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Feature Report

“Chemical Terrorism: A Strategy and Implementation Plan Would Help DHS Better Manage Fragmented Chemical Defense Programs and Activities”. Published by U.S. Government Accountability Office; Sept. 21, 2018

<https://www.gao.gov/products/GAO-18-562>

Recent attacks using chemical agents abroad have sparked concerns about potential similar attacks occurring in the United States. What is the Department of Homeland Security doing about it?

We found that DHS recently consolidated some of its chemical defense programs into a new Countering Weapons of Mass Destruction Office. But several agency's components, including Customs and Border Protection and the U.S. Coast Guard, still run their own programs.

Sharing resources and information department-wide could make DHS's chemical defense more effective. We [U.S. Government Accountability Office] recommended developing a strategy and implementation plan to better manage chemical defense.

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NUCLEAR WEAPONS

Reuters (New York, N.Y.)

Explainer: Why Nuclear Disclosure Is Key First Step in North Korea's Denuclearization

By Hyonshee Shin, David Brunnstrom

Sept. 23, 2018

SEOUL/WASHINGTON (Reuters) - New pledges made last week by North Korean leader Kim Jong Un to curb his nuclear weapons program may have opened the door to further talks with Washington, but just how much impact would they have on the North's nuclear arsenal?

At last week's summit with South Korea's President Moon Jae-in, Kim promised to allow outside inspections on key missile facilities, and expressed a willingness, for the first time, to "permanently" scrap North Korea's main nuclear complex.

While these are positive first steps, experts say they would do little to damage the country's larger nuclear and missile capabilities, nor demonstrate whether Kim is serious about giving up his nuclear arsenal.

The agreement by Kim and Moon also does not stipulate any plans by North Korea to declare a list of its nuclear weapons, facilities and materials, or a concrete timeline for denuclearization.

With U.S. Secretary of State Mike Pompeo expected to meet his North Korean counterpart Ri Yong Ho to restart nuclear talks as soon as this week on the sidelines of the U.N. General Assembly, here is a summary of Pyongyang's nuclear and missile capabilities at stake.

YONGBYON

In the joint statement, the North expressed its willingness to "permanently dismantle" the Yongbyon nuclear complex if the United States takes corresponding action. Moon said this would include a declaration of an official end to the 1950-53 Korean War.

A sprawling complex located about 100 km (60 miles) north of the capital, Yongbyon is the country's main nuclear facility and the birthplace of its nuclear programs.

Built in the late 1950s with Soviet aid, it houses at least three reactors, fissile materials, fuel re-processing plants and a multitude of research labs, according to the Nuclear Threat Initiative (NTI), a Washington-based think tank.

An operational five-megawatt reactor there produces weapons-grade plutonium, while there is also a facility to produce highly enriched uranium (HEU), also used to make atomic bombs, experts say.

Dismantling Yongbyon would slow the production of fissile material, but not reduce the current stockpile of plutonium and HEU, nor clear suspicions of other secret production sites, says Joshua Pollack, a North Korea missile expert at the Middlebury Institute of International Studies in California.

"Yongbyon is where all of North Korea's plutonium production has taken place, so this step would effectively cap their stockpile of plutonium," Pollack said.

"Unfortunately, it would neither reduce their current plutonium stockpile nor address the production of highly enriched uranium, which most experts believe happens both at Yongbyon and at one or more other sites."

North Korea has denied the existence of other secret sites, but U.S. media reports, citing intelligence sources, said in recent months the North has been running at least one covert uranium enrichment facility just outside of Pyongyang, known as the Kangson enrichment site.

“But there is still value in being able to verifiably shut down the known facilities with a negotiated mechanism for inspecting suspected sites,” said Jenny Town, managing editor of the Washington-based Stimson Centre’s 38 North project, which provides satellite imagery analyses of the North’s weapons facilities.

TONGCHANG-RI

North Korea also said it will “permanently dismantle” its missile engine testing site and launch platform in the northwestern town of Tongchang-ri in the presence of experts from “concerned countries”.

Also known as the Sohae satellite launching station, this site has been the country’s primary site for rocket launches since 2012. It is where the North last year test-fired intercontinental ballistic missiles (ICBM) designed to reach the U.S. mainland.

The facility consists of a missile assembly building, a launch pad with a gantry and mobile launch platform, fuel and oxidizer storage, a rocket engine test stand and an instrumentation stand, according to NTI.

In July, after the Singapore summit between Kim and Trump, satellite imagery indicated the North has begun dismantling the engine test site in Tongchang-ri, but without allowing outsiders access for verification.

While it has served as a key test center for liquid fuel engines designed for long-range missiles and played an important role in the country’s ICBM development, Sohae’s importance may be diminishing, experts say. Pyongyang, having declared its newest ICBM complete in November, has called for mass production to begin.

The North has also been moving toward solid-fuel missiles that can be fired from harder-to-detect mobile launchers, making a fixed stand increasingly unnecessary. There is also at least one other operational missile launch station, Tonghae or Musudan-ri in the northeast, though it has not been used since 2009.

“Neither that engine test site nor launch platform would be U.S. priorities,” said Lee Ho-ryung, head of North Korea military studies at the Korea Institute for Defence Analyses in Seoul. “Maybe a political message to the United States, but that would hardly make meaningful steps toward denuclearization.”

EXISTING NUCLEAR STOCKPILE

Estimates on how many nuclear weapons North Korea vary. U.S. intelligence officials have put it at between 30 and 60 warheads, while South Korea’s intelligence agency said last month the North may have as many as 100 warheads.

38 North, which estimates North Korea has 50-60 nuclear warheads, said last year the operational Yongbyon reactor is capable of producing around 6 kg of plutonium every year, enough to make about two bombs.

The suspected continuation of production makes it an urgent task to get Pyongyang to first freeze nuclear and missile production, as well as convince it to declare all related facilities for verification, experts say.

“How far the North would go to disclose its facilities would be key,” said Kim Dae-young, a military analyst at the Korea Research Institute for National Strategy in Seoul.

“Though it may be implausible to rid them completely of nuclear capabilities, it’s crucial to make it impossible for them to build the bombs again, including through regular inspections.”

Reporting by Hyonhee Shin in SEOUL and David Brunnstrom and Matt Spletanick in WASHINGTON; Additional reporting by Haejin Choi and Jeongmin Kim in SEOUL; Editing by Soyoung Kim and Lincoln Feast.

<https://www.reuters.com/article/us-northkorea-southkorea-denuclearisatio/explainer-why-nuclear-disclosure-is-key-first-step-in-north-koreas-denuclearization-idUSKCN1M304F>

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Phys.org (Isle of Man, Europe)

North Korea’s 2017 Bomb Test Set Off Later Earthquakes, New Analysis Finds

By Columbia University

Sept. 24, 2018

Using newly refined analysis methods, scientists have discovered that a North Korean nuclear bomb test last fall set off aftershocks over a period of eight months. The shocks, which occurred on a previously unmapped nearby fault, are a window into both the physics of nuclear explosions, and how natural earthquakes can be triggered. The findings are described in two papers just published online in the journal *Seismological Research Letters*.

The September 3, 2017 underground test was North Korea's sixth, and by far largest yet, yielding some 250 kilotons, or about 17 times the size of the bomb that destroyed Hiroshima. Many experts believe the device was a hydrogen bomb—if true, a significant advance from cruder atomic devices the regime previously exploded. The explosion itself produced a magnitude 6.3 earthquake. This was followed 8.5 minutes later by a magnitude 4 quake, apparently created when an area above the test site on the country's Mt. Mantap collapsed into an underground cavity occupied by the bomb.

The test and collapse were picked up by seismometers around the world and widely reported at the time. But later, without fanfare, seismic stations run by China, South Korea and the United States picked up 10 smaller shocks, all apparently scattered within 5 or 10 kilometers around the test site. The first two came on Sept. 23, 2017; the most recent was April 22, 2018. Scientists assumed the bomb had shaken up the earth, and it was taking a while to settle back down. "It's not likely that there would be so many events in that small area over a small period of time," said the lead author of one of the studies, Won-Young Kim, a seismologist at Columbia University's Lamont-Doherty Earth Observatory. "These are probably triggered due to the explosion."

After looking at the series of aftershock reports, Kim's group sifted more closely through the data and spotted three other aftershocks that had not previously been recognized, for a total of 13. The tremors were all modest, all between magnitude 2.1 and 3.4, and almost certainly harmless. In the past they would have been hard to pick out using far-off seismometers, he said. However, under new international cooperation agreements, he and colleagues obtained recordings from relatively nearby instruments including ones in Ussuriysk, Russia, a borehole in South Korea, and Mudanjiang, northeast China.

The group then used a new analysis method developed in part by Lamont seismologist David Schaff that looks at energy waves that are much lower frequency and slower-moving seismic than those

used in conventional earthquake analyses. These slow-moving waves allowed Schaff and the rest of the team to pinpoint the locations of the quakes with far greater precision than with conventional recordings. Instead of the random scatter initially seen, the quake locations lined up in a neat 700-meter-long row about 5 kilometers northwest of the blast—indication of a hidden fracture.

Seismometers have long been routinely used to verify nuclear test treaties, and scientists have become increasingly confident that they can detect even small tests and distinguish them from natural earthquakes. But the link between explosions and subsequent quakes is less studied. Seismologists documented a handful of apparent aftershocks near a Nevada test site in the 1970s, and near a Soviet test site in Kazakhstan in 1989. However, they were not able to pinpoint the locations of these quakes with the technology then available. With more instruments and the new analysis method, 'now we can see everything,' said Paul Richards, a Lamont seismologist who coauthored the papers. "It's a radical improvement in cataloging even tiny, tiny earthquakes. It shows not just what we can do with natural earthquakes, but that we can monitor what the North Koreans are doing. North Korea can't do anything at all now [in secret] and expect to get away with it."

Richards said the exact location of tiny quakes could also help in the so far largely fruitless quest by some seismologists to predict bigger quakes. Richards did not assert that quakes could eventually be predicted, but said, "If you're ever going to do this, you have to understand locations, and how one earthquake affects its neighbors."

This spring, the North Koreans made a show of blowing up part of the Mt. Mantap site, though it may already have become largely unusable due to the destruction caused by previous explosions. And no nuclear tests have been detected since North Korean leader Kim Jong Un and U.S. president Donald Trump met in June to discuss ending North Korea's tests. However, despite boasts by Trump that North Korea's program has been neutralized, U.S. diplomats have noted evidence suggesting that the North continues to quietly develop its weapons.

Lamont scientists have studied previous North Korean tests, including ones in 2013 and 2009; they concluded that reports of one in 2010 was a false alarm. The current studies were coauthored by Eunyong Jo and Yonggyu Ryoo of the Korea Meteorological Administration.

<https://phys.org/news/2018-09-north-korea-earthquakes-analysis.html>

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Defense One (Washington, D.C.)

An Italian-Designed, American-Built Helicopter Will Replace US Air Force Hueys

By Marcus Weisgerber

Sept. 24, 2018

The selection of the Boeing-Leonardo MH-139 ends a years-long quest to replace the 1970s-era UH-1Ns.

Almost two decades after the U.S. Air Force started trying to replace the Vietnam-era helicopters that patrol missile fields and stand by to evacuate senior officials, the service announced Monday that it has placed an initial order of MH-139 helicopters with the team of Boeing and Italian defense firm Leonardo.

Today's contract awards \$375 million for the first four MH-139s, the first batch of what is slated to be a \$2.38 billion, 84-aircraft program. The deal is structured as a firm fixed-price contract, meaning that the company, not the government, would be on the hook for cost overruns.

Air Force officials said the program was initially estimated to cost \$4.1 billion. "Strong competition drove down costs for the program, resulting in \$1.7 billion in savings to the taxpayer," Air Force Secretary Heather Wilson said in a statement.

The selection is an upset of Lockheed Martin's Sikorsky, whose venerable Black Hawk was long considered the favorite. The MH-139 also beat out a bid by Sierra Nevada, which was proposing to acquire, overhaul, and update U.S. Army Black Hawks.

It's a major win for Leonardo, which has been trying to expand its U.S. business led by former Deputy Defense Secretary William Lynn. Last year, Boeing teamed up with Leonardo — formerly Finmeccanica's AgustaWestland — to pitch a militarized version of the latter's commercial AW-139. The companies plan to build the helicopters at a Leonardo factory in northeast Philadelphia.

The new helicopters will guard intercontinental ballistic missile fields in North Dakota, Wyoming, and Montana. They will also stand ready to evacuate high-ranking government officials and members of Congress from Washington, D.C., in a national emergency. In all, the Air Force plans to buy 84 new helicopters.

The missile-field helicopters carry security teams over and around hundreds of ICBMs in underground silos. They also escort the armored convoys that carry the missiles between silos and military bases for maintenance. Commanders have been quick to point out that the Huey needs to land for refueling stops because it doesn't have the range to traverse the expansive missile fields.

Calls to replace the Huey began after Sept. 11, 2001, when the U.S. military began beefing up security at its installations. The Air Force originally planned to buy a single helicopter type to replace its Hueys and its search-and-rescue HH-60G Pave Hawks, but soon split the project into two separate efforts. (The HH-60 replacement program was slowed by various problems between 2006 and 2009, slipped down the Air Force's list of acquisition priorities, and culminated in a 2014 order of 114 Sikorsky CRH-60s.)

It took even longer for the Air Force to get back to the Huey replacement, which finally came front-burner after the aircraft struggled at a 2015 nuclear exercise, CQ reported. Initially, it looked as though Air Force leaders would hand the job to the H-60, but in 2016, they decided to hold a competition.

In August, Gen. John Hyten, who oversees the military's nuclear weapons as head of U.S. Strategic Command, underscored the need for new helicopters.

“We are going to get a new helicopter in the missile fields,” Hyten said. “We are going to get a new helicopter if I have to die trying or if I have to kill somebody to do it.”

It’s rare for a European aircraft design to edge out an American one in a Pentagon competition, particularly for multibillion contracts. In 2006, the Army chose Airbus’ UH-72 Lakota as its Light Utility Helicopter, in part because it allowed the European firm to open a production facility for military and commercial helicopters in Mississippi.

As well, the U.S. Navy chose an AgustaWestland design for its new Marine One helicopter, but that contract was eventually cancelled.

<https://www.defenseone.com/business/2018/09/huey-helicopter/151513/?oref=d-river>

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Defense One (Washington, D.C.)

The Must-Haves of the Next Strategic Nuclear Bomber

By Patrick Tucker

Sept. 21, 2018

Air Force officials opened up — just a bit — about at the thinking that’s informing the design process.

Almost nothing is known about the new bomber in development, the B-21 Raider, the most important Air Force project of the new century. But it will differ from previous bombers in one critical feature: rapid upgradability, according to Air Force Gen. Tim Ray, who leads the service’s Global Strike Command. In essence, there will be no single bomber but an ever-evolving platform that will change as technology and circumstances change as well.

So the B-21 will be modifiable in four key areas: sensors, communications, electromagnetic signature, and defensive capability, Ray said during the recent Air Force Association conference, just outside of Washington, D.C.

That means the Air Force and prime contractor on the project, Northrop Grumman, need to build a plane that can exhibit a wide variety of attributes depending on the mission and even the current state of technology. That will require changes in the way that the service acquires technology. Said Ray, “all of these things are moving much faster than our acquisition approach.” Another change: the Air Force is planning upfront to spend more to acquire and keep the intellectual property it needs as part of the program, particularly in information technology. “I’m not interested in letting intellectual property sit outside my family,” Ray said.

Air Force leaders see the future bomber as a critical component of nuclear deterrence but deterrence has changed a lot from the height of the Cold War when the government saw the three legs of the nuclear triad—ICBMs, nuclear-missile-armed submarines, and bombers—as sufficient to deter the Soviet Union from launching a nuclear war.

Both the Russians and the Chinese have developed new capabilities, including better radar, cyber, and electronic warfare tactics and longer-range missiles, that will make it harder for U.S. aircraft to penetrate enemy defenses.

Additionally, emerging technologies like quantum radar threaten to scuttle conventional advantages that the United States has enjoyed for years, such as stealth. That means that designing new craft with no rounded edges to defeat conventional aircraft won’t yield as much return on investment as it has in the past.

It's a problem that the Air Force has only begun to wrap its arms around. Gen. James Holmes of Air Combat Command was asked about the future effects of quantum radar on next-generation craft design.

"I have a quantum physicist in the family, my daughter, so I understand what she's able to patiently explain to me... we're trying figure out what the problems are and where the threats are."

Right now, the design strategy is: increase the versatility of all the aircraft that might be tasked with penetrating enemy air defenses, according to Gen. Stephen Wilson, the Air Force Vice Chief of Staff. That means making strategic bombers that can also carry conventional weapons. Some have argued that F-35 should also be armed with long-range standoff nuclear cruise missiles (though this is not the current policy.) The F-35 is compatible with the B61-12 bomb. Next-generation electronic warfare effects and long-range sensing, of the sort that give the F-35 its core value, would also factor into the mix.

The future bomber will have to be well-integrated with the rest of the military's jets, drones, ships, and satellites, all of that within a massive data-sharing networking. Air Force officials talk repeatedly about the need to create a massive nervous system of communication to defeat enemy electronic warfare defenses across the domains of sea, air, land, space, and information. But those lofty plans for massive information sharing among heterogeneous platforms look distant against today's low-bandwidth secure communications (the commonly used Link 16 secure data link generally sends data at just 115.2 kilobits per second.) And while the Air Force's next-generation aircraft will feature more modern communication gear, they will still need to be able to link to older aircraft.

Defense One asked Holmes about bridging the gap between today's encrypted communications gear and the ones he wants to see on future aircraft.

"We think there's three core capabilities that we have to pursue as we transition to a multi-domain capability against peer adversaries. One is multi-domain awareness," meaning a near-perfect understanding of how every satellite, ground or sea vehicle or cyber operator is affecting the mission and how vulnerable each of them is, Holmes said. "We're moving from a world where air combat command presented a threat to your air sensors primarily and only your air sensors to thinking about how you use space sensors, how you use air sensors, publicly available information, and how do we sort through all of the information that's out there to give us multi-domain" awareness.

The next one, he said, is advanced battle management, meaning how do you take all of the information about the objects on the field, across the domains, and construct a strategy of attack. "The third part is agile, resilient [communications]: How do we make sure that we can link that multi-domain info with advanced battle management?"

When communication between these nodes fails because of the way the enemy is using cyber or electronic warfare, the fourth component will be "how do we teach our people to take the information that they have to make a decision and act and drive an [operations tempo] that forces the enemy to keep up with you."

Read that to mean: no matter how advanced the next bomber is, and how smart the aircraft flying alongside it are, there will be moments when communication is incredibly sparse. All of the platforms, and the operators using them, will have to use rare moments of clarity and data sharing to maximum effect.

<https://www.defenseone.com/technology/2018/09/must-haves-next-strategic-nuclear-bomber/151467/?oref=d-river>

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US COUNTER-WMD

Homeland Preparedness News (Washington, D.C.)

Simulation Highlights Holes in Preparedness Response for Smallpox Outbreaks

By Claudia Adrien

Sept. 24, 2018

Fiji is subjected to a smallpox outbreak where social norms breakdown and medical experts scramble to get the outbreak under control.

This wasn't reality, but it was the simulation exercise for participants of a workshop held last month at the University of New South Wales Sydney. The event was organized by the school's Kirby Institute, in conjunction with the UNSW's Centre for Research Excellence in Integrated Systems for Epidemic Response, the UNSW Medicine's School of Public Health and Community Medicine, and the Fiji Ministry of Health.

The theme of the simulation: Is the Pacific Rim prepared for bioterrorism attacks?

"We looked at a worst-case scenario, because the purpose of an exercise like this is to prepare for the worst, while hoping for the best," said David Heslop, who is an associate professor at the university and a senior medical advisor for the Australian Defence Force. "It is a mammoth task to ensure that the health systems work in close partnership with military, police, emergency services, vaccine and drug manufacturers, the World Health Organization and many other agencies."

American researcher Matthew Scotch of the Biodesign Institute at Arizona State University attended the event and remarked how "eye-opening" it was.

"Obviously we knew this really wasn't going on," Scotch said. "But what took me by surprise was how quickly the social unrest occurred."

Doctors and nurses didn't want to go the hospital. Airline flights were suspended. Decisions had to be made regarding who received the limited vaccines. There was even a battle of news dissemination between real and "fake" media.

Attending the workshop has implications for Scotch's research, which surrounds the spread of zoonotic diseases, that is, those that travel from animals to humans. Seventy to 80 percent of infectious diseases are zoonotic in origin, including Ebola, Avian influenza, and SARS.

Scotch develops software for epidemiologists at health departments to track the evolution and spread of pathogenic viruses. Attending the workshop gave him a clearer picture of how that evolution is initiated on the ground.

Kevin Yeo, director of Clinical & Medical Affairs at Emergent BioSolutions, said the exercise showed "... that safeguarding the population against public health threats, whether by accidental, intentional, or naturally occurring causes, requires coordinated strategies at the national level. Collaboration across stakeholders and input from experts from government, defence agencies, academia, industry, first responder groups, healthcare providers, community partners, vaccine manufacturers, and others are key to prepare for, prevent, and protect against these threats."

“It is vitally important for all countries to have a preparedness plan for such untoward events,” Yeo added.

Preparedness may make the difference between a contained local outbreak and a global pandemic, but what experts are not necessarily prepared for is who might cause the spread of smallpox.

“Even though the world successfully eradicated smallpox in 1980, the disease has been on the radar again since scientists used mail order DNA to create a virus very similar to smallpox in a lab in 2017,” said Raina MacIntyre, the head of the Centre for Research Excellence in Integrated Systems for Epidemic Response and designer of the simulation.

Although the virus has been eradicated for more than 30 years, technology has advanced enough to allow determined individuals the opportunity to develop it or similar viruses in the lab. This was the case for University of Alberta researchers who last year assembled horsepox, a cousin to smallpox, from pieces of DNA received by mail, then infected and reproduce it.

Smallpox is easily transmissible and killed more than 300 million people worldwide last century.

According to the workshop organizers, in the event of global smallpox spread, first responders would need to isolate 70 percent of smallpox patients and track and vaccinate at least 70 percent of their contacts. If this drops to less than 53 percent, it would take more than four years and 2 billion doses of vaccine to bring the epidemic under control.

The existing World Health Organization stockpile contains 35 million doses of vaccine.

<https://homelandprepnews.com/countermeasures/30569-simulation-highlights-holes-in-preparedness-response-for-smallpox-outbreaks/>

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Homeland Preparedness News (Washington, D.C.)

GAO Says DHS’s Countering WMD Office Should Be Better Coordinated

By Dave Kovaleski

Sept. 25, 2018

The U.S. Government Accountability Office (GAO) has recommended that the Department of Homeland Security’s Countering Weapons of Mass Destruction Office develop a plan to help DHS coordinate chemical defense programs and activities.

The GAO’s study came about in response to concerns about recent chemical attacks abroad and the threats against the West by the Islamic State of Iraq and Syria (ISIS).

DHS manages several programs to protect against domestic attacks using chemical agents. Some of the various chemical defense programs were recently consolidated under the new Countering Weapons of Mass Destruction (CWMD) Office. However, several agency’s components, including Customs and Border Protection and the U.S. Coast Guard, still run their own programs.

GAO was asked to examine DHS programs and activities to prevent and protect against domestic chemical attacks and look at how it has coordinated all of its chemical defense programs and activities. It found that DHS has not fully integrated and coordinated its chemical defense programs and activities. As a result, DHS may miss an opportunity to leverage resources and share information that could lead to greater effectiveness addressing chemical threats, GAO said.

A strategy and implementation plan would help the CWMD Office mitigate the risk of fragmentation among DHS programs and activities as well as leverage resources and capabilities and provide a roadmap for addressing any gaps. DHS agreed with the recommendations and will address them.

<https://homelandprepnews.com/countermeasures/30574-gao-says-dhss-countermeasures-wmd-office-should-be-better-coordinated/>

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US ARMS CONTROL

Foreign Policy (Washington, D.C.)

The Arms Control Believer

By Sharon Squassoni

Sept. 25, 2018

Lassina Zerbo isn't letting the Comprehensive Nuclear-Test-Ban Treaty go.

On Aug. 29, flanked by victims of Soviet nuclear testing, Lassina Zerbo, the executive secretary of the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), spoke from Kazakhstan about the need to end nuclear testing forever. Kazakhstan is home to the former Soviet nuclear test site at Semipalatinsk, which closed on Aug. 29, 1991, a day that has been adopted as the International Day Against Nuclear Tests. In a joint statement with Kazakhstan's foreign minister, Kairat Abdrakhmanov, Zerbo said: "It is high time to bring the Comprehensive Nuclear-Test-Ban Treaty into force. We owe it to ourselves and to future generations."

Zerbo's statement evoked the usual fanfare and frustration. Fifty years in the making, the Comprehensive Nuclear-Test-Ban Treaty (CTBT) has been caught in legal limbo since 1996, hung up on its own provision that requires 44 specific states to ratify it. When the U.S. Senate narrowly voted against the treaty in 1999, 41 of the required countries had signed and more than half of those had ratified. But with the United States mired in partisan politics, the incentive for the remaining holdouts to approve the treaty was gone. China, Egypt, India, Iran, Israel, North Korea, and Pakistan have since also failed to ratify.

In the era of Donald Trump, traditional arms control and disarmament treaties feel like vestiges of a bygone era, but Zerbo, a 54-year-old geophysicist born in Burkina Faso, insists that they are relevant. After a recent trip to South Korea, he opined that "the CTBT and its organization can play an important role in finding a lasting solution to the nuclear problem on the Korean Peninsula."

But as diplomats in Washington and Pyongyang search haltingly for common ground, the machinery of the CTBTO has continued to operate smoothly, as it has for more than two decades. Over the years, the Vienna-based provisional organization developed a functional global monitoring system for nuclear tests that is 90 percent complete. The International Monitoring System comprises 321 stations and 16 laboratories that use seismic, hydroacoustic, infrasound, and radionuclide (for detecting certain radioactive isotopes in gases and on particles) signals to help distinguish natural explosions, such as earthquakes, from man-made ones, such as nuclear tests. The stations are located in places as remote as Antarctica, Tristan da Cunha in the south Atlantic Ocean, and Crozet Islands in the south Indian Ocean, as well as Rarotonga in the Cook Islands, Easter Island, and Ulaanbaatar, Mongolia.

This global network of sensors, as Zerbo discovered in 2004, has far wider application than just detecting nuclear tests. On Dec. 26 of that year, a devastating earthquake and subsequent tsunami in the Indian Ocean claimed the lives of more than 225,000 people in 14 coastal countries from Thailand to South Africa. The CTBTO's monitoring system collected data that could have helped warn people. But there were no protocols in place at the time to share such information.

It was a missed opportunity that Zerbo, who joined the commission that year, was determined not to repeat. In 2006, he and then-Executive Secretary Tibor Toth won approval from the more than 150 member states to use the nuclear test monitoring system to provide early warning for tsunamis. The data-sharing failure prompted soul-searching of a different sort as well: If a country tested a nuclear weapon before the treaty entered into force, how would—or could—the provisional commission respond?

North Korea tested its first nuclear weapon in 2006. Toth and Zerbo decided to fly back to Vienna from a U.N. meeting in New York to brief member states, just as they would have if the treaty were in force, establishing a pattern of behavior that Zerbo intensified after his election to lead the commission in 2013.

In the five years after, Zerbo has met with foreign ministers, prime ministers, and presidents; launched a trans-Atlantic youth group comprising university graduates interested in pursuing the goals of the treaty; and recruited eminent advisors such as Federica Mogherini, the EU's foreign-policy chief, and former U.S. Defense Secretary William Perry. Zerbo met with Israeli Prime Minister Benjamin Netanyahu in 2016, telling the press afterward that Israel's ratification of the treaty was a matter of "when, rather than if." He even managed to get the Chinese to install monitoring stations and agree to share data.

Zerbo admits his was an unusual route to diplomacy. He studied geology (which he calls "rocks and dust") as an undergraduate and earned a Ph.D. in geophysics from the Université de Paris XI in 1993. After a decade of leading projects for the mining company Anglo American in eastern and southern Africa, he came to Vienna, along with his wife and three daughters, to direct the CTBTO's International Data Centre.

But for all of his successes, some efforts are out of his control. The United States will still not back the treaty. Buried in the 2018 Nuclear Posture Review (a document that details U.S. nuclear plans), the Trump administration announced it would not seek ratification. This is hardly surprising, except that the United States has conducted 1,030 nuclear tests (more than all other countries combined) and would gain the most by signing a treaty that will end nuclear weapons testing forever. What's more, the concerns that prompted senators to vote against the treaty in 1999 are no longer compelling. Since 1997, U.S. national laboratory directors and the head of U.S. Strategic Command have annually certified the reliability of the U.S. nuclear weapon stockpile. The CTBTO's ability to detect and identify six North Korean nuclear tests since 2006 has helped bolster the credibility of the monitoring system and the organization.

<https://foreignpolicy.com/2018/09/25/arms-control-optimist-lassina-zerbo-ctbto/>

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Arms Control Today (Washington, D.C.)

North Korea's Other Weapons of Mass Destruction

By Cristina Varriale

September 2018

Although its nuclear and missile programs are frequently in the headlines, North Korea's other weapons of mass destruction (WMD) programs and their role in Pyongyang's security strategies draw less discussion and analysis.

Expanding analysis to include a consideration of North Korea's chemical weapons capabilities allows for a better understanding of the doctrine around its unconventional weapons and thus for development of more tailored policies to deal with the WMD threats and risks they pose.

North Korea has never confirmed publicly that it maintains a chemical weapons stockpile, although the U.S. government and others have long assessed that Pyongyang has a variety of lethal chemical agents and related missile and artillery delivery systems. In 1989, Pyongyang signed the 1925 Geneva Protocol, which prohibits the use of chemical and biological weapons in warfare but does not ban production or stockpiling. North Korea signed that accord with reservations, outlining its right to dismiss the protocol in the case of another party that violates the use prohibition. North Korea has not joined the more comprehensive 1993 Chemical Weapons Convention (CWC), which extends the prohibition to include production and stockpiling.

In considering North Korea's strategic drivers, three main elements are common throughout its history: deterrence and reunification, which are recognized as supporting the principal goal of protecting national sovereignty, and survival. There has been much debate on the role of nuclear weapons in this context but much less focus on the role of chemical weapons.

By developing a long-range nuclear capability and maintaining regional WMD assets, Pyongyang is able to take advantage of a difference between the United States and South Korea in calculation of strategic risks. A key South Korean security concern, as it relates to North Korea, is the use of conventional and WMD capabilities with regional ranges. U.S. officials, as North Korea's long-range missile program develops, will have an increasing interest in protecting the continental United States, which may include a lessened desire to retaliate on behalf of South Korea. Such a divergence of strategic interests could weaken the U.S.-South Korean alliance and thus reduce the adversarial risk to Pyongyang, a motivation for North Korea to pursue capabilities that can achieve this result.

North Korea's strategic goals have also been shaped by founder Kim Il Sung's vision of leadership over a unified Korea and the use of military force to achieve it. This thinking is often used to understand the role of nuclear weapons under Kim Jong Un, the late Kim's now-ruling grandson. Such a goal could be pursued through military actions or coercion under the shadow of nuclear weapons. Although the latter is not explicitly referenced in current North Korean discourse, it should not be assumed to be absent from the regime's internal thinking.

Yet, the goal of reunification in the South Korean soldiers take part in a chemical weapons drill during a military exercise in Seoul on July 28, 2010. The same may be true of the long-term vision, although reunification remains imbedded in North Korea's Constitution and the North Korean psyche. At the same time, given the economic and military buildup in South Korea and increased U.S. military presence in the region, the North's worry about a potential territorial attack has increased, likely elevating deterrence for regime survival above reunification. This does not equate to a renunciation of reunification but does suggest a shift in strategic priorities, especially in the short to medium term, that prioritizes nuclear weapons.

The two overarching elements of North Korean strategic thinking—deterrence and reunification—are used to support the enduring goal of regime survival. Beyond repelling external efforts to remove the regime, it also encompasses the elimination of internal threats, economic development, and, secondarily, reunification. The three strategic priorities are interlinked; deterring adversaries helps preserve the regime, which is key for any possibility of reunification.

These strategic motivations have driven consecutive North Korean leaders to pursue asymmetric military assets. Given the great asymmetric value of nuclear weapons in relation to conventional military threats on the peninsula and the option of balancing perceived nuclear threats from the United States, these capabilities have visibly taken priority.

Understanding strategic goals in the context of North Korean priorities in the past, present, and future is important for understanding the role played by weapons of mass destruction. As the nuclear capability has advanced, it is worthwhile to consider what this means, if anything, for North Korea's chemical weapons capabilities.

History of Chemical Weapons

Although North Korea's chemical capabilities briefly hit the headlines in 2017 following the assassination of Kim Jong Nam, the estranged half-brother of Kim Jong Un, there has been concern for decades about North Korean chemical weapons efforts.

In 1961, Kim Il Sung's "declaration of chemicalization" formally initiated a dual-use chemical industry in North Korea. The declaration came at a time when the North was attempting to recover from the Korean War, investing heavily in agricultural and industrial development, as well as seeking to expand military capabilities to support opportunities for reunification by force and to defend against similar attempts from the South.

By 1979, a U.S. Defense Intelligence Agency assessment reported that North Korea had acquired a defensive chemical capability. This assessment coincided with a 1980 statement reportedly made by Kim Il Sung to the Korean Worker's Party Central Military Committee that "poison gas" would be effective for use in combat, boasting that North Korea had "succeeded in producing poisonous gas and bacterial weapons through our own efforts supported by Soviet scientists in the field."

Information on how such activities have continued to evolve is sparse. Assessments relating to the North's chemical weapons stockpile suggest that Pyongyang has developed chemical capabilities across a spectrum—vesicants, nerve, cyanogen, and choking agents. Arguably the most publicly visible of these has been nerve agents, not only appearing in the Kim Jong Nam assassination but also featuring in Chinese media reports that suggested a detected leak of sarin. Defector testimonies have also included accounts of prisoners being victims of chemical testing. Such defector accounts should be read with caution in terms of reliability, but not disregarded.

Amid evidence that chemical weapons capability exists, stockpile estimates vary, with a range of 2,000 to 5,000 tons of agent. A 2009 report noted that there had been no indication of growing storage facilities that would be necessary in the case of an expanding chemical arsenal and estimated that 2,000 to 3,000 tons of agent would be sufficient to significantly impact a war with the South. The South Korean Ministry of National Defense has cited similar stockpile estimates since 2008, with a relatively consistent but broad range of 2,500 to 5,000 tons of agent. It is widely assumed that North Korea can deliver chemical weapons via a range of systems, including artillery, multiple rocket launchers, ballistic missiles, and aircraft.

Although there is little doubt that North Korea has produced chemical weapons, a comprehensive and public understanding of the current condition of inventories and infrastructure is limited, with some analysts citing the capability as aging and rudimentary.

In his 2015 New Year's address, Kim Jong Un highlighted the chemical industry as an area of potential for North Korean growth and independence. In 2017 and 2018, he referenced the chemical industry as successful and expanding. Given the dual-use nature of chemical production, assessing the facilities for weapons production through open sources is challenging.

There is a widespread belief that North Korea was behind the 2017 assassination of Kim Jong Nam at a Malaysian airport by attackers using VX, an extremely potent nerve agent. The nature of the attack challenges the assumption that North Korea is technically limited to producing rudimentary unitary munitions; two perpetrators used cloths to smear a substance on Kim Jong Nam's face. It is unclear whether both cloths contained the same substance, providing a double dose for increased lethality, but each cloth may have been dowsed with a corresponding binary agent. (With a binary agent, the two components become lethal only when combined.)

Nerve agents are especially sensitive to impurities and thus prone to instability. The higher the quality, the more stable and thus the longer the shelf life. Applying this to the Kim Jong Nam case, the agent used was produced relatively recently or was of a high quality. Either of these possibilities would refute claims that North Korea only possesses degraded or rudimentary chemical capabilities.

A recent U.S. Department of Defense report on North Korea states that although the investigation of the assassination is ongoing, evidence supporting North Korea's role would demonstrate that North Korea has a chemical weapons stockpile from a long-standing chemical weapons program. This case alone cannot confirm whether this agent was syphoned from a military-scale program or stockpile or was produced in a small quantity for this specific act. The agent used may not have been produced via the same program that supports a broader military chemical weapons development. The assassination was likely orchestrated by special operations personnel, potentially requiring separate production of the nerve agent in a small quantity.

Role of Chemical Weapons

Despite the focus on the nuclear weapons program to strengthen deterrence and support regime survival, chemical weapons likely continue to have value for the Kim regime. Historically, chemical weapons most likely filled a deterrence gap prior to the development of an adequate nuclear capability. Some scholars have observed that the threat of U.S. nuclear use in the Korean War helped drive the desire for a chemical capability; although acquisition of nuclear weapons was probably a long-term aspiration for Kim Il Sung, chemical weapons were recognized as a weapon of mass destruction that could provide deterrence as well.

With the Korean War still very much in recent memory, Kim Il Sung focused on bolstering the military capabilities necessary for reunification of the peninsula. There have been allegations that the United States during the war used biochemical weapons against the North. To be able at least to respond in kind to such capabilities in any future military conflict, the Kim Il Sung regime believed it would need to develop WMD capabilities to successfully reunify the peninsula. With the military alliance of the United States and South Korea developing at a rate that North Korea could not match conventionally, chemical weapons could have provided an appropriate asymmetric capability less costly than nuclear weapons and that could be developed quickly with help from allies such as the Soviet Union, China, and East Germany.

A key change came in the early 1990s, following the U.S. Operation Desert Storm against Iraq. Pyongyang likely concluded from observing that event that chemical weapons could not sufficiently deter U.S. military intervention, something only a nuclear arsenal could achieve. This shift has resulted in nuclear weapons becoming North Korea's main tool of deterrence today.

Still, chemical weapons have not become redundant or irrelevant for North Korean deterrence or its strategic thinking more broadly. Such weapons contribute to asymmetric capabilities, especially early in a conflict where a move to nuclear weapons use might be too rapid an escalation, but asymmetric tactics are required for defensive protection or offensive gain.

It has been Kim Jong Un's intention to strengthen the asymmetric strategy of North Korea, and chemical weapons continue to act as a conventional-force multiplier. Chemical weapons likely would be used to hinder the movement in war of the adversary's conventional land forces. Despite much superior conventional strength, South Korean and U.S. armed forces would be hindered for three reasons. First, chemical weapons use could deny or delay access to key areas crucial for the forward movement of on-peninsula forces, as well as to key ports needed for incoming support. Second, it would slow hostile forces by forcing them to operate in chemical protection suits. Third, it would add complexity to the military engagement because it would be impossible to distinguish between incoming conventional and chemical warheads.

The deterrence role of chemical weapons persists given the uncertainty about North Korea's military capabilities. The ambiguity can play to North Korea's favor by complicating an adversary's calculus. Chemical weapons continue to back up North Korea's conventional capabilities and underpin the nuclear deterrent through increasing the risks associated with military action to overthrow the regime. By complicating how a military scenario on the Korean peninsula could play out, chemical weapons increase the risks associated with military action and contribute to calculus against this option, thus assisting in the preservation of the regime.

Further, chemical weapons have a role for the regime in sustaining international relationships and revenue generation. Maintaining a chemical program allows North Korea to retain marketable proliferation skills and assets. A recent notable example was the 2016 visit of a North Korean technical delegation to Syria. The visit included the transfer of special resistance valves and thermometers that are known for use in chemical weapons programs.

Although this is likely a secondary benefit of chemical weapons capabilities, it brings added value and justification for maintaining chemical weapons even as the nuclear program has grown. Proliferation of chemical weapons-related equipment and know-how will continue to be a valuable asset for North Korea, particularly if the international norms against use of such weapons continue to erode, as seen in Syria.

Despite recent diplomatic developments, North Korea has not moved formally to rollback its nuclear capability. The prospect of complete North Korean nuclear disarmament seems implausible. For North Korea's leadership, chemical weapons alone do not have a strong enough deterrent value to provide assurance of regime survival. Nuclear weapons have not made a military chemical weapons capability redundant; a military chemical weapons program will likely continue to be maintained at least as an insurance policy against attack by superior conventional forces.

Asymmetric Advantages

Arms control discussions that focus on just one of these capabilities might not be able to lead to the removal of other types of weapons of mass destruction. Given the differing but complimentary roles of chemical and nuclear capabilities, approaching North Korea with the idea of limiting or removing these capabilities together, as some U.S. officials have proposed, likely would not produce fruitful results. An approach to remove both or signal an intent to remove one and then the other without significant shifts in the security context would make North Korea reluctant to engage.

Even if the current dialogue around the nuclear program can produce tangible results in at least capping the nuclear program, the opportunity for including chemical weapons will be low. North Korea has consistently maintained that it does not possess a chemical weapons program and to

shift to a position of acknowledgment and a willingness to limit these capabilities will only be possible with a dramatic shift in the security environment in which North Korea sees itself and as part of a much longer-term strategy.

To limit the threat from the possession of chemical weapons in the more immediate term, policymakers must focus on two main areas. First, a priority should be to continue to engage with North Korea to reduce hostilities, thus weakening the potential for military action on the peninsula. This is where risk reduction of chemical and nuclear weapons indirectly ties together. It is widely acknowledged that any conflict on the Korean peninsula would be devastating, but inclusion of chemical weapons use would have broad implications for the international nonuse norms that have been built since the opening for signature of the CWC. Making sure the nonuse norm does not have another arena for degradation will be vital.

Second, the international community should work to ensure the chemical norm does not further erode outside of the Korean peninsula and should attempt to restore it in light of events in Syria. Getting Pyongyang to agree and explicitly commit to no onward proliferation for chemical weapons is unlikely. If the premise is accepted that much of North Korea's onward proliferation is driven economically at least in part, reinstating the norm against chemical weapons could help reduce the risks of North Korea's chemical program by stemming the demand side of the equation. Recent initiatives to expand the scope of investigations by the Organisation for the Prohibition of Chemical Weapons should be the start of the normative shift back toward nonuse.

<https://www.armscontrol.org/act/2018-09/features/north-koreas-other-weapons-mass-destruction>

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Reuters (New York, N.Y.)

Trump Praises North Korea's Kim but Says Sanctions Must Stay for Now

By David Brunnstrom, Jeff Mason

Sept. 25, 2018

UNITED NATIONS (Reuters) - U.S. President Donald Trump praised North Korea's leader Kim Jong Un on Tuesday for his courage in taking steps to disarm, but said much work still had to be done and sanctions must remain in place on North Korea until it denuclearizes.

"The missiles and rockets are no longer flying in every direction, nuclear testing has stopped, some military facilities are already being dismantled," Trump said in his speech to the annual United Nations General Assembly.

"I would like to thank Chairman Kim for his courage and for the steps he has taken, though much work remains to be done," Trump said. "The sanctions will stay in place until denuclearization occurs."

Trump's remarks on North Korea were dramatically different from those in his speech last year at the U.N. assembly, when he threatened to "totally destroy" North Korea and mocked the North Korean leader as "Rocket Man" on a "suicide mission."

Trump held an unprecedented summit with Kim in Singapore in June which yielded a broad pledge by Kim to "work towards" denuclearization of the Korean peninsula.

However, Kim's commitments and actions so far have fallen far short of Washington's demands for a complete inventory of North Korea's weapons programs and irreversible steps to give up a nuclear arsenal that threatens the United States.

Trump has nevertheless heaped personal praise on Kim and expressed enthusiasm for a second summit.

On Monday, he said he expected this to be announced "pretty soon" but that the location had yet to be determined.

During a meeting with South Korean President Moon Jae-in at the United Nations on Monday, Trump said Kim has been "really very open and terrific, frankly."

"I think he wants to see something happen."

Trump singled out Japanese Prime Minister Shinzo Abe, Moon and Chinese President Xi Jinping for their support over North Korea, in spite of some questions about the commitment of the latter two leaders to maintaining tough sanctions on Pyongyang.

At a meeting last week with Moon, Kim promised to dismantle a missile site and also a nuclear complex if the United States took "corresponding action".

Moon told an event in New York on the sidelines of the U.N. meeting that declaring a formal end to the 1950-53 Korean War would encourage North Korea to move further with denuclearization.

Moon said Kim had told him the "corresponding measures" he was seeking were security guarantees Trump pledged in Singapore and moves toward normalization of relations with Washington.

"I believe that setting a timetable for all these measures is a task for the second U.S.-North Korea summit," Moon said.

U.S. Secretary of State Mike Pompeo said on Monday he hoped to travel to North Korea again before the end of the year to make final preparations for a second Trump-Kim summit.

Pompeo has proposed a meeting with North Foreign Minister Ri Yong Ho at the General Assembly this week. U.S. ambassador to the United Nations Nikki Haley said last week the two had agreed to meet but that the meeting could take place later.

Moon and Abe met on the sidelines of the U.N. assembly and the South Korean leader highlighted the importance of improved relations between Tokyo and Pyongyang to accelerate North Korean denuclearization, South Korea's Yonhap news agency reported.

"I believe the normalization of North Korea-Japan relations is required in the process of establishing peace on the Korean Peninsula, and I will actively support and cooperate so a North Korea-Japan summit will be held," Yonhap quoted Moon as telling Abe.

Reporting by David Brunnstrom; Editing by Jonathan Oatis and James Dagleish

<https://www.reuters.com/article/us-un-assembly-trump-northkorea/trump-praises-north-koreas-kim-but-says-sanctions-to-remain-in-place-idUSKCN1M523U>

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BBC News (London, U.K.)

Iran Nuclear Deal: Plan Put Forward to Dodge US Sanctions

Author Not Attributed

Sept. 25, 2018

The remaining members in the Iranian nuclear deal say they will set up a new payment system to maintain business with Iran and bypass US sanctions.

The system would facilitate oil companies and businesses to continue trading, without relying on the US-led global market and dollar.

Exactly how the system would work is still being determined.

Earlier this year, President Donald Trump pulled the US from the 2015 Iran nuclear deal and re-imposed sanctions.

The Joint Comprehensive Plan of action, as the nuclear deal is officially known, was negotiated during the US presidency of Barack Obama.

It saw Iran limit its nuclear activities in exchange for sanctions relief.

EU foreign policy chief Federica Mogherini announced the plan after talks at the UN with the remaining members of the accord - Britain, China, France, Germany, Russia.

A statement said they were determined to "protect the freedom of their economic operators to pursue legitimate business with Iran".

Ms Mogherini said the technical experts would discuss the details of the new payment mechanisms.

Analysts though doubt whether such a mechanism is feasible given the US could modify its sanctions to encompass any new system.

Mr Trump has called the deal "one-sided", "disastrous" and the "worst I've ever seen".

He believes renewed economic pressure, which went into force in August, will force Iran to agree to a new deal.

The value of Iran's currency, the rial, has been damaged by the new US policy.

<https://www.bbc.com/news/world-middle-east-45634448>

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COMMENTARY

Washington Post (Washington, D.C.)

An Administration in Search of an Effective Iran Policy

By Jennifer Rubin

Sept. 24, 2018

Former U.S. diplomat Eric S. Edelman and retired Air Force Gen. Charles Wald both opposed the Joint Comprehensive Plan of Action for Iran's nuclear program but they, nevertheless, cautioned against unilaterally pulling out of the agreement. They have now co-authored a report for the post-pullout world. They deliver some tough advice to makers of flabby policy — warning them against unrealistic expectations and half-measures.

They begin with a premise many in the Trump administration may not want to hear: Sanctions are not enough to deter Iran. They argue “it would be a mistake to expect even robust sanctions, on their own, to deter or deny Iran's nuclear weapons progress, arrest its aspirations for Middle East dominance, and convince the regime its very survival could be at stake if its aggression persists. Instead, such economic measures should be supplemented by other forms of pressure that will maximize the coercive impact of U.S. policy against Tehran, including credible options for use of force.”

If sanctions alone won't work, what will? The report's recommendations begin with stepping up support for regional allies. “This includes providing them both the tools to defend themselves, and explicit U.S. backing for their efforts to diminish Iran's destabilizing regional footprint,” the report reads. “By strengthening and supporting Israel and other Middle Eastern allies, American policymakers can improve their chances of reducing Iranian aggression and avoiding major regional conflict.”

It also means dropping the administration's on-again-off-again commitment to Syria, which merely encourages Bashar al-Assad's Iranian (and Russian) patrons. Edelman and Wald recommend:

To address threats from both Iran and ISIS — whose persistence only increases Iran's leverage and influence in these countries — the United States must make clear it will maintain a limited force presence in Syria and Iraq, primarily special operations forces. It also should bolster military support for its Syrian and Iraqi partners, first and foremost the multi-ethnic, Kurdish-led Syrian Democratic Forces (SDF), and update rules of engagement to appropriately defend its forces, the SDF and other partners on the ground. In tandem with a more concerted policy of blocking land routes via Iraq and Syria, these measures will constrain Iran's entrenchment in the heart of the region.

That advice is at odds with President Trump's bent to retrench and retreat from the region but, as the authors argue, the region — if left to its own devices — is not going to deter Iran or prevent a wider Middle East war.

In addition, the administration's decision to go it alone in rejecting the nuclear agreement has created an unacceptable rift with allies whose support we dearly need. Edelman and Wald say a “consistent, coherent public diplomacy can address potential diplomatic fallout from leaving the nuclear deal and counter Tehran's self-depiction as the aggrieved party.” That would include joint efforts to check Iran's non-nuclear activities (which, frankly, could have been done with the JCPOA intact), including focus on Iran's missile programs, working to prevent the Islamic State's

reemergence in the region, intelligence cooperation, maritime security and “targeting Tehran’s continuing support for terrorism, including in Europe.”

The problem here is that America’s allies understandably don’t trust Trump and are nervous about sharing intelligence, given his proclivity to declassify material, as well as his past sharing of highly sensitive intelligence with Russian officials in the Oval Office.

The authors also recommend we step up political warfare. They write, “Such a campaign would target and exploit Tehran’s growing domestic vulnerabilities through information operations, cyber, sanctions and support for dissidents, among other measures. Secretary [of State Mike] Pompeo’s speech at the Reagan Library on July 22 detailing the corruption and misdeeds of senior Iranian leaders is an excellent first step in this regard.”

The problem here, once again, is Trump. Any other president could effectively exploit the Iranian regime’s corruption and efforts to squelch opposition press. This president, however, is a poor role model. Trump finger-wagging against Iranian regime’s crackdown on the press or its misuse of public funds would be, quite simply, laughable.

Finally, Edelman and Wald contend that “a comprehensive strategy of pressure must include credible U.S. military options against the Iranian regime’s most critical assets, including its nuclear and ballistic missile programs. Preparing for such contingencies, and communicating U.S. military readiness, will strengthen American policymakers’ hands as they pursue a coercive approach against Iran more broadly.”

It is also worth noting that, nearly two years after taking office, the Trump administration has not affected Iranian behavior in any measurable way. To the contrary, Iran is entrenched in Syria, continues its domestic repression, maintains its regional aggression (e.g., in Yemen) and builds up its military capability thanks to its relationship with Trump’s pal, Russian President Vladimir Putin, who pays absolutely no penalty for Russia’s support for Tehran.

The authors’ suggestions are logical, measured and attainable — with any other president. Unfortunately, the one we have regularly trashes allies, and vacillates between an immediate pullout from the region and threats of destruction. He has frittered away the United States’ credibility on human rights. That said, work can be done on these policy suggestions, which in turn may be useful should we one day get a competent, stable commander in chief.

https://www.washingtonpost.com/news/opinions/wp/2018/09/24/an-administration-in-search-of-an-effective-iran-policy/?utm_term=.7f9823574422

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Stars and Stripes (Washington, D.C.)

Korean Military Pact Seeks to Ease Border Tensions despite Lack of Nuclear Progress

By Kim Gamel

Sept. 23, 2018

SEOUL, South Korea — South Korea wasn’t at the table when military commanders from the U.S.-led United Nations Command and the joint Chinese-North Korean forces signed the 1953 armistice that ended the Korean War. Then-President Syngman Rhee opposed peace talks.

South Korean President Moon Jae-in isn’t letting that happen again. Moon, 65, a former human rights attorney, has sent clear signals that Seoul is moving forward with improving relations with the North despite slow progress on the nuclear front.

Efforts to resume economic cooperation are limited by U.S.-led sanctions linked to the North's banned nuclear weapons program.

But a far-reaching military agreement signed during his summit with North Korean leader Kim Jong Un last week outlines ambitious steps to reduce tensions along the heavily fortified border, which has bisected the peninsula since the end of the three-year Korean War.

While his efforts to revive nuclear talks between Pyongyang and Washington got the most attention, Moon called the military accord "the most important" result for relations between the two countries.

"This development would go beyond ending the Korean War that has remained unfinished since the signing of the armistice agreement, eradicating any possibility of war between the two Koreas in the future," he said during a news conference after returning to Seoul on Thursday.

Conservatives in South Korea and other critics have expressed concern that Moon's administration is letting down its guard too soon considering the North's track record of renegeing on past agreements.

Thorough review

It's also unclear how the military measures could affect the armistice agreement, which is enforced by the UNC under the command of Army Gen. Vincent Brooks, who also leads U.S. Forces Korea.

The UNC, which likely would need to sign off on key points, said it would "thoroughly review" the agreement "to ensure compliance with the Armistice Agreement."

The command will cooperate with South Korea's defense ministry and "as appropriate" with the North Korean military "to work through the details of the agreement," according to a UNC official who spoke on condition of anonymity because of the sensitivity of the issue.

The UNC has made a number of exceptions to facilitate diplomatic efforts that gained momentum this year, including allowing North Korean officials and athletes to travel across the DMZ for the Winter Olympics.

But the command blocked Korean plans for a joint railway survey in August, citing a procedural error.

Experts said the agreement — the result of extensive bilateral talks in the run-up to the Sept. 18-20 summit in Pyongyang — would help build trust and would lower the possibility of accidental conflict.

"I think it makes very appropriate reciprocal confidence-building measures," said Eric Gomez, a security analyst at the Cato Institute, a U.S. libertarian think tank.

He said it would be hard for the U.S. to object to the measures, calling it "clever maneuvering on Moon's part."

"If they said, 'No,' then it would just be enhancing Kim's arguments that the U.S. isn't negotiating in good faith," he said in a telephone interview. "And it would also create problems with the alliance with South Korea."

Easing tensions

The deal appeared designed to stay within parameters that would be acceptable to the U.S., which maintains some 28,500 troops in the South.

It was focused on conventional forces, an important issue for Moon because North Korea has more than 1 million soldiers and thousands of artillery batteries and rockets poised to target Seoul, some 35 miles to the south.

North Korean leaders have threatened to turn the South Korean capital into a “sea of fire” in the past.

But military officials have said they’re just as worried that misunderstandings or human error could tip the peninsula into crisis.

“I think the only way you really get to nuclear use on the peninsula is not the North surprise-attacking anyone or the U.S. surprise attacking the North, it’s more from something ... that has the risk of spiraling out of control,” Gomez said.

The two sides agreed to cease military exercises including live-fire artillery drills and maritime maneuver exercises in front-line areas, effective Nov. 1.

They also will designate no-fly zones for helicopters, drones and hot-air balloons, which are used to deliver propaganda leaflets, above the Military Demarcation Line that runs through the Demilitarized Zone.

“It stops short of addressing the annual combined exercises by the US that so offend the North Koreans,” Joshua Pollack, of the Middlebury Institute of International Studies in California, wrote in a tweet.

“Seoul continues to ‘color inside the lines’ of alliance solidarity in its dealings with the North,” he said.

President Donald Trump suspended the joint war games after the Singapore summit but warned he could “instantly restart” them if progress isn’t made toward denuclearization.

The Koreans agreed to withdraw 11 guard posts from each side in the Demilitarized Zone by the end of the year.

DMZ blueprint

The rivals also announced a blueprint to transform the DMZ, a 2.5-mile-wide no man’s land that is lined with barbed wire and land mines, into a peace zone, as agreed during the first Moon-Kim summit on April 27.

That included plans to remove all mines and to disarm troops in the Joint Security Area in the truce village of Panmunjom. The agreement said a trilateral consultative body including the two Koreas and the UNC would be established to oversee the process.

“If implemented, these measures will reduce tensions, and will also make incidents at the DMZ significantly less likely — even though it will hardly prevent either side from staging a clash when/if it is seen as politically expedient,” North Korea expert Andrei Lankov wrote in a commentary for NK News.

“But given that many earlier incidents were seemingly provoked by human error, these measures are likely to save the lives of soldiers from both sides,” he said.

<https://www.stripes.com/news/pacific/korean-military-pact-seeks-to-ease-border-tensions-despite-lack-of-nuclear-progress-1.548845>

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Talks to Ban Nuclear Materials Need a Fresh Start

By Paul Meyer

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If grades in disarmament diplomacy were given out for perseverance, then Canada would surely merit an “A” for its efforts on behalf of the Fissile Material Cut-off Treaty, or FMCT. Forging this treaty, which would ban the production of fissile material for nuclear weapons, has been a supposed goal of the international community for over half a century. In that time, though, negotiations to bring the treaty about never even started, suggesting that the FMCT is one of those worthy goals that are periodically affirmed without any serious effort to realize them. And though Canada has traditionally led efforts to move forward on the treaty, the Canadian-led group most recently charged with supporting future negotiations has submitted a report that deserves a failing grade.

This is unfortunate, because the FMCT, if it ever happens, could have a major impact on reducing nuclear proliferation. The problem is that the 25-member preparatory group asked to facilitate the task of future negotiators has recommended that “the negotiation of a treaty ... begin without delay in the Conference on Disarmament.” This is not a realistic solution, as anyone familiar with the Conference on Disarmament knows it does not act “without delay” on anything. It simply does not get things done. To initiate work on the FMCT will require its liberation from this diplomatic dungeon.

Canada has been closely associated with the FMCT since 1995, when the late Canadian Ambassador Gerald Shannon won approval for a mandate to negotiate the treaty at the Conference on Disarmament. In principle, the Geneva-based, 65-nation Conference is the United Nation’s designated forum for negotiating multilateral arms control and disarmament agreements. The forum operates under an extreme version of the consensus procedure, whereby no decision can be taken unless all members agree. Given the various perspectives and priorities of its member states, it has been unable to agree on and implement a program of work for twenty years. Nominally, it is this diplomatic forum that is supposed to assume the task of negotiating the FMCT, but opposition from one member, Pakistan—which claims that the treaty would be contrary to its national security interests—has blocked any official work on the treaty.

Each year through 2011, Canada led on a UN General Assembly resolution calling for the Conference on Disarmament to start negotiating the FMCT. In 2012, recognizing that simply repeating the resolution was an exercise in futility given the gridlock in Geneva, Ottawa decided on a new tack. That year, Canada led on a resolution establishing a Group of Governmental Experts “to make recommendations on possible aspects that could contribute to but not negotiate a treaty banning the production of fissile material for nuclear weapons.” This mandate’s awkward formulation reflected the reluctance of some UN parties to see any type of negotiation on the FMCT begin.

The Group of Governmental Experts operated over eight weeks in 2014 and 2015, under a Canadian chair, and successfully adopted a consensus report. It was able to do this by eschewing any effort to forge common positions in favor of enumerating the differing views held by states on the key issues concerning the treaty. One issue that has loomed large as a point of contention is the question of the treaty’s scope, specifically whether it will be limited to future production of fissile material or cover past production—existing stocks—as well. The group’s 2015 report concluded that “the various perspectives of States on a treaty should not be an obstacle to commencement of negotiations.” It also affirmed that the so-called Shannon mandate, which recognized that the issue

of scope remained open, “continues to provide the most suitable basis on which future negotiations can commence without further delay in the Conference on Disarmament.”

Despite these upbeat conclusions, further delay was very much in the cards and differing views continued to obstruct any action on the FMCT at the Conference on Disarmament.

Canada therefore seemed to be back at square one in terms of getting any negotiation underway. Apparently animated by an “if at first you don’t succeed...” attitude, Canada proposed a sequel to the Group of Governmental Experts under a new if more pretentious label. The “high-level fissile material cut-off treaty preparatory group” was the result, and Canada was once again able to obtain UN General Assembly support for this variation on an old theme. The preparatory group was duly constituted and met in 2017 and 2018, again under a Canadian chair. It was able to produce a consensus report, published by the United Nations in July.

Although the express intention of the preparatory group was to build upon rather than duplicate the work of the Group of Governmental Experts, the July report enumerates states’ various views on the FMCT—including scope, definitions, verification, and legal aspects—in a way that makes it highly similar to the earlier group’s work. The new report’s self-described “plain-language menu of potential treaty elements” has some value, but the array of preferences expressed has changed little since the 2015 report. Indeed, it would appear that the preparatory group didn’t even attempt to converge the views, as the report notes that “no attempt was made to narrow this range of substantive options.” The casual observer would be justified in questioning the purpose of the entire exercise if it didn’t even try to narrow the differences among states with respect to what the FMCT should include.

If the familiar nature of the views recorded by the preparatory group was disappointing, its recommendation that negotiation “begin without delay in in the Conference on Disarmament” was even more so, given that body’s track record. To confine the negotiation of the FMCT to such a dysfunctional forum seems the height of diplomatic folly, but this is the considered recommendation of the 25 members of the preparatory group. It would appear to serve everyone’s interests to repeat the hollow ritual of invoking the Conference on Disarmament gods, and Canada, regrettably, has been a willing shaman to this spectacle.

The 190 members of the Nuclear Non-Proliferation Treaty, which first entered into force in 1970, committed themselves to nuclear disarmament as well as nonproliferation goals. In 1995 that treaty was indefinitely extended on the basis of a “package” of decisions, which included making the negotiation of an FMCT a top priority. Like the Comprehensive Test Ban Treaty, which opened for signature in 1996, the FMCT was seen as an important tool for reducing nuclear proliferation. The protracted failure to conclude such a treaty (or even start negotiations on it) contributes to a credibility crisis that the Nuclear Non-Proliferation Treaty is now experiencing. If it can’t deliver on such core commitments after decades, what authority can it expect to command going forward?

To initiate work on the FMCT will require it to be freed from the constraints of the Conference on Disarmament and granted a fresh start under the authority of a diplomatic body not subject to the veto of any one state. This might be best achieved via a UN General Assembly resolution. Alternatively, a group of concerned states—such as the five official nuclear weapon states under the Nuclear Non-Proliferation Treaty, or some other group that possesses fissile material—could undertake ad hoc negotiations.

Until the political will can be generated for such concrete action, the disarmament community should avoid exercises in treading water like the recent FMCT preparatory group. However well-intended, they only provide an illusion of progress, and further erode the credibility of the global nuclear non-proliferation and disarmament regime.

<https://thebulletin.org/2018/09/talks-to-ban-nuclear-materials-need-a-fresh-start/>

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ABOUT THE USAF CSDS

The USAF Counterproliferation Center (CPC) 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's Director for Nuclear and Counterproliferation (then AF/XON) and Air War College commandant established the initial personnel 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.

In 2008, the Secretary of Defense's Task Force on Nuclear Weapons Management 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." This led to the addition of three teaching positions to the CPC in 2011 to enhance nuclear PME efforts. At the same time, 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 professional continuing education (PCE) through the careers of those Air Force personnel working in or supporting the nuclear enterprise. This mission was transferred to the CPC in 2012, broadening its mandate to providing education and research on not just countering WMD but also nuclear operations issues. In April 2016, the nuclear PCE courses were transferred from the Air War College to the U.S. Air Force Institute for Technology.

In February 2014, the Center's name was changed to the Center for Unconventional Weapons Studies (CUWS) 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. In May 2018, the name changed again to the Center for Strategic Deterrence Studies (CSDS) in recognition of senior Air Force interest in focusing on this vital national security topic.

The Center'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. The Latin inscription "Armis Bella Venenis Geri" stands for "weapons of war involving poisons."

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