

Section 2 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 1.5 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.

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

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,¹ and it adopts “military-first (Songun) politics” to realize this goal. The “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.² Leader Kim Jong-un, Chairman of the Korean Workers’ Party (KWP),³ who is in a position to control the military, noted in his New Year Address⁴ in January 2016: “The People’s Army should further develop itself into a revolutionary army of the Party”; and “[The munitions industry sector should] develop and produce a greater number of various means of military strike of our own style that are capable of overwhelming the enemy.” In his report on the work of the KWP Central Committee at the Seventh Congress of the KWP in May 2016, the Chairman stated, “It is necessary to uphold the military-first revolutionary path as the constant strategic path, and strengthen the might of the military power in all of its dimensions.” As such, the Chairman makes references to the importance of military capabilities and regularly visits military organizations. In this light, it is conceivable that the Chairman will continue to attach importance to and rely on the military forces.

Although North Korea has been facing serious

economic difficulties and has depended on the international community for food and other resources, it seems to be maintaining and enhancing its military capabilities and combat readiness by preferentially allocating resources to its military forces. North Korea deploys most of its military forces along the DMZ. According to the official announcement at the Supreme People’s Assembly in April 2016, the proportion of the defense budget in the FY2016 national budget was 15.8%. However, it is believed that this represents only a fraction of the real defense expenditures.

Furthermore, North Korea seems to maintain and reinforce its so-called asymmetric military capabilities by continuing to promote the development of WMDs and ballistic missiles, including conducting its fourth nuclear test in January 2016 and repeatedly launching ballistic missiles in and after February, and by maintaining large-scale special operations forces. In addition, North Korea repeatedly uses provocative rhetoric and behavior against relevant countries, including Japan. In particular, from March to April 2013, North Korea underscored that it would exercise its right to preemptive nuclear attack against the United States and other countries, and that the strike zone of its ballistic missiles included Japan, naming specific cities.⁵ In November 2014, the North Korean National Defense Commission released a statement protesting the adoption of a resolution on North Korea’s human rights situation by the Third Committee of the U.N. General Assembly. The statement noted that like the United States and the ROK, Japan will have to be hit

¹ North Korea used to insist that it would open the door to a “powerful and prosperous nation (Kangseong Daeguk)” in 2012, which marked the 100th anniversary of the birth of the late President Kim Il-sung. Recently, however, North Korea has been using mainly the expression, “powerful and prosperous country (Kangseong Kukka).”

² Written decision of the Seventh Congress of the Korean Workers’ Party, “Report on the Work of the KWP Central Committee” (May 8, 2016).

³ Kim Jong-un was named “Chairman of the Korean Workers’ Party” at the Seventh KWP Congress held in May 2016. For consistency purposes, “Chairman of the Korean Workers’ Party” is used for the title of Kim Jong-un in this white paper, including for matters predating Kim Jong-un’s appointment as KWP Chairman.

⁴ Until 1994, the late President Kim Il-sung gave a “New Year Address” every year on January 1. From after his demise in 1995 to 2012, the KWP’s newspaper “Rodong Shinmun,” the Korean People’s Army’s newspaper “Korean People’s Army,” and the Kim Il-sung Socialist Youth League’s newspaper “Youth Vanguard” jointly published a joint New Year Editorial.

⁵ For example, a comment in the Rodong Shinmun dated March 31, 2013 states that U.S. mainland is located within the range of our attacks along with Yokosuka, Misawa, Okinawa and Guam. In addition, an article in the Rodong Shinmun dated April 10, 2013 claims that the entire territory of Japan cannot escape from North Korea’s retaliatory attacks, and in this context, the article listed the Japanese cities of Tokyo, Osaka, Yokohama, Nagoya, and Kyoto.

hard and sent to the bottom of the sea.⁶ Additionally, an “important statement” of the Supreme Command of the KPA released in February 2016 notes its first target of attack would be the ROK Blue House, while secondary targets would include U.S. Force bases in the Asia-Pacific region and the U.S. mainland. In March 2016, North Korea reiterated provocative rhetoric and behavior this time against Japan, stating that U.S. Force facilities and areas in Japan are within the firing range of North Korea’s strike means, and that North Korea could instantly wipe out Japan if it is so inclined.⁷

Such military trend in North Korea constitutes a serious and imminent threat to the security not only of Japan but also of the entire region and the international community. Needless to say, North Korea’s possession of nuclear weapons cannot be tolerated. Sufficient attention needs to be paid to the development and deployment of ballistic missiles, the military confrontation on the Korean 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.

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).⁸

North Korea’s military forces are comprised mainly of ground forces, with a total troop strength of roughly 1.19 million. While North Korea’s military forces are believed to have been maintaining and enhancing their capabilities and operational readiness, most of its equipment is outdated.

Meanwhile, North Korea has forces such as large-

scale special operations forces 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 1.02 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. Despite limited resources, it is deemed that North Korea continues to selectively reinforce its conventional forces and improve its equipment, such as main battle tanks and multiple rocket launchers.⁹

The Navy has about 780 ships with a total displacement of approximately 104,000 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 70 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 560 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 forces whose size is estimated at 100,000 personnel.¹⁰ In recent

⁶ Statement of the National Defense Commission of the Democratic People's Republic of Korea released on November 23, 2014.

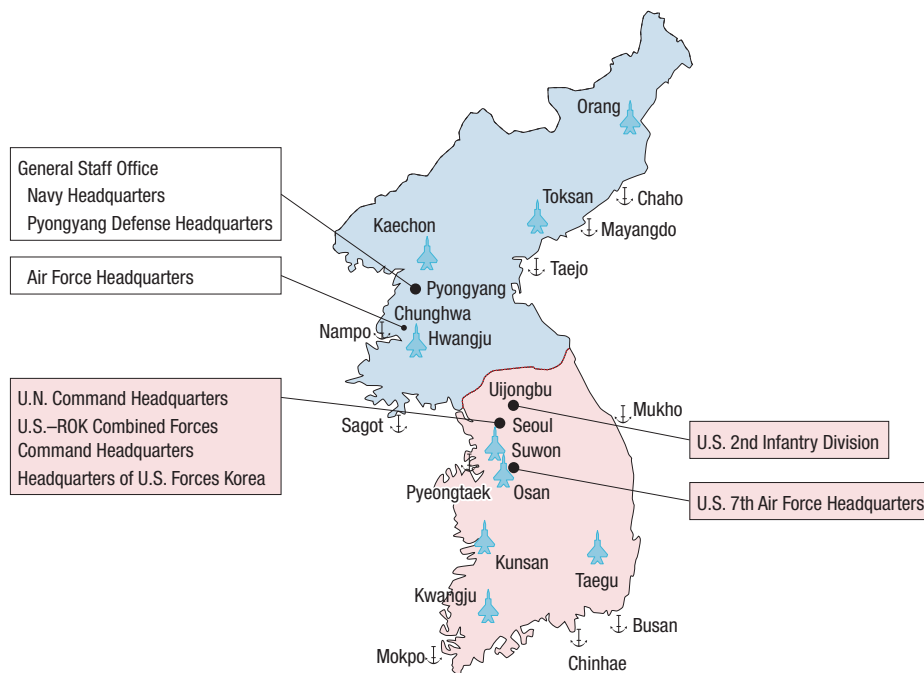
⁷ For example, “Once the fire is lit in the Korean Peninsula, not only the U.S. Forces’ bases of aggression in Japan but everything in Japan that would be used for war would burn down to ashes in an instant” and “Today, North Korea has the capability not only to instantly wipe out Japan, but also to retaliate by directly striking and demolishing Hawaii and the U.S. mainland as well if it is so inclined” (Rodong Shinmun dated March 10, 2016). A statement by the spokesperson of the Committee for the Peaceful Reunification of Korea dated March 7, 2016 notes that all bases of aggression in Japan, the Pacific, and the U.S. mainland are within the firing range of various type strike means of North Korea.

⁸ The Four Military Guidelines were adopted at the fifth plenary meeting of the fourth KWP Central Committee in 1962.

⁹ According to “The Military Balance 2014,” North Korea is replacing Soviet-made T-54 and T-55 tanks with the Ch’onna-ho that North Korea independently produced based on the T-62. Furthermore, the Defense White Paper 2014 that the ROK Ministry of National Defense released in January 2015 refers to North Korea’s development of a new 300 mm multiple rocket launcher, as well as the significant increase in the number of tanks, armored cars, and multiple rocket launchers in North Korea’s possession. North Korea allegedly fired several rounds from the 300 mm multiple rocket launcher on three instances in March 2016 and launched a new short-range surface-to-air missile in April 2016.

¹⁰ It had been said that North Korea possessed two types of special operations forces: one under the military forces and the other under the KWP. However, it has been reported that these organizations were consolidated in 2009 and the Reconnaissance General Bureau was established under the auspices of the military forces. The existence of the bureau was officially confirmed in March 2013 when Korean Central Broadcasting Station reported General Kim Yong-chol as the Director of the Reconnaissance General Bureau. Moreover, 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 2014 notes, “Special operation forces are currently estimated at 200,000 strong.”

Fig. I-2-2-1 Military Confrontation on the Korean Peninsula



		North Korea	ROK	U.S. Forces in Korea
Total armed forces		Approx. 1.19 million personnel	Approx. 628,000 personnel	Approx. 25,000 personnel
Army	Ground troops	Approx. 1.02 million personnel	Approx. 495,000 personnel	Approx. 17,000 personnel
	Tanks	T-62, T-54/-55, etc. Approx. 3,500	M-48, K-1, T-80 etc. Approx. 2,400	M-1
Navy	Naval vessels	Approx. 780; 104,000 tons	Approx. 240; 211,000 tons	Supporting corps only
	Destroyers		12	
	Frigates	4	11	
	Submarines	20	13	
			Approx. 29,000 personnel	
Air Force	Combat aircraft	Approx. 560	Approx. 620	Approx. 80
	3rd and 4th generation fighter aircraft	Mig-23 x 56 Mig-29 x 18 Su-25 x 34	F-4 x 70 F-16 x 164 F-15 x 60	F-16 x 60
Reference	Population	Approx. 25 million	Approx. 49 million	
	Term of service	Army: 5–12 years Navy: 5–10 years Air Force: 3–4 years	Army: 21 months Navy: 23 months Air Force: 24 months	

Source: "The Military Balance 2016," etc.

years, North Korea is seen to be placing importance on and strengthening its cyber forces.¹¹

3 WMD and Ballistic Missiles

While North Korea continues to maintain large-scale military capabilities, its conventional forces are considerably inferior to those of the ROK and the U.S. Forces Korea. This is the result of a variety of factors,

including decreases in military assistance from the former Soviet Union due to the collapse of the Cold War regime, limitations placed on North Korea's national defense spending due to its economic stagnation, and the rapid modernization of the ROK's defense capabilities. It is thus speculated that North Korea is focusing its efforts on WMD and ballistic missile reinforcements in order to compensate for this shortfall.

North Korea's development of WMDs and missiles

¹¹ The U.S. Director of National Intelligence's "Worldwide Threat Assessment" of February 2016 notes, "North Korea probably remains capable and willing to launch disruptive or destructive cyber attacks to support its political objectives." The annual report "Military and Security Developments Involving the Democratic People's Republic of Korea" (2015) submitted to Congress by the U.S. DoD also in February 2016 states, "North Korea probably views OCO [offensive cyber operations] as an appealing platform from which to collect intelligence and cause disruption in South Korea and other adversaries including the United States." According to the ROK's Defense White Paper 2014, North Korea has mobilized over 6,000 cyber warfare personnel and carries out cyber attacks which interfere with the ROK's military operations and national infrastructure. Regarding North Korean cyber attacks, see Part I, Chapter 3, Section 5.

is considered to have made further strides through going ahead with the fourth nuclear test and repeating ballistic missile launches. Coupled with its provocative rhetoric and behavior, such as suggesting a missile attack on Japan, North Korea's development of WMDs and missiles poses a serious and imminent threat to the security of the region including Japan 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.

(1) Nuclear Weapons

a. Recent Major Developments related to North Korea's Nuclear Development

With regard to the issue of North Korea's development of nuclear weapons, six rounds of the Six-Party Talks have been held since August 2003, aimed at taking peaceful measures to achieve the verifiable denuclearization on the Korean Peninsula. At the fourth round of the Six-Party Talks in 2005, the Joint Statement was adopted, which focused on the abandonment of "all nuclear weapons and existing nuclear programs" by North Korea. In 2006, the Talks were suspended with North Korea launching seven ballistic missiles and conducting a nuclear test,¹² along with the U.N. Security Council adopting Resolutions 1695 and 1718 in response. Later, North Korea returned to the fifth round of the Six-Party Talks. At the sixth round of the Talks in September 2007, the parties reached an agreement, which included completion of the disablement of nuclear facilities in Yongbyon and "a complete and correct declaration of all (North Korea's) nuclear programs" by the end of the year. However, the implementation of the agreement has not been completed, and the Six-Party Talks has been suspended since December 2008.

Subsequently, the U.N. Security Council adopted Resolution 1874 in June 2009 in response to North Korea's ballistic missile launches and nuclear test in 2009,¹³ Resolution 2087 in January 2013 in response to North Korea's launch of a ballistic missile disguised as a "Satellite" in December 2012, and Resolution 2094 in March 2013 in response to North Korea's nuclear test in February 2013. These resolutions have expanded and strengthened the sanctions against North Korea. In

addition, in response to North Korea's nuclear test in January 2016 and launch of a ballistic missile disguised as a "Satellite" in February 2016, the U.N. Security Council adopted Resolution 2270 in March 2016 that included the further addition and strengthening of sanctions against North Korea, such as a prohibition on exporting and supplying aviation fuel to North Korea and a prohibition on importing coal and iron ore from North Korea.

North Korea announced in 2005 that it manufactured nuclear weapons, and declared itself a "nuclear weapons state" in 2012 in its revised constitution. In 2013, North Korea continued to take steps to boost its standing in the international community as a "nuclear weapons state." In March 2013, it adopted the "new strategic line" policy of simultaneous economic and nuclear development. North Korea alleged that even if it does not increase defense spending, as long as robust nuclear deterrence is achieved by increasing the effectiveness of its war deterrent and defense force, North Korea would be able to concentrate on its economic development and on improving the people's livelihood. North Korea reiterated that nuclear weapons were neither a political bargaining chip nor a thing for economic transactions. In April of the same year, North Korea adopted a law "On Consolidating the Position of Nuclear Weapons State for Self-Defense."¹⁴ In March 2016, in response to the new U.N. Security Council resolution, North Korea issued a statement saying, "The DPRK will, as ever, firmly hold the banner of the line of developing the two fronts, further bolster its self-defensive nuclear deterrence."¹⁵ During the Seventh KWP Congress held in May 2016, KWP Chairman Kim Jong-un delivered a report on the work of the KWP Central Committee, setting out that North Korea was a "nuclear weapons state" and stating, "We will consistently take hold on the strategic line of simultaneously pushing forward the economic construction and the building of nuclear force and boost self-defensive nuclear force both in quality and quantity."

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;¹⁶ North Korea considers that it needs

¹² On October 27, 2006, as a result of the independently collected information and its analysis as well as Japan's own careful examination of the U.S. and ROK analyses, the Japanese government arrived at the judgment that the probability of North Korea conducting a nuclear test was extremely high.

¹³ Given that North Korea announced on May 25, 2009, via the Korean Central News Agency, that it had successfully conducted an underground nuclear test, and in light of the fact that the Japan Meteorological Agency detected seismic waves with a waveform that differed from an ordinary waveform, which could possibly have resulted from a North Korean nuclear test, the Japanese government believes that North Korea conducted a nuclear test on that day.

¹⁴ According to a Korean Central News Agency report dated April 1, 2013, this law establishes that North Korea is a "nuclear weapons state," and in order to further consolidate North Korea's "position of nuclear weapons state," it provides for bolstering the nuclear deterrence and nuclear retaliatory strike power both in quality and quantity, safekeeping and management of nuclear weapons and other assets, cooperation towards the prevention of nuclear proliferation, and the provision of proactive supports for nuclear disarmament.

¹⁵ Statement by a spokesperson for the government of the Democratic People's Republic of Korea issued on March 4, 2016.

¹⁶ U.S. DoD's "Military and Security Developments Involving the Democratic People's Republic of Korea," March 2014.

its own nuclear deterrence to counter the nuclear threat of the United States¹⁷ 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 due to their lack of nuclear deterrence;¹⁸ and North Korea reiterates nuclear weapons will never be traded away at negotiations.

b. 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 four nuclear tests including the nuclear test in January 2016, it is conceivable that North Korea could have made considerable progress in its nuclear weapons program.

With regard to plutonium, a fissile material that can be used for nuclear weapons,¹⁹ North Korea has suggested its production and extraction on several instances.²⁰ Moreover, in June 2009, North Korea announced that it would weaponize all of its newly extracted plutonium.²¹ In April 2013, North Korea announced its policy to readjust and restart all nuclear facilities in Yongbyon, including the nuclear reactor, the disablement of which was agreed upon at the sixth round of the Six-Party Talks in September 2007. In November 2013, the International Atomic Energy Agency (IAEA) opined that while lack of inspection makes it impossible to determine conclusively, multiple activities were observed from satellite imagery suggesting that the nuclear reactor was restarted.²² Furthermore, in September 2015, North Korea stated that all nuclear facilities in Yongbyon including the nuclear reactor and the uranium enrichment plant were readjusted and started normal operation. Because the restarting of the reactor could lead

to the production and extraction of plutonium by North Korea, such developments are causes of great concern.

As for highly enriched uranium that can also be used for nuclear weapons, in 2002 the United States announced that North Korea acknowledged the existence of a uranium enrichment program for nuclear weapons. Later in June 2009, North Korea declared the commencement of uranium enrichment. Furthermore, 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 uranium in addition to plutonium.²³

With regard to the development of nuclear weapons, North Korea has conducted nuclear tests in October 2006, May 2009, February 2013,²⁴ and January 2016.²⁵

17 For example, a statement issued by the National Defense Commission of the Democratic People's Republic of Korea on March 14, 2014 alleges that the United States threatens and intimidates North Korea with nuclear strikes, and that North Korea has come to possess nuclear deterrence out of necessity in order to protect the autonomy of its nation and people.

18 For example, a comment in the *Rodong Shinmun* 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.

19 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%).

20 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.

21 Then U.S. Forces Korea Commander Walter Sharp testified before the House Armed Services Committee in April 2011 that "we assess North Korea currently holds enough plutonium to make several nuclear weapons." The ROK Defense White Paper 2014 estimates that North Korea has approximately 40 kg of plutonium.

22 The "Worldwide Threat Assessment" of the U.S. Director of National Intelligence of January 2014 notes, "North Korea has followed through on its announcement by expanding the size of its Yongbyon enrichment facility and restarting the reactor that was previously used for plutonium production." It is said 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.

23 The "Worldwide Threat Assessment" of the U.S. Director of National Intelligence of January 2012 states, "the North's disclosure (of a uranium enrichment facility) supports the U.S. longstanding assessment that North Korea has pursued uranium-enrichment capability." The ROK Defense White Paper 2014 notes, "it is also assessed that a highly enriched uranium (HEU) program is underway."

24 At around 11:59 am on February 12, 2013, the Japan Meteorological Agency detected seismic waves with an epicenter located in the vicinity of North Korea, which had waveforms that differed from an ordinary waveform and were unlikely those of a natural earthquake. On the same day, North Korea announced via the Korean Central News Agency that it successfully conducted a nuclear test. On this basis, the government of Japan verified the facts in coordination with other relevant parties, including the United States and the ROK. Based on a comprehensive consideration of the aforementioned information, the Japanese government determined that North Korea conducted a nuclear test. North Korea announced that it "succeeded in the third underground nuclear test," "the test was conducted in a safe and perfect way on a high level with the use of a smaller and light A-bomb, unlike the previous ones, yet with great explosive power," "physically demonstrating the good performance of the DPRK's nuclear deterrence that has become diversified."

25 At around 10:30 am on January 6, 2016, the Japan Meteorological Agency detected seismic waves with an epicenter located in the vicinity of North Korea, which had waveforms different from an ordinary waveform and were unlikely those of a natural earthquake. On the same day, North Korea announced via the Korean Central News Agency that it successfully conducted a hydrogen bomb test. Based on a comprehensive consideration of this and other information, the Japanese government determined that North Korea conducted a nuclear test.

It is highly likely that North Korea has made strides in its nuclear weapons program, collecting the necessary data through these nuclear tests. Although North Korea asserts that the nuclear test conducted in January 2016 was a hydrogen bomb test,²⁶ it is doubtful that a general hydrogen bomb test was conducted, considering the magnitude of the earthquake.²⁷ On the other hand, North Korea has already conducted four nuclear tests in the past and is anticipated to achieve technological maturity. In this light, North Korea's activities to develop nuclear weapons including the hydrogen bomb require continued attention. Since the nuclear test in January 2016, North Korea has continued to reiterate that it would further strengthen its nuclear assets, and therefore, a situation that raises serious concerns for the international community is expected to remain.

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. For instance, in March 2016, images were released showing KWP Chairman Kim Jong-un meeting with nuclear weapons engineers and others and observing an object North Korea claims to be a miniaturized nuclear warhead.²⁸ 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 that the United States, the 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 reached through North Korea's previous four nuclear tests, among other factors, it is possible that North Korea has achieved the miniaturization of nuclear weapons and has developed nuclear warheads.²⁹ Taking into account that North Korea has not changed its stance of continuing its nuclear weapons program, it is believed that with the

passage of time, there would be a greater risk of North Korea deploying a ballistic missile mounted with a nuclear warhead that includes Japan in its range. In this regard, related developments need to be monitored carefully.

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 could become the delivery vehicles of WMDs, poses a serious and imminent threat to the security of the region including Japan and of the international community, and significantly impairs peace and stability. Therefore, they can never be tolerated.

(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 for the production of biological weapons.^{30, 31}

(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,³² in addition to enhancing its military capabilities. In March, June, and July 2014 and

²⁶ Regarding the nuclear test conducted on January 6, 2016, North Korea announced: "The first H-bomb test was successfully conducted"; and "The DPRK fully proved that the technological specifications of the newly developed H-bomb for the purpose of test were accurate and scientifically verified the power of smaller H-bomb." Prior to this, on December 10, 2015, the Korean Central Broadcasting Station reported KWP Chairman Kim Jong-un as saying, North Korea has "become a powerful nuclear weapons state that can reverberate the large explosion sound of a hydrogen bomb."

²⁷ In regard to North Korea's nuclear test on January 6, 2016, the U.S. Director of National Intelligence's "Worldwide Threat Assessment" (February 2016) states, "Although we are continuing to evaluate this event, the low yield of the test is not consistent with a successful test of a thermonuclear device." Furthermore, in January 2016, the ROK National Intelligence Service reportedly briefed the National Assembly that because the power and seismic waves of the fourth nuclear test do not match up to those of the previous three nuclear tests, the test was unlikely a hydrogen bomb test.

²⁸ According to the Korean Central Broadcasting Station on March 9, 2016, KWP Chairman Kim Jong-un met with engineers and others from the nuclear weapons research team, provided guidance regarding the nuclear weapons program, and stated, "The nuclear warheads have been standardized to be fit for ballistic missiles by miniaturizing them."

²⁹ Over nine years have already passed since North Korea conducted its first nuclear test in October 2006. Furthermore, North Korea has conducted four 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, Soviet Union, United Kingdom, France, and China. The ROK's Defense White Paper 2014 assesses that "North Korea's ability to miniaturize nuclear weapons also seems to have reached a considerable level." In March 2016, the spokesperson of the ROK Ministry of Unification stated during his press conference that, "Considering the timespan since the first nuclear test, we perceive that North Korea has secured some level of miniaturization technology." In addition, the spokesperson of the Ministry of National Defense stated, "We assess that North Korea's miniaturization technology has reached a considerable level. However, we view North Korea, at this point, does not have a miniaturized nuclear warhead nor has secured actual combat capability of KN08." In March 2016, North Korea published photos of the object it claims is a "miniaturized nuclear warhead," suggesting that it may be mounted on the new KN08 ICBM.

³⁰ For example, the ROK Defense White Paper 2014 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 pest. Moreover, the U.S. DoD's "Military and Security Developments Involving the Democratic People's Republic of Korea" of May 2013 points out that, "North Korea probably could employ CW [chemical weapons] agents by modifying a variety of conventional munitions, including artillery and ballistic missiles."

³¹ North Korea ratified the Biological Weapons Convention in 1987 but has not acceded to the Chemical Weapons Convention.

³² North Korea admitted that it is exporting ballistic missiles to earn foreign currency. (Comment by the Korean Central News Agency on June 16, 1998, and statement made by a North Korean Foreign Ministry spokesperson on December 13, 2002)

March 2015, North Korea launched short- and medium-range ballistic missiles believed to be the Nodong and Scud missiles, and since February 2016, has repeatedly launched ballistic missiles including the ballistic missile disguised as a “Satellite.” North Korea often launches ballistic missiles to conduct military provocations against relevant countries, including Japan.³³

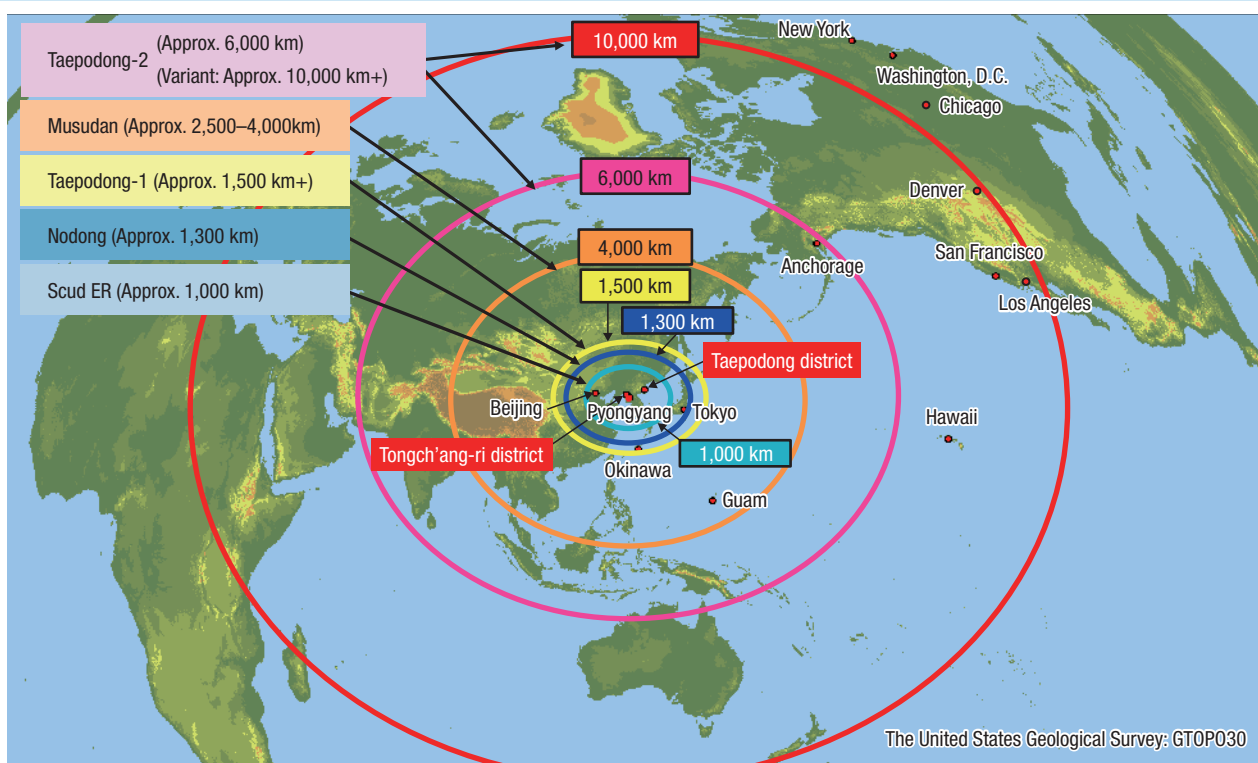
a. Toksa

North Korea is thought to be developing a short-range ballistic missile “Toksa” with its range estimated to be approximately 120 km.³⁴ It is deemed that Toksa is the first ballistic missile owned or developed by North Korea which adopts a solid fuel propellant.³⁵

b. Scud

It is believed that, since the middle of the 1980s, North Korea has manufactured and deployed Scud B and Scud C,³⁶ a variant of Scud B with extended range, and has exported these ballistic missiles to the Middle East and other countries. At present, North Korea is considered to deploy Scud ER (Extended Range) which 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 1,000 km,³⁷ and it is possible that a part of Japan falls within this range.

Fig. I-2-2-2 Range of North Korean Ballistic Missiles



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

³³ An overview of North Korea's short- and medium-range ballistic missile launches since 2014 is as follows. (1) On March 3, 2014, at around 6:20 am and around 6:30 am, North Korea launched two ballistic missiles presumed to be Scud missiles in the east-northeast direction from the vicinity of Wonsan in the eastern coast on the Korean Peninsula. It is estimated that both missiles flew approximately 500 km and fell into the Sea of Japan. (2) On March 26, 2014, from around 2:30 am to 2:40 am, North Korea launched two ballistic missiles presumed to be Nodong missiles in the eastern direction from the vicinity of Sukchon in the western coast on the Korean Peninsula. It is estimated that both missiles flew approximately 650 km and fell into the Sea of Japan. (3) On June 29, 2014, at around 5 am, North Korea launched two ballistic missiles presumed to be Scud missiles in the eastern direction from the vicinity of Wonsan in the eastern coast on the Korean Peninsula. It is estimated that the ballistic missiles launched flew a maximum of approximately 500 km and all fell into the Sea of Japan. (4) On July 9, 2014, from around 4 am to around 4:20 am, North Korea launched two ballistic missiles presumed to be Scud missiles in the northeast direction from the southwestern area of North Korea (approximately 100 km south of Pyongyang). It is estimated that both of the ballistic missiles launched flew approximately 500 km and fell into the Sea of Japan. (5) On July 13, 2014, from around 1:20 am to around 1:30 am, North Korea launched two ballistic missiles presumed to be Scud missiles in the northeastern direction from the vicinity of Kaesong in the southern area of North Korea. It is estimated that both of the ballistic missiles launched flew approximately 500 km and fell into the Sea of Japan. (6) On July 26, 2014, at around 9:35 pm, North Korea launched one ballistic missile presumed to be a Scud missile in the eastern direction from the western coast of North Korea (approximately 100 km west of Haeju). It is estimated that the ballistic missile launched flew approximately 500 km and fell into the Sea of Japan. (7) On March 2, 2015, at around 6:30 am and around 6:40 am, North Korea launched two ballistic missiles presumed to be Scud missiles in the east-northeastern direction from the vicinity of Nampo on the western coast of North Korea. It is estimated that both of the ballistic missiles launched flew approximately 500 km and fell into the Sea of Japan. (8) On March 10, 2016, at around 5:22 am and around 5:27 am, North Korea launched two ballistic missiles presumed to be Scud missiles in the east-northeastern direction from the vicinity of Nampo on the western coast of North Korea. It is estimated that both of the ballistic missiles launched flew approximately 500 km and fell into the Sea of Japan. (9) On March 18, 2016, at around 5:54 am, North Korea launched one ballistic missile presumed to be a Nodong missile in the eastern direction from the vicinity of Sukchon on the western coast of North Korea. It is estimated that the ballistic missile launched flew approximately 800 km and fell into the Sea of Japan.

³⁴ In March 2007, then U.S. Forces Korea Commander Burwell B. Bell testified before the House Armed Services Committee that, “North Korea is developing a new solid propellant short-range ballistic missile. Recently, in March 2006, North Korea successfully test-fired the missile. Once operational, the missile can be deployed more flexibly and rapidly than the existing system and North Korea will be able to launch the missile in a much shorter preparation period.”

³⁵ Generally, solid fuel propellant missiles are considered to be militarily superior because they are filled with a propellant in solid form in airframes and are capable of immediate launches compared with liquid fuel propellant missiles, making signs of their launches unlikely to be detected in advance. Furthermore, they are relatively easy to store and handle.

³⁶ The ranges of Scud B and Scud C missiles are estimated to be about 300 km and 500 km, respectively.

³⁷ U.S. DoD's “Military and Security Developments Involving the Democratic People's Republic of Korea” of March 2014.

c. Nodong

North Korea is thought to have started developing longer-range ballistic missiles by the 1990s, including Nodong. It appears that Nodong, which is believed to be already deployed, is a liquid fuel propellant single-stage ballistic missile. It is assessed to have a range of about 1,300 km, and may reach almost all of Japan.

It is highly probable that Nodong was used in the launch into the Sea of Japan in 1993. A total of six ballistic missiles fired from the Kittaeryong district in the southeastern part of North Korea in July 2006 are believed to be Scud and Nodong.³⁸ In July 2009, North Korea is believed to have launched a total of seven ballistic missiles from the same district, and it is possible that they were either Scud or Nodong missiles.³⁹ Furthermore, the ballistic missiles presumed to be Nodong missiles that were launched towards the Sea of Japan in March 2014 marked the first time that the missiles were launched from the western coast of North Korea in the eastern direction, across the Korean Peninsula. Accordingly, it is deemed that North Korea is building up its confidence in the performance and reliability of its ballistic missiles.⁴⁰

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.

d. Taepodong-1

Taepodong-1 is assumed to be a two-stage, liquid fuel propellant ballistic missile with a Nodong used as its first stage and a Scud as its second stage. It is estimated to have a range of at least approximately 1,500 km. The ballistic missile launched in 1998 is assessed to be based on Taepodong-1. North Korea is believed to have shifted its focus to the development of a longer range missile, and Taepodong-1 may have been a transitory product for the development of Taepodong-2.

e. Musudan

North Korea is currently developing a new type of intermediate-range ballistic missile (IRBM) "Musudan." It has been suggested that Musudan is a revamped version of the Russian SLBM SS-N-6 that North Korea acquired in the early 1990s. It will be loaded onto a Transporter-Erector-Launcher (TEL), similar to its Scud and Nodong counterparts, to transport and operate. With the new missile allegedly having a range of between 2,500 and 4,000 km, it has been suggested that all parts of Japan and Guam may fall within its firing range.⁴¹

In April 2016, North Korea is thought to have made its first attempt to launch a ballistic missile presumed to be the Musudan but it ended in failure. However, in June 2016, an IRBM presumed to be the Musudan that was launched from the vicinity of Wonsan in the eastern coast of North Korea reached an altitude exceeding 1,000 km (maximum height was 1,413.6 km according to North Korea's announcement) and flew approximately 400 km before falling into the Sea of Japan.⁴² With regard to the situation of this launch, it is believed that the missile was launched on a "lofted trajectory," meaning it was launched at a steep angle to reach a higher altitude than a

³⁸ Of the seven ballistic missiles North Korea launched in total in July 2006, the third missile is believed to be a Taepodong-2 fired from the Taepodong district in the northeastern coastal area.

³⁹ All of the seven ballistic missiles launched were assumed to have landed in the military target practice area, for which a navigation warning was issued by the Japan Coast Guard upon notification by North Korea on June 22, 2009.

⁴⁰ On March 18, 2016, North Korea again launched ballistic missiles presumed to be Nodong missiles in a similar manner.

⁴¹ In a statement for the Senate Armed Services Committee in March 2009, General Sharp, then Commander of U.S. Forces Korea, testified, "North Korea is now fielding a new intermediate range ballistic missile capable of striking Okinawa, Guam, and Alaska." Furthermore, the ROK's Defense White Paper 2014 notes that, "In 2007, it [North Korea] fielded the Musudan missile (range of over 3,000 km). Following these deployments, North Korea has gained direct strike capabilities against South Korea, Japan, Guam, and other surrounding countries."

⁴² On June 22, 2016, North Korea launched a ballistic missile presumed to be the Musudan at around 5:57 am and around 8:03 am, respectively. The ballistic missile launched at 5:57 am separated into multiple pieces and fell near the shore of the eastern coast of North Korea. It is estimated that the longest flight distance among the separated pieces was approximately 100 km. The ballistic missile launched at 8:03 am is as stated in the main text. On the following day, June 23, the Korean Central Broadcasting Station announced that the test launch of the "Hwasong-10" surface-to-surface intermediate long-range strategic rocket was conducted successfully and reported as follows: (1) The test launch was carried out by the high-angle launch system simulating the maximum range of the ballistic rocket; (2) the rocket reached the maximum height of 1,413.6 km along the planned flight orbit, flew, and accurately landed in the targeted waters 400 km forward; (3) the test launch confirmed the flying kinetic feature of the ballistic rocket and its stability and maneuverability as well as the technical features of the newly-designed rocket structure and its power system, and verified the heat-resisting property of the warhead in the re-entry stage and its flight stability; and (4) KWP Chairman Kim Jong-un who visited the site stated, "We have attained definite capability to attack in a full-fledged and realistic way the U.S. Forces in the Pacific operation theatre." In addition, Rodong Shinmun from the same day published several photos showing scenes from the launch.

normal trajectory, while flying a shorter distance.⁴³ If this same ballistic missile presumed to be the Musudan were launched on a normal trajectory, it is estimated that its range would correspond to a range between approximately 2,500 and 4,000 km, the previously suggested range of a Musudan. In this light, it is considered that, through its launch in June, North Korea demonstrated that its missile had functions of an IRBM⁴⁴ to some level. While the failures of North Korea's several Musudan launches⁴⁵ since April 2016 have suggested that there could be fundamental flaws with the engine and missile body, it cannot be ruled out that North Korea has striven to solve the problems through the failures and could have made some technical gains.

It is very difficult to verify the intention of North Korea's military activities because of its closed regime. In addition, it is believed that North Korea has constructed underground military facilities across the country, and the ballistic missiles such as Toksa, Scud, Nodong and Musudan, would be loaded onto TELs. These make it difficult to detect in advance individual and specific signs of the launch of missiles with TELs, such as detailed launch sites and timings.⁴⁶

f. Taepodong-2

Taepodong-2 is believed to be a missile which uses 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 one ton. A Taepodong-2 is believed to have been launched from the Taepodong district located in the northeastern coastal area in July 2006, and was damaged during flight at an altitude of several kilometers, several tens of seconds after the launch without separating the first stage, and fell near the launch site. In the launch of a missile disguised as a "Satellite" in April 2009, it is thought that North

Korea used a Taepodong-2 or a variant of it from the same district. It is estimated that the missile crossed over Japan, and flew more than 3,000 km before falling into the Pacific Ocean. In April 2012, North Korea conducted a launch using what is believed to be a Taepodong-2 or its variant from the Tongch'ang-ri district on the northwestern coast of North Korea, which was disguised as a "Satellite." The missile flew over a minute and then fell into the Yellow Sea by breaking into several pieces. The launch is thought to have been a failure.⁴⁷

In December 2012, North Korea again conducted a launch using a Taepodong-2 variant, which was disguised as a "Satellite," from the Tongch'ang-ri district. In this launch, all falling objects are presumed to have fallen in the expected falling areas where North Korea had announced before the launch. An object including the possible third stage propelling device is presumed to have continued flight while changing its trajectory, and to have put an object into orbit around the Earth.⁴⁸

In February 2016, North Korea once again conducted a launch from the Tongch'ang-ri district using a Taepodong-2 variant, which seemed to be a similar type of the ballistic missile launched in December 2012, saying it was launching a "Satellite." 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.⁴⁹ Accordingly, it is believed that a test launch 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, 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,

⁴³ It is not necessarily clear why North Korea launched the missile on a lofted trajectory. However, based on Korean Central Broadcasting Station's report on June 23, 2016 that "The test-fire was successfully conducted without giving any slightest effect to the security of surrounding countries," it is possible that North Korea aimed to minimize the anticipated backlash and criticism from the international community, including neighboring countries and the United States, should its missile overfly the territories of other countries including Japan. In general, it is considered that ballistic missiles launched on a lofted trajectory make interception more difficult.

⁴⁴ IRBM generally refers to a ballistic missile with a range between approximately 3,000 and 5,500 km.

⁴⁵ On April 28, 2016, North Korea launched a ballistic missile presumed to be the Musudan in the early morning and late afternoon, respectively, but the launches ended in failure. Additionally, in the early morning of May 31, 2016, North Korea launched an IRBM that could be a Musudan, but it ended in failure. Furthermore, on April 15, 2016, North Korea launched a ballistic missile that ended in failure. It is suggested that this missile was also a Musudan.

⁴⁶ According to the U.S. DoD's "Military and Security Developments Involving the Democratic People's Republic of Korea" of February 2016, North Korea possesses a maximum of 100 TELs in total for Toksas and Scuds, a maximum of 50 TELs for Nodongs, and a maximum of 50 TELs for IRBMs (understood as referring to Musudans). Furthermore, according to "IHS Jane's Sentinel Security Assessment China and Northeast Asia (2015)," North Korea possesses 700 to 1,000 missiles in total, 45% of which are presumed to be Scud-class, 45% Nodong, and the remaining 10% other intermediate- and long-range ballistic missiles.

⁴⁷ After the launch, North Korea announced that "the earth observation satellite failed to enter its preset orbit," admitting the failure of the launch.

⁴⁸ It has not been confirmed that the object put into orbit around the Earth is performing communication or is transmitting or receiving any signal to and from the ground. Therefore, it is not assessed that the object actually functions as a satellite.

⁴⁹ In the case of the February 2016 launch of a ballistic missile, which North Korea disguised as a "Satellite," once again no communication or transmission of signals between the object and the ground of any kind were confirmed, and it is not assessed that that object actually functions as an artificial satellite.



Object likely from the Taepodong-2 variant launched by North Korea that washed ashore and was discovered in the coast of Tottori Prefecture [Photo courtesy of Tottori Prefecture]

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 such as Musudan, KN-08 and SLBM and diversification of attack measure. On the other hand, it is assessed that further verification of some relevant technologies would be required for the practical use of long-range ballistic missiles. For example, concerning the development of long-range ballistic missiles, North Korea may plan to verify technology required for protecting a re-entry vehicle from ultrahigh heating when the warhead re-enters into the atmosphere through further flight tests.⁵⁰ Furthermore, as launches from fixed launch pads are vulnerable to external attacks, North Korea may seek resiliency and survivability through building underground or silo launch facilities and launching from TELs.

In June 2016, what appears to be a part of the fairing of the Taepodong-2 variant launched in February 2016,

based on its appearance and other features, washed ashore and was discovered in the coast of Tottori Prefecture. As of the end of June 2016, the MOD is analyzing the details.

g. KN08

The details of the new missile "KN08" which was showcased at the military parade in April 2012 and July 2013 are unknown. However, the missile is believed to be an ICBM.⁵¹ At the military parade in October 2015, a new missile thought to be the "KN08" was showcased with a different-shaped warhead from the previous version.⁵² The U.S. DoD reportedly calls the new missile, considered a variant of the "KN08," the "KN14." Whereas the Taepodong-2 is launched from a fixed launch pad, the "KN08" and "KN14" are carried by a TEL, making it difficult to detect signs of their launch in advance, and is likely intended to increase survivability.

h. Submarine-Launched Ballistic Missile (SLBM)

It has been suggested that North Korea is developing an SLBM and a new submarine which is designed to carry the SLBM. In May 2015, North Korea, along with photos, announced through its media that it conducted a successful test launch of an SLBM.⁵³ In January 2016, a documentary film on the activities of KWP Chairman Kim Jong-un in December 2015 showed footage of an ejection test of what is assessed to be an SLBM different from the one made public in May 2015. In April 2016,

⁵⁰ On March 15, 2016, the Korean Central Broadcasting Station reported that a "simulated test of atmospheric re-entry of a ballistic vehicle" was conducted successfully under the leadership of KWP Chairman Kim Jong-un.

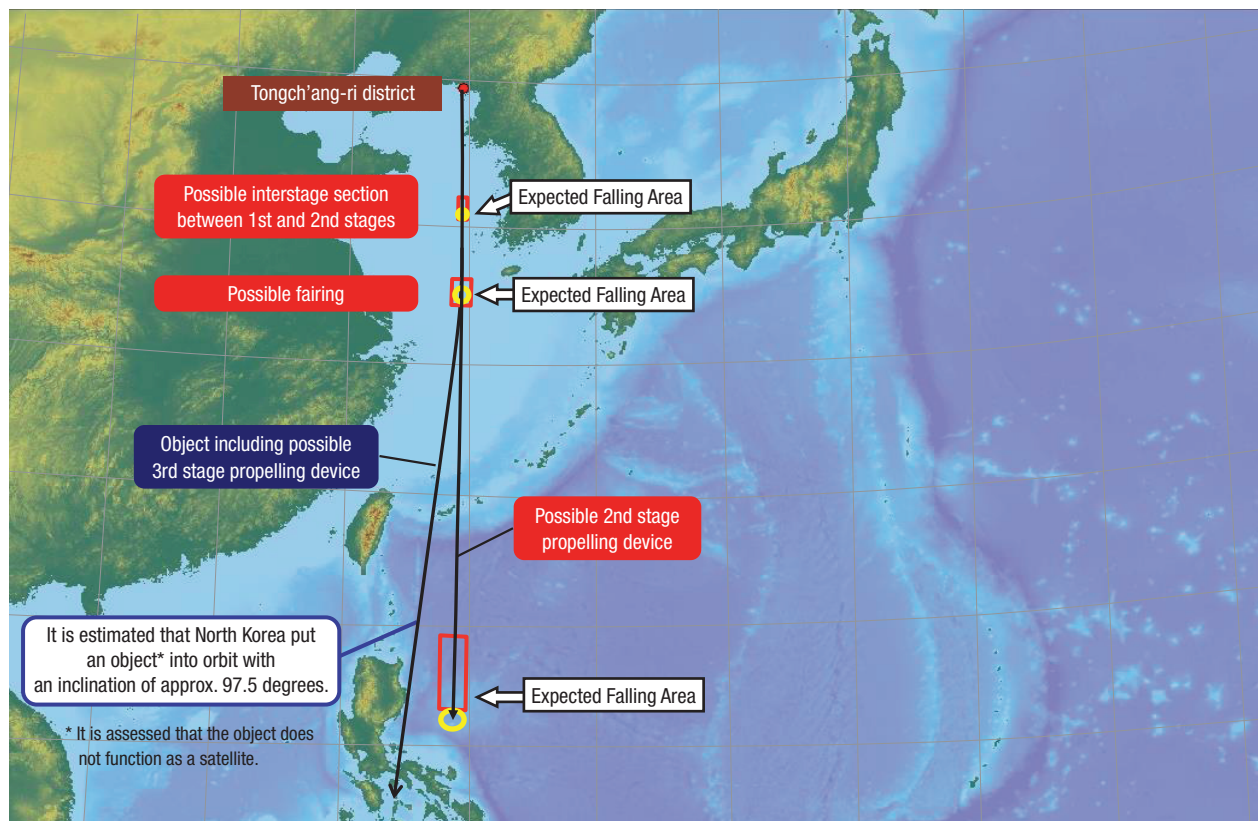
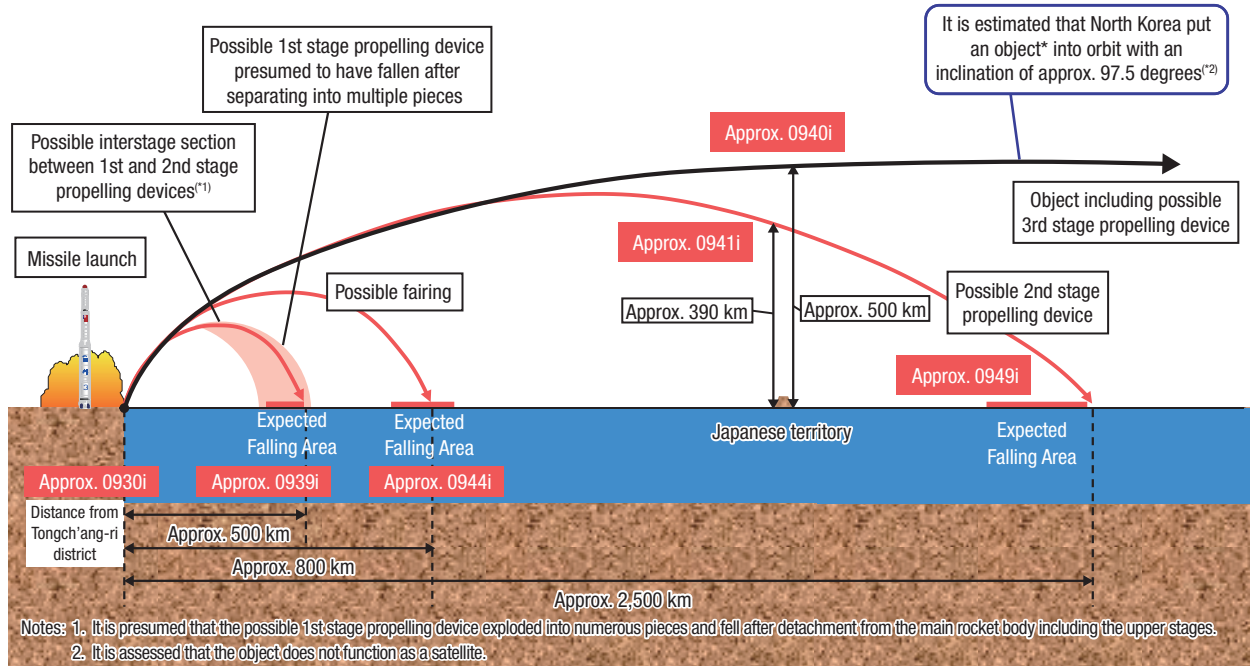
⁵¹ The "Worldwide Threat Assessment" of the U.S. Director of National Intelligence of February 2015 notes that, "[North Korea] has publicly displayed its KN08 road-mobile ICBM twice. We assess that North Korea has already taken initial steps towards fielding this system, although the system has not been flight-tested."

⁵² Jane's Defence Weekly dated October 13, 2015 notes that the "KN08" showcased at the military parade on October 10, 2015 had a larger third stage than the earlier version, and therefore, could have an extended range. It also suggests that low quality ablative materials cannot withstand high temperatures during re-entry, and thus, a blunter shape warhead may have been developed to reduce speed to protect the warhead.

⁵³ An article dated October 28, 2014 published on the website (38North) of the U.S.-Korea Institute at Johns Hopkins University in the United States points out that a new test stand had been set up near the Sinpo shipyard in northern North Korea, which could be used for the initial stages of research, development, testing, and evaluation of a vertical launch tube system for submarines and surface combatants. In addition, the ROK Defense White Paper 2014 states that North Korea is believed to be building a new submarine that is capable of carrying ballistic missiles. With regard to the "underwater test-fire" of an SLBM that North Korea announced, the ROK Ministry of National Defense assessed that the test constituted an "ejection test" in the early stage of development and that another four to five years is needed to complete the development. Having said so, the Ministry expressed concern that North Korea's development of an SLBM undermines the stability of Northeast Asia and urges North Korea to immediately suspend its development. According to "Military and Security Developments Involving the Democratic People's Republic of Korea" (2015) submitted to Congress by the U.S. DoD in February 2016, North Korea is developing SLBMs and is thought to have at least one launcher.

Fig. I-2-2-3

Launch of a Ballistic Missile which North Korea Disguised as a "Satellite" on February 7, 2016



North Korea's Launch of a Ballistic Missile which was Disguised as a "Satellite" on February 7, 2016

On February 2, 2016, North Korea, intending to launch an "earth observation satellite" between February 8 and 25, set its expected falling areas and informed international organizations. Then, on February 6, North Korea notified the organizations that it changed the timeframe of the launch to between February 7 and 14. On the following day, February 7, at approximately 9:30 am, North Korea launched a ballistic missile in the southern direction from the Tongch'ang-ri district on the northwestern coast.

It is assessed that the trajectory of this missile was almost the same as the launch in December 2012 (hereinafter referred to as "the previous launch" in this column) despite some differences such as the falling areas. In addition, it is presumed that through this launch North Korea put an object into orbit around the Earth. However, it is not assessed that this object actually functions as an artificial satellite. (→ For the detailed flight pattern, see Fig. I-2-2-3.)

Launching ballistic missiles and Satellite Launching Vehicles (SLVs) require the same technologies such as those for control of large-size propelling devices, separation of multi-stage propelling devices, and attitude and guidance control. Therefore, it is assessed that North Korea was able to demonstrate the technical challenges that have to be met for improving its ballistic missile capabilities through this launch following the previous launch.

With regard to the shape and the type of the ballistic missile launched by North Korea, considering the status of its ballistic missile development, the exterior appearance of the ballistic missile unveiled this time by North Korea, and the trajectory in this launch, it is judged that what North Korea launched this time was a three-stage Taepodong-2 variant that seemed to be a similar type of ballistic missile used in the previous launch. Should the Taepodong-2 variant be actually used for its purpose as a ballistic missile, its range could extend to over 10,000 km assuming a warhead weight of approximately 1 ton or less.

It is assessed that North Korea has improved the reliability of its ballistic missile-related technology in this launch, based on the following facts: (1) North Korea launched a similar type of multi-stage ballistic missile that was launched in the previous launch; (2) the missile flew in almost the same way as that in the previous launch; and (3) an object including the possible third stage propelling device continued flight after separation while changing trajectory and put an object into orbit around the Earth in a similar way seen in the previous launch.

It is also estimated that the possible first stage propelling device was divided into pieces after separation from the upper stage devices. North Korea may intentionally have broken the device in order to prevent others from collecting it because the Republic of Korea (ROK) collected and analyzed the possible first stage propelling device that fell without significant damage into the sea in the previous launch.

Taking serious note of North Korea's activities to develop ballistic missiles, Japan will seek to collect and analyze related information and take all possible measures to protect Japan's peace and security, cooperating with the whole international community including the United States, the ROK, and other liked-minded countries.

North Korea announced that it once again conducted a successful test launch of an SLBM.⁵⁴ If the images and footage released by North Korea are accurate, North Korea could have succeeded in using the "cold launch system" in which a missile is ignited after it is ejected into the air. Based on observations such as the shape of the flame coming out of the missile and the color of the smoke, it has been suggested that solid fuel may have been used for the launch in April 2016.⁵⁵ In July 2016, North Korea again launched a ballistic missile presumed to be an SLBM from the coast of Sinpo. In this regard, continued attention needs to be paid to related developments. It is deemed that through developing SLBM, North Korea

intends to diversify its ballistic missile attack capabilities and improve survivability.

See>> Fig. I-2-2-2 (Range of North Korean Ballistic Missiles)

i. Trends in and Outlook of Ballistic Missile Development

North Korea has made rapid strides in the development of its ballistic missiles with only a few test launches. It is believed that an underlying factor was North Korea's imports of various materials and technologies from outside of the country. It is also noted that North Korea transfers and proliferates ballistic missile airframes and related technologies, and that it promotes the further development of missiles using funds procured by such transfer and proliferation.⁵⁶ It is further pointed out that

⁵⁴ The ROK Joint Chiefs of Staff announced that on April 23, 2016 at around 6:30 pm, North Korea launched a missile presumed to be an SLBM from the Sea of Japan northeast of Sinpo, and that the missile is believed to have flown approximately 30 km. The U.S. Strategic Command also announced that on the same day at 6:29 pm JST, it detected and tracked the launch of an SLBM by North Korea from the Sea of Japan.

⁵⁵ It is suggested that North Korea's SLBM is an improved version of the liquid-fueled SLBM "SS-N-6" made in the former Soviet Union.

⁵⁶ For example, because Nodong is similar in shape to Shahab-3 of Iran and Gauri of Pakistan, analysts point out that Nodong airframes or related technologies may have been transferred. In addition, concerning the proliferation of WMDs and ballistic missiles by North Korea, the "Worldwide Threat Assessment" of the U.S. Director of National Intelligence of January 2014 pointed out that "North Korea's export of ballistic missiles and associated materials to several countries, including Iran and Syria, and its assistance to Syria's construction of a nuclear reactor, destroyed in 2007, illustrate the reach of its proliferation activities." Moreover, in the report entitled "Military and Security Developments Involving the Democratic People's Republic of Korea," which was published by the U.S. DoD in March 2014, it was pointed out that North Korea uses various techniques to circumvent measures taken by each country on the basis of United Nations Security Council Resolutions, including sending cargo through multiple front companies and intermediaries.

North Korea conducts tests at transfer destinations and uses the results. Moreover, because a test launch of a long-range ballistic missile contributes to improving the performance of other shorter-range ballistic missiles and its related technologies could be applied to other new intermediate- and long-range ballistic missiles being developed by North Korea, the launch of long-range ballistic missiles such as Taepodong-2, including the launches in December 2012 and February 2016, will likely further advance North Korea's entire ballistic missile development.

North Korea continues to claim that it would keep conducting "satellite launches" and would develop and launch more capable satellite launch vehicles. It is highly possible that North Korea will further develop its long-range ballistic missiles by repeating similar launches under the name of "satellite" launches to carry out further technical tests to bring its long-range ballistic missiles to the stage of practical use. It has been suggested that North Korea is carrying out modification for upsizing its launch tower in Tongch'ang-ri district.⁵⁷ While the missile launched in February 2016 was similar in size as the Taepodong-2 variant launched in December 2012, North Korea could launch larger long-range ballistic missiles in the future. Should North Korea make further progress in its longer-range ballistic missile capability and simultaneously achieve the miniaturization of nuclear weapons and acquired nuclear warheads and so on, North Korea may come to have a one-sided understanding that it secured strategic deterrence against the United States. Should North Korea have a false sense of confidence and recognition regarding its deterrence, this could lead to increases in and the 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 attempted its first Musudan launch in April 2016, and demonstrated its certain capability as an IRBM in the June 2016 launch. In March 2016, North Korea disclosed the implementation of ballistic missile re-entry environmental simulations, a ground test of a jet of a high-power solid fuel missile engine, and a ground jet test of a new-type high-power engine of ICBM. North Korea has shown readiness to acquire technologies to make practical use of new intermediate- and long-range ballistic missiles and make them more sophisticated, presenting serious concerns for Japan and other relevant countries.

Additionally, North Korea has intensified not only its research and development of ballistic missiles, but also activities intended to increase their operational capabilities. KWP Chairman Kim Jong-un has repeatedly instructed military units to conduct realistic military training that does away with formalistic practices. In the case of the ballistic missile launches since 2014, multiple ballistic missiles were launched using TEL in the early morning and late evening hours from locations which had never been used in the past. The launches revealed that North Korea has the capacity to launch ballistic missiles from locations and at timings as it chooses. The improvements in the operational capabilities of North Korea's ballistic missile units, including surprise attack capabilities, demonstrate that the North Korean ballistic missile threat is increasing further.

In this light, coupled with its nuclear issue, North Korea's ballistic missile issue has become more realistic and imminent for the Asia-Pacific region, including Japan, and for the international community from the perspective of both the improvement of the capability and transfer and proliferation, and such developments are profoundly worrisome.

See>> Fig. I-2-2-3 (Launch of a Ballistic Missile which North Korea Disguised as a "Satellite" on February 7, 2016)

4 Domestic Affairs

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

After the demise of Chairman of the National Defense Commission Kim Jong-il in 2011, Kim Jong-un became the de facto head of the military, party, and the "state" by assuming the position of Supreme Commander of the KPA, First Secretary of the KWP, and First Chairman of the National Defense Commission by April 2012. The framework of the Kim Jong-un regime was laid out in a short period of time. 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. Meanwhile, KWP Chairman Kim Jong-un underscores the importance of military strength and makes frequent visits to military organizations. In this light, the Chairman is anticipated to continue to attach importance to military strength.

⁵⁷ Articles dated October 1 and July 29, 2014 published on the website (38North) of the U.S.-Korea Institute at Johns Hopkins University in the United States point out that analyses of satellite images of the Tongch'ang-ri district show that the launch tower was raised to 55 m, enabling launches of rockets up to 50 m in height, larger than the Taepodong-2 variant (total height approx. 30 m) which was used in December 2012.

Following the change in regime, KWP Chairman Kim Jong-un has conducted frequent personnel reshuffles, including reshuffles of the top three military posts of the Director of the General Political Bureau, the Chief of the General Staff, and the Minister of the People's Armed Forces. In turn, individuals whom Chairman Kim Jong-un selected were assigned to the key party, military, and cabinet posts. In addition, in December 2013, Jang Song-thaek, Vice-Chairman of the National Defense Commission and Chairman Kim Jong-un's uncle, was executed for "plotting to overthrow the state." It is believed that through such measures, the Chairman endeavors to strengthen and consolidate a monolithic leadership system.⁵⁸ In 2014, the North Korean media stopped reporting the activities of Kim Kyong-hui, Secretary of the KWP and Kim Jong-un's aunt. Meanwhile, the North Korean media began to report the activities of Chairman Kim Jong-un's younger sister, Kim Yo-jong, as a senior member of the KWP.⁵⁹ These developments suggest that a generational change in the leadership may be taking place among the Kim dynasty.

At the KWP Congress held in May 2016, Kim Jong-un was named to the new post of KWP Chairman. In his report on the work of the KWP Central Committee, the Chairman set out that North Korea was a "nuclear weapons state," and said the country would consistently uphold the "new strategic line" policy of economic development and the building of nuclear force as well as further boost its self-defensive nuclear force both in quality and quantity. In this manner, the Chairman demonstrated, both to those in and outside of the country, North Korea's readiness to continue with its nuclear and missile development. Prior to the Congress, North Korea conducted provocations at unprecedented frequency and content, including the launch of ballistic missiles.

The holding of the KWP Congress may be an indication that North Korea has shifted into high gear by establishing the "state"-run governance system centered on the party and led by KWP Chairman Kim

Jong-un, in terms of its organization, personnel, among other dimensions, both in name and in substance.⁶⁰ At the Supreme People's Assembly convened in June 2016, it was decided that the National Defense Commission would be turned into the State Affairs Commission, and KWP Chairman Kim Jong-un was named Chairman of the State Affairs Commission, the new "highest position" of the "state" replacing First Chairman of the National Defense Commission. These changes are likely also manifestations of the governance system moving into full swing. However, with senior officials unable to dispute the decisions of KWP Chairman Kim Jong-un due to an atrophy effect created by the frequent executions, demotions, and dismissals of senior officials, combined with the alleged appointment of hardliner Kim Yong-chol, Director of the Reconnaissance General Bureau, to replace Kim Yang-gon, Director of United Front Department in charge of ROK policy who died of a car accident in December 2015, there is likely growing uncertainty, including over the possibility of North Korea turning to military provocations without making adequate diplomatic considerations. In addition to this, it has been suggested that there is declining social control caused by widening wealth disparities and information coming in 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 in recent years 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.⁶¹ Following North Korea's various provocations including the nuclear test in January 2016 and launch of a ballistic missile disguised as a "Satellite" in February 2016, the ROK decided to

⁵⁸ Following the execution of Jang Song-thaek, Vice-Chairman of the National Defense Commission, the North Korean media repeatedly calls for the strengthening of the "monolithic leadership system" and "single-minded unity." For example, an editorial in the *Rodong Shinmun* dated January 10, 2014 urged the people to stay cautious even of trivial phenomena and elements which erode North Korea's single-minded unity. In May 2015, it was suggested that Hyon Yong-chol, Minister of the People's Armed Forces, may have been executed on charges of treason. The ROK National Intelligence Service reportedly briefed the National Assembly that the Minister was executed in late April 2015. In July 2015, the North Korean media introduced Pak Yong-sik, previous Deputy Director of the General Political Bureau of the Korean People's Army, with the title, Minister of the People's Armed Forces. Additionally, since February 21, 2016, the North Korean media has introduced Ri Myong-su, previous Minister of People's Security, as Chief of General Staff Department instead of Ri Yong-gil. Ri Yong-gil was announced as an alternate member of the KWP Politburo at the KWP Congress in May 2016.

⁵⁹ According to the Korean Central Broadcasting Station, Kim Yo-jong was elected a member of the KWP Central Committee at the KWP Congress held in May 2016. The media has also shown her supporting KWP Chairman Kim Jong-un on the podium during the celebration parade following the KWP Congress.

⁶⁰ Elections for members and alternate members of the KWP central leadership agencies (e.g., KWP Central Committee and KWP Politburo) were held during the KWP Congress. Pak Pong-ju, Premier, and Choe Ryong-hae, KWP Secretary, were newly elected as KWP Politburo Standing Committee members to form a five-member Standing Committee including: Kim Jong-un, KWP Chairman; Kim Yong-nam, President of the Presidium of the Supreme People's Assembly; and Hwang Pyong-so, Director of the General Political Bureau. All five members of the KWP Politburo Standing Committee are not genuine military personnel. Furthermore, the ranks of military personnel have fallen within the KWP Politburo, and Premier Pak Pong-ju has been added as a member of the KWP Central Military Commission. It is pointed out that these aspects show that a KWP-led governance system is shifting into high gear.

⁶¹ In April 2016, the Food and Agriculture Organization of the United Nations (FAO) forecasted North Korea's total production of principal foods to have been 5.40 million tons and estimated the necessary imported amount of grains to have been 0.694 million tons between November 2015 and October 2016. North Korea's total food production fell for the first time since 2010 due to water scarcity and the other impacts of drought.

completely suspend operations at the Kaesong Industrial Complex, which makes up over 99% of inter-Korean trade, and furthermore, countries including Japan and the United States have strengthened their sanctions. Along with these measures, if China, North Korea's largest trading partner,⁶² and other relevant countries rigorously implement the sanctions of U.N. Security Council Resolution 2270 adopted in March 2016, an even more severe economic situation could beset North Korea.

To tackle a host of economic difficulties, North Korea has made attempts at limited improvement measures and some changes to its economic management systems,⁶³ and promotes the establishment of economic development zones⁶⁴ and the enlargement of the discretion of plants and other entities over production and sales plans.⁶⁵ At the Seventh KWP Congress held in May 2016, the report on the work of the KWP Central Committee referred to the delays in the economic sector and identified the country's economic revitalization and raising the people's standard of living as the most important tasks. These all suggest North Korea is placing importance on the rebuilding of the economy. Nonetheless, North Korea is unlikely to carry out any structural reforms that could lead to the destabilization of its current ruling system, and thus, various challenges confront the fundamental improvement of its current economic situation.

5 Relations with Other Countries

(1) Relations with the United States

The United States has shown that its stance is to take steps to convince North Korea to abandon its nuclear program in close cooperation with other countries, aiming to resolve the issue through the Six-Party Talks. The United States consistently makes its position clear that North Korea needs to comply with the 2005 Joint Statement of the Six-Party Talks and take specific measures to improve North-South relations before

resuming the Six-Party Talks.

In response, North Korea has criticized the United States, claiming that its "hostile policy" towards North Korea and lack of trust between them stand in the way of the peace and denuclearization on the Korean Peninsula, and asserts that the conclusion of a U.S.-North Korea peace agreement is necessary to build a relationship of trust.⁶⁶ As such, a significant gap has been observed between the two parties' stances. Since the adoption of the U.N. Security Council Resolution 2087 in January 2013, North Korea, claiming that the "hostile policy" of the United States has entered a dangerous state, has contended that there can be no denuclearization on the Korean Peninsula before the denuclearization of the world. In this context, it has asserted that there would be no more talks for the denuclearization on the Korean Peninsula, while leaving room for dialogue for ensuring peace and security in the region. The divide between the two parties' positions has yet to be bridged. In June 2013, North Korea, in the form of an important statement by the spokesperson of the National Defense Commission, proposed to hold U.S.-North Korea senior-level talks. However, the United States has remained firm on its stance that North Korea must first take concrete steps to show it is headed towards denuclearization, and the talks have not materialized.

North Korea has reacted sharply to the U.S.-ROK combined exercise, alleging that such activities were a manifestation of the U.S. "hostile policy" towards North Korea. In this regard, North Korea has repeatedly voiced strong criticisms against the United States and conducted military provocations such as ballistic missile launches.⁶⁷ When the U.S.-ROK combined exercise was carried out from March to April 2016, North Korea reiterated its hardline arguments, stating that its target of attack included the bases of the U.S. Forces in the Asia-Pacific region and the U.S. mainland.

⁶² Trade between China and North Korea accounted for around 64% of North Korea's total trade in 2015.

⁶³ For example, North Korea conducted a so-called currency revaluation (decreasing the denomination of its currency) at the end of 2009. The currency revaluation is said to have led to economic disorder, such as price escalation due to shortfall of supply, which in turn increased social unrest.

⁶⁴ During the plenary meeting of the KWP Central Committee on March 31, 2013, KWP Chairman Kim Jong-un instructed the establishment of economic development zones in each province. Pursuant to these instructions, the Economic Development Zone Law was enacted in May of that year. In November 2013, the establishment of 1 special economic zone and 13 economic development zones was announced. In January 2015, it was reported that development plans for 13 economic development zones were established.

⁶⁵ While the details of the policy are not necessarily clear, it is understood that in the industrial sector, entities would be able to independently make production decisions and conduct sales outside the scope of the national plan, as well as determine employee remuneration and benefits based on the situation of the entities. In the agriculture sector, an autonomous business system would be introduced at the household level. It has been said that 1,000 pyeong (1 pyeong = approx. 3.3 m²) of land would be allocated per person, with 40% of the agricultural products going to the state and 60% going to individuals.

⁶⁶ For example, during the 20th Ministerial Meeting of the Association of Southeast Asian Nations (ASEAN) Regional Forum (ARF) held on July 2, 2013, Pak Ui-chun, Minister of Foreign Affairs of North Korea, delivered an address, stating, "The United States drop of its hostile policy should start from the conclusion of a peace treaty between the United States and the DPRK on the basis of the respect for the latter's sovereignty and halt to all sanctions and military provocations against it."

⁶⁷ On the occasion of the U.S.-ROK combined exercise carried out from March to April 2013, coupled with the protests against U.N. Security Council resolutions, North Korea repeatedly made hardline arguments including nullification of the Korean War Armistice Agreement and suggestion of preemptive nuclear attack on the United States. During the U.S.-ROK combined exercise from February to April 2014, North Korea launched ballistic missiles and fired several rounds from multiple rocket launchers while criticizing the United States. On the occasion of the U.S.-ROK combined exercise held from March to April 2015, North Korea launched ballistic missiles in the direction of the Sea of Japan on March 2, the first day of the exercise, and reiterated its criticism of the United States.

(2) Relations with the Republic of Korea

Relations between the ROK and North Korea worsened under the administration of President Lee Myung-bak, spurred by the outbreak of incidents that heightened North-South military tensions, including the sinking of an ROK patrol vessel in March 2010⁶⁸ and the shelling incident of Yeonpyeong Island in November of the same year.⁶⁹ Even after the administration of President Park Geun-hye was inaugurated in February 2013, North Korea lodged protests against the adoption of U.N. Security Council Resolution 2087 in January 2013 and U.N. Security Council Resolution 2094 in March 2013, as well as to the U.S.-ROK combined exercise conducted in March to April. North Korea adopted a hardline rhetoric, including abrogation of all agreements on North-South nonaggression.⁷⁰ Following the U.S.-ROK combined exercise that was conducted until the end of April 2013, North Korea gradually softened its provocative rhetoric and behavior against the ROK. By August, North Korea agreed to the resumption of the Kaesong Industrial Complex⁷¹ which had de facto suspended its operations. In addition, North Korea has held dialogues with the ROK, including the North-South separated family reunion meeting which was held for the first time in three years and four months in February 2014. However, when the U.S.-ROK combined exercise commenced at the end of February 2014, North Korea engaged in military provocations, including intrusion into the ROK's airspace using small drones⁷² and a large-scale maritime live-fire drill in an area near the northwest islands of the ROK covering Baengnyeong Island and Yeonpyeong Island.⁷³

In August 2015, landmines exploded in the ROK's area of the DMZ, causing serious injuries to two ROK Force personnel. This incident deeply stirred tensions

between the ROK and North Korea, with the ROK resuming loudspeaker broadcasts targeting the North for the first time in approximately 11 years and the shelling incident between the two sides. However, as a result of the talks between their senior officials, the two sides agreed on a joint press release that included the suspension of loudspeaker broadcasts.⁷⁴ In October 2015, a reunion of separated families was held, and tension temporarily subsided. Nonetheless, no concrete agreement was announced following the vice-ministerial-level talks for improving relations. Moreover, after North Korea conducted a nuclear test in January 2016 and went ahead with the launch of a ballistic missile disguised as a "Satellite" in February 2016, the ROK took measures such as resuming loudspeaker broadcasts targeting North Korea, deciding to begin formal talks between the ROK and the United States regarding the deployment of Terminal High Altitude Area Defense (THAAD) by U.S. Forces Korea,⁷⁵ and deciding to completely suspend operations at the Kaesong Industrial Complex. In response, North Korea declared the Kaesong Industrial Complex a military control zone, and announced that it would expel all ROK nationals from the zone and freeze their assets. When a U.S.-ROK combined exercise was carried out from March to April 2016, North Korea repeated provocative rhetoric and behavior, noting that the first target of attack would be the ROK Blue House, resulting in heightened tensions between the ROK and North Korea. Since the Seventh KWP Congress in May 2016, North Korea has proposed to the ROK to hold dialogue between their military authorities. However, the ROK has maintained that it would not agree to dialogue unless North Korea demonstrates its intention to denuclearize with actions.

⁶⁸ On March 26, 2010, the ROK's naval corvette Cheonan sank near the Northern Limit Line in the Yellow Sea. In May 2010, a joint military-civilian survey group comprising experts from the United States, Australia, the United Kingdom, and Sweden released survey results indicating that the ROK naval ship had split and sank as a result of a shock wave and bubble effect created by the underwater blast of a torpedo fired by a small North Korean submarine.

⁶⁹ On November 23, 2010, North Korea bombarded Yeonpyeong Island as the ROK military engaged in firing exercises off the coast of the island facing the Yellow Sea, causing deaths and injuries on the ROK side including civilians.

⁷⁰ In January 2013, North Korea's Committee for the Peaceful Reunification of Korea issued a statement saying that if the South "takes direct part in the U.N. 'sanctions,' the DPRK will take strong physical counter-measures against it." Furthermore, in February of the same year, the Rodong Shinmun published an editorial saying, "(if ROK tightens sanctions as a countermeasure against the nuclear test, it) will not be able to avoid deadly retaliation."

⁷¹ In April 2013, North Korea prohibited ROK nationals from entering the Kaesong Industrial Complex (located in the city of Kaesong in southwest North Korea, close to the military demarcation line with the ROK; many ROK companies operate businesses by employing North Korean workers), which commenced operations in 2004 as a North-South economic cooperation project; subsequently, North Korea withdrew all North Korean workers and announced the temporary suspension of the project. In May 2013, all personnel from the ROK also withdrew from the Complex.

⁷² On March 24, March 31, and April 6, 2014, crashed drones were discovered in Paju, Baengnyeong Island, and Samcheok, respectively. In May of the same year, the ROK Ministry of National Defense announced that a scientific study confirmed that the drones originated from North Korea and that the flights were clear military provocations in violation of the armistice agreement and North-South non-aggression agreement. North Korea criticized the ROK for fabricating the incidents, and asserts that the facts should be uncovered through a ROK-North Korea joint study.

⁷³ According to an announcement by the ROK Ministry of National Defense, on March 31, 2014, North Korea fired roughly 500 rounds using its multiple rocket launchers and other systems, of which about 100 landed in the ROK's sea area south of the Northern Limit Line (NLL). The ROK government issued an evacuation order to people living near Baengnyeong Island and other areas, and returned fire with about 300 rounds. No damages in the ROK were reported.

⁷⁴ On August 25, 2015, the South and the North agreed on a joint press release consisting of six items. The North "expressed regret over the injuries of the soldiers of the South caused by the recent landmine explosions." The South agreed that "as long as no abnormal incident occurs...[it would] suspend all loudspeaker broadcasts." Additionally, the two sides agreed to arrange reunions of separated families and to hold meetings among authorities to improve inter-Korean relations.

⁷⁵ 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.

(3) Relations with China

The China-North Korea Treaty on Friendship, Cooperation and Mutual Assistance, which was concluded in 1961, is still in force.⁷⁶ Currently, China is North Korea's biggest trade partner. In 2015, trade volume between China and North Korea was very high, accounting for approximately 64% of North Korea's total trade,⁷⁷ leading observers to point to North Korea's dependence on China.

Meanwhile, with regard to the situation in North Korea and its nuclear issue, China has expressed support for the denuclearization on the Korean Peninsula and early resumption of the Six-Party Talks. In addition, China endorsed U.N. Security Council Resolutions 2087 and 2094. Following the adoption of the two resolutions, China issued notices in February and April 2013, stating that China would thoroughly enforce the embargo of items set forth in both resolutions. When North Korea conducted a nuclear test in January 2016 and launched a ballistic missile disguised as a "Satellite" in February 2016, China initially expressed concerns towards excessive sanctions, saying a destabilization on the Korean Peninsula must be avoided. Nevertheless, China ultimately endorsed U.N. Security Council Resolution 2270 which included a significant strengthening of sanctions against North Korea.

China is a vital political and economic partner for North Korea and maintains a degree of influence on the country. However, North Korea does not necessarily adopt actions which are in line with the position of China over nuclear and ballistic missile issues. Furthermore, Jang Song-thaek, Vice-Chairman of the National Defense Commission, who played a key role in economic cooperation with China was executed. Given such circumstances, North Korea-China relations and China's influence on North Korea will continue to be followed.

Since 2014, a possible cooling of North Korea-China relations in the political and diplomatic domains has been noted, with mutual visits by senior officials becoming less frequent and President Xi Jinping paying a state visit to the ROK without visiting North Korea. Developments that hinted to the improvement of North Korea-China relations were observed temporarily. For example, Choe Ryong-hae, KWP Secretary, visited China for the "commemorative event for the 70th

anniversary of the victory of the Chinese people's war of resistance against Japanese aggression" in September 2015. In October 2015, China's Liu Yunshan, Politburo Standing Committee member, visited North Korea for the commemorative event of the 70th anniversary of the KWP. During his meeting with Liu Yunshan, KWP Chairman Kim Jong-un stated that North Korea-China relations were strategic relations forged by blood and that the bilateral relationship would be further strengthened and developed. Nevertheless, North Korea went ahead with a nuclear test in January 2016 despite China's request for the denuclearization on the Korean Peninsula. In February 2016, North Korea launched a ballistic missile disguised as a "Satellite" immediately after Wu Dawei, Special Representative for Korean Peninsula Affairs of the Ministry of Foreign Affairs of China, visited North Korea. In this light, it is possible that North Korea-China relations are cooling once again. In June 2016, KWP Deputy Chairman Ri Su-yong visited China and held talks with President Xi Jinping. However, whereas North Korea requested China's understanding of the "new strategic line" policy, China urged self-restraint and dialogue. It is believed that a significant difference in view still remains between China and North Korea over the latter's nuclear development.

(4) Relations with Russia

While North Korea and Russia became estranged with the end of the Cold War, they signed the Russia-North Korea Treaty on Neighborly Friendship and Cooperation in 2000.⁷⁸ In August 2011, Kim Jong-il, then Chairman of the National Defense Commission, visited Russia. A Russia-North Korea summit was held for the first time in nine years, and the two sides agreed to cooperate on a gas-pipeline project, among other matters. In September 2012, after the transition to the Kim Jong-un regime, the two countries signed an agreement that wrote off 90% of the debt owed to Russia by North Korea, and in such ways, friendly relations have been maintained between the two countries. Furthermore, in September 2013, a railway opened for service connecting Khasan, a coastal area in the Russian Far East, and Rajin Port in northeastern North Korea. Since 2014, North Korea has further intensified its diplomacy with Russia, as

⁷⁶ It includes a provision that if either of the signatories (China and North Korea) is attacked and enters into a state of war, the other would make every effort to immediately provide military and other assistance.

⁷⁷ North Korea's total trade here was calculated by summing North Korea's total foreign trade excluding trade with the ROK released by the Korea Trade-Investment Promotion Agency, and trade between North Korea and the ROK released by the Ministry of Unification of the ROK.

⁷⁸ The previous treaty (Soviet-North Korea Friendship and Mutual Assistance Treaty) contained the provision that if either of the signatories (Russia and North Korea) is attacked, the other would immediately provide military and other assistance by any means available. This provision, however, was dropped from the new treaty.

exemplified by the mutual visits of many senior officials as well as advances in economic cooperation.⁷⁹

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. After the nuclear test conducted by North Korea in February 2013, Russia issued a statement that condemned the test but opposed sanctions that could have implications on normal trade and economic relations with North Korea. When North Korea conducted a nuclear test in January 2016 and launched a ballistic missile disguised as a "Satellite" in February 2016, Russia condemned North Korea for violating U.N. Security Council resolutions, while maintaining a cautious stance towards rigorous sanctions, saying that an economic collapse in North Korea should be avoided. Ultimately it agreed to the resolution by way of limiting the impact on Russia.

(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 countries⁸⁰ 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. In April 2013, North Korea's attempt to export gas masks and other items to Syria was intercepted by Turkish authorities. In July of the same year, the North Korean vessel Chong Chon Gang sailing from Cuba to North Korea was seized by Panamanian authorities near the Panama Canal. As a result, contents of cargo that violated U.N. Security Council resolutions were confiscated, including MiG-21 fighters and a surface-to-air missile system.

In recent years, North Korea is deemed to be strengthening its relations with African countries, with North Korean senior officials paying visits to African countries.⁸¹ 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 U.N. Security Council resolutions and political turmoil in the Middle East.⁸² The possibility that North Korea's illegal activities would provide a funding source for nuclear and ballistic missile development is a cause for concern.

⁷⁹ For example, in February 2014, President of the Presidium of the Supreme People's Assembly Kim Yong-nam visited Russia. In March 2014, Minister for the Development of the Russian Far East Alexander Galushka visited North Korea, and the two sides signed minutes of talks (protocol) on cooperation in trade, economy, and science and technology. In April 2014, Deputy Prime Minister Yuri Trutnev visited North Korea, and the two sides signed an agreement on trade and economic cooperation between the Ministry of Foreign Trade of North Korea and the government of the Amur Oblast of the Russian Federation. In May 2014, President Vladimir Putin signed a law which ratified an agreement to write off North Korea's debts. In September 2014, Minister of Foreign Affairs Ri Su-yong visited Russia. In November 2014, Minister of the People's Armed Forces Hyon Yong-chol and Secretary of the Korean Worker's Party Choe Ryong-hae visited Russia. In 2015, Minister of Foreign Affairs Ri Su-yong and Minister of Foreign Trade Ri Ryong-nam visited Russia between February and March. In April 2015, Minister of the People's Armed Forces Hyon Yong-chol visited Russia. In June 2015, Chairman of the Supreme People's Assembly Choe Thae-bok visited Russia. In April and October 2015, Minister for the Development of the Russian Far East Galushka visited North Korea. Mutual visits by senior officials continue to be conducted frequently.

⁸⁰ For example, the United Kingdom and Germany established diplomatic relations with North Korea in 2000 and 2001, respectively.

⁸¹ For example, in May 2016, President of the Presidium of the Supreme People's Assembly Kim Yong-nam attended the inauguration ceremony of the President of Equatorial Guinea. He held talks with the President, as well as with the leaders of the Republic of Chad, the Gabonese Republic, the Central African Republic, the Republic of Congo, the Republic of Guinea, and the Republic of Mali who were attending the inauguration ceremony.

⁸² The final report of the U.N. Security Council's Panel of Experts assisting the North Korea Sanctions Committee released in February 2015 makes references to possible transactions with an Ethiopian ammunition producer, possible export of arms-related equipment to Eritrea, and possible violation of the arms embargo in providing training support to the Ugandan Police Force.

2 The Republic of Korea and the U.S. Forces Korea

1 General Situation

In the ROK, the administration of Park Geun-hye was inaugurated in February 2013. The Park administration maintains that forging trust through dialogue is most critical for improving the North-South relations. With regard to the nuclear issue, the administration sets out that North Korea's nuclear development can never be tolerated and that the ROK would address this issue in concert with the international community. In August 2013, the ROK unveiled a policy called the "Trust-Building Process on the Korean Peninsula," which aims to realize denuclearization by building trust through efforts, including humanitarian initiatives and North-South exchanges. The ROK states that it would make a decisive response to military provocations by North Korea and emphasizes the importance of building a solid posture to deter and address the threat of North Korea.

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 a vital role in deterring the outbreak of large-scale armed conflicts 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." However, the ROK presently uses the expression, "the North Korean regime and its armed forces...will remain as our enemies."⁸³

In 2005, the ROK Ministry of National Defense announced the "National Defense Reform Basic Plan 2006-2020" for "the restructuring of the military from its current quantitative, conventional form centered on troops to a qualitative, high-tech military force structure that is information and technology intensive."⁸⁴ In 2009, in light of the changes in the situation, such as the missile launches and nuclear test by North Korea, the Defense Reform Basic Plan 2009-2020 was announced. The Basic Plan identified, among other measures, the scaling down of the initially planned reduction in the force strength and the possibility of preemptive strikes against North Korean nuclear and missile facilities. Meanwhile, in response to the sinking of the ROK patrol ship and the artillery shelling on Yeonpyeong Island in 2010, in August 2012, the ROK Ministry of National Defense released the Defense Reform Basic Plan 2012-2030, incorporating the enhancement of deterrence against North Korea and further streamlining of the military.⁸⁵ In March 2014, the Park Geun-hye administration unveiled the Defense Reform Basic Plan 2014-2030, which envisions long-term defense force enhancements for dealing with potential threats following the unification on the Korean Peninsula, while maintaining a readiness posture against North Korean threats.⁸⁶

3 Military Posture of the ROK

The ROK's military capacity is as follows. The ground forces consist of 22 army divisions and 2 marine divisions, totaling 520,000 personnel; the naval forces consist of 240 vessels with a total displacement of approximately 211,000 tons; and the air forces (Air Force and Navy combined) consist of approximately 620 combat aircraft.

In recent years, the ROK has been focused on modernizing its Navy and Air Force in particular in order to establish an omnidirectional defense posture to deal with future potential threats, not least threats from North Korea. The Navy has been introducing

⁸³ The ROK's Defense White Paper 2014 describes North Korea as follows: "North Korea poses a serious threat to our security by developing and increasing its large-scale conventional arsenal, nuclear program, missiles and other weapons of mass destruction, and by continually perpetrating acts of armed provocation such as the attack on the ROK Ship Cheonan and the shelling of Yeonpyeongdo Island. As long as these threats persist, the North Korean regime and its armed forces, which are the entities who pose these threats, will remain as our enemies."

⁸⁴ An act on national defense passed in 2006 obliges the revision and supplementation of the National Defense Reform Basic Plan based on an analysis and assessment of the changes in conditions and the performance of national defense reform.

⁸⁵ In order to reorganize the ROK Forces into a structure tailored to the operational environment on the Korean Peninsula, the ROK Ministry of National Defense intends to greatly enhance its operational capability in the northwestern offshore island region, reorganize the upper command structure in preparation for the transition of the wartime OPCON, gradually promote troop reduction and reorganization, and significantly expand capabilities to handle missile and cyber warfare. Moreover, in order to build a highly efficient and advanced defense structure, it will promote streamlining, reorganize the human resource management system, and improve the military's welfare and service environment.

⁸⁶ In order to secure capabilities for responding to existing and potential threats, the ROK Ministry of National Defense plans to install three additional Aegis destroyers, develop and install next-generation destroyers and submarines, and install mid- and high-altitude unmanned reconnaissance aircraft and multi-functional satellites.

submarines, large transport ships, and domestically built destroyers. In February 2010, the first mobile force in the ROK was created.⁸⁷ In February 2015, a submarine command was created. In April 2012, the Air Force completed the introduction of F-15K fighters which had been implemented since 2002. The Air Force is currently promoting a program for the installation of the F-35A as a next-generation fighter with stealth property.

In October 2012, the ROK government announced a revision of its missile guidelines stipulating the range of ballistic missiles it possesses; the revision includes the extension of their maximum range from 300 km to 800 km to enhance the deterrence against military provocation by North Korea. In addition, to address North Korean nuclear and missile threats, the ROK intends to expand the missile capabilities of the ROK Forces,⁸⁸ establish a system known as “Kill Chain” to conduct swift preemptive strikes using missiles and other assets,⁸⁹ and develop an indigenous missile defense system (Korea Air and Missile Defense [KAMD]).⁹⁰

In recent years, the ROK has actively promoted equipment export, which reached approximately US\$3.6 billion on a contract value basis in 2014. Since 2006, the amount has increased by nearly 14-fold in eight years. It is reported that export items have diversified to include communication electronics, aircraft, and naval vessels.⁹¹

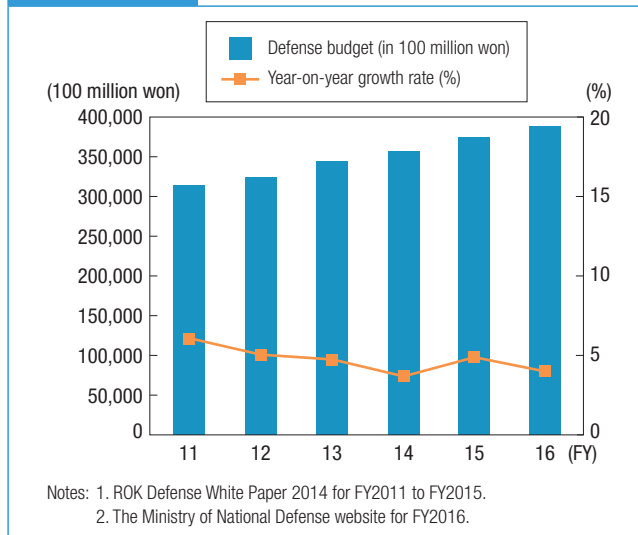
Defense spending in FY2016 (regular budget) increased by about 3.6% from the previous fiscal year to nearly KRW 38.7995 trillion, marking the 17th consecutive year of increases since 2000.

See>> Fig. I-2-2-4 (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. At the U.S.-ROK Summit Meeting in June 2009, the two sides agreed on the Joint Vision for the Alliance of the United States of America and the Republic of Korea. The vision

Fig. I-2-2-4 Changes in the ROK's Defense Budget



includes reference to building “a comprehensive strategic alliance,” which would expand the scope of the U.S.-ROK alliance from the Korean Peninsula to global and would widen the partnership of the two countries to encompass non-military areas. Furthermore, at the 42nd U.S.-ROK Security Consultative Meeting (SCM) in October 2010, a joint communiqué was released, which included the Guidelines for U.S.-ROK Defense Cooperation for realizing the future vision of the U.S.-ROK Alliance. At the U.S.-ROK Summit Meeting in May 2013, the two sides, in a joint declaration commemorating the 60th anniversary of the conclusion of the U.S.-ROK Mutual Defense Treaty, affirmed to continue to strengthen their alliance in order to meet the security challenges of the 21st century. Through such measures, the two countries have striven to deepen their relations. In addition to agreements at the political and strategic levels, in March 2013, the two countries signed the ROK-U.S. Counter-Provocation Plan for dealing with North Korea’s provocations.⁹² At the 45th SCM in October 2013, the two countries approved the Tailored Deterrence Strategy designed to enhance deterrence against North Korean nuclear and

⁸⁷ The primary missions of the Seventh Mobile Corps, which is the first mobile force established in the ROK, are described as the protection of sea lanes, deterrence against North Korea, and support for the government’s external policies.

⁸⁸ In April 2012, the ROK Ministry of National Defense announced that the country has developed and already fielded missiles that include cruise missiles able to strike throughout North Korea. In February 2013, the ministry indicated that it would accelerate the development of 800 km-range ballistic missiles, possession of which was made possible by the revision of the missile guidelines in October 2012, and announced that it has fielded cruise missiles to be launched from vessels or submarines and capable of attacking the entire area of North Korea. Also in October, during an event commemorating the 65th anniversary of the founding of the armed forces, the ROK Forces displayed to the public for the first time the “Hyeonmu 2” ballistic missile, which is said to have a 300 km range, and the “Hyeonmu 3” surface-to-surface cruise missile, which is said to have a 1,000 km range. In April 2014, the ROK conducted a successful test launch of a new ballistic missile with a range of 500 km.

⁸⁹ The ROK Ministry of National Defense explains that the system is capable of detecting and identifying signs of missile launch, determining attack, and actual attacking instantaneously. It is noted that the system is comprised of ISR capabilities (reconnaissance drone and satellite), striking capabilities (F-35 fighter, air-to-surface missile, and new ballistic missile, etc.), and intercept capabilities (current PAC-2, as well as PAC-3 and indigenously built anti-air missile).

⁹⁰ The ROK intends to develop the Kill Chain and KAMD systems by the mid-2020s. Meanwhile, the ROK Ministry of National Defense has denied participation in the U.S. missile defense system, and has underscored that the ROK was creating its own indigenous systems. The reported reasons include differences in threat perceptions between the United States and the ROK, concern over Chinese backlash, and cost effectiveness.

⁹¹ As for recent examples, in 2012, the ROK concluded an agreement to export three Type 209 submarines to Indonesia as well as an agreement to export four of the new Military Afloat Reach and Sustainability (MARS) vessels to the United Kingdom. In 2014, the ROK concluded an agreement to export 12 FA-50 light attack aircraft to the Philippines.

⁹² The ROK Joint Chiefs of Staff has announced that the plan contains consultative procedures as well as robust and thorough response methodologies for the United States and the ROK to take joint responses in the event of a North Korean provocation. However, the details of the plan have not been made public.



In response to North Korea's nuclear test, a U.S. Air Force B-52 conducts a low-level flight in the vicinity of Osan, ROK with a ROK Air Force F-15K and a U.S. Air Force F-16
[Photo courtesy of the U.S. Air Force]

other WMD threats.⁹³ 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.⁹⁴ Additionally, after North Korea went ahead with its nuclear test in January 2016, in February 2016 the United States and the ROK began formal talks regarding deployment of THAAD to U.S. Forces Korea, and in July 2016 the deployment was officially decided. In the U.S.-ROK combined exercise held from March to April 2016, around 290,000 ROK Forces personnel and around 17,000 U.S. Forces personnel participated, and a record number of troops and equipment were mobilized, including a carrier strike group for the first time since 2009.

At the same time, the two countries have worked to deal with such issues as the transition of wartime operational control (OPCON) to the ROK and the realignment of U.S. Forces Korea. Despite these efforts, however, the two countries are pressed to revise their plans. For the transition of OPCON to the ROK,⁹⁵ 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 the ROK Forces meet conditions such as enhanced capabilities. Although this new approach does not present a specific deadline for the transition, the transition of OPCON could be delayed considerably given that the central challenges to enhancing the capabilities of the ROK Forces are deemed to be Kill Chain and KAMD, and that these systems have mid-2020s as the target completion date. Moreover, in June 2015, the ROK-U.S. Combined Division was formally launched. The Commanding General of the 2nd Infantry Division of the U.S. Forces concurrently serves as Commanding General of the ROK-U.S. Combined Division. In peacetime, they hold joint exercises, while in wartime, units of the U.S. Forces and the ROK Forces jointly carry out operations.

With regard to the realignment of the U.S. Forces Korea,⁹⁶ 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. However, the relocation to the Pyeontaek area had been delayed due to logistical reasons, including increases in relocation costs. The decision to postpone the transition of OPCON that was made at the 46th SCM has in turn necessitated some U.S. Forces personnel to remain at Yongsan Garrison. In addition, the two countries decided that the counter-fires forces of the 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. These decisions have given rise to new factors that force the two countries to partially revise the plans. Accordingly, while the plans

⁹³ According to the Joint Communiqué of the 45th ROK-U.S. SCM, this strategy establishes a strategic framework for tailoring deterrence against key North Korean threat scenarios across armistice and wartime, and strengthens the partnership between the United States and the ROK to maximize their deterrent effects. However, the details have not been made public.

⁹⁴ According to the Joint Communiqué of the 46th SCM, the “Concepts and Principles” are designed to detect, defend, disrupt, and destroy missile threats including nuclear and biochemical warheads. However, the details have not been made public. Furthermore, according to the “Strategic Digest 2015” of the U.S. Forces in the ROK, the “Concepts and Principles” apply from peacetime to war, and will guide operational decision-making, planning, exercises, capability development, and acquisitions.

⁹⁵ 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. In 2007, the two countries decided to dissolve the U.S.-ROK Combined Forces Command in April 2012 and to transition OPCON to the ROK. However, in June 2010, they agreed to postpone the transition timing to December 1, 2015 due to reasons, including North Korea's increased military threat.

⁹⁶ The United States intends to consolidate and relocate the bases of the U.S. Forces Korea which are scattered across the ROK, in order to ensure stable stationing conditions for U.S. Forces Korea and a balanced development of ROK land. The agreement between the United States and the ROK include: (1) an agreement to conduct the relocation to south of the Han River in two stages (June 2003); and (2) the withdrawal of 12,500 of the nearly 37,500 personnel out of the ROK (October 2004). The United States has thus been transforming its posture in accordance with these agreements. However, at the U.S.-ROK Summit Meeting in April 2008, the two countries agreed to maintain the current 28,500 as the appropriate troop level. Since then, the two countries have continued to affirm that maintaining this troop level would be appropriate.

themselves would be maintained, their completion date was revised to “strive for completion in a timely manner.” In May 2016, the ROK Ministry of National Defense announced that “The relocation to Pyeontaek of most of the units including the U.S. Forces Korea command is scheduled to be completed by 2017.” These challenges are perceived to have significant impact on the U.S.-ROK defense postures on the Korean Peninsula. In this regard, relevant developments need to be followed closely.

5 Relations with Other Countries

(1) Relations with China

China and the ROK have made continuous efforts to strengthen their relations. Following the inauguration of the Park Geun-hye government, in June 2013, President Park held a summit meeting with President Xi Jinping during her visit to China, and the two sides announced the Joint Statement on the Korea-China Future Vision. At the working-level, also in June, the Chairman of the ROK Joint Chiefs of Staff visited China for the first time in six years. Further, in December 2013, the first China-ROK Dialogue on Diplomacy and Security was held between the directors-general of the foreign and defense ministries of the two countries, and the two sides agreed to hold the dialogue regularly. In July 2014, President Xi Jinping paid a state visit to the ROK and released a joint statement in which agreement was reached on items, including promoting bilateral dialogue in the areas of politics and security and realizing the denuclearization on the Korean Peninsula. In February 2015, the Minister of National Defense of China visited the ROK for the first time in nine years, and in September 2015, President Park Geun-hye visited China and attended the military parade that was part of the “commemorative event for the 70th anniversary of the victory of the Chinese people’s war of resistance against Japanese aggression.” In this regard, a trend in deepening the bilateral relations was observed among government leaders and senior officials.

Meanwhile, outstanding issues have emerged between China and the ROK. The “East China Sea Air Defense Identification Zone” (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 exclusive economic zone. Against this backdrop, the ROK government announced the expansion of its own

ADIZ in December 2013 and enforced it from the same month. In addition, following North Korea’s nuclear test in January 2016 and launch of a ballistic missile in February 2016, the ROK began formal talks with the United States regarding deployment of THAAD by U.S. Forces Korea, and the deployment was officially decided in July 2016. China has protested that the deployment of THAAD to the ROK would undermine China’s strategic security interests.

(2) Relations with Russia

Military exchanges have been under way between the ROK and Russia in recent years, including exchanges among high-ranking military officials. The two countries have also agreed on cooperation in the areas of military technology, defense industry, and military supplies. At the ROK-Russia Summit in September 2008, they agreed to upgrade the bilateral relations to a “strategic cooperative partnership.” In March 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.

(3) Overseas Activities

Since its dispatch of an engineering unit to Somalia in 1993, the ROK has participated in a number of U.N. peacekeeping operations (PKO). In December 2009, the ROK unveiled plans to substantially expand the number of personnel sent overseas on PKO missions from the current level.⁹⁷ In July 2010, the ROK created the “International Peace Support Force,” a special unit

⁹⁷ The ROK intends to further improve the legal and institutional foundations for the ROK Forces to expand their participation in PKO activities. In December 2009, an act concerning participation in U.N. PKO was enacted.

for overseas dispatch. Since March 2013, the ROK has dispatched troops composed primarily of engineering units to the United Nations Mission in the Republic of South Sudan (UNMISS).

Furthermore, the ROK has dispatched naval vessels to off the coast of Somalia and in the Gulf of Aden where they have been engaged in the protection of ROK-registered ships and maritime security operations (MSO) of the Combined Maritime Forces (CMF). Since January

2011, the ROK has dispatched a ROK special forces unit for the purpose of supporting the training of the United Arab Emirates (UAE) special forces units, joint exercises, and protecting ROK nationals in emergency situations. Additionally, in December 2013, the ROK dispatched a disaster recovery support unit consisting of approximately 500 personnel, including an engineering unit and medical personnel, to the Philippines in the wake of its typhoon disaster.