the dialogue on control over conventional weapons to a deadlock."

"As earlier we remain open to discuss issues of international security and stability based on equality and taking into account mutual interests," Ryabkov stressed.

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TASS Russian News Agency – Moscow, Russia

### **Russia Will Not Deploy Nuclear Weapons Abroad — Ministry**

*Russia, US reduce nuclear arsenals to level of late 1950s, the Foreign Ministry says*

September 23, 2016

MOSCOW, September 23. /TASS/. Russia will not deploy nuclear weapons outside its borders and all arsenals will remain in its national territory, the director of the Russian Foreign Ministry's non-proliferation and weapons control department, Mikhail Ulyanov, told a news conference on Friday.

"Russia removed all of its nuclear weapons from foreign territories back in 1989-1990," he said. "All of our weapons, including tactical ones, remain exclusively in our national territory. We have no plans for deploying them elsewhere."

"I believe that this is a decent position," he remarked.

"As far as the United States is concerned, the situation looks totally different. The bombs are far away from the US, across the ocean," Ulyanov said. "Moreover, these bombs peg a number of non-nuclear countries, where the bombs are kept - the Netherlands, Germany, Belgium, Italy and Turkey - to the nuclear potential of the United States and NATO. This grossly violates the first two articles of the Non-Proliferation Treaty that prohibit placing nuclear weapons under the control of non-nuclear states."

### **Russia, US reduce nuclear arsenals**

The diplomat went on to say that Russia and the United States have reduced their nuclear arsenals to the level of the late 1950s.

"We systematically comply with our liabilities under the Non-Proliferation Treaty. Russia and the United States have been steadily reducing their nuclear arsenals," Ulyanov said. "We've cut our nuclear weapons by 80% since the Cold War peak. We stopped the nuclear arms race. The Russian and US arsenals are now where they were in the late 1950s of early 1960s."

The diplomat said neither Russia nor other nuclear powers will take part in the talks on banning nuclear weapons.

"We share the goal of building a nuclear-free world, but the issue is how to move towards this aim. One path of taking a decision on banning nuclear weapons instantly is risky. The other one is more real - that's a step-by-step process towards this goal," Ulyanov said.



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The Russian side is guided by the agreements reached as part of the Non-Proliferation Treaty (NPT), the diplomat reminded. "These agreements envisage gradually moving towards building a nuclear-free world. This movement should be done so that strategic stability and equal security for all are maintained in the world," he said.

"We are fully committed to this thesis. We believe that an attempt to bury it in oblivion or revise it is counterproductive," Ulyanov stressed. "It is evident that neither Russia nor other nuclear powers will participate in the negotiations on banning nuclear weapons," he added.

The diplomat said the US, unlike Russia, cannot explain its claims regarding the Treaty on Intermediate-Range Nuclear Forces (INF Treaty).

"Our contacts on the Intermediate-Range Nuclear Forces Treaty are public," he said in response to a question from TASS. "As to me, this dialogue does not make a strong impression, the U.S. is unable to explain its claims regarding the INF Treaty."

"Time after time they are saying: We know you are to blame and you know you are to blame and you should repent." But there are no talks without details," the diplomat continued. "As for our claims, they have good reasons, and we present them in writing on dozens of pages, all the claims are backed with detailed and major facts."

Contacts continue, he said, for as long as they are rational. "In our opinion, combat drones are violation of the Treaty, and the U.S. is working on them and uses in military operations," the diplomat added.

### **Unilateral disarmament impossible**

Russia believes it is impossible to go ahead with nuclear disarmament in the unilateral format, Ulyanov added.

"Going ahead with nuclear disarmament in the unilateral format at a time when Russia has already cut its strategic nuclear potential by approximately 85% is impossible," Ulyanov said.

"That we've turned a blind eye on this so far was a gesture of good will," he said. "But now, that we have reduced the potential to very low levels, it is no longer possible to proceed in the same fashion."

"While France distances itself to a certain extent from the common NATO potential, Britain is a member of NATO's Nuclear Planning Group," Ulyanov said. "To put it in a nutshell, we can no longer afford to ignore this."

### **Moscow hopes for consensus with Washington**

The diplomat said Moscow hopes for consensus with a new US Administration in disarmament.

"On September 16, was over a conference on disarmament for 2016, and a new session of 2017 will open in January," the diplomat said. "Our suggestions are still on the table."

"We hope the new US Administration, be those Republicans or Democrats, will be able to look unbiasedly at our suggestions (in disarmament) and will be able to review its approach," he said.

"If this should happen, then I think we will achieve a complete consensus in merely a few weeks and this dialogue could begin," the diplomat stated. "If the Americans continue to thwart (Russia's) proposals without giving a convincing explanation for their objections, then the Conference on



Disarmament grants us the right to start negotiations without their consent," Ulyanov noted. "But frankly speaking, in this case an opportunity will be lost."

"Oddly enough, US President Barack Obama began his presidency with promises to ensure considerable progress in nuclear disarmament only to launch fundamental upgrade of these forces," Ulyanov said. "Upgrades are being carried out not with the aim of eventually eliminating these weapons and building a nuclear-weapons-free world. These weapons are designed to last till the 2080s."

He warned that smart nuclear bombs lowered the threshold of using them and increased the temptation to take advantage of their parameters.

"There've been statements that these bombs will be 'more ethical'," Ulyanov said. "This is a highly debatable argument and it invites a harsh response. This is a matter of the near future. New multi-purpose bombs will go operational in 2020. This will be no means enhance European security," he warned.

### **Full ban of nuclear weapons unrealistic**

According to the diplomat, Moscow considers unrealistic the initiative concerning a conference on an international convention on full banning of nuclear weapons.

The diplomat said, the 71st session of the UN General Assembly had adopted a report "containing recommendations to organize talks on an international convention on full banning of nuclear weapons." This session, he continued, may initiate a joint resolution draft. "Then, will begin a major fight and a rather tough discussion."

"We consider this initiative absolutely far from reality, and, in fact, even harmful," the diplomat said.

### **START extending**

Deputy Director of the Russian Foreign Ministry's Non-Proliferation and Arms Control Department Vladimir Leontyev said further steps after implementing the New START Treaty signed by Russia and the United States in 2010 must take into account the factor of third countries.

"While the nuclear arsenals of Russia and the US are reduced, the total potential of third countries is becoming a rather comparable figure. We believe that further steps after implementing the New START Treaty should take into account the factor of third countries," the diplomat said. Two out of five official nuclear powers (the US, France, the UK, China and Russia) are political and military allies of the US and cooperate closely with it in the nuclear sphere, he added.

"We call on all the countries possessing nuclear potential to have a substantive dialogue on this. But we don't see that they have any enthusiasm here," he said.

The diplomat went on to say that speaking about an extension of the START is too early.

"Under the treaty, it can be extended for another five years, but should be discuss it now?" he said. "Probably, not yet. As of now, we have not made to the levels, which will be possible in February 2017. And, besides, those levels are not limited to the treaty."

The official expressed confidence Moscow would observe the conditions and Russia "will reach those levels in due time."

"Even when all those figures are reached, all the remaining provisions will also continue being in force: there will be mechanisms of verification, will be inspections, and exchange of notifications," he said. There is no necessity in "dropping everything now to begin working on a new agreement."



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"At first, we should fulfil the one we have," he said.

### **Unfavorable tendencies**

The diplomat said the tendencies in the global strategic situation "are rather unfavorable for the agreements of the kind." Among the factors, which affect future possible agreements in the sphere he named the situation in the anti-missile defense, in the sphere of conventional arms, including high-precision arms, the situation with the agreement on banning nuclear tests, which still has not come into force.

"There are many factors, and they all will be considered as the issue of possible further actions are discussed," the diplomat added.

He said, it took about a year to draft the agreement, thus there is still time enough to offer a new document if the decision is made.

The New START Treaty was signed by the Russian and US presidents in Prague on April 8, 2010 and took effect after its ratification by the Russian State Duma and the US Congress on February 5, 2011. Under the treaty, the signatories reduce their deployed intercontinental ballistic missiles, submarine-launched ballistic missiles, and heavy bombers equipped for nuclear arms down to 700 and their nuclear warheads down to 1,550. The treaty will remain in force for a total of 10 years.

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FlightGlobal.com – Sutton, U.K.

### **Drone Defense for Nuclear Sites Awaits Government Approval**

By LEIGH GIANGRECO

20 September 2016

WASHINGTON, DC -- Small, commercial unmanned aerial vehicles pose an imminent threat to sensitive government facilities, but the US Air Force must wait on approval from a complex web of government agencies before moving forward with a drone defense strategy, according to the head of the US Air Force Global Strike Command.

Even with a near-term threat on the horizon, the USAF is proceeding with caution when it comes to fielding a counter-UAV system, Gen. Robin Rand told reporters during the annual Air Force Association conference Monday.

"I think we have the technology solutions, but remember we're a democracy here," Rand says. "We are law abiding people and you don't change the laws without thinking of the ramifications, so you don't fix one problem and create another."

Over the past year, counter-UAV systems have emerged as a priority for the US Defense Department. While Rand and head of US Strategic Command Adm Cecil Haney are deep in discussions about a system to protect nuclear assets from small UAVs, the DOD cannot move forward with a solution until several government agencies approve.

"I can tell you, 14 months ago when I took command, we weren't discussing this," he says. "After some recent incidents that have happened across government, not just Air Force Global Strike,



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Maxwell AFB, Alabama

Adm. Haney and I have had several discussions about this and it's being worked. In the meantime, we're asking our airmen to be very vigilant about what they're doing."

Technology solutions that combat small UAVs are not in short supply, from Raytheon's high-powered microwave demonstrator that fries UAV electronics to low- or no-tech solutions, such as the Netherlands' team of drone-snatching eagles. Last spring, the USAF revealed its urgent need for a handheld device resembling a handgun that could provide an interim solution to counter UAVs at Global Strike Command facilities. The air force called for a system that could not only disrupt UAVs, but passively detect the vehicle's radar frequency signature to track its operator on the ground.

<https://www.flightglobal.com/news/articles/drone-defense-for-nuclear-sites-awaits-government-ap-429541/>

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National Defense Magazine – Arlington, VA

### **Officials Lukewarm on Unmanned Version of B-21**

By Stew Magnuson

September 20, 2016

Senior Air Force officials involved in the development of the B-21 Raider long-range strike bomber expressed little interest in developing an unmanned version of the aircraft.

Lt. Gen. James Holmes, deputy chief of staff for plans and requirements at Air Force headquarters, acknowledged Sept. 19 during a panel discussion at the Air Force Association annual conference that the possibility of an unmanned B-21 is still out there and that it remains a base requirement. Yet there might be better options.

"Recall that this platform is part of a much larger family of systems and in that family it is going to bring to bear some of the best capabilities of our nation and the defense industry," he said.

"The question is: What's the right timing to bring that level of capability together with this type of platform?" he asked.

Gen. Robin Rand, commander of Air Force Global Strike Command, didn't care for the idea. "I was around during the initial discussions on whether it should be manned or unmanned. We're planning on being manned."

With a family of systems there will be other platforms supporting the bomber's mission that are not going to be manned. "If you had to pin me down, I like the man in the loop ... very much, particularly as we do the dual capable mission with nuclear weapons," Rand said.

Meanwhile, officials remain optimistic about keeping the program on budget and on schedule. The Air Force is going through the process of base-lining program costs with Northrop Grumman, including its tier-two contractors, said Randall Walden, director and program executive officer for the rapid capabilities office. The Air Force has a fixed-price contract for five lots totaling 21 aircraft, which is normally the most expensive part of production, he said.

"Right now all indications are that we should do quite well," he said. The latest independent estimate has the bomber coming in under the \$550 million per aircraft mark that has been touted since the beginning of the program.



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Walden was asked if there were any plans to transition the bomber from the rapid capabilities office to a more traditional program executive office, which would presumably be PEO fighters and bombers based at Wright-Patterson Air Force Base in Ohio.

“Right now, I don’t see us transitioning the program,” he said. The RCO, he added, has the best subject matter experts when it comes to building bombers and a streamlined acquisition regime. It answers to a board of directors that has “personal insight and oversight of the execution of the program,” he said.

As for the number of aircraft, Rand said there is no final decision yet, but he favors 100 bombers, which he considers a minimum. He bases that on current demands on the bomber force and force projections 15 to 30 years in the future. There are 158 bombers in the inventory now, he noted.

“I can’t for the life of me imagine that our United States Air Force and our nation can have one less bomber than it currently has today,” he added.

<http://www.nationaldefensemagazine.org/blog/Lists/Posts/Post.aspx?ID=2303>

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The Japan News – Tokyo, Japan

### **U.S., South Korea Drill to Model Attack on North’s Nuclear Facility**

STAFF REPORT

September 19, 2016

South Korean and U.S. warplanes will simulate strikes on North Korea’s nuclear facilities in drills in Alaska next month, the Yonhap news agency quoted unidentified military officials as saying.

The maneuver will take part amid Exercise Red Flag, held at Eielson Air Force Base from Oct. 3-21.

“The drill will be held with the scenario of a sudden missile attack from North Korea,” Yonhap quoted an official as saying.

South Korean F-15K strike fighter jets will mimic attacking the North’s Nyongbyon nuclear facility with GBU-31 guided bunker-buster bombs, the official added.

That munition is designed to penetrate deep into buildings or fortified shelters before exploding.

Red Flag exercises are held several times a year between the U.S. and its allies. They are designed to sharpen interoperability, or the ability of pilots to work with one another across potential language barriers and differing levels of experience.

The drills customarily take place within the Joint Pacific Alaska Range Complex, “the largest instrumented air, ground and electronic combat training range in the world,” according to the U.S. military. It has more than 67,000 sq. miles (173,500 sq. km) of airspace, including three bombing ranges with hundreds of different targets and 45 threat simulators, both manned and unmanned.

The allies are under pressure to show preparedness to intervene in North Korea after it conducted its fifth and largest-ever nuclear test this month. Pyongyang shrugged off United Nations sanctions imposed after a test in January and has apparently continued its nuclear and missile work unabated.



However, it is unclear whether bombing the nuclear plant at Nyongbyon is a likely scenario, given the potential for radioactive contamination across the Korean Peninsula.

Yonhap quoted the official as saying "other core military facilities" would also be targeted in the drills.

It said South Korea would send to Alaska six F-15K fighter jets and two C-130 transport aircraft for the drills.

News of the joint exercise comes after reports emerged of a South Korean plan to "annihilate" Pyongyang in a massive bombing campaign if the North shows signs of a nuclear attack.

The plan, known as "Korea Massive Punishment & Retaliation" (KMPR), was revealed earlier this month. Similar to reported "decapitation strikes" on the North Korean leadership, the KMPR plan would also target the hermit nation's upper echelons, including leader Kim Jong Un.

<http://www.japantimes.co.jp/news/2016/09/19/world/u-s-south-korea-drill-model-attack-norths-nuclear-facility/#.V-MAOLTfvq1>

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The Chosun Ilbo – Seoul, South Korea

## **Kim Jong-un's Sister Purges Own Superiors**

By Kim Myong-song

September 19, 2016

North Korean leader Kim Jong-un's sister Yeo-jong is apparently responsible for sending a string of high-ranking party officials off to humiliating "re-education."

Kim Yeo-jong rose to the post of vice director of the Workers Party's Propaganda and Agitation Department in November 2014, where she is in charge of the personality cult surrounding her brother and party propaganda.

She immediately sent three elderly superiors off for re-education -- Kim Ki-nam (87), Ri Jae-il (81) and Choe Hwi (62), intelligence sources here said.

Re-education usually takes the form of labor at chicken farms and rural plantations. Kim Ki-nam, Ri Jae-il and Choe Hwi all technically rank higher than Kim Yeo-jong in the department and are old enough to be her father or grandfather.

A source said the department, which used to be one of the two most powerful in the Workers Party along with the Organization and Guidance Department, has been "filled with lamentations since Kim Yeo-jong became a part of it. It was unheard of for such senior officials to undergo re-education at the same time."

The chief of the state-run Rodong Sinmun daily has been replaced twice since Kim Yeo-jong joined the department.

Meanwhile, Kim Jong-un's wife Ri Sol-ju remains a focus of fascination among ordinary North Koreans. In spite of crackdowns by security forces, North Koreans secretly watch old video clips of Ri performing as a singer with the Unhasu Orchestra. "Authorities are confiscating CDs and USBs with such videos, but people continue to watch them," a source said.



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North Korean officials have been busy erasing records of Ri performing as a singer ever since her marriage to Kim became official knowledge in July 2012.

Ri has not been seen in public since March.

[http://english.chosun.com/site/data/html\\_dir/2016/09/19/2016091901476.html](http://english.chosun.com/site/data/html_dir/2016/09/19/2016091901476.html)

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The Chosun Ilbo – Seoul, South Korea

### **Ex-U.S. Military Chief Suggests Preemptive Strike on N.Korea**

By Lee Yong-soo

September 19, 2016

A former U.S. military leader has called for a preemptive strike on North Korea to prevent further provocations after its fifth nuclear test earlier this month.

Mike Mullen, a former chairman of the U.S. Joint Chiefs of Staff, was speaking at a seminar hosted by the U.S. Council on Foreign Relations on Friday.

Mullen said it would be possible to launch a preemptive strike on the North if it comes "very close" to being capable of attacking the U.S. The strike could in theory destroy North Korean missile launch pads, he said.

He claimed the North has miniaturized nuclear warheads to the point that it could attack the U.S. and a preemptive strike was one of several options to respond to its provocations. But a diplomatic source warned that a preemptive strike "could lead to a military intervention by China and Russia."

During the first North Korean nuclear crisis in 1994, the Clinton administration in the U.S. considered precision bombing of the North's nuclear facility in Yongbyon, but the idea was dropped in the face of opposition from then President Kim Young-sam, who feared a full-scale war.

[http://english.chosun.com/site/data/html\\_dir/2016/09/19/2016091900824.html](http://english.chosun.com/site/data/html_dir/2016/09/19/2016091900824.html)

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The Korea Herald – Seoul, South Korea

### **NK Claims Successful Test of New Rocket Engine**

By Yoon Min-sik

September 20, 2016

North Korea on Tuesday claimed it has successfully conducted a ground test of its new rocket engine, a move South Korean military and experts believe is aimed at boosting its intercontinental ballistic missile program.

According to Pyongyang's Korea Central News Agency, the test was conducted under supervision of its leader Kim Jong-un and was aimed at developing a rocket that can launch a geostationary satellite into the Earth's orbit.



The engine's thrust was about 80 ton-force, which is the weight of 80 tons due to standard gravity and is equivalent to about 784,532 newton. The KCNA said that the engine remained stable during its 200 second-long working time.

If confirmed, this would mark an upgrade from a ground test of the North's existing rocket that propelled the satellite Kwangmyongsong-4 outside the atmosphere in February. Local experts believe that the engine's thrust was about 30 ton-force, which means the new engine is about three times more powerful than the existing one.

The rocket used for the Kwangmyongsong-4 is estimated to have a maximum range of some 12,000 kilometers.

"Based on what the North claimed, it would mark an increase in the engine's thrust capacity," said Joint Chiefs of Staff spokesman Jeon Ha-kyu, adding that more analysis is needed to verify if the test was indeed a success.

"We (the military) are assessing that the test was for a new engine that could be used on a long-range missile," he said.

Tuesday's engine test sparked speculation that another long-range rocket launch by Pyongyang may be imminent. In the dictatorial regime, a test supervised by Kim himself is of particular significance.

North Korea has been launching satellites as early as in 1998, but the South Korean military believes that it is merely a ruse to disguise the hermit kingdom's pursuance of propellants for an ICBM that can reach the US mainland.

South Korean military carried out an analysis of the fairing that encased the Kwangmyongsong in February. It concluded that the purpose of the launch was for missile development, based on findings that the encasing did not have any devices to protect the satellite from the impact of the launch.

The UN Security Council resolution bans North Korea from any nuclear or ballistic missile programs, and has slapped powerful economic sanctions against it as punitive action for its Jan. 6 nuclear test and Feb. 7 long-range rocket launch.

But the communist state has repeatedly defied the UNSC, most recently with a nuclear test on Sept. 9.

"We are keeping a keen eye on North Korea concerning the recent rocket. Pyongyang will become more and more isolated as it continues to carry out provocations, along with the condemnation of the international community," said deputy spokesperson Sun Nahm-kook.

North Korea currently has an intermediate-range Musudan missile deployed. It is believed to have a range of over 3,000 kilometers, but there has been only one case of a successful test launch in June.

South Korean military says that the North has yet to acquire technology to ensure the re-entry of the ICBM into the Earth's atmosphere. Some experts believe that the Musudan was fired in June at an abnormally high angle to simulate the re-entry environment of an ICBM.

"The significance of today's test is to boast the North's supposed nuclear strike capacity. Pyongyang currently only has the ICBM technology to strike the US mainland left to achieve before fully acquiring what it says is a nuclear deterrent," said Kim Dong-yup, a professor at the Institute for Far Eastern Studies at Kyungnam University.



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He pointed out that the engine used Tuesday was to launch a geostationary satellite, which typically orbits at around 30,000 kilometers in altitude, much higher than the previously launched North Korean satellite.

The capacity to launch the satellite into a much-higher orbit translates into the capacity to fire a missile that can cover a much greater distance, he said.

Kim also said that the engine test was to boast to Pyongyang's citizens that it is pushing to become an advanced country not only in strength, but also in terms of culture with its new satellite.

Pyongyang's youthful leader has been showing more belligerence than his father and former leader Kim Jong-il, firing more ballistic missiles in his under-five-year rule than the elder Kim did over 18 years.

Yang Moo-jin, a professor at the University of North Korean Studies, said that the North is likely to fire a long-range rocket soon in defiance of the UNSC sanctions.

But professor Kim said it may take more time, since the North may try to use the new engine as leverage against the new US administration that will take office next year.

<http://www.koreaherald.com/view.php?ud=20160920000815>

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The Korea Times – Seoul, South Korea

### **N. Korea Finishes Extracting Plutonium from Spent Fuel**

September 21, 2016

North Korea appears to have finished extracting plutonium from spent nuclear fuel, gaining up to four more nuclear weapons worth of plutonium, a U.S. research institute said Tuesday.

The Institute for Science and International Studies (ISIS) said that satellite imagery taken of the North's Yongbyon nuclear complex between July and August shows little activity at the North's nuclear reprocessing plant, compared with brisk activity earlier this year when reprocessing was believed to be under way.

"The recent campaign to separate plutonium at the Radiochemical Plant may be finished," ISIS said in a report. "An earlier Institute report estimated that North Korea could have separated about 5.5 to 8 kilograms of plutonium during this campaign, which is roughly enough for 1 to 4 nuclear weapons."

The institute said that imagery also shows continued activity at the complex, such as vehicle movements, but the 5-megawatt nuclear reactor at Yongbyon, the main source of plutonium, appears to be operating sporadically.

The "imagery dated August 26, 2016 showed no outward signs of full power, such as extensive water discharge into the nearby river or steam venting from the reactor's turbine structure," it said.

"Our assessment is that the reactor has operated intermittently or at low power since mid-2014. Based on the recent imagery, we do not detect evidence of consistent operation at full reactor power in July and August 2016," the institute said.



"Although North Korea has conducted extensive renovations of the reactor during the last several years, including importing equipment and materials from abroad, the reactor's operation may remain sporadic," it said.

The institute said that construction of a new light water reactor at Yongbyon appears to be still on going. But once completed, the new reactor will be a bigger source of weapons-grade plutonium for the North than the 5-megawatt reactor.

"Given the importance of plutonium to North Korea's nuclear weapons program, another question remains whether North Korea will seek to boost plutonium production at these two reactors by getting the smaller one to work better and starting the larger one," it said. (Yonhap)

[https://www.koreatimes.co.kr/www/news/nation/2016/09/485\\_214400.html](https://www.koreatimes.co.kr/www/news/nation/2016/09/485_214400.html)

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Yonhap News Agency – Seoul, South Korea

## **N. Korea Threatens Nuclear Strike against THAAD in S. Korea**

September 21, 2016

SEOUL, Sept. 21 (Yonhap) -- Apparently playing into fears held by some South Koreans, North Korea's state media said Wednesday that a new U.S. air missile defense system to be deployed in South Korea will become a primary target of the North's nuclear strikes.

In a signed commentary, the North's Korean Central News Agency (KCNA) claimed the plan to deploy the United States' Terminal High Altitude Area Defense (THAAD) system in South Korea was only part of U.S. efforts to dominate the world.

"If THAAD is deployed in South Korea, it will be exposed to nuclear strikes here and there as the primary target," it said.

The decision to introduce the new U.S. missile defense system here came in the wake of a nuclear test by the communist North in January, followed by a series of military provocations that included ballistic missile launches.

Pyeongyang again conducted a nuclear test, the fifth of its kind, earlier this month.

The North Korean threat of nuclear strikes came amid a series of protest rallies by residents in Seongju, the likely site of the new missile defense system located some 300 kilometers southeast of Seoul, who have insisted the deployment of the new radar-based defense system will only make their town a target of North Korean attacks.

"It is necessary to make a clean sweep of Park Geun-hye without delay if the South Korean people are to escape a horrible nuclear disaster," the KCNA said. "All Koreans should never allow the Park group to deploy THAAD in South Korea."

<http://english.yonhapnews.co.kr/northkorea/2016/09/21/0401000000AEN20160921010600320.html>

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

The Korea Herald – Seoul, South Korea

### **Activity at NK Nuke Site May Indicate Preparations for Another Test**

September 21, 2016

Heightened activity at North Korea's nuclear test site may indicate that the reclusive country is getting ready to conduct another underground detonation in the near future, military officials here said Wednesday.

South Korea's military said it will remain on high alert as the North might launch another long-range missile or conduct a sixth nuclear test or both next month to celebrate the 68th anniversary of the founding of the ruling Worker's Party of Korea on Oct. 10.

"The canopy erected to hide the entry way of No. 2 tunnel (where the fifth nuclear test was conducted) has not been removed.

Moreover, a giant canopy was set up over the entryway of the No. 3 tunnel where many expect a sixth nuclear test could take place," a military official told Yonhap News Agency.

The North's fifth nuclear test was conducted at the No. 2 tunnel in the Punggye-ri area in North Hamgyeong Province. The canopy is not camouflaged, but does prevent accurate observation of the area it covers from the sky.

Both No. 2 and the No. 3 tunnels could be used at any time for another nuclear test in Punggye-ri, the site of all five nuclear explosions, the official said.

Pyongyang has carried out five nuclear tests in the past decade. Three of them took place under the Kim Jong-un regime since he took power from his deceased father Kim Jong-il in December 2011.

All nuclear device detonations were made at either the No. 1 or No. 2 tunnel at Punggye-ri.

The North most recent test conducted on Sept. 9 was the strongest to date, After the detonation Pyongyang claimed it had mastered the ability to mount a warhead on a ballistic missile.

Following up on this provocation, the North on Tuesday carried out a "successful" ground test of a new rocket engine that could further bolster its nuclear and missile capabilities.

After supervising the engine test, North Korean leader Kim Jong-un called on officials, scientists and technicians "to round off the preparations for launching the satellite as soon as possible," hinting an imminent missile launch. (Yonhap)

<http://www.koreaherald.com/view.php?ud=20160921000693>

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TASS Russian News Agency – Moscow, Russia

### **South Korea Says Will Shoot Down Russian, Chinese Missiles if THAAD Attacked**

*The South Korean defense minister stresses the deployment of the US anti-ballistic missile system THAAD is aimed at protecting it from North Korea's missiles*

September 21, 2016

SEOUL, September 21. /TASS/. South Korea will intercept Russian and Chinese missiles if these countries attempt to deliver a strike on the US anti-ballistic missile system THAAD due to be

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

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deployed in the country next year, Defense Minister Han Min-goo told Yonhap news agency on Wednesday.

"If missiles of China or Russia are fired at us, then of course we will shoot them down," Han said, noting that the interception will be carried out by the Terminal High Altitude Area Defense (THAAD) system.

The minister reminded that the deployment of this system in South Korea is aimed at protecting it from North Korea's missiles and is not threatening the security of other countries.

Russia's Foreign Ministry earlier said that the deployment of the THAAD system in South Korea may escalate tensions in the region and create difficulties for solving the problems on the Korean Peninsula.

The ministry stressed that Russia had warned of dangerous outcome of such a decision. "Moscow considers this step as leading to buildup of potential of the Asia Pacific segment of the US missile shield and undermining the existing strategic balances in the Asia Pacific region and beyond it," the ministry said.

Beijing has also said that the actions of Washington and Seoul on the THAAD deployment could seriously affect China's strategic security.

[http://tass.com/world/901234?\\_ga=1.114829255.1704320355.1474500983](http://tass.com/world/901234?_ga=1.114829255.1704320355.1474500983)

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The Japan Times – Tokyo, Japan

## **U.S. Bombers Fly Over South Korea for Second Time Since North's Nuclear Test**

By JESSE JOHNSON, Staff Writer

September 22, 2016

Two supersonic U.S. bombers flew over South Korea on Wednesday — with one landing on the Korean Peninsula for the first time in 20 years — amid soaring tensions after the North's fifth nuclear test on Sept. 9.

The U.S. B-1B landed at Osan air base 40 km (25 miles) south of the capital, the air force said in a statement. It said the flight, which took off from Andersen Air Force Base in Guam, was the closest a B-1B strategic bomber had ever flown to the border between South and North Korea.

South Korea's Yonhap news agency reported that the aircraft flew over a U.S. live-fire training site in the Pocheon area bordering the North.

U.S. Forces Korea did not say how long the jet would stay at the base. It said the flight was conducted as a demonstration of Washington's "ironclad" commitment to maintaining security on the peninsula.

"The bond between the United States and the Republic of Korea is ironclad and the strength of that commitment will not be shaken by North Korea's aggressive behavior," said Lt. Gen. Thomas W. Bergeson, 7th Air Force Commander. "What we are showing today is just one tool we have to choose from a wide array of options."

South Korean Air Force Operational Commander Lt. Gen. Lee Wang-kuen said the North's nuclear test, as well as its continued ballistic missile launches had prompted a "grave security crisis" on the peninsula.



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“Should the enemy provoke us once again, the Combined Air Forces will respond and eliminate their will and capability to fight,” Lee Wang-kuen was quoted as saying.

The United States, which has about 28,500 troops in South Korea, flew two B-1B bombers on Sept. 13 escorted by U.S. and South Korean fighter jets in a show of solidarity with Seoul.

Originally developed for nuclear capacities, the bomber was converted to its exclusively conventional combat role in the mid-1990s. It is capable of carrying the largest payload of both guided and unguided weapons in the air force inventory.

The B-1B, capable of reaching the Korean Peninsula from Guam in just two hours, is one of the U.S. military’s three major multirole, long-range bombers along with the B-52 and B-2.

There was also a possibility that the U.S. will send B-52s and B-2s to Korea as well, Yonhap said Wednesday. The B-52 can carry nuclear missiles and “bunker buster” bombs that are capable of destroying underground facilities.

According to Euan Graham, director of the International Security Program at the Lowy Institute in Sydney, the most noteworthy aspect of the flights was not the nearness to the North Korean border, but rather than a nonnuclear jet is currently being tasked with the role of nuclear reassurance.

“The U.S. is trying to calm South Korean nerves, to deter the North Koreans — and not raise tensions with China,” Graham said. “I suspect that’s why the B-1B ... has been selected for these highly visible flights” despite Seoul having wanted Washington to bring in dual-capable B-52 and B-2 bombers after the fifth nuclear test.

Graham said this reflects Seoul’s desire for the U.S. to communicate that extended deterrence is functioning “when North Korea is off the nuclear leash and pro-nuclear weapons advocates have suddenly become more vocal” in the South.

“The U.S. does not want to go down a road that leads back to the reintroduction of nuclear weapons onto the peninsula, or which also raises tensions with Beijing,” Graham said

Pyongyang has ignored global condemnation of its fifth nuclear test, while also continuing to test-fire missiles. On Tuesday, it announced the successful ground test of a new type of “high-power engine,” ostensibly for launching satellites, but which the U.S. has called a cover for testing missile technology. In February, the North launched a satellite that was widely seen as a test of long-range ballistic missile technology.

The United States, Japan and South Korea have roundly condemned the nuclear test and called for tough new measures to further isolate the communist state.

Washington, meanwhile, has pressed Beijing, Pyongyang’s most important diplomatic backer and trading partner, to do more to rein in the country. The two countries have reportedly begun discussions on a possible U.N. resolution in response to the latest nuclear test, but it remains to be seen whether this would mean closing loopholes in earlier sanctions.

In another demonstration of force, Washington is planning to dispatch a nuclear-powered aircraft carrier to South Korea next month as part of its efforts to deter further military provocations by the North, reports have said.



The Yokosuka, Kanagawa Prefecture-based USS Ronald Reagan was reportedly scheduled to participate in a joint naval exercise with the South Korean military from Oct. 10 to 15. The exercise would focus on training the allies' naval forces in joint precision attacks on the North's military facilities and the regime's leadership that would be launched in the event of a war with the isolated state.

<http://www.japantimes.co.jp/news/2016/09/22/asia-pacific/u-s-deploy-b-1-bombers-south-korea-may-add-b-2s-b-52s-report/#.V-MPUBtFtmA>

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Xinhua News – Beijing, China

### **DPRK Warns of Retaliation against U.S., South Korea**

Source: Xinhua

September 22, 2016

PYONGYANG, Sept. 22 (Xinhua) -- The military of the Democratic People's Republic of Korea (DPRK) on Thursday warned of "military counteraction" against recent U.S. and South Korean military moves, in particular the U.S. sending B-1B strategic bombers to South Korea.

The U.S. military on Wednesday sent two strategic bombers to South Korea in a show of force against Pyongyang. The two B-1B Lancers flew low over the Osan Air Base in Pyeongtaek, some 70 km south of capital Seoul, at about 1:10 p.m. local time (0410 GMT).

A spokesman for the General Staff of the DPRK military called that in a statement "anti-DPRK military provocations," saying that the provocations "have pushed the situation on the Korean Peninsula to the uncontrollable and irreversible phase of the outbreak of a nuclear war."

The statement, carried by the official news agency KCNA, threatened that the nuclear warheads of the military will completely reduce Seoul to ashes.

"Should they escalate the danger of military provocations by letting B-1Bs fly over the air of Korea, the KPA (Korean People's Army) will sweep Guam from the surface of the earth," it added.

On Sept. 9, the DPRK announced that it had successfully conducted an explosion test of nuclear warhead to fit on ballistic rockets. The fifth nuclear test was staged just eight months after the fourth in January.

The fifth test was seen as the most powerful nuclear detonation ever by the DPRK as it produced an explosive yield of 10 kilotons, stronger than 6 kilotons recorded in the previous test.

Pyongyang said Tuesday that it tested an engine jet on the ground of a carrier rocket for geostationary satellite, which the Seoul military saw as a long-range missile.

[http://news.xinhuanet.com/english/2016-09/22/c\\_135706444.htm](http://news.xinhuanet.com/english/2016-09/22/c_135706444.htm)

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## **USAF Center for Unconventional Weapons Studies**

### **(CUWS) Outreach Journal**

Yonhap News Agency – Seoul, South Korea

#### **N.K.'s New Rocket Engine Suitable for Sending Unmanned Probes to Moon: U.S. Expert**

By Chang Jae-soon

September 23, 2016

WASHINGTON, Sept. 22 (Yonhap) -- North Korea's test of a new rocket engine this week shows the communist nation has made real strides in its rocket and missile programs to a point where it could send unmanned probes to the Moon, a U.S. missile expert said Thursday.

The North unveiled the massive new engine Tuesday, claiming it successfully conducted a "ground jet test of a new type high-power engine of a carrier rocket for the geo-stationary satellite." It said the engine has a thrust of 80 tons, which is three times the power of the engine used in the North's previous long-range rocket launches.

John Schilling, a top aerospace engineer with expertise in the North's missile programs, said the new engine is "too big and powerful" for use in intercontinental ballistic missiles the North has been developing, such as KN-08 and KN-14 road-mobile missiles.

But it could be used for outer space missions, he said.

"North Korea recently announced it plans to launch rockets to the Moon within the next ten years, along with launching increasingly capable satellites into Earth orbit. This engine would be suitable for launching modest unmanned lunar probes," Schilling said in an article in the website 38 North.

"They still have a way to go on the necessary satellite technology, of course, but they are now one step closer to demonstrating a basic operational capability in outer space. We should start thinking about how we might live with a North Korea that has such a capability," he said.

Even though the new engine isn't right for ICBMs, the North has already demonstrated that it can build large rockets using both solid and high-energy liquid propellants, to their own requirements, Schilling said.

"Whatever missiles North Korea may roll out in coming years, we can no longer expect to be limited to what can be cobbled together from old Russian cold-war leftovers," he said.

The expert also noted that the North has upgraded its Sohae long-range rocket launch site in the country's northwest to make it possible to launch bigger rockets from there. The new engine might be for a new larger space vehicle, he said.

"Liquid-fuel space launch vehicles typically use more than one engine on the first stage, and North Korean practice so far has been to use four engines," Schilling said. "A launch vehicle using four of these new engines would be about the right size for the upgraded launch pad and gantry tower at Sohae."

The North is banned from any ballistic missile activity under U.N. Security Council resolutions over concern that the regime could develop nuclear missiles. Experts say long-range rockets and ICBMs are basically the same with differences only in payloads.

This week's new engine test came amid heightened worries sparked by the North's fifth nuclear test on Sept. 9 that Pyongyang is making real headway in its nuclear and missile development, and could soon perfect capabilities to threaten the mainland U.S. with nuclear-tipped intercontinental ballistic missiles.

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The Sept. 9 test was the most powerful of the five conducted by the North, with its yield estimated at 10 kilotons of TNT, compared with January's 6 kilotons. The previous four tests came in 2006, 2009, 2013 and January this year.

By comparison, the Hiroshima bomb was about 15 kilotons.

Analysts have warned that it is only a matter of time until the North develops nuclear-tipped missiles. Some experts have projected that the communist nation's nuclear arsenal could expand to as many as 100 bombs by 2020.

<http://english.yonhapnews.co.kr/northkorea/2016/09/23/0401000000AEN20160923000200315.html>

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The Korea Times – Seoul, South Korea

### **60% of S. Koreans Support Nuclear Armament: Poll**

September 23, 2016

Nearly 60 percent of South Koreans support the country's development of its own nuclear weapons, a poll showed Friday, amid the rising calls among hawkish lawmakers for Seoul to consider the aggressive option to curb Pyongyang's provocations.

According to the data compiled by pollster Gallup Korea, 58 percent of the respondents agreed with South Korea's nuclear armament scenario, while 34 percent expressed an opposition. The study was conducted on 1,010 South Koreans throughout the country this week.

The supporters' ratio marks a slight increase from 54 percent posted in January, when Pyongyang conducted the fourth nuclear test. North Korea pushed ahead the fifth test earlier in September, continuing its provocations.

By age group, 39 percent of those in their 20s supported the nuclear armament, while 74 percent of South Koreans aged 60 or above called for the development.

The plan was especially popular among supporters of the ruling Saenuri Party, posting a positive response of 75 percent. Supporters of the main opposition Minjoo Party of Korea were almost evenly divided.

The pollster said the result reflects South Koreans' rising concern over North Korea's repeated nuclear tests.

Amid the rising voice on the nuclear armament among conservative lawmakers, the government has been reiterating that Seoul supports denuclearization of the Korean Peninsula. (Yonhap)

[http://www.koreatimes.co.kr/www/news/nation/2016/09/205\\_214598.html](http://www.koreatimes.co.kr/www/news/nation/2016/09/205_214598.html)

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

The Dong-A Ilbo – Seoul, South Korea

### **White House Negative about Nuclear Weapons in S. Korea**

September 23, 2016

The White House has rejected calls in South Korea for Seoul's nuclear armament or redeployment of U.S. tactical nuclear weapons.

"We think it's not in our interest and in South Korea's interest for South Korea to pursue nuclear weapons," Jon Wolfsthal, senior director for arms control and nonproliferation at the White House's National Security Council, told reporters after attending the 4th U.S.-ROK Dialogue at the Woodrow Wilson International Center for Scholars in Washington on Wednesday. It was the first time that a senior White House official in charge of North Korean nuclear issues publicly expressed Washington's opposition to Seoul's nuclear armament or tactical nuclear redeployment, although U.S. State Department's Special Representative for North Korea Policy Sung Kim expressed such opposition during his visit to Seoul immediately after North Korea's fifth nuclear test.

"The long-standing view in the United States is that we together are more than capable of defending South Korea and Japan against any conceivable threat from any country, that we always have the full range of capabilities available to us if necessary," Wolfsthal said. He stressed that Seoul and Washington "are voluntarily and legally bound under the nonproliferation treaty in a way that benefits them greatly and something that forms a backbone of our alliance."

Regarding the probe into the Dandong-based Chinese trading conglomerate Liaoning Hongxiang Group, which is suspected of having shipped nuclear materials to North Korea, the White House official said, "It doesn't matter if it's a pencil or an ounce of gold or a boatload of coal. Everything that North Korea does we believe is linked or supportive of their weapons of mass destruction program and that trade is to be prohibited."

<http://english.donga.com/Home/3/all/26/747290/1>

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TASS Russian News Agency – Moscow, Russia

### **Russia's Westernmost ICBM Unit to Be Armed with Yars Missile — Commander**

*The strategic missile force division in the Tver region will be the sixth to get the newest ground-based missile systems in replacement of the Topol missile systems*

September 20, 2016

MOSCOW, September 20. /TASS/. Russia's westernmost ICBM division near Bologoye will be re-armed with the missile system Yars, the Defense Ministry has told TASS.

"The westernmost strategic missile force division in the Tver region will soon begin to be rearmed with the missile system Yars. It will be a sixth strategic missile division where the newest mobile ground-based missile complexes will replace the intercontinental ballistic missile Topol," the press-service of the Strategic Missile Force quotes its commander Sergey Karakayev as saying.

According to the official, this year regiments in the Irkutsk and Yoshkar-Ola divisions began to be rearmed. The re-armament of the Novosibirsk and Tagil divisions is nearing completion. Earlier, the Teikovo division was fully rearmed.

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The final decision to rearm the strategic missile division in the Tver Region will be made after a command staff exercise there. The press-service said the exercises will be devoted to maneuvering along combat patrol routes.

In the near future the ICBM RS-24 Yars, alongside the previously commissioned monoblock warhead ballistic missile RS-12M2 Topol-M, will constitute the backbone of Russia's strategic missile force.

[http://tass.com/defense/901039?\\_ga=1.221170079.686218982.1474421374](http://tass.com/defense/901039?_ga=1.221170079.686218982.1474421374)

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Tasnim News Agency – Tehran, Iran

### **Leader Highlights Iran's Outright Distrust of US**

September 18, 2016

TEHRAN (Tasnim) – Iran's deep mistrust of the US arises from rationale and experience, Leader of the Islamic Revolution Ayatollah Seyed Ali Khamenei said, dismissing the idea of interaction between Tehran and Washington as a ploy to infiltrate into Iran and impair its regional clout.

“One of the elements of the Islamic Republic of Iran's soft power is ‘downright distrust of global hegemonic powers’, which is today symbolized by the US,” Ayatollah Khamenei said in a meeting of the Islamic Revolution Guards Corps (IRGC) commanders and officials, held in Tehran on Sunday.

The Leader underscored that such mistrust originates from insight and experience, pointing to a list of US hostile acts against Iran after the victory of 1979 Islamic Revolution, with the most recent example seen in the nuclear negotiations with Iran.

Ayatollah Khamenei further warned that opening the doors for negotiation with the US will not only prepare the ground for their “overt and covert infiltration”, but also impede the country's progress.

The Leader reminded Iranian officials of the need to remain vigilant in the face of US plots, arguing that Washington's main purpose in insisting on negotiations with Iran about the West Asia developments, particularly about Syria, Iraq, Lebanon and Yemen, is to block Iran's presence in the region, which is the root cause of US failure in West Asia.

Rejecting the notion of talks with the US on the regional issues, Imam Khamenei added, “Negotiating with the US is not only useless, but also harmful, and this point has been told to the country's high-ranking officials with reasoning, and they had no reason to reject it.”

The Leader has repeatedly called for action to prevent the US from gaining political and cultural foothold in Iran, warning that the consequences of such infiltration would be much worse than that of enemy's economic influence.

<http://www.tasnimnews.com/en/news/2016/09/18/1190208/leader-highlights-iran-s-outright-distrust-of-us>

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

FARS News Agency – Tehran, Iran

Monday, September 19, 2016

### **IRGC Commander: Iran Able to Target Enemies' Vital Interests from Inside, Outside Borders**

TEHRAN (FNA)- Lieutenant Commander of the Islamic Revolution Guards Corps (IRGC) Brigadier General Hossein Salami stressed Iran's military capabilities, and said the country has grown so powerful that it can now target all enemies' vital interests from inside and outside its borders.

"We are so powerful that we can target all the vital interests of the enemies in the region from either inside or outside Iran with any desired intensity and power," Salami said in an interview with the state-run TV on Sunday night.

Noting that the enemies are merely aware of a part of Iran's military power, he said, "The hidden parts of our military power are always more than the overt parts of our power."

Salami also underlined that Iran's military and deterrence power forced the world powers to sit to the negotiations table with the country on the nuclear issue.

In relevant remarks in June, Deputy Chief of Staff of Armed Forces Brigadier General Massoud Jazayeri said the US and its allies will be deeply surprised to see Iran's secret military achievements.

"The enemies of the Islamic Republic, headed by the Americans, the Zionists and the British, are (only) aware of a part of the Islamic Republic of Iran's power in different defensive and missile fields and fortunately, since we are self-reliant in this area, our enemies aren't aware of certain parts and will not be aware any time soon unless something happens," Jazayeri said.

"In such a case, we might need to display a part of our capabilities in the battlefield and I believe that if such a thing happens, they will be much surprised to suddenly see how much progress the Islamic Republic has made in defensive fields," he added.

<http://en.farsnews.com/newstext.aspx?nn=13950629000385>

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Trend News Agency – Baku, Azerbaijan

### **Iran-40 Heavy Water Reactor to Run in Full Force**

By Mehdi Sepahvand, Trend

20 September 2016

Tehran, Iran, September 20 -- Mojtaba Zonnuri, member of the Iranian Parliament's National Security and Foreign Policy Commission said that the Iran-40 (Arak heavy water facility) will continue to run in full force.

"The Arak heavy water production factory goes on to work nonstop as it did before the JCPOA," he said after visiting the facility along with some other members of the commission, Fars news agency reported September 20.

Iran's commitments about the reactor under the JCPOA have also been fully implemented, the lawmaker noted.

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He went on to say that Iranian, Chinese, and US officials are holding their regular talks over redesigning the reactor.

The reactor core which was filled with concrete has been removed and room has been made for the new reactor to be installed and start operating, he stated.

Under the JCPOA, Iran agreed to redesign the IR-40 reactor, with assistance from the P5+1, to minimize its plutonium production and avoid production of weapons-grade plutonium.

Iran also agreed to remove the reactor core or calandria and fill it with concrete to render it unusable, and to export all spent fuel within one year of its removal from the reactor.

<http://en.trend.az/iran/nuclearp/2662576.html>

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FARS News Agency – Tehran, Iran

Thursday, September 22, 2016

### **ISIL Launches Suspected Chemical Shell at Iraqi, US Troops in Northern Iraq**

TEHRAN (FNA)- US and Iraqi security forces came under a suspected ISIL mustard gas attack in Northern Iraq, media and officials on the ground said.

Media said that ISIL militants have reportedly fired a shell loaded with mustard chemical agent during an attack on Iraqi troops and their US allies in Qayyara, Northern Iraq, NDTV reported.

If confirmed, it would be the first recorded chemical attack on Iraq's military and US troops inside Iraq since the terror group overran some Northern and Western regions in the country in 2014.

According to the reports the attack was taken place on a joint troop location with the deadly gas in Iraq's Qayyara and Iraq-based US military commanders said one of the shells lobbed at Qayyara Airfield West, where US troops are based, tested positive for a mustard agent.

According to the officials, there were no US casualties, and the shell, likely a rocket or mortar, was imprecise and crude.

Concentrations of mustard gas can cause agonizing burns and blisters, blindness and permanent disfigurement.

Qayyara Airfield West, also known as Key West, was retaken by Iraqi security forces in July and has been slowly converted into a staging point for the upcoming campaign to seize the city of Mosul, one of the ISIL's last strongholds in Iraq.

The sprawling base once housed thousands of troops and numerous aircraft during the Iraq War, but after it was captured by the ISIL in 2014 it was systematically mined and its facilities destroyed. According to officials, the degraded state of the base has made it difficult to turn it into an effective staging area for the approaching Mosul battle.

The ISIL has used chemical weapons, in the past, most notably against Kurdish Peshmerga positions in Northern Iraq. The weapons, a mixture of mustard and chlorine agents, crudely loaded into a variety of artillery, mortar shells and rockets, have not been widely used.

<http://en.farsnews.com/newstext.aspx?nn=13950701000376>

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

Xinhua News – Beijing, China

### **Iran's IRGC Says Ready to Shower "Jungle of Missiles" over Enemies**

Source: Xinhua

September 23, 2016

TEHRAN, Sept. 23 (Xinhua) -- A senior commander of the Islamic Revolution Guards Corps (IRGC) said that the Islamic republic will respond to any threat by the enemies by showering missile over them, Iranian media reported on Friday.

The country has "a jungle of missiles" deployed at tunnels and silos and other locations, which are ready to be fired at enemies if there is a need, Press TV quoted Brigadier General Hossein Salami as saying.

"We would chase any enemy seeking to cause the slightest damage to Iran's self-esteem and independence no matter where in the world they would be," Salami said in a televised speech.

He said that Iran has been building and modernizing its own military equipment despite the arms and economic embargoes it is facing.

Also, Iran now competes with the superpowers in producing unmanned aerial vehicles (UAVs), he said. "Our UAVs can fire rockets at any capture footage from (targets) within a range of 3,000 kilometers."

"Some big powers have even made demands for our products," he added.

Salami reiterated Iran's support for Lebanese Hezbollah and Palestine and said the Lebanese resistance movement of Hezbollah and fellow Palestinian groups are "completely popular and defending their rights."

Under no circumstances Iran will consider Lebanese and Palestinian resistance groups as terrorists, he stressed.

[http://news.xinhuanet.com/english/2016-09/23/c\\_135709065.htm](http://news.xinhuanet.com/english/2016-09/23/c_135709065.htm)

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The Australian – Sydney, Australia

### **Islamic State Stockpiles Chemical Weapons for Last Stand in Mosul, Iraq**

By TOM COGLAN and MICHAEL EVANS, The Times

September 23, 2016

Islamic State will try to turn the looming operation to take Mosul into a chemical battlefield, experts have warned, amid evidence that the group has a stockpile of the banned weapons.

US soldiers in northern Iraq have come under bombardment this week from rockets that tested positive for mustard gas - the first time that American troops have faced such an attack since the First World War.

Tests were being conducted on the remains of a "small number" of rockets fired into the Qayyara West base 40 miles south of Mosul, which is home to several hundred US advisers and is being prepared as a logistics hub for the attack. Results are expected today.

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Initial tests on one rocket that contained a “tar-like, black oily substance” showed evidence of mustard gas, US officials said, although a later test proved negative. A number of US military personnel underwent decontamination procedures after the attack but none showed any symptoms - which would typically emerge within 12 hours of exposure.

Mustard gas is a banned blistering agent. It was responsible for the majority of the 6000 British and Commonwealth deaths and 175,000 injuries caused by chemical weapons in the First World War. About 4500 tonnes of mustard gas and nerve agents were used by Saddam Hussein during the Halabja attack that killed 5000 Kurds in 1988.

“Daesh have used chemical weapons. They have a rudimentary capability and we have reports of their use on a number of occasions around Iraq and Syria,” Colonel John Dorrian said.

Asked if there were concerns that IS would strike at forces attacking Mosul with mustard gas, he replied: “There is the possibility of that. We have conducted training with Iraqi security forces to prepare them.”

Iraqi forces have received 17,000 gas masks, according to Hamish de Bretton-Gordon, a British chemical warfare expert who advises the Kurdish and Iraqi governments. That is enough for about half the 30,000 troops expected to take part in the assault.

“The coalition has been trying to write down the Isis chemical weapon programme for the past 18 months,” said Mr de Bretton-Gordon, who is a former commander of British chemical, biological, radioactive and nuclear defence forces. “We know Isis will use everything they have to defend Mosul. They have been building a stockpile for some time.”

IS has used chlorine and mustard gas about 20 times, he said, causing up to 15 deaths and hundreds of injuries. He speculated that the stockpile might amount to 150 tonnes, though the quality of the mustard gas appeared low.

“Hitherto, Isis has used 100kg at a time in 20 to 30 mortar shells. It’s enough to put fear in people’s minds. It’s the ultimate terrorist group with the ultimate terror weapon.

“Isis will throw the kitchen sink at defending Mosul and that will include a lot of chemicals.”

He added that some reports suggested that IS might have obtained nerve agents - sarin and VX gas - after capturing chemicals from the Assad government stockpile.

Tim Trevan, a former UN chemical weapons inspector, said that IS might manage to delay the Mosul operation by extensive use of mustard gas, but added: “I don’t think it will change the timing of the operation (expected to start next month) or the outcome.”

*The Times*

<http://www.theaustralian.com.au/news/world/the-times/islamic-state-stockpiles-chemical-weapons-for-last-stand-in-mosul-iraq/news-story/1b66404c9753e6c0ad56b68523d09d19>

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

Sputnik International Russian Information Agency

### **Syrian Army Discovers Turkish Manual Instructing Terrorists in Use of Nukes**

23 September 2016

In the course of a recent operation to liberate a terrorist-held enclave in northern Latakia, Syrian Army troops discovered a 'manual for terrorists'. Printed in Turkey, the book teaches jihadis "the proper conduct of war on foreign soil," up to and including the use of nuclear weapons.

The manual, printed in Arabic and called 'Zad al-Mujahed' (roughly, 'Fruits for the work of God's Warriors') was published in Istanbul, with its publishers making no attempt to even try to hide the book's origins. It features the logo of the Istanbul-based Guraba publishing company, contact information, and even an ISBN, inside its front cover.

Speaking to Sputnik Arabic, the Syrian Army soldier who discovered the book said that it was filled with hatred and calls to war against people who don't share jihadists' faith, as well as instructions on what must be done with "enemies and their property."

*"The book describes how to properly burn cities captured by jihadi fighters, how to cut down all the trees, destroy all life, how to execute prisoners in the correct manner," the soldier explained.*

*"The book says that jihadis have a right to marry their captives; the book even mentions the aspect of the possible use of nuclear weapons," he added.*

The book is banned in Syria for its radical content, and repeated calls to violence and terror. For this reason, Sputnik Arabic decided not to quote it directly. Still, it published photos, republished here, showing the cover and details on the book's publisher. It remains unclear how many copies of this book were found.

Syrian authorities are extremely sensitive about published materials which could be seen to inspire sectarian conflict. Before it was engulfed in war in 2011, Syria was known as a secular, multicultural and multiethnic nation with a large number of religious minorities. Since then, many of these minorities have been threatened with enslavement or extermination by homegrown and foreign-sponsored radical Islamist terrorists, including Daesh (ISIS), al-Nusra and a collection of affiliated groups.

<https://sputniknews.com/middleeast/20160923/1045637762/turkish-terrorist-manual-syria.html>

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The Indian Express – Mumbai, India

### **Behind Rafale Deal: Their 'Strategic' Role in Delivery of Nuclear Weapons**

*The long-delayed deal is being finalised because India has identified the French fighters for their 'strategic' role — to deliver nuclear weapons.*

Written by Sushant Singh

September 18, 2016

New Delhi -- WITH INDIA and France expected to announce the Inter-Government Agreement (IGA) for Rafale fighter jets in the next few days, the clinching factor behind Delhi deciding to buy even

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only 36 French aircraft has become clearer. The long-delayed deal is being finalised because India has identified the French fighters for their 'strategic' role — to deliver nuclear weapons.

The Indian Air Force (IAF) currently has 32 fighter squadrons against an authorisation of 42, and many of them, particularly the MiGs, are reaching the end of their service in this decade. Thirty-six Rafales, to be inducted between 2019 and 2023, will make for only two squadrons. This still leaves a huge gap, to be filled by either the indigenous Tejas fighters, or another foreign fighter such as the Swedish Gripen or the American F-16, both of which have offered to 'Make in India'.

Although there is a follow-up clause in the IGA for buying an additional 18 Rafales, the numbers still fall short of the 126 Rafales India had originally planned to buy under the previous UPA government.

According to officials who spoke to The Sunday Express on condition of anonymity, the deciding factor in buying the Rafales, even in such small numbers, was its ability "to be used as an airborne strategic delivery system". In other words, Rafale is expected to be the chosen fighter plane for the delivery of nuclear weapons in a strike role.

"The French Air Force, Armee de l' Air, is shifting from Mirages to Rafales for its nuclear strike role this year. They have already started the process, and although our nuclear delivery systems are different from theirs, it does tell us that Rafale is suited for that task," said a defence official.

"The French Mirage-2000s have been modified for the delivery of our strategic arsenal. France has continued to provide maintenance, spares and technical support for these Mirages, which may not have been the case with some other foreign countries. We expect the same degree of cooperation from France when we modify and use the Rafales for that role," said another official.

At present, IAF is supposed to use modified Mirage-2000 fighters in a nuclear strike role. But these upgraded Mirages are scheduled to be phased out of service from 2030 onwards. According to officials, a replacement for them would be needed, and India's comfort with Paris on these matters makes it logical to go with Rafales for this critical task.

Meanwhile, sources have confirmed that India has extended an invite to the French defence minister, Jean Yves Le Drian, to visit Delhi next week. Although a formal confirmation from Paris was not received till Friday, the two sides are expected to announce the signing of an IGA for 36 Rafales next week.

Following a Cabinet Committee on Security approval, a contract, if things go as per schedule, should be signed within 45 days. An advance of 10-15 per cent of total contract value is expected to be paid to the French government at the signing of the contract.

During his visit to Paris last April, Prime Minister Narendra Modi had announced the purchase of 36 Rafale fighters in a government-to-government deal with France. This followed a decade-long process of trials and selection of Rafales for the 126 Medium Multi Range Combat Aircraft (MMRCA) tender, which could not be concluded. The MMRCA tender was formally withdrawn by Defence Minister Manohar Parrikar later last year.

India and France underwent a series of negotiations over the price of the 36 fighters, and the two sides agreed to a final price of about Euro 7.87 billion a few weeks ago. Although all the fighters will be made in France, Rafale will invest 50 per cent of the value of the deal as offsets in India. The delivery of the first fighter aircraft is scheduled for 2019.

<http://indianexpress.com/article/india/india-news-india/behind-rafale-deal-their-strategic-role-in-delivery-of-nuclear-weapons-3036852/>

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

The Hindu – Chennai, India

### **Nuclear Blackmail Will Not Be Tolerated, Says Ram Madhav**

Special Correspondent

September 21, 2016

New Delhi -- BJP general secretary Ram Madhav has said India will not tolerate Pakistan's efforts at "nuclear blackmail" and will expose the "rogue nature of Pakistan" in the aftermath of the Uri terror attack.

"The anger in the country is well appreciated by the government. We all know that the Uri attack has seriously disturbed the people, who want a strong and appropriate response by the government. Prime Minister Narendra Modi has said the perpetrators will not be spared, and the government has started taking action, exposing Pakistan's dubious character in the international forum," he said on the sidelines of a seminar on integral humanism, a concept propounded by the former Jan Sangh president, Deendayal Upadhaya.

"All the necessary responses will be given, at an appropriate time and [in an appropriate] manner. No blackmail will be tolerated. No one wants a nuclear war, but no one will tolerate any nuclear blackmail either. Everybody knows the rogue nature of that [Pakistan] country," he said.

Mr. Madhav's remarks come after Pakistani Minister for Water, Power and Defence Khawaja Muhammad Asif said in an interview that his country would use "tactical [nuclear] weapons" if its security was threatened.

Asked whether he was suggesting the use of nuclear weapons, Mr. Asif said: "If our country is under threat, what is to be afraid of." But he dismissed the possibility of a war with India.

<http://www.thehindu.com/news/national/nuclear-blackmail-will-not-be-tolerated-says-ram-madhav/article9128890.ece>

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Arms Control Wonk.com – U.S.

OPINION/Article

### **The Range of North Korean ICBMs**

By Joshua Pollack

September 17, 2016

If there's one thing in the public discussion of proliferation that troubles me the most, it might be this: the systematic minimization of North Korea's nuclear and missile capabilities in the American news media. Someone could write a book on this phenomenon and its causes, but life is short. Let's just focus on just one question for now: *how far can North Korean ICBMs fly?*

News reports persistently describe North Korea's three-stage space launcher, the Taepodong-2 (TD-2), as capable of delivering a reasonably sized warhead to Alaska or maybe to the western continental United States. But at least if we go by the official, unclassified, publicly released estimate of the U.S. government, that's wrong! The TD-2 can range all of the USA, from sea to shining sea.

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Here it is in black-and-white from the [National Intelligence Council's September 1999 paper](#), "Foreign Missile Developments and the Ballistic Missile Threat to the United States Through 2015":

"A two-stage Taepo Dong-2 could deliver a several-hundred kilogram payload to Alaska and Hawaii, and a lighter payload to the western half of the United States. A three-stage Taepo Dong-2 could deliver a several-hundred kilogram payload *anywhere in the United States.*"

Emphasis added, so nobody misses the point.

This many-handed estimate reflects the bygone debates of the 1990s. Initially, it seems, the TD-2 and little brother, the Taepodong-1 (TD-1), were thought to have two stages each. When the TD-1 took flight in August 1998, lo and behold, it had three stages. That forced a reconsideration of what the TD-2 might look like, with the results you see above.

When the TD-2 ultimately materialized—flying in July 2006, April 2009, April 2012, December 2012, and February 2016, the last two times successfully—it had three stages. (We've never seen pictures of the 2006 version; at least [one news report](#) said it had only two stages.) For whatever reasons, though, reporters have mostly gravitated to estimates associated with a two-stage version of what turns out to be a bigger rocket. And the more often these estimates are repeated, the more the confusion is reinforced.

It probably doesn't help that the U.S. government no longer spells out these sorts of estimates. [Anonymous officials](#) ascribed this choice back in May to both the bad aftertaste of the Iraq WMD debacle and what reporters called "an effort to avoid strengthening and encouraging Mr. Kim." The U.S. Air Force's National Air and Space Intelligence Center does periodically release a [document on missile threats](#), but it coyly offers a range of "5,500+" km for the TD-2, alluding to the lower bound of what defines an ICBM.

Lest this silence engender any doubts—has that 1999 estimate changed, perhaps?—after this February's launch, the semi-official South Korean news agency described the TD-2 as having a [range of 12,000 km](#) if used as a missile. Give or take a kilometer or two, that's the distance from North Korea's east-coast launch site to downtown Miami. Hey, Puerto Rico is safe, at least!

And what about North Korea's mobile ICBM, the KN-08, which it has displayed a number of times since 2012, but it has yet to fly, or its apparent successor, the KN-14?

We don't know much about the KN-14, but in testimony this April before the Strategic Forces subcommittee of the House Armed Services Committee, Admiral William Gortney, the commander of US Northern Command, was faced with this exact question about the KN-08. Asked whether he assumed that the KN-08 could target any point in the continental United States, he responded in the affirmative. [South Korean media reports](#) agree, ascribing a 12,000 km range to the KN-08—the same as the TD-2.

The North Koreans certainly haven't been shy about their ambition to hang a nuclear Sword of Damocles over [spots 11,000 km or so away](#). Lately, they've also tried to put to rest any doubts that the [KN-08 is a real missile](#).

Before anyone objects: all the usual caveats apply. ADM Gortney, in his testimony, assigned a low probability to the idea that the KN-08 could perform successfully, a reasonable comment about a missile that has yet to be flight-tested. But now that the North Koreans have enjoyed their first successes in flight-testing an intermediate-range ballistic missile and a two-stage, solid-fueled submarine-launched ballistic missile, a KN-08 flight-testing campaign seems like a logical next step. Stay tuned.



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Obviously, too, what the government says isn't the last word. Experts are free to devise their own estimates. And none of this discussion is intended as a comment on the wisdom or efficacy of missile-defense programs, which is a topic for another day. (Here's [what I wrote a few years ago.](#)) But just for clarity's sake, it would be helpful for our reporters to pause before recycling what so many have already written so often. Instead, they might be well advised to start fresh. And a fresh assessment could start by considering what official sources in Washington have had to say.

*Joshua Pollack used to be a consultant to the U.S. government on arms control, nonproliferation, deterrence, and the like. Now he's the editor of the Nonproliferation Review.*

<http://www.armscontrolwonk.com/archive/1201960/the-range-of-north-korean-icbms/>

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The Diplomat – Tokyo, Japan

OPINION/The Debate

### **Is It Time for Nuclear Sharing in East Asia?**

*The dynamics that generated U.S.-NATO nuclear sharing in Europe in the late 1950s seem to be emerging in Asia today.*

By Elmar Hellendoorn and Christine M. Leah

September 19, 2016

It was reported recently that back in May, South Korea eyed shared control of nuclear weapons with the United States. This has been a long time coming — first, because there are now increasingly severe strains on the credibility of U.S. extended deterrence in the Asia-Pacific, and second because for the first time in history, U.S. extended nuclear deterrence faces severe challenges in both Europe *and* the Asia-Pacific.

In Europe, Russia is presenting an increasing challenge to NATO. With its recent incursion into Ukraine, NATO's weaker military forces, and Moscow's signaling of a "de-escalatory" nuclear strike in response to, for example, a NATO offensive to recapture a potential Russian-occupied Baltics, NATO's nuclear posture may need to change. Indeed, how might Washington respond to a Russian de-escalatory nuclear explosion? With limited nuclear strikes in return? One option would be for NATO partners to wield a retaliatory option themselves, since it is not entirely clear that Washington would be ready to launch large-scale nuclear counterforce strikes against Russian forces in a "Baltic" scenario. Compared to other U.S. nuclear adversaries, Russia may have too many nuclear weapons to be targeted by comprehensive counterforce strikes.

The upgraded B61s, stockpiled in Germany and Western Europe, and under U.S. authority, may not be sufficient to deter a Russian de-escalatory nuclear attack. This might be problematic, because the U.S. president would then have to authorize the use of these weapons stockpiled in Europe. Moreover, the range of the Dual-Capable Aircraft (DCA) may not be long enough (refueling is prone to fail in contested airspace), and there might not be sufficient warheads at NATO's disposal. Instead, the United States could decide on a limited counter value strike. These could be executed by NATO members with a greater authority in nuclear use.

It is also time for U.S. allies in Asia to become much more involved in the U.S. nuclear targeting and employment planning processes. Faced with increasing Chinese and North Korean military power,

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Japan, South Korea, and even Australia are making greater investments in bigger military hardware, including submarines. To some extent this reflects unease about U.S. resolve. Such unease may lead to a downward spiral of increased mistrust and tensions in the region, which is disadvantageous to the United States, its allies, and China alike. But that can be redressed in part by including Seoul, Tokyo, and Canberra in a dialogue that goes deeper than the strategic or operational level of nuclear strategy, into the actual decision-making of targeting. Moreover, it would be useful to coordinate the use of conventional forces into this decision-making – integrated command and control.

A major question remains – could this ever be done on a multilateral basis? Many of the issues encountered in the Asia-Pacific today bear resemblance to politico-strategic questions of Cold War Europe. However, the problems of extended deterrence are far bigger in the Asian maritime context than in the European context, it thus becomes even *more* important for allies to have a say in these issues.

Extended *nuclear* deterrence has been a central tenet of most of America's post-World War II alliances. Like during certain moments during the Cold War, that security guarantee is being seriously challenged in both Europe *and* the Asia-Pacific. However, extended deterrence in a maritime, multipolar, and non-contiguous maritime environment is a *lot* harder to achieve than it ever was in a bipolar, contiguous, land context in Europe.

Realizing that U.S. conventional forces may not be sufficient for a protracted conflict between China and the United States, both Seoul and Tokyo have been stepping up their game with an expansion of submarine and land-based missile systems. Aside from allies doing more for their own defense, we might see U.S. nuclear weapons policy evolve. The issue of “friendly proliferation” is an issue that is going to come up more and more in Asia. This prospect might not only make alliance management harder for Washington and evoke unforeseen reactions from Peking, but it would also ruin long-term prospects for regional arms control and disarmament.

The dynamics that generated U.S.-NATO nuclear sharing, and eventually the idea of a Multilateral Nuclear Force (MLF), in Europe in the late 50s seem to be emerging in Asia today. For both political and military reasons, many European leaders sought control over the American nuclear backbone of Europe's defenses. Come late 1957, the United States responded by proposing tactical atomic stockpiles and IRBMs (Intermediate Range Ballistic Missiles) to NATO Europe: such nuclear sharing had to give Europeans “the feel” of NATO control, while the actual warheads remained under U.S. command and control. In 1966, the NATO nuclear planning group was established. This allowed the European allies to play a role in the decision making process about *how* and under which circumstances the American weapons would be used.

Chinese military capabilities are increasingly posing a threat to American regional leadership. Meanwhile, American allies are geographically dispersed and have widely diverging interests. This makes it difficult to develop a “one-size-fits-all” approach to the emerging Chinese politico-strategic challenge. In the absence of satisfying new multilateral approaches emanating from Washington, U.S. allies might seek national solutions, including nuclear proliferation or accommodation with Peking. Crucially, this downward spiral might be countenanced by enhancing a nuclear sharing relationship between Washington, Seoul, Tokyo, and Canberra. Expanding the role of nuclear weapons in U.S. diplomacy toward the Asia-Pacific might both improve regional strategic stability, while keeping long-term arms control and disarmament options open.

Absent the United States allowing its allies to “go nuclear,” would something resembling the NATO nuclear sharing schemes devised in response to the challenges of the late 1950s and the 1960s even be possible for Asia? This would imply bilateral dual-key atomic stockpile or ballistic missile arrangements with individual allies, operating under a regional allied command, while remaining



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under U.S. nuclear control. Although the option of a truly multilaterally controlled nuclear missile force was deferred by NATO, it does remain a hypothetical option in the Asia-Pacific.

The idea of a joint Asian nuclear force was floated during the 1960s. In the aftermath of China's nuclear test, a multilateral nuclear hardware and control sharing scheme for Asia was mooted in Washington as a way to prevent China's neighbors from acquiring their own nuclear weapons. Dean Rusk supported this scheme and even voiced support for Japan and India developing their own deterrent capabilities. In parallel, Washington entertained the idea of deploying ICBMs in Australia.

A renewed debate on nuclear sharing in the Asia-Pacific is in order. However, the obstacles are formidable. First, there is much historical distrust and animosity between Japan and South Korea. Second, the regional U.S. allies will have different threat perceptions and ideas about targeting and escalation regarding both North Korea and China. These issues reflect the bigger issue that there is no Asian NATO. The question remains, however, in the long run: at what point will the major allies be unsatisfied with any system of nuclear control that leaves the decision to use nuclear weapons solely in American hands? Arguably, though, nuclear hardware and control sharing would make any future attempts at nuclear and conventional arms control with China much more complicated. This is the potential tricky trade-off between reassuring allies on the one hand, and seeking a "stable" relationship with both China and North Korea on the other.

These issues feed into the bigger issue of developing a coherent maritime doctrine, and giving allies a say in this doctrine, just like with NATO. This will be crucial, because at a certain point nuclear weapons come into calculations about escalation. How can allies "rely" on U.S. extended deterrence if they remain blind to the nuclear aspects of U.S. operational planning?

What all this comes down to is the question of what is the best way to achieve stability in the region? Does this entail introducing tactical nuclear weapons and Intermediate-Range Nuclear Forces on South Korean and Japanese soil? Or establishing joint U.S.-Japanese/U.S.-South Korean control over sea-launched cruise missiles? The essential point remains, that given the increasing relevance of nuclear weapons to U.S. maritime strategy, it might make sense for U.S. allies to be more involved in dialogue and planning.

***Elmar Hellendoorn** is an independent geopolitical consultant and lecturer at Utrecht University.  
**Christine M. Leah** has served as a postdoctoral fellow at Yale University and MIT.*

<http://thediplomat.com/2016/09/is-it-time-for-nuclear-sharing-in-east-asia/>

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The National Interest – Washington, D.C.

OPINION/The Buzz

### **U.S. Security in a Proliferated World Will Require a New ICBM**

By Dan Goure

September 21, 2016

It's really quite simple: deterrence of an attack on the United States by a hostile nation rests, ultimately, on the nuclear triad -- intercontinental ballistic missiles (ICBMs), submarine-launched ballistic missiles (SLBMs) and bombers. While each leg of the triad plays a critical role in deterring aggression, there are some circumstances in which the land-based missile force could make the

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difference between war and peace. For that reason, the United States will need to develop and deploy a new ICBM, now called the Ground-Based Strategic Deterrent (GBSD).

It is certain that in the not-too-distant future the United States will face both more and larger nuclear threats. Russia is aggressively modernizing its strategic nuclear forces and has published a defense strategy that proposes the first use of nuclear weapons to “de-escalate” conventional conflicts with other major powers. China has taken a patient, more deliberate approach but is also increasing both the size and sophistication of its theater and strategic nuclear forces. North Korea has defied decades of sanctions and political maneuvers in its march to acquire not merely a theater nuclear capability but a strategic deterrent involving ICBMs and SLBMs. How many of these systems Pyongyang will eventually deploy is unknown. Finally, it is only a matter of time before the regime in Teheran develops and deploys both nuclear weapons and long-range delivery systems.

Deterrence of large-scale attacks on the homeland requires that the United States have a secure retaliatory capability. This is the vital role played by the SLBM force. But more is needed. An adversary might seek to execute only a limited attack, against a set of critical military and leadership targets in an attempt to paralyze this country. The United States has made commitments to protecting a number of allies against attack, including with nuclear weapons. This is extended deterrence, the so-called nuclear umbrella. This country also maintains the right to use nuclear weapons to deter attack on U.S. deployed forces and overseas bases. Virtually all planning scenarios for the use of U.S. strategic nuclear forces, including those for “crazy states” such as North Korea, see their use as the outcome of an intensifying military conflict that begins without the use of nuclear weapons and then grows to involve limited nuclear attacks and, finally, large-scale exchanges.

In order for strategic deterrence to be effective, meaning that an adversary chooses not to risk an attack on U.S. forces, bases or allies by conventional or nuclear means, the United States must have the option to escalate to the next level of military intensity. This is the so-called escalation ladder. On each step up the ladder, the United States needs to be able to either defeat/destroy the enemy forces being employed or impose unacceptable costs on the aggressor.

The most important rung on the escalation ladder is provided by the GBSD force. The reason for this is straightforward. If the U.S. chooses to employ long-range ballistic missiles in response to intensifying military aggression, that adversary faces a stark choice: either accept being struck in this manner, essentially being defeated, or escalate in turn, knowing in this case that the U.S. secure retaliatory capability will annihilate that country. But the enemy must recognize that this is the only step on the escalation ladder over which he has control: the one that will inevitably lead to Armageddon.

That is the value of the GBSD force; it poses an insoluble dilemma for an aggressor. The only way to prevent the United States from employing its strategic nuclear forces to deny the adversary the fruits of his aggression is by attempting a disarming attack on them. There are only a handful of targets that involve the bomber and submarine legs of the triad. But the land-based leg includes 450 missile silos in addition to launch control centers and other facilities. This would be an attack of such magnitude that, even assuming the adversary had enough nuclear weapons to attempt it, would cause such damage to the U.S. homeland as to trigger the launch of a massive retaliatory strike. So an aggressor can either start climbing the escalatory ladder with high likelihood of failure or not commit military aggression at all.

It is the GBSD, first and foremost, that provides the United States with an ability to dominate the escalatory ladder. In addition, it provides a prompt, precise nuclear strike capability that cannot be countered effectively by existing air and missile defenses.



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While the mission of the triad's land-based leg is enduring, the same cannot be said for the missiles themselves. The current GBSD, the Minuteman III, was first deployed in 1966. Although the Minuteman III has been repeatedly upgraded and its service life extended, there are limits to what can be done. The current ICBM force is fast approaching that limit. It is not just a matter of rising maintenance costs. The reliability of the overall missile system, to include launch control centers, is increasingly at risk.

The Air Force's current plan for the GBSD is to develop an integrated system that includes launch and command and control capability. The GBSD program will not only develop a new missile, one based on 21st century technologies, but also design in features that will allow adaptability in response to future threats. The GBSD will help secure the United States, its allies and overseas bases and forces from attack into the next century. This is a capability the nation must have and a program it must pursue.

*Dr. Dan Goure is a Vice President of the Lexington Institute. He is involved in a wide range of issues as part of the institute's national security program.*

<http://nationalinterest.org/blog/the-buzz/us-security-proliferated-world-will-require-new-icbm-17781>

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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.