

INTER-KOREAN MISSILE CAPABILITIES AND DOCTRINES

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INTRODUCTION

Since World War II, the Korean peninsula has been home to disputes between the North and South regarding essential matters such as ideological identity and military security. On four notable instances - (1) the Armistice Agreement (July 1953), (2) the Joint Communiqué (July 1972), (3) the conclusion of the Basic Agreement (December 1991) and (4) Joint Declaration (June 2000), Seoul and Pyongyang attempted to rectify the Inter-Korean struggle. However, even today, after 75 years of failed attempts, the Korean conflict remains unresolved. Major credit for the unresolved complications goes to the Inter-Korean security complexities, wherein missile possession and development plays a pivotal role. This paper will focus on the missile objectives and capabilities of both North and South Korea. Between the two, The Democratic People's Republic of Korea (DPRK) has placed far more importance on missile capabilities. Nevertheless, South Korea has attempted to develop a robust defence system against the North Korean threat, and recent developments have tried to narrow down this disparity.

SECTION A: NORTH KOREA

DPRK's DOCTRINE AND GOALS

There are three main reasons why missile development is important for North Korea. Firstly, DPRK's main aim has been to tip the Inter-Korean and the worldwide military situation in its favour. It has paid an exceptional emphasis on strategically deterring the combined threats of the United States and South Korea. It is no secret that the Korean conflict has been deeply intensified because of the DPRK's perception of danger from the United States. A South Korea without the influence of Uncle Sam is a far smaller threat to North Korea. Therefore, in order to seek a solution to the Korean conflict at all, the focus should be on drastically reducing North Korea's insecurity stemming from a threatening USA.

Secondly, it is known to everyone that the North Korean missile programs are merely a tool to portray its supreme leader, Kim Jong-un's unmatched power and prestige. Even though North Korea's economy has been nothing short of a nightmare (due to its strict policy of self-

dependence), it never fails to invest hard cash into military advancements. According to the Korea’s Ministry of Unification, North Korea’s two missile launches in 2012 cost it a total of 1.3 billion USD. These funds are sufficient to buy 4.6 million tonnes of corn, which could potentially have fed the entire country for five years.¹ It is important to note that these numbers are from 2012, just a few months after Kim Jong-un took over power. According to the Centre for Strategic and International Studies’ Missile Defence Project, up till 2020, Kim Jong-un had conducted around 127 missile launches. The missile launches under Kim Jong-un are more than double of his predecessors, Kim Il Sung and Kim Jong Il combined.



Source: Centre for Strategic and International Studies- Missile Defense Project

Third, while simultaneously acting as an investment in its security, missiles are a source for DPRK to earn extensive foreign currency. North Korea, especially after the disintegration of the USSR, has been the most aggressive agent of ballistic missile systems. The country has been selling missile systems and technology to other nations, even after the United Nations Security Council has explicitly forbidden it. In the past, North Korea has sold its missiles to countries like Yemen,

¹ Ramy Inocencio, “North Korea’s Rocket Launches Cost \$1.3 Billion,” *CNN* (Cable News Network, December 12, 2012), <https://edition.cnn.com/2012/12/12/business/north-korea-rocket-cost/index.html>.

Iraq, Syria and Libya.² Furthermore, unlike its antagonist in the South, DPRK is not a member of the Missile Technology Control Regime (MTCR). Initially, North Korea had to take help from China and Russia to build a solid missile development structure. Today, the country is more or less self-sufficient when it comes to material, supplies and expertise.

DPRK's MISSILE CAPABILITIES

Background

North Korea's dedicated missile development efforts from the late 1970s to 2000 created a strong foundation for the following years. This segment will discuss the origin of some critical missiles that North Korea possesses till date.

Initial Soviet Assistance

To manifest an all-powerful missile development and export framework, North Korea had to take intense help and inspiration from its allies in Moscow. DPRK's missile development potential boosted in 1987, after the *Hwasong-5* was placed into speedy production. The *Hwasong-5* was DPRK's version of the Soviet Union's Scud-B. Within five years, North Korea initiated the development of the *Hwasong-6* (modified version of the Soviet weapon *Scud-C*). Later on, it also included the *Nodong* and *Taepodong 1* and *2* and additionally, worked on the Musudan after taking inspiration from the Soviet *R-27/SS-N-6 Serb*. Russian officials have accepted that nuclear specialists and high profiled missile experts from Russia aided North Koreans throughout the 1990s.³

However, North Korea's reliance on the Soviet Union for missile designs has raised three important concerns in the past:⁴

1. A restricted launch crew - Believing that the quality of domestically produced missiles is high, the missiles were still fundamentally based on Soviet designs. The lack of experience of the launch crew with respect to Soviet missiles would result in average outcomes at its very best.
2. Considering that missiles are produced in North Korea, they would not be highly reliable or accurate.

² "North Korea," Nuclear Threat Initiative - Ten Years of Building a Safer World, accessed July 15, 2021, <https://www.nti.org/learn/countries/north-korea/delivery-systems/>.

³ Markus Schiller, "Characterizing the North Korean Nuclear Missile Threat," *RAND Corporation*, September 27, 2012, https://www.rand.org/pubs/technical_reports/TR1268.html.

⁴ "Korean Missile Forces," Korean Missile Forces | *Center for Strategic and International Studies*, July 12, 2021, <https://www.csis.org/analysis/korean-missile-forces>.

3. The amount of well-tested missiles from the Soviet Union was remarkably limited.

Dependence on foreign technology remains one of the key reasons why North Korea has portrayed accelerated growth in missile development without an adequate amount of testing or successful results.

The *Hwasong* program

The DPRK has developed a gigantic stockpile of short-ranged ballistic missiles (SRBM). These SRBMs are domestically produced and have a maximum range of nearly 300-500 km.⁵ This means that it can conveniently travel to any significant targets in South Korea. Initially, it was evident to the world that the DPRK had updated the Soviet Union's classic *Scud-B*. North Korean version of these missiles had an increased diameter, improved range and a new rocket fuel. It is highly possible that North Koreans received ample aid from foreign means like China, Russia, Egypt and Iran while developing the missiles.⁶ In 1987, DPRK made its first-ever sale of the *Hwasong-5* (*Scud-B*) through a 500 million USD deal with Iran. This deal consisted of around 100 *Hwasongs* (which were later re-named as the *Shehbab-1*). Furthermore, in 1985, the two countries signed an agreement after which a production plant for the *Hwasong-5* was set up in Iran in 1988.⁷

The *Toksha*

First displayed in the military parades of April 2008, *Toksha*'s technology was very different from the Scud. However, it took inspiration from and was very similar to the Soviet SS-21 Scarab.⁸ Even though the range was restricted to just 120 km, the *Toksha* was more accurate than any other North Korean missile at that time.

⁵ Markus Schiller, "Characterizing the North Korean Nuclear Missile Threat," *RAND Corporation*, September 27, 2012, https://www.rand.org/pubs/technical_reports/TR1268.html.

⁶ Markus Schiller, "Characterizing the North Korean Nuclear Missile Threat," *RAND Corporation*, September 27, 2012, https://www.rand.org/pubs/technical_reports/TR1268.html.

⁷ "North Korea," Nuclear Threat Initiative - Ten Years of Building a Safer World, accessed July 15, 2021, <https://www.nti.org/learn/countries/north-korea/delivery-systems/>.

⁸ "North Korea's Nuclear and Missile Programs," *Crisis Group*, August 17, 2016, <https://www.crisisgroup.org/asia/north-east-asia/korean-peninsula/north-korea-s-nuclear-and-missile-programs>.

The Nodong Program

Like most North Korean missiles, the *Nodong* (or *Nodong-1*) was derived from the Soviet *Scud*. It was successfully flight tested in the year 1993, which the Pakistanis and the Iranians reportedly observed. One can understand a lot about the *Nodong* if it is compared with the Pakistani *Ghauri-II* and the Iranian *Shahab-3*. It seems like the results from the tests of *Shahab-3* and *Ghauri-II* was shared with the DPRK, and initially, all these missile programs appeared to be related to each other. However, the *Nodongs* displayed in the military parade of 2010 looked different from the Iranian and Pakistani missiles, and instead, resembled the Iranian missile *Gadhr-1*. According to some reports, the Iranians committed 500 million USD to expand missile capacities with the DPRK during the same time.⁹ Furthermore, opposed to other modern missiles, the *Nodong's* accuracy (and hence reliability) is low and the program still requires a considerable number of tests to thrive.

THE TAEPODONG PROGRAM

Taepodong-1

In the late 1980s, the DPRK started developing the *Taepodong-1* (known as *Scud-X*). The *Taepodong* was Pyongyang's first-ever multi-stage missile, which was deemed as the key to Inter-Continental Ballistic Missile (ICBM) possibilities. The missile possesses an approximate range of 2000 km. The North Koreans developed the missile by using the *Nadong* in the first and the *Hwasong-5/6* in the second stage. Instead of a re-entry vehicle, a Space Launch Vehicle was used in the third stage which give it more potential. In August 1998, the *Taepodong-1* was tested for the first using an SLV. However, the test failed at its third stage. After the failed *Taepodong-1* test, a reformed *Taepodong-2* program was inaugurated.¹⁰

Taepodong-2

By the early 1990s, North Korea began the advancement towards the *Taepodong-2* (*Moksong-2*). It resembled the *CSS-2/3* from China at its first stage and *Nodong* at the second stage. It also has not been tested enough, but initially, it was believed that the *Taepodong-2* could cover the distance up till California comfortably.¹¹ However, the estimates regarding the *Taepodong-2* vary

⁹ Markus Schiller, "Characterizing the North Korean Nuclear Missile Threat," *RAND Corporation*, September 27, 2012, https://www.rand.org/pubs/technical_reports/TR1268.html.

¹⁰ "North Korea," Nuclear Threat Initiative - Ten Years of Building a Safer World, accessed July 15, 2021, <https://www.nti.org/learn/countries/north-korea/delivery-systems/>.

¹¹ "North Korean Ballistic Missile Threat to the United States," EveryCRSReport.com (Congressional Research Service, February 24, 2009), <https://www.everycrsreport.com/reports/RS21473.html>.

drastically. Some estimates display that at its best (a complete three-stage missile variant), the *Taepodong-2* can travel 10,000 km, easily covering San Francisco and the Pacific coast US cities.¹²

If the *Taepodong* program was a success and a *Taepodong-2* was truly developed (as North Korea claims), the North Korean dictator would have ticked one major box in his checklist. A significant reason why an ICBM was critical for North Korea is that the United States itself will be at stake in inter-Korean matters. Before the *Taepodong*'s development, the threat was only majorly directed towards US allies and US bases around North Korea. However, now, any form of substantial conflict instantly puts US citizens in danger, and hence, USA must handle the Korean matter with the utmost sensitivity.

The Musadan

Reports suggest that in the 1990s itself, DPRK had started developing an upgraded and longer-ranged Inter-Continental Ballistic Missile called the *Musadan* (or *Nodong-B*). The design was based on Soviet Union's R-27 missile, which it had deployed during the 1960s. The *Musadan* was first showed to the world during a North Korean military parade in October 2010.¹³ Again, the estimated range of the *Musadan* varies from source to source. Nevertheless, the *Musadan* is estimated to have a range between 2500 km to 4000 km.¹⁴ With such capability, the *Musadan* missile can potentially strike US bases in Okinawa and Guam.

The Soviet Scud was the initial inspiration behind most of the missiles present in the DPRK today. Initial Russian assistance drastically helped North Korea to build a powerful military that challenges the world. The circumstances that stand today threaten both the United States of America and South Korea simultaneously. Even after disastrous failures, the consistent and dedicated development of missiles is the reason why the North Korean Military stands strong in 2021. The credit of what happens in North Korea today goes back to the primary *Hwasong*, *Toksha*, *Nodong*, *Taepodong* and *Musadan* programs.

RECENT ADVANCEMENTS

After witnessing the October 2020 military parade, it is clear that North Korea has continued its advancements in the nuclear warfighting potential that can counter its enemies' ballistic missile defense systems.

¹² "North Korea," Nuclear Threat Initiative - Ten Years of Building a Safer World, accessed July 15, 2021, <https://www.nti.org/learn/countries/north-korea/delivery-systems/>.

¹³ "Missiles, Maneuvers and Mysteries," James Martin Center for Nonproliferation Studies, July 6, 2016, <https://nonproliferation.org/missiles-maneuvers-and-mysteries-review-of-recent-developments-in-north-korea>.

¹⁴ "North Korea," Nuclear Threat Initiative - Ten Years of Building a Safer World, accessed July 15, 2021, <https://www.nti.org/learn/countries/north-korea/delivery-systems/>.

Nuclear Tests

A nuclear explosive device has been tested six times since 2006 by the DPRK, the most recent one being in September 2017. At the time, a North Korean statement claimed that they had tested a two-staged thermonuclear warhead, which was being developed to deliver on an ICBM. Furthermore, in April 2018, North Korea decided to close down its Punggye-ri nuclear test site, stating that it had achieved its desired goals.¹⁵ If North Korea has completed its nuclear ambitions (as claimed in 2018), it will, in all probability, aim further to combine its nuclear power with existing ballistic missile capabilities. Ballistic missiles have the potential to deliver nuclear payloads at incredibly high speed.

ICBMs

Successful launches of the multi-stage missile *Hwasong-14* in July and *Hwasong-15* in November 2017 were excellent signs for North Korea. These tests meant that North Korea could strike the whole US continent. Despite this development, the dependability of these ICBMs remains low. The *Hwasong-15* test in November 2017 was the last instance where North Korea tested an ICBM. In a military parade in October 2020, North Korea also displayed a new and larger *Hwasong*, which has not been tested yet. This vast time gap may also mean that North Korea possesses only a limited number of these missiles.¹⁶

Short and Medium-range Missiles

From 2019, the DPRK boosted its Short Range Ballistic Missile (SRBM) and Medium Ranged Ballistic Missile (MRBM) tests. Even though there was a small gap between March 2020 till 25th March, 2021, a series of short-ranged system launches broke the silence. Pyongyang's SRBMs, MRBMs, and multiple rocket launch systems (MRLS) pose a direct and pressing threat to other nations. North Korea is showing a shift towards satellite guidance systems and solid propellants, the advancements and knowledge of which can carry over to ICBMs.

The modern bunch of North Korean missiles (*Hwasong-14* and *-15*, *KN-15*, *-23*, *-24* and *-25*) have displayed immense progress toward North Korea's military goals. The recent progress has been aimed at overpowering missile defenses in neighbouring countries, specifically in South Korea. North Korea has a massive military structure due to its dedication toward testing, especially under the supervision of Kim Jong-un. North Korea should build on its potential and advance its already improving missile precision, accuracy, and reliability. Therefore, the future goal of North Korea

¹⁵ Mac William Bishop, "North Korea's Vow to Shut Punggye-Ri Nuclear Site Appears Mostly Symbolic," NBCNews.com (NBCUniversal News Group, May 7, 2018), <https://www.nbcnews.com/news/north-korea/north-korea-s-vow-shut-punggye-ri-nuclear-site-appears-n869991>.

¹⁶ "North Korea: What We Know about Its Missile and Nuclear Programme," *BBC News* (BBC, April 14, 2021), <https://www.bbc.com/news/world-asia-41174689>.

should be polishing, and as North Korea likes it, flaunting its abilities to maintain its deterrence policy against its enemies. After a 75 year-long history which resulted in the formation of North Korea and, consequentially, the development of a gigantic missile program, the current status of North Korean Missiles stand as follows -

Missile	Class	Range	News
<u>KN-24</u>	SRBM	410 km	In Development
<u>Pukguksong-3 (KN-26)</u>	SLBM	1900 km	Operational
<u>KN-25</u>	SRBM	380 km	Operational
<u>KN-23</u>	SRBM	450 km	Unknown
<u>Hwasong-15</u>	ICBM	8,500-13,000	In Development
<u>KN-06</u>	SAM	150 km	Operational
<u>M1985/M1991</u>	MLRS	40-60 km	Operational
<u>Koksan M1978</u>	Artillery	40-60 km	Operational
<u>Hwasong-14</u>	ICBM	10,000+ km	In Development
<u>KN-09</u>	MLRS	190 km	In Development
<u>Kumsong-3</u>	ASCM	130-250 km	Possibly Operational
<u>Hwasong-12</u>	IRBM	4,500 km	In Development
<u>KN-18 (Scud MaRV Variant)</u>	SRBM	450+ km	In Development
<u>Pukguksong-2 (KN-15)</u>	MRBM	1,200-2,000	Operational
<u>Pukguksong-1 (KN-11)</u>	SLBM	1,200 km	In Development
<u>No-Dong</u>	MRBM	1,200-1,500 km	Operational

<u>Taepodong-1</u>	IRBM	2,000-5,000 km	Obsolete
<u>Taepodong-2</u>	SLV	4,000-10,000 km	Operational
<u>KN-14</u>	ICBM	8,000-10,000 km	In Development
<u>KN-08</u>	ICBM	5,500-11,500 km	In Development
<u>BM-25 Musudan</u>	IRBM	2,500-4,000 km	In Development
<u>Hwasong-9 (Scud-ER)</u>	MRBM	800-1,000 km	Operational
<u>Hwasong-6</u>	SRBM	500 km	Operational
<u>Hwasong-5</u>	SRBM	300 km	Operational
<u>KN-01</u>	ASCM	110-160 km	Operational
<u>KN-02</u>	SRBM	120-170 km	Operational

Source: Centre for Strategic and International Studies- Missile Defense Project

SECTION B: SOUTH KOREA

MISSILE CAPABILITIES

It is evident to the world that every political and military action taken by Seoul is a direct result of DPRK's behaviour. The fundamental basis for a long-lasting US-ROK relation is DPRK. The USA has discouraged ROK from working on any long-range ballistic missile. In 1979, the ROK, in return for technical guidance from the United States, voluntarily agreed to not developing ballistic missiles that exceed the range of 180 km. However, Seoul has constantly been seeking to increase that limit since the late second half of the 1990s, which has resulted in several revisions in the original memorandum of understanding between the two countries.¹⁷

¹⁷ "Arms Control Today," Arms Control In Print | *Arms Control Association*, accessed July 15, 2021, <https://www.armscontrol.org/act/2000-03/arms-control-print-0>.

Background

The NHK Program

Despite constant pressure from the United States, ROK has made a few attempts to go on the offensive. ROK President Park Chung Hee released a directive to concentrate on an SRBM program. Just like the DPRK took missile inspiration from Moscow, Seoul reverse-engineered the *Nike Hercules* system from the United States in 1975. This missile system was given the name *NHK-1* and initially had a range of 150 km. The first successful test of the *NHK-1* was completed in September 1978.¹⁸ Immediately after that, the White House feared a potential arms race in the Korean peninsula. In this very context, the ROK signed an agreement with the United States to constrain its missile range to 180 km and a maximum of 500 kg payload. After agreeing to the terms of the deal, The ROK further developed the NH-2, which ranged from 180 km to 250 km.¹⁹

The 2001 Missile Technology Control Regime

As a result of Pyongyang's constantly threatening tests and missile developments, South Korea also wished to expand its own missile program. In 1995, ROK reached out to the White House and notified the USA that it wanted to re-adjust the 1979 agreement. The country joined the MTCR in 2001, superseding the 1979 agreement with the US.

The Hynmu Program

Due to the restrictions put forth by the MTCR, ROK's focus shifted on developing the *Hynunmu-3*, a cruise missile that could conveniently deliver payloads under 500 kg. Later on, the *Hynmu-3A* and *3-B* were deployed by the ROK in 2006 and 2009 respectively. The most recent of them, however, was the *Hynmu-3C*. The missile is reported to enter production in 2010. The *Hynmu-3C* had the ability to travel up to 1,500 km, which covers areas not just in DPRK but also in Japan, Russia and China. Further advancements in the program will not have a game-changing impact on the equation but will most definitely give South Korea a new option to counter Pyongyang. In case of an Inter-Korean military conflict, Seoul will at least have a source to strike long-distance targets without involving aircrafts. In order to increase ROK's deterrence capabilities even further, revisions were again made to the agreement between the USA and South Korea. This was a result

¹⁸ "South Korea," Nuclear Threat Initiative - Ten Years of Building a Safer World, accessed July 15, 2021, <https://www.nti.org/learn/countries/south-korea/>.

¹⁹ "NHK-1," Missile Threat, accessed July 15, 2021, <https://missilethreat.csis.org/missile/nhk-1-nike-hercules-korea/>.

of sky-rocketed threats from the DPRK in 2012.20 ROK could now deploy missiles with a distance of 800 km and a payload capacity of 500 kg. Seoul further displayed its urge to expand its military capability with a series of test launches in April 2014.²¹

MISSILE DEFENCE SYSTEMS

KAMD- The Korean Air and Missile Defense System

In the defensive category, ROK is more prepared than DPRK. After the 2012 missile and 2013 nuclear tests from the DPRK, Seoul accelerated its ballistic missile defense objectives. In this context, the ROK decided to build a *Korean Air and Missile Defense* (KAMD), believing that it would suit the Korean dynamics more than a US anti-missile program. 900 million USD was spent by Seoul to buy the *Patriot Advanced Capability 2* (or *PAC-2*) systems from Germany in 2008. The Israeli *Iron Dome*, which ROK sought to purchase in the past, is not ideal in the Korean Peninsula. In an open conflict, the DPRK can fire up to 500,000 rounds of artillery on South Korea in just one hour.²² Furthermore, the *Iron Dome* will be too expensive for South Korea to maintain, with one *Iron Dome* battery costing around 50 million USD.²³

Space

In the 1990s, the ROK started developing its space program. This included the development of an SLV too. In August 2009, ROK launched the Korea Space Launch Vehicle - 1. This raised a lot of concerns amongst the international community regarding South Korean WMD potential. The partial success of this launch proved that ROK has the resources and the willingness to deploy dangerous long-range ballistic missiles successfully. In the future, it is possible for Seoul to work on such long-range ballistic missiles and counter the threat that the DPRK's missile programs pose.²⁴

²⁰ Sang-hun, Choe. "U.S. Agrees to Let South Korea Extend Range of Ballistic Missiles." *The New York Times*. *The New York Times*, October 7, 2012. <https://www.nytimes.com/2012/10/08/world/asia/us-agrees-to-let-south-korea-extend-missile-range.html>.

²¹ "South Korea Extending Ballistic Missile Range to Counter North's Threat," *Yahoo! News* (Yahoo!), accessed July 15, 2021, <https://news.yahoo.com/soth-korea-extending-ballistic-missile-range-counter-norths-031335112--sector.html>.

²² Victor Cha David Kang, "Think Again: North Korea," *Foreign Policy*, March 25, 2013, <https://foreignpolicy.com/2013/03/25/think-again-north-korea/>.

²³ Kevin Baron, "Why Doesn't Seoul Have Iron Dome?," *Foreign Policy* (Foreign Policy, April 9, 2013), <https://foreignpolicy.com/2013/04/09/why-doesnt-seoul-have-iron-dome/>.

²⁴ Nknews, "South Korea Launches Space Rocket: Pyongyang Silent: NK News," *NK News - North Korea News*, December 26, 2019, <https://www.nknews.org/2013/01/south-korea-launches-space-rocket-pyongyang-silent/>.

Below is a list of all the current South Korean Missiles-

Missile	Class	Range	News
Hellfire	ASM	7-11 km	Operational
Hyunmoo 3D/4	LACM	3,000 km	In development
Hyunmoo 3C	LACM	1,500 km	Operational
Hyunmoo 3B	LACM	1,000 km	Operational
NHK-2	SRBM	180-250 km	Operational
NHK-1	SRBM	180 km	Obsolete
Hyunmoo 3A	LACM	500 km	Operational
Hyunmoo-2C	SRBM	800 km	In development
Hyunmoo-2A	SRBM	300 km	Operational
Hyunmoo-2B	SRBM	500-800 km	Operational
Haeseong III	LACM	1,500 km	Operational
Haeseong II	LACM	500 km	Operational
Haeseong I	ASCM	150-250 km	Operational

Source: Centre for Strategic and International Studies- Missile Defense Project

SOUTH KOREAN DOCTRINE

The South Korean approach has primarily been defensive. Today, precision strike has become a major part of the ROK's doctrine. The two main South Korean strategies against a potential North Korean confrontation today are "Korea Massive Punishment and Retaliation" (KMPR) and "Kill Chain". These strategies depend on surveillance and precision guidance to defend against the North Korean threat. The "Kill Chain" and KMPR strategies work directly in coordination with the KAMD framework. The Kill Chain works on early detection and preemptive striking. North Korean political movements are constantly monitored, and if DPRK attacks, the Kill Chain attempts to strike and destroy DPRK's offensive. The KMPR, in assistance, is likely to be utilised when there is a North Korean nuclear or major conventional attack. In a war-like situation in the future, a ground conflict is bound to happen. However, it is important that the South Korean missile defense system stays active and acts efficiently during the first few hours of the conflict. Therefore, developing a flawless and robust missile defense system should be South Korea's first priority.

CONCLUSION

The current Korean situation brings with it two significant concerns related to arms control. Firstly, it is important to consider the Nth weapon paradox. According to this paradox, it is possible to constrain a nation's nuclear weapons. However, it is practically impossible to be sure that the country has not retained a few. Furthermore, arms control also increases specific targeting - the fundamental problem with controlling arms is that the limited the capacity is, the more it can be used in ways that puts critical targets in the limelight. For example, hypothetically, if North Korea has just one conventional missile in its arsenal, it will undoubtedly aim that missile towards Seoul, the most populated city of South Korea, putting millions of people in danger. Secondly, it is important to take into account the diversion effect. The diversion effect is the never-ending uncertainty and risk that controlling nuclear power can potentially push a country more toward chemical and biological weapons. It is important to note that North Korea has, for a long time, possessed chemical power.

It is known to the world that North Korean missiles are not the best when it comes to accuracy and reliability. Unless North Korea conducts an extensive number of tests in the upcoming years, it cannot be certain about its true potential. Furthermore, DPRK desperately needs to increase its focus on "smart warheads". A lot of North Korean tests fail in the third stage, and that is where the DPRK has to work. Once North Korea masters the art of consistently delivering a nuclear warhead on ballistic missiles (which it has been trying to and has partially succeeded), not just South Korea, but even the international community as a whole will be in the direct radar at all times. Overall, it is essential to realise that missiles, and conventional weapons as a whole, are only one part of the wider issue of Inter-Korean imbalance. South Korea should look forward towards a bi-lateral approach in the Korean Peninsula. Furthermore, it is important for Seoul to

develop a strong ballistic missile arsenal like North Korea, even if it means pushing its luck with the United States of America. As mentioned previously, a South Korea without the USA is a much smaller threat to Kim Jong-un. Extensive DPRK nuclear programs in the future can be prevented only if the North Korean insecurity with respect to the United States of America is eliminated.