



USAF Center for Unconventional Weapons Studies (CUWS) Outreach Journal

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Feature Item: “India’s Nuclear-Armed Submarines: Deterrence or Danger?” Authored by Diana Wueger; Published by The Washington Quarterly; Fall 2016, 39:3, pp. 77–90.

https://twq.elliott.gwu.edu/sites/twq.elliott.gwu.edu/files/downloads/TWQ_Fall2016_Wueger.pdf

In April 2016, India took a momentous step forward in its quest to complete the nuclear triad.¹ INS Arihant—India’s first indigenously-built, nuclear-powered ballistic missile submarine (SSBN)—launched its long-range nuclear-capable missile, codenamed the K-4, for the first time while submerged. Unveiled in 2009 for several years of trials, Arihant is the first of a planned five- or six-ship SSBN fleet to be introduced over the next half-century that will provide India with a secure and assured second-strike capability², or the ability for a country to respond to a nuclear attack with its own nuclear counterstrike.

Do SSBNs truly provide an unassailable second strike that deters absolutely, thus generating strategic stability? And does the logic that underpinned sea-based deterrence during the Cold War apply in South Asia, with political, geographic, and bureaucratic realities that differ dramatically from those of the U.S.–Soviet relationship? To answer these questions, this essay seeks first to illuminate the Cold War context in which these ideas took root and to assess how these ideas fit into India’s current nuclear doctrine. In the second section, I examine the South Asian context in which India is operationalizing that doctrine via Arihant. Here, I address some of the regional implications of the introduction of sea-based deterrence in the Indian Ocean Region (IOR), particularly the effect on India’s relations with China and Pakistan.

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U.S. Department of Defense (DoD) – Washington, D.C.

DoD News

Stratcom Commander Addresses Strategic Deterrence in 21st Century

By Terri Moon Cronk

DoD News, Defense Media Activity

October 24, 2016

WASHINGTON, Oct. 24, 2016 — Global security threats today must be viewed in a transregional, multidomain and multifunctional context, the commander of U.S. Strategic Command said Oct. 21.

Speaking at Kansas State University's Landon Lecture Series, Navy Adm. Cecil D. Haney addressed U.S. military strategic deterrence in the 21st century.

Haney discussed Russia, China, North Korea, Iran and the Islamic State of Iraq and the Levant as the five evolving challenges the military faces, and he emphasized that strategic deterrence capabilities are used every day to maintain strategic stability.

"As we look in the rear-view mirror over the last year and extrapolate into the future, our global security environment remains dynamic and uncertain," the Stratcom commander said. "Some nation-states are developing and modernizing their nuclear weapons capabilities," he said. "Nuclear and non-nuclear nation states aspire to or have demonstrated their ability to employ not just a variety of missile capabilities, but also cyber, counter-space and other asymmetric capabilities."

Addressing Challenges

But any nation that thinks it can get away with a strategic attack on the United States and its allies must think carefully about their actions and potential consequences, Haney cautioned. "I think we all understand the impact a nuclear weapon could have, but it's also important to understand that an attack in space or cyberspace can have strategic effect," he said.

And with all the complexities and the interconnectedness of globalization, these strategic problems have global ramifications that require comprehensive solutions, Haney said.

As a global combatant command, Stratcom has transregional responsibility that extends from under the sea to geosynchronous orbit, the admiral explained.

"[Stratcom's] capabilities underpin the fundamental elements of deterrence, affording the United States the ability to maintain strategic stability – a must in this dynamic and uncertain security environment," he emphasized.

Stratcom works to understand deterrence mechanisms and gain a deeper understanding of the adversary, he noted, adding, "We provide the nation with a safe, secure, effective and credible strategic nuclear deterrence force that is ready."

Deterrence Forces Critical in Global Security

U.S. deterrence forces stand at the ready and are critical in a global security environment where it is clear other nation-states are placing a high priority on developing, sustaining, modernizing, and in some cases expanding their nuclear forces, Haney said.

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“Today, the extended service of our nuclear delivery platforms is testament to the efforts and ingenuity of our predecessors -- particularly the designers, engineers, maintainers, and industry -- but we are fast approaching the point where having an effective nuclear deterrent will be put at risk,” he said. “To be clear, however, baseline sustainment won’t meet future adversarial threats. We simply must modernize.”

Delaying development and fielding of our modernization programs – everything from space-sensing, communications, platforms and life extensions for warheads – or ceasing to invest in the people who engineer, maintain and operate these systems -- will create an unacceptable increase in risk, the admiral said.

“Equally, if not more important, delaying will directly affect our credibility and ability to deter and assure and will detract from our nonproliferation efforts,” Haney told the audience.

Synchronized Campaign

Meeting future challenges requires a synchronized campaign of investments supporting the full range of military operations that secure U.S. national security objectives, he added. And while the admiral said he was pleased with the president’s proposed defense budget request for fiscal year 2017, he said he is “not pleased with the fact we do not have an approved budget and continue to live with a continuing resolution.”

A credible strategic deterrence capability cannot be done by Stratcom alone, he said, adding that a holistic approach should be taken to integrate military effects with all instruments of national power.

Haney explained such synchronization is commonly called “DIME” – for diplomatic, information, military and economic – “which together deters our adversaries and assure U.S. allies and partners.”

For example, he said, Stratcom aims to work seamlessly with the other combatant commands and across the federal government, as well as with partners and allies, the commercial sector and academia to apply the scope of its portfolio toward a synchronized pursuit of national objectives, such as building, sustaining and supporting partnerships to better understand the strategic and the regional environment and successfully develop effective strategies.

The Stratcom commander also noted that leaders must ensure they are developing the talent that will assume the mantle as the geopolitical landscape continues to change and evolve.

Nation Needs Future Leaders

The nation needs professionals who can think deeply and strategically, voice educated opinions, coherently document those thoughts and drive effective solutions, Haney said. “We must ask ourselves: How do we deter one without provoking another?” he said. “Are we thinking about our actions from the perception of our adversaries? How do we communicate our intent, our resolve, and our readiness?”

The answers to those questions start with this institution and with the people in this room,” the admiral told the university audience. “KSU fosters a high-velocity learning environment and helps to create leaders who not only understand the challenges associated with the world we live in today, but who can develop and apply solutions. Therefore, we need you.”



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The goal of deterrence is peace, the Stratcom commander noted. “Peace is achieved through strength,” he added. “Strength is all of us working together to prepare for an uncertain world.”

<http://www.defense.gov/News/Article/Article/984849/stratcom-commander-addresses-strategic-deterrence-in-21st-century>

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Defense News – Springfield, VA

Game Over: GAO Protest Reveals Cost Was Deciding Factor in B-21 Contest

By Valerie Insinna

October 25, 2016

WASHINGTON — Eight months ago, the Government Accountability Office shot down Boeing’s protest of the government’s decision to award the B-21 bomber contract to competitor Northrop Grumman. With the Tuesday release of its 52-page decision, the public now can read why.

The gist of GAO’s argument, which redacts all pricing and technical information, was that Northrop’s offering met the technical specifications at a price much lower than Boeing’s proposal.

“Significant structural advantages in Northrop’s proposal — specifically, its labor rate advantage and decision to absorb significant company investment — also strongly impacted the outcome of this essentially low-price, technically acceptable procurement,” the office said in its conclusion. “Northrop’s significantly lower proposed process for the LRIP phase created a near-insurmountable obstacle to Boeing’s proposal achieving best value or to Boeing’s protest demonstrating prejudice in the cost realism evaluation.”

The Air Force in October 2015 awarded Northrop the contract to develop and produce its newest bomber, now designated the B-21 Raider. Northrop beat out a Boeing-Lockheed Martin team for the two-pronged contract that covers the engineering, manufacturing and development phase of the program as well as the first five low-rate initial production lots.

According to the GAO decision, Boeing argued that the Air Force did not effectively measure the risk of Northrop’s bomber. The company contended that if the service had followed definitions set in the request for proposals, Northrop would not have met four out of seven unnamed technical capability subfactors. Boeing also stated that Northrop’s proposal was “inherently high risk” with regard to certain requirements in a way that should have rendered its offering unacceptable.

GAO shot down those claims, saying its review found the Air Force evaluated Northrop’s bid in a way that was “reasonable and consistent” with the RFP.

Boeing also alleged that the service overestimated the price of its own offering and relied too heavily on independent government estimates.

Again, the GAO disagreed.

“We see no error in the Air Force’s rejection of supporting cost data presented in Boeing’s proposal, or its upward adjustment to Boeing’s proposed EMD costs,” it wrote.

The office noted that both Northrop’s total weighted price and total estimated price were lower than Boeing’s. Although Boeing calculated that its proposal price had been overestimated by a

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dollar amount that was redacted in the report, even if Boeing's proposal was adjusted by that figure it would have not been enough to topple Northrop, which would have nabbed the contract on the basis of its lower total weighted price.

Thus, GAO said Boeing could not demonstrate that the Air Force had demonstrated competitive prejudice — a situation where the company would have won the contract if not for the government mismanagement or wrongdoing.

While much of the document was redacted, the decision sheds light on many interesting aspects of the competition. After the companies submitted their proposals to the Air Force in 2014, the service found both offerings technically unacceptable and held eight rounds of discussions where the competitors worked through deficiencies, although the GAO noted that some risk still remained with each proposal.

Those discussions failed to resolve questions about both Boeing and Northrop's cost estimates for the EMD phase of the program, which Air Force found to be overly optimistic when compared with its own independent government estimates. Even after eight rounds of talks, neither company was able to put forward a proposal that could be considered realistic with respect to the majority of the cost categories.

But while Northrop increased its own estimates, Boeing kept its own cost data at the same level, the GAO said. And, partially because Northrop offered to pay for certain expenses internally on its own dime, the company was able to keep EMD costs below Boeing's throughout the duration of the discussion process.

<http://www.defensenews.com/articles/lockheed-cfo-no-agreement-yet-on-price-profit-margin-for-f-35-lots-9-and-10>

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Breaking Defense – Washington, D.C.

Spending Bill Delay Would Trip Up Nuclear Missile Sub: CR vs. ORP

By SYDNEY J. FREEDBERG JR.

October 27, 2016

CRYSTAL CITY: If Congress doesn't pass the annual defense spending bill — already 26 days overdue — by January 1st, the Navy's top priority program may miss its sailing date 14 years from now.

The Ohio Replacement SSBN submarine, which will carry 70 percent of American nuclear warheads, "will come to *almost* a screeching halt" without a proper spending bill, warned Vice Admiral Joseph Mulloy, the Deputy Chief of Naval Operations.

Previous delays already "took all of the margin out of the program," said the Navy's Program Executive Officer for submarines, Rear Adm. Michael Jabaley. (Both admirals spoke Wednesday to the Naval Submarine League's annual conference). So there's no margin left for error, whether it's technical or congressional. If the Navy can't fund steady, uninterrupted work today, each day you lose now will compound to cost multiple days by 2030 — or 2031, or 2032, or whenever the first sub is delayed to.

The awkwardly named ORP is weeks away from its Milestone B review, said Jabaley. That's when the Office of the Secretary of Defense officially declares (or doesn't) that the program is ready to move from research and development into production. In the near term, that means a new, more

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detailed, more intensive stage of design and prototyping. The Pentagon's proposed budget for fiscal year 2017, which began October 1st, includes \$773 million in the SCN account (Ship Construction, Navy) for this effort — but Congress hasn't passed it.

Instead, the government is limping along under what's called a Continuing Resolution, which allows agencies to spend whatever was appropriated for them last year. That works for programs moving at a steady pace, but it prevents starting new programs, terminating old ones, or — as in ORP's case — doing more than last year.

Worse yet, ORP's old funding is R&D money, not SCN. That may seem like a matter of labels. Jabaley himself admits he could keep *try* to keep work going by relabeling some SCN activities as R&D, but he doubts his superiors would approve. Jabaley can keep design work moving for a while using R&D funds, he says, but he'll run out of room around January 1st.

The current Continuing Resolution expires December 9th. The hope is that the lame-duck Congress and the lame-duck President will pass proper spending and policy bills; the fear is they'll extend the CR into the New Year.

"There's not a lot of days" between the time Congress comes back and the time the CR expires, warned Mulloy. That said, committee staff has worked out most of a compromise, he said. In fact, "they actually thought they had a conference position going," Mulloy said ruefully, until it ran aground on the annual partisan debate about protecting Sage Grouse habitat near military bases.

The Ohio Replacement is the most important program, but it's hardly the only one hamstrung by the CR, said Mulloy. Across the \$15 billion shipbuilding budget, he said, "I've got the right amount of money, but I've got \$5 billion in the wrong place" — which means the Navy's not allowed to spend it, on ORP or anything else.

With the oldest *Ohio* reaching a staggering 42 years of service and retiring just as the first Ohio Replacement sub joins the fleet, there's no margin of error left. "My job is to buy margin back into that schedule," said Jabaley.

The Navy and its contractors — Electric Boat and Newport News — are doing everything they can to manage the massive workload and buy back time. "We are already building pieces of the ship," said Jabaley: Some prototype components being bought with R&D funds will be used — assuming they work right — in the first ORP sub. The program is looking at buying other components of the first submarines before their construction is legally authorized, but that will require Congress to vote Advanced Procurement (AP) funds or other special authorities. They're also seeking economies of scale with the famously efficient *Virginia*-class attack submarine program and even the badly over-budget nuclear-powered *Ford*-class carriers.

Instead of all this agony, outside analysts sometimes suggest the Navy could simply buy fewer Ohio Replacement submarines. After all, we've got from a fleet of 41 first-generation nuclear missile subs — the "41 for Freedom" — to 18 and then 14 *Ohios*, with a plan for only 12 Ohio Replacements — and the strategic requirement is for only 10 SSBNs in service at any given time. Why not go a little lower yet?

We've used up all our margin for the number of submarines, too, said Jabaley. The 10-SSBN minimum is derived from highly classified calculations of how widely the missile subs need to disperse to cover key targets while remaining concealed, and of how long each submarine spends in maintenance rather than at sea. We actually will go down to just 10 subs at one point, he noted, but that's only possible at a particular, peculiar point in time, when all the *Ohios* are old enough to have



finished their lengthy mid-life overhauls and none of the Ohio Replacements is old enough to need one yet.

"Normally, it takes 12 to make 10," Jabaley said: That is, 12 submarines in the fleet to have 10 available for operations at any given time. That sets an absolute minimum for the size of the Ohio Replacement class, he said, channeling Monty Python: "12 is the number and the number shall be 12."

<http://breakingdefense.com/2016/10/spending-bill-delay-would-trip-up-nuclear-missile-sub-cr-vs-orp/>

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Yonhap News Agency – Seoul, South Korea

CSIS Chief: China Made 'Colossal' Mistake on THAAD

October 26, 2016

WASHINGTON, Oct. 25 (Yonhap) -- China has made a "colossal" mistake by opposing the planned deployment of the U.S. THAAD missile defense system in South Korea, the head of the Center for Strategic and International Studies (CSIS) said Tuesday.

John Hamre, a top security expert who is president and CEO of CSIS, made the remark during a forum on Korean Peninsula issues, saying he conveyed such a view when he met with Chinese Ambassador to the U.S. Cui Tiankai earlier in the day.

"I said, 'You guys made a big mistake on opposing THAAD because you're opposing a system that has only one application and that's to defend people,'" Hamre said during the seminar that was organized by the Institute for Corean-American Studies (ICAS) and held at the Heritage Foundation.

"I mean if we had proposed to put Lance (nuclear missile) back into the Korean Peninsula with a nuclear warhead, you know, a short-range ICBM that could attack China, you'd have the right to be upset. Instead, you're upset about a system that's entirely defensive. You guys really read this wrong, profoundly wrong," he said.

He also rejected Beijing's argument that THAAD could undermine China's nuclear deterrent, pointing out that Chinese missiles, if fired toward the U.S., don't fly over South Korea.

"So this argument that THAAD somehow affects Chinese nuclear deterrent is nonsense, completely wrong, and intentionally wrong. And it's designed to try to intimidate the South Korean government and the South Korean people and it's failed," he said.

"If we take to a logical extension the South Korean desire to see a tangible American expression that our nuclear deterrent covers them, that means we would have to put nuclear weapons in the theater that would legitimately be seen as a threat to China," he said. "They made a colossal mistake opposing THAAD. They really should recover from it as soon as possible but I don't think they can do it."

Hamre also said that the U.S. should seriously view growing calls in South Korea for nuclear armament, saying the desire reflects increasing doubts about Washington's security commitment amid intensifying nuclear and missile threats from North Korea.

"Average citizens as well as elites are starting to conclude with greater, louder voice that they no longer can count on America's nuclear extended guarantee. This is a worry," he said, adding that the situation is a byproduct of the North's relentless pursuit of nuclear missile development.



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"It's no longer a fringe discussion. Ten years ago, 15 years ago, this would be a conversation you would rarely hear in South Korea, and usually by kind of wacky people, but that's not the case any longer. It's now much more broadly being felt and argued," he said.

<http://english.yonhapnews.co.kr/national/2016/10/26/39/0301000000AEN20161026000300315F.html>

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TASS Russian News Agency – Moscow, Russia

Russia Voices Concern over Japan's Part in US Missile Shield Deployment

The Russian side stressed the need for further exchanges between the Russian and Japanese defense ministries

October 28, 2016

MOSCOW, October 28. /TASS/. Russian Deputy Defense Minister Anatoly Antonov and Japan's Ambassador to Russia Toyohisa Kozuki discussed the deployment of the US missile shield segment in the Asia-Pacific region, the press office of Russia's Defense Ministry reported on Friday.

"The deputy head of Russia's Defense Ministry outlined the Russian side's concerns over Japan's participation in this process," the press office said in a statement obtained by TASS.

The participants in the meeting also exchanged opinions on the state and the prospects of cooperation between Russia and Japan. The Russian side stressed the need for further intensifying exchanges between the defense ministries of both countries.

<http://tass.com/politics/909405>

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TASS Russian News Agency – Moscow, Russia

Formidable Sarmat: Satan's Successor that Can Pierce any Defense

TASS' military analyst fills us in on one of the greatest secrets of Russia's defense industry

October 25, 2016

The Makeyev Rocket Design Bureau just recently [published](#) the first image of the newest heavy intercontinental ballistic missile, the RS-28 Sarmat (also known under NATO's reporting name SS-X-30). It is to replace its predecessor, the R36M2 Voyevoda (or NATO reporting name – the SS-18 Satan). According to a TASS source, the SS-X-30 is to be authorized for service at the end of 2018.

The SS-X-30 is to undergo pop-up tests by the end of 2016. Its flight testing is due no earlier than the end of the first quarter of 2017.

The missile's parameters remain a state secret, so its features can be discussed only on the basis of open sources and the opinions of military specialists.

This story by TASS is about one of the greatest surprises from Russia's defense-industrial complex that largely remains secret for the time being.

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Satan's worthy successor

The SS-X-30 is a heavy inter-continental ballistic missile (ICBM) being developed by the Makeyev Rocket Design Bureau. According to some estimates, the missile will have a liftoff mass of 100 tonnes, including a ten-tonne payload. It is to replace the world's most powerful strategic missile, the Voyevoda (211 tonnes, including a payload of 8.8 tonnes). Its NATO reporting name is the SS-18 Satan.

"The Soviet Union once had 308 SS-18s. Their manufacturer – Yuzhmash – is located in the city of Dnepropetrovsk, Ukraine. The first Soviet-US Strategic Arms Reduction Treaty (START-1) materialized largely because Washington was under the strongest impression of the missile's capabilities, in particular, its multiple warhead consisting of ten independently targetable re-entry vehicles each having a yield of 750 kilotonnes"

Viktor Litovkin

TASS military analyst

After the Soviet Union's breakup, the plant in Dnepropetrovsk halted the production of SS-18s. Under START-1 terms, Russia scrapped 154 missiles. Those still on duty were to be withdrawn from operation after the expiration of their life cycles.

According to open sources, 46 silo-launched missiles of that class remain on duty. The SS-X-30 missiles are to take their place, for which the silos will have to be upgraded.

Invisible to missile defense

In contrast to its predecessor (the SS-18) the SS-X-30 will boast far smaller liftoff mass and a greater range of flight.

"Whereas the SS-18's range of operation was 11,000 kilometers, the SS-X-30 will be able to hit targets as far as 17,000 kilometers away and, as its designers promise, to approach the targets along flight paths crossing the South Pole, from where they are least-expected and where no missile shields are being created"

Viktor Litovkin

TASS military analyst

Each SS-X-30 will carry not 10 nuclear warheads, but no fewer than 15, located in the missile's forward most section. These independently targetable 150-300-kilotonne re-entry vehicles, arranged in a grape cluster-like fashion, will be able to separate from the cluster one by one when the pre-loaded program issues the order to attack the selected target.

"The re-entry vehicle will be flying towards the target at hypersonic speeds (of Mach 17). The flight path's altitude and direction will be changing all the time, thus making the weapon immune to any missile defenses – current or future one, even those relying on space-based elements. "For the SS-X-30 it makes no difference if there is a missile defense or if there is none. It will slip through unnoticed," missile specialists say"

Viktor Litovkin

TASS military analyst

Mass media have already mentioned the hypersonic re-entry vehicles' name - Yu-71. Their accuracy is reportedly a hundred times greater than that of the SS-18 warheads.



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“This allows for arming the SS-X-30 missiles with kinetic energy warheads that destroy strategic enemy targets with a mechanical impact without a nuclear explosion. Using lower yield warheads is another alternative”

Viktor Litovkin

TASS military analyst

Whereas each of the SS-18’s MIRVs had a yield of 750 kilotonnes and the circular error probable (CEP) was not very important, because the explosion would raze everything to the ground within a range of dozens of kilometers, the SS-X-30’s high accuracy warheads boast a far better CEP, so the predecessor’s heavy yield will be no longer necessary.

Litovkin believes that a 150-300 kilotonne blast will be enough to cope with any task. The lower the yield and mass of each MIRV, then the more of these that can be loaded into the missile’s front section.

Strategic parity

Commander of Russia’s Strategic Missile Force, Colonel-General Sergey Karakayev, says “the contribution of the stationary group of heavy ICBMs (SS-18 or SS-X-30) in contrast to that of a stationary group of light ICBMs (Topol-M or Yars) will be four times greater by all parameters that are used to gauge the likely combat effectiveness of the Strategic Missile Force.”

How many SS-X-30 missiles will go operational in Russia is unknown, but as Litovkin says, it is easy to guess.

“SS-18s will vacate at least 154 silos (another 154 were destroyed in controlled explosions under START-1 terms). Although not all of the silos will be re-equipped to accommodate the new missile, they will have to fit in with the parameters of START-3, which allows Russia and the United States to have 700 operational delivery vehicles armed with a total of 1,550 warheads by February 5, 2018”

Viktor Litovkin

TASS military analyst

Each SS-X-30 is to carry 15 warheads. According to open sources, Russia at the moment has 521 operational delivery vehicles and 1,735 warheads (and the United States, 741 and 1,481 accordingly).

START-3 may be prolonged after its expiration in 2021 by mutual agreement for another five years. If that happens, says Litovkin, Russia will have fewer SS-X-30s than SS-18s. Alongside the SS-X-30s, Russia has at its disposal other delivery vehicles (both ground- and sea-launched) and strategic bombers. All are on the START-3 list.

What function is the SS-X-30 expected to perform?

TASS military analyst Viktor Litovkin believes the SS-X-30, just as the Strategic Missile Force, is crucial to deterring a likely aggressor and also to replacing the SS-18, which by the time START-3 expires, will have come to the end of its guaranteed life cycle.

On the other hand, says Major-General Vladimir Dvorkin, Chief Research Fellow at the Institute of World Economy and International Relations (IMEMO) the solid propellant mobile strategic missiles Topol-M, Yars and Rubezh and, in the longer term, the strategic missile carrying trains Barguzin would be quite enough for deterrence.



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"In contrast to the SS-18, the SS-X-30 missile is an easy target for the enemy's first strike. Russia will never be the first to launch a nuclear missile attack, although such an opportunity is reserved in the country's military doctrine"

Vladimir Dvorkin

Dr. Sc. (Tech), Major-General, ret.

The former chief of the Strategic Missile Force Staff, and current adviser to the missile force commander, Viktor Yesin, agrees with Dvorkin, but only partially.

"We have no intention of being the first to deliver a nuclear strike. The SS-X-30 is a weapon of retaliation. We will be able to launch them while enemy missiles are still on the way. We are building Voronezh-class missile attack warning radars along the borders capable of identifying any approaching missiles. Hypothetical enemies are aware of that. The SS-X-30 will guarantee our security"

Viktor Yesin

Colonel General, adviser to the Strategic Missile Force commander

http://tass.com/defense/908575?_ga=1.161425533.158245374.1477440858

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The Diplomat – Tokyo, Japan

Russia Unveils 1st Image of New Intercontinental Ballistic Missile

The new missile will reportedly be capable of penetrating any missile defense system.

By Franz-Stefan Gady

October 26, 2016

Russia unveiled the first image of a new super-heavy thermonuclear-armed intercontinental ballistic missile, the RS-28 Sarmat, on October 23. The Makeyev Rocket Design Bureau in the city of Miass, located in Chelyabinsk Oblast in the Ural Mountains region, **posted a declassified picture** of the prospective new missile on its website. Accompanying the picture was a short statement signed by the missile's chief designers, V. Degtar and Y. Kaverin:

In accordance with the Decree of the Russian Government 'On the State Defense Order for 2010 and the planning period 2012-2013,' the Makeyev Rocket Design Bureau was instructed to start design and development work on the Sarmat. In June 2011, the Bureau and the Russian Ministry of Defense signed a state contract for the Sarmat's development. The prospective strategic missile system is being developed in order to assuredly and effectively fulfill objectives of nuclear deterrent by Russia's strategic forces.

Russia's newest super heavy liquid-propelled thermonuclear ICBM reportedly can carry ten heavy or 15 (some sources say 16) lighter warheads. The RS-28 Sarmat is expected to enter service with Russia's Strategic Missile Force by 2020, replacing Soviet era RS-36M ICBMs. (Russia plans to retire all Soviet-era ICBMs and replace them with new weapon systems by 2022.)

According to Russian media reports, the missile's first stage engine PDU-99 was tested in August. No other tests have been publicly revealed so far. The first test-launch of the missile is reportedly scheduled for November or December of 2016. Russia announced in January that it would conduct a

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total of 16 ICBM test launches in 2016, with 14 dedicated to testing new missiles and warheads including the RS-28 Sarmat (See: “Russia to Launch 16 Intercontinental Ballistic Missiles in 2016”).

“The development of the Sarmat silo-based missile system with a heavy missile is nearing completion,” the commander of Russia’s Strategic Missile Forces, Colonel-General Sergei Karakayev, said in May (See: “Russia Developing New Nuclear Missiles Capable of Penetrating US Defenses”). “The performance of the stationary grouping of the heavy ICBM (of the Voevoda or Sarmat class) will four times surpass that of the stationary grouping of the light-class ICBM (Topol-M, Yars) by all the RVSN [Strategic Missile Forces] grouping tactical effectiveness parameters,” he added.

Russia has also been working on a new hypersonic glide vehicle (HGV), the YU-71, under the secret Project 4202, a warhead purportedly capable of penetrating any missile defense shield that can be mounted on the SR-28. “A YU-71 HGV warhead mounted on a Sarmat ICBM could be one of the deadliest nuclear weapons fielded since the end of the Cold War,” I reported elsewhere. According to *Sputnik News*, the Sarmat ICBM can wipe out an area the size of Texas or France, while “its higher speed performance will enable it to speed past every missile defense system in existence.”

<http://thediplomat.com/2016/10/russia-unveils-1st-image-of-new-intercontinental-ballistic-missile/>

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The Diplomat – Tokyo, Japan

Russia Test Fires Nuclear-Capable Hypersonic Glider Warhead

Russia’s Strategic Missile Forces reportedly launched a HGV-tipped RS-18 intercontinental ballistic missile on Tuesday.

By Franz-Stefan Gady

October 28, 2016

Russia’s Strategic Missile Forces reportedly test fired a RS-18 intercontinental ballistic missile on October 25, according to the Russian Ministry of Defense. Russian military analysts believe that the launch might have been a test of a new hypersonic glide vehicle (HGV), the YU-71, also known as Project 4202, a warhead purportedly capable of penetrating any missile defense shield.

“At 11:58 a.m. Moscow time [08:58 GMT], an RS-18 intercontinental ballistic missile was launched from the position area of the Yasnensky missile formation [the Orenburg Region]. The launch has been a success and the warhead has been delivered to the area of the Kura combat field [Kamchatka Peninsula],” the defense ministry said in a statement published by *TASS* news agency.

The defense ministry statement did not mention the YU-71. As I noted elsewhere, the last successful test of the YU-71 occurred in April 2016, according to Pentagon officials. (A previous test in June 2015 is believed to have been unsuccessful.) The April 2016 test also allegedly involved a RS-18 ICBM.

Senior Russian defense officials have repeatedly stated that Russia’s defense industry is working on fielding hypersonic weapon system capable of penetrating advanced missile defense systems by the early 2020s. One of the major difficulties remains the YU-71 HGV’s accuracy since engineers have so far been unsuccessful in developing functioning missile control system, according to a Russian

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defense industry source. Missile scientists also need to develop new materials that can withstand temperatures of 1,500°C, generated by speeds of Mach 5 and above.

Last year, I explained why a HGV warhead spells trouble for conventional interceptor-based missile defense systems:

Once it reaches near space and is ejected from the missile booster, the YU-71 HGV begins to glide in a relatively flat trajectory by executing a pull-up maneuver and accelerating to up to ten times the speed of sound, or around 7,680 miles per hour.

The gliding phase enables the YU-71 HGV not only to maneuver aerodynamically – performing “extreme maneuvers” and evading interception – but also extends the range of the missile.

Furthermore:

[U]nlike conventional reentry vehicles, which descend through the atmosphere on a predictable ballistic trajectory, hypersonic glider vehicles are almost impossible to intercept by conventional missile defense systems, which track incoming objects via satellite sensors and ground and sea radar.

As I noted previously, the YU-71 could eventually be mounted on Russia’s new super-heavy thermonuclear-armed intercontinental ballistic missile, the RS-28 Sarmat. With its 10 heavy or 15 (some sources say 16) lighter warheads, the silo-based ICBM, once operational, will reportedly be capable of wiping out an area the size of Texas or France. Some experts estimate that the RS-28 will be able to carry up to three YU-71 HGVs.

The RS-18 is a Soviet era a fourth-generation silo-launched liquid-propellant ICBM capable of carrying up to six 550 kiloton warheads and an estimated range of 10,000 kilometers. According to some estimates, the Strategic Missile Forces have around 30 RS-18 ICBM currently in service, but the two-stage liquid fuel missile is slowly being phased out and replaced by never silo-based models like RS-24 Yars (SS-27), which along with the RS-12M2 ICBM (the Topol-M missile system) will become the mainstay of Russia’s land-based nuclear deterrent.

The Russian Defense Ministry announced at the beginning of 2016 that the Strategic Missile Forces would test-launch a total of 16 ICBM throughout the year, with 14 dedicated to testing new missiles and warheads including the RS-28 Sarmat (See: “Russia to Launch 16 Intercontinental Ballistic Missiles in 2016”).

<http://thediplomat.com/2016/10/russia-test-fires-nuclear-capable-hypersonic-glider-warhead/>

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Press TV – Tehran, Iran

Russia to Eliminate All Its Chemical Weapons by End 2017

Thursday, October 27, 2016

Russia says it plans to annihilate all of its remaining chemical weapons by the end of next year, a year earlier than previously scheduled.

Colonel General Valery Kapashin, who is the head of Russia’s Federal Department for the Safe Storage and Destruction of Chemical Weapons, said on Thursday that a decision had been made to eliminate the country’s chemical stockpiles by December 2017, Russia’s Interfax news agency reported.

The report added that the destruction was to be carried out at only one facility, near the settlement of Kizner in Udmurtia, located in western Russia.



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Back in August, Kapashin had declared that some 94 percent of the country's chemical weapon stocks had been eliminated.

In April, the official announced that over 37,000 tons of chemical warfare agents, around 93 percent of the stocks, had been destroyed to date, promising that Russia would "get rid of" the remaining stock by December 2018.

The elimination of the stockpiles began in December 2002. By the end of 2014, Moscow announced that it had destroyed 84.7 percent of its air-delivered chemical munitions.

In January 1993, Russia signed the Chemical Weapons Convention, which bans the production, development, possession, sharing or use of chemical weapons. At the time, Moscow declared that it possessed some 40,000 tons of toxic ammunition, including nerve agents Sarin, Soman and VX-type chemical agents.

Moscow says it uses completely safe technologies to eliminate chemical weapons, and since the commencement of the elimination process 14 years ago, no single emergency situation has occurred during the processes of destroying the toxic substances.

<http://www.presstv.ir/Detail/2016/10/27/490913/Russia-chemical-weapons-Kizner-CWC>

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Task & Purpose.com – U.S.

Interactive Map Shows What a Nuclear Bomb Would Do to Your Hometown

By SARAH SICARD

October 21, 2016

NUKEMAP lets you see what a nuclear bomb would do if it was dropped anywhere in the world.

Have you ever wondered what would happen if the Cold War didn't stay cold? Rising tensions between the United States and Russia have renewed fears about the possibility of nuclear warfare. The two countries combined have 93% of the world's nuclear weapons, with Russia boasting the most powerful weapon the world has ever known: the Tsar Bomba.

The bomb was 57 Megatons of power. Though it's hard to imagine the scale of destruction that such a bomb would create, the fact that it's 1,400 times more powerful than Hiroshima and Nagasaki combined is clearly a harrowing prospect.

Now, thanks to a [Google Maps mashup called NUKEMAP](#), you can see exactly the damage that bombs as small as the tiny U.S. Davy Crockett bomb or terrifying as the Tsar Bomba would do anywhere around the globe.

For example, if Russia dropped the Tsar Bomba in Central Park, Manhattan, more than 8 million people would die in the first 24 hours, and nearly 7 million would be injured.

While it's a awesome tool to play with, it also shows the catastrophic consequences that nuclear war would bring.

http://taskandpurpose.com/interactive-map-shows-nuclear-bomb-hometown/?utm_source=newsletter&utm_medium=email&utm_campaign=tp-today

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People' Daily Online – Beijing, China

Xi Demands Strong Army, Solid Troops

(Xinhua)

October 21, 2016

BEIJING, Oct. 21 (Xinhua) -- Chinese President Xi Jinping has urged building a solid national defense and strong armed forces that are commensurate with China's international status and national security and development interests.

Xi, also general secretary of the Communist Party of China (CPC) Central Committee and chairman of the Central Military Commission (CMC), made the remarks at a gathering on Friday to commemorate the 80th anniversary of the victory of the Long March.

He also noted that the Party's absolute leadership over the armed forces is the fundamental guarantee for the army's victory.

"To build a strong country requires efforts to build a strong army, and only with a strong army can the country be secured," Xi said.

He called for efforts to foster a new generation of Chinese servicemen who are "soldiers with soul, high calibre, guts and virtue," and to build rock-solid troops with "iron-like beliefs, conviction, discipline and commitment."

<http://en.people.cn/n3/2016/1021/c90000-9130948.html>

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Korea JoongAng Daily – Seoul, South Korea

North Korean and U.S. Officials Hold Two-Day Meeting

Both peace talks and denuclearization were tabled, participant says

By KANG JIN-KYU

October 24, 2016

North Korean top-ranking officials held two-day unofficial talks with former U.S. officials in Malaysia on Friday and Saturday, raising questions over the nature of the meeting and possibility of further dialogue between the two countries.

North Korean foreign vice minister, Han Song-ryol, who previously served as deputy ambassador to the United Nations, was among the five North Korean officials involved in the meeting with four U.S. former officials. Jang Il-hun, Pyongyang's current deputy ambassador to the United Nations, also took part.

Among the participants, who gathered at a hotel in Kuala Lumpur, was Robert Gallucci, who was part of a U.S. negotiation team in 1994 that reached a landmark deal with Pyongyang on freezing its nuclear weapons program in return for economic incentives. Joseph DeTrani, a former U.S. deputy envoy for the long-stalled six party talks aimed at dissuading the North from its nuclear weapons program, and Leon Sigal, director of the Northeast Asia Cooperative Security Project at the Social Science Research Council, were also there.



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While details of the two-day meeting remain unknown, Sigal told reporters there that the North Korean team demanded the two sides begin talks for a “peace treaty” that would establish diplomatic relations between the two.

It is reported that the North stressed that peace talks should precede moving on to address its nuclear and missile program, repeating its longstanding position that it will only agree to discuss denuclearization after setting up diplomatic relations with Washington, which it sees as a guarantee for regime survival.

Sigal told reporters that his team reiterated the U.S. position that the scrapping of the nuclear program must come before any other issues, but he indicated that the two sides sought ways to resume dialogue that has been closed for years under the Obama administration’s so-called “Strategic Patience” policy, whereby Washington has decided to wait until Pyongyang drops its nuclear ambitions before holding official talks. Sigal also said the talk “gives us a chance to explore things that you know go beyond what the government is saying right now to see if we can find a way back to negotiations.”

The two-day talk came just a day after the North test-fired yet another medium-range missile, which ended in failure as it exploded right after launch, according to the South Korean military.

But Koh Yoo-hwan, a professor of North Korean studies at Dongguk University, told the Korea JoongAng Daily the North’s informal encounter with the U.S. could have come across as “disconcerting news” for the South Korean government as it has been leading international efforts to bring tougher sanctions against the Kim Jong-un regime in the wake of its fifth nuclear test.

“It appears that the North sat down with the assumption that Hillary Clinton will win the election next month and the Democratic government will maintain power,” said Koh, pointing out former U.S. officials who took part in the talk were affiliated with the Democratic Party and are considered to be “dovish.”

<http://koreajoongangdaily.joins.com/news/article/article.aspx?aid=3025257&cloc=joongangdaily%7Chome%7Cnewlist1>

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Yonhap News Agency – Seoul, South Korea

U.S. again Downplays Informal Talks with N. Korea

October 25, 2016

WASHINGTON, Oct. 24 (Yonhap) -- The United States again downplayed last week's talks between North Korean diplomats and former U.S. nuclear negotiators as "private" and "unofficial" discussions, urging Pyongyang to demonstrate denuclearization commitments so as to reopen the long-stalled nuclear negotiations.

"There's no U.S. government involvement here. This is done by private citizens and typically they discuss a range of issues. But the United States government isn't sponsoring them. There's no government involvement in it," State Department spokesman John Kirby said at a regular briefing Monday.

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Kirby was referring to the two days of meetings held in Malaysia's Kuala Lumpur last week between North Korean diplomats, including Vice Foreign Minister Han Song-ryol, and former nuclear negotiators Robert Gallucci and Joseph DeTrani.

The rare meetings drew keen attention as they could signal Pyongyang's willingness to reopen the long-stalled negotiations with the U.S. amid heightened tensions in the wake of its fifth nuclear test and a series of missile launches.

The talks have also raised concern they could undermine international efforts to tighten sanctions on Pyongyang by giving an impression of flexibility on the part of the North. Both South Korea and the U.S. have downplayed the talks as "Track 2" discussions unrelated to government.

"The Track 2 stuff is unofficial. It's private citizens and they talk about a range of issues. And as I said, they do this independent of any U.S. government involvement," Kirby said.

He said the U.S. is open to talks with the North, but said Pyongyang should prove it's serious about denuclearization.

"We remain open to dialogue with the DPRK with the aim of returning to credible and authentic negotiations about the denuclearization of the peninsula. But as we've also said, the onus is on the North to prove that they're able, willing and ready to join in those discussions through the six-party process, and they have not," he said.

<http://english.yonhapnews.co.kr/northkorea/2016/10/25/0401000000AEN20161025000500315.html>

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Xinhua News – Beijing, China

China, U.S. to Hold Talks on Strategic Security Issues

Source: Xinhua

October 25, 2016

BEIJING, Oct. 25 (Xinhua) -- China and the United States will hold an inter-sessional meeting of the China-U.S. Strategic Security Dialogue in Beijing on Oct. 29.

Foreign Ministry spokesperson Lu Kang said at a news briefing on Tuesday that the meeting will be co-chaired by U.S. Deputy Secretary of State Antony Blinken and Chinese Vice Foreign Minister Zhang Yesui.

Both sides will exchange views on China-U.S. relations as well as strategic security issues of mutual concern, Lu said.

http://news.xinhuanet.com/english/2016-10/25/c_135780084.htm

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The Japan Times – Tokyo, Japan

North Korea Giving Up Nuclear Weapons is 'Lost Cause,' Top U.S. Official Says

By JESSE JOHNSON, Staff Writer

October 26, 2016

WASHINGTON – A top adviser to the U.S. president on national security issues said Tuesday that persuading North Korea to get rid of its nuclear weapons “is probably a lost cause” and the best Washington can hope for is to cap the capabilities.

Director of National Intelligence James Clapper said that denuclearizing the Korean Peninsula — long the stated U.S. goal — is now a nonstarter for Pyongyang.

“I think the notion of getting the North Koreans to denuclearize is probably a lost cause,” Clapper said at the Council on Foreign Relations think tank in New York. “They are not going to do that. That is their ticket to survival.”

Washington has long pushed for the North to scrap its nuclear program and has vowed never to recognize the reclusive country as a nuclear power.

Clapper’s comments appeared to highlight internal divisions in the White House’s approach to reining in the North’s ever-improving atomic and missile programs as Pyongyang seeks to develop a nuclear-tipped missile capable of hitting the U.S. mainland.

Clapper noted that although Pyongyang has yet to test its KN-08 intercontinental ballistic missile, Washington operates under the assumption that the North has the capability to hit parts of the U.S. — particularly Alaska and Hawaii — with a missile.

In Washington, State Department spokesman John Kirby said that while he had not seen Clapper’s remarks, U.S. policy toward the North remained unchanged.

“We want to continue to see a verifiable denuclearization of the peninsula,” Kirby said.

“We want to see a return to the six-party talk process, and that means we need to see the North show a willingness and an ability to return to that process which they haven’t done yet,” he added.

The six-party talks, which groups the isolated state plus China, Japan, Russia, South Korea and the United States, have been frozen for years.

In the absence of the talks, Pyongyang has ramped up its nuclear and weapons activities this year to a level previously unseen, with two atomic test explosions — including its most powerful to date — and more than 20 missile tests.

Clapper, who oversees the 17 U.S. intelligence agencies, said he got a good taste of how the world looks from Pyongyang’s perspective when he visited the North on a secret mission in 2014 to help secure the release of two Americans held there.

“They are under siege and they are very paranoid, so the notion of giving up their nuclear capability, whatever it is, is a nonstarter with them,” he said.

“The best we could probably hope for is some sort of a cap, but they are not going to do that just because we ask them. There’s going to have to be some significant inducements.”

On the subject of sanctions, Clapper said that while they remain an option for the U.S., “we’re kind of running out of gas ... since we’ve imposed most of them that we can.”

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North Korea has been hit by five sets of U.N. sanctions since it set off its first nuclear device in 2006, and negotiations are ongoing to close loopholes in existing sanctions over its second atomic test in September.

But leader Kim Jong Un, who took power in late 2011, has shown no signs of abandoning his nuclear and missile push, with the country even enshrining its status as a nuclear power in a new 2012 constitution.

Robert E. Kelly, a professor of international relations at Pusan National University in South Korea, agreed that the North would “almost certainly never denuclearize.”

“It took them 20 years to get here,” Kelly said. “It cost huge resources for a country constantly beset by scarcity. And they endure enormous international opprobrium to get here. ... It would be remarkable if they gave up nukes after all that for sanctions relief.”

Daniel Pinkston, an East Asia expert at Troy University in Seoul, called Clapper’s comments “nothing new.”

“He’s clearly stating the obvious,” he said.

Pinkston said the North’s “byungjin” line embraced by Kim — which focuses on the parallel development of the economy and nuclear weapons — has become an indelible part of the country’s character.

“It’s nonnegotiable and part of the DPRK’s national identity,” he said. “Abandoning the nuclear program would constitute revolutionary change — not a policy shift.”

As for any successful attempt by the U.S. to cap the North Korean nuclear program, Pinkston said Washington has little leverage to make such a move.

“They will cap their program according to their internal plans and objectives — not according to what the Americans suggest in diplomatic talks,” he said, warning that any incentives or rewards delivered to Pyongyang would be pocketed while the leaders “continue with their original objectives anyway.”

In his comments, Clapper also recommended the U.S. and South Korea capitalize on using information as a weapon against the North.

“That’s something they worry about a lot,” he said. “And their reaction to the loudspeakers being activated along the DMZ or the dropping of leaflets by NGOs over North Korea, and they go nuts when that happens. And so that is a great vulnerability that I don’t think we have exploited.”

<http://www.japantimes.co.jp/news/2016/10/26/asia-pacific/clapper-says-push-get-pyongyang-shed-nuclear-arms-probably-lost-cause/#.WBE46bRh1mA>

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The Korea Herald – Seoul, South Korea

Failed Musudan Missile Launch Burned Mobile Launcher

October 26, 2016

North Korea's failed Musudan missile launch caused considerable damage to one of its mobile launchers, official sources here said Wednesday, the latest sign of shortcomings in the country's military capabilities.



USAF Center for Unconventional Weapons Studies (CUWS) Outreach Journal

Pyongyang launched a ballistic missile, believed to be a Musudan, last Thursday from an airfield in the northwestern city of Kusong. The intermediate-range ballistic missile is known to have exploded soon after liftoff. This launch appeared to have been an attempt by the North to save face from another failed Musudan test conducted less than a week earlier on Oct. 15.

"The exploding missile caused the launcher to catch fire and it was seriously scorched," a government official told Yonhap News Agency.

South Korean military and intelligence authorities believe that North Korea was testing a Musudan missile with a modified liquid-fuel rocket engine when the missile exploded. They believe the explosion was caused by defects in fuel conduits.

The shape of the missile's warhead was not disfigured in the blast, which suggests that the recent failure was not caused by warhead overload, a government official said.

North Korean leader Kim Jong-un's push to demonstrate missile capabilities appears to be to blame for a series of failures of Musudan IRBM launches, he speculated.

The latest launch is the eighth Musudan missile fired off this year by the reclusive country. Of the eight, a missile launched on June 22 flew 400 kilometers and reached an altitude of over 1,400 km. Others blew up immediately after being launched, which may indicate that Pyongyang has not fully mastered the necessary missile technology.

"The North is likely to test more Musudan missiles soon so as to fix the faulty parts and correct problems discovered so far," another government official said. (Yonhap)

<http://www.koreaherald.com/view.php?ud=20161026000674>

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The Chosun Ilbo – Seoul, South Korea

Did N.Korea Test a Long-Range Missile?

By Kim Jin-myung

October 28, 2016

North Korea may have been testing an intercontinental ballistic missile on Oct. 15 and 20, rather than a medium-range missile as U.S. and South Korean authorities have assumed, American pundits speculate.

The failed launches took place at an air base in Kusong in remote North Pyongan Province.

At the time, South Korean and U.S. military authorities said they "presume" the missiles, which exploded in mid-air, were of a medium-range type usually called "Musudan," which can fly an estimated 3,500 km to reach the U.S. base in Guam in the western Pacific.

But the pundits disagree. "We think it is important that people consider the possibility that this was a KN-08 [ICBM] test," the Washington Post quoted Jeffrey Lewis, at the Middlebury Institute of International Studies at Monterey in California, as saying.

"Lewis and his colleagues found burn scars after each missile firing, showing where the hot exhaust scorched the pavement and grass," the daily said Wednesday. "These big burn scars are much



bigger than what had been seen after Musudan tests, and the fact that they happened on the other side of the country added to suspicions about the kind of missile being tested."

"The possibility of a KN-08 cannot be ruled out," John Schilling, an aerospace engineer who frequently writes about the North's missiles, told the daily.

The U.S. Strategic Command "twice misidentified three missiles that North Korea launched in September," Lewis said. "We still think people are being too quick to jump to the conclusion that this was a Musudan. Even if it's only 50:50, being shocked half of the time is still bad."

U.S. officials first presumed three missiles the North fired on Sept. 5 to be short-range Rodong missiles but later concluded they were mid-range Musudan missiles.

http://english.chosun.com/site/data/html_dir/2016/10/28/2016102800715.html

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Yonhap News Agency – Seoul, South Korea

Kim Jong-un Orders Full Probe into Musudan Missiles Launches

October 28, 2016

SEOUL, Oct. 28 (Yonhap) -- North Korean leader Kim Jong-un has ordered a special investigation team to conduct a full-fledged probe into the causes of the failure of recent intermediate-range missiles launches, a North Korean defectors group claimed Friday.

"Kim has instructed the special investigation team to implement a probe into the national defense sector starting on Nov. 1 to make the causes for the launch failures clear," said Kim Heung-kwang, a North Korean defector and executive director of Seoul-based dissidents' group North Korea Intellectuals Solidarity, in a press conference.

Kim attributed the investigation to the North Korean leader's belief that spies from the United States and South Korea had been implicated in a series of Musudan missile failures.

It is speculated that North Korean authorities believe South Korea and the U.S. have done something detrimental to the missile parts, including the integrated circuit chips, that are imported from foreign countries, according to Kim.

Headed by the North's State Security Minister Kim Won-hong, the investigation team has around 60 anti-spy experts, he said.

Subject to investigation are all the people involved in the making of Musudan missiles.

"Officials and workers who engaged in the launches of the missiles are now banned from traveling and their mobiles phones are confiscated to check their conversation records," Kim said.

North Korea has test-fired the Musudan missile eight times since April 15 and the launches ended in failure except one on June 22, when a missile flew 400 kilometers and reached an altitude of over 1,400 km. Others blew up immediately after launch, which may indicate that Pyongyang has not fully mastered the related missile technology.

<http://english.yonhapnews.co.kr/northkorea/2016/10/28/0401000000AEN20161028008400315.html>

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South China Morning Post – Hong Kong, China

US Reassures Asian Allies that Getting North Korea to Give Up Nuclear Weapons is Not a 'Lost Cause'

Agence France-Presse (AFP)

October 28, 2016

The United States on Thursday reassured its key Asian allies Japan and South Korea that its policy seeking North Korea's nuclear disarmament remains unchanged, after its intelligence chief called it a "lost cause".

Washington has always maintained it cannot accept North Korea as a nuclear state and, under President Barack Obama, has made any talks with Pyongyang conditional on the country first making some tangible commitment towards denuclearisation.

But in remarks to a think-tank earlier this week, US Director of National Intelligence James Clapper suggested that such a policy was based on wishful thinking, saying: "The notion of getting the North Koreans to denuclearise is probably a lost cause."

US Deputy Secretary of State Antony Blinken took issue with that view in Tokyo after a trilateral meeting with his Japanese and South Korean counterparts.

"Our policy has not changed," he told reporters at a joint news conference. "We will not accept North Korea as a nuclear state, we will not accept North Korea's possession of nuclear weapons. Period."

The threat from North Korea is growing "more acute by the day" as the country ramps up its missile and nuclear tests, he added.

"We are focused on increasing the pressure on North Korea with one purpose: To bring it back to the table to negotiate in good faith denuclearisation. That is the objective," he said.

Agreeing with Blinken, Japanese vice foreign minister Shinsuke Sugiyama said the three countries "are closely cooperating" to implement existing UN Security Council sanction resolutions on Pyongyang and adopt a new sanction "that is meaningful."

The Security Council is currently discussing a new resolution to punish North Korea over its fifth nuclear test in September – having already imposed tough economic measures after a fourth test in January.

Clapper's comment reflected an opinion widely held among North Korea experts but one only expressed in private by senior US administration officials who feel a policy change is overdue.

State Department spokesman John Kirby has already rebuffed Clapper's position, stressing that "nothing has changed" with the Obama administration's policy of pushing the North – through a toughened sanction regime – to give up its nuclear weapons.

<http://www.scmp.com/news/world/united-states-canada/article/2040703/us-reassures-asian-allies-getting-north-korea-give>

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RT (Russia Today) – Moscow, Russia

US Warns of More Antimissile Steps, Pushes China to Back North Korea Sanctions

28 October 2016

The deployment of the THAAD antimissile system in South Korea, which China sees as a threat, may be followed by further steps, a senior US diplomat said. It comes as Washington pushes Beijing to put in place more sanctions against North Korea.

The US and South Korea announced in June a plan to deploy THAAD antimissiles by the end of 2017. China strongly objected to the move, saying it would compromise its own capabilities. Washington insists that the system would be aimed against threats from North Korea.

“Every single day that goes by, North Korea becomes a more and more acute threat to South Korea, Japan, countries in the region, and the US. And it gets closer to the day when it can actually put a nuclear weapon in an intercontinental ballistic missile that can reach the continental US. That’s not acceptable for us,” US Deputy Secretary of State Tony Blinken said during a lecture at Seoul National University.

“We have been very clear with China and others that we will have to continue to take defensive steps to protect ourselves and protect our allies and partners. And sometimes those kinds of steps we think that China does not like even though they are not directed at China. For example, the decision... to deploy the THAAD missile defenses system,” he added as cited by Yonhap news agency.

Beijing has doubts over the justification for the deployment, saying Washington is using the pretext of the North Korean threat to deploy more military assets in the region to ensure its supremacy in the face of China’s growing capabilities.

The statement from Blinken comes days after a senior Chinese official visited North Korea. Vice Foreign Minister Liu Zhenmin led a Chinese delegation to Pyongyang on Monday, becoming the first top-ranking official to visit China’s awkward ally in eight months. The North Korean state media said the delegation came to discuss joint border issues.

North Korea relies on China in many aspects of its economy, from supplies of food, fuel and machinery to Beijing’s turning a blind eye on Korean guest workers employed by Chinese firms. After Pyongyang’s fourth nuclear test in January, the UN Security Council passed new, tougher economic sanctions.

China is in the best position to enforce them, but the US says Beijing is not doing enough. China also opposed imposing further sanctions after the fifth nuclear test in September, saying they apparently did not stop North Korea from developing nuclear weapons and missiles. The US vice secretary apparently suggested that further antimissile deployments may not be necessary if China goes along with the US sanctions bid.

“If we are able to build a sustained, comprehensive sanction regime with regard to the DPRK, it can succeed in forcing a choice on Kim Jong-un between continuing to pursue nuclear weapons and missiles or actually having an economy that answers basic needs for his people and ends North Korea’s isolation,” Blinken said.

“By far, the best way to do that is working cooperatively and hand-in-hand with China. And that is the purpose of our engagement now.”

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North Korea is developing nuclear and missile capability citing a military threat from the US and its Asian allies.

<https://www.rt.com/news/364520-us-china-thaad-sanctions/>

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Sputnik International – Russian Information Agency

Moscow Has 'Major Surprises' in Store for the US if New Sanctions Are Introduced

25 October 2016

Russian Foreign Minister Sergei Lavrov has confirmed that Russia would "definitely respond" if the US introduces new sanctions against Russia over the situation in Syria. Russian geopolitics experts explain exactly what kinds of tools Moscow has at its disposal.

On Tuesday, asked to explain what Deputy Foreign Minister Sergei Rybakov meant when he said that Russia was prepared to introduce "asymmetrical measures" if the US introduces new tough sanctions against Russia, Lavrov indicated that it meant exactly what it sounded like – that Russia will "definitely respond if there are new sanctions."

"First we will see what happens with the plans of our US colleagues, who issue threats, but at the same time continue to talk to us," Lavrov added.

Last week, Rybakov told Russian lawmakers that in light of the extended, ongoing US sanctions against Russia, Moscow has "used this period to do some research, and to prepare a series of measures, which could be used asymmetrically in case of the further tightening of the sanctions regime."

The deputy foreign minister did not specify what specific measures he had in mind, but did recall Russia's recent decision to suspend the Russian-US agreement on the disposal of weapons-grade plutonium. That deal, signed in 2000, stipulated that the two countries were obliged to dispose of 34 tons of weapons-grade plutonium by burning it in nuclear reactors, beginning in 2018. Russia has all the necessary infrastructure to dispose of the plutonium under this deal, while the US does not.

Russia outlined several conditions for the renewal of the plutonium agreement, including a reduction of the US troop presence and military infrastructure in NATO countries bordering Russia, and the abandonment of all anti-Russian sanctions, from the Magnitsky Act to measures taken by the US and its allies over alleged Russian interference in the Ukrainian crisis. Rybakov recognized that the Obama administration is unlikely to agree to these conditions. "In this case, the agreement will be suspended indefinitely," he said.

Russian experts believe there are several areas where additional Russian countersanctions can hit Washington. For instance, the US continues to purchase Russian RD-series rocket engines for the launch of cargo, satellites and manned spaceflights. Earlier this month, Igor Arbutov, general director of Energomash, the Russian company which produces the engines, confirmed that the US will continue to purchase the Russian engines until at least 2019, and possibly into the mid-2020s.

The US is also heavily dependent on Russia in another area of the nuclear sector: for the supply of enriched uranium. Former deputy director of the Russian Research Institute of Nuclear Engineering Igor Ostretsov recently told the online newspaper Svobodnaya Pressa that the US presently has almost

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no uranium enrichment capacity for the supply of fuel to its nuclear power plants; existing US technology is severely outdated, he said.

Earlier this year, the US even halted the construction of a centrifuge enrichment plant, its engineers proving unable to master the technology. Meanwhile, Rosatom's share of the global uranium enrichment market continues to grow, and is expected to account for 45-50% of global production by 2020, according to the World Nuclear Association.

"Many say that the US wants to destroy Russia. That's nonsense," Ostretsov said, adding that "the collapse of Russia would lead to the immediate collapse of the United States, because the US nuclear industry works on uranium enriched in Russia."

There are other measures Moscow can take, including not just abrogating existing agreements, but refusing new proposals for cooperation. Speaking to Svobodnaya Pressa, Institute of Regional Problems head Dmitri Zhuravlev recalled that while Russian-US economic relations are not significant, military and geopolitical cooperation remain crucial.

Military cooperation includes things like the plutonium agreement. "With regard to foreign policy, it must first be said that we were not the ones to initiate the deterioration in relations. The US tore up cooperation in many areas themselves. But we have begun to approach US proposals more critically. Our partners very much enjoyed using our capabilities without offering anything in return. We can stop accommodating them on issues of interest to them. This includes issues related to Afghanistan, the Arctic, and so on."

In 2015, Zhuravlev recalled, the Russian government effectively closed off access to the airbase in Ulyanovsk, which the US had previously used to supply their troops in Afghanistan. "In the future, we can continue to refuse this kind of cooperation."

"Take one more example: for a long time we did not want to reopen the long-shuttered SIGINT radar center in Lourdes, Cuba. Now, it's possible that we will be doing so. During his recent trip to Latin America, President Putin said that we do not want to have military facilities in the region, and that's true. But if the US forces us to play hard, we'll have to do so."

Space cooperation is another important area, the analyst noted, and includes not only the RD-series rockets, but questions concerning the International Space Station as well.

"How is it that we invested 75% into the ISS, but own 25%, while for the US it's just the opposite? At the time of the station's construction, the US had no meaningful experience in creating manned orbital stations. Only the USSR had this experience. The means to deliver cargo and astronauts to the ISS are ours; so are the station's technologies. The US was developing their space program along different lines, and ended up being mistaken. It has turned out that at this stage, their program is not working. But somehow the lion's share of the ISS belongs not to us, but to the US and its allies."

"Until this moment, we have not raised this question, because we did not seek confrontation. But if that's what the US wants, we will have no choice, and begin to discuss this issue as well. I'm not talking about closing the ISS, but it will be necessary to revise the legal norms and decide who owns what."

Finally, the analyst suggested that Russia "can start competing more actively in the arms trade, emphasizing that our products are cheaper and in no way inferior in terms of quality. Before, we attempted to avoid entering markets held by our partners; now we can stop being so courteous and polite."



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Zhuravlev stressed that ultimately, the escalation of tensions cannot continue endlessly, and that hopefully, the next administration, if not this one, can "go a different path – can begin looking for solutions, negotiating; this is especially true considering that we're not asking for much."

"Escalation cannot be infinite. None of us wants to unleash a nuclear war; and no missile defense system will be able to change anything. If we wanted to create a world where nothing but cockroaches survived, it would be enough to detonate our nuclear stockpiles on our own territory. Therefore, sooner or later, tensions will have to be reduced, and we will have to negotiate."

Andrei Martynov, director of the International Institute of Newest States, suggested that whatever Russia's response to US sanctions might be, it will be asymmetrical, with the recent ultimatum on the processing of weapons-grade plutonium being a good example.

As for Europe, the analyst noted that it's highly unlikely that they will follow the US down the path to more sanctions. "I'm pretty sure that the EU will end these ridiculous sanctions in the near future. This has already been spoken aloud, not just by businessmen, but by high-level European bureaucrats as well. Just last week, [EU foreign policy chief] Federica Mogherini said that it was time to reconsider Brussels' approach, because so far it has led to nothing but losses. Russian experts talked about this earlier, but underestimated the degree to which the EU leadership depends on their overseas partners."

In a recent interview for Izvestia, Antonio Fallico, president of the 'Know Eurasia' Association, confirmed Martynov's assessment, saying that in a situation where Europe and North America are experiencing a systemic economic crisis, the artificial exclusion of the Russian and Eurasian Union market for trade via sanctions is nothing short of madness.

Removing sanctions is "mandatory," Fallico stressed. "It's not a choice, but a necessity." "I'll put it this way; Europe can afford to maintain sanctions for another year, the US – for three."

Ultimately, as far as Washington's idea for more sanctions is concerned, Martynov suggested that perhaps it will take a difficult domestic political crisis connected to the current elections "for the US to sober up and see common sense prevail."

<https://sputniknews.com/politics/201610251046710339-new-us-sanctions-against-russia-implications/>

Islamic Republic News Agency (IRNA) – Tehran, Iran

23 October 2016

Leader: US Invincibility Big Mistake

Tehran, Oct 23, IRNA – It is a big mistake to think that the United States is undefeatable, says Supreme Leader of the Islamic Revolution Ayatollah Seyyed Ali Khamenei.

'The US is severely paralyzed and vulnerable in the region as a result of its repeated mistakes during the past 15 years,' Ayatollah Khamenei said Friday evening in a meeting with the visiting Venezuelan President Nicolas Maduro.

'Rational resistance against the US and exercising prudence in facing its policies is certainly going to bring victory,' the Leader said.



Leader of the Islamic Revolution said Venezuela's influence on the anti-arrogance movements across Latin America points to the country's high potential.

He urged Venezuela to exploit the potential while the country holds the rotating presidency of the Non-Aligned Movement.

'The West does not like the Non-Aligned Movement to make progress,' he said.

'But independent countries should go against the will of the West, and if they manage to do this, the future sure enough is going to be better than the past,' he said.

Ayatollah Khamenei also referred to using oil as leverage by the West to put independent countries under pressure.

There was a time in the past when some Islamic nations decided to counter the Zionist regime by stopping selling oil to the West.

'But the move was faced with the West's hue and cry alleging that the oil producing countries are using oil as a political instrument,' he said.

Today, however, some OPEC members are following the US policies to use oil as a weapon, the Leader added.

'It is possible to avert all the conspiracies and hostilities by enhancement of cooperation and pursuing rational policies,' the leader of the Islamic Revolution said.

Ayatollah Khamenei also emphasized the Islamic Republic's firm decision to enhance its cooperation with Venezuela.

The Venezuelan President, on his part, praised Iran's robust resistance against the US hostilities.

'While the Iranian people are living in peace and security, many of the regional countries are overwhelmed with wars, divisions and vulnerabilities,' Madoru said.

He also described as successful his negotiations with officials of the Islamic Republic.

We should do our best to achieve our goals, the Venezuelan President said.

<http://www.irna.ir/en/News/82277083/>

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Sputnik International – Russian Information Agency

Israel Preparing to Buy More Nuclear-Capable Submarines

23 October 2016

Israel wants to buy at least three more submarines capable of launching nuclear missiles to replace the oldest vessels in its fleet, some of which have been in service since 1999.

According to a report by the Israeli newspaper Maariv, the country is secretly preparing to purchase three Dolphin-class submarines from Germany at a total cost of \$1.3 billion. This purchase will come in addition to its existing contract for six German submarines, the last of which is due for delivery in 2017.

"The new submarines are said to be more advanced, longer and equipped with better accessories," the newspaper report said.

The Israeli Defense Ministry refused to provide an immediate response.



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While Israel pursues a policy of neither acknowledging nor denying its nuclear weapons capabilities, the Dolphin submarines are reportedly able to carry and launch missiles equipped with nuclear warheads.

According to various foreign military experts' estimations, Israel is currently in possession of some 100 nuclear warheads and some 200 missiles to deliver them; however, this information has never been publicly acknowledged. Israel insists the submarines' main goal is to provide the country with intelligence capabilities that no other kind of weapon can offer.

"Submarines bring a level of intelligence to Israel that cannot be achieved by other units," a senior Israeli military representative said in an interview with the Jerusalem Post in 2014. "A submarine can stay in enemy territory for weeks, and no one knows it's there."

In addition to the submarines, Israel reportedly plans to upgrade its entire surface combat fleet. New German-built Sa'ar-6 corvette warships are expected to join the fleet over the next few years, and new radars with electronic warfare systems are being installed on existing Sa'ar-5 and Sa'ar-4.5 ships. The total cost of four Sa'ar-6 corvettes is estimated as 430 million euros (\$468 million).

<https://sputniknews.com/military/201610221046625479-israel-buys-nuclear-submarines/>

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Trend News Agency – Baku, Azerbaijan

Iranian Arak's Heavy Water Purity Up to 95.99%

By Mehdi Sepahvand, Trend

October 24, 2016

Tehran, Iran, Oct. 24 -- The purity of the heavy water at Iran's Arak nuclear reactor (aka IR-40) has improved from 75.99 percent to 95.99 percent, said Presidential Office Director Mohammad Nahavandian.

Noting that Iran has already exported heavy water to the United States and Russia, the official said plans are made to sell more the product to other countries, the president's official website reported October 24.

"This means an undisputable victory for Iran in attending the global economy in nuclear energy," he stressed.

Underlining the progress of redesign operations at the nuclear facility, he said the nuclear activity at the IR-40 is "international and peaceful".

IR-40 was a hot issue of debate in Iran's nuclear talks with world powers which culminated in the Joint Comprehensive Plan of Action (JCPOA) last year.

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.



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

<http://en.trend.az/iran/nuclearp/2676725.html>

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FARS News Agency – Tehran, Iran

Wednesday, October 26, 2016

Arab Media: General Soleimani in Mosul Operations Room

TEHRAN (FNA) - Commander of the Quds Force of the Islamic Revolution Guards Corps (IRGC) Major General Qassem Soleimani has arrived in Hashd al-Sha'abi (popular forces) operations room in Mosul to play his advisory role in anti-ISIL campaign in Iraq, Arab media reported on Wednesday.

"Hashd al-Sha'abi will soon start its operations in Western Mosul to cut the ISIL's supply routes to Syria and defuse the US plots to postpone the popular forces' participation in the Mosul operations, and General Soleimani has also joined them as a military advisor," the Arabic-language al-Akhbar said quoting renowned Iraqi figures.

No other source has yet confirmed the report.

Washington is pressuring Iraqi Prime Minister Haider al-Abadi not to allow Hashd al-Sha'abi forces to participate in the Mosul liberation operations.

Spokesman of the Iraqi popular forces Ahmad al-Assadi had confirmed in August that General Soleimani would play a major role in operations to liberate Mosul, stressing that his country is in dire need of Iranian military advisors.

"The presence of Brigadier-General Soleimani in the operations to free Mosul and Nineveh province is necessary and General Soleiman is the greatest advisor that has helped the Iraqi government in the war against the ISIL," al-Assadi told FNA.

"Hajj Qassem Soleimani is one of the most important military advisors of the Islamic Republic of Iran who is in Iraq at the invitation, demand and agreement of the Iraqi government," he added.

Stressing that the Iranian advisors are in Iraq at the demand of the Iraqi government and have played a big role in most operations conducted by the popular forces, al-Assadi said, "They provided the Iraqis with strong views and important consultations with respect to their experience and capabilities."

In relevant remarks in June, Iraqi Foreign Minister Ebrahim al-Jafari underlined that General Soleimani is in Iraq to help the country in campaign against terrorism after receiving Baghdad's rigid request.

"General Soleimani is in Iraq at the invitation of the Iraqi government to provide military counseling to the Iraqi forces," the Arabic-language Sumeria news channel quoted al-Jafari as saying.

Also in June, Hashd al-Sha'abi Commander Abu Mehdi al-Mohandes underlined that General Soleimani is helping the Iraqi forces in their campaign against terrorism upon a request by the Iraqi government.



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"The Iranian advisors, headed by dear brother Qassem Soleimani, have been beside us since the start of war and his presence has happened upon the demand of the Iraqi government and agreement of the Armed Forces' top commander," Mohandes said in an interview with Sumeria news channel.

He, meantime, said that the Iraqi nation is able to kick the terrorists out of Iraq with the possibilities in their hands now, adding that Hashd al-Sha'abi doesn't have any political plan and merely supports the political process.

<http://en.farsnews.com/newstext.aspx?nn=13950805001148>

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Sputnik International – Russian Information Agency

India's Nuclear Triad May Tip the Balance of Forces in the Indian Ocean

21 October 2016

India has commissioned its first nuclear-powered submarine capable for launching medium range nuclear-tipped ballistic missiles. With the INS Arihant now in service, India has completed its nuclear triad, making it capable of launching nuclear missiles from land, air and sea.

In an interview with Sputnik Moscow-based military expert Vasily Kashin said that even though the completion of India's nuclear will hardly have any short-term effect on the balance of forces in the region, but in the long haul this would have very serious consequences for countries with strategic interests in the Indian Ocean.

The 6,000-ton Arihant is the first of four such nuclear-powered submarines — the minimum number India needs to have at least one such SSBN on patrol at any time, while the others are being repaired or undergoing routine maintenance checks.

"This doesn't mean however, that India will be able to ensure non-stop patrols. The French and the British have four SSBNs each to ensure constant patrols and nuclear deterrence, but they are more experienced and their subs are technologically more advanced too," Vasily Kashin said.

Nuclear submarines require expensive and well-protected infrastructure to service their nuclear power plants and nuclear-tipped ballistic missiles, which makes the defense of nuclear submarine bases and their access routes a major priority.

"The US, Britain and France together enjoy absolute advantage over any potential adversary, that's why their missile-armed nuclear subs are virtually invulnerable when out at sea. Other countries with such weapons have no such edge," he said.

He added that for Russia the situation was made easier by the existence of internal seas, such as the White Sea and the Sea of Okhotsk, NATO subs could have problems sailing into.

Russian submarines are also able to sail under the pack ice of the Arctic Ocean where they are less vulnerable to an enemy attack.

"China is less lucky, that's why it is trying to establish a safe patrol area in the South-China Sea which partly explains its behavior in those disputed waters," Kashin noted.

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He added that India is also mindful of the smaller, but nonetheless formidable, Pakistani Navy with its advanced French-made submarines.

Additionally, Islamabad will soon be buying eight new generation diesel submarines in China, whose qualitatively and quantitatively superior naval force is even a bigger threat.

“Even with the lease of a pair of relatively modern Project 971 nuclear submarines from Russia, India will find it hard to protect its submarines especially now that the purchase of modern diesel-powered subs may be held up by bureaucratic red tape,” Kashin said, adding that Pakistan might want to equip its diesel subs with nuclear-tipped anti-ship missiles or buy North Korean technology of building diesel submarines armed with two-stage solid-fuel medium-range missiles.

<https://sputniknews.com/asia/201610211046592810-india-subs-triad/>

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DAWN.com – Karachi, Pakistan

‘India Has Capacity to Produce Hundreds of New Nuclear Bombs’

A Reporter

October 25, 2016

ISLAMABAD: A new study indicates that India has sufficient material and the technical capacity to produce between 356 and 492 nuclear bombs.

The study titled ‘Indian Unsafeguarded Nuclear Program’ which was published by the Institute of Strategic Studies Islamabad (ISSI) and was co-authored by four nuclear scholars, unveils a new and comprehensive assessment of India’s nuclear weapon capacity. The launch of the study at the ISSI on Monday was attended by foreign diplomats, scholars, journalists and students.

Speaking at the event, ISSI Board of Governors Chairman Ambassador Khalid Mahmood said the book gives a fresh perspective on India’s unsafeguarded nuclear program, will be read with interest around the world and will benefit scholars and diplomats alike.

An internationally known physicist and a member of the International Panel on Fissile Materials Dr A.H Nayyar said the book was a significant addition to the existing material on the size, history and capacity of India’s nuclear program. He also highlighted a number of weaknesses and flaws in the book and suggested the ambiguities be removed in the next edition.

Former Chairman Pakistan Atomic Energy Commission Ansar Pervez said the research breaks new ground by providing officials, researchers, scholars and students with new insight into India’s nuclear weapon making capacity.

He said that in terms of detail, depth, analysis and the use of information from primary sources, the research is far superior to several studies on the Indian nuclear program and carefully blends social science perspective with technical details.

Mr Pervez added that the book will also expand international awareness, policy discourse and academic debate on this secretive and unsafeguarded program.

ISSI’s Dr Naeem Salik then chaired a discussion between the authors and called the study a “pioneering effort”. The four authors – including Adeela Azam, Ahmed Khan, Mohammad Ali and Sameer Khan- said that the purpose of the study was to provide an understanding of the true history, size, extent and capabilities of the different aspects of the complex Indian nuclear program which New Delhi has kept outside the International Atomic Agency safeguards.

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The authors said the study contains evidence that India has the largest and oldest unsafeguarded nuclear programme in the developing world and among the states not party to the Nuclear Non-Proliferation Treaty (NPT).

They said that member states of the Nuclear Suppliers Group (NSG) should consider the large and swiftly expanding Indian nuclear bomb capacity when dealing with India's NSG membership and ensure that Indian membership of this export control arrangement does not, in any way, help India expand and accelerate its nuclear weapons program.

<http://www.dawn.com/news/1292132>

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Korea JoongAng Ilbo – Seoul, South Korea

OPINION/Editorial

Words and Actions

October 22, 2016

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The United States has said it will do everything to defend South Korea should North Korea dare to use nuclear or missile weapons. It has the capacity to do so, it said. Every time Pyongyang tests a weapon of mass destruction, Washington sends nuclear-capable bombers in a show of force and deterrence capabilities.

But both experts and the Korean public have become dubious about Washington's claimed extended deterrence capacity amid fast advances and the increasing sophistication of North Korea's nuclear and missile technology.

Should North Korea really succeed in developing inter-continental ballistic missiles with nuclear warheads capable of reaching U.S. territory, it remains questionable if U.S. military capabilities would still be reserved to defend South Korea.

That is why some have called for Seoul to go nuclear in one way or another: to develop its own nuclear-powered submarines, or bring back American tactical nuclear weapons.

In an annual Security Consultative Meeting in Washington, defense ministers of the two nations agreed to discuss rotational permanent deployment of U.S. strategic assets in the seas and air around South Korea.

The idea is to have nuclear-capable aircraft and submarines as well as nuclear-powered carriers under the U.S. strategic commander take turns to patrol the nation. It could ensure the effectiveness of extended deterrence by allowing a constant watch and immediate responses to North Korean provocations.

The agreement, however, was dropped from the official statement released after the meeting. Instead the two countries said the idea would be further explored in a new channel called "Extended Deterrence Strategy and Consultation Group."

The defense officials reportedly believed exposing strategic options in advance could mitigate any deterrence effect. Washington also would have had to consider Beijing's response. Most local media



outlets had to run updated articles after publishing the plan as a done deal upon a briefing by local defense ministry.

The fiasco not only underscored the indiscretion of local authorities but also could expose different views between Seoul and Washington over nuclear deterrence. It remains to be seen whether Washington's actions would be as good as its words on the guarantee of a nuclear umbrella and deterrence.

<http://koreajoongangdaily.joins.com/news/article/Article.aspx?aid=3025216>

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The Korea Herald – Seoul, South Korea

OPINION/Editorial

[Editorial] Sending Message to Pyongyang

US needs concrete actions to deter NK threat

October 23, 2016

South Korea and the US are key players in the efforts to cope with nuclear and missile threats from North Korea, which for now come in two forms -- sanctions and military deterrence.

It seems that punishing the North for its latest nuclear and missile provocations is on the right track. The UN has already imposed the harshest-ever sanctions against the Pyongyang regime and its key members.

The international community led by the US is straining the North's economic system by ostracizing its international finance. Chinese firms working with North Koreans were put in a virtual secondary boycott. Some of the North's remaining sources of foreign exchange earnings, such as exports of coal and labor, face restrictions. More sanctions by South Korea, Japan and European countries are in the making.

The other pillar of the efforts to rein in the rogue regime in Pyongyang -- more urgent than sanctions -- is strengthening military deterrence, as the North is now seen as being closer to acquiring the capability to a strike with a nuclear-tipped missile.

Deterrence against North Korea should include the capability to make pre-emptive strikes at signs of an imminent provocation, an effective missile defense system and readiness for a massive retaliation.

The South Korea-US alliance is critical in securing such a strong deterrence against North Korea. In that regard, last week's high-level talks between the two allies in Washington were important.

The talks, which involved top diplomats and defense chiefs of the two countries, focused on North Korea. South Korean Defense Minister Han Min-koo and his US counterpart Ash Carter held separate talks, which centered on joint military steps to counter nuclear and missile threats from North Korea.

A key issue was pushing the deployment of US strategic military assets to South Korea permanently on a rotational basis. This means the US keeps at least one of its strategic assets, such as long-range stealth bombers, nuclear-powered submarines or aircraft carriers, on standby on or near the peninsula.



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That would be a good option for the allies. Most of all, it would provide an effective “extended deterrence” by Washington without causing the allies the burden of bringing US tactical nuclear weapons, which were taken out of South Korea in the early 1990s.

Han made it clear that the issue was a key agenda in his talks with Carter. He said after the talks that he and the US defense secretary discussed “a lot of options,” including permanently deploying US strategic assets on a rotational basis. Carter also said that the two sides were talking about a number of measures to further enhance deterrence.

But a joint communique issued after the Han-Carter talks only said the two sides agreed to “consider” the rotational stationing of US strategic assets. This raised speculation that the US was reluctant to agree to the plan.

Some interpret that the US wanted to maintain “strategic ambiguity” or considered the possible sensitive reaction from China. People with a pessimistic view of the US commitment argue that the communique showed a gap between the allies.

The two sides need to dispel such a concern. One of the first steps should be the early launch of a joint body they agreed to form -- the Extended Deterrence Strategy and Consultation Group -- and work out details of the US extended deterrence. One of its objectives should of course be reaching a full agreement on the rotational stationing of US strategic assets.

Carter said that any attack on America or its allies would not only be defeated, but any use of nuclear weapons will be met with an “overwhelming and effective response.” Such words alone -- unaccompanied by concrete actions -- would not be enough to send a clear message to the North that any serious provocation would result in its total destruction.

<http://www.koreaherald.com/view.php?ud=20161023000211>

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People’s Daily Online – Beijing, China

OPINION/Editorial

China Will Never Allow US to Run Amok in South China Sea: People’s Daily

People’s Daily Online

October 24, 2016

China will never allow the US to run amok in South China Sea waters, the People’s Daily asserted in a commentary on Sunday after a US Navy guided-missile destroyer, the USS Decatur, sailed through the waters of the Xisha Islands on Friday without the Chinese approval.

What the US did, driven by its hegemonic mentality, cannot increase its influence in Asia-Pacific region, the article said, adding that such acts to stir up enmity and make troubles will only result in the accelerated decline of its global influence.

The Chinese government resolutely opposes such provocative behavior and takes a series of effective counter-measures, added the commentary under the byline of “Zhongsheng”.

The following is the translation of the article:

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A US Navy guided-missile destroyer, the USS Decatur, sailed through Xisha Island waters, part of the South China Sea as Chinese territorial waters on Friday without the approval of Chinese authorities. The Chinese government resolutely opposes such provocative behavior and will take a series of effective counter-measures.

In the statement of the Chinese government on the territorial sea baseline issued in May 1996, China clarified the baseline of the Xisha Islands. The Law of the People's Republic of China on the Territorial Sea and the Contiguous Zone and other international laws also stipulates that all foreign warships need to gain approval from the Chinese government before entering Chinese waters.

The illegal entry of US warships into Chinese waters without permission seriously violates China's sovereignty and security interests, breaches both Chinese and international laws as well, and poses threats to peace, security as well as order in the relevant waters.

What the US did aims to encroach upon the sovereignty, security and maritime interests of regional countries in the so-called name of a "freedom-of-navigation operation." But such provocative acts once again expose the negative energy of its "Rebalance to Asia" strategy, and at the same time verify the US' role as a real trouble-maker in the South China Sea.

The so-called patrol launched by the US this time came just as China and the Philippines, a country immediately concerned with the South China Sea issue, were restoring their ties. During Philippine President Rodrigo Duterte's state visit to China, the two countries inked a series of cooperation agreements.

This US provocation in Chinese territorial waters, at a time when the improvement of ties between China and relevant countries is pulling the South China Sea issue to a encouraging solution, proves that the US has been destabilizing the South China Sea by playing up tensions.

By launching the so-called patrols, the superpower is telling the world that it can tolerate neither a tranquil South China Sea, nor a peaceful and stable Asia-Pacific. Since it cannot find a puppet troublemaker any longer, the exasperated Washington has to create a disturbance by itself.

President Duterte pointed out in a speech that "the US feels a little anxious over China's sound ties with the Philippines," and his remarks revealed the complicated psychology of the US. Its peremptory provocation, as a matter of fact, can be regarded as a way to release its depression and an inertia to maintain its hegemony.

Washington has to realize that it is rightly this hegemonic mentality that has resulted in its declining global influence and inability to provide public goods with positive energy. It also has to admit that the era when one country can dominate an alliance network by creating tensions with lies will never come back.

No one wants to weaken the US' influence in the Asia-Pacific region, but such influence must be based on a positive dedication to common development of the whole region. Its outdated hegemonic mentality is by no means accepted by regional countries who aspire for peace, cooperation and shared progress.

It is well-known that "freedom-of-navigation," often cited by the US as a pretext, is actually a falsehood to allow the country to pursue "absolute freedom" of its own security. But the US should bear in mind the ultimate consequences of seeking absolute security as the country has paid enough bitter prices for its arrogance and ignorance.

The arbitrary decision will certainly bring the country to deadlock, and such a stubborn country may obtain some hard power, but never soft power and smart power.

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If the US really wants to be a world power, it can never resort to guns, firearms, separation or fishing in troubled waters. Efforts to expand interests can be shared by all countries. Highfalutin words but obstinate and aggressive deeds will win no respect and trust from other countries.

Over the past years, in a bid to cement its maritime hegemony, the US has been destabilizing regional peace and stability by meddling in the South China Sea, challenging China and alienating ties between China and the Philippines.

Washington has not realized that those tricks cannot overturn the regional trend of peaceful development. As the Philippines once appealed, "We can't be US' 'little brown brother' forever." Its choice to adjust diplomatic policies and reinforce cooperation with China also proves that an unjust cause committed to by the US finds little support.

What's more, the US should not bear any fantasy in terms of the South China Sea issue as this is not its first head-to-head game with China. China has a rock-solid determination to safeguard its sovereignty and territorial integrity. China will not ask for anything not belonging to itself, but it will fight for every inch of its territory within its sovereignty.

Chinese President Xi Jinping, at the gathering commemorating the 80th anniversary of the conclusion of the Long March (1934-36), urged the entire military to remain vigilant and be aware of its responsibilities, stressing that the modernization of national defense and armed forces must advance in a bid to safeguard the country's national sovereignty, security and development interests.

The US' consolidation of hegemony with military actions will only highlight China's necessity to strengthen defense, and activate China's resolution to improve its capability to safeguard its own interests.

The Chinese army will definitely safeguard China's national sovereignty and security by stepping up patrols based on demand and optimizing its defensive capabilities. China will never allow the US to run amok in the South China Sea, an issue concerning principles.

<http://en.people.cn/n3/2016/1024/c90000-9131652.html>

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Yonhap News Agency – Tehran, Iran

OPINION/Feature

(Yonhap Features) Nuke-Armament Advocates Gaining Support amid Pyongyang's Provocations

By Kang Yoon-seung

October 25, 2016

SEOUL, Oct. 25 (Yonhap) -- South Korean politicians and scholars advocating the development of nuclear weapons are no longer remaining silent as Pyongyang's provocations, including its fifth nuke test, are sparking growing calls in Seoul for more aggressive countermeasures, pundits here said Tuesday.

While such claims were previously ignored not only by the opposition bloc but the general public as a whole, and were seen to jeopardize its strong alliance with the United States, the latest surveys

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conducted after North Korea's nuke test, which took place on Sept. 9, are showing clear signs of the shifting times.

A poll conducted by Gallup Korea on 1,010 South Koreans last month showed 58 percent of the respondents agreeing to South Korea's nuclear armament scenario, while 34 percent expressed opposition.

It marked a slight increase from 54 percent posted in January, when Pyongyang conducted its fourth nuclear test.

After the fifth nuclear test, another research by MBC, a major South Korean broadcaster, and pollster Research & Research showed 65.1 percent of the people supporting such aggressive countermeasures against the North.

The seemingly hawkish survey, however, does not necessarily mean such an aggressive stance has emerged as a mainstream voice here.

The South Korean government has repeatedly claimed it will continue efforts to make the Korean Peninsula a nuke-free area, ruling out such an option, despite heated rhetoric directed toward the North.

In September, President Park Geun-hye said North Korean leader Kim Jong-un "does not listen to anything from the international community," and that his mental state is "uncontrollable."

Most mainstream political observers have said while there is growing consensus that something needs to be done to better protect the country, it is not likely South Korea will take drastic steps in the near future. They, however, say it is worthwhile to openly discuss outlying issues, adding there must be an effort to bring the public voices together.

If South Korea were to go the nuclear route, according to scientists, there is no doubt it has enough capabilities and technologies to produce nuclear weapons in short notice.

"South Korea has sufficient financial and technological capabilities to build up a nuclear deterrence if it wants to," said Suh Kune-yull, a professor of nuclear engineering at Seoul National University.

"We have more advanced nuclear-generation technologies compared with Britain, Russia and China," Suh added. "Within only two years, we are capable of making our own weapons that can easily surpass anything the North can have.

"The country has around 25 nuclear power plants in operation. It is emerging as one of the world's top three leaders in the area, beating Russia and Japan, whose competency tumbled after the Chernobyl and Fukushima disasters," Suh said.

He pointed out that while Seoul does not have any nuclear weapons, it can obtain technologies to enrich uranium and extract plutonium at any time.

While some cast concern whether South Korea would be allowed to leave the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), experts say any member country can make the decision to legally do so if their national security is endangered.

Article 10 of the NPT makes clear that each party shall in exercising its national sovereignty have the right to withdraw from the treaty if it decides that extraordinary events have jeopardized the supreme interests of its country.

For those that oppose South Korea going nuclear, however, technology or NPT-related issues are not the main issues.



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Surrounded by not only North Korea, but China, Russia and Japan, pundits say Seoul will face strong diplomatic and economic retaliation from strong powers, adding its long-standing ally, the United States, will not be pleased with a decision involving Seoul getting nuclear weapons.

South Korea is already trying to soothe Beijing and Moscow over the deployment of an advanced U.S. missile defense system in the country.

"If South Korea announces its secession from the Non-Proliferation Treaty and heads towards nuclear armament, the international community will discuss, adopt, and implement various pressures and sanctions in the short term," said Choi Kang, a researcher at the Asan Institute of Policy Studies.

"But if a certain amount of time passes, we may seek to normalize relationships, although there will be some forms of economic sanctions," Choi added.

Cheong Seong-chang, a North Korea researcher at the Sejong Institute think tank who openly advocates the armament plan, said any sanctions against the South will not last for long, and that the Seoul-Washington alliance will eventually remain tight.

"Some people say that the alliance will be damaged, but such claims lack basis," Cheong said. "There are limitations for Washington to seek a balance with China only through its ties with Japan. South Korea and the U.S. share common interests, and therefore, their ties will be unharmed."

The researcher added South Korea's nuke armament does not necessarily mean Seoul breaking away from the military alliance with Washington but is aimed at easing the dependency.

"If South Korea owns nuclear weapons, we no longer have to depend heavily on the Seoul-Washington cooperation. We can head towards a more balanced, equal and healthy alliance," Cheong said.

"South Korean nukes can also help U.S. security. North Korea would no longer have time and resources to develop ballistic missiles aimed for the U.S. mainland when we have nukes here," he added.

Cheong said South Korea will also be able to persuade the neighboring countries that Seoul's nuclear armament could benefit them in terms of security.

"For example, we can ask China if they would rather have South Korea maintain inextricable ties with Washington or stand with leeway in the realm of military and diplomacy," Cheong pointed out, adding Seoul's excessive dependency on the U.S. may emerge as a burden for Beijing, as South Korea may not be able to refuse Washington's request to deploy military facilities aimed at China down the road.

Experts said the same logic can also be applied with the Seoul-Moscow ties, adding both China and Russia would prefer to have South Korea as a balancer, rather than be placed under Washington.

In the economic sphere the country could face a short-term tumble, although the impact will not last for long, experts said.

"South Korea would most likely weather the storm considering the precedent of India," Charles D. Ferguson of the Federation of American Scientists said in his paper "How South Korea could acquire and deploy nuclear weapons."

"In May 1998, India conducted nuclear explosive tests and was subject to sanctions. But the sanctions did not last much longer than a year," the paper added. "While India was not producing



many coveted goods at that time, its huge population offered an enticing market and, as a democracy, was seen by the United States as an important counter to communist China's rising military strength."

Cheong echoed the view, adding neighboring countries may consider their traditional alliance with South Korea more important than controversies surrounding nuclear weapons.

"Even if North Korea develops nukes, it is highly unlikely that Pyongyang will aim them at Beijing. The same relationship applies to Seoul and Washington as well," Cheong said. "Although there may be short-term repercussions, breaking ties would also adversely impact the U.S. economy.

"If South Korea's economy is severely damaged (due to the sanctions by the U.S.), the people will grow a hostile sentiment towards Washington. This could result in Seoul establishing stronger ties with Beijing," Cheong added. "If the economic connection between South Korean and the U.S. weakens, it would eventually lead to the reduced presence of Washington in Northeast Asia."

Other experts, however, claim such perception is misguided, adding South Korea will not be able to develop its own nukes considering the status quo of international politics.

"If we seek to develop nukes, it will result in the rupture of the alliance with the U.S.," said Kim Young-hyun, a professor of North Korean studies at Dongguk University. "Once we have a nuke, we would not be able to stop the so-called domino of nuke armament among neighboring countries. We would also lose the logic to stop Pyongyang's provocations."

Kim added there would be "tremendous" sanctions from the international community, adding past examples do not necessarily predict the future.

"Situations are different here. India and China held uncomfortable relationships, and the U.S. considered Indian nukes to be useful in seeking balance with China amid the Cold War," Kim said. "Things changed after the end of the Cold War.

"South Korea makes its living through exports. We should look how the U.S. and the world slap sanctions on North Korea. Virtually, it is impossible for us to develop nukes."

<http://english.yonhapnews.co.kr/northkorea/2016/10/21/0401000000AEN20161021002600315.html>

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Bulletin of the Atomic Scientists – Chicago, IL

OPINION/ ROUNDTABLE: US No-First-Use: The View from Asia

For Nuclear Weapons, Self-Interest Rules

By Raymund Jose G. Quilop

26 October 2016

Yes, I have argued in this roundtable that Washington should not renounce the first use of nuclear weapons. But the crux of my argument is not—as my colleague Ta Minh Tuan suggests—that *other* countries wouldn't respond to a US no-first-use declaration with declarations of their own. Indeed, even if all nuclear-armed countries *other* than the United States decided to forgo first use on their own initiative, I would still argue that no-first-use made no sense for Washington. Renouncing first use would render the US nuclear arsenal useless and, as I wrote in Round One, it is pragmatic for "nuclear weapon states to maintain some ambiguity about whether and why they might use nuclear weapons first." That is the crux of my argument.

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Ta is correct to point out that arms control agreements such as the Nuclear Non-Proliferation Treaty (NPT) and the Comprehensive Test Ban Treaty have been negotiated *with* the involvement of nuclear-armed countries—but he incorrectly suggests that nuclear-armed countries have participated in negotiations because of "international calls for reductions in nuclear risk." The truth is that nations with nuclear weapons have acted to enhance their own security—the very imperative that led them to develop nuclear weapons in the first place. Let's face it: States prioritize their own interests. Therefore, when powerful countries craft international agreements and allow themselves to be bound by them, their actions are anchored in a sense that doing so is beneficial to them.

Take the NPT. Non-nuclear weapon states indeed have reasons to participate in the treaty. But nuclear weapon states established the treaty to prevent other states from developing nuclear weapons—not to provide benefits to nations without nuclear weapons. The treaty confines possession of nuclear weapons to states that already had them when the treaty came into force; it gives nuclear weapon states an unfair advantage. Self-interest, is it not?

Self-interest explains why, though general nuclear disarmament is a pillar of the treaty, nuclear weapon states have not eliminated their weapons. To be sure, they have reduced their nuclear arsenals in some instances—but they have reduced their stockpiles only when *other* nations have agreed to do so and they perceived the mutual reductions as beneficial. Make no mistake, the reductions have never come under circumstances such as Ta proposes for no-first-use declarations—that one nation takes a disarmament action and hopes that others will simply follow suit.

A no-first-use policy should only be announced when other nations agree to make the same pronouncement (and as mentioned above, I would counsel the United States not to adopt no-first-use even in *that* case). For the United States, it would be sheer naiveté to adopt no-first-use and expect others to follow. Unless all members of the nuclear club agreed to no-first-use ahead of time, Washington could have no expectation that its commitment would be reciprocated by other nuclear-armed states. And it is naive to write, as Ta does, that the United States would be setting a "good example for other nuclear weapon states" if it renounced first use. The good example would not be followed.

Ta also goes wrong when he writes that a US no-first-use declaration would "increase US prestige." How so? Prestige comes from having nuclear weapons in the first place. Indeed, the desire for prestige is one of the factors that have induced states to develop these weapons.

Ta argues that the international system "depends on respect for and exercise of national commitments and international law." Indeed it does, insofar as respect for international law and national commitments is necessary for global peace and stability. Necessary—but insufficient. That's precisely the reason that states arm themselves. The more lethal the armament, the more leverage they gain from possessing it.

Raymund Jose G. Quilop is assistant secretary for assessments and international affairs in the Philippines' Department of National Defense. He is also a former associate professor of political science at the University of the Philippines.



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He has published on nuclear issues in Global Asia, Philippine Political Science Journal, and previously in the Bulletin of the Atomic Scientists; and has contributed chapters to The Politics of Religion in South and Southeast Asia and Primed and Purposeful: Armed Groups and Human Security Efforts in the Philippines.

<http://thebulletin.org/us-no-first-use-view-asia/nuclear-weapons-self-interest-rules>

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The Korea Times – Seoul, South Korea

OPINION/Editorial

Confusion over NK Nukes

October 27, 2016

The top American intelligence official's remarks on North Korea's nuclear weapons program are creating a stir. Speaking at a seminar organized by the Council on Foreign Relations in New York, Tuesday, U.S. National Intelligence Director James Clapper said the notion of persuading North Korea to abandon its nuclear weapons was a "lost cause."

"The best we could probably hope for is some sort of a cap (on the North's nuclear capabilities)," the former U.S. Air Force lieutenant-general said. This was taken as meaning that Washington may feel the need to acknowledge Pyongyang's nuclear arsenal and choose to set the freezing of the nuclear weapons as a policy objective.

But Clapper's remarks clearly contradict the policy goal of South Korea and the U.S. of denuclearizing the reclusive North. In response to a question about Clapper's comments, a Chinese Foreign Ministry spokesman said that "only by negotiation and consultation can the nuclear issue be brought back to the track of settlement."

Even so, that Clapper, who oversees 16 U.S. intelligence agencies, officially raised the need to change the policy toward North Korea must be heeded.

Clapper's comments reflect America's more realistic assessment of Pyongyang's nuclear capabilities. As he pointed out, it is widely believed that North Korea would never give up its nuclear weapons. And the North is moving closer to having nuclear-tipped missiles through two nuclear tests and over 20 ballistic missiles launches this year.

True, few believe that sanctions alone will thwart the North's nuclear ambitions. The stark reality is that the hostile regime in Pyongyang has been upgrading the North's nuclear capabilities.

So it is tempting to alter the policy toward North Korea's weapons of mass destruction from "no tolerance" to "freezing." Should Democratic presidential nominee Hillary Clinton be elected, the next U.S. administration may drop Obama's "strategic patience" and seek dialogue with the North. The recent so-called Track 2 discussions in Malaysia between former U.S. diplomats and North Korean officials may also signal a possible shift in American policy.

The most important thing here is whether our diplomats are well prepared for America's sudden policy change. They must be on high alert, keeping a close watch on possible changes in Washington's North Korea policy.

South Korea has no reason to be too rigid concerning the North's nuclear issue, bound by the current goal of denuclearization. Depending on the circumstances, it's possible to consider freezing

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the North's weapons program as an intermediate goal. But Seoul cannot afford to let Washington change its policy toward the North without consultation.

https://www.koreatimes.co.kr/www/news/opinion/2016/10/202_216970.html

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ABOUT THE USAF CUWS

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

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

In February 2014, the Center's name was changed to the Center for Unconventional Weapons Studies to reflect its broad coverage of unconventional weapons issues, both offensive and defensive, across the six joint operating concepts (deterrence operations, cooperative security, major combat operations, irregular warfare, stability operations, and homeland security). The term "unconventional weapons," currently defined as nuclear, biological, and chemical weapons, also includes the improvised use of chemical, biological, and radiological hazards.

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