

Chapter 4

The Korean Peninsula: North Korea's Growing Nuclear and Missile Threat and South Korea's Anguish

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The Democratic People's Republic of Korea (DPRK, or North Korea), following the strategic line on carrying out economic construction and building nuclear armed forces simultaneously, conducted its fourth and fifth nuclear tests, and multiple launches of Nodong missiles that can reach Japan, Musudan missiles that can reach Guam, and submarine-launched ballistic missiles (SLBM). It accelerated the pace of its nuclear and missile development, repeatedly fired ballistic missiles into the waters near Japan, and continues to increase its threat level. Moreover, a Five-Year Strategy for National Economic Development was announced at the Seventh Congress of the Workers' Party of Korea (WPK), convened for the first time in thirty-six years, and it appears, in fact, that nuclear and missile development is prioritized over economic development. Domestically, Kim Jong Un was installed as Chairman of the WPK and Chairman of the State Affairs Commission of the DPRK, continuing his regime's dictatorship and reign of terror through purges.

In response to North Korea's nuclear tests, the Park Geun-hye administration of the Republic of Korea (ROK, or South Korea) changed course toward increased psychological, diplomatic, and military pressure on North Korea. While this shift created discord with the People's Republic of China (PRC, or China) in terms of sanctions against North Korea, the US-ROK alliance and Japan-US-ROK cooperation were strengthened. The new president to be elected in 2017 may attempt to change these policies of the Park administration but whether this would result in the denuclearization of North Korea is not clear.

Militarily, South Korea focused on systems for precision attacks to destroy North Korea's nuclear and missile facilities and building its own missile defense system. In response to North Korea conducting two nuclear tests in 2016, South Korea made clear its policy of retaliation targeting North Korean leadership with ballistic missiles and special operations forces in the event of North Korean use of nuclear weapons. Regardless of whatever means of retaliation are employed, the challenge is whether the situation inside of North Korea can be accurately gauged.

1. North Korea: Growing Nuclear and Missile Threat Nearing Operational Deployment

(1) Diversification and Demonstration of North Korea's Nuclear and Missile Capabilities

North Korea's provocative actions in 2016 began with its fourth nuclear test, allegedly a hydrogen-bomb test, on January 6. This test was conducted in Punggye-ri, North Hamgyong Province of North Korea, the same area as in previous tests. On the same day, Pyongyang issued a statement that described the fourth nuclear test as follows.¹⁾ First, this test was of a "smaller" hydrogen bomb "conducted with indigenous wisdom, technology and efforts." Second, North Korea, as "a responsible nuclear weapons state, will neither be the first to use nuclear weapons nor transfer relevant means and technology under any circumstances as already declared as long as the hostile forces for aggression do not encroach upon its sovereignty." Third, this test was a defensive measure against "the ever-growing nuclear threat and blackmail by the U.S.-led hostile forces," and North Korea would not abandon its nuclear development until and unless the United States "rolled back its vicious hostile policy toward [the DPRK]." Fourth, North Korea would continue to "steadily escalate its nuclear deterrence of justice both in quality and quantity."

While many question whether this fourth nuclear test, in fact, employed a miniaturized hydrogen bomb, there exists the possibility that North Korea has succeeded in developing a miniaturized nuclear warhead.²⁾ Further, the second point noted above is interpreted as a declaration of no first use and a declaration of intent of nuclear nonproliferation. Nuclear-weapons states generally declare their intention of no first use and nonproliferation, but this is not the first time that Pyongyang has also hinted at its intentions in this regard.

North Korea, in an ordinance promulgated by the Supreme Peoples' Assembly in 2013, has stated that it, as a "responsible nuclear-weapons state," shall: (1) neither use nor threaten the use of nuclear weapons against a non-nuclear state unless that state joins a hostile nuclear weapons state in an invasion of or attack on the republic; (2) strictly observe the rules on safekeeping and management of nuclear weapons, and ensure the safety and security of nuclear testing; (3) establish a mechanism and order for safekeeping and management of nuclear weapons and technology, and ensure weapons-grade nuclear materials are not

leaked illegally; (4) upon the ending of adversarial relationships with hostile nuclear weapons states, cooperate in international efforts for nuclear nonproliferation and safe management of nuclear materials based on the principles of mutual respect and equality; and (5) actively support international efforts toward nuclear disarmament, oppose any nuclear arms race, and build a world free of nuclear weapons, eliminating the risk of nuclear war.³⁾

This should be considered North Korea's peacetime nuclear doctrine and it is thought the DPRK will continue to adhere to this position going forward. The same ordinance also stipulates, in addition to no first use and nonproliferation, North Korea's nuclear weapons are a defense mechanism against the United States, the DPRK's nuclear development will not be abandoned until the world is denuclearized, that the country would continue to strengthen its nuclear weapons both qualitatively and quantitatively, and that the final decision to use nuclear weapons would only occur upon the order of Kim Jong Un.

In addition, North Korea conducted its fifth nuclear test on September 9, 2016, the anniversary of the founding of the DPRK. In contrast to the fourth nuclear test, North Korea issued a statement regarding the test via the Nuclear Weapons Institute of North Korea, declaring: (1) the successful nuclear test confirmed the structure and specific features of movement, performance, and power of the nuclear warhead that has been standardized to be able to be mounted on the strategic ballistic rockets of the Hwasong (using the original North Korean naming) artillery units of the Strategic Forces; (2) analysis of test results confirmed the observed values of explosive power and nuclear material use coefficients "conformed with the calculated values," and there was no leakage of radioactive materials during the test, and therefore there was "no adverse impact on the

Table 4.1. Estimated yield of North Korea's nuclear tests to date

| Date of Test | Yield (kilotons) |
|---------------------|-------------------------|
| Oct. 9, 2006 | 0.5 to 1 |
| May 25, 2009 | 2 to 3 |
| Feb. 12, 2013 | 6 to 7 |
| Jan. 6, 2016 | 6 to 7 |
| Sep. 9, 2016 | 11 to 12 |

Sources: Comprehensive Nuclear Test Ban Treaty Organization, US Geological Survey, and others.

ecological environment of the surroundings”; (3) the standardization of the nuclear warhead will enable the DPRK to produce, at will and as many, warheads as it wants of a variety of smaller, lighter, and diversified nuclear warheads of higher strike power, acquiring the technology for producing and using various fissile materials, advancing North Korea’s nuclear weapons to an even higher level.⁴⁾

The yield of North Korea’s fifth nuclear test was eleven to twelve kilotons, larger than the previous four tests but not reaching the level of the fifteen kilotons of the Hiroshima-type “Little Boy” atomic bomb and the twenty-one kilotons of the plutonium-core “Fat Man” bomb dropped on Nagasaki. Further, the statement above noted that North Korea had advanced its nuclear weaponization to even higher levels, suggesting that it has made progress in miniaturization and warhead technology,⁵⁾ that is, its weaponization capabilities in terms of mounting nuclear warheads on ballistic missiles.

Immediately following North Korea’s fourth and fifth nuclear tests, Japan deployed Japan Air Self-Defense Force T-4 aircraft to collect radioactive particles and C-130 transport aircraft to collect noble gases, as it has done in the past.

North Korea, as in remarks by a spokesperson for the Ministry of Foreign Affairs on October 6, suggested it would engage in actions such that the United States would “face a shuddering reality,” and it is possible that such actions included the nuclear test.⁶⁾

North Korea has continued to launch ballistic missiles, including the February 7, 2016, launch of a ballistic missile ostensibly for a “satellite,” and multiple launches of Musudan missiles capable of striking Guam and Nodong missiles capable of reaching Japan. The missile launched on February 7 is thought to be a Taepodong-2 variant with a range of 10,000 kilometers, sufficient to reach the Midwestern United States.⁷⁾ Of special concern to Japan’s national security were the August 3 landing of a Nodong missile (one of two fired that day) in Japan’s exclusive economic zone (EEZ) off the Oga Peninsulain Akita Prefecture, and the September 5 launches of three missiles that landed in the EEZ. The missile that entered Japan’s EEZ on August 3 landed approximately 250 kilometers west of the Oga Peninsula, presenting not only a hazard for aircraft flying in the area but also fishing boats active in nearby waters, with Norihisa Satake, governor of Akita Prefecture, stating, “This deeply disturbing incident will inevitably have a serious impact upon the safety and peace of mind of the lives of prefectural residents.”⁸⁾ As for the three missiles launched on September 5, at least one landed in the

waters approximately 200 kilometers west of Okushiri Island in Hokkaido. Further, the September 9 nuclear test, the second of the year, combined with continued launches of ballistic missiles, raised concerns expressed as “the threat level is different from the threat levels to date” and “a step up in the degree of threat.”⁹⁾ While the South Korean military classified the three missiles as Scud class, some experts specifically identified the missiles as Scud-ER (Extended Range).¹⁰⁾ The Scud-ER is a missile developed solely by North Korea that extends the range of existing Scud missiles. In addition, North Korea is thought to be developing intercontinental ballistic missiles (ICBMs) called KN-08 and a variant thereof called KN-14. North Korea publicly announced that it had conducted a successful test burn of a high-power rocket engine for ICBM under the “on-the-spot guidance” of Kim Jong Un.¹¹⁾ Kim Jong Un in his New Year address on January 1, 2017, spoke of North Korea being in the final stages of preparation for test launch of an ICBM,¹²⁾ suggesting the possible test launch of an ICBM hereafter.

North Korea also conducted launch tests of submarine-launched ballistic missiles (SLBMs) on April 23, July 9, and August 24 in 2016. The July test ended in failure when the missile exploded after flying only several kilometers, but the SLBM launched in April flew approximately thirty kilometers, and the one launched in August traveled about 500 kilometers. The August flight was described by Pyongyang as the successful test launch of a strategic SLBM.¹³⁾ The same announcement stated that Kim Jong Un oversaw the test, and that the test launch from maximum launch depth and high-angle launch trajectory confirmed that the core ballistic missile technology indicators required by operational strategy had been completely achieved, including accuracy of the warhead’s atmospheric re-entry, reliability of operation of the stage separation and guidance systems. It also said that the test reconfirmed the flight dynamics of each stage during its flight following underwater launch, the ignition characteristics of the high-power solid-fuel rocket engines, and the safety of the ballistic missile cold launch system. Cold launch refers to the ignition of rocket engines after the missile has been ejected into the air. North Korea also issued a statement following the April launch declaring that the stability of the cold launch system had been tested.¹⁴⁾ In the announcement regarding the August SLBM launch, Kim Jong Un proclaimed, “the U.S. mainland and the operational theatre in the Pacific are now within the striking range of the [Korean People’s Army], no matter how hard the U.S. tries to deny it,” maintaining North Korea’s hostile stance against the United States and

Table 4.2. North Korean nuclear and missile activity in 2016

| Date | Activity |
|---------|---|
| Jan. 6 | 4th nuclear test, claimed to be “test of hydrogen bomb.” |
| Feb. 7 | Launched long-range ballistic missile (Taepodong-2 variant) purportedly to orbit a “satellite.” The second stage landed approximately 2,500 km from the firing point. |
| Mar. 10 | Launched two Scud missiles, which flew approximately 500 km. |
| Mar. 18 | Launched one Nodong missile. |
| Apr. 15 | Launched one Musudan missile (failure). |
| Apr. 23 | Launched one SLBM, exploded in mid-air after flying approximately 30 km. |
| Apr. 28 | Launched two Musudan missiles (failure). |
| May 31 | Launched one Musudan missile (failure). |
| June 22 | Launched two Musudan missiles, one successfully flew approximately 400 km. The other missile, however, exploded in mid-air. |
| July 9 | Launched one SLBM, which exploded after flying several km. |
| July 19 | Launched three ballistic missiles, of which two flew approximately 400 to 500 km (thought to be Scud or Nodong missiles). |
| Aug 3 | Launched two Nodong missiles, one flew approximately 1,000 km, landing in Japan’s EEZ; the other exploded. |
| Aug. 24 | Launched one SLBM, which flew approximately 500 km. |
| Sep. 5 | Launched three ballistic missiles, all of which flew approximately 1,000 km, landing in Japan’s EEZ. |
| Sep. 9 | Conducted fifth nuclear test. |
| Oct. 15 | Launched on Musudan missile, the first to be launched from Kusong (failure). |
| Oct. 20 | Launched one Musudan missile (failure). |

Sources: Compiled by authors from Japan Ministry of Defense, “2016 nen no Kitachosen niyuru misairu hassha ni tsuite” [North Korea’s Nuclear Test and Missile Launches], November 9, 2016, and various media reports.

Note: The table above covers nuclear tests and ballistic missile launches.

“its followers.” Moreover, the SLBM launched in August landed in Japan’s Air Defense Identification Zone in the Sea of Japan, representing an even greater and immediate threat to Japan’s national security.

Additionally, North Korea continues to improve the accuracy of a new-type 300-millimeter multiple rocket launcher aimed at South Korea, including ROK Armed Forces and US Forces Korea (USFK) units. In March 2016, twelve rockets were fired from what is thought to be a new type of rocket launcher targeting the

Sea of Japan and other areas. The rockets were fired from a transporter-erector-launcher (TEL) and flew approximately 200 kilometers. The long-range rocket launchers deployed in tunnels near the military border have the range to strike the metropolitan area of Seoul, with high probability that ROK Armed Forces and USFK military facilities could be attacked. North Korea is thought to be continuing its efforts to improve the technology of these rocket launchers in all respects going forward.¹⁵⁾

Further, regarding the capabilities of North Korea's submarines, the 1,200-ton Sinpo-class submarine used to launch missiles to date, including the August SLBM launch, is only capable of being on station for days in relatively shallow waters,¹⁶⁾ but the research group 38 North, a project of the U.S.-Korea Institute at the Paul H. Nitze School of Advanced International Studies (SAIS), Johns Hopkins University in the United States, indicated its view that the possibility exists that North Korea is developing an even larger new class of submarine that is capable of continuous operation without surfacing.¹⁷⁾ If North Korea's capability in submarines used as launching platforms for ballistic missiles improves, then the survivability of the DPRK retaliatory measures will also improve in the future.

Regarding the Musudan missile, which has the range to strike Guam, the single missile launched on April 15, the two missiles launched on April 28, and one missile launched on May 31 failed. However, one of the two missiles launched on June 22 is believed to have attained an altitude of more than 1,000 kilometers and flown approximately 400 kilometers before landing in the Sea of Japan. All the missiles were launched from a TEL in Wonsan, North Korea. On June 23, North Korea published a statement proclaiming the successful launch test of the Hwasong-10¹⁸⁾ under the guidance of Kim Jong Un, and noting the missile was launched using a high-angle trajectory simulation of the maximum range of the ballistic missile, tracked per its planned flight path, reached a maximum altitude of 1,413.6 kilometers, and landed accurately in the planned target waters 400 kilometers from the launch point. The statement also said that as a result of the test, the aerodynamic characteristics of the ballistic missile with its modernized systems developed solely by North Korea, its safety and operability, and the technological characteristics of the newly designed construction and propulsion system were proven, and the thermal-resistance characteristics of the warhead during the re-entry phase were also confirmed.

As shown above, North Korea's missile capabilities are diversifying and there

exists the possibility of improvement in all respects. Improvements in missile range, flight accuracy and stability, use of solid fuels, simultaneous/multiple launch capabilities, etc., concurrent with advances in nuclear development, constitute a deepening threat to the security of the region, including Japan, as well as the world. Moreover, in contrast to the launch of long-range ballistic missiles ostensibly for “satellites,” Nodong and Musudan missiles were launched without notice, making it more difficult to detect signs of launch, heightening the surprise attack potential of North Korean missile launches. For Japan, the importance of ballistic missile defense preparations through exercises such as the June 2016 trilateral Japan-US-ROK ballistic missile defense (BMD) tracking exercise, Pacific Dragon, (details follow),¹⁹⁾ and expansion and strengthening of US extended deterrence becomes even more critical.

The US-ROK Invincible Spirit joint naval exercises scheduled for October 10–15 created concern that North Korea would conduct nuclear tests or missile launches coinciding with the start of the exercises but none were conducted on October 10. The exercises’ objectives involved simulated strikes targeting North Korea’s nuclear and missile facilities, and were conducted in waters surrounding the Korean Peninsula, including the Yellow Sea, the coast of Cheju Island, and the Sea of Japan. It is reported that the exercise involved Carrier Strike Group 5, including the flagship USS *Ronald Reagan* and several destroyers, from the United States, and dozens of ships from the ROK Navy.²⁰⁾ North Korea launched one Musudan missile for the first time from Kusong in its northwestern region but US and ROK forces deemed it to be a failure. If it is true North Korea refrained from launches during the period of the joint exercises and launched one missile to coincide with the final day of the exercises, it could be thought that the large-scale US-ROK joint exercise had the effect of deterring provocative action by North Korea. Further, North Korea launched one Musudan missile on October 20 but US Strategic Command and ROK forces also judged this launch to be a failure as with the launch on October 15. Although North Korea continued to experience repeated failure, it is thought the DPRK will continue with launches in the future to improve its missile capabilities.

(2) The Continuation of the Kim Jong Un Regime's Dictatorship and Reign of Terror

Internally, North Korea continues to strictly adhere to the strategic line on carrying

out economic construction and building nuclear armed forces simultaneously while also strengthening the dictatorship of the Kim Jong Un regime under the so-called unitary leadership system. During May 6–9, the Seventh Congress of the WPK was convened for the first time in thirty-six years, “The Rules of the WPK” were revised and the Chairman of the WPK became the highest office of the WPK, and Kim Jong Un was elected as Chairman of the WPK. Also, the continuation of the strategic line on carrying out economic construction and building nuclear armed forces simultaneously was re-confirmed, and a Five-Year Strategy for National Economic Development from 2016 to 2020 was promulgated but with no indication of concrete numerical goals.²¹⁾ At the fourth session of the Thirteenth Supreme People’s Assembly convened on June 29, the position of first chairman of the National Defense Commission was superseded by Chairman of the State Affairs Commission of the DPRK, and the National Defense Commission was superseded by the State Affairs Commission of the DPRK, and Kim Jong Un was elected chairman thereof, re-confirming his position as the supreme leader of North Korea.²²⁾ Further, while a report on the promulgation of a Five-Year Strategy for National Economic Development was announced, the energy problem, solutions to the food supply problem arising from agriculture, livestock, and fisheries industries solutions to the consumer goods problem arising from development of light industry, the principle of preserving scenic beauty and the convenience of the construction sector, etc., were, as previously, addressed only by slogans lacking in concreteness. In the end, the Congress of the WPK and the Supreme People’s Assembly were notable for the measures to systematically strengthen the dictatorship regime centered on Kim Jong Un.

Under the reign of terror of this manner of dictatorship regime, the purges occurring since 2012 continued to be carried out. In April 2015, Hyon Yong Chol, chief of the Korean People’s Army, was publicly executed, and in May of the same year, Choi Yong Gon, vice prime minister, was also executed. In 2016, Kim Yong Jin, vice prime minister, was executed and it was reported that the WPK’s Kim Yong Chol, director of the United Front, was sentenced to hard labor at a regional farm.²³⁾

In addition to purges, reports from South Korea of people escaping from North Korea and seeking asylum continue to increase. From April to May 2016, it was reported that employees of a North Korean restaurant in China, and, in June, several factory workers sought asylum.²⁴⁾ From August to October, it was reported that Thae Yong Ho, North Korea’s deputy ambassador to the United Kingdom, and

several staff of the Embassy of the DPRK in Russia sought or put out feelers for asylum.²⁵⁾ Further, it was also reported in 2015 that a person at the bureau director-general level of the Department of State Security (there is the possibility the name has been changed to Ministry of State Security), the secret police of North Korea, had escaped from the DPRK to South Korea.²⁶⁾

The causes of these incidents are attributed by some observers to instability in the Kim Jong Un regime, or conversely a transitory phenomenon amidst the reform of the Kim Jong Un regime, while others assert it is a result of the efforts by the ROK government to encourage North Korean nationals to escape to South Korea.

(3) China's Holding of the Key to Successful Sanctions

China, as North Korea's sole formal alliance and trading partner, has long been seen as holding the key to the effectiveness of any UN Security Council resolutions. In response to North Korea's fourth nuclear test in January 2016, and launch of a long-range ballistic missile in February, UN Security Council Resolution 2270 was unanimously adopted on March 3. In reaction, a DPRK government spokesperson criticized Japan, the United States, and South Korea,²⁷⁾ and a Foreign Ministry spokesperson issued a statement rejecting the resolution and denouncing the big powers that participated in the resolution.²⁸⁾ The approval of the resolution, which embargoed items such as aviation and rocket fuels to North Korea, and China's affirmation of the resolution and expressed intent to enforce the resolution heightened hopes for the effectiveness of the resolution. In fact, while China's official statistics showed a decrease in trade with North Korea from April to June, as the possibility of the Terminal High Altitude Area Defense (THAAD) system being deployed to South Korea grew, it was reported in June that imports of iron ore began to increase, and from the latter half of June China's supply of crude oil to North Korea shifted to an upward trend.²⁹⁾ According to statistics of China's General Administration of Customs, China's exports to North Korea in June were 9.4 percent higher than the same period in the previous year.³⁰⁾

Following North Korea's fifth nuclear test, the DPRK's first airshow, the International Friendship Air Festival, was held in Wonsan September 24–25, featuring flights of MiG-29 fighter planes made in the former Soviet Union and MD-500 helicopters made in the United States.³¹⁾ That an airshow was held, combined with increase in trade between China and North Korea, raised doubts about the effectiveness of China's sanctions against the DPRK, which included

bans on exports of aviation fuel and rocket fuel. It should be noted here that UN Security Council Resolution 2321, adopted November 30, 2016, builds on Resolution 2270's general bans on aviation fuel exports to North Korea and on coal and iron ore exports from North Korea by establishing a ceiling on coal procured from North Korea in the exceptional cases provided for, and by enlarging the scope of embargoed mineral resources.

Further, the Center for Advanced Defense Studies (C4ADS) in the United States and the Asan Institute for Policy Studies in South Korea published a report on relationships between and activities of North Korea and Chinese companies,³²⁾ made clear to some extent the trade networks that make possible the economic continuation of North Korea's regime and its development of weapons of mass destruction (WMD) despite various sanctions. This report used specialized network analysis methods to derive the following conclusions. Specifically, 91 percent of US sanctions and 84 percent of UN sanctions target individuals and organizations within North Korea and appear to be strictly enforced but more than 161 economic entities are avoiding these sanctions. Of these, 74 percent of the entities are registered domestically in third countries or registered as third country entities, creating loopholes in the sanctions. Moreover, the most noteworthy part of the report reveals that Dandong Hongxiang Industrial Development Co., Ltd., one of six companies in the Liaoning Hongxiang Industrial Group, conducted trade with North Korea from January 2011 to September 2015 valued more than approximately US\$530 million. The founder of the company, Ma Xiaohong, who was elected delegate of the Liaoning Province People's Congress, is said to be the Chinese counterpart of Jang Song Thaek, vice-chairman of the National Defense Commission, who was purged by Kim Jong Un. The Chinese government took him into custody in September 2016 but it is indicated that pressure from the United States was in the background.³³⁾

Further, Yoon Sang Hyun (of the ruling Saenuri Party), a member of South Korea's National Assembly's Foreign Affairs and Unification Committee, reportedly revealed that the value of DPRK imports of luxury goods was US\$645.86 million in 2012, US\$644.29 million in 2013, US\$800 million in 2014, and US\$669.4 million in 2015, totaling in excess of US\$2.697 billion over a four-year period, using Chinese trade statistics and the list of luxury goods banned for export to North Korea by the South Korean government as the basis of calculation.³⁴⁾ In this case, luxury goods include ornaments and cosmetics,

indicating a situation where luxury goods can be obtained in North Korea despite sanctions from other countries. As indicated previously, however, the value of China's trade with North Korea was showing signs of an increasing trend in June, and since China's trade with North Korea tends to be influenced by China's relationship with the United States and the ROK, continued caution is warranted.

In any case, the degree of fulfillment of China's sanctions and increased pressure placed on North Korea will continue to be the key to success or failure of sanctions in the future.

2. South Korea Shaken by North Korea's Improving Nuclear Capabilities

(1) Taking a Harder Line against North Korea

In response to North Korea's nuclear tests and ballistic missile launches in 2016, South Korean president Park Geun-hye further increased pressure against the DPRK. In contrast to its previous honeymoon relationship with China, South Korea's conflicting point of view became obvious, as evidenced by its sanctions against North Korea and the deployment of THAAD systems with the USFK. The presidential election scheduled for 2017 will occur sooner or later. The new president may attempt to improve relations with China and to revise various agreements made with US and Japan during the Park Geun-hye administration. While it is unclear whether these new government policies would mitigate North Korea's nuclear and missile threat, the possibility of creating friction in its relationship with the United States and Japan cannot be denied.

North Korea's two nuclear tests and repeated missile launches in 2016 caused a significant shift toward a harder line in the South Korean government's North Korean and military policies. One move taken was the February 10 shutdown of the Kaesong Industrial Complex, which was built in North Korea using South Korean investment. The Park Geun-hye administration suspected that foreign investment flowing into the complex, which totaled US\$120 million in 2015 alone, may have been used by North Korea for nuclear and missile development.³⁵⁾

Second, South Korea increased psychological pressure directed at North Korea. Immediately following the January 6 nuclear test by North Korea, the ROK Army resumed loudspeaker broadcasting of propaganda aimed at creating unrest amongst North Korea's soldiers and civilians.³⁶⁾ Moreover, President Park Geun-

hye began to use openly expressions that appeared to be aimed at the collapse of the Kim Jong Un regime. For example, in a speech before the National Assembly on February 16, she stated that nuclear development “merely hastens the [DPRK] regime’s collapse,” and on October 1, Armed Forces Day, she stated to the people of North Korea, “Please come to the bosom of freedom in the Republic of Korea whenever you want,” an unprecedented call encouraging North Koreans to escape to South Korea.³⁷⁾

South Korea also used diplomacy in an attempt at isolating North Korea, in addition to a policy of strengthening sanctions against North Korea as in the past. For example, President Park Geun-hye and Yun Byung-se, minister of Foreign Affairs, visited Iran, Cuba, and Uganda, attempting to drive a wedge between North Korea and these countries, which have traditionally maintained a cooperative relationship with the DPRK.³⁸⁾ Further, Foreign Minister Yun and the ROK ambassador to the United Nations, called for the UN to seriously reconsider whether North Korea was qualified to be a member nation of the UN, as the DPRK continues to violate UN sanctions.³⁹⁾

North Korea’s nuclear tests also caused significant changes in South Korea’s relationships with the United States and China. First, the security relationship between the ROK and the United States became even closer. Symbolic of this was when the Park Geun-hye administration formally agreed with the US government to deploy THAAD on July 8, 2016, changing its previously reluctant stance, and pushing through strong resistance from parts of the country.⁴⁰⁾ THAAD is deployed with the USFK but has the effect of covering substantial portion of South Korea under its protective umbrella. Further, the United States reaffirmed its pledge to provide extended deterrence for South Korea, and both countries committed to strengthening the deterrence and capabilities of their alliance. The US-ROK Defense and Foreign Ministers Meeting (2+2) convened on October 19 for the first time in two years, followed by the Security Consultative Meeting (SCM) on October 20, in which the defense ministers of both countries met, provided the setting for the agreements.⁴¹⁾ The United States tried to concretely demonstrate its pledge. For example, following the DPRK nuclear tests in January and September, the United States dispatched B-52 and B-1B strategic bombers to fly through South Korean airspace.⁴²⁾ Further, in February, the United States and ROK conducted extended deterrence operational exercises, and the United States opened its anti-ballistic missile defense ground-based interceptor (GBI) launch

facilities and displayed the Minuteman III ICBM, which is a retaliatory measure, to a group of ROK government representatives.⁴³⁾ These actions could be said to be both a warning to North Korea and providing “reassurance” to South Korea. The South Korean government had hoped the United States would place “strategic assets” such as the B-52 and strategic nuclear submarines within the ROK and surrounding areas, but at the December 20 first meeting of the Extended Deterrence Strategy and Consultation Group (EDSCG)—a meeting of foreign and defense vice ministerial-level officials established at the October US-ROK “2+2” meetings—the United States only pledged such assets would be “periodically deployed.”⁴⁴⁾ It is likely that financial burden imposed by forward-based facilities and the existence of other means that could be employed, as well consideration of the impact on China and Russia, played a role in the decision.

Since being inaugurated in February 2013, President Park Geun-hye demonstrated consideration particularly toward China. As concrete examples, President Park was the only head of state from the major democratic nations to attend, in September 2015, the military parade in commemoration of the seventieth anniversary of China’s victory over Japan, and took a negative stance against the USFK deployment of THAAD, which China opposed as targeting itself. This consideration reflected hopes that China would use its influence over North Korea to the advantage of South Korea both in terms of denuclearization of the DPRK and the future reunification of the Korean Peninsula. Following the nuclear tests in 2016, however, the Park Geun-hye administration lost hope when China opposed stringent economic sanctions that might destabilize North Korea. As previously noted, when South Korea with the United States to deploy THAAD, the Chinese government pressured the ROK side to withdraw from the agreement, asserting it would have negative effect on China-ROK relations⁴⁵⁾ as well as attempting to restrain South Korea through a variety of means, including criticism in state media, joint statement with Russia, suspension of broadcasting of Korean television dramas in China (the Chinese government denied the suspension was a result of government policy).⁴⁶⁾ Although the South Korean government stated in regards to THAAD, the radars would not be turned toward China, and the system would be removed from the ROK if the denuclearization of North Korea were achieved⁴⁷⁾ but Chinese criticism of South Korea did not stop. Further, illegal operations of Chinese fishing boats within South Korea’s EEZ also intensified,⁴⁸⁾ and the China-ROK relationship was strained in 2016.

There were already moves in 2015 to improve relations between Japan and South Korea but, because of advances in North Korea's nuclear and missile capabilities, recognition within the ROK of the necessity of security Japan-ROK and Japan-US-ROK cooperation grew stronger than previously. On March 31, President Park Geun-hye met with Prime Minister Shinzo Abe and President Barack Obama in a summit meeting held in Washington, where they mutually confirmed the necessity of Japan-US-ROK security cooperation.⁴⁹⁾ President Park and Prime Minister Abe also held their second bilateral summit meeting at this time. In terms of practical cooperation, the Japan Maritime Self-Defense Force participated for the first time in missile detection exercises with Aegis destroyers from US and ROK naval forces in Pacific Dragon 2016 in the waters off Hawaii on June 28, maritime interdiction exercises off of western Kyushu October 22–23, and Japan-US-ROK ballistic missile information-sharing exercises November 9–10.⁵⁰⁾ In November, the ROK Ministry of National Defense resumed negotiations with Japan on the Agreement Between the Government of Japan and the Government of the Republic of Korea on the Protection of Classified Military Information (generally known as GSOMIA), which was signed and became effective on the 23rd of the same month.⁵¹⁾ This agreement was scheduled to be concluded in June 2012 but was cancelled by the Lee Myung-bak administration on the day it was to be signed, out of concern over public opposition. The signing of the agreement raised expectations in South Korea of increased deterrent capabilities of the country vis-a-vis North Korea but in fact strong opposition exists, including that based on misunderstandings.⁵²⁾

The conspicuous improvement of North Korea's nuclear and missile capabilities, and concerns over the reliability of the US nuclear umbrella sparked unprecedentedly intense debate in South Korean political circles regarding whether the country should introduce nuclear weapons or develop its own. The debate can be divided into two patterns. The first involves allowing the deployment of tactical nuclear weapons by the USFK; the US military withdrew tactical nuclear weapons from South Korea in 1991. The second argument is whether South Korea should develop its own nuclear weapons or establish the capability to develop them in a short period of time.⁵³⁾ In a public opinion survey conducted by Gallup Korea in September 2016, 51.5 percent agreed that the country should possess its own nuclear weapons, with 42.1 percent opposed, indicating strong vocal support of nuclear weapons even amongst the public.⁵⁴⁾ In contrast, the

South Korean government reconfirmed its policy of not possessing nuclear weapons,⁵⁵⁾ and in January 2016 President Park Geun-hye, while conceding that she fully understood the argument that South Korea should possess tactical nuclear weapons, made it clear that possession of nuclear weapons would violate the country's "promise" with the international community.⁵⁶⁾ This "promise" likely refers to the Nuclear Non-Proliferation Treaty (NPT), the US-ROK Civil Nuclear Cooperation Agreement, and the Joint Declaration on the Denuclearization of the Korean Peninsula. The first two are necessary for the continuation of South Korea's nuclear power generation, while the third may prove to be the fulcrum for pursuing the denuclearization of North Korea, and thus remains in place today. In regard to military uses of nuclear power, there are some asserting the opinion that South Korea should possess nuclear submarines to counter North Korea's SLBM-equipped submarines, but the Ministry of National Defense has stated that nothing has been decided yet regarding plans for development.⁵⁷⁾

Since October 2016, the South Korean public's anger over allegations surrounding President Park Geun-hye has erupted, and in December the National Assembly voted to impeach President Park, and the Constitutional Court is now deliberating on whether to dismiss the president. South Korea's presidential elections take place every five years, so the next one would normally be held in December 2017, but the possibility of an earlier date continues to rise.

Many of the leading candidates to be the next president are progressive (reformist) and assert broadly that the major policies of the Park administration need to be changed.⁵⁸⁾ If elected, these candidates will likely seek to improve relations with North Korea and China. Particularly for North Korea, they are likely to attempt to drive denuclearization through dialogue and economic cooperation, not pressure. As for the United States, while there would be no change in the emphasis placed on the alliance, it is possible they would push for reevaluation of the THAAD deployment and for moving forward the transfer of wartime operational control (OPCON), which the Park administration and the United States agreed in 2014 to postpone until the timing was

right.⁵⁹⁾ Regarding Japan, it is possible there will be demands to revise or abrogate GSOMIA and the so-called “comfort women agreement” of December 2015 on the pretext of them being inconsistent with the feelings of the people of South Korea. Even if these policies were to be enacted, no guarantee exists there would be any connection with denuclearization of North Korea or a reduction in missiles. Further, South Korea’s relations with the United States and Japan would be awkward, with the effect of weakening the ROK’s deterrent force. Conversely, after the election of a new president, it is possible that more realistic policies would be pursued, judging that South Korea would lose international trust over the medium and long term by unilaterally abrogating bilateral commitments.

(2) Plans for Retaliation Targeting the North Korean Leadership

On September 9, 2016, immediately following North Korea’s second nuclear test of the year, South Korea announced it was developing the “Korean three-axis system” to deter and counter the DPRK nuclear and missile threat. The three elements are the Kill Chain preemptive strike system (discussed below) that would be used to attack North Korea’s nuclear and missile facilities, such as launch pads, upon indication North Korea is going to use nuclear and missile weapons, the Korean Air and Missile Defense (KAMD) system that would track and shoot down ballistic missiles launched from launch facilities not destroyed by Kill Chain strikes, and the Korea Massive Punishment and Retaliation (KMPR) plan targeting the North Korean leadership for retaliation in the event South Korea suffered damage by nuclear weapons.⁶⁰⁾

This marks the first time the KMPR plan was revealed and calls for, in the event that harm is inflicted by North Korea’s use of nuclear weapons, massive, coordinated strikes using precision ballistic/cruise missiles, air-to-ground missiles, and other weaponry to reduce to ashes the areas where Kim Jong Un and other North Korean leaders would attempt to hide, and attacks by special operations forces infiltrating the DPRK to eliminate that leadership. South Korea already possesses ballistic and cruise missiles that could be used in KMPR, and will improve their accuracy even further, while continuing to increase the power of the warheads. The special operations forces to be established will comprise a force tasked with eliminating the leadership, and a dedicated helicopter unit for transporting that force.⁶¹⁾ South Korea’s intention is to deter North Korea from even considering the use of nuclear weapons by making it clear that the DPRK

leadership will not escape death if they choose to employ nuclear weapons.

Of the three-axis system elements, the deployment of the Kill Chain and KAMD systems was initiated during the administration of Lee Myung-bak (February 2008 to February 2013). The Kill Chain system aims to destroy North Korea's nuclear and missile forces by precision strikes on TEL and fixed facilities before launch, upon detection of signs of missile launches aimed at South Korea.⁶²⁾ The target of the strikes would include long-range artillery which North Korea has publicly claimed has the power to turn Seoul into a "sea of fire" using conventional warheads.⁶³⁾ To detect signs of missile launches, South Korea already possesses the RC-800 Baekdu electronic intelligence (ELINT) and RC-800 Geumgang imagery intelligence (IMINT) reconnaissance aircraft, both modified versions of the Hawker 800, and the E-737 Peace Eye airborne early warning and control aircraft. To update some of the RC-800 aircraft, South Korea plans the operational deployment of Falcon 2000 (business jet) equipped with ELINT and IMINT reconnaissance systems by 2017.⁶⁴⁾ Further, South Korea plans to deploy four RQ-4 Global Hawk unmanned surveillance aircraft in 2018–2019,⁶⁵⁾ and to launch five reconnaissance satellites in 2021–2022.⁶⁶⁾ The domestic development of medium-altitude unmanned aerial vehicle (MUAV) surveillance aircraft capable of scanning ground targets 100 kilometers away from an altitude of 10 kilometers continues as well. In July 2016, the South Korean Ministry of National Defense was in discussion with the US Department of Defense regarding technology-sharing,⁶⁷⁾ which may indicate the development is behind schedule although it was reported in 2013 that the planned operational deployment of the systems would be in 2017.⁶⁸⁾

In terms of the means to strike targets, the ROK Armed Forces possess diversified platforms and warheads across the land, sea, and air spectrum, and continues to increase, improve, and extend the range, accuracy, destructive power, and penetration capabilities thereof. Ground-launched weapons include the Hyeonmu-3C cruise missile (range 1,500 kilometers) and the Hyeonmu-2A ballistic missile with a range of 300 kilometers (warhead capacity of 500 kilograms). The Hyeonmu-2B with extended range of 500 kilometers was first deployed around the end of 2015 (at the latest, prior to August 2016),⁶⁹⁾ and a new variant with a range of 800 kilometers is in development. In addition, the ROK Army possesses the US-made Army Tactical Missile System (ATACMS) with a maximum range of 300 kilometers, and the domestically produced Cheonmu

multiple launch rocket system (MLRS), first deployed in 2015, which has a maximum range of 80 kilometers and can launch both guided and unguided warheads. Further, a “tactical surface-to-surface guided weapon” short-range ballistic missile with a range of 120 kilometers and a warhead capable of penetrating several meters under ground is in development aiming for operational deployment in 2019.⁷⁰⁾

The Cheonryong (with a reported range of 400 kilometers),⁷¹⁾ Haeseong-2 and Haeseong-3 cruise missiles (reported to have ranges of 500 to 1,000 kilometers, and 1,000 to 1,500 kilometers, respectively) can be fired from surface ships and submarines. South Korea had six *Son Wonil*-class (1,800 tonnes) submarines as of December 2016 and is scheduled to increase that number to nine vessels by around 2018.⁷²⁾ Construction of the first large submarine (3,000 tonnes) is underway, with a target completion date of 2020. The construction of a total of six submarines by 2027 is decided, and an additional three vessels is under consideration. These submarines are reported to be equipped with vertical launching systems (VLS) capable of launching the Hyeonmu-2B ballistic missile.⁷³⁾

Weapons that can be fired from combat aircraft include the SLAM-ER air-to-ground missile with a range of 270 kilometers, the SPICE 2000 guided bomb with a range of 100 kilometers, and the GBU-28 precision-guided bomb that can destroy underground facilities (so-called “Bunker Buster”). The Korean GPS Guided Bomb (KGGB), which can fly approximately 110 kilometers like a glider and uses global positioning system (GPS) to guide the weapon to the target, has been operational since 2014.⁷⁴⁾ Further, the German-made Taurus KEPD 350K air-to-ground cruise missile with a range of 500 kilometers was deployed operationally in December 2016. It was reported that the US government in 2016 authorized use of military GPS, which is resistant to jamming, on the KGGB and Taurus missiles.⁷⁵⁾ Further, development of carbon fiber bombs aimed at destruction of North Korean electrical transformers and transmission networks is progressing.⁷⁶⁾

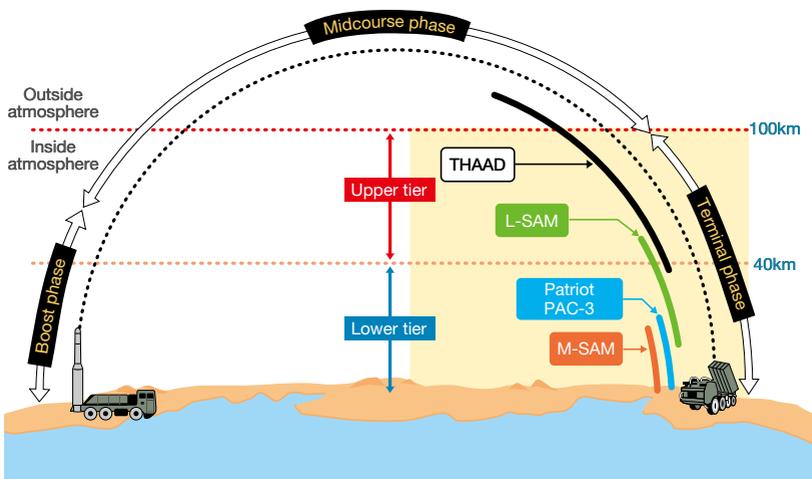
Airborne platforms include existing F-16 fighters, F-15K fighters, and FA-50 light attack aircraft. From 2018 to 2021, forty F-35A fighter planes, with superior stealth capabilities, are scheduled to be imported from the United States, and it is reported that importation of an additional twenty aircraft is under consideration.⁷⁷⁾

KAMD includes Green Pine ground-based radars (one each in North and South Chungcheong provinces) and three Aegis ship-based radars to detect enemy missiles, and surface-to-air missiles to intercept them. At the present, only the

modified Patriot PAC-2 missile interceptor (interception altitude of fifteen to twenty kilometers) is deployed but it is reported that operations to deploy the PAC-3 (interception altitude of thirty to forty kilometers), which has superior target missile destructive power, began in 2016 for phased deployment scheduled for completion by 2022.⁷⁸⁾ In March 2016, it was reported that the domestically produced Cheongung medium-range surface-to-air missile (M-SAM) had been deployed to some units but M-SAM capability to intercept enemy ballistic missiles at altitudes of twenty to twenty five kilometers is currently being improved with scheduled operational deployment from 2019.⁷⁹⁾ Further, the development of long-range surface-to-air missiles (L-SAM) capable of intercepting ballistic missile at altitudes of forty to sixty kilometers, which began in 2015, continues with target operational deployment in 2023.⁸⁰⁾ When these systems are combined with the USFK deployment of THAAD, the skies of South Korea will be covered by a multi-layered low-altitude to high-altitude missile defense.

Until now, South Korea has emphasized that KAMD was completely unrelated to the US-led BMD, primarily motivated by the desire to avoid provoking China, and did not pursue acquisition of high-altitude inception systems such as the SM-3 missiles launched from Aegis ships.⁸¹⁾ With the acceptance of THAAD in 2016, however, and the planned establishment of a real-time system for sharing

Figure 4.1. Conceptual diagram of THAAD and KAMD



Sources: Created by authors based on ROK Ministry of National Defense materials.

information between US and ROK forces, using data gathered from US early warning satellites and ground-based radars within South Korea,⁸²⁾ the interoperability of KAMD and BMD is deepening. In 2016, the plan to establish a new “K2 Operations HQ” within the ROK Air Force Operations Command to integrate operations of Kill Chain and KAMD was revealed.⁸³⁾ Both systems share many common elements, such as detection and designation of attack targets, and, if South Korea were hypothetically to invoke the Kill Chain, the probability of North Korea attacking those bases with ballistic missiles is high, and the integrated operation of both systems would be rational.

South Korea’s three-axis system faces multiple difficulties. First, the challenge of intelligence and information, including identification and designation of North Korea’s launch platforms, which can be moved and hidden in bunkers, detection of indications of launch, and locating the areas or underground shelters where North Korean leadership would hide. Second, the technological challenge of whether KAMD can handle a saturation attack, in which North Korea simultaneously launches numerous missiles. In the case of the Kill Chain system, the risk of escalation inherent in a preemptive strike decision, which would have to be made by the ROK president in a very short time while maintaining consensus with the United States. In the event of using special operations forces in KMFR, it would not be easy to get close to where the North Korean leadership is located, even assuming the locations were in fact known. Up to now, ROK Forces have fundamentally been preparing for missiles flying in from the North. If North Korea were to operationally deploy SLBM, however, South Korea would have to pay attention to attack vectors other than from the North, and strengthen its anti-submarine capabilities. Moreover, there is the problem the threat from North Korea is not limited to only nuclear weapons and missiles. If North Korea were to operationally deploy nuclear weapons capable of being mounted on ballistic missiles, it may presume that it has established a balance of power vis-à-vis the United States,⁸⁴⁾ and thus could be emboldened to initiate small-scale military actions involving cyber warfare or conventional weapons; South Korea cannot be lax in preparing for this potential threat.

NOTES

- 1) *Korean Central News Agency*, January 6, 2016.
- 2) National Institute for Defense Studies (NIDS), ed., *East Asian Strategic Review 2016*, The Japan Times, 2016, p. 79; Ministry of Defense (MOD), *Defense of Japan 2016*, Urban Connections, 2016, p. 23.
- 3) *Korean Central News Agency*, April 1, 2013.
- 4) *Korean Central News Agency*, September 9, 2016.
- 5) MOD, *Defense of Japan 2016*.
- 6) *Korean Central News Agency*, October 6, 2016.
- 7) MOD, *Defense of Japan 2016*.
- 8) *Sankai Shinbun*, August 3, 2016; *Mainichi Shinbun*, August 4, 2016.
- 9) Second press conference by Prime Minister Shinzo Abe, Cabinet Secretariat, Cabinet Public Relations Office, September 9, 2016.
- 10) *The Korea Times*, September 9, 2016.
- 11) *Korean Central News Agency*, April 9, 2016.
- 12) *Rodong Sinmun*, January 1, 2017.
- 13) *Korean Central News Agency*, August 25, 2016.
- 14) *Korean Central News Agency*, April 24, 2016.
- 15) *Yomiuri Shinbun*, April 5, 2016.
- 16) John Schilling, “North Korea’s SLBM Program Progresses, But Still Long Road Ahead,” *38 North*, August 26, 2016.
- 17) Joseph S. Bermudez Jr., “Is North Korea Building a New Submarine?” *38 North*, September 30, 2016.
- 18) *Korean Central News Agency*, June 23, 2016.
- 19) *US Navy News*, June 28, 2016.
- 20) *Yonhap News*, October 11, 2016; *The Diplomat*, October 12, 2016; *Yomiuri Shinbun*, October 15, 2016.
- 21) *Korean Central News Agency*, May 8, 2016.
- 22) *Korean Central News Agency*, June 29, 2016.
- 23) *Yonhap News*, August 31, 2016.
- 24) *Yonhap News*, October 6, 2016.
- 25) *Yonhap News*, October 5, 2016.
- 26) *Yonhap News*, October 12, 2016.
- 27) *Korean Central News Agency*, March 4, 2016.
- 28) *Korean Central News Agency*, March 4, 2016.
- 29) Ibid.
- 30) The General Administration of Customs of the People’s Republic of China (GACC), “2016 Import-Export Value, by Country”, July 21, 2016.

- 31) *Associated Press* (AP), September 24, 2016.
- 32) The Center for Advanced Defense Studies (C4ADS) and The Asan Institute for Policy Studies, *In China's Shadow: Exposing North Korean Overseas Networks*, August 2016.
- 33) *Yomiuri Shimbun*, September 22, 2016.
- 34) *Yonhap News*, October 10, 2016.
- 35) Ministry of Unification, "Statement on Complete Shutdown of Kaesong Industrial Complex," February 10, 2016; "Minister of Unification, Minister of the Office for Government Policy Coordination Briefing," February 12, 2016.
- 36) *Kookbang Ilbo*, January 10, 2016; Park Geun-hye, "Full Transcripts of Talk with the People," January 13, 2016.
- 37) Park Geun-hye, "Address to the National Assembly on Government Policy," February 16, 2016; "Address on Armed Forces Day," October 1, 2016.
- 38) The Blue House, "State Visit to Iran," May 4, 2016; "Tour to Three African Nations and France," June 7, 2016; *Yonhap News*, June 6 and 20, 2016.
- 39) *Yonhap News*, February 20 and September 23, 2016; Yun Byung-se, Keynote Address for 71st Session of the UN General Assembly, September 22, 2016.
- 40) ROK Ministry of National Defense, "ROK-US Final Decision on USFK Deployment of THAAD," July 8, 2016.
- 41) U.S. Department of State, "Remarks With Republic of Korea Foreign Minister Yun Byung-se at a Press Availability," October 19, 2016; "Joint Communiqué of the 48th U.S.-ROK Security Consultative Meeting," October 20, 2016; and U.S. Department of Defense, "Remarks by Secretary Carter and Minister Han in a Press Conference in the Pentagon Briefing Room," October 20, 2016.
- 42) *Kookbang Ilbo*, January 10 and September 18, 2016.
- 43) ROK Ministry of National Defense, "Joint Statement on 2016 ROK-US Deterrence Strategy Commission Expanded Deterrence Operational Exercise (TTX)," February 29, 2016.
- 44) U.S. Department of Defense, "Remarks by Secretary Carter and Minister Han in a Press Conference in the Pentagon Briefing Room," October 20, 2016, and "Joint Statement on the Inaugural Meeting of the Extended Deterrence Strategy and Consultation Group (EDSCG)," December 20, 2016; *Joongang Ilbo*, October 22, 2016; *Chosun Ilbo*, October 24, 2016; *Kookbang Ilbo*, October 25, 2016.
- 45) PRC Ministry of Foreign Affairs, "Wang Yi Meets with Foreign Minister Yun Byung-Se of the ROK," April 27, 2016; *Yonhap News*, July 8, 2016; PRC Ministry of Foreign Affairs, "Vice Foreign Minister Zhang Yesui Summons US and ROK Ambassadors to China and Lodges Solemn Representations on the Two Countries' Decision to Deploy THAAD Missile Defense System in ROK," July 25, 2016; PRC Ministry of Foreign Affairs, "Wang Yi Met ROK Foreign Minister Yun Byung-se,"

East Asian Strategic Review 2017

July 25, 2016.

- 46) *The Global Times*, January 27, 2016; PRC Ministry of Foreign Affairs “Joint Statement of PRC President and Russian Federation President on Strengthening Global Strategic Stability,” June 26, 2016; *Joongang Ilbo*, June 27, 2016; *Yonhap News*, December 21, 2016.
- 47) *Records of the National Assembly Steering Committee*, July 13, 2016, p. 6.
- 48) *Yonhap News*, October 10, 2016; ROK Ministry of Foreign Affairs, “Government Calls China Ambassador, States Opposition to ‘Hostile Behavior of Chinese Fishing Boats,’” October 11, 2016.
- 49) Japan Ministry of Foreign Affairs, “Japan-US-ROK Summit” and “Japan-ROK Summit,” April 1, 2016; the White House, “Remarks by President Obama, President Park Geun-Hye of the Republic of Korea, and Prime Minister Shinzo Abe of Japan After Trilateral Meeting,” March 31, 2016.
- 50) Japan Maritime Staff Office, “Regarding Japan-US-ROK Joint Exercises (Maritime Interdiction Exercises),” October 21, 2016, and “Regarding Japan-US-ROK Joint Exercises (Ballistic Missile Information-Sharing Exercises),” November 9, 2016; *Kookbang Ilbo*, October 20, 2016.
- 51) *Records of the FY2016 Inspection and Investigation of State Administration by the National Defense Commission*, October 14, 2016, p. 19; and ROK Ministry of National Defense press releases, October 27 and November 1 and 23, 2016.
- 52) “Editorial,” *Chosun Ilbo*, November 12, 2016; and “Editorial,” *Hankook Ilbo*, November 23, 2016.
- 53) Yu Yong-weon, “Let’s Have ‘The Option to Go Nuclear,’” *Chosun Ilbo*, January 11, 2016.
- 54) *Yonhap News*, September 23, 2016.
- 55) *Yonhap News*, September 21, 2016; *Records of the National Assembly Plenary Session*, September 21, 2016, p. 5.
- 56) The Blue House, “Statement to the People and Press Conference,” January 13, 2016; *Chosun Ilbo*, January 14, 2016.
- 57) ROK Ministry of National Defense “Daily Briefing,” August 29, 2016
- 58) *Yonhap News*, December 15, 27, and 30, 2016.
- 59) NIDS, ed., *East Asian Strategic Review 2015*, The Japan Times, 2015, pp. 87-88.
- 60) *Records of the National Assembly National Defense Commission*, September 9, 2016, p. 3; *Yonhap News*, October 7, 2016.
- 61) *Records of the National Assembly Plenary Session*, September 21, 2016, p. 38; *Yonhap News*, October 12, 2016.
- 62) *Records of the National Assembly National Defense Commission*, September 9, 2016, p. 3.
- 63) *Korean Central News Agency*, March 25, 2016.

- 64) *Yonhap News*, April 4, 2016.
- 65) *Yonhap News*, October 1, 2015.
- 66) *Yonhap News*, October 5, 2015.
- 67) *Kookbang Ilbo*, September 6, 2016.
- 68) *Yonhap News*, April 16, 2015.
- 69) *Yonhap News*, August 12, 2016.
- 70) *Kookbang Ilbo*, March 3, 2014; ROK Ministry of National Defense, “Development within Two Years of Guided Weapons to Destroy North Korea Long-Range Artillery,” March 30, 2016; *Yonhap News*, March 30 and April 7, 2016.
- 71) *Yonhap News*, November 23, 2012.
- 72) *Yonhap News*, April 5, 2016.
- 73) *Yonhap News*, May 17 and July 1, 2016.
- 74) *Kook Min Ilbo*, August 14, 2016; and *Newsis*, August 14, 2016.
- 75) *Yonhap News*, August 9 and December 7, 2016; *Newsis*, August 14, 2016; *Kookbang Ilbo*, September 29, 2016.
- 76) *Kookbang Ilbo*, March 30, 2016; and *Yonhap News*, March 30, 2016.
- 77) *Yonhap News*, September 12, 2016.
- 78) *Kookbang Ilbo*, July 13, 2016; and *Yonhap News*, July 19, 2016.
- 79) *MBC News* (Seoul), March 17, 2016; and *Kookbang Ilbo*, March 20 and September 29, 2016.
- 80) *Kookbang Ilbo*, September 29, 2016.
- 81) *Records of the Assembly Plenary Session*, July 19, 2016, p. 55.
- 82) *Hankook Ilbo*, September 24, 2016, *Kookbang Ilbo*, January 24, 2016.
- 83) *Records of the National Assembly National Defense Commission*, September 9, 2016, p. 3.
- 84) *Korean Central News Agency*, May 30, 2015.

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