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### *America First – Not Alone*

#### **NORTH KOREA THREAT – Is its Army a Paper Tiger?**

*With the recent increase in nuclear saber-rattling and testing of Intercontinental Ballistic Missiles (ICBMs), and other new weapons, by North Korea's prickly leader, Kim Jong-un, we need to ask ourselves - is the current focus on his nuclear capabilities an adjunct to his reportedly formidable conventional forces, or perhaps a compensation for their inadequacy.*

*The conventional wisdom about North Korea's conventional forces is that they are menacing, especially their abundant artillery and rocket units arrayed near the demilitarized zone (DMZ), a short distance from South Korea's capital, Seoul.*

*But are they as dangerous as they appear? In this piece, North Korean military expert, Lieutenant Colonel Charles Schlom, U.S. Army, (ret.), provides some unique insights. **Paul Crespo, President***

#### **How Effective are North Korea's Conventional Armed Forces?**

##### ***Tiger of the East, Or Dragon with No Fire?***

by Charles M. Schlom, LTC, USA (ret), [Contributor, CADS](#)

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#### **BACKGROUND**

Since the end of the Korean War, the leadership of the North, also known as the Democratic People's Republic of Korea (DPRK), has remained an enigma. The same goes for much of its military. From the 1950's until today, they have presented a threat to regional, and world stability. This is even more so now, with their recently acquired nuclear and long-range missiles, and likely, the ultimate weapon, a hydrogen bomb.

But while the DPRK has been furiously developing these nuclear bombs and long-range delivery systems, what has happened to their conventional forces? Are they still the tiger of the east? Or are they an atrophied force, short of funds, oil, food, and outdated equipment. In effect, a dragon with no fire?

Serving for twenty-six years in the U.S. Army, before retiring as a Lieutenant Colonel, I had the opportunity to serve for ten years on our 'Democratic People's Republic of Korea (DPRK) Opposing Force (OPFOR)' team, and also develop the battle plans and execute them as an Exercise Controller and as a Senior OPFOR Observer/Controller Trainer during U.S. Army battle simulations based on DPRK doctrine.

One of the best recent papers written on the capabilities of the North Korean military, is by Kim-Min-Seok, who wrote an excellent piece titled "The State of the North Korean Military," for the Carnegie

Endowment for International Peace.<sup>1</sup> In his paper he describes the weaknesses of their forces. I find that his conclusions are compelling and match my own experience and analysis regarding the DPRKs conventional capabilities.

#### **KOREAN PEOPLE'S AIR AND ANTI-AIR FORCE**

*Chosŏn-inmin'gun hangkong mit banhangkong'gun*

The North Korean Peoples Air Force and Anti-Air Force (NKPAF) is the second largest branch of the Korean People's Army (KPA) with an estimated 110,000 members. It possesses around 810 combat aircraft out of 1,630 total aircraft in its fleet, mostly of decades-old Soviet and Chinese origin.<sup>2</sup>



*MiG-21PF. Source: Korea JoongAng Daily \*Note 1960s style Chinese PLAAF leather jacket*

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<sup>1</sup> Kim, Min-Seok, The State of the North Korean Military, Carnegie Institute for Peace, March 18, 2020.

<sup>2</sup> Kim, Min-Seok research source: Abraham Ait, "Is North Korea's MiG-29 Fleet Growing?" Diplomat, November 29, 2018, <https://thediplomat.com/2018/11/is-north-koreas-mig-29-fleet-growing/>; and IISS, Military Balance 2019, 282.



*Air Bases Source: Office of the Secretary of Defense, Business Insider*

Their most modern fighter is the MiG-29A, developed in the 1970s as a 4th Generation air superiority fighter. The NKPAF possesses only 35 of these relatively modern (initial operation mid-1980s) Russian-made MiG-29 'Fulcrum' fighters.<sup>3</sup> The rest of its air force is composed of antiquated Russian MiG-23s, 21s, 19s, and 17s dating to the 1960s and 1970s. Their attack aircraft, such as the Soviet-era SU-25 'Frogfoot' can still be considered modern, as the Russian Aero Space Force still uses an upgraded model of this aircraft today.

But the rest of the fleet is composed of elderly SU-7s and Chinese Q-5s. Its bomber force comprises older H-5s (Chinese variant of the Russian TU-16) and IL-28s, which are of 1950s design and cannot carry an adequate bomb load. It is important to note that none of these aircraft is capable of dropping any type of precision, or advanced ordnance.

<sup>3</sup> Flight Global, World Air Forces, 2015.



*MiG-17. Source: DailyNK. \*Note 1960s style Chinese PLAAF leather jackets and pants*

There is little doubt that the pilots of the NKPAF are highly motivated, selected from politically reliable families, and are considered elite by most standards. However, their training and proficiency is highly questionable. On average, the KPAF pilot flies only an estimated 15-25 hours per year.<sup>4</sup>

The bulk of their training is conducted in simplified flight simulators or on the ground, conducting training with a partner walking with models practicing their tactics. The rest of their training consists of political indoctrination. Twenty-five hours per year is not enough proficiency to land a military aircraft under Visual Flight Rules (VFR) day conditions, let alone fly Instrument Flight Rules (IFR) or on coordinated night maneuvers.

Indeed, when the KPA shelled Yeonpyeong Island, of several fighters that were launched to provide Combat Air Patrol (CAP) during the attack, three later crashed on landing. In addition to lack of proficiency, the KPAF suffers from fuel and spare parts shortages due to economic problems and

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<sup>4</sup> Kim, Min-Seok research source: Byun Ji-hee, "Kim Jong-un Goes on an Internal Crackdown, Orders Air Force Flight Training Although There's No Propellant," Chosun Ilbo, April 18, 2019; and Peter Foster, "Intelligence Experts Analyse 'North Korean Fighter Jet Crash,'" Telegraph, August 18, 2018, <http://www.nkleadershipwatch.org/dprk-security-apparatus/general-staff-operations-bureau/>



support aircraft that are essentially museum pieces.<sup>5</sup> It should be noted that the average South Korean Air Force pilot flies more than 135 hours per year.<sup>6</sup>

### **KOREAN PEOPLE'S ARMY (KPA)**

*Chosŏn-inmin'gun*

North Korea has one of the largest standing armies in the world - with nearly one million personnel, and an estimated reserve of some 600,000. But, like the Air Force, the KPA suffers from antiquated equipment, lack of spares and fuel, and most likely, food too, due to numerous famines. Composing a major element of the KPA is its armor force and artillery, doctrinally based on outdated Cold War Soviet Army tactics. Artillery is central to the striking capability of the KPA.<sup>7</sup>

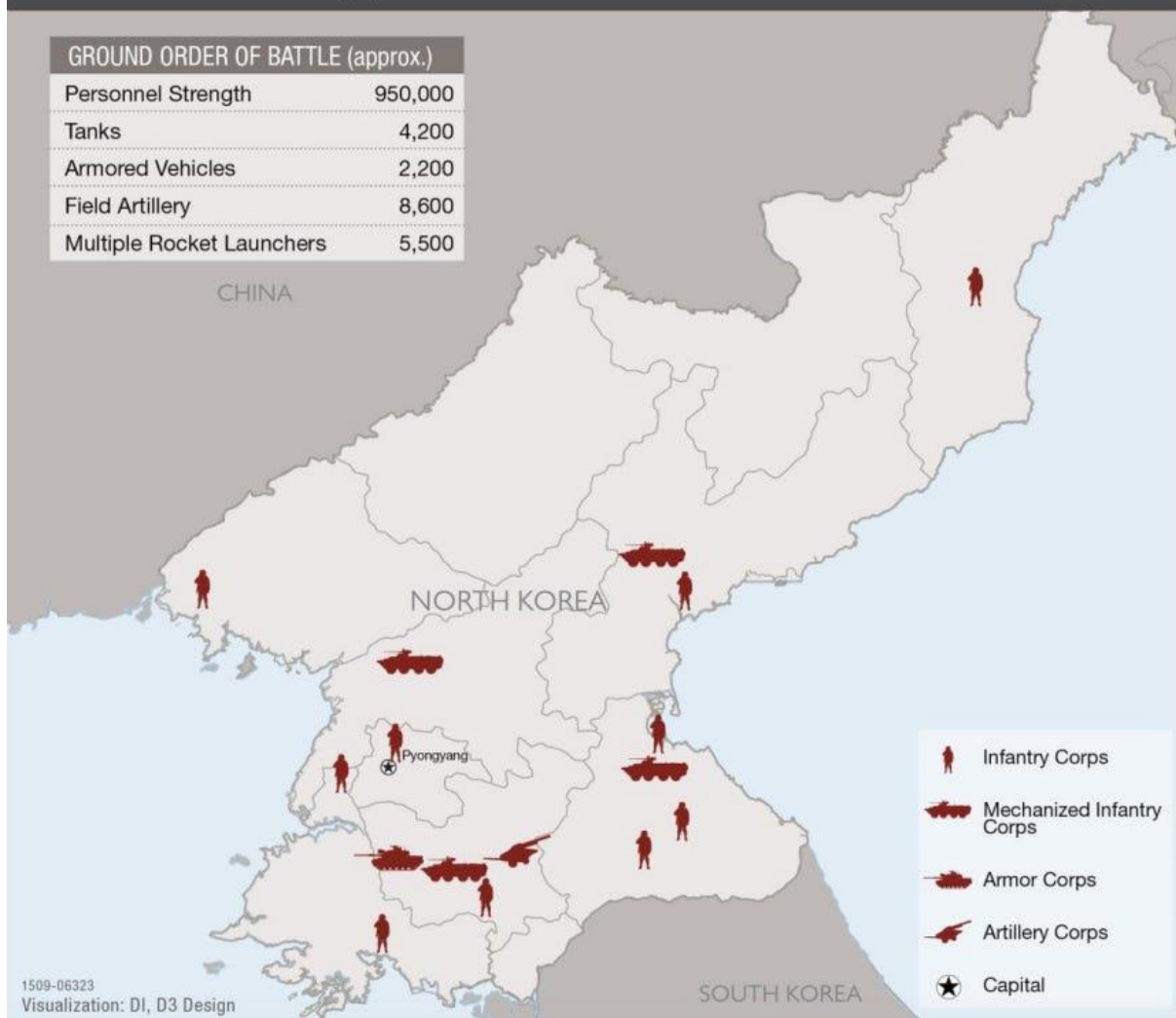
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<sup>5</sup> Kim, Min-Seok research source: Lee Han-seok, "*jeontujojongsa bihaenghunlyeonsigan choesosujundo mos michyeo*" [Combat pilot's minimum flight training time less than the minimum], SBS News, September 30, 2011

<sup>6</sup> Ibid.

<sup>7</sup> Kim, Min-Seok research source: U.S. Department of Defense, Military and Security Developments Involving the Democratic People's Republic of Korea: Report to Congress (Washington, DC: U.S. Department of Defense, 2017), <https://fas.org/irp/world/dprk/dod-2017.pdf>.

## (U) North Korean Ground Forces



*Army Bases Source: Office of the Secretary of Defense*

However, like the Air Force, the KPA suffers from antiquated armor, such as WWII vintage T-34s, 1950s era T-55s, and 1960s T-62 tanks. This force also includes some newer Chinese Main Battle Tanks (MBTs).<sup>8</sup>

Due to terrain, the KPA can only use several valleys to deploy their armor before arriving at the Demilitarized Zone (DMZ) between the countries. Most of these valleys are known to the U.S. and South Korean Forces and will present excellent targets of opportunity for Battlefield Air Interdiction (BAI) and Close Air Support (CAS) to disrupt their order of battle. Indeed, even if those tanks were able to engage U.S. and ROK forces, the M1A1 would be able to out gun any T-62 that would survive the perilous journey south.

The T-62s 115mm gun would be no match for the Korean K-2 and US Abrams, which sport 120mm guns and superior armor.

<sup>8</sup> Kim, Min-Seok research source: South Korean Ministry of National Defense, 2018 Defense White Paper, 23.



*T-34. Source: Vitaly V. Kuzman*

Another area that the KPA lags badly is in artillery and reliable munitions, despite having overwhelming numbers.<sup>9</sup> Using Russian/Chinese made guns and Multiple Launch Rocket Systems (MLRS), their performance is in doubt. Most KPA artillery was obtained before 1990, and some, like the D-30, 122mm piece were first developed in 1960. The KPAs main weapon system is the 170 mm M-1989 self-propelled gun (which provides no armor protection for the gun crew) and is limited to only 12 rounds, when it becomes necessary to change its barrel. It is reported to be inaccurate and difficult to maneuver.<sup>10</sup>

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<sup>9</sup> Kim, Min-Seok research source: South Korean Ministry of National Defense, 2018 Defense White Paper.

<sup>10</sup> Ibid.



*M-1989. Source: Picasa*

Additionally, the other heavy artillery piece is the 300mm Multiple Rocket Launcher (MRL). The 6×6 launcher truck features armored louvers to protect the windshield from rocket blasts, and the eight launch tubes are contained in two pods of four rockets, decreasing reload time as pods can be preloaded with missiles and swapped out faster than reloading individual tubes. The MRL's design is believed to be based on Russian and Chinese large-caliber rocket artillery.

The long range of this weapon system does present a threat to South Korea and is considered highly accurate by North Korean claims.<sup>11</sup> Their true numbers and accuracy, however, are not known.

The Yeonpyeong Island Incident of November 23, 2010, revealed glaring problems with munitions and accuracy of KPA artillery. The South Koreans estimated that the KPA fired more than 170 shells, using 120mm MRLs, Fifty percent of which fell harmlessly into the sea. Twenty five percent of the rounds that actually struck the island were duds.<sup>12</sup> If this is an example of the accuracy and reliability from nearly a decade ago, one must consider the reliability of the KPA's systems today, especially with most funds pouring into their nuclear and ICBM projects.

This also begs the question, how reliable are old rounds stocked, manufactured, or acquired since then with the same problems?

Although formidable in numbers, the KPA possesses the fourth largest army in the world, most of its ordnance is based on technology from 1960s to the 1980s. The majority of their infantry have no

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<sup>11</sup> [N. Korea reveals details of 300mm multiple rocket launcher](http://www.nknews.org) - NKnews.org, 4 March 2016

<sup>12</sup> Kim, Min-Seok research source: Joseph S. Bermudez, "The Yeonpyongdo-do Incident, November 23, 2010," 38 North, January 11, 2011, [https://www.38north.org/wp-content/uploads/2011/01/38North\\_SR11-1\\_Bermudez\\_Yeonpyeong-do.pdf](https://www.38north.org/wp-content/uploads/2011/01/38North_SR11-1_Bermudez_Yeonpyeong-do.pdf).



modern uniforms, body armor, radios, or NODS (Night Observation Devices - night vision goggles). Its soldiers, after years of famine, combined with COVID 19, are of questionable health. This also goes to their combat readiness, and their ability to fight a sustained war in the south.<sup>13</sup>

Several strategic issues also plague the KPA. First, has the KPAs General Staff derived a workable doctrine for incorporating new armaments into existing war plans, and how would this affect their much older systems?<sup>14</sup> If a functional plan does exist, how does this reflect in realistic training? The vast majority of KPA training that is available to the west is propaganda, with live fire exercises, usually conducted against static targets.

This includes air strikes, artillery, tank fire, and infantry small arms fire. But often is realistic training conducted?

Most experts believe it is infrequent.<sup>15</sup>

Lastly, as has been mentioned before, what is the operability and reliability of their weapons systems, some dating all the way back to WWII? With weapons sales to the North internationally outlawed since 2006, the KPA has been forced to self-develop equipment, reverse engineer stolen weapons, and rely on dual-use technology. The net result is most likely even more unreliable arms and munitions.<sup>16</sup>

## **KOREAN PEOPLE'S NAVY**

### *Chosŏn-inmingun Haegun*

The Korean People's Army Naval Force (KPANF) is mainly a coastal force of over 700 smaller vessels, with various fast attack boats of Russian design, 140 air cushioned landing craft (hovercraft) and at least two frigate class combatants.

Their capability is limited by the same issues that plague the rest of the DPRK's conventional arsenal, old ships and weapon systems, and poor training. However, the KPANF does possess nearly 70 diesel electric submarines.<sup>17</sup> Most of these old Soviet Romeo Class designs are considered "loud submarines" and easily detected by ROK and U.S. naval sonar.

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<sup>13</sup> Doug Bandow, Senior fellow, South Korea vs. North Korea: Who Has the More Powerful Military? Cato Institute.

<sup>14</sup> Liang Tuang Nah, Ph.D, The Tactical Implications of North Korea's Military Modernization. The Diplomat. January 27, 2021.

<sup>15</sup> Ibid.

<sup>16</sup> Ibid.

<sup>17</sup> Kim, Min-Seok, The state of the North Korean Military, Carnegie Institute for Peace, March 18, 2020.



*Romeo Class Submarine (Note Rust) Source: Business Insider*

The North Korean fleet also includes 70 midget submarines (including the *Yono*-class submarine and *Sang-O*-class submarine).

## (U) North Korean Naval Forces



**Navy Bases Source:** *Office of the Secretary of Defense*

Being mainly a brown water, riverine and coastal navy, the KPANF has very short range, and although it can protect the coast of North Korea to some extent, its aging fleet and weapons make it no match for the ROK and U.S. Navy. It simply doesn't have the capacity to engage an experienced blue water navy in the open Pacific.



*Patrol Boat Source: The Diplomat*

However, the KPNAF does pose a credible threat, as a surprise attack by midget submarine on a South Korean Navy Corvette in 2010 proves, with 46 South Korean sailors killed, many of which were draftees. But, due to its limited range, lack of modern surface and submarine combatants, poor safety record, the longevity and usefulness of the KPANF would be highly dubious in an armed naval conflict with the South and U.S. naval forces.

## **CONCLUSION**

The DPRK's conventional forces, while large, and formidable on paper, are still largely armed with antiquated ground weapons, aircraft, and ships. Does this force pose a danger to the Republic of Korea (ROK) in the south? The answer is yes. Mostly due to its sheer size. However, the amount of damage that it can cause depends on many factors that degrade that capability. Lack of parts, fuel, and fuel reserves, rations, training, and the ability to maintain and sustain any attack on the ROK is in serious doubt.

This is further exacerbated by not having any evident known doctrine that combines forces into a joint functioning military – a key to modern warfighting.

Being one of the poorest and most isolated countries in the world, the DPRK's military is also hamstrung by the loss of Russian, and to some extent, Chinese modern conventional weapons, which it can't afford. Importantly, decades of accelerated economic growth by South Korea have allowed South Korea to exceed the North's military power by being able to afford the most advanced conventional weapons available and provide the funds to adequately train and maintain a modern conventional military force.



This is something, beyond its nuclear weapons and delivery systems, the North does not possess.<sup>18</sup>

**\*\*Important Caveat – Special Operations Force**

*One area of North Korea's conventional armed forces not covered here is the 200,000-strong North Korean Special Operations Force -- the largest in the world. And larger than the entire U.S. Marine Corps.*

*The DPRK's twenty-five special-forces and special-purpose brigades, and five special-forces battalions, some reportedly akin to U.S. Marines, Army Rangers, and Green Berets, are tasked with missions from frontline DMZ assault to parachute and assassination missions. These commandos are trained to operate throughout the Korean Peninsula, and possibly beyond, presenting an unquantified asymmetric threat.*

*But, unlike their American special operations counterparts, such as Navy SEALs or Army Delta Force, it appears many of these units are capable of fighting as conventional airborne, air assault, or naval infantry as well.*

*Whether they too are more bark than bite is the topic of another paper.*



*North Korean special-forces soldiers parade for 105th birth anniversary of founder Kim Il Sung, in Pyongyang, April 15, 2017. REUTERS/Damir Sagolj*

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<sup>18</sup> Ibid.

## **BIOGRAPHY**

*Lieutenant Colonel Charles M. Schlom, US Army (ret.), a combat veteran of Afghanistan, is an Army aviator and Subject Matter Expert (SME) on the North Korean military. He is Contributor to the Center for American Defense Studies (CADS). In the Army he served in aviation positions from Section Leader to Corps Flight Operations. Schlom was also assigned to the 85<sup>th</sup> Division (Exercise) where he served as Scenario Developer, Senior Opposing Forces (OPFOR) Observer/Controller Trainer and OPFOR aviation SME. He has participated in numerous North Korean Battle simulations and exercises. Schlom graduated Cum Laude from Illinois State University where he was also a Distinguished Military Graduate from Army ROTC. A Command and General Staff College graduate he earned a Master of Business Administration at Chicago's Illinois Institute of Technology, Stuart School of Business.*

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