

Section
3

Korean Peninsula

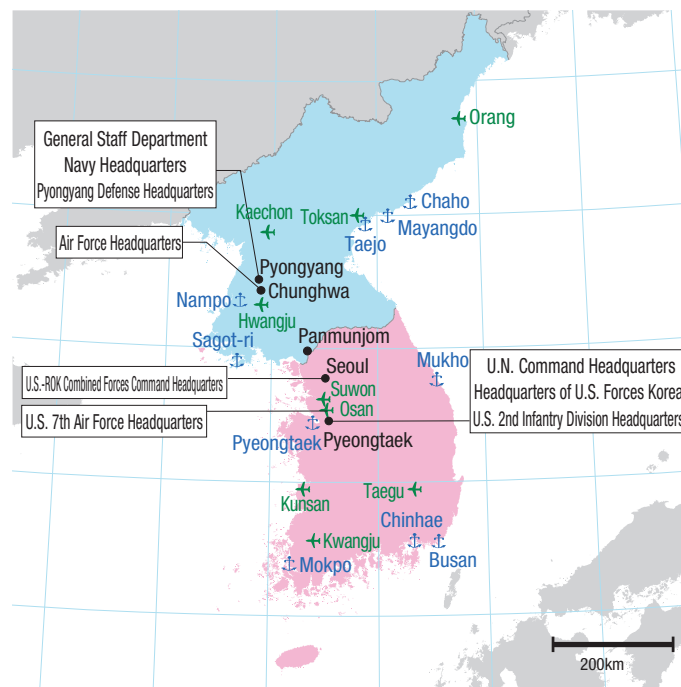
On the Korean Peninsula, people of the same ethnicity have been divided into two—north and south—for more than half a century. Even today, the ROK and North Korea pit their ground forces of about 1.6 million against each other across the demilitarized zone (DMZ).

Peace and stability on the Korean Peninsula under such security environment is an extremely important challenge not only to Japan but also to the entire region of East Asia.

Q See Fig. I-2-3-1 (Military Confrontation on the Korean Peninsula)

Fig. I-2-3-1

Military Confrontation on the Korean Peninsula



		North Korea	ROK	U.S. Forces Korea
Total armed forces		Approx. 1.28 million personnel	Approx. 600,000 personnel	Approx. 30,000 personnel
Army	Ground troops	Approx. 1.1 million personnel	Approx. 460,000 personnel	Approx. 20,000 personnel
	Tanks	T-62, T-54/55, etc. Approx. 3,500	M-48, K-1, T-80 etc. Approx. 2,220	M-1A2SEPV2
Navy	Naval vessels	Approx. 800 111,000 tons	Approx. 240 255,000 tons	Supporting corps only
	Destroyers		12	
	Frigates	4	13	
	Submarines	25	14	
Air Force	Marines		Approx. 29,000 personnel	
	Combat aircraft	Approx. 550	Approx. 620	Approx. 80
	Third and fourth generation fighters	Mig-23 × 56 Mig-29 × 18	F-4 × 30 F-16 × 162 F-15 × 59	F-16 × 60
Reference	Population	Approx. 25.51 million	Approx. 51.64 million	
	Term of service	Men: 12 years Women: 7 years	Army: 18 months Navy: 20 months Air Force: 21 months	

Note: 1. Data from "The Military Balance 2020," etc.

2. ROK is reducing the mandatory military service period in stages from 2018 to 2021.

1 North Korea

1 General Situation

North Korea has been advocating the building of a strong socialist state in all areas—ideology, politics, military affairs, and economy, and it adopts “military-first (Songun) politics” to realize this goal. “Military-first (Songun) politics” has been defined as a basic form of socialist politics that leads the great undertaking of socialism to victory by giving priority to the military forces in all activities under the principle of military first, and strengthening and relying on the actors in the revolution with the Korean People’s Army (KPA) acting as the central and main force.¹ At the Plenary Meeting of the Central Committee of the Korean Workers’ Party (KWP) in March 2013, Chairman Kim Jong-un² adopted the “Byungjin line” policy of simultaneous economic and nuclear development. At the Seventh KWP Congress in May 2016, he made it clear that he would uphold the “Byungjin line” as well as the “Songun politics.” Between 2016 and 2017, North Korea pushed ahead with three nuclear tests and as many as 40 ballistic missile launches. The international community responded by imposing sanctions under relevant UN Security Council resolutions, while Japan and the United States were among those who strengthened their own sanctions against North Korea.

On the other hand, at the Plenary Meeting of the Central Committee of the KWP in April 2018, Chairman Kim declared that the “Byungjin line” had been successfully carried out as the development of the state nuclear force had been completed. He also announced that the KWP’s “new strategic line” was that the whole of the party and the whole of the state will fully concentrate efforts on the construction of a socialist economy, indicating his policy of concentrating on economic development. In addition, North Korea decided to discontinue “nuclear test and inter-continental ballistic rocket test-fire” and to dismantle the northern nuclear test ground, announcing in May 2018 that the nuclear test ground had been blown up. During the U.S.-North Korea summit meeting that June, Chairman Kim expressed the intention to work toward denuclearization of the Korean Peninsula. However, the February 2019 U.S.-North Korea summit meeting ended without any agreement being reached between the two parties. At the December 2019 Plenary Meeting of

the Central Committee of the KWP, Chairman Kim stated that, since the United States was holding U.S.-ROK joint military exercises, there were no grounds for North Korea to be unilaterally bound any longer by a commitment that no other party honors. He also announced the intention to continue developing strategic weapons until the United States rolls back its hostile policy towards North Korea. In addition, Chairman Kim stated that North Korea should take an offensive for making a breakthrough head-on aimed at neutralizing the sanctions and pressure by the hostile forces and opening a new avenue for socialist construction, declaring the economy to be the key. Moreover, he stated at the same meeting that powerful political, diplomatic and military guarantees would be needed, indicating that North Korea will continue to make efforts to maintain and enhance its military capabilities and combat readiness. According to the official announcement at the Supreme People’s Assembly in April 2020, the proportion of the defense budget in the FY2019 budget of North Korea was 15.9%. However, it is believed that this represents only a fraction of the real defense expenditures.

North Korea has continued to promote the development of weapons of mass destruction (WMDs) and ballistic missiles and the enhancement of its operation capabilities, including by conducting six nuclear tests so far and repeatedly launching ballistic missiles in recent years at an unprecedented frequency. In addition, North Korea is assessed to possess large-scale cyber units as part of its asymmetric military capabilities, engaging in theft of military secrets and developing capabilities to attack critical infrastructure of foreign countries. It also retains large-scale special operation forces. In addition, North Korea has repeatedly used provocative rhetoric and behavior against relevant countries, including Japan.

Such military trends in North Korea pose grave and imminent threats to Japan’s security and significantly undermine the peace and security of the region and the international community.

Needless to say, North Korea’s possession of nuclear weapons cannot be tolerated. At the same time, sufficient attention needs to be paid to the development and deployment of ballistic missiles, the military confrontation on the Korean

¹ According to a written decision of the Seventh Congress of the KWorkers’ Party, “Report on the Work of the KWP Central Committee” (May 8, 2016).

² In 2013, he held the title of First Chairman of the National Defense Commission. At the Supreme People’s Assembly in June 2016, the National Defense Commission was renamed the State Affairs Commission, presided over by Chairman Kim Jong-un. For consistency purposes “Chairman of the State Affairs Commission” is used for the title of Kim Jong-un in this white paper.

Peninsula, and the proliferation of WMDs and ballistic missiles by North Korea.

Partly because North Korea maintains its extremely closed regime, it is difficult to accurately capture the details and intentions of its behavior. However, it is necessary for Japan to pay utmost attention to them. As for North Korea's abduction of Japanese nationals, utmost efforts continue to be made to realize the return of all abductees to Japan as quickly as possible by close cooperation with related countries, including the United States.

2 Military Posture

(1) General Situation

North Korea has been building up its military capabilities in accordance with the Four Military Guidelines (extensive training for all soldiers, modernizing all military forces, arming the entire population, and fortifying the entire country).³

North Korea's military forces are comprised mainly of ground forces, with a total troop strength of roughly 1.28 million. While North Korea still maintains substantial military forces, its conventional forces are markedly inferior to those of the ROK's military and U.S. Forces Korea, and most of its equipment is outdated. Contributory factors to this situation include the reduction in military assistance from the former Soviet bloc due to the collapse of the Cold War structure, limitations on defense spending caused by the weak economy, and the rapid modernization of ROK's defense capability.

North Korea is thought to be attempting to compensate for its consequent disadvantage by focusing its efforts on building up its arsenal of WMDs and ballistic missiles. North Korea also has forces such as a large-scale special operations force that can conduct various operations ranging from intelligence gathering and sabotage, to guerrilla warfare. Moreover, North Korea seems to have many underground military related installations across its territory.

(2) Military Capabilities

The North Korean Army comprises about 1.10 million

personnel, and roughly two-thirds of them are believed to be deployed along the DMZ. The main body of the army is infantry, but the army also maintains armored forces including at least 3,500 tanks and artillery. North Korea is believed to regularly deploy long-range artillery along the DMZ, such as 240 mm multiple rocket launchers and 170 mm self-propelled guns, which can reach cities and bases in the northern part of the ROK including the capital city of Seoul.

The Navy has about 800 ships with a total displacement of approximately 111,000 tons and is chiefly comprised of small naval vessels such as high-speed missile craft. Also, it has about 20 of the former model Romeo-class submarines, about 50 midget submarines, and about 140 air cushioned landing crafts, the latter two of which are believed to be used for infiltration and transportation of the special operations forces.

The Air Force has approximately 550 combat aircraft, most of which are out-of-date models made in China or the former Soviet Union. However, some fourth-generation aircraft such as MiG-29 fighters and Su-25 attack aircraft are also included. North Korea has a large number of outdated An-2 transport aircraft as well, which are believed to be used for transportation of special operations forces.

In addition, North Korea has so-called asymmetric military capabilities, namely, special operations force whose size is estimated at 100,000 personnel.⁴ In recent years, North Korea is seen to be placing importance on and strengthening its cyber forces.⁵

 Chapter 3, Section 3-2-3 (North Korea)

3 WMD and Ballistic Missiles

In recent years, North Korea has launched ballistic missiles at an unprecedented frequency, rapidly improving its operational capabilities, such as simultaneous launch and surprise attack. In addition, given the technological maturity obtained through a series of nuclear tests, North Korea is assessed to have already miniaturized nuclear weapons to fit ballistic missile warheads.

These military trends in North Korea pose grave and imminent threats to Japan's security and significantly

³ The Four Military Guidelines were adopted at the fifth plenary meeting of the fourth KWP Central Committee in 1962.

⁴ James Thurman, then Commander of the U.S. Forces Korea, stated, "North Korea possesses the world's largest special operations force of over 60,000" in his speech at the Association of U.S. Army in October 2012. Additionally, the ROK Defense White Paper 2018 notes, "Special operation forces are currently estimated at approximately 200,000 strong." The white paper pointed out that North Korea's special operations force has become an independent military branch.

⁵ Regarding North Korean cyber attacks, see Chapter 3, Section 3.

undermine the peace and security of the region and the international community. Additionally, such development poses a serious challenge to the entire international community with regard to the non-proliferation of weapons, including WMDs.

On the other hand, at the Plenary Meeting of the Central Committee of the KWP held on April 20, 2018, decisions were made to discontinue “nuclear test and inter-continental ballistic rocket test-fire,” and to dismantle the northern nuclear test ground. In the subsequent inter-Korean summit meeting held on April 27 and in the U.S.-North Korea summit meeting held on June 12, North Korea expressed its intention to work towards denuclearization. Then, on May 24, international press representatives were invited to witness the destruction of the northern nuclear test ground.

However, North Korea has not yet carried out the dismantlement of all WMDs and ballistic missiles of all ranges in a complete, verifiable, and irreversible manner. Having repeatedly carried out ballistic missile launches in breach of relevant Security Council resolutions since May 2019, it seems that North Korea has been striving to develop more advanced technologies and operational capabilities in this field. Japan cannot possibly turn a blind eye to this series of missile launches, which is an issue of serious concern to the international community as well. At the December 2019 Plenary Meeting of the Central Committee of the KWP, Chairman Kim stated that, since the United States was holding U.S.-ROK joint military exercises, there were no grounds for North Korea to be unilaterally bound any longer by a commitment that no other party fails to honor. He also announced the intention to continue developing strategic weapons until the United States rolls back its hostile policy towards North Korea. Furthermore, at the enlarged meeting of the Central Military Commission of the KWP in May 2020 guided by Kim Jong-un, North Korea announced that new policies for further increasing nuclear war deterrence and putting the strategic armed forces on a high alert were set forth and crucial measures for considerably increasing the firepower strike ability of the KPA's artillery were taken.

Looking to the future, it will be necessary to continue to carefully monitor moves by North Korea, including what kind of concrete actions it will take towards the dismantlement of all weapons of mass destruction and ballistic missiles of all ranges in a complete, verifiable and irreversible manner.

(1) Nuclear Weapons

a. The Current Status of the Nuclear Weapons Program

Details of the current status of North Korea's nuclear weapons program are largely unclear, partly because North Korea remains an extremely closed regime. In light of the unclear status of past nuclear developments, and considering North Korea has already conducted six nuclear tests including the nuclear test in September 2017, it is conceivable that North Korea has made considerable progress in its nuclear weapons program.

With regard to plutonium, a fissile material that can be used for nuclear weapons,⁶ North Korea has suggested its production and extraction on several instances.⁷ As for recent activities, in September 2015, North Korea announced that all nuclear facilities in Yongbyon, including the nuclear reactor and the reprocessing facility, the disablement of which was agreed upon at the fifth and the sixth round of the Six-Party Talks in February and September 2007, respectively, had been readjusted and had started normal operation.⁸ Because the restarting of the reactor could lead to the production and extraction of plutonium by North Korea, those activities are causes of great concern.

As for highly enriched uranium that can also be used for nuclear weapons, in June 2009, North Korea declared the commencement of uranium enrichment. In November 2010, North Korea disclosed its uranium enrichment facility to American nuclear specialists and later announced that it was operating a uranium enrichment plant equipped with thousands of centrifuges. The expansion of this uranium enrichment plant has been suggested in August 2013; in this regard, North Korea could have increased its enrichment capabilities. The series of North Korean behaviors related to uranium enrichment indicate the possibility of the development of nuclear weapons using highly enriched

⁶ Plutonium is synthetically produced in a nuclear reactor by irradiating uranium with neutrons, and then extracting it from used nuclear fuel at a reprocessing facility. Plutonium is then used as a basic material for the production of nuclear weapons. Meanwhile, in order to use uranium for nuclear weapons, it is necessary to extract uranium 235 (U235), a highly fissile material, from natural uranium. This process is called enrichment. Generally, a large-scale enrichment facility that combines thousands of centrifuges is used to boost the U235 concentration to nuclear weapon levels (over 90%).

⁷ North Korea announced in October 2003 that it had completed the reprocessing of 8,000 used fuel rods that contain plutonium, and in May 2005 that it had completed extraction of an additional 8,000 used fuel rods. The ROK's Defense White Paper 2018 estimates that North Korea possesses around 50 kg of plutonium, retaining the assessment given in the Defense White Paper 2016.

⁸ The “Worldwide Threat Assessment” of the U.S. Director of National Intelligence of January 2016 notes, “North Korea has followed through on its announcement by expanding the size of its enrichment facility and restarting the reactor that was previously used for plutonium production.” It is said that the reactor was restarted at the end of August 2013. It has been noted that if the reactor is restarted, North Korea would have the capability to produce enough plutonium (approximately 6 kg) to manufacture approximately one nuclear bomb in one year.

uranium in addition to plutonium.⁹

Regarding these nuclear-related activities, activities that are inconsistent with a “commitment to work toward complete denuclearization of the Korean Peninsula,” which North Korea insists it upholds, have been pointed out. For example, U.S. Secretary of State Pompeo testified in the Senate in July 2018 that North Korea was continuing to produce nuclear fuels. In addition, at a meeting of the International Atomic Energy Agency (IAEA) Board of Governors, then IAEA Director General Amano pointed out in March 2019 that the IAEA continued to observe signs of North Korea using the enrichment facility at nuclear facilities in Yongbyon.

With regard to the development of nuclear weapons, North Korea has conducted nuclear tests on October 9, 2006, May 25, 2009, February 12, 2013, January 6, 2016, September 9, 2016, and September 3, 2017. It is highly likely that North Korea has made strides in its nuclear weapons program, collecting the necessary data through these nuclear tests.

It is believed that North Korea seeks to miniaturize nuclear weapons and develop them into warheads that can be mounted on ballistic missiles, as part of its nuclear weapons program. On September 3, 2017, it was announced that Chairman Kim Jong-un had visited North Korea’s Nuclear Weapons Institute and had seen a hydrogen bomb capable of being loaded into an ICBM,¹⁰ in addition to which, following North Korea’s sixth nuclear test that was forced through on the same day, North Korea announced that it “successfully carried out a test of H-bomb for ICBM.” In general, miniaturizing a nuclear weapon small enough to be mounted on a ballistic missile requires a considerably high degree of technological capacity. However, considering, for example, that the United States, the former Soviet Union, the United Kingdom, France, and China succeeded in acquiring such technology by as early as the 1960s, as well as the technological maturity that is estimated to have been reached through North Korea’s previous six nuclear

tests, it is assessed that North Korea has already miniaturized nuclear weapons to fit ballistic missile warheads.¹¹

Furthermore, the yield of the sixth nuclear weapons test in 2017 was estimated to be the largest ever, with a maximum yield of approximately 160 kt. Given the size of the estimated yield, the possibility cannot be discounted that the test was of a hydrogen bomb.¹²

In any case, North Korea’s nuclear weapons development, considered in conjunction with North Korean efforts to enhance ballistic missile capabilities, including extending the range of ballistic missiles that are the delivery vehicles of WMDs, poses grave and imminent threats to Japan’s security, and significantly undermines peace and security of the region and international community. Therefore, it can never be tolerated.

b. Background of the Nuclear Program

As regards the objective of North Korea’s nuclear development, North Korea is deemed to be developing nuclear weapons as an indispensable deterrent for maintaining the existing regime in light of the following: North Korea’s ultimate goal is allegedly the maintenance of the existing regime;¹³ North Korea considers that it needs its own nuclear deterrence to counter the nuclear threat of the United States and is in no position at least in the short-term to overturn its inferiority in conventional forces vis-à-vis the United States and the ROK; North Korea asserts that the Iraqi and Libyan regimes collapsed and that Syria was attacked by U.S. Forces in April 2017 due to their lack of nuclear deterrence;¹⁴ and North Korea has reiterated that nuclear weapons will never be traded away at negotiations.

With regard to the issue of North Korea’s development of nuclear weapons, Chairman Kim expressed the desire on a number of occasions—including at the U.S.-North Korea summit meeting held on June 12, 2018—to work towards the complete denuclearization of the Korean Peninsula.

⁹ The ROK Defense White Paper 2018 assesses that North Korea possesses a substantial amount of highly enriched uranium (HEU). It has been noted that a uranium enrichment facility different from the one in Yongbyon exists in Kangson.

¹⁰ On September 3, 2017, in a report on a visit by Chairman Kim Jong-un to North Korea’s Nuclear Weapons Institute, the Korean Central News Agency (KCNA) announced that North Korea is able to conduct an “ultra-powerful electromagnetic pulse (EMP) attack over a wide area.”

¹¹ Over ten years have already passed since North Korea conducted its first nuclear test in October 2006. Furthermore, North Korea has conducted six nuclear tests to date. This timetable for technology development and the number of tests are reaching levels that are by no means inadequate, even when compared to the processes of developing technologies to miniaturize and lighten nuclear weapons in the United States, former Soviet Union, the United Kingdom, France, and China. The ROK’s Defense White Paper 2018 assesses that “North Korea’s ability to miniaturize nuclear weapons seems to have reached a considerable level.”

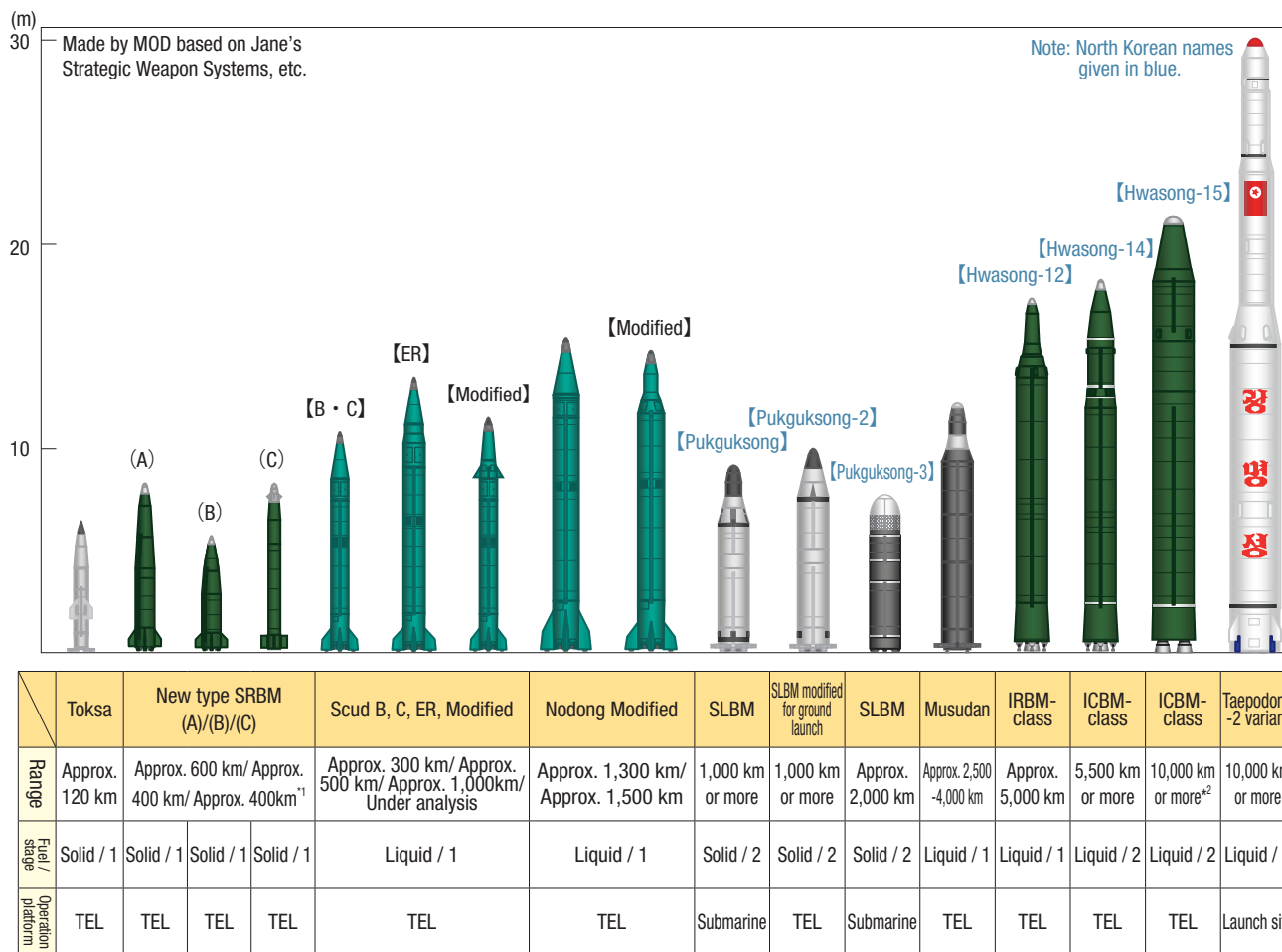
¹² The ROK’s Defense White Paper 2018 noted that the explosive yield of the sixth nuclear test was approximately 50 kt, significantly larger than the yield of the past tests and that this was assessed to be a hydrogen bomb test. North Korea also insisted that its fourth nuclear test, conducted in January 2016, was a hydrogen bomb test. However, given that the yield of that test is estimated at 6 to 7 kt, it is difficult to conceive that this was a hydrogen bomb test as generally defined.

¹³ According to “Military and Security Developments Involving the Democratic People’s Republic of Korea,” U.S. DoD (February 2016)

¹⁴ For example, a comment in the Rodong Sinmun dated December 2, 2013, contends that the situation in Iraq and Libya teaches an acute lesson that countries under the constant threat of U.S. preemptive nuclear attack have no choice but to become a victim of U.S. state terrorism, unless the countries have powerful deterrent capability. In addition, the “Statement by the Spokesperson of the Foreign Ministry of the Democratic People’s Republic of Korea” dated April 8, 2017, states with regard to the U.S. attack on Syria two days earlier on April 6 as follows: “Swagging as a superpower, the US has been picking only on countries without nuclear weapons and the Trump administration is no exception.”

Fig. 1-2-3-2

Ballistic Missiles Developed/Possessed by North Korea



* 1 Ranges of new type SRBM (A)/(B)/(C) are the largest ones achieved.

* 2 Depends on weight of the warhead, etc.

However, he is presumed to have done so on the premise that North Korea would continue to possess a nuclear arsenal. In fact, North Korea has frequently asserted to the international community its claim to the status of “a nuclear weapon state” and has repeatedly insisted that it will not agree to unilateral denuclearization. For example, at the December 2019 Plenary Meeting of the Central Committee of the KWP, Chairman Kim stated that if the United States persists in its hostile policy, there will never be denuclearization on the Korean Peninsula, and that North Korea will maintain a powerful nuclear deterrent capable of guaranteeing its long-term security. In addition, it has been noted that even after announcing a commitment to full denuclearization of the Korean Peninsula, North Korea has continued nuclear development¹⁵ and that a uranium enrichment facility not disclosed by North Korea exists.

In light of the above, it is now necessary to keep a close watch on what kind of concrete actions it will take towards the dismantlement of all WMDs and all ballistic missiles of all ranges in a complete, verifiable and irreversible manner.

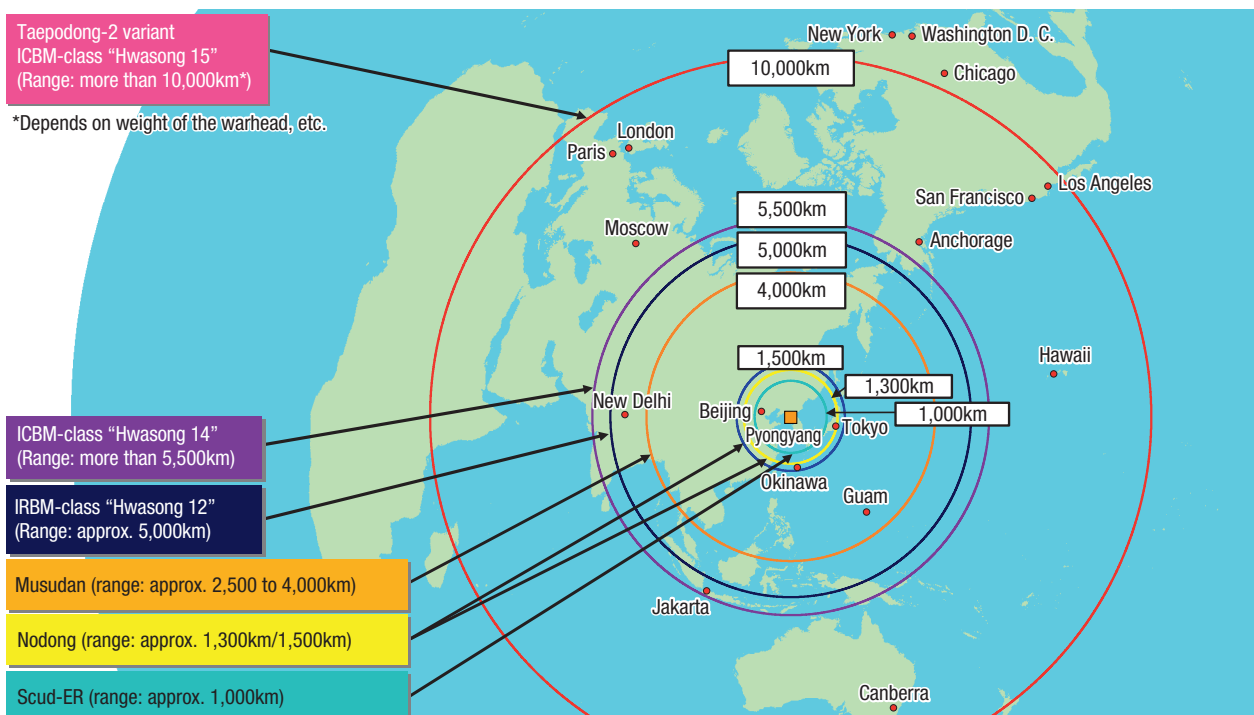
(2) Biological and Chemical Weapons

North Korea is an extremely closed regime. In addition, most materials, equipment, and technology used for manufacturing biological and chemical weapons are for both military and civilian uses, which in turn facilitates camouflage. For these reasons, details of the status of North Korea's biological and chemical weapons development and arsenals are unclear. However, with regard to chemical weapons, North Korea is suspected to have several facilities capable of producing chemical agents and already a substantial stockpile of such agents. North Korea is also thought to have some infrastructure

¹⁵ For example, “Worldwide Threat Assessment,” U.S. Director of National Intelligence (January 2019).

Fig. I-2-3-3

Range of North Korea's Ballistic Missiles



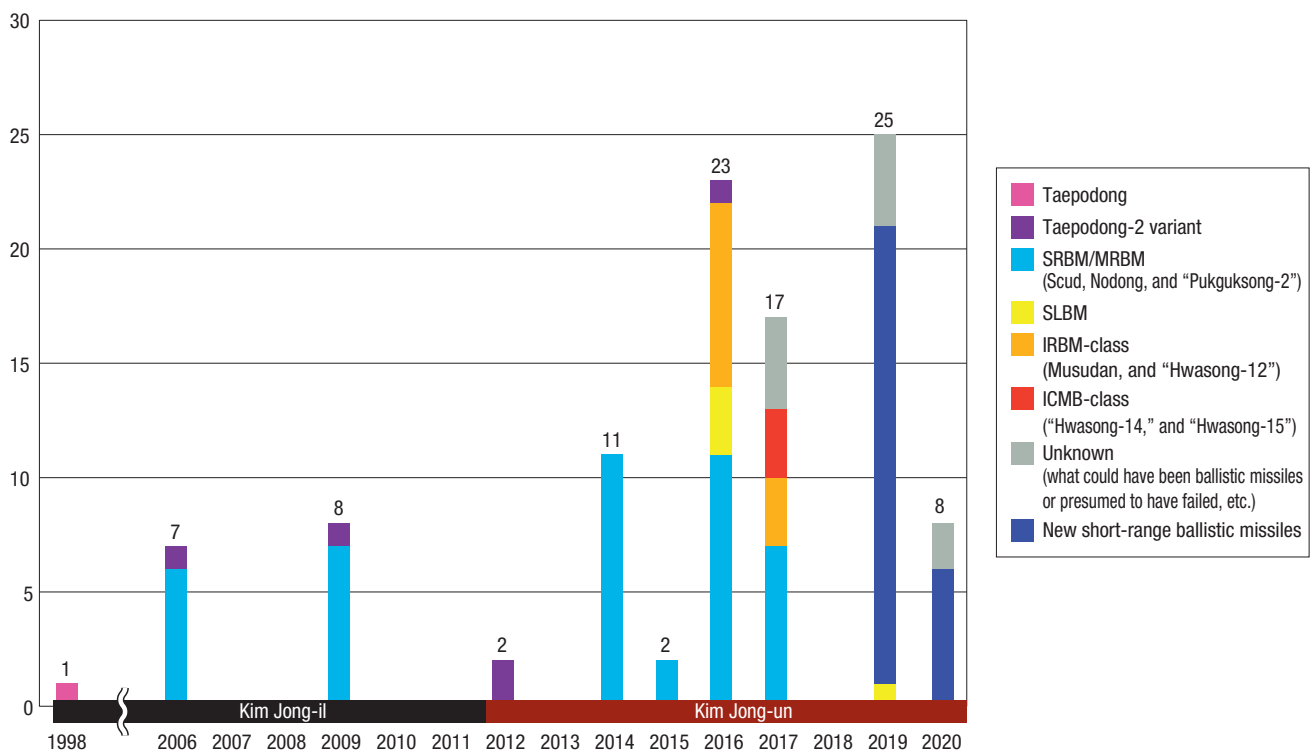
Note 1: The figure above shows a rough image of the distance each missile can reach from Pyongyang for the sake of convenience.

Note 2: Quotation marks indicate the names used by North Korea.

Fig. I-2-3-4

Major Trends in North Korea's Ballistic Missile Launches

Number of Ballistic Missiles Launched by North Korea (as of March 2020)



- Increase of ranges:** Development of intercontinental-range ballistic missiles-class ballistic missiles (since 2017) with a range exceeding 10,000km
- Enhancement of the accuracy and operational capabilities necessary for saturation attacks:** Repeated launches from unprecedented locations in the early morning and late hours of the night using TELs, often in multiple numbers (since 2014). Some ballistic missiles are said to be equipped with a Maneuverable Reentry Vehicle (MaRV) (since 2017).
- Enhancement of secrecy and instantaneity and the ability to conduct surprise attacks:** Launches of SLBMs (since 2016) and promotion of the development of solid-fueled ballistic missiles (since 2016)
- Irregular trajectories:** Launches of short-range ballistic missiles having a shape similar to that of the Russian "Iskander," which are said to be able to fly at a lower altitude than conventional ballistic missiles and on an irregular trajectory (since 2019)
- Diversification of the forms of launches:** Ballistic missile launches assumed to have used a lofted trajectory have been confirmed (since 2016).

Fig. I-2-3-5 Cases of North Korean Ballistic Missiles Overflying Japan

Launches of ballistic missiles allegedly as launches of satellites after reporting supposed falling areas to international organizations (three times)

Date	Presumed type of missile	Number of launches	Location	Flight distance
2009.04.05	Taepodong-2 or variant	1	Taepodong Area	3,000 km or more
2012.12.12	Taepodong-2 variant	1	Tongch'ang-ri Area	Approx. 2,600 km (second stage landfall)
2016.02.07	Taepodong-2 variant	1	Tongch'ang-ri	Approx. 2,500 km (second stage landfall)

Launches of ballistic missiles without prior notice (three times)

Date	Presumed type of missile	Number of launches	Location	Flight distance
1998.08.31	Taepodong-1	1	Taepodong Area	Approx. 1,600 km
2017.08.29	IRBM-class "Hwasong-12"	1	Near Sunan	Approx. 2,700 km
2017.09.15	IRBM-class "Hwasong-12"	1	Near Sunan	Approx. 3,700 km

* After the launch of Taepodong-1 on August 31, 1998, North Korea announced that it was the launch of a satellite.

* Quotation marks indicate the names used by North Korea.

Fig. I-2-3-6 Cases of North Korean Ballistic Missiles Launched on a Lofted Trajectory

Date	Presumed type of missile	Number of launches	Location	Flight distance	Altitude and flight duration
2016.06.22	Musudan	2	Wonsan	First: Approx. 100 km (maximum); Second: Approx. 400 km	Exceeded 1,000 km (the second one)
2017.05.14	IRBM-class "Hwasong-12"	1	Near Kusong	Approx. 800 km	Exceeded 2,000 km; for around 30 minutes
2017.07.04	ICBM-class "Hwasong-14"	1	Near Kusong	Approx. 900 km	Exceeded far beyond 2,500 km; for around 40 minutes
2017.07.28	ICBM-class "Hwasong-14"	1	Near Mupyong-ri	Approx. 1,000 km	Exceeded far beyond 3,500 km; for around 45 minutes
2017.11.29	ICBM-class "Hwasong-15"	1	Near Pyongsong	Approx. 1,000 km	Exceeded far beyond 4,000 km; for around 53 minutes
2019.10.02	SLBM "Pukguksong-3"	1	Near Wonsan	Approx. 450 km	Approx. 900 km; for around 17 minutes

* Quotation marks indicate the names used by North Korea.

for the production of biological weapons.¹⁶ Possession of sarin, VX, mustard and other chemical weapons, and of anthrax, smallpox, pest and other biological agents that could be used as biological weapons have been pointed out.

The possibility cannot be denied that North Korea is able to load biological and/or chemical weapons on warheads.

(3) Ballistic Missiles

As is the case with WMDs, many of the details of North Korea's ballistic missiles are unknown, partly owing to the country's extremely closed regime. It appears, however, that North Korea gives high priority to the development of ballistic missiles out of political and diplomatic considerations and from the viewpoint of earning foreign currency, in addition

to enhancing its military capabilities. The ballistic missiles currently deemed to be possessed and developed by North Korea are the following.¹⁷

Q See Fig. I-2-3-2 (Ballistic Missiles Developed or Possessed by North Korea)
Fig. I-2-3-3 (Range of North Korea's Ballistic Missiles [image])
Fig. I-2-3-4 (Major Trends in North Korea's Ballistic Missile Launches)
Fig. I-2-3-5 (Cases of North Korean Ballistic Missiles Overflying Japan)
Fig. I-2-3-6 (Cases of North Korean Ballistic Missiles Launched on a Lofted Trajectory)

a. Types of Ballistic Missiles Possessed or Developed by North Korea

(a) Toksa

Toksa is a short-range ballistic missile with a range estimated to be approximately 120 km. It is transported and operated on a TEL.¹⁸ It is deemed that Toksa is the first ballistic missile

¹⁶ For example, the ROK Defense White Paper 2018 points out that, following the commencement of production in the 1980s, it is estimated that North Korea has a stock of 2,500-5,000 tons of various chemical weapons stored. It also notes that North Korea likely has the capability to produce a variety of biological weapons including anthrax, smallpox, and pests. Moreover, the U.S. DoD's "Military and Security Developments Involving the Democratic People's Republic of Korea" of May 2018 points out that, "North Korea probably could employ CW [chemical weapons] agents by modifying a variety of conventional munitions, including artillery and ballistic missiles." North Korea ratified the Biological Weapons Convention in 1987 but has not acceded to the Chemical Weapons Convention.

¹⁷ According to "Jane's Sentinel Security Assessment China and Northeast Asia" (accessed in March 2020) North Korea possesses 700 to 1,000 ballistic missiles in total, 45% of which are presumed to be Scud-class, 45% Nodong-class, and the remaining 10% other intermediate- and long-range ballistic missiles.

¹⁸ The signs of a launch from a fixed launcher are easy for the adversary to detect and are vulnerable to attack by the adversary. TEL was developed mainly by the former Soviet Union among others in order to make the detection of launch signs more difficult and increase survivability. According to the U.S. DoD's "Military and Security Developments Involving the Democratic People's Republic of Korea" of May 2018, North Korea possesses a maximum of 100 TELs for Scuds, 50 TELs for Nodongs, and 50 TELs for IRBMs (Musudans). As for a TEL-mounted missile launch, it is deemed difficult to detect individual specific signs in advance concerning the detailed location and timing of the launch. This is because it is operated by being mounted and transported on a TEL, and furthermore, military-related underground facilities are thought to exist all over North Korea. Along with activities related to the development of ballistic missiles, developments related to the building of TELs require close watch as they concern the operational capabilities of ballistic missiles by North Korea.



Image publicly released by North Korea when it launched short-range ballistic missiles (July 2019) [JANES]



Image publicly released by North Korea when it launched short-range ballistic missiles (August 2019) [JANES]



Image publicly released by North Korea when it launched short-range ballistic missiles (September 2019) [JANES]

possessed or developed by North Korea which adopts a solid fuel propellant.

(b) New SRBM launched since 2019

Since 2019, North Korea has launched at least three types of short-range ballistic missile that are presumed to be new models. From images published by North Korea, it can be ascertained that these three types of SRBM were launched from a wheeled-drive or continuous-tracked TEL, with the characteristic radial exhausts of solid fuel propellant engines identifiable on each of the images.

(i) SRBM A

The SRBM (described by North Korea as “new type of

tactical guided weapon”) launched in 2019 on May 4 and 9, July 25, and August 6 are all presumed to have the same system and to be of a new and different type from missiles such as Nodong and Scud. Two missiles were launched on each of the aforementioned dates and flew approximately 200-600 km. The launched missiles have a shape similar to that of the Russian short-range ballistic missile “Iskander,” which is said to be able to fly at a lower altitude than conventional ballistic missiles and on an irregular trajectory.

(ii) SRBM B

The SRBM (described by North Korea as “new weapon” or as “tactical guided weapon”) launched on August 10 and 16, 2019 and on March 21, 2020 are all presumed to have the same system and to be of a new and different type again from the aforementioned A-type. Two missiles were launched on each of the aforementioned dates and flew approximately 250-400 km.

(iii) SRBM C

The SRBM (described by North Korea as “super-large multiple rocket launcher”) launched in 2019 on August 24, September 10, October 31, and November 28, and on March 2 and 9, 2020 are all presumed to be of a new and different type again from the aforementioned A-and B-types. Two missiles were launched on each of the aforementioned dates and flew approximately 300-400 km. The interval between launches was estimated at about 3 minutes in the case of the October 31, 2019 launches, and less than 1 minute during the launches on November 28, 2019 and March 2, 2020, suggesting that North Korea is trying to improve the continuous fire capability required for saturation attacks and the like.

In addition, North Korea carried out two launches of what could have been SRBMs on July 31, 2019 and another two a couple of days later, on August 2. Another two SRBMs were launched on March 29, 2020; analysis of the specific type of shell is still under way.

Through such launches, North Korea appears to be pursuing enhancement of related technologies and operational capabilities, including enhancing secrecy and instantaneity, to make it difficult to detect signs of a launch, as well as improving its ability to conduct surprise attacks and its continuous fire capability. Considering the distances flown, it would appear that not only the ROK, but also parts of Japan would be within range of some of the SRBMs launched. There is also a concern that this short-range ballistic missile technology will be applied to longer-range missiles in due course.



Image publicly released by North Korea when it launched 4 Scud ERs (March 2017) [JANES]

(c) Scud

The Scud is a liquid fuel propellant single-stage ballistic missile and is transported and operated on a TEL.

Scud B and Scud C, a variant of Scud B with extended range, are SRBMs with ranges estimated to be about 300 km and 500 km, respectively. It is believed that North Korea has manufactured and deployed them, and has exported them to the Middle East and other countries.

The Scud ER (Extended Range) is a ballistic missile that has an extended range due to the extension of the Scud's body as well as the reduction in weight of the warhead, among other factors. The range of a Scud ER is estimated to reach approximately 1,000 km, and it appears that a part of Japan falls within this range.

In addition, North Korea is developing a ballistic missile that appears to be an improvement of the Scud missile. This ballistic missile was launched on May 29, 2017. A day after the launch, North Korea announced that it had successfully conducted a test launch of a newly developed ballistic rocket incorporating a precision navigation guidance system. In addition, while the images released by North Korea show that the ballistic missile was launched from a continuous track TEL and had what appears to be small wings on its warhead, i.e., characteristics different from those of existing Scud missiles, the shape other than the warhead and length are similar to existing Scud missiles. Another similarity is that it can be confirmed that the missile has straight-line exhausts characteristic of a liquid fuel-propelled engine. It has also been noted that this ballistic missile is equipped with

a MaRV.¹⁹ Given that North Korea announced that Chairman Kim Jong-un had ordered the development of ballistic missiles capable of precision attacks on enemy ships and other individual targets, the intent appears to be to enhance the accuracy of ballistic missile attacks.

(d) Nodong

The Nodong is a liquid fuel propelled single-stage ballistic missile and is transported and operated on a TEL. It is assessed to have a range of about 1,300 km, reaching almost all of Japan.

Although the details of Nodong's performance have not been confirmed, Nodong may not have the accuracy to carry out precise strikes on specific target installations, as this ballistic missile is likely based on Scud technology. However, it has been suggested that North Korea is working to increase the Nodong's accuracy. In this regard, it had been suggested that there is a type of Nodong aimed at enhancing accuracy by improving the shape of the warhead (whose range is deemed to reach approximately 1,500 km through the weight reduction of the warhead). Against this backdrop, the launch of this type of ballistic missile was confirmed for the first time in the images published by North Korea a day after the launch of one Scud and two Nodong missiles on July 19, 2016.

(e) SLBM

(i) SLBM "Pukguksong"

It has been suggested that North Korea is developing an SLBM and a new submarine which is designed to carry the SLBM (referred to by North Korea as "Pukguksong"). Since it announced in May 2015 through its media that it conducted a successful test launch of an SLBM, it has made public SLBM "Pukguksong" launches on four occasions.²⁰ Judging from the images and footage that it has made public so far, North Korea may have succeeded in operating the "cold launch system," in which the missile is ignited after it is ejected into the air. Moreover, in the launches in April and August 2016, it appears, based on observations such as the shape of the flame coming out of the missile and the color of the smoke, that the solid fuel propellant system was adopted.

¹⁹ For example, according to "Jane's Sentinel Security Assessment China and Northeast Asia" (accessed in March 2020), the launch on May 29, 2017, was presumed to have been the first launch of a short-range ballistic missile based on a Scud missile, equipped with a MaRV, suggesting that North Korea has made advances in its precision guidance systems.

²⁰ On May 9, 2015, North Korea announced that it had succeeded in a test launch of an SLBM. On January 8, 2016, it released footage of an SLBM test launch that appears to be different from the one unveiled in May 2015. On April 24 and August 25, 2016, it again announced that it had succeeded in SLBM test launches. Moreover, the MOD predicts that North Korea also launched one ballistic missile presumed to be an SLBM on July 9, 2016, although North Korea has not made an announcement about the launches.



Image publicly released by North Korea when it launched an SLBM “Pukguksong-3” (October 2019) [JANES]

A ballistic missile presumed to be an SLBM “Pukguksong” has been confirmed in flight in the direction of Japan, launched from the vicinity of Sinpo, on the east coast of North Korea, on August 24, 2016. The SLBM flew approximately 500 km. Considering that this was its first SLBM to fly approximately 500 km, the possibility cannot be denied that North Korea had striven to solve the problems through the preceding launches and achieved certain technological progress. Furthermore, it is predicted that the ballistic missile that was launched at this time flew on a somewhat higher than nominal trajectory. If it were launched on a nominal trajectory the firing range is expected to surpass 1,000 km.

North Korea’s “Pukguksong” SLBMs are believed to be launched from a Gorae-class submarine (displacement 1,500 tons). North Korea has one such submarine. It is also pointed out that North Korea seeks to develop a larger submarine to launch SLBMs.²¹

(ii) SLBM “Pukguksong-3”

On October 2, 2019, North Korea launched what was presumed to be a new type of SLBM (described by North Korea as a “Pukguksong-3”) that differed from the SLBM “Pukguksong.” The missile in question flew for about 450 km and is presumed to have fallen into Japan’s exclusive economic zone (EEZ). As the ballistic missile launched on this occasion reached a maximum altitude of about 900 km, it is surmised to have been launched on a lofted trajectory. If launched on a nominal trajectory, it is estimated that it could have a range of approximately 2,000 km. The characteristic radial exhausts of solid fuel propellant engines are identifiable on images published by North Korea. The ballistic missile in question could potentially have been launched from underwater launch

test equipment.

It is deemed that through developing the SLBM and a new submarine to carry it, North Korea intends to diversify its ballistic missile attack capabilities and improve survivability.

(f) Ballistic Missile Modified from the SLBM

North Korea launched a ballistic missile on both February 12 and May 21, 2017, both of which appeared to be a modified version of the SLBM “Pukguksong” for ground launch (referred to by North Korea as “Pukguksong-2”). This ballistic missile is estimated to have flown approximately 500 km on both occasions, on somewhat higher trajectories than normal. If it were launched on a nominal trajectory, the firing range is assessed to surpass 1,000 km. A day after the launch on February 12, North Korea announced that it was developed as a ground-to-ground ballistic missile based on the results of the August 2016 SLBM launch. It also announced a day after the launch on May 21, 2017 that it had again successfully conducted the test launch of the Pukguksong-2 and that Chairman Kim Jong-un had authorized its “operational deployment.” Moreover, the launch by a “cold launch system,” in which the missile is ignited after it is ejected into the air from a continuous track TEL, and the characteristic radial exhausts of solid fuel propellant engines, can be confirmed from each of the images that North Korea released. It has the characteristics of appearing to be using “cold launch system” and solid fuel propellant engines in common with the SLBM “Pukguksong.” Given that North Korea has made references to its operational deployment, there is a possibility that North Korea will newly deploy a solid fuel propellant engine that includes Japan within its firing range.

(g) Intermediate-Range Ballistic Missile (IRBM)-class

To date North Korea has launched three liquid fuel-propelled IRBM-class ballistic missiles (referred to by North Korea as “Hwasong-12”). This ballistic missile was launched on May 14, 2017 and based on this flight pattern, it is presumed that the ballistic missile was launched on a lofted trajectory. Had it been launched on a nominal trajectory, the maximum firing range is assessed to be close to approximately 5,000 km. In addition, the straight-line exhausts characteristic of a liquid fuel propelled engine can be confirmed from the images released by North Korea a day after the launch, suggesting that the ballistic missile uses liquid fuel. On August 29 and September 15, 2017, single missiles of this class were

²¹ According to “Jane’s Fighting Ships 2019-2020,” etc.

launched and flew over Japan's territory in the vicinity of the Oshima Peninsula and Cape Erimo. These launches were the first cases of North Korea launching what it calls ballistic missiles that flew over Japan's territory.

In view of their flight paths, these missiles appear to demonstrate a certain level of function as an IRBM. Also, the fact that missiles that overflowed Japan were launched in succession in a short time period would suggest that North Korea is steadily improving its ballistic missile capabilities. Furthermore, although at the time of launches in May and August 2017 the missiles were confirmed to have been launched after being separated from the wheel-drive TEL, at the time of the September launch the missile was confirmed to have been launched while still attached to the wheel-drive TEL. Considering this point, together with North Korea's claims at the time of the launch that it was for the purposes of "confirming practical operational procedures" and "realize the potential of the 'Hwasong-12,'" there is a possibility that North Korea is improving its practical operational capabilities.

In 2016 North Korea conducted repeated launches of an IRBM-class ballistic missile that is presumed to be the Musudan,²² but although the missile launched in June flew for a certain distance on a lofted trajectory, the fact that there were two successive launch failures in October would suggest that there may still be obstacles remaining towards the operationalization of the Musudan and that North Korea may be concentrating on the development and operationalization of the "Hwasong-12" as an IRBM instead.

(h) Intercontinental-Range Ballistic Missile (ICBM)-class

(i) ICBM-class "Hwasong-14"

North Korea has launched ICBM-class ballistic missile (referred to by North Korea as "Hwasong-14") on July 4 and 28, 2017. From the flight pattern, it is presumed that the two ballistic missiles were launched on a lofted trajectory. If they were to have been launched on a normal trajectory, it is estimated that they would have a maximum range of at least 5,500 km. On July 4, the day of the launch, North Korea made an "important announcement," announcing that it had successfully conducted a test launch of a new type of ICBM. Furthermore, on the day following the July 28 launch, North Korea announced that the "nuclear bomb detonation device" had functioned normally, emphasizing that the safety of the warhead in an atmospheric reentry

environment had been made maintained. This suggests that North Korea is aiming to operationalize long-range ballistic missiles.

Based on images released by North Korea, the ballistic missiles launched on July 4 and 28 have the following in common with the IRBM-class ballistic missile launched on May 14: (1) the engine system consists of one main engine and four auxiliary engines; (2) the shape of the lower part of the propulsion system is conical; and (3) the straight-line flame of liquid-propulsion systems can be confirmed. Based on these facts and the respective ranges that can be estimated for the missiles, the possibility can be deduced that the ICBM-class ballistic missile that were launched on July 4 and 28 were developed on the basis of the new-type IRBM-class ballistic missile that had been launched on May 14.

Also based on images published by North Korea, it can be confirmed that the ballistic missiles that were launched on July 4 and 28 had been mounted on the wheeled eight-axle TEL similar to KN-08/14 (see (j) below). However, it can be confirmed from the images at the time of the launches that they were launched from simplified launch pads, not TELs. Furthermore, the images suggest that the missile was of two-stage construction.

(ii) ICBM-class "Hwasong-15"

On November 29, 2017, North Korea launched a single missile that is presumed to have been an intercontinental-range ballistic missile-class ballistic missile (referred to by North Korea as "Hwasong-15") different from the aforementioned "Hwasong-14" missiles. From the flight pattern it is presumed that the missile was launched on a lofted trajectory. On the day of the launch, North Korea made a "government statement," declaring that it had successfully conducted a test launch of the "Hwasong-15," a newly developed type of ICBM with the capability to strike all areas of the U.S. mainland, and asserting that it had now completed development of its state nuclear force.

The following points would suggest that this missile is an intercontinental-range ballistic missile-class ballistic missile, different from the ICBM-class ballistic missile launched twice in July 2017: (1) its flight distance and altitude; (2) the fact that North Korea announced the successful test launch of a new type of ICBM, the "Hwasong-15;" (3) the fact that the missile was deployed on a previously unseen nine-axle wheel-drive TEL;

²² It has been suggested that, given its range of between 2,500 and 4,000 km, all parts of Japan and Guam may fall within the Musudan's firing range. Similar to its Scud and Nodong counterparts, it is liquid fuel-propelled and is loaded onto a TEL to transport and operate. It has been noted that Musudan is a revamped version of the Russian SLBM SS-N-6 that North Korea acquired in the early 1990s.



Image publicly released by North Korea when it launched an ICBM-class "Hwasong-15"
(November 2017) [JANES]

and (4) that the nose of the warhead was more rounded than previous missiles. In addition, according to images released by North Korea, the missile was of a two-stage design, and it can be confirmed that it was removed from the TEL prior to launch and that its straight-line exhausts are characteristic of a liquid fuel propelled engine.

Furthermore, based on the flight altitude, distance flown and released images, it can be assumed that this missile could have a range in excess of 10,000 km, depending on the weight of the warhead deployed, etc., thus renewing concerns over the increasing ranges of North Korea's ballistic missiles.

In addition, although the wheel-drive TELs possessed by North Korea are thought to be modified versions of Russian and Chinese TELs, it is noteworthy that North Korea has claimed to have developed its own TEL.

(i) Taepodong-2

Taepodong-2 are long-range ballistic missiles launched from fixed launch pads.²³ Taepodong-2 is believed to use in its first stage, four engines, each of which is developed based on the technologies of Nodong, and the same type of engine in its second stage. Its range is estimated to be approximately 6,000 km for the two-stage type, while the range of its three-stage variant can be more than approximately 10,000 km assuming that the weight of the warhead is not over approximately 1 ton. Taepodong-2 missiles and its variants have been launched a total of five times so far.

Most recently, in February 2016, North Korea conducted a launch of a missile disguised as a "satellite" from the Tongch'ang-ri district in the northwest coastline of North Korea using a Taepodong-2 variant after notifying

international organizations. It is assessed that North Korea's long-range ballistic missiles' technological reliability had been advanced by this launch because it is estimated that (1) it successfully launched two similar types of ballistic missiles in a row; (2) the missile flew in almost the same way as the last launch; and (3) it put an object into orbit around the Earth.

Accordingly, it is believed that these test launches of long-range ballistic missiles can contribute to the development of shorter-range missiles in such ways as increasing the range and payload capability and improving the circular error probability (CEP). Also, related technology such as the separation technology of multi-stage propelling devices and the technology of posture control and thrust modulation of long-range ballistic missiles can be applied to other middle-range and long-range ballistic missiles that North Korea is newly developing. Therefore, the launch may lead not only to the improvement of other types of its ballistic missiles including Nodong but also to the advancement of North Korea's entire ballistic missile program including the development of new ballistic missiles and diversification of attack measure.

North Korea announced twice that it had conducted a "crucial test" in December 2019 at its Sohae satellite launching station in Tongch'ang-ri district. It has been suggested that these were ICBM-class ballistic missile engine tests.

(j) KN-08/KN-14

The details of the new missile "KN-08" which was showcased at the military parade in April 2012 and July 2013 are unknown. However, the missile is believed to be an ICBM. At the military parade in October 2015, a new missile thought to be the "KN-08" was showcased with a different-shaped warhead from the previous version. The new missile, considered a variant of the "KN-08," is called the "KN-14."

b. Major Trends in Ballistic Missile Launches

North Korea has repeatedly launched various types of ballistic missiles. In particular, since 2016 it has conducted more than 70 launches, including launches of what appear to be new types of missiles.

As for trends in North Korea's ballistic missile launches, the following characteristics have been observed. Firstly, it appears that the country seeks to increase the firing range

²³ There is also Taepodong-1, which may have been a transitory product for the development of Taepodong-2.

of ballistic missiles. An intercontinental-range ballistic missile-class ballistic missile launched in November 2017, which could have a range in excess of 10,000 km, depending on the weight of the warhead deployed, etc. Although it is considered necessary for the operationalization of long-range ballistic missiles to further verify technology for protecting the re-entry vehicle from the ultrahigh temperature that is generated during the atmospheric re-entry of the warhead part, North Korea, with announcements such as the one in November 2017 on the day of the launch of what is believed to have been an intercontinental-range ballistic missile-class ballistic missile, claiming that it had re-verified warhead reliability in a reentry environment, is displaying an intention to seek to secure and enhance technology aimed at the operationalization of long-range ballistic missiles. Should North Korea make further progress in the development of ballistic missiles, including the acquiring of reentry technologies, it may come to have a one-sided understanding that it has secured a strategic deterrence against the United States. However, if North Korea has such a false sense of confidence and recognition regarding its deterrence, it could lead to an increase and escalation of military provocations by North Korea in the region and could create situations that are deeply worrying also for Japan. North Korea is presumed to have acquired the atmospheric re-entry technologies required for the operationalization of Nodong and Scud-ER ballistic missiles, within whose range Japan lies, suggesting that it already has the ability to attack Japan with nuclear weapons fitted to these ballistic missiles.

Secondly, North Korea may be aiming to enhance the accuracy, continuous fire capability, and operational capabilities necessary for saturation attacks and the like. As for the Scud and Nodong, which are already deployed, since 2014, they have been launched from unprecedented locations, cutting across the Korean Peninsula, in the early morning and late hours of the night using TELs, often in multiple numbers. This indicates that North Korea is capable of launching Scuds and Nodongs from any place and at any time, from which it is deemed that it has increased confidence in the performance and reliability of its ballistic missiles.

As for Scuds and Nodongs, since the August 2016 Nodong launch, there have been launches where it is presumed that warheads fell in Japan's EEZ, posing a major threat to Japan's security. The four ballistic missiles, apparently Scud ERs, launched on March 6, 2017, were launched simultaneously.

It is possible that through these launches, North Korea's intentions are not only research and development of ballistic

missiles but also the enhancement of their operational capabilities. Since Chairman Kim Jong-un has repeatedly instructed the military troops to reject formality and conduct practical training, it can be considered that these instructions underpin the launches of ballistic missiles that have already been deployed.

Some have noted that a ballistic missile which appears to have been modified from the Scud missile launched in May 2017 is equipped with a MaRV. Furthermore, images of the 2019 ballistic missile launches published by North Korea show that the missiles were launched from different places and hit the specific target.

This suggests that North Korea is aiming to enhance the accuracy of attack by upgrading ballistic missiles that have already been deployed and developing new ballistic missiles.

Furthermore, in the short-range ballistic missile launches on November 28, 2019 and March 2, 2020, the interval between launching the two missiles on both occasions was estimated at less than 1 minute, suggesting that North Korea is trying to improve the continuous fire capability required for saturation attacks and the like.

In recent years, North Korea also appears to have been striving to improve its practical operational capabilities, conducting target practice using a combination of new SRBMs and various types of artillery.

Thirdly, North Korea appears to be seeking to improve its ability to conduct surprise attacks by enhancing secrecy and instantaneity to make it difficult to detect signs of a launch. Using a TEL or submarine, a ballistic missile can be launched from any point, making it difficult to detect signs of a launch in advance. North Korea has repeatedly launched ballistic missiles from TELs and SLBMs. In addition, all the ballistic missiles launched in 2019 appear to use solid fuel. It is therefore believed that North Korea is proceeding with the development of solid-fueled ballistic missiles. Generally solid fuel-propelled ballistic missiles are pre-loaded with solid fuel, and therefore, they can be launched instantly and the signs of their launch are more difficult to detect. Furthermore, they can be reloaded more quickly, and they are relatively easier to store and handle in comparison to liquid fuel-propelled missiles. In this respect, they are considered to be superior militarily. From these factors, North Korea is deemed to be aiming to enhance its surprise attack capabilities.

Fourthly, North Korea could possibly be developing ballistic missiles that fly at low altitudes on irregular trajectories, in an attempt to breach other countries' missile

Column

North Korea's nuclear and missile capabilities

(Based on the current state of miniaturization and warhead technology of nuclear weapons)

North Korea, which is significantly inferior to the ROK Forces and the U.S. Forces Korea in terms of conventional forces, has been promoting the development of nuclear weapons and ballistic missiles and enhancing operational capabilities in order to make up for the inferiority.

In order to launch an attack using ballistic missiles fitted with a nuclear weapon, technologically, it is essential to miniaturize a nuclear weapon sufficiently to be carried by a ballistic missile and to acquire atmospheric reentry technology that prevents the deforming, destruction and other damage to the warhead due to heat generated at the time of reentry into the atmosphere.

For the miniaturization of nuclear weapons, substantial technological capability is considered to be required. However, considering, for example, that the United States, the former Soviet Union, the United Kingdom, France, and China succeeded in acquiring such technology by as early as the 1960s, as well as the technological maturity that is estimated to have been reached through North Korea's previous six nuclear tests, it is assessed that North Korea has already miniaturized nuclear weapons.

Generally speaking, it is considered that the longer the range of a ballistic missile is, the more difficult it is to acquire sufficient atmospheric reentry technology because of such factors as a rise in the temperature of the generated heat due to a higher speed. However, North Korea is presumed to have already acquired the necessary technology with respect to ballistic missiles whose range covers Japan, such as Pukguksong and Pukguksong-2, in addition to the Nodong and Scud ER missiles, which are already deployed. Moreover, in March 2016, North Korea conducted a mock ballistic missile atmospheric re-entry

environment test of an intercontinental ballistic missile (ICBM) and announced the successful implementation of the test. This indicates that North Korea is seeking to acquire technology for longer-range missiles.

In light of the above, North Korea is considered to have miniaturized nuclear weapons to fit in ballistic missile warheads and to possess the capability to launch an attack on Japan with a ballistic missile fitted with a nuclear warhead. On the other hand, it is necessary to continue careful analysis as to whether or not North Korea has acquired a technology necessary for operationalizing longer-range ballistic missiles.

If North Korea makes further progress in the development of ballistic missiles and acquires a technology to fit nuclear warheads on ICBMs, it may come to have a one-sided understanding that it has secured strategic deterrence against the United States. Should North Korea have such a false sense of confidence and recognition regarding its deterrence, this could lead to increases and the escalation of military provocations by North Korea in the region and could create situations that are deeply worrying also for Japan.

In light of the above, North Korea's military activities, including nuclear and missile development, pose serious and imminent threats to the security of Japan and significantly undermine the peace and security of this region and the international community. Therefore, Japan never tolerates the possession of nuclear weapons by North Korea, and will continue to support the U.S.-North Korea process and closely cooperate with countries such as the United States and the ROK toward denuclearization of the Korean Peninsula.



Nodong missiles
[Korea News Service-Jiji]



Object claimed to be a hydrogen bomb capable of being loaded into an ICBM [JANES]

defense networks. The SRBMs launched in 2019 on May 4 and 9, July 25, and August 6 have a shape similar to that of the Russian short-range ballistic missile "Iskander," which is said to be able to fly at a lower altitude than conventional ballistic

missiles and on an irregular trajectory. The prevailing view is that missiles which fly at lower altitudes than conventional ballistic missiles and on an irregular trajectory, such as the "Iskander," are designed to breach missile defense networks.

Fifthly, North Korea may be attempting to diversify the forms of launches. It has been confirmed that the June 22, 2016, May 14, July 4, July 28, and November 29, 2017, and October 2, 2019 ballistic missile launches used a lofted trajectory, in which missiles are launched to high altitudes at higher angles than normal. Generally, when a launch is made on a lofted trajectory, interception is considered to be more difficult.

North Korea is proceeding with ballistic missile development at an extremely rapid pace and is believed already to have the ability to attack Japan with nuclear weapons fitted to Nodong and Scud-ER ballistic missiles, within whose range our nation lies. Furthermore, North Korea has developed more advanced missile-related technologies in recent years. The three types of SRBMs that are presumed to be new models and have been involved in a series of launches since May 2019 are distinctive in that they use solid fuel and fly at lower altitudes than conventional ballistic missiles. North Korea is therefore believed to be trying to breach missile defense networks by making it more difficult to detect signs of a launch and making early detection harder. There are concerns that such advanced technologies will be applied to longer-range missiles.

Thus, North Korea is relentlessly pursuing increasingly complex and diverse modes of attack and is steadily strengthening and improving its attack capabilities. These enhancements in its capabilities make early detection of the signs of a launch and the interception of the missiles more difficult, thereby posing new challenges for the information gathering, early warning, and interception postures of relevant countries, including Japan.

c. Future Outlook for Ballistic Missile Development

At the Plenary Meeting of the Central Committee of the KWP in April 2018, Chairman Kim Jong-un announced the suspension of ICBM test launches. Then, at the U.S.-North Korea summit meeting in June, he clearly expressed the intention to work towards denuclearization. However, at the December 2019 Plenary Meeting of the Central Committee of the KWP, Chairman Kim stated that, since the United States was holding U.S.-ROK joint military exercises, there were no grounds for North Korea to be unilaterally bound any longer by a commitment that no other party honors. He also announced the intention to continue developing strategic weapons until the United States rolls back its hostile policy towards North Korea.

Given these points, it will be necessary to continue to carefully monitor trends in North Korea's ballistic missile

development program.

4 Domestic Affairs

(1) Developments Related to the Kim Jong-un Regime

In North Korea, the power base centered on Chairman Kim is being solidified. The constitution was amended in April and August 2019, strengthening Chairman Kim's authority through such provisions as the stipulation that the Chairman of the State Affairs Commission is "the supreme leader of the Democratic People's Republic of Korea who represents the state." Since the transition to the new regime, there has been a number of announcements of party-related meetings and decisions, and in May 2016, the Seventh KWP Congress was held for the first time since the last Congress in October 1980, 36 years earlier. These developments suggest that the state is run under the leadership of the party.

On the other hand, with senior officials unable to dispute the decisions of Chairman Kim Jong-un due to an atrophy effect created by the frequent executions, demotions, and dismissals of senior officials, it is believed that there is growing uncertainty, including over the possibility of North Korea turning to military provocations without making adequate diplomatic considerations. In addition, it has been suggested that there is declining social control caused by widening wealth disparities and information inflow from other countries. In this regard, attention will be paid to the stability of the regime.


(2) Economic Conditions

In the economic domain, North Korea has been facing chronic stagnation and energy and food shortages due to the vulnerability of its socialist planned economy and diminishing economic cooperation with the former Soviet Union and East European countries following the end of the Cold War. Especially for food, it is deemed that North Korea is still forced to rely on food assistance from overseas. Furthermore, the strengthening of sanctions by countries including Japan and the United States, and the sanctions of the related UN Security Council resolutions in response to the implementation of nuclear tests and missile launches can be assumed to have had a certain effect, when considered together with the severe economic situation of North Korea. Accordingly, if China, North Korea's largest trading partner, and other relevant countries continue to rigorously implement sanctions, an even more severe economic situation could beset North Korea. In 2020, North Korea implemented a

number of measures to prevent infection with the novel coronavirus, such as halting the tourism and the operation of international rail and air services, which suggests that it might be suffering economic losses.²⁴

To tackle a host of economic difficulties, North Korea has made attempts at limited improvement measures and some changes to its economic management systems, and promotes the establishment of economic development zones and the enlargement of the discretion of plants and other entities over production and sales plans. Furthermore, at the Plenary Meeting of the Central Committee of the KWP in December 2019, Chairman Kim stated that North Korea should take an offensive for making a breakthrough head-on aimed at neutralizing the sanctions and pressure by the hostile forces and opening a new avenue for socialist construction, declaring the economy to be the key. It therefore appears that North Korea regards the rebuilding of the economy as being of paramount importance. Nevertheless, as North Korea is unlikely to carry out any structural reforms that could lead to the destabilization of its current ruling system, it faces various challenges in making fundamental improvements to its current economic situation.

North Korea is presumed to be evading the UN Security Council sanctions by conducting ship-to-ship transfers on the high seas, which are forbidden under the terms of the UN Security Council resolutions.²⁵ The final report of the UN Security Council's Panel of Experts assisting the North Korea Sanctions Committee, released in April 2020, pointed out that in 2019, North Korea illicitly imported a volume of petroleum products far in excess of the cap set by UN Security Council resolutions.

 Fig. I-2-3-7 (Sanctions based on UN Security Council Resolutions against North Korea)

5 Relations with Other Countries

(1) Relations with the United States

The U.S. Trump administration announced that it would deal with North Korea's nuclear and missile issue based on the concept of "all options are on the table" and adopted the policy of exerting pressure on North Korea to abandon plans to develop and proliferate nuclear weapons and missiles by

strengthening economic sanctions and diplomatic measures. In response, North Korea repeated its previous assertions that developing its own nuclear deterrent capability was necessary in order to respond to the nuclear threat posed by the United States, and continued to engage in provocative rhetoric and behavior, coupled with military provocations such as ballistic missile launches.

In June 2018, the historic first-ever U.S.-North Korea summit meeting was held and both sides confirmed that they would join their efforts to build a lasting and stable peace regime on the Korean Peninsula. Chairman Kim Jong-un made clear his intention to work towards the complete denuclearization of the Korean Peninsula, and confirmed that negotiations would continue with the United States.

However, the second U.S.-North Korea summit meeting in February 2019 ended without any agreement being reached between the two countries. At the Supreme People's Assembly in April 2019, Chairman Kim Jong-un stated that he was ready to hold a third U.S.-North Korea summit meeting on the condition that the United States find out "with a proper attitude a methodology that can be shared with us" and that North Korea would "wait for a courageous decision from the U.S. till the end of this year."

When President Trump visited the ROK in June 2019, he met the North Korean leader at Panmunjom and they agreed to proceed with dialogue at the working level. A working-level meeting took place that October, but North Korea subsequently announced that talks had broken down.

At the December 2019 Plenary Meeting of the Central Committee of the KWP, Chairman Kim stated that, since the United States was holding U.S.-ROK joint military exercises, there were no grounds for North Korea to be unilaterally bound any longer by a commitment that no other party honors. He also announced that there will never be denuclearization on the Korean Peninsula, and that North Korea will continue developing strategic weapons until the United States rolls back its hostile policy towards North Korea. Furthermore, Chairman Kim remarked that North Korea would maintain its nuclear deterrence against the United States' nuclear threat and that the scope and depth of the buildup of the deterrent would be coordinated depending on the future approach of the United States.

However, no concrete progress has yet been observed in

²⁴ North Korea itself has stated on Uriminzokkiri, the website of the Committee for the Peaceful Reunification of the Fatherland, that it is suffering huge economic losses (dated March 10, 2020).

²⁵ Between the beginning of 2018 and the end of March 2020, MSDF patrol aircraft have observed 24 cases in which a North Korean-flagged tanker and a foreign-flagged vessel were anchored side-by-side on the high seas. As a result of comprehensive judgment by the government, there are strong suspicions that the observed vessels were engaging in illegal ship-to-ship transfers. For details of these cases and information about Japan's response, see Part III, Chapter 1, Section 1.

Fig. 1-2-3-7

Sanctions based on UN Security Council Resolutions against North Korea

Main content		
Items	Sanction content	Related resolution
Crude oil	Restriction of annual supply to 4 million barrels or 525,000 tons	No. 2397 (December 2017)
Petroleum refined products	Restriction of annual supply to 500,000 barrels	No. 2397 (December 2017)
Coal	Total ban on imports from North Korea	No. 2371 (August 2017)
Ship offloading (ship-to-ship transfer)	Banned	No. 2375 (September 2017)

Summary of recent UN Security Council resolutions on sanctions against North Korea

Date	Resolution	Catalyst event	Main content
2006.7.16	No. 1695	Seven ballistic missile launches (2006/7/5)	Request transfer prohibition on related goods and funds for nuclear and missile plans
2006.10.15	No. 1718	First nuclear test (2006/10/9)	Prohibition on export and import of weapons of mass destruction related goods and large weapons
2009.6.13	No. 1874	Taepodong-2 launch (2009/4/5), second nuclear test (2009/5/25)	Adoption of financial regulations
2013.1.23	No. 2087	Taepodong-2 launch (2012/12/12)	Addition of six organizations and four individuals to sanctions
2013.3.8	No. 2094	Third nuclear test (2013/2/12)	Tougher financial regulations and obligation to conduct inspections of goods on ships suspected of transporting banned goods within one's own territorial waters
2016.3.3	No. 2270	Fourth nuclear test (2016/1/6), Taepodong-2 launch (2016/2/7)	Ban on air fuel exports and supply and ban on coal and iron ore exports by North Korea (excluding those for personal livelihood or unrelated to North Korea's nuclear and missile plans)
2016.11.30	No. 2321	Fifth nuclear test (2016/9/9)	Establishment of an upper limit on coal exports by North Korea (roughly \$400 million/7.5 million tons a year)
2017.6.3	No. 2356	Ballistic missile launches since 2016/9/9	Addition of four organizations and 14 individuals to sanctions
2017.8.6	No. 2371	ICBM-class "Hwasong-14" launch (2017/7/4 and 7/28)	Total ban on coal imports, total ban on iron and iron ore imports, and establishment of an upper limit on the total number of work permits for North Korean workers for the first time
2017.9.12	No. 2375	Sixth nuclear test (2017/9/3)	Addition of oil to supply restrictions for the first time, addition of textile products to the import ban, and ban on work permits for overseas workers
2017.12.23	No. 2397	ICBM-class "Hwasong-15" launch (2017/11/29)	Further supply restrictions in the oil area, expansion of the scope of bans on trade (exports/imports) with North Korea bans, and return of North Korean workers to North Korea

* Quotation marks indicate the names used by North Korea.

the North Korea's dismantlement of WMDs and missiles.

(2) Relations with the ROK

Chairman Kim's remarks in his January 2018 New Year Address on the need for inter-Korean dialogue triggered substantial progress in inter-Korean relations that year. The inter-Korean summit meeting was held in April, resulting in the issuance of the Panmunjom Declaration, which confirmed among other matters that the two parties agreed to completely cease all hostile acts against each other in every domain, and confirmed the common goal of realizing a nuclear-free Korean Peninsula. In addition, in another inter-Korean summit meeting held in May, Chairman Kim Jong-un reiterated his desire for the complete denuclearization of the Korean Peninsula. Furthermore, at the inter-Korean summit meeting in September, Pyongyang Joint Declaration of September 2018, which referred to an ending of military hostilities, was issued. In addition, the "Agreement on the

Implementation of the Historic Panmunjom Declaration in the Military Domain," which prescribed concrete measures to ease inter-Korean military tensions, was signed. In 2018, North and South Korea conducted activities related to the implementation of the measures based on these documents. The Panmunjom Declaration also notes that the two countries will aim to declare an end to the Korean War, and the Pyongyang Joint Declaration of September 2018 notes that Chairman Kim Jong-un will visit Seoul soon. In March 2020, the ROK presidential office announced that President Moon Jae-in had received a letter from Chairman Kim. However, 2019 saw no major advances in inter-Korean dialogue and cooperation programs, unlike the year before. Moreover, North Korea has frequently issued remarks critical of the ROK of late. For example, it has used statements by the foreign ministry press secretary to criticize ROK's efforts to upgrade its defense capability and the U.S.-ROK joint military exercises held in March and August 2019. In addition, North Korea frequently demonstrates an attitude

inimical to dialogue with its southern neighbor, with North Korean media reporting that, although President Moon had asked Chairman Kim to attend the November 2019 ASEAN-ROK Commemorative Summit, the North Korean leader had refused, on the grounds that a purely ceremonial face-to-face meeting between the two leaders would be worse than no meeting at all. Future developments in inter-Korean relations will be closely watched.

(3) Relations with China

The China-North Korea Treaty on Friendship, Cooperation and Mutual Assistance, which was concluded in 1961, is still in force. In addition, China is currently North Korea's biggest trade partner. In 2018, trade volume between China and North Korea was very large, accounting for approximately 90% of North Korea's total trade (excluding trade between North Korea and the ROK),²⁶ suggesting North Korea's dependence on China.

With regard to the situation in North Korea and its nuclear issue, China has expressed support for denuclearization on the Korean Peninsula, for peace and stability on the Korean Peninsula, and solving problems through dialogue and consultations. While it has endorsed the series of UN Security Council Resolutions, which strengthen sanctions on North Korea. It has also stated that sanctions alone will be unable to achieve a fundamental solution to the nuclear issue and that a solution should be found through dialogue and consultations. In this respect, China has expressed support for the U.S.-North Korea dialogue, including U.S.-North Korea summit meetings. China, as well as North Korea and Russia, insists that denuclearization of the Korean Peninsula should be gradual and simultaneous, with relevant countries taking corresponding measures. In December 2019, China and Russia together circulated among UN Security Council members a draft resolution proposing adjustments to sanctions imposed by Security Council resolutions.

China is a vital political and economic partner for North Korea and maintains a degree of influence on the country. Although it has been noted that China-North Korea relations had deteriorated because North Korea did not necessarily take actions that were in accordance with China's position. For example, North Korea repeatedly conducted nuclear and ballistic missile tests despite opposition from the international community including China. However, in

March 2018 the first-ever China-North Korea summit meeting under the leadership of Chairman Kim Jong-un was held. Chairman Kim's visit to China for this meeting marked the first time that he had traveled abroad since taking over the leadership. Chairman Kim Jong-un made visits to China in May and June 2018, and in January 2019, and held meetings with President Xi. In addition, President Xi visited North Korea in June 2019 for the first time since he was appointed President, and held a meeting with Chairman Kim Jong-un. They reportedly had discussion on the development of the relationship between two countries and denuclearization of the Korean Peninsula.

(4) Relations with Russia

Concerning North Korea's nuclear issue, Russia, along with China, has expressed support for the denuclearization on the Korean Peninsula and early resumption of the Six-Party Talks. Although Russia endorsed UN Security Council Resolution 2397, adopted in December 2017, it emphasized that pressure on North Korea should make way for dialogue and negotiations. In December 2019, Russia and China together circulated among UN Security Council members a draft resolution proposing adjustments to sanctions imposed by Security Council resolutions.

Following the U.S.-North Korea summit meeting in June 2018, Russia has continued to demonstrate an active stance in supporting political and diplomatic processes in the vicinity of the Korean Peninsula and has called on relevant countries to give consideration to consultations in a multilateral format. In April 2019, Chairman Kim Jong-un visited Vladivostok and held a meeting with President Putin to exchange opinions on the development of the bilateral relationship and the Korean Peninsula situation. In addition, President Putin is said to have accepted Chairman Kim's invitation to visit North Korea.

(5) Relations with Other Countries

Since 1999, North Korea has made efforts to establish relations with a series of West European countries and others, including the establishment of diplomatic relations with European countries and participation in the ARF ministerial meetings. Meanwhile, it has been reported that North Korea has cooperative relationships with countries such as Iran, Syria, Pakistan, Myanmar, and Cuba in military affairs including arms trade and military technology transfer.

²⁶ According to an announcement by the Korea Trade-Investment Promotion Agency (KOTRA)

In recent years, North Korea is deemed to be strengthening its relations with African countries. The underlying purposes for enhancing relations with these countries include the usual objective of deepening political and economic cooperation. In addition, it appears that North Korea hopes to acquire foreign currency by expanding its arms trade and military cooperation with African countries – activities which are

becoming increasingly difficult due to sanctions based on UN Security Council resolutions and political turmoil in the Middle East. It is actually the case that transactions that violate the terms of UN Security Council Resolutions have been observed,²⁷ and the possibility that North Korea's illegal activities could provide a funding source for nuclear and ballistic missile development is a cause for concern.

2 The ROK and the U.S. Forces Korea

1 General Situation

With regard to its North Korea policy, the Moon Jae-in administration, which was inaugurated in May 2017, is placing emphasis on improving the inter-Korean relationship and easing tensions based on the Panmunjom Declaration, issued at the inter-Korean summit meeting in April 2018 and Pyongyang Joint Declaration of September 2018, issued at the inter-Korean summit meeting in September of the same year. How the North Korea policy of the Moon administration will impact inter-Korean relations will continue to require close attention.

The U.S. Forces, mainly the Army, have been stationed in the ROK since the ceasefire of the Korean War. The ROK has established very close security arrangements with the United States primarily based on the U.S.-ROK Mutual Defense Treaty. The U.S. Forces Korea have been playing an important role in securing peace and stability of the region such as playing a vital role in deterring the outbreak of large-scale armed conflict on the Korean Peninsula.

2 Defense Policies and Defense Reform of the ROK

The ROK has a defensive weakness, namely, its capital Seoul, which has a population of approximately 10 million, is situated close to the DMZ. The ROK has set the National Defense Objective as follows: “to protect the country from external military threats and invasions, to support peaceful unification, and to contribute to regional stability and world peace.” As one of the “external military threats,” the ROK, in its Defense White Paper, used to designate North Korea as the “main enemy” or state that “the North Korean regime and its armed forces...will remain as our enemies.” In the ROK Defense White Paper 2018, published in January 2019, while continuing to describe North Korea's WMDs as a threat to the peace and stability of the Korean Peninsula,

the designation of the country as an enemy was eliminated. Instead, the white paper states as follows: “The Republic of Korea's armed forces regard any forces that threaten and encroach upon our sovereignty, territory, people and assets as our enemies.” In addition, the white paper emphasizes the importance of omni-directional response to security threats.

The ROK has continued to undertake reforms of its national defense. In recent years, in July 2018, the ROK released the “Defense Reform 2.0,” which has set the following three main goals: making omni-directional response to security threats, enhancing military power based on advanced science and technology and developing armed forces appropriate for a developed country. This plan calls for continued promotion of efforts to secure combat capabilities necessary for responding to the threat from North Korea and also includes the reduction of the troops and the mandatory military service period.

3 Military Posture of the ROK

The ROK's military capacity is as follows. The ground forces consist of 21 army divisions and 2 marine divisions, totaling 460,000 personnel; the naval forces consist of 240 vessels with a total displacement of approximately 255,000 tons; and the air forces (Air Force and Navy combined) consist of approximately 620 combat aircraft.

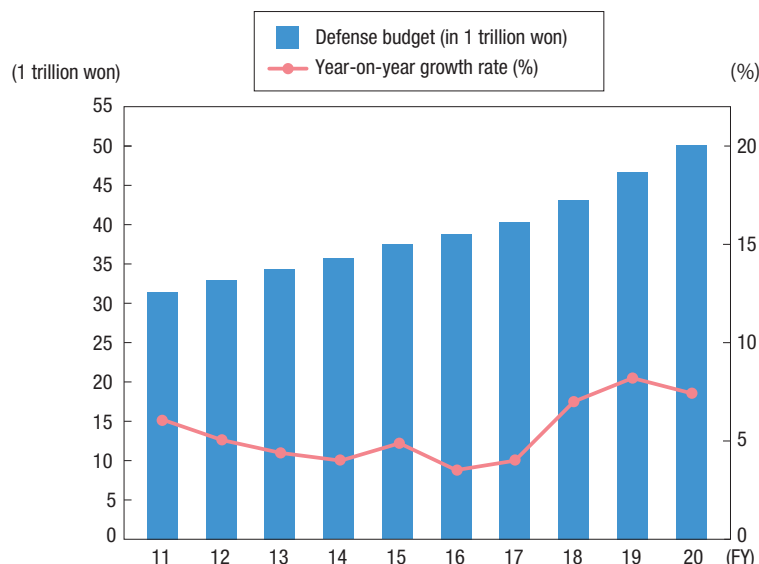
The ROK has been modernizing its military forces— not only its Army but also its Navy and Air Force—in order to establish an omni-directional defense posture to deal with future potential threats, not least threats from North Korea. The Navy has been introducing submarines, large transport ships, and domestically built destroyers. The Air Force is currently promoting a program for the installation of the F-35A as a next-generation fighter with stealth property.

In November 2017, the ROK Government announced a

²⁷ According to the final report of the UN Security Council's Panel of Experts assisting the North Korea Sanctions Committee (April 2020)

Fig. I-2-3-8

Changes in the ROK's Defense Budget



Notes: According to the website of the Ministry of National Defense of ROK (accessed in March 2020)

revision of its missile guidelines, which were agreed by the U.S. and ROK governments in 1979 and stipulate the range of ballistic missiles it possesses; the revision included the elimination of warhead weight limits on ballistic missiles, in order to enhance deterrence against military provocation by North Korea. Furthermore, to address North Korean nuclear and missile threats, as well as expanding the missile capabilities of the ROK Forces, the ROK is engaging in efforts to build a “strategic strike system,” which would use missiles and other means to launch rapid preemptive strikes directly targeting the North Korean command, and also a missile defense system called Korea Air and Missile Defense (KAMD). In addition, the focus of defense has changed from responding to the threat of North Korean missiles to an omni-directional response to security threats.

In terms of ballistic missiles, the ROK appears to have operationally deployed Hyunmoo-2 missiles with an estimated range of 300-800 km and is believed to be developing new ballistic missiles, following the abolition of warhead weight limits in the 2017 revision of the missile guidelines. With regard to cruise missiles, the ROK appears to have operationally deployed the Hyunmoo-3 surface-to-surface cruise missile, which is believed to have a range of about 500-1,500 km, and Haeseong series ship-to-ship/ship-to-surface cruise missiles, which are believed to have a maximum range of 1,000-1,500 km. The Dosan Ahn Changho submarine and the arsenal ship expected to be introduced under the 2020-2024 mid-term defense plan will reportedly be equipped with ballistic missiles in the future.

In recent years, the ROK has actively promoted equipment export, which reached approximately US\$3.2 billion on a

contract value basis in 2017. Since 2006, the amount has increased by nearly 13-fold in 11 years. It is reported that export items have diversified to include communication electronics, aircraft, and naval vessels.

Defense spending in FY2020 (regular budget) increased by about 7.4% from the previous fiscal year to nearly KRW 50.1527 trillion, marking the 21st consecutive year of increases since 2000. According to the Defense Reform 2.0, the ROK will increase the defense budget 7.5% on an annual average.

Fig. I-2-3-8 (Changes in the ROK's Defense Budget)

4 U.S.-ROK Alliance and U.S. Forces Korea

The United States and the ROK have taken various steps to deepen the U.S.-ROK Alliance in recent years.

While regularly confirming the strengthening of the U.S.-ROK Alliance at the summit level, as specific undertakings, the two countries signed the U.S.-ROK Counter-Provocation Plan for dealing with North Korea's provocations in March 2013, and approved the Tailored Deterrence Strategy, designed to enhance deterrence against North Korean nuclear and other WMD threats, at the 45th Security Consultative Meeting (SCM) in October of the same year. At the 46th SCM in October 2014, the two countries agreed on “Concepts and Principles of ROK-U.S. Alliance Comprehensive Counter-missile Operations (4D Operational Concept)” to tackle North Korean ballistic missile threats. At the 47th SCM in November 2015, the implementation guidance on the 4D Operational Concept was approved. Additionally, after North Korea went ahead with its nuclear test in January 2016, the

United States and the ROK officially decided to deploy THAAD²⁸ to U.S. Forces Korea in July 2016, concluding the temporary deployment of it in September. In addition, in a U.S.-ROK summit meeting also held in September, the enhanced deployment of U.S. strategic assets in and around the ROK on a rotational basis was agreed.

With regard to U.S.-ROK joint military exercises, the two countries announced in June 2018 that, in light of progress in dialogue with North Korea, the U.S.-ROK joint military exercise “Freedom Guardian” planned for August had been suspended, along with two U.S.-ROK Marine Exchange Program training exercises scheduled to occur within the next three months. In October, they announced the cancellation of the Vigilante Ace, a regular air force exercise conducted in November-December in usual years, in order to provide every possible opportunity to continue the U.S.-North Korea diplomatic process. Furthermore, in March 2019, they announced the “conclusion” of the Key Resolve and Foal Eagle exercise, which has been conducted in March-April in usual years, and the implementation of Alliance (Dong Maeng), a combined command exercise. They also carried out a combined command exercise in August 2019, but did not clearly disclose its size or name. That November, the United States and the ROK announced the postponement of a U.S.-ROK joint air exercise, as an act of goodwill to contribute to an environment conducive to diplomacy and the advancement of peace. In February 2020, they announced the postponement of U.S.-ROK joint exercises to curb the spread of the novel coronavirus outbreak.

At the same time, the two countries have worked to deal with such issues as the transition of operational control (OPCON) to the ROK²⁹ and the realignment of U.S. Forces Korea. For the transition of OPCON to the ROK, the roadmap for the transfer “Strategic Alliance 2015” was established in October 2010. Aiming to complete the transition by December 1, 2015, the two countries have reviewed the approach of transitioning from the existing combined defense arrangement of the U.S. and ROK Forces, to a new joint defense arrangement led by the ROK Forces and supported by the U.S. Forces. Nevertheless, based on the increasing seriousness of North Korea’s nuclear and missile threats, the two sides decided at the 46th SCM to re-postpone

the transition of OPCON, and to adopt a conditions-based approach, i.e., implementing the transition when conditions such as the ROK Forces’ enhanced capabilities are met. The ROK plans to develop core military competencies for deterrence against and response to the threats from nuclear weapons and missiles, which are required for the transition of OPCON, by 2023. At the 50th SCM in October 2018, it was decided that following the transition of OPCON, an ROK military officer will serve as commander of the Future Combined Forces Command, replacing the current arrangement of a U.S. military officer serving as the commander of the U.S.-ROK Combined Forces. It was also decided that regarding the ROK Forces’ operational capabilities, their Initial Operating Capability (IOC) will be assessed in 2019. In August 2019, an IOC assessment was carried out during a combined command exercise. At the 51st SCM in November 2019, the two parties concurred that the exercise had played an important role in verifying IOC and decided to pursue an assessment of Full Operational Capability for the Future Combined Forces Command in 2020.

With regard to the realignment of the U.S. Forces Korea, an agreement had been reached in 2003 on the relocation of the U.S. Forces’ Yongsan Garrison located in the center of Seoul to the Pyeontaek area, south of Seoul, and on the relocation of the U.S. Forces stationed north of the Han River to the south of the river. Subsequently, however, the agreement has been partially revised, due to various factors, including: the relocation to the Pyeontaek area being delayed due to logistical reasons such as increases in relocation costs; in relation to the postponement of the transition of OPCON, it has been necessary for some U.S. Forces personnel to remain at Yongsan Garrison; and it was decided that the counter-fires forces of U.S. Forces Korea would remain in their location north of the Han River to counter the threat of North Korea’s long-range rocket artillery. In July 2017 the U.S. Eighth Army headquarters relocated to the Pyeontaek area, and in June 2018 the headquarters of U.S. Forces Korea and UN Command also relocated to the same area. The realignment of U.S. Forces Korea could have a significant impact on U.S. and ROK defense postures on the Korean Peninsula, and as such it will be necessary to follow future developments

²⁸ A ballistic missile defense system designed to intercept short- and intermediate-range ballistic missiles in their terminal phase from the ground. It captures and intercepts targets at high altitudes outside of the atmosphere or in the upper atmosphere. See Part III, Chapter 1, Section 2 regarding the ballistic missile defense system

²⁹ The United States and the ROK have had the U.S.-ROK Combined Forces Command since 1978 in order to operate the U.S.-ROK combined defense system to deter wars on the Korean Peninsula and to perform effective combined operations in the case of a contingency. Under the U.S.-ROK combined defense system, OPCON over the ROK Forces is to be exercised by the Chairman of the Korea Joint Chiefs of Staff in peacetime and by the Commander of the U.S. Forces Korea, who concurrently serves as the Commander of the Combined Forces Command, in a contingency.

closely.

Concerning **defense burden sharing**, whereby the ROK government bears a portion of the total stationing costs of the U.S. Forces Korea to ensure a stable stationing environment, the United States and the ROK are engaged in negotiations aimed at concluding the 11th edition of Special Measures Agreement (SMA) (as of May 2020).

5 Relations with Other Countries

(1) Relations with China

China and the ROK have made continuous efforts to strengthen their relations. Meanwhile, outstanding issues have emerged between China and the ROK. The “ADIZ” issued by China in November 2013 overlapped in some areas with the ROK’s ADIZ. Furthermore, it included the airspace above the sea areas surrounding the reef, Ieodo (Chinese name: Suyan Rock), regarding which China and the ROK have conflicting claims to the jurisdictional authority over the EEZ. Against this backdrop, the ROK Government announced the expansion of its own ADIZ in December 2013 and enforced it from the same month. The ROK is protesting that Chinese aircraft are repeatedly intruding into the ROK’s ADIZ.

China has protested that the deployment of THAAD to U.S. Forces Korea would undermine China’s strategic security interests. On this point, in October 2017 the governments of China and the ROK announced that they had agreed to

utilize military channels to reach a mutual understanding relating to China’s concerns about THAAD. In December 2017 President Moon Jae-in made his first visit to China since his inauguration and the two leaders agreed to establish a hotline and continue to maintain close communication, as well as vitalizing high-level strategic dialogue. The ROK Defense White Paper 2018 also makes clear that the ROK will strengthen strategic communication with China.

(2) Relations with Russia

The ROK and Russia have agreed on cooperation in the areas of military technology, defense industry, and military supplies. In 2012, the two countries held the first ROK-Russia defense strategic dialogue and agreed to regularize the dialogue. In November 2013, President Vladimir Putin visited the ROK, and a joint statement was issued in which the two sides agreed to strengthen dialogue in the areas of politics and security.

In June 2018, President Moon Jae-in visited Russia as a state guest, becoming the first ROK president to do so in 19 years. In August 2018, defense strategic dialogue was held, and it was agreed that the dialogue will be upgraded to the vice minister level and that a hotline will be established between the two countries’ air forces.

On the other hand, Russia opposes the deployment of THAAD by U.S. Forces Korea for the reason that it is part of the U.S. missile defense network and harms the strategic stability of the region.

Column

Defense Burden Sharing

Defense burden sharing refers to the ROK government bearing a portion of the total stationing costs of the USFK to ensure a stable stationing environment for the USFK. The ROK started its contribution in 1991 following the SMA. While the 10th SMA was concluded on February 10, 2019, it lapsed at the end of 2019 without the 11th SMA having been concluded. While the

United States has been seeking an increase in the ROK’s share, with Secretary of State Mike Pompeo and Secretary of Defense Mark Esper penning a joint article headlined “South Korea Is an Ally, Not a Dependent” in January 2020, the ROK’s stance has been that they should work towards a “fair and reasonable” agreement and talks are ongoing (as of May 2020).