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## North Korea's Military-What Do They Have, What Do They Want?

On February 12, North Korea conducted its third nuclear test (after the first and second in 2006 and 2009) and announced to hit Washington with a nuclear bomb in response to what it referred to as a de facto declaration of war by the US and its allies. By that, Pyongyang was referring to UN sanctions-this time also endorsed by Pyongyang's only part-time ally China-in response to its December 2012 missile test (like in the past, the regime in Pyongyang referred to it as a satellite launch) and its nuclear test.

The UN Security Council Resolution 2094 harshly condemned North Korea's December 2012 rocket launch and its February 2013 nuclear test approving a number of sanctions aimed at restricting progress of Pyongyang's nuclear program. The resolution authorizes a new set of measures aimed at further and more efficiently freezing Pyongyang's financial transactions, prohibiting the opening of North Korean bank branches abroad and limiting bulk cash transfers to North Korea. The resolution also aims at individuals and institutions connected with Pyongyang's nuclear program and strengthens the control of transfer of WMD technology by land, sea and air to and from North Korea. Much to the chagrin of Pyongyang's political and military elites, the sanctions also prohibit the export transfer of luxury commodities such as cars, yacht, jewelry and other expensive toys usually delivered to those who live in abundance not suffering from hunger and oppression in North Korea.

In reaction to the UN sanctions and the annual March US-South Korean military maneuver in the region, Pyongyang terminated the decade-old military hotline with South Korea and unilaterally withdrew from the North-South Korea 1953 armistice agreement which ended hostilities on the Korean Peninsula 60 years ago (North and South Korea never signed a peace treaty and have remained-at least technically-in a state of war). That 'technical' state of war, it is now feared in South Korea and beyond, could once again turn into a de facto state of war. Finally and equally

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### ABSTRACT

North Korea is flexing its muscles, again. The UN imposing further sanctions onto North Korea in a (late) response to its December 2012 missile and February 2013 nuclear tests had the regime in Pyongyang go ballistic leading to angry rhetoric and threats to attack the US and its allies with ballistic and nuclear weapons. While due to technological shortcomings such threats (fortunately) lack credibility, Pyongyang's conventional and probably more so its asymmetric military capabilities do nonetheless pose a potential military threat to South Korea and its neighbors. Massive artillery systems stationed along the DMZ, the country's 200.000 Special Operation Forces (SOF) together with regime's ambitions to boost and modernize the country's its naval capabilities and aircraft will continue to make sure that South Korean, US and Japanese armed forces will stay on high alert in the months ahead. An all-out war triggered by a North Korean pre-emptive attack on the other hand can most probably be excluded: while Pyongyang would be able to inflict heavy casualties and damage on South Korean territory during the (very) early phase of such an attack, allied bombing would be massive leaving little left of Pyongyang and the regime in a few weeks. For the time being, be prepared for the occasional shelling of or intrusion into South Korean territory as well inter-Korean small-scale naval clashes in and around disputed territorial waters.

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worrying to analysts who fear that Pyongyang's angry rhetoric could rather sooner than later be followed by equally angry actions, North Korea pulled out of a non-aggression pact with the South.

While Pyongyang's threat to launch missile and nuclear attacks on the US and South Korea lacks—at least for now—credibility (North Korea's ballistic missile program is unproven and Pyongyang has yet to master nuclear miniaturization technology needed to place a nuclear warhead onto a missile), North Korea might in the months ahead nonetheless choose to launch a small-scale or limited attack onto South Korea.

As will be sought to show below, its armed forces are fairly well equipped and trained to do just that.

### **Sticking with Asymmetric Warfare**

North Korea has the world's fifth largest military force with 1.1 million active soldiers and between 5 and 7 million reserve forces. While Pyongyang officially maintains an annual defense budget of roughly \$1.5 billion, it is estimated that the actual budget amounts up to \$5 billion. If this estimate turned out to be accurate, this would be roughly 25% of the country's GDP, amounting to \$20-25 billion (\$40 billion in power-purchasing-parity (PPP) terms). Out of these funds, roughly 40% are assigned towards defense procurement with a focus on self-propelled artillery, multiple rocket launchers, and ballistic missiles.

Pyongyang's conventional and asymmetric warfare capabilities will continue to make sure that South Korea and its allies will have to be prepared for the occasional small or not so small asymmetric attack. While much of the Pyongyang's armed forces' conventional military equipment is outdated—more than 50% of the country's weapons and weapons systems were designed and built in the 1960s, Pyongyang is rapidly modernizing its three-part asymmetric military forces capabilities: long-range artillery, ballistic missiles, and Special Operation Forces (SOF).

Pyongyang has over the decades conducted numerous low-level covert operations and asymmetric attacks in and onto South Korea. In fact, large parts of Pyongyang's armed forces' structure are deployed for the goal of conducting asymmetric attacks with targets in the South: this is where the country's 200,000 Special Operation Forces (SOF) come in. The SOF are organized by brigade or battalion, but can also consist of very small teams (3-4 men). North Korean army defectors have in the past confirmed that up to 90% of the SOF's strategic targets (missile and military bases, airports, power plants) are on South Korean territory to which the SOF would be deployed by parachute, hovercraft or through a tunnel system under the Demilitarized Zone (DMZ) along the 38<sup>th</sup> parallel (the border between North and South Korea). At least four large North Korean tunnels under the DMZ are known and each of these tunnels is big enough to allow the passage of an entire North Korean infantry division.

According to a report by retired Brigadier General Lee Won-seung of the Korea Advanced Institute of Science and Technology, North Korea's SOF have been trained to infiltrate and strike more than 90% of its targets in South Korea. The report is, at least in parts based on defector testimonies such as the testimony by high-ranking North Korean defector Hwang Jang-yop. Hwang explains that "Each North Korean special forces unit has been assigned a specific target in South Korea, usually strategic objectives such as missile bases and airfields. The units will be delivered to their targets by parachute or hovercraft."

Cyber warfare too is something that Pyongyang is increasingly becoming good at. In 2011, Pyongyang has conducted a number of cyber attacks targeting South Korean government agencies and military installations. The 2011 attacks have been so sophisticated that the South

Korean government saw itself obliged to adopt a new national cyber security strategy dealing with cyber attacks from the North.

### **Ready-to-Strike Artillery Forces**

Before Korean infantry could cross the border and march the 38 kilometers to reach Seoul, North Korea's roughly 13,000 artillery and multiple rocket launcher (MRL) systems (the most modern multiple launchers were bought from China in 2009 and 2010) would seek to prepare the ground and launch massive artillery attacks onto the South Korean capital. Roughly a thousand of these systems that fall into the category 'long-range' and they consist of long-range 170mm self-propelled guns, supported by long-range 240mm multiple rocket launchers. Up to 500 of these systems have the ability to hit Seoul and many of them are stationed in hardened artillery sites (HARTS), which have been constructed very close to the DMZ, explains the scholar Bruce E. Bechtol in an article in *International Review of Korea Studies* in April 2012<sup>1</sup>. Furthermore, it is estimated that up to 20% of rounds provided to forward artillery units could be equipped with chemical ammunition. Data released by South Korea's Ministry of Defense documents that North Korea might have up to 5,000 tons of chemical agents, enough to contaminate an area up to four times the size of Seoul.

South Korean reports from 2010 and 2011 claim that North Korea has over the last two-three years further increased the number of artillery systems (recently) along the DMZ. According to these reports, Pyongyang added up to 100 additional multiple rocket launchers (MRL) along the DMZ. The artillery's overall quality and accuracy however, is not as impressive as its quantity: when North Korea's artillery bombarded South Korea's Yong'yong-do Island in November 2010, the attack's accuracy was fairly poor. At the time, only roughly 50% of the artillery fired at the island actually landed on it.

### **The Missile Threat**

Pyongyang's short-range and long-range missiles complete the threefold asymmetric warfare able to inflict heavy casualties onto Seoul in the early phase of a military contingency.

Pyongyang has deployed and successfully test-launched its No Dong ballistic missile with a range of 1,300 to 1,500 kilometers. The No Dong missile technology is based on Soviet Union SCUD technology and it could reach every target in South Korea. What's more, if not intercepted and destroyed by existing Japanese missile defense systems, the No Dong could also reach downtown Tokyo in less than ten minutes. The No Dong's latest version with a tri-conic nosecone was on display at a North Korean military parade in October 2010 and showed similarities with the Iranian Shahab missile<sup>2</sup>. This led analysts to suggest that Pyongyang cooperated with Tehran on missile development. On the same occasion in 2010, Pyongyang also put a new surface-to-air missile similar to a Chinese model on display.

Pyongyang's long-range Musudan (also referred to as Taepo Dong) missiles has been tested successfully in North Korea (as well as in Egypt which bought them from Pyongyang in 2006). The Musudan missile technology and design are based on the former Soviet Union's SS-N-6 technology and are launched from mobile land-based launch facilities. Satellite images show that up to 1,000 Musudan missiles are deployed at several sites within North Korea and they are believed to have a range of up to 4,000 kilometers. This would enable Pyongyang to –at least in theory– hit Guam as well as continental parts of the US as well as Alaska and Hawaii. What's more, the Musudan missile could be capable of carrying a nuclear warhead once Pyongyang has

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<sup>1</sup> <http://www.icks.org/publication/pdf/2012-SPRING-SUMMER/8.pdf>.

<sup>2</sup> <http://edition.cnn.com/2010/WORLD/asiapcf/11/24/north.korea.capability/index.html>

mastered the technology of mounting a small enough nuclear-armed warheads onto a missile. Finally, Pyongyang has deployed numerous infrared anti-aircraft missiles which can potentially shoot down fighter aircraft, transportation aircraft, and helicopters. In 2011, the South Korean Ministry of National Defense Board of Audit and Inspection warned that North Korean IGLA ground-to-air, and AA-11 air-to-air missiles use medium-range infrared waves which are not easily divertible by South Korean flares. Pyongyang's new anti-aircraft missiles, it is feared, can even pose a threat to South Korea's most advanced aircraft, including the F-15K.

### **Boosting Up Firepower**

A July 2011 Center for Strategic and International Studies (CSIS) report<sup>3</sup> confirms that Pyongyang is as serious as ever about its 'Military-First-Policy', (*songun*), i.e. prioritizing armed forces' firepower over feeding the starving parts of the population. Citing data from Military Balance published by the International Institute for Strategic Studies (IISS), the report counts 456 North Korean naval combat ships in total. In terms of air force firepower, the report counts a total of 852 North Korean military aircraft, amongst them 488 aircraft fighters (in comparison South Korea has a total of 708 aircraft, amongst them 467 aircraft fighters).

The armed forces' modernization of recent years also includes the country's naval capabilities in general and those posing a threat to South Korea territorial waters off the county's west coast in particular. Pyongyang has reportedly deployed a new version of its most advanced mini-sub, the 'SANGO'. The newer 'SANGO' version has higher underwater speed and is five meters longer than the previous version. North Korea has also enhanced its mini-sub fleet, e.g. through the deployment of the 'Daedong-B,' an advanced infiltration submarine with a special ramp to offload Special Operation Forces. That mini-sub is also believed to be equipped with torpedo launch tubes.

Furthermore, a new North Korean hovercraft base located roughly 56 kilometers away from South Korean islands off the west coast of the Korean Peninsula is currently under construction and once completed it is believed to be able to accommodate up to 70 hovercraft. The hovercraft are capable of traveling at a speed of up to 90 kilometers per hour and can transport a full platoon of naval infantry forces aboard (and reach South Korean territory on the hovercraft in less than 40 minutes).

Pyongyang's air power too has been boosted through the acquisition of state-of-the art MiG-29 fighter jets since the 1990s even if the majority North Korean MiGs are outdated and unable to compete with South Korean and US fighter jets. To be sure, fuel shortages continue to limit the country's ability to conduct large-scale air force military training exercises. North Korean fighter-jet pilots are believed to train to as little as 20 hours per year.

### **Willing to Die?**

Military analysts maintain that North Korean military doctrine, and the troops' morale are key factors in determining the military's ability and motivation to fight in the case of a military contingency. Although the evidence and information regarding the armed forces' morale coming out of North Korea are more often than not anecdotal and hence far from fully reliable and transparent (information e.g. provided by defectors), it is safe to assume that latent shortage of food shortage and insufficient military training have taken a toll on troop morale and the soldiers' willingness to make the ultimate sacrifice for the regime in Pyongyang.

Unless there has been a (secret) change in North Korea's military doctrine in recent years, North Korea's armed forces would in the case of a military conflict most probably be employing an

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<sup>3</sup> [http://csis.org/files/publication/110712\\_Cordesman\\_KoreaMilBalance\\_WEB.pdf](http://csis.org/files/publication/110712_Cordesman_KoreaMilBalance_WEB.pdf)

inflexible and outdated Soviet-style military doctrine, de facto hindering the armed forces to apply operational flexibility. Soviet-style military doctrine assigns little authority to middle-ranking officials who have little authority and mandate to make decisions on their own. Although it remains difficult if not impossible to assess the actual and overall level of the fighting morale of North Korea's armed forces, it is likely that in the case of an efficient and very quick joint US-South Korean counterattack, the soldiers' morale and willingness to make the ultimate sacrifice could sink fairly quickly.

What's more, while Pyongyang has sought to raise military training levels and readiness over recent years, fuel and other shortages continue to limit the country's ability to conduct large-scale military training exercises ensuring that the ground forces in general and air force pilots in particular are not sufficiently prepared to conduct military operations efficiently. Fuel shortages have over the last ten years limited air force training to an unsustainably low level: pilot training amounts to as little as 20 hours per year, probably not least as Pyongyang feels obliged to conserve scarce fuel for possible actual military contingencies.

### **Attacking Pre-Emptively. Maybe not**

Put under enough international pressure, Pyongyang could opt for an all-out war and pre-emptively attack South Korea. In that case, Pyongyang's artillery would probably launch a massive attack onto South Korean and US military positions south of the DMZ as well as Seoul.

While such an all-out attack remains very unlikely, the military posture of Pyongyang's armed forces suggests that a pre-emptive attack is at least a possibility. Indeed, the percentage of armed forces deployed along the DMZ in relation to Pyongyang's overall forces and firepower has increased over recent years. Today, it is estimated that Pyongyang deploys more than 60% of its total military units (700.000 soldiers) and up to 80% of its firepower within a range of 100km of the DMZ. With this forward deployments, Pyongyang could relatively quickly initiate an invasion before being confronted with a massive US-South Korean counterattack. North Korea's artillery forces would be capable of afflicting massive human and material damage on South Korea and its capital although the time to do so would be very limited, Mark Fitzpatrick, Director of the IISS Non-Proliferation and Disarmament Programme at the International Institute for Strategic Studies (IISS) in London tells this author: "North Korea's long-range artillery systems might have no more than ten minutes before joint US-South Korean counter-battery fire, air strikes and helicopter attacks begin to respond to a North Korean artillery attack."

A joint US-South Korean pre-emptive attacks is equally unlikely as the allied forces could target and hit only a part of North Korean missile launch sites, i.e. those whose are known and accessible for bombing. The same is true for nuclear sites: while the US and South Korea could hit and destroy the North's nuclear facilities in Yongbyon interrupting or indeed terminating its plutonium production there, such an attack cannot hit hidden nuclear facilities in the country. What's more, the IISS estimates in a recent North Korea dossier<sup>4</sup> that Washington would have to deploy up to 500.000 or half of its total combat forces in the event of an all-out conflict on the Korean Peninsula.

What's more, a limited pre-emptive attack runs the risk of provoking North Korean retaliation. Pyongyang would interpret any attack against its strategic assets as an all-out war and an attempt to change the regime in Pyongyang. While Pyongyang is without a doubt aware that a massive response to a limited US-South Korean strike would guarantee the end of the regime, the regime might nonetheless see itself obliged to respond massively. What's more, it cannot be excluded that the military would in the case of a US-South Korean attack decide not to follow the regime's orders

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<sup>4</sup> <http://www.iiss.org/publications/strategic-dossiers/north-korean-security-challenges-a-net-assessment/>

not to respond massively. While the regime maintains very firm control over the armed forces, it cannot be excluded that rogue generals could decide to ignore orders from the top. And even if Pyongyang tried to limit its military response to selected targets such as US military bases in South Korea and Japan, the danger of escalation to a state of an all-out regional conflict (most likely also involving China, directly or indirectly) would be high. As a consequence, there is little enthusiasm in Washington, and much less in Seoul and Tokyo, for a surprise 'surgical strike' targeting North Korea's key military assets and risk another 1950-1953-style Korean War.

## Conclusions

While the sinking of the South Korean naval vessel Cheonan in March 2010 near the disputed North Korean-South Korean maritime border confirmed that Pyongyang is able to turn angry rhetoric into angrier actions (46 South Korean sailors died back then), a full-scale pre-emptive North Korean attack onto South Korea can be excluded, at least for now.

Then again, the above analysis demonstrates that the North Korea's armed forces are without a doubt well-equipped enough to opt for more asymmetric and small-scale attacks onto South Korean territory. If the recent rhetoric and threats coming out of Pyongyang are anything to go by, the possibility of such attack in the weeks and months ahead will have to continue featuring on the US, South Korean and Japanese defense policy agendas.

Unlike in the past, South Korea would-not least due to reasons related to political and security credibility-be obliged to massively respond to any North Korean attack or provocation which in turn could become an all-out military conflict in the region involving the US, China and Japan.

Not even an angry North Korea subject to new UN sanctions and-at least from its perspective-surrounded by hostile forces ready to change the regime with force-would be erratic or indeed crazy enough to risk just that. Hopefully.

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