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Featured Item

“Asia in the ‘Second Nuclear Age’”. Written by Gaurev Kampani and Bharath Gopaldaswamy, published by the Atlantic Council; November 2017

http://www.atlanticcouncil.org/images/Asia_in_the_Second_Nuclear_Age_web_1115.pdf

It is often presumed that some kind of nuclear weapon use is inevitable in the twenty-first century. The volatile relationships between many Asian states and the steady expansion of nuclear capabilities in the continent make such expectations plausible, and they acquire special resonance in South Asia because of the triangular security competition between China, India and Pakistan. In this report, Bharath Gopaldaswamy and Gaurav Kampani offer insightful analysis that assesses the credibility of many prevailing fears—which they often find wanting.

Based on the findings of workshops conducted in Beijing, New Delhi and Islamabad, on conversations held with Indian, Pakistani, and Chinese academics, policymakers, and analysts, and a comprehensive review of the empirical evidence, Gopaldaswamy and Kampani remain “more optimistic than the nuclear ‘sky is falling’ arguments often aired in the mass media, and policy conferences in general.” At the crux of their shared hope is the fact that China, India, and Pakistan, despite being enmeshed in a complex rivalry, “are stakeholders in the existing international order, and are committed to an open economic order and multilateral institutionalism.” Moreover, they are embedded in a global order that is vastly different from either the pre-World War I era or the “first nuclear age” that was manifested during the Cold War.

Despite general optimistic conclusions, however, they do flag some important reasons for concern. The authors anticipate that the greatest threat to stability in the region “comes not from the development of large, sophisticated, and diversified nuclear arsenals, but from the continued stability of the institutions guarding them.” They also highlight the consequences of “aggressive nationalism” in China and India, and the potential for the “the first three decades of the post-Cold War era” to become merely “a temporary hiatus in their onward nuclear journey,” which could lead to “truly horrendous” consequences that would prove true the “worst-case assumptions of the nuclear pessimists.”

In highlighting these specific risks, which stem from different dimensions of the complex Asian nuclear equation, Gopaldaswamy and Kampani carefully discern the instabilities not merely at the inter-state level but also at the intra-state and civil-society levels, dimensions that are often ignored in many contemporary analyses of the region. The insights contained in this report make it a valuable addition to our understanding of the competitive nuclearization currently occurring in China, India and Pakistan and for that reason should be required reading for both scholars and policymakers alike.

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US NUCLEAR WEAPONS

United Press International (Washington, DC)

U.S. and U.K. Tap Lockheed for Trident II Support

By James LaPorta

December 21, 2017

Lockheed Martin was awarded a contract to provide support to the U.S. and Great Britain for the Trident II Strategic Weapon System that's commonly deployed aboard U.S. Navy Ohio-class submarines.

The terms of deal were announced Wednesday in a press release by the Department of Defense. The agreement taps Lockheed Martin to integrate navigation hardware, to include, software design, test and installation, which aims to support current services for fleet ballistic missile navigation subsystems.

Lockheed Martin will be awarded more than \$154.4 million under the terms of a cost-plus-incentive-fee and cost-plus-fixed-fee contract, which are cost reimbursement deals from the U.S. government, meaning, Boeing could receive additional federal money if overrun costs on the contract are acculated or if the performance of Lockheed Martin on the contract is exemplary.

According to the Defense Department contract, the deal will specifically provide the U.S. and the United Kingdom with navigation systems, long lead material transducers, "a portable data collections system, and long-range software modernization activities."

Work on the contract will occur in several states in the U.S., and is expected to be completed by Dec. 2020, according to the Pentagon press release.

More than \$24 million will be obligated to Lockheed Martin from U.S. Navy fiscal 2018 other procurement funds, coupled with funds from the United Kingdom, according to the press release.

However, subject to the availability of funding, Lockheed Martin will be obligated more than \$130.3 million from multiple U.S. Navy funding accounts and the United Kingdom at the time of award contract.

According to the Defense Department press release, those funds will not expire at the end of the current fiscal year.

https://www.upi.com/Defense-News/2017/12/21/US-and-UK-tap-Lockheed-for-Trident-II-support/1161513873330/?utm_source=sec&utm_campaign=sl&utm_medium=6

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US COUNTER-WMD

Defense One (Washington, DC)

Congress Rushes Pentagon \$4B for Missile Defense Improvements

By Marcus Weisgerber

December 22, 2017

The emergency bill is light on details, but it appears to fulfill the military's wide-ranging November request.

Congress might have kicked the federal-budget can another four weeks down the road on Thursday, but it did give the Pentagon \$4 billion for missile defense projects that the Trump administration says are needed to counter North Korea.

The money will go toward adding missile interceptors to an Army base in Alaska, where they will stand ready to shoot down ballistic missiles fired at the U.S. mainland, say, by North Korea. It will also buy more THAAD tactical missile interceptors, the same type of systems already deployed in South Korea and Guam.

“We are ordering \$4 billion worth of missile defense equipment and missiles themselves. Very important,” President Donald Trump said at the White House Friday. “Top of the line. Best in the world. We make the best military product in the world, and nobody is even close.”

While lawmakers included few details in the text of the bill about what projects the money would be spent on, they appear to have rubber-stamped a Pentagon emergency spending request from November. The top-level numbers in the bill passed this week appear to match up perfectly with those in the Pentagon's somewhat-more-detailed request.

For example, the bill includes \$884 million for Army projects “to detect, defeat, and defend against the use of ballistic missiles.” In November, service leaders requested that amount for 147 PAC-3 Patriot interceptors, upgrades to Patriot launchers and ATACMS missiles.

Those additional PAC-3s, the Army said in its November request to Congress, are “required to address emergency warfighting requirements in support of readiness.”

The Army also requested \$20.7 million for “advanced technology development” and “advanced component development & prototypes.”

In its own part of the November request, the Navy asked for \$60 million for “classified programs” research and development. Congress this week approved \$60 million in Navy missile defense-related research-and-development funding.

And the Air Force requested \$12 million for “special update programs” related to missile procurement. It also requested \$288 million for a separate list of classified and “special update programs.” Congress approved \$12 million in for Air Force missile procurement and \$288 million for classified and “special update programs.”

In addition, the Air Force requested \$256 million for research-and-development work, including \$90 million is for “Advanced Component Development & Prototypes” — and the balance for classified work. Lawmakers approved \$256 million for Air Force R&D.

Congress approved \$1.2 billion in procurement for the Missile Defense Agency, which had requested 50 additional THAAD interceptors, 16 SM-3 interceptors and money to start building 20 new ground-based interceptors in Alaska.

Lawmakers also approved \$1 billion for defense-wide research-and-development work. The Missile Defense Agency requested \$597 million for “advanced component development and prototypes” and the Office of the Secretary of Defense also requested hundreds of millions of dollars for the same type of work.

The money comes as the Pentagon puts the finishing touches on a Ballistic Missile Defense Review, which is expected to present the Trump administration’s investment plan for related systems.

The approval of \$200 million in funding for a new missile field with 20 interceptors at Fort Greely, Alaska, has been one of several signals by the administration that it plans to expand missile defense projects.

While the Army and Navy have interceptors, the Air Force’s role in missile defense mostly involves launch-detecting satellites.

In addition to the \$4 billion for missile defense, Congress also approved \$673 million to repair the USS John S. McCain and USS Fitzgerald, the two Navy destroyers that collided with commercial ships in the Pacific earlier this year.

<http://www.defenseone.com/business/2017/12/congress-rushes-pentagon-4b-missile-defense-improvements/144793/?oref=d-river>

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Space News (Alexandria, VA)

New Report Slams Idea of a Missile Defense Shield in Space

By Sandra Erwin

December 21, 2017

The Fiscal Year 2018 NDAA authorizes the development of a “space-based ballistic missile intercept layer, capable of providing boost-phase defense”

WASHINGTON — It’s one of those ideas that never really goes away: The deployment of missiles in space to intercept ballistic missiles aimed at the United States and its allies. With North Korea testing ever more advanced nuclear weapons and delivery systems, the push to place interceptors in space is back in the conversation.

Congress is asking the Pentagon to investigate the possibility. The National Defense Authorization Act for Fiscal Year 2018 authorizes the development of a “space-based ballistic missile intercept layer, capable of providing boost-phase defense.”

Don’t do it, warns a new report by the Center for Strategic and International Studies. The think tank included space-based missile interceptors as part of its series titled “Bad Ideas in National Security.”

This would be an attempt to resurrect the high-tech missile shield derided with the moniker ‘Brilliant Pebbles’ during the George H.W. Bush administration. The idea somehow has resurfaced after a hibernation period between Republican administrations, wrote Thomas Roberts, program coordinator and research assistant for the Aerospace Security Project at CSIS.

“Space-based missile interceptors are a bad idea because of their inefficiency and vulnerability,” said Roberts. “Investments in missile defense would be better directed to other, more effective areas.”

From a political standpoint, the consequences of a space-based missile interceptor system would be troubling, Roberts said, as such a system would be seen as overt weaponization of space.

Defending against a missile strike during the boost-phase is generally preferred but it presents the same challenge to space-based interceptors as it does for ground-based ones: having an interceptor close enough to the missile to respond when one is launched, Roberts explained. “The physics of orbital mechanics dictates that only interceptors in low-Earth orbit can reach a target missile in the required response time for a boost phase intercept — about 120 and 170 seconds for solid- and liquid-propelled missiles respectively.”

Satellites in LEO are in constant movement over the surface of the Earth, meaning a large constellation of satellites is needed to ensure at least one is within range of a particular place on Earth at all times, Roberts noted. While satellites in geostationary orbit stay fixed over one area, at an altitude of more than 22,000 miles, they are simply too far away for an interceptor to reach a missile while it’s still in its boost phase.

To defend against multiple missiles being launched at the same time — a salvo attack — several weapons must be within intercept range to provide effective coverage. Having a minimum of one interceptor available to strike a missile would require a constellation of hundreds of space-based interceptors, Roberts argued. Having multiple interceptors in position to defend against multiple missiles would mean thousands of interceptors in orbit. He cited a 2004 study by the American Physical Society suggesting that 1,646 satellites would be required for full-Earth coverage. The cost of such a system is estimated at \$67 billion to \$109 billion.

One inherent weakness of a space-based missile shield is that the use of even a single interceptor can undermine the effectiveness of the remaining interceptors, Roberts noted. An adversary could both launch a missile to create a gap and later launch a second missile through the gap. Filling gaps in coverage would require back-up interceptors in orbit, waiting to take the place of an expended one, or the ability to launch new interceptors with short notice. These options would require a substantially greater investment than a minimal satellite constellation.

Roberts said space-based interceptors could contribute to the greater missile defense complex by “thinning the herd” in a ballistic missile attack. But the physical constraints inherent to a boost phase intercept from orbit make it an impractical system to defend the United States and its allies. Investments in missile defense, he contends, would be better spent on adding a space-layer for tracking and target discrimination or additional land- and sea-based interceptors. The Outer Space Treaty does not prohibit placing conventional weapons like missile interceptors in space, as it does for nuclear weapons and weapons of mass destruction in general. “But the fact that it is not prohibited does not make it a good idea.”

<http://spacenews.com/new-report-slams-idea-of-a-missile-defense-shield-in-space/>

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US ARMS CONTROL

Arms Control Wonk (Carmel, CA)

Year-End Assessment

By Michael Krepon

December 27, 2017

“We are made wise not by the recollection of our past, but by the responsibility for our future.”

— George Bernard Shaw

It has been a bad year. Any year is a bad year when Mar-a-Lago and the White House are common ports of call. Donald Trump walks both manicured grounds, telling us what’s on his mind, accompanied by microphones and the football.

The Senate Foreign Relations Committee convenes testimony on the subject of one-finger decision-making to push the proverbial button. Three experts are bereft of better ideas. We have to do better than this.

The Great Unraveling continues. The biggest, least appreciated accomplishment of the past half-century – the safety net of treaties, constraints and norms to reduce nuclear dangers and prevent mushroom clouds – remains widely unacknowledged, let alone appreciated. The great architects of this safety net have mostly left the stage. Much of the general public has come to expect these benefits as if by birthright, without need of further investment and reinforcement.

Those who seek their safety net against nuclear dangers by spending large sums on weapons whose use would invite conflagration and by fine-tuning offensive options keep beavering away.

Fantasists have something to celebrate this holiday season: the Maestro’s distancing act from an agreement that places verifiable constraints on Iran’s bomb-making capability. This advance – a term that, in Trump-like inversion, signals retreat from real-world consequences – is accompanied with calls for more sanctions. Drumbeaters on Capitol Hill and elsewhere have no clue about how else to proceed.

Snipping away at the nuclear safety net is a twisted yardstick of success, but it appeals to those who never reconciled themselves to the necessity for cooperative nuclear threat reduction with rivals. Boll weevils in Pentagon policy shops keep gnawing away at remaining strands already frayed by Vladimir Putin’s misconduct. Open Skies Treaty over-flights, which could help renew defense ties across Europe and push back against the Kremlin’s boorishness, are underfunded and squandered. And the most adept ways to counter Russian violation of the Intermediate-Range Treaty on nuclear forces are viewed as poor substitutes for the one that will be hardest to convince allies to implement – and therefore most injurious to the damaged accord.

As for the problem from Hell in North Korea, the Maestro and his National Security Adviser reject the acceptance of mutual deterrence. What then, pray tell, remains on the table? When we are unable to imagine deterrence and diplomacy working, we invite war, and sometimes wage it.

On the plus side, the year now receding has produced a Ban Treaty. Kudos are due to its champions. The Ban Treaty’s limitations are evident, but in due course, it can be part of a wider normative netting of restraint against nuclear weapons’ use. This assumes we can manage to avoid another battlefield use of nuclear weapons in the unscripted passages that lie ahead.

Everything hopeful and positive we seek depends on preventing this third mushroom cloud. In the event of failure, those in thrall to the manifold requirements of nuclear deterrence will have proven to be of no help whatsoever. Worse, they will have become accomplices to catastrophic failure. If the nuclear threshold is crossed, targeting plans provide only bad answers. In the event of another mushroom cloud, decision makers will be left to their own flimsy devices, crushed by time pressures. Everything that matters will then depend on somehow stopping more mushroom clouds.

<https://www.armscontrolwonk.com/archive/1204575/year-end-assessment/>

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ASIA/PACIFIC

The Washington Post (Washington, DC)

Documents Shed Light on North Korea's Startling Gains in Sea-Based Missile Technology

By Joby Warrick

December 27, 2017

A few months after the collapse of the Soviet Union, a group of American investors and Russian scientists struck a deal to begin marketing one of the crown jewels of Moscow's strategic arsenal: an entire family of missiles designed for launch from submarines.

Up for sale were powerful missiles called "Calm" and "Ripple," built to lob heavy warheads into space from a barge or a submarine tube, and a new model called "Surf" that could be rolled off the side of a ship and fired straight out of the water. The idea of the joint venture, as one of its U.S. partners wrote in early 1993, was to link American satellite companies to a top Russian weapons laboratory to "convert potentially threatening submarine missiles into peaceful space boosters."

The Americans quickly ran aground on a series of legal and bureaucratic barriers, but the Russians forged ahead with a new partner willing to pay cash for Soviet military technology: North Korea. More than two decades later, some of the Soviet designs are reappearing, one after another, in surprisingly sophisticated missiles that have turned up on North Korean launchpads over the past two years. Now, newly uncovered documents offer fresh clues about the possible origins of those technical advances, some of which seemed to outside observers to have come from nowhere.

"The question that has long been raised is: Did North Korea get this technology from a [Russian] fire sale?" said David Wright, a missiles expert at the Union of Concerned Scientists. "Did they get plans years ago and are just now at the point where they can build these things?"

North Korea is known to have relied on Russian parts and designs for its older missiles, including the Scud derivatives that had dominated its stockpile since the 1980s. The newly uncovered documents include technical drawings for much more advanced missiles — designs that include features seen in some of the newest missiles in North Korea's expanding arsenal.

The documents from the Makeyev Rocket Design Bureau include marketing brochures for an array of top-of-the-line Soviet missiles that were able to deliver nuclear warheads to U.S. cities. Initially designed for the Soviet navy's nuclear submarines, some of the models offered for sale could be launched from a large boat, a submerged barge, or a capsule dropped into the ocean, negating the need for a modern submarine fleet.

"The missile could be floated and ignited without any need for a launch platform," recalled Kyle Gillman, the former executive vice president of the U.S.-Russian joint venture known as Sea Launch

Investors. Gillman, who negotiated the business agreement with Russia's Makeyev scientists, reviewed and authenticated the documents obtained by The Washington Post.

The evidence that the designs eventually ended up in North Korea is partly circumstantial. In late 1992, with the U.S.-Russian project flagging, more than 60 Russian missile scientists and family members from the Makeyev facility were arrested at Moscow's Sheremetyevo International Airport as they prepared to travel to Pyongyang to work as consultants. U.S., Russian and South Korean intelligence officials later concluded that some of the scientists eventually succeeded in traveling to North Korea to offer blueprints and technical advice for the country's missiles program.

But U.S. analysts see more -persuasive evidence in the actual missiles that North Korea has put on display over the past two years. In the most striking case, the -Hwasong-10, or Musudan, a -single-stage missile successfully tested by North Korea in June 2016, appears to use the same engine and many design features as the Soviet Union's R-27 Zyb, a submarine-launched ballistic missile designed by Makeyev scientists and advertised in one of the brochures obtained by The Post.

The fact that it has taken Pyongyang so long to exploit the Russian designs is perplexing, but North Korea had long lacked the sophisticated materials, engineering expertise and computer-driven machine tools for the kinds of advanced missiles it has recently tested, weapons experts say. With an industrial base enhanced by years of slow, patient acquisition efforts, North Korea is only now in a position to capitalize on technology it had been sitting on for years or even decades, analysts say.

"North Korea was just recently able to acquire machine tools that were state-of-the-art in the 1990s, meaning they are still damn good machine tools," Wright said. "Once you have the plans, and are able to get your hands on the materials and the right kinds of tools, you have a real leg up."

Helping Russians pay the bills

The U.S. founders of Sea Launch Investors saw their joint project with the Russians as the profitable answer to two pressing global concerns, company documents show.

One was a shortage of launch capacity for a new generation of satellites servicing the rapidly expanding global telecommunications industry. The other was the problem of newly idle weapons scientists in labs and factories across the former Soviet Union. The abrupt halt to the Cold War in 1991 upended the careers of the thousands of physicists, chemists, microbiologists and engineers who built the Red Army's vast stockpile of nuclear, chemical and biological weapons, along with the missiles for delivering them. Once among the elites of Soviet society, these highly skilled scientists faced an uncertain future with little meaningful work and a plummeting standard of living.

The United States would ultimately commit billions of dollars to help secure or dismantle Soviet weapons stockpiles and repurpose former weapons laboratories. Yet, in the early 1990s, U.S. officials remained gravely worried about the possible leakage of Soviet weapons secrets, and perhaps of the weapons themselves.

The Americans who founded Sea Launch Investors in 1992 believed that their project could help prevent the poaching of Russian weapons experts by terrorists and rogue states, at least from the community of rocket scientists at the Makeyev Rocket Design Bureau, the premier Soviet manufacturer of submarine-launched ballistic missiles headquartered in Miass, a small city in Russia's southern Ural mountains.

"We not only help the Russians to pay their bills and stabilize their country by showing them how the free enterprise system works," John E. Draim, a Navy pilot and engineer, wrote in the company's business plan in 1993, "but we also help those Americans who are looking for an economical way to get satellites into orbit."

In May of that year, a Protocol of Intent agreement was signed by retired Adm. Thomas Moorer, a former Joint Chiefs chairman and head of the American team, and retired Russian Adm. Fyodor Novoselov, a former deputy fleet commander for shipbuilding and armaments. The joint venture -acquired exclusive rights to Makeyev's inventory of submarine-launched ballistic missiles, and then developed marketing materials that showcased a line of products that could be converted for use in commercial ventures. These included a missile known as the R-27 Zyb — or "Ripple" — the squat, blunt-nosed workhorse of the Soviet Union's Yankee-1 Class submarine fleet, along with larger, more powerful missiles such as the 50-foot-tall R-29 Shtil — or "Calm" — and the newer, solid-fueled R-39 Rif. The latter two were true intercontinental ballistic missiles with a range of more than 5,000 miles.

But the marquee item was the Priboi, or "Surf," a hybrid model that the investors planned to create by combining parts of the Shtil and Rif into two-stage spacecraft designed to put small satellites into orbit. The Surf's most extraordinary feature was that it could be fired into space without a submarine or conventional launchpad. Using techniques that both the United States and Russia had developed experimentally in the 1960s and '70s, the missile could be launched from a floating tube, virtually anywhere in the world. Here, Russian missiles had a distinct advantage, as their lower specific gravity allowed them to float vertically, like an ocean buoy. Moreover, the engines for Soviet submarine missiles were specifically designed to ignite while their nozzles were still in the water.

Backers of the plan envisioned a day when Russia's missiles could launch commercial satellites into space quickly and cheaply, using a nearly infinite number of launch sites across the world's oceans.

"Erection in the water, even for the largest rockets, will take less than a minute," Draim wrote in the 1993 business plan. Telecommunications companies would save millions of dollars, he wrote, while eliminating a real threat to U.S. national security.

Losing the peace

As the months passed, Makeyev's managers became increasingly frustrated as their American partners ran into a series of obstacles, including reservations about whether the joint venture was permissible under U.S.-Russian arms-control agreements. In April 1993, Gen. Colin L. Powell, then the Joint Chiefs chairman, informed Sea Launch Investors that the project could not proceed without a government review and a formal waiver of the Strategic Arms Limitation Treaty. No waiver was granted, and by the spring of 1995, it was clear that the company was at a dead end.

"The present ground rules . . . practically put us out of business," Moorer complained in a memo on April 26 of that year.

By then, some of the Makeyev drawings and blueprints had apparently gone out the door. The Russian scientists arrested at the Moscow airport acknowledged to investigators that they had been recruited as a group to assist North Korea in building rockets, ostensibly as space boosters for satellites. In "The Dead Hand," David E. Hoffman's Pulitzer Prize-winning history of the last years of the Cold War, a Russian security official describes how the North Koreans systematically chose experts from across Makeyev's entire production line, from fuels specialists to engineers who designed the nose cone and payload chamber. The salary offer, \$1,200 a month, was 200 times as much as some of the scientists were earning at home.

"This was the first case when we noticed the North Korean attempts to steal missile technology," the security official is quoted as saying.

Other attempts would follow. U.S. and South Korean intelligence officials have confirmed that Makeyev scientists eventually did land jobs as consultants for the North Koreans, and technical drawings were passed to Pyongyang, either directly or through intermediaries.

Some of Makeyev's missile secrets appear to have left Russia before the joint-venture effort officially disbanded. Still, years later, the company's former executive vice president remains convinced that most, if not all, could have been kept locked away if Western governments had acted quickly.

"We just needed to be creative, and try and win the peace," Gillman said. "But our government and military and intelligence agencies were shortsighted."

Technological leaps

On June 22, 2016, North Korea successfully tested a mysterious new missile that differed dramatically from anything in Pyongyang's known arsenal. The 36-foot-tall missile had a squat, snub-nosed frame and used a liquid propellant more powerful than the kerosene-based fuels the North Koreans had used in the past, potentially allowing it to fly farther, with heavier payloads.

The missile was dubbed the Hwasong-10, or Musudan. But experts noted striking similarities to the R-27 Zyb, or Ripple, manufactured by the Makeyev Rocket Design Bureau. Two months later, on Aug. 24, 2016, North Korea successfully tested the Pukguksong-1, a submarine-launched missile that also incorporates some features from the Zyb. Both models are "generally regarded as derived from the designs of the Makeyev Bureau's R-27," said Joshua Pollack, an analyst at the James Martin Center for Nonproliferation Studies in Monterey, Calif.

Those two tests were followed in recent months by even greater technological leaps, culminating in the successful tests this year of North Korea's first true intercontinental ballistic missiles, capable of reaching every city in the continental United States. There have been no further tests of the Musudan, but satellite images released this month show that North Korea is building floating barges thought to be intended for tests of new submarine-launched missiles. The construction is occurring in two different ports on opposite sides of the country.

U.S. analysts also believe that North Korea is working on an improved version of the Pukguksong.

"I have to assume that Makeyev pitched part, if not all, of these concepts and proposals to other interested investors, including the North Koreans," said Michael Elleman, a former missiles scientist and a senior fellow at the International Institute for Strategic Studies, a British think tank.

While there is "solid evidence" that North Korea acquired blueprints for the R-27 Zyb, there is no proof so far that Pyongyang is building a clone of the R-29 Shtil, with its more powerful engine and 5,000-mile range. But Elleman cautioned: "It may be there, and appear in the future."

https://www.washingtonpost.com/world/national-security/documents-shed-light-on-north-koreas-startling-gains-in-sea-based-missile-technology/2017/12/27/dd82878a-e749-11e7-ab50-621fe0588340_story.html?utm_term=.46a302b60406

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Business Insider (New York, NY)

US Sanctions 2 'Key Leaders' of North Korea's Nuclear Weapons Program

Associated Press

December 27, 2017

WASHINGTON (AP) — The U.S. Treasury Department issued sanctions Tuesday against two officials it describes as "key leaders of North Korea's unlawful weapons programs."

The sanctions against Kim Jong Sik and Ri Pyong Chol block them from any property or interests in property within U.S. jurisdiction, and prohibit them from transactions with American citizens. Treasury said the men are senior officials in North Korea's Munitions Industry Department.

Treasury Secretary Steven Mnuchin said the sanctions are part of the United States' "maximum pressure campaign" to isolate North Korea and "achieve a fully denuclearized Korean Peninsula."

The United Nations Security Council unanimously approved tough new sanctions against North Korea on Friday in response to its latest launch of a ballistic missile, which Pyongyang says is capable of reaching the U.S. mainland.

Baik Tae-hyun, spokesman of South Korea's Unification Ministry, expressed hope Wednesday that the continuing campaign of sanctions and pressure will eventually force North Korea into "making the right decision" and engaging in dialogue over its nuclear program.

Baik noted it was the seventh time the U.S. Treasury has imposed unilateral sanctions against the North since the start of President Donald Trump's administration. Baik also pointed out that the two North Koreans had already been under U.N. Security Council sanctions.

<http://www.businessinsider.com/us-sanctions-2-key-leaders-of-north-koreas-nuclear-weapons-program-2017-12>

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The Washington Post (Washington, DC)

What Made North Korea's Weapons Programs So Much Scarier in 2017

By Adam Taylor and Tim Meko

December 21, 2017

Just a few years ago, North Korea's weapons program was treated like a bad joke, better known for its duds, misfires and fakes than its ability to threaten the United States.

But in 2017, the North Korean weapons program stopped being funny. Instead, Pyongyang's persistent pursuit of ballistic missile and nuclear weapons technology led to serious talk about the risk of a devastating conflict between the United States and North Korea.

This change wasn't due to a sudden surge in North Korean tests or a change in leader Kim Jong Un's stance. In fact, data collected by researchers show that the number of tests in 2017 is similar to the number last year, while the bellicose threats made against the United States and others are consistent.

Building on decades of tests, North Korea has made remarkable technological gains in the past year, despite diplomatic and economic isolation. In the space of just a few months, Pyongyang conducted tests that showed it had boosted the range of its ballistic missiles and increased the yield of its nuclear weapons, as well as other more subtle advances that shocked outside observers.

A giant nuclear weapons test

North Korea tested only one nuclear weapon this year, as opposed to two last year. However, the size of the weapon tested Sept. 3 dwarfed all previous tests — most experts agree that the bomb's yield, or the energy generated by the blast, was at least 140 kilotons. Some respected analysts have even pegged it at 250 kilotons.

If the higher estimate is true, that would mean that North Korea has a bomb almost 17 times the size of the one that was dropped on Hiroshima, Japan, in 1945. For comparison, the biggest weapon tested by North Korea before this year was between 10 kilotons and 20 kilotons.

David Wright, co-director of the global security program at the Union of Concerned Scientists, said he believes that the Sept. 3 bomb was a “real H-Bomb” — suggesting that North Korea wasn't lying when it said it had created a two-stage thermonuclear device shortly before this test. If this is true, it shows that North Korea has now mastered the more complicated technology that entered the U.S. and Soviet arsenals in the 1950s after the first wave of nuclear weapons.

Such a device dramatically increases the damage that could be inflicted on a city. It also could mean that North Korea's missile systems can afford to be significantly less accurate when used in a real-life attack because the blast itself would be so much bigger.

An increased missile range

Although North Korea has conducted only one nuclear test in 2017, it has conducted at least 20 missile tests.

In July, experts warned that some of its long-range missiles looked like intercontinental ballistic missiles — meaning that they would have a range of more than 3,400 miles. Those fears were confirmed Nov. 28, when North Korea tested its Hwasong-15 missile. This enormous missile flew 54 minutes and traveled about 596 miles on a lofted trajectory. Its likely range was 8,100 miles — which would include the entire United States.

The advance is significant — last year, the longest-range missile North Korea had tested had a range of just 2,500 miles. Wright notes that this older missile, known as the Musudan, was the first that had gone significantly past the Scud missile technology first developed by the Soviets but that it had problems with reliability. After failed tests in 2016, North Korea appears to have shut down the Musudan program and replaced it with something better.

It is not clear whether North Korea can make a thermonuclear device small enough to fit on the end of the new missile, but many suspect that North Korea will soon gain this ability — if it hasn't already. “I believe we have to assume it can,” James M. Acton, a physicist and co-director of the Nuclear Policy Program at the Carnegie Endowment for International Peace, told *The Washington Post* shortly after the Sept. 3 test.

More new missiles tested

North Korea's missile program has been around for decades, but the sheer number of new missiles unveiled in 2017 shocked experts. “This year didn't see a record number of strategic missile tests, but it did see a record number of new missiles,” said Shea Cotton, a research associate at the James Martin Center for Nonproliferation Studies. “In fact, most of the missile systems tested this year we hadn't seen before.”

In just one year, Cotton said, Kim Jong Un has unveiled six new missile systems. In contrast, his father, Kim Jong Il, tested only two new missiles during his time as leader, and North Korean founder Kim Il Sung tested three. “While I'm sure most of these new systems have been in the works for the past few years,” Cotton said of this year's tests, “I'll give credit where credit is due. That is impressive as hell.”

Others agreed. “From the late 1980s until 2016, all we saw were variant of Soviet Scuds,” Wright said, but North Korea's missiles were now starting to look like modern missiles, with things like movable nozzles on their engines to steer the missiles. Importantly, two of the land-based missiles tested this year — the KN-15s — used solid fuel, rather than liquid fuel.

This is an important development as solid fuel can be left in a missile, meaning that it doesn't have to be fueled before it is launched.

“Solid-fueled missiles can be launched much more quickly and from mobile launchers, thereby enhancing the survivability of Pyongyang's missile arsenal,” said Kingston Reif, director of disarmament and threat reduction policy at the Arms Control Association. “The ability to load and launch with minimal warning would put strain on the ability of missile defenses to get an early track on the missile.”

What's next?

North Korea's weapons program advances in 2017 were not widely anticipated. But what about 2018? If North Korea continues on its current course without being interrupted, experts think it will make further advances within a year.

North Korea may test new missile technology, such as another that uses solid-state fuel, further advancing how effective its missiles would be in a real-life setting. It may also conduct more military exercises around missile launches or launching a volley with multiple missiles going up at once — essentially, allowing it to practice the sort of procedure that would happen in a real launch.

Cotton suggests that if things continue at this rate, North Korea could probably build up to a bigger event: what has been called the “Juche bird,” a test of a missile loaded with a live nuclear weapon, probably above the Pacific Ocean. “A lot of folks in the U.S. have said North Korea still lacks the capability to put it all together,” Cotton said. “North Korea has made several statements suggesting they think they might need to show us once and for all that they do have that capability.”

https://www.washingtonpost.com/news/worldviews/wp/2017/12/21/what-made-north-koreas-weapons-programs-so-much-scarier-in-2017/?utm_term=.727e68be9fe1

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EUROPE/RUSSIA

Independent (London, UK)

North Korea Will Not Be Accepted As a Nuclear Power by US or Russia, Say Rex Tillerson and Sergei Lavrov

By Mythili Sampathkumar

December 27, 2017

Both sides agree to pursue a 'diplomatic solution' to the crisis

The US and Russia have insisted they will not accept North Korea as a “nuclear state”, amid a series of missile tests by the East Asian nation and increased rhetoric from both Kim Jong-un and Donald Trump.

US Secretary of State Rex Tillerson and Russian Foreign Minister Sergei Lavrov spoke by phone on a myriad of issues, but both agreed on their stance regarding Pyongyang's continued development of nuclear weapons despite United Nations sanctions.

State Department Heather Nauert said in a statement that “both sides agreed that they will continue to work towards a diplomatic solution to achieve a denuclearised Korean peninsula”.

However, on the same call on Tuesday, Mr Lavrov criticised President Donald Trump's "aggressive rhetoric" towards North Korea, as many world leaders and the UN have before. Mr Trump has said in the past that the US will rain down "fire and fury" on North Korea.

The phone call comes on the heels of Russia's offer to be a mediator between Pyongyang and Washington, fostering dialogue rather than trading barbs as Mr Trump and Mr Kim have been doing for several months.

The President has repeatedly called Mr Kim "Rocket Man" as Mr Kim continues to test missiles dangerously close to US ally Japan.

Late last week, the UN Security Council also unanimously passed - including votes from Russia and China who have closer ties to Pyongyang - more sanctions on North Korea, further limiting its oil supplies and slave labour market.

Mr Tillerson had previously said during a November news conference that North Korea's fuel supply "is already quite constrained" as shown by "anecdotal evidence" and US intelligence sources which show cars lined up at petrol stations or certain stations closing that would normally have fuel.

The issue is that the country only has one refinery that operates internally, so it is heavily reliant on finished fuel imports.

Reuters that according to Chinese customs data, China exported no oil products to North Korea in November - something that was above and beyond UN sanctions requirements. Beijing also imported no North Korean iron ore, coal or lead in last months, the second full month of those trade sanctions, the data showed.

China has not disclosed its crude exports to North Korea for several years, but industry sources say it still supplies about 520,000 tonnes, or 3.8m barrels, a year to the country via an ageing pipeline.

A day after the UN sanctions, North Korea's state media called the stricter controls "an act of war" by a "frenzied" Trump administration.

The US Treasury Department also released a statement regarding the US-specific sanctions on the country. Treasury Secretary Steve Mnuchin said the department's finance-related sanctions will be "targeting leaders of North Korea's ballistic missile programmes".

Tensions have continued to rise between North Korea and the US, as Pyongyang tested an intercontinental ballistic missile on 29 November that US intelligence officials said would put all of the US mainland within striking range.

The US has declared North Korea a "state sponsor of terrorism" to enact further financial sanctions and also claimed in the President's National Security Strategy that Pyongyang is developing biological weapons.

<http://www.independent.co.uk/news/world/asia/north-korea-us-russia-nuclear-power-recognise-rex-tillerson-sergei-lavrov-a8130316.html>

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MIDDLE EAST

Newsweek (New York, NY)

Trump Could Kill Iran Nuclear Deal As Early As Next Month

By Jessica Kwong

December 28, 2017

Come January, President Donald Trump will have the opportunity to, as he promised on the campaign trail, axe one of his predecessor Barack Obama's signature foreign policy achievements: the Iran nuclear deal.

The 2015 deal, which lifted biting economic sanctions on Iran in exchange for limits on the country's nuclear energy program, requires Trump on January 11 to certify whether Tehran is meeting the terms of the agreement, as it does every 90 days.

More importantly, Trump faces deadlines as early as January 12 to continue temporary waivers, up for renewal every 120 days, of U.S. sanctions on Iran, sources familiar with the law told POLITICO. The deadline will put Trump in the position to reevaluate the deal, which he spared throughout this year.

Should Trump restore the sanctions, Tehran will likely restart its controversial nuclear program. Potential consequences are a military conflict with the U.S. and Israel, and the other countries in the deal—China, France, Germany, Russia and the United Kingdom—isolating the U.S. The U.S. is the only country in the deal considering withdrawal. All others have vowed to keep it in place.

Trump in mid-October called on Congress and the European signatories to resolve parts of the agreement—which he previously dubbed “the worst deal ever”—that he believes are weak. Trump has claimed it is too lenient and that Iran has broken some portions, including access to inspectors from outside the country.

“(I)n the event we are not able to reach a solution working with Congress and our allies, then the agreement will be terminated,” Trump said in a speech on October 13.

Mark Dubowitz, CEO of the Washington think tank Foundation for Defense of Democracies closely tied to the White House, told POLITICO that “it's entirely possible that Trump tells Congress and the Europeans, ‘I gave you 90 days to get your act together and you didn't — and I'm done.’”

Supporters of the deal believe it has served well in preventing Tehran from obtaining a nuclear arsenal when the only other alternative was military intervention. Trump's national security adviser H.R. McMaster has met with ranking senators both Democratic and Republican to try to come up with legislation that would be agreeable to the president and stop him from killing the deal.

“I'm actually feeling like we might get someplace,” Senate Foreign Relations Chairman Bob Corker (R-Tenn.) recently told POLITICO.

Trump has sought to persuade European parties to join him in asking for tougher terms around the deal, including doing away with sunset provisions that critics contend gives Iran a path to nuclear weapons in 10 to 15 years.

<http://www.newsweek.com/will-trump-axe-iran-nuclear-deal-761775>

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INDIA/PAKISTAN

Hindustan Times (New Delhi, India)

North Korea's Nuclear Tests a Threat to India's Security: Sources

By Saubhadra Chatterji

December 26, 2017

Sources in New Delhi say India holds China and Pakistan—both nuclear power nations—responsible for the rise of North Korea's nuclear tests and ballistic missile programmes.

India considers the nuclear proliferation in North Korea as a threat to its “own national security” and will continue to demand an in-depth investigation into how the country acquired nuclear technology, people familiar with the matter in the Indian foreign policy establishment said.

They maintained that New Delhi holds China and Pakistan—both nuclear power nations—responsible for the rise of North Korea's nuclear and ballistic missile programmes and wants the linkages between North Korea and China and Pakistan to be probed by the international community. The government has discussed this with a group of parliamentarians while briefing them on New Delhi's stance on North Korea, the people added, asking not to be identified.

India will participate in the Vancouver dialogue-- a discussion initiated by the US and Canada and including France, South Korea and Japan-- on North Korea on January 16.

New Delhi's position assumes significance at a time when Trump administration is raising the pitch against the dictatorial regime amid a series of missile tests by Pyongyang.

On Friday, the UN Security Council cleared a fresh set of strict sanctions against North Korea after the Kim Jong-un regime launched its latest ballistic missile, which Pyongyang claimed, can reach anywhere on the US mainland. The US drafted the resolution after negotiating with China, North Korea's closest ally.

The people added that Pyongyang is aware of India's concerns, especially its links with Pakistan, over missile and nuclear technologies.

While India is not a signatory of the Treaty on the Non-Proliferation of Nuclear Weapons or the Non-Proliferation Treaty (NPT), it points out that North Korea at one point of time, was a signatory. The secretive regime later pulled out.

North Korea has an embassy in Delhi, but negligible trade ties with India. The National Democratic Alliance government has maintained close ties with Japan and South Korea, both rivals of Pyongyang.

On September 3, New Delhi issued a press statement after Pyongyang's nuclear test. “India deplors the nuclear test. It is a matter of deep concern that DPRK has once again acted in violation of its international commitments which goes against the objective of the denuclearization of Korean peninsula,” the statement said.

<http://www.hindustantimes.com/india-news/north-korea-s-nuclear-tests-a-threat-to-india-s-security-sources/story-9EJkrf2Osb7nNlFCIn8FiL.html>

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COMMENTARY

Defense One (Washington, DC)

Last Year's Top 5 Worst Nuclear Nightmares (That Aren't Going Away)

By Joe Cirincione

December 27, 2017

Each of these threats has only gotten worse. Take one guess what (or who) I think remains the top nuclear threat to us...

The top five nuclear nightmares we faced in 2017 will continue to haunt us in 2018. In fact, each has gotten worse this year.

It is not that the past year has been devoid of good news, but the bad outweighed the good.

The overall number of nuclear weapons in the world continues to shrink, thanks to arms control treaties negotiated over the past few decades. The steady defeat of ISIS has reduced the risk of nuclear terrorism. Tensions seem to have eased between India and Pakistan, reducing the risk of war in South Asia.

Most promisingly, 122 nations approved a treaty banning nuclear weapons at the United Nations. The citizens group that encouraged this process, the International Campaign to Abolish Nuclear Weapons, or ICAN, won the Nobel Peace Prize for their efforts. None of the nuclear-armed states have yet joined the treaty, but as the Norwegian Nobel Committee said, "This year's Peace Prize is therefore also a call upon these states to initiate serious negotiations with a view to the gradual, balanced and carefully monitored elimination of the almost 15,000 nuclear weapons in the world."

Yet, former chairman of the Joint Chiefs of Staff, Adm. Mike Mullen, says the risk of nuclear war is rising: "I think it's more probable than it used to be. And it scares me to death, quite frankly. They're the most dangerous weapons in the world."

Here are the top five threats, from bad to worst.

5. The new nuclear arms race. Every nuclear-armed country in the world is building new nuclear weapons. Some — China, India, Pakistan and North Korea — are adding to their arsenals. The others — France, Israel, Russia, the United Kingdom and the U.S.— are building new generations of bombers, submarines, and missiles to replace their existing Cold War weapons rather than retire them gracefully. The U.S. programs alone will cost at least \$1.7 trillion over the next thirty years.

Russia and the United States hold about 95 percent of all the world's nuclear weapons. If America were to use all the weapons in its stockpile, it could drop a hydrogen bomb on every city in the world with a population over 100,000, destroying most human and animal life on the planet. Scientists calculate that even as few as 100 weapons used in a South Asian war could trigger a nuclear winter, devastating food crops and causing a famine that could kill one billion people.

That is still not enough for some. The U.S. Congress voted this year to increase military spending and build new nuclear weapons that would smash arms control treaties because, as Sen. Tom Cotton, R-Ak., said "it's better to win an arms race than lose a war."

4. New "usable" nuclear weapons. Several nations are building smaller, so-called "more usable" nuclear weapons. This blurs the fire-break between conventional and nuclear war. Nuclear weapons have assumed a greater role in Russia's deterrence doctrine. They now plan to use a

nuclear weapon first in a conventional conflict in Europe to “de-escalate” the war by demonstrating how serious they are.

Pakistan, similarly, is introducing growing numbers of “battlefield” nuclear weapons into its force. Just as NATO once thought it would need nuclear weapons to defeat invading Soviet tank armies, Pakistan believes it must use short-range nuclear weapons to stop an Indian invasion. India has promised to answer in kind.

The United States, too, has several new programs for weapons that would be used first in combat. In addition to a new ground-launched cruise missile the Trump administration wants the option to use in a nuclear war in Europe, the Air Force is making the first nuclear “smart” bomb, adding a tail-kit to the B-61 bomb to guide it to the ground. The greater precision, they say, will allow for a small hydrogen bomb warhead, and encourage commanders to use the weapon against conventional targets.

Michael Krepon of the Stimson Center warns, “The point of deterrence is to have no mushroom clouds, not new, tailor-made mushroom clouds for escalation control and battle management.”

Nuclear experts Phil Coyle and James McKeon add, “The use of just one small nuclear weapon would almost certainly trigger a like-for-like retaliation, followed by a similar or stronger response from the original aggressor and progression toward a nuclear apocalypse. The assumption that crossing the nuclear threshold can lead to anything other than colossal destruction puts hundreds of millions of lives at risk.”

Indeed, the U.S. nuclear command in November wargamed scenarios to see if two militaries that possessed nuclear weapons could even resist using them and stick to fighting a conventional war. “It’s dicey. It’s dicey and that’s one place we don’t want to go,” said Brig. Gen. Gregory Brown, the J3 deputy director for global operations at U.S. Strategic Command, at November’s Defense One Summit, in Washington. “When one side begins to use them, then the temptation to utilize those weapons... the Russians escalate to win, not to de-escalate. So it gets to a very difficult calculus and it’s clearly a place that we don’t want to go.”

3. Destruction of the Iran Deal. UN Amb. Nikki Haley’s December 14 speech on Iran was ominous. Carefully selecting intelligence to portray Iran as the source of instability in the Middle East, she was eerily reminiscent of speeches about Iraq in the buildup to war. It appears part of an orchestrated effort to make the case for withdrawing from the 2015 nuclear accord that rolled back and froze Iran’s nuclear program.

President Donald Trump again will have to certify in mid-January that Iran is complying with the agreement (as U.S. intelligence agencies and the International Atomic Energy Agency repeatedly report they are) and waive sanctions lifted by the deal. If, as appears likely, he fails to do this, the deal could collapse, ending all limits and inspections now imposed on Iran. With restrictions gone and new sanctions impossible, the only alternative to preventing the rebuilding of Iran’s nuclear program will suddenly become military action.

Sen. Dianne Feinstein, D-Calif., warns, “Having voluntarily walked away from an agreement for no reason, it is difficult to imagine the president would be able to lead the international community in pressuring Iran back to the negotiating table.” Former Iran deal negotiator Amb. Wendy Sherman agrees: “If President Trump undermines the nuclear deal, the repercussions for American foreign policy will be disastrous: It will drive a wedge between the United States and Europe, weakening the critical trans-Atlantic relationship and increasing the influence of Iran, Russia and China.” She adds, “This information vacuum could, in short order, lead us to consider military action to destroy Iranian nuclear facilities, perhaps leading to a wider war in the Middle East.”

2. War with North Korea. Although U.S. military planners have long designed their forces to fight in two theaters at the same time, they never imagined that it could be two wars started by choice. But there is a growing chorus in Washington for a military strike on North Korea. “The Trump national security team seems convinced that North Korea cannot be deterred, and war is the inevitable outcome,” concludes Tufts University professor Daniel Drezner. Former CIA Director John Brennan last month estimated the chance of a war at 20 to 25 percent. Council of Foreign Relations President Richard Haass puts the odds at 50-50.

Secretary of State Rex Tillerson’s ray of hope in a December 13 talk that the administration was finally willing to “sit down and see each other face to face” was quickly extinguished by the White House, which once again said it would only talk if North Korea agreed to eliminate all its nuclear weapons. The administration’s policy increases the drift towards war, with unimaginable consequences.

Hundreds of thousands of South Koreans and Americans stationed there could die within the first few hours of a conventional war. If there is a nuclear exchange, “there easily could be a million deaths on the first day,” says Stanford University scholar Scott Sagan.

1. An Impulsive Finger on the Button. The greatest nuclear danger does not come from a foreign threat or a terrorist group but from our own president. The Washington Post, reporting on how intelligence briefings are shaped so as not to upset President Trump, concludes that “the personal insecurities of the president have impaired the government’s response to a national security threat.” Many fear that the president’s mental condition is itself a national security threat. This is, like so much of the past year, unprecedented.

Concern over the president’s mental stability and his sole, unchecked authority to launch nuclear weapons caused the Senate Foreign Relations Committee this year to hold the first hearings on nuclear command and control in over 40 years. Chairman Bob Corker, R-Tenn., fearing that Trump was leading the nation “on the path to World War III,” convened the hearing. Sen. Chris Murphy, D-Conn., voiced his deep fear at the session: “We are concerned that the president of the United States is so unstable, is so volatile, has a decision-making process that is so quixotic that he might order a nuclear weapons strike that is wildly out of step with U.S. national security interests.”

Once an order is given, no one could stop it. Mullen, when asked if a general could refuse Trump’s order, said, “Any senior military officer always approaches it from the standpoint of we’re not going to follow an illegal order. That said, the president is in a position to give a legal order to use those weapons. And the likelihood that given that order that it would be carried out I think would be pretty high.”

Most experts agree. Former Director of National Intelligence James Clapper worries that if Trump, “in a fit of pique” decides to launch a nuclear strike, “there’s actually very little to stop him. The whole system is built to ensure rapid response if necessary. So there’s very little in the way of controls over exercising a nuclear option, which is pretty damn scary.” Senators and House Members have introduced legislation to change the decision process and policy.

The fear of a mad, nuclear-armed president haunts those outside the United States as well. “While the global community may trust that no responsible head of state would ever order another nuclear attack, we have no guarantees that it will not happen,” Berit Reiss-Andersen, head of the Norwegian Nobel Committee, warned during the prize ceremony this month. “Despite international legal commitments, irresponsible leaders can come to power in any nuclear-armed state and become embroiled in serious military conflicts that veer out of control.”

Nobel Laureate Beatrice Fihn was more direct: “The only rational course of action is to cease living under the conditions where our mutual destruction is only one impulsive tantrum away.”

To paraphrase Walt Kelly's famous comic strip character, Pogo, we have met the world's worst nuclear threat, and it is us.

<http://www.defenseone.com/ideas/2017/12/last-years-top-5-worst-nuclear-nightmares-arent-going-away/144845/?oref=d-topstory>

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Breaking Defense (Washington, DC)

What Trump's First Nuclear Posture Review Should Do

By Bob Butterworth

December 26, 2017

If we're lucky, the fourth Nuclear Posture Review (NPR) will encourage a reawakening of strategic analysis and renewed efforts to assess the role of nuclear weapons in US national security. If we're not, and this is more likely, we'll find ourselves awash in time-worn arguments about assured destruction, limited war, arms limitation, modernization, and morality.

Such arguments have dominated discussions of nuclear weapons for the past two decades or so, typically promoting a preferred course of action by emphasizing a selected value — stability, or transparency, or affordability or political acceptability (which really means consensus). The result has been a protracted narrowing of the role and mission of nuclear weapons, together with a rejection of non-nuclear weapons that somebody thinks some foreign government might think could be nuclear weapons. (Ed.: think of some Prompt Global Strike options.)

The United States has conducted no operational tests of its nuclear weapons since 1992. For years, American policymakers have said we would design no new nuclear weapons (although sometimes what "new" means has been interpreted broadly). The US has denied itself sub-kiloton warheads, dual-use artillery and tactical missiles, and ICBMs armed with non-nuclear warheads. National policy continues to emphasize limits on when and where and why the US would use nuclear weapons. The US no longer deploys nuclear weapons abroad (except in response to European demands) or on Navy surface ships, and few of its forces are equipped and trained to operate in a nuclear environment.

Those actions may reflect various convictions, such as: fewer nukes are safer; or, more usable nukes are more destabilizing; or nukes are only good for deterring nuclear attacks; or every nuke is a strategic nuke; or deployed nukes are on a "hair trigger." But those convictions do not comprise or reflect a national strategic assessment. Nor, to be fair, do many of the convictions on the other side, such as: "deterrence" is the primary security goal; or, modernization is more important today than innovation; or ICBMs are needed to ensure that an enemy will have to strike CONUS with several hundred missiles at least.

It takes a wider scope to determine what is good for the national security posture overall, a scope that includes looking at interdependencies with other force packages and programs, at the inevitable gap between policy declarations and execution planning, at what adversaries might understand and what they are actually able to do, at what we might want to do, and at how risks and uncertainties may affect outcomes. It reminds us to consider logistics, communications, mobility, and many other concrete factors that can bring upsetting surprise when long-studied situations become real challenges.

The broader view, in short, helps test the range of specific realities that real contingencies will give to abstract concepts. It reminds us, for example, that our nuclear posture must be shaped not only

for deterrence but also for managing crises, controlling escalation, encouraging an early and satisfactory conclusion in war, and ensuring against defeat even after suffering catastrophic conventional losses. It reminds us, too, that there can be no stark “separation of powers,” conventional and nuclear, in our strategic posture. Bernard Brodie referred to nuclear weapons as a “deep pedal tone” underlying all our national security operations, and the chronic issues of extended deterrence testify to the linkage between conventional force operations and nuclear crises.

Above all, strategic assessments will help keep us clear about what we don’t know and how that ignorance might affect alternative courses of action. We build weapons, configure postures, and train and exercise forces to threaten defeat or punitive retaliation against those who would attack US interests. If events are completely controlled by the governments involved, and if would-be attackers credit our threats and for that reason refrain from attacking, they are deterred. It is not our threats, but their reactions to them that determines whether our deterrence succeeds or fails. We try very hard, using all the intelligence we can command, to understand how would-be adversaries view their needs, the military balance, and our own statements and capabilities, in the hope that we can make threats that are credible and meaningful and that will have the effect we desire.

But we might get things wrong, because we did not do a good job of intelligence collection and assessment, or because we do not understand well enough how the other side views us and our relative situations, or because it is really just too hard to get it right all the time. After all, with nuclear weapons we are talking about situations with no precedent and for which we have scarce empirical data. These concerns will multiply with the increased number and variety of nuclear situations we might confront in years to come.

Our planning, consequently, must provide capabilities to accomplish our goals across a range of conceivable circumstances, keeping in mind that what we want to accomplish and the effects we want to create to do so will depend on the particular circumstances of particular challenges at particular times. Yes, we must have forces that are secure, survivable, and effective; that can be controlled responsively and employed precisely; that can be tailored quickly to deliver the effects needed to accomplish our objectives. And again, those attributes must be rendered in specific operational terms. Whatever our planning, the particular characteristics of the contingency will heavily shape both what we will be able to do, and what we will want to.

The Defense Department used to do a pretty good job of using strategic security assessments to explain its nuclear policy and programs (see, for example, the Annual Report to the Congress offered by Defense Secretaries Schlesinger, Brown, Weinberger or Carlucci). Perhaps we can again root decisions about nuclear matters in an understanding of our national security interests. And with luck, NPR4 might help get us there.

<https://breakingdefense.com/2017/12/what-trumps-first-nuclear-posture-review-should-do/>
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Foreign Affairs (New York, NY)

The North Korea Deal: Why Diplomacy Is Still the Best Option

By Michael Fuchs

December 21, 2017

Sooner or later, the United States will either be in negotiations with North Korea or at war with North Korea. Given the unacceptable consequences of war, it is long past time to get realistic about diplomacy. That means not just exploring whether talks are worth trying, but also clarifying what each party would have to accept, and concede, in order to give diplomacy a chance to work.

The U.S. debate about policy options toward North Korea has long suffered from a lack of candor, on all sides. Calls for military strikes are based on the fallacy that Pyongyang can't be deterred, a rationale offered by U.S. National Security Adviser H. R. McMaster, among others. Pleas for diplomacy, meanwhile, rarely address the serious obstacles that make talks more likely to fail than to succeed. And claims that pressure will force North Korea to give away its prized nuclear arsenal are similarly unrealistic.

Policymakers must face the facts. There are no acceptable U.S. military options involving a first strike, given the inevitable retaliation and mass casualties that would follow, and North Korea is not handing over its nuclear weapons anytime soon. Yet keeping the peace will ultimately mean making diplomacy work. A "freeze for freeze" agreement (in which Pyongyang stops missile and nuclear tests and Washington stops military exercises with South Korea) could help get both sides to the negotiating table. But even that would mark just the beginning of a thorny diplomatic process—one that would inevitably demand wrenching choices and considerable political sacrifice.

THE PERFECT AND THE GOOD

North Korea may not be interested in talking until it feels assured that it has what it needs for deterrence—namely, the ability to place a nuclear warhead on an intercontinental ballistic missile that could hit the continental United States (as of this writing, a capability it may or may not have). Yet Washington must convey that it is ready to talk anytime and anywhere, without preconditions and with the full backing of the president.

The Six-Party Talks—which included North Korea and the United States, along with China, Japan, Russia, and South Korea—could be revived as a formal coordination mechanism, but the real work would have to be done bilaterally between Washington and Pyongyang. Like the discussions that yielded the Iranian nuclear deal, talks with North Korea should begin in secret, to stave off political pressure for as long as possible. Eventually, the United States should encourage South Korea and Japan to play a supporting role, and it should try to bring China along without relying on it, since Beijing, given its fear of destabilizing North Korea, would likely help just enough to stave off severe U.S. pressure.

Once talks began, the United States would need to make clear what it wants and what it could give up—as well as the fact that it is willing to live with a nuclear North Korea. In reality, the United States has for the past decade already shown that it can do so, although senior U.S. policymakers appear to be incapable of saying so in public. The long-term goal should remain a nuclear-free peninsula—useful both for garnering political support for diplomacy and for maintaining leverage over Pyongyang—but for now, that goal should stay on the backburner. Instead, negotiators should pursue the near-term goal of reducing the threat posed by a nuclear North Korea. That would mean focusing on a few plausible accomplishments.

The first of these accomplishments would be to establish channels of communication between U.S. and North Korean senior officials to reduce the risk of conflict in the event of an accident or a crisis.

Indeed, such channels have helped defuse past crises, as in 1994, when officials met to secure the release of an American pilot after North Korea shot down a U.S. helicopter. To prevent future mishaps, diplomats from both sides could hold regular, in-person meetings at Panmunjom, a village that straddles the demarcation line between North Korea and South Korea, as well talk via a hotline in special circumstances.

The second goal should be to stop further missile and nuclear tests and development. An immediate freeze would be enough to get talks started, but once negotiations were underway, Washington would have to press for additional arms control measures. Pyongyang would have to agree to stop producing fissile material for nuclear weapons, cap the number of weapons in its possession, and open its arsenal up to an international inspections program (the only mechanism capable of enforcing an arms agreement). For strategic reasons, North Korea enjoys having a degree of ambiguity about its nuclear program, and so it would likely resist this demand. The issue could be put off as others were dealt with first, but ultimately, inspections would be necessary to verify any deal.

The next step would be building a nonproliferation regime to ensure that North Korea could not share nuclear materials or technologies with other countries. Most of the necessary tools exist: for instance, UN Security Council resolutions already give any country the authority to inspect North Korean ships, and the Proliferation Security Initiative, a program launched by the George W. Bush administration to stop nuclear trafficking, facilitates coordination among states. But fundamentally, nonproliferation regimes are imperfect and require rigorous enforcement by governments. The United States, for its part, would have to enhance its intelligence collection to identify and interdict illicit trade with North Korea. And it would have to impose harsh penalties on countries that do business with North Korea, such as Egypt, which was caught buying arms from the country in 2017.

HARD CHOICES

Naturally, North Korea would bring its own set of goals to talks. Chief among them would be international acceptance of its nuclear program, an end to the isolation that has hindered its economic growth, and the boost in stature that would come from high-level engagement with the United States.

In exchange for a U.S. commitment of non-hostility, North Korea would have to offer a commitment of its own. Over the decades, it has attacked U.S. aircraft and personnel, not to mention shelling a South Korean island, sinking a South Korean ship, and abducting Japanese nationals. North Korea would have to pledge to end that behavior, while the United States would have to commit not to attempt regime change. And both countries would have to commit to a “no first use” policy—meaning each would pledge to never be the first to attack the other with nuclear weapons.

The United States should also be ready to halt or significantly reduce the size of the major military exercises it holds with South Korea. It has done so before, cancelling joint exercises in 1994, 1995, and 1996 as a concession to the North Koreans, with no meaningful impact on readiness. Moreover, many exercises already take place on computers and can continue, and altering the real-life exercises would do nothing to weaken the strongest component of U.S. deterrence: the United States’ military presence in South Korea and its pledge to defend the country against a nuclear attack. In exchange for all these changes on the U.S. side, North Korea would have to halt or scale down its own major military exercises.

The United States should also arrange high-level visits and open a U.S. interests section in Pyongyang. Such actions would cost little and give North Korea one of the things it craves most: respect from the United States. Likewise, the United States could publicly recognize the fact that

North Korea is a state with a nuclear capacity and could focus in negotiations on issues besides denuclearization, while still keeping denuclearization as the long-term goal.

Sanctions should be ended only gradually and partially. Washington could lift them on sectors such as coal and oil, which affect the basic needs of the North Korean economy, while maintaining those directed at nuclear and missile programs. Over time, more economic engagement could yield additional benefits in slowly opening up North Korea.

The exact combination of concessions offered and demands made wouldn't become clear until talks got underway. And even if they turned out to be successful, the Korean peninsula would remain divided and tense, and Pyongyang would hold on to its nuclear weapons and its missiles. But there would be verifiable limits to its nuclear weapons program, and both sides would have taken meaningful steps to reduce the risk of conflict. Other big items would remain outstanding—including fully normalized relations and a peace treaty to officially end the Korean war, which would have to wait for denuclearization and changes to the nature of the North Korean regime.

THE WAY THINGS WORK

This approach carries plenty of risks. Pyongyang could cheat. U.S. acceptance of a nuclear North Korea could embolden it to engage in more dangerous activity and sharpen its demands. And U.S. concessions on military exercises could lead China to believe that it could rid itself of the U.S. military presence in Asia.

To address such risks, Washington would have to push other measures at the same time as talks unfold. It should strengthen deterrence capabilities, such as missile defense, and work closely with South Korea and Japan on the diplomatic effort. With advance planning and ongoing coordination, U.S. allies would likely support this approach to negotiations. After all, they want to maintain the alliance with the United States and to prevent a war on the Korean peninsula.

Ultimately, the question is not whether the United States can get everything it wants; it's whether a deal can secure vital interests. In the case of North Korea, that means protecting the lives of Americans, keeping the peace, securing allies, and containing North Korea's nuclear and missile programs. Right now, there is still a chance to achieve those basic goals. Pyongyang may be approaching the point of feeling secure enough with the weapons it has, and recent tensions with Beijing gives it reason to reduce its dependence on its long-time ally. Washington, meanwhile, should recognize that failure to respond while questions are asked about whether it would be willing to risk a strike on a U.S. city for the sake of standing up for allies in Asia will erode alliances and create opportunities for China and for North Korea. With time, in other words, the options will only get worse.

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Limited Strikes on North Korea Are Past Due

By David Allan Adams

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As North Korea inches ever closer to having the ability to strike the United States with nuclear-armed ballistic missiles, President Donald Trump has warned Pyongyang's leaders "not to try the United States." His speech before the South Korean parliament, combined with his previous threat to respond to North Korean provocations with "fire and fury," created a frenzy among much of the foreign policy establishment. The Trump administration's approach to this crisis has led to widespread speculation that the United States is preparing to conduct preemptive strikes against North Korea, with "devastating consequences." But the costs of failing to preempt North Korean aggression could prove equally destructive.

Deterrence Requires Rational Behavior

Many defense leaders and foreign policy experts have warned that the United States "should not punch first in North Korea." They fear any U.S. military action against Pyongyang will trigger a calamitous war on the peninsula and could set off a wider military confrontation with China. Instead, they maintain, Washington should continue to pursue a diplomatic solution centered on convincing China to restrain its longtime ally. Should that fail, the implication is that the only sensible alternative will be to rely on deterrence—as did the United States with the Soviet Union. These experts contend that the United States must simply learn to live under the shadow of a North Korean bomb.

Whether North Korea can be deterred is a pivotal unanswered question. The trouble is that many of the same experts who are calling for the United States to lean on diplomacy and deterrence also say that Kim Jong Un "is not rational." These leaders either failed or have forgotten their basic political science courses on deterrence. Renowned Harvard Professor Graham Allison explains in his *Essence of Decision* (Little Brown, 1971) why deterrent strategies require rational decision makers to succeed. In practice, Allison's theories have proven right time and again. The success or failure of the U.S. North Korean policy hinges almost completely on the rationality of the North Korean regime.

Those who call for diplomatic solutions and a posture to deter North Korean aggression while at the same time calling out Pyongyang's conduct as irrational cannot have it both ways. Allison and others argue that Kim is rational, although erratic. Allison goes on to claim that if confronted even with limited military strikes, the North Korean dictator would unleash a suicidal war on the peninsula. This is hardly a rational response to measured U.S. military action.

The truth is, nobody knows for sure whether Kim is a "crazy fat kid" or a rational actor cleverly playing to his regime elites' notion of their nation's best interest. The distinction, however, is critical. Since no one knows for sure, the only way to absolutely discern the true nature of North Korea's provocative decisions may be to gauge the regime's response to limited military action.

Break the Provocation Cycle

The North Korean conundrum has been made more difficult by decades of muted responses to Pyongyang's persistent provocations. The U.S. failure to confront North Korea with anything more than diplomatic and economic sticks and carrots has emboldened the regime to become

increasingly bellicose. Limited military action would serve the dual purpose of hampering North Korean nuclear progress and resetting the level of U.S. tolerance for Pyongyang's belligerence.

Since the Armistice Agreement in 1953, North Korean provocations have followed a familiar cycle:

- A seemingly insincere gesture of goodwill by North Korea
- Rejection of the disingenuous gesture by the international community
- Intense, bellicose threats of action
- Limited acts of aggression
- International outrage followed by a cooling-down period (sometimes precipitated by international concessions) before starting the whole cycle over again

In recent times the frequency of this cycle has increased, and the provocative acts—such as the sinking of the South Korean corvette ROKS Cheonan and the shelling of Yeonpyeong Island—have become much more belligerent. North Korea has come to rely on U.S. inaction following any level of provocation. The rational explanation for North Korea's hyperbolic rhetoric followed by limited acts of aggression, ranging from shelling and missile launches to nuclear tests, is that the regime hopes to deter the United States from pursuing a preemptive attack while using these confrontations to fuel the anti-Americanism that underpins the regime's internal legitimacy.

It is possible that Kim's behavior, while bellicose, is not only rational but effective. By perpetuating the myth that any U.S. military response to Pyongyang's provocations will trigger an all-out war on the Korean Peninsula, the North Koreans have been able to deter the United States and buy decades of time to build up their nuclear weapons and ballistic missile programs.

Rational or not, it is time for the United States to devise a strategy to break the North Korean provocation cycle. As former Secretary of State Henry Kissinger put it, "Pyongyang must not be left with the impression that it can trade time for procedure and envelop purpose in tactics as a way to stall and thus fulfill its long-held aspirations."

Kissinger, like many others, would prefer a solution brokered by the Chinese. Unfortunately, China is either unwilling or unable to restrain Pyongyang. At the same time, there is little evidence that China will alter its perennial propensity to favor North Korea in its disputes with the United States. But that does not mean that China would risk war to retaliate against limited U.S. strikes on its neighbor.

Allison and others warn that action against North Korea might cause the United States and China to slip into Thucydides' trap: the idea that war is likely whenever a rising power threatens to displace a ruling one. This position misses the facts that China is cautious and that it understands it is not yet able to confront the U.S. military directly. Therefore, it is unlikely that Beijing would risk it all by overreacting to limited U.S. strikes on the northern peninsula.

China's failure to taper North Korea's belligerence and Pyongyang's rapid drive toward nuclear armament and missile deployments suggest it is time to accept that diplomacy has run its course. Repeated failures to respond to North Korean provocations are only making the situation worse. The moment has come to launch measured preemptive strikes to roll back at least partially North Korea's nuclear weapon and ballistic missile programs.

Escalate to Deescalate

Limited strikes should be targeted carefully and focused on North Korea's specific provocation. A good start would be to take out the next North Korean intercontinental test missile on its launch pad. Before making such a preemptive strike, however, careful consultation with allies, particularly

South Korea and Japan, would be essential. Controlling escalation would require the adept execution of sound tactical and strategic plans that had already been established.

In the wake of such strikes, Kim likely would feel compelled to act. If rational, he would respond in ways that would not promote a wider war. Especially because this is an unknown factor, it would be wise to prepare for cyber and maritime aggressions similar to his more serious provocations in 2010. Such planning would dovetail with the development of sound preplanned responses to increase the odds of U.S. military success at this “escalate to deescalate” strategy. The nature of North Korea’s reaction to military strikes—rational or irrational—would shape U.S. and its allies’ policies to protect their citizens.

Even those who contend that the United States should learn to live with the North Korean bomb should support limited strikes. If Kim can be deterred, as they suggest, he will react in a way that risks few lives and leaves him options to preserve his precious regime. But if a limited military move against North Korea prompts an irrational shelling of Seoul and a wider war on the peninsula, then it is better to find out sooner than later. The only thing worse than a devastating war on the Korean Peninsula today is a war against an irrationally behaving, nuclear-armed North Korea capable of demolishing Honolulu, Tokyo, and Tumon tomorrow.

<https://www.usni.org/magazines/proceedings/2017-12/limited-strikes-north-korea-are-past-due>

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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.