



Ministry of National Defense
Republic of Korea

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2016 DEFENSE WHITE PAPER



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2016 **DEFENSE**

WHITE PAPER

Message from the Minister of National Defense

Today, the Republic of Korea (ROK) Armed Forces face a security situation unprecedented in its complexity and severity.

North Korea's Kim Jong-un regime conducted two nuclear tests and several test-launches of Musudan and Submarine-Launched Ballistic Missile (SLBM) in 2016 alone, and continues to carry out provocations through various methods such as cyber-attacks.

Amid the anticipation of sweeping changes in the global economy and the security order, as a result of the new U.S. administration taking office, Northeast Asian countries continue to oscillate between cooperation and competition according to their national interests.

Faced with numerous domestic challenges, the Korean people are particularly attentive to the role of the military as the 'guardian of national security.' For the ROK military, it is also an important juncture in the timeline of internal defense reforms to make meaningful progress in tasks such as fostering a modern barracks culture, and improving defense acquisition programs.

In order to effectively meet these various challenges ahead, we have strived to strengthen the fundamentals by maintaining our firm readiness posture and introducing a new barracks culture which combines respect for human rights and rigorous discipline, and at the same time actively engaging in efforts to prepare for the future by building independent defense capabilities and further cementing and expanding the bilateral military alliance between the ROK and the U.S.

The ROK military enjoys the confidence of the ROK public, gained by deterring North Korean aggression by responding firmly and in a principled manner to incidents, such as the planting of landmines in the DMZ and firing of artillery across the border, while eradicating illegal fishing by Chinese fishermen near the mouth of the Han River through the deployment of the civil military police.

In the face of gradually increasing nuclear and missile threats from North Korea, the ROK military is strengthening its deterrence and response capabilities. A three-axis system composed of the Kill Chain, Korea Air and Missile Defense (KAMD) and the Korea Massive Punishment and Retaliation (KMPR) strategy is being put in place. In tandem, the 'Extended Deterrence Strategy Consultation Group (EDSCG)' was established to bolster the execution capability of the ROK-U.S. bilateral Tailored Deterrence Strategy.

We have stepped up the mental training of our troops, who are the very sources of our combat power, and introduced a new military ethos that is centered on combat duties through tactics-focused unit training and scientific training. Moreover, by appropriately updating the legal and institutional framework, modernizing installation facilities, and improving the military health care system, we have laid the groundwork for a new barracks culture that can be appreciated by our servicemembers and approved by the ROK people. This was coupled with defense regulatory reforms to lift or ease access restrictions to safety zones around military installations to reduce the public's inconveniences.

Notwithstanding, more fundamental reforms are still needed in many areas. Going forward, our goal is to resolutely do



away with bureaucratic mentality and mannerism to clear the path toward building strong elite forces that garner the trust of the ROK people and instill fear in our enemies.

In order to provide support in the form of military strength to the government's denuclearization efforts such as sanctions and pressure against the North, in the face of intensifying nuclear and missile threats from North Korea, we are endeavoring to further develop the independent capabilities of our armed forces as a starting point. We will thoroughly prepare for the various types of North Korean aggression, including cyber-attacks.

Moreover, we will expand the ROK-U.S. Alliance beyond its military origin to a comprehensive partnership that encompasses economic and cultural spheres, and develop it into a peace-building alliance contributing to the stability not just of the Korean Peninsula, but also of Northeast Asia and the world as a whole. Meanwhile, we will ensure that the 'conditions-based operational control transition' takes place according to the terms agreed upon by the ROK and the U.S. at an appropriate time and in a stable manner, thereby allowing the ROK military to take initiative in defending the ROK.

Furthermore, we will instill a new barracks culture by transforming the mindset of our servicemembers, creating a transparent and efficient environment for defense acquisition programs, and implement a low-cost, high-efficiency defense management system through logistics reform. We will thus transform our armed forces into an 'advanced elite military,' respectful of the public welfare and trusted by the people of our nation.

Our armed forces have been a sturdy pillar and a reassuring presence for the nation and its people, unshaken and undaunted by challenges in difficult times. In the face of a complex and unstable security situation, the ROK military pledges to remain resolute and unwavering to steadfastly fulfill its duties and maintain a firm readiness posture capable of deterring North Korean aggression and carrying out a swift and forceful retaliation in the event of an aggression.

The purpose of the '2016 Defense White Paper' is to inform the Korean public about these efforts. This publication details changes in military threats from North Korea, including nuclear and missile threats, significant achievements made in national defense over the past four years, and future policy directions. The Appendix contains various defense-related data which can be helpful for an in-depth understanding of national security and defense and research into this field.

It is our hope that the '2016 Defense White Paper' will contribute to enhancing the public understanding and appreciation of the ROK Armed Forces.

December 31, 2016

A handwritten signature in black ink, consisting of stylized Korean characters, reading '한민구' (Han Min-koo).

Han Min-koo

Minister of National Defense, Republic of Korea

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Chapter 1

Changes and Challenges in the Security Environment



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2016 Nuclear Security Summit in Washington, D. C. (April 2016)

Section 1 Global Security Environment

The uncertainty in security is continuing to increase as transnational and non-military threats proliferate on top of the ever existing possibility of regional disputes triggered by traditional conflict factors. Countries around the world are strengthening cooperative international efforts in order to contribute to regional stability and global peace by jointly responding to various security threats, such as nuclear and missile threats, terrorism, cyber-attacks and infectious diseases.

1. Possibility of Regional Disputes Triggered by Traditional Conflict Factors

Traditional conflict factors such as territorial claims and religious and ethnic variances are presenting a continuous threat to security worldwide.

In East Asia where the ‘Asia-Pacific Rebalance Strategy’ by the U.S. and China’s ‘New Type of Major Power Relations’¹⁾ are in conflict, maritime jurisdiction disputes including the South China Sea dispute are ongoing. While China is continuing its efforts to strengthen its maritime jurisdictional status by taking actions such as constructing artificial islands in the South China Sea, the U.S. is strengthening military cooperation with its allies in the region, calling for freedom of navigation. Even after the ruling in July 2016 by the Permanent Court of Arbitration (PCA) at The Hague that Beijing has no legal basis to claim historical rights in the South China Sea, disputes between the parties, including the Philippines, China and the U.S., have not abated.

Nuclear and missile provocations by North Korea is a major factor of disrupting security in the region. In 2016, North Korea carried out two nuclear tests and a string of missile tests including long-range ballistic missiles and submarine-launched ballistic missiles (SLBM), escalating security concerns in the region.

In Europe, the refugee crisis has emerged as a major problem. With thousands of refugees from Syria and North Africa pouring into Europe without receiving the proper refugee status, the fundamental principle of integration pursued by the EU based on the Schengen Agreement²⁾ is facing a serious challenge.

In September 2015, the EU announced measures to respond to the refugee crisis, including

-
- 1) A doctrine proposed by Chinese President Xi Jinping during the U.S.-China bilateral summit held in June 2013, which calls for mutual respect when dealing with issues touching the core national interests of the two countries or important strategic issues.
 - 2) An agreement guaranteeing the free movement of persons between EU member states, signed in 1985, near the town of Schengen, Luxemburg, by five countries – Germany, France, Belgium, Luxembourg and the Netherlands-. The agreement was partially amended in 1990 and was enacted in 1995.

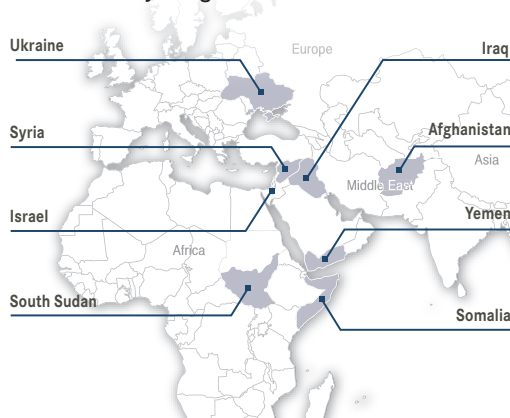
the distribution of 120,000 refugees to twenty-eight countries. During the European Council meeting in October 2016, EU heads of state agreed to provide economic and development aid to Libya, Egypt and other North African nations that are the main countries of provenance for refugees, in a continuing effort to resolve the crisis.

However, following the recent terrorist attacks in France, Belgium and Turkey, the possibility of terrorists entering EU countries disguised as refugees became a reality, forcing even those member states that are willing to take in refugees to tighten border controls. With terrorist threats aggravating the refugee problem, Europe is currently faced with a serious security crisis.

In eastern Ukraine, despite Minsk II,³⁾ the second ceasefire agreement reached in February 2015, military tensions are undiminished, with sporadic skirmishes between government forces and separatist forces still taking place. In September 2016, the 'Trilateral Contact Group,' a group of representatives of Ukraine's government forces, separatist forces and the Russian Federation, convened, and the parties agreed on setting up three 'pilot areas of disengagement' as part of an ongoing effort to alleviate tensions in eastern Ukraine.

In the Middle East, unrest persists due to a combination of factors including the ascendancy of violent extremist groups, sectarian strife and the vacuum of state power and control. In Syria, civil war is ongoing between the Assad regime and the rebel forces. In Iraq, military clashes are continuously occurring between government forces and ISIL⁴⁾ in Mosul and other northern Iraqi cities. As for Iran, after signing the nuclear deal with the five permanent members of the UN Security Council and Germany (P5+1⁵⁾), the country is seeking to improve its relations with western nations. In the Middle East, on the other hand, Iran has had sectarian or political conflicts with some of the Gulf nations. Concerning the Israeli-Palestinian conflict, no visible progress has been achieved in the way of resolving the deep-seated tensions between the two countries.

<Chart 1-1> Major Regions of Conflict



3) Peace agreements entered into between Ukraine, Russia, representatives of the separatist forces and the OSCE (Organization for Security and Cooperation in Europe) in Minsk, Belarus, successively in September 2014 and in February 2015, to halt the war in the Donbass region of Ukraine.

4) Islamic State of Iraq and the Levant.

5) P5+1, abbreviation for the Permanent 5+1, refers to the five permanent members of the UN Security Council (U.S., U.K., France, China and Russia) and Germany.

Political and economic unrest also remains unabated in Africa where countries are rocked by the power struggle between political factions, ethnic tension and terrorism by violent extremist groups. In South Sudan, the clash between federal government forces and opposition forces in July 2016 ended in bloodshed, causing as many as 150 casualties. In countries like Nigeria, Somalia and Mali, acts of terrorism by violent extremist groups such as Boko Haram and Al-Shabaab are recurrent.

2. Transnational and Non-military Threats Compound Security Uncertainties

Terrorist acts by ISIL and other violent extremist groups are spreading fear in the international community. ISIL carried out terrorist attacks in Paris, France, in November 2015, in Jakarta, Indonesia, in January 2016, in Brussel, Belgium, in March 2016 and in Istanbul, Turkey, in June 2016, causing the loss of hundreds of innocent lives. ISIL is recruiting foreign combatants and is expanding its influence beyond the Middle East to Europe, Southeast Asia and Africa through active propaganda.

Rising cyber-attacks constitute another serious type of transnational threat. There have been various cases where computing systems of not only private-sector firms but also government institutions are infiltrated causing serious system failure or system collapse. The hacking of Sony Pictures by North Korea in November 2014 and the Bangladesh Bank cyber-heist in February 2016 are two major examples that alerted the global community to the dangers of cyber-threats. Accelerated efforts are currently underway in countries around the world to develop a response strategy to cyber-threats.

The spread of new types of infectious diseases has emerged as a cause of acute concern to the global community. The Ebola virus epidemic in 2013 was followed in 2015 by the outbreak of MERS which rapidly spread to twenty-six countries, with cases of infection found in seventy-one countries according to the latest report. The UN Security Council and the wider international community have recognized infectious diseases as a major security threat⁶⁾ and are working toward building response capabilities to this new threat.

Global warming and other climate change effects are causing natural disasters and calamities around the globe. The April 2015 Nepal earthquake, April 2016 earthquake in Japan and Hurricane Matthew that struck Haiti in October 2016 clearly show that there is a limitation in the capabilities of the afflicted nations to carry out swift and effective recovery efforts.

⁶⁾ In UN Security Council Resolution 2177, adopted on September 18, 2014, it is stated that “the unprecedented extent of the Ebola outbreak in Africa constitutes a threat to international peace and security.”

3. Bolstering Cooperation with the International Community to Respond to Security Threats

The need for closer international cooperation is being emphasized in order to respond to security threats that are difficult to counter through efforts at the level of individual countries.

Efforts are ongoing in the international community to expand the non-proliferation system, among others, through the Treaty on Non-Proliferation of Nuclear Weapons (NPT). In July 2015, the five permanent members of the UN Security Council and Germany (P5+1) agreed to the Joint Comprehensive Plan of Action (JCPOA) which put a halt on Iran's nuclear program. In March 2016, the UN Security Council unanimously adopted Resolution 2270,⁷⁾ which condemned the fourth nuclear test and the test-launch of a long-range ballistic missile by North Korea, and imposed fresh sanctions on the country. The fifth nuclear test was met by the adoption of Resolution 2321⁸⁾ in November 2016, imposing stronger sanctions, which demonstrated and reaffirmed the resolve and unity of the international community concerning the North Korean nuclear issue.

Efforts toward international cooperation in counter-terrorism are also ongoing in response to ISIL and other violent extremist groups. In November 2015, the UN Security Council unanimously adopted Resolution 2249 condemning terrorist attacks by ISIL and calling upon the member states to take all necessary measures to prevent the extremist group from recruiting foreign combatants and stop the flow of terrorist funds. Governments around the world actively responded to this call. The Global Coalition to Counter ISIL,⁹⁾ founded in 2014, on the initiative of the U.S., has engaged in various activities against ISIL from air strikes in territories occupied by the terrorist organization to relief efforts for refugees in Iraq and Syria. Meanwhile, Saudi Arabia and its regional neighbors formed, in 2015, the 'Islamic Military Alliance to Combat Terrorism.'¹⁰⁾

International cooperation efforts to respond to cyber-threats are also gaining momentum. In

7) Tough sanctions were imposed by this resolution in which the human rights issue in North Korea was mentioned for the first time, including the prohibition of providing nuclear weapon or missile development-related instruction or training to North Korean nationals, blocking the transfer of items, materials and equipment related to the development of weapons of mass destruction, prohibition of trade of items and goods that may be used for production of weapons, mandatory inspection of all cargos destined for or originating from North Korea and the prohibition of public and private financial transactions with North Korea.

8) The new resolution contains significantly fewer escape clauses than the previous resolution, hence eliminating many of the loopholes, and has reduced the permitted scope of trade in coal and other goods for livelihood purposes, while also reducing the number of staff at North Korean diplomatic missions and restricting bank accounts held by North Korean nationals to be able to effectively control the flow of foreign funds into the country. Along with Resolution 2270, this resolution imposes the most robust and comprehensive set of non-military sanctions in the history of the UN.

9) As of 2016, the Global Coalition to Counter ISIL counts sixty-two member countries and international organizations (military operation partners: Saudi Arabia, U.S., France, etc. / armament support providers: Germany, Italy, etc. / humanitarian assistance providers: the ROK, Japan, etc.).

10) Among its thirty-four signatories are fourteen Middle Eastern countries including Saudi Arabia and the UAE, sixteen African countries including Egypt and Morocco and four Asian countries including Malaysia and Bangladesh.

2016, during the fifth meeting of the UN GGE (Group of Governmental Experts) on Information Security, its members analyzed cyber-threats and discussed rules of international law and norms that are applicable to cyber-space. FIRST,¹¹⁾ a private-sector consultative group, is also working to strengthen international cooperation in internet security.

In September 2015, during the second Global Health Security Agenda (GHSA) Senior Officials Meeting, representatives of member states reaffirmed the shared perception that the spread of infectious diseases such as MERS or the Zika virus presents a political, economic, social and security threat to the global community and agreed to carry out government-level cooperation. Efforts are also intensifying to expand international cooperation in disaster relief to ensure swift rescue and recovery operations in the aftermath of large-scale natural disasters. Currently, through the UN Global Disaster Alert and Coordination System (GDACS), real-time information on disasters occurring around the globe and the status of relief operations and relief plans are made available worldwide. Regional multilateral security consultative bodies such as the ASEAN Regional Forum (ARF) and the ASEAN Defense Ministers' Meeting-Plus (ADMM-Plus) are also exploring disaster relief methods and conducting drills.

11) Forum for Incident Response and Security Teams.

Section 2 Security Environment of Northeast Asia

The ‘Asia’s Paradox’ phenomenon, in which the deepening economic interdependence is not matched by a commensurate level of cooperation in the security field, still lingers in Northeast Asia. Northeast Asian countries are building up their military strength in an attempt to achieve military superiority and increase their clout in the region while expanding bilateral and multilateral cooperation with neighbors sharing common interests.

1. The Structure of Cooperation and Conflict among Nations in the Region Persists

Against the backdrop of the U.S.-China relationship resting upon a dual structure of strategic cooperation and competition, Japan and Russia are also bolstering their militaries to increase their clout in the region while the level of instability and uncertainty continues to grow as the alliances and the cooperation and conflict dynamic among the regional nations persist.

To maintain its influence in Northeast Asia in a stable manner, the U.S. has expanded its military presence in the region based on its ‘Asia-Pacific Rebalance Strategy,’ and has tightened cooperation with its allies and partners, while actively participating in regional multilateral consultative bodies.

Despite the reductions in the defense budget, the U.S. is shifting 60% of its naval fleet to the Asia-Pacific and increasing its investment in cutting-edge defense technologies. The U.S.’s stance is to prevent war on the Korean peninsula and maintain peace and stability in the region, based on the ROK-U.S. Alliance and U.S.-Japan Alliance.

China, based on its enhanced national power, has demanded a ‘new type of major power relations’ to the U.S., and in an effort to further lift its status and influence in the region, it is modernizing its military and pursuing a proactive foreign policy. To ensure continuous economic growth and national development, China is likely to seek peace and stability on the Korean peninsula as well as in Northeast Asia, while aggressively responding to issues that are related to its core national interests.

In the case of Japan, proclaiming a ‘proactive pacifism’¹²⁾ based on the U.S.-Japan Alliance, its government is moving toward a more proactive defense policy. In April 2014, Japan set out the ‘Three Principles of Transfer of Defense Equipment and Technology’ which drastically alleviated the restrictions on exporting weapons and military equipment. Also, by reinterpreting the post-war pacifist constitution to allow engagement in collective self-defense, the role of the Self-Defense Forces is expanding beyond the region and towards the international community.

Russia is focusing on restoring its influence in the former Soviet region through such moves as the establishment of the Eurasia Economic Union (EEU) and integration of the Crimean peninsula, while actively intervening in international issues like the Syrian crisis and Iranian nuclear program.

Given how Russia is expanding its Eastern Military District and the Pacific Fleet and showing active interest in international cooperation in the development of Russia’s Far East, the country’s influence in the region is likely to continue to increase going forward.

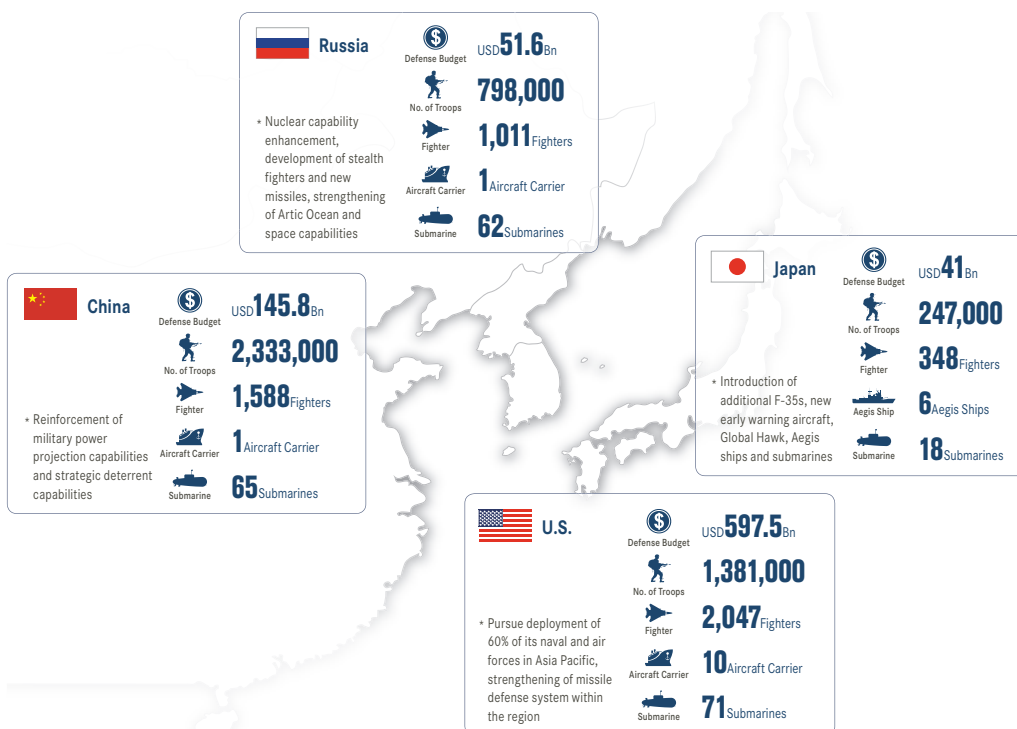
As the ‘Asia’s paradox’ is expected to linger on in Northeast Asia at least for the foreseeable future, how U.S.-China relations develop in the near future may be the determining factor for the security order and stability in the region. The U.S. and China are likely to share benefits from regional stability and peace, while maintaining a relationship of cooperation or competition depending on the issues at stake. However, when their core national interests clash, this could exacerbate the discord between the two countries, affecting the security environment in the region.

2. Expanding Influence of Countries Surrounding the Korean Peninsula and Military Modernization

While the U.S. maintains its military superiority, China, Japan and Russia are vying to build up their own military strength, spurring an arms race especially in naval and air forces. <Chart 1-2> below summarizes the military strength of the four countries surrounding the Korean peninsula:

12) The expression was first used by Japanese Premier Shinzo Abe, during his speech to the UN General Assembly in September 2013, to convey Japan’s desire to make the Self-Defense Forces an active participant of UN peacekeeping operations (PKO) and contribute to global peace and stability.

<Chart 1-2> Military Strengths of the Four Major Powers Surrounding the Korean Peninsula



* Sources: *The Military Balance 2016* (International Institute for Strategic Studies, Feb. 2016.), *Defense of Japan 2016*, etc.

| U.S. | In the 2015 National Security Strategy (NSS)¹³⁾ and National Military Strategy,¹⁴⁾ the U.S. underlined the need to maintain its military superiority in order to enhance the security of its people, allies and partners around the world, stimulate the U.S. economy, protect democracy and other universal values, and safeguard the international order in the face of global challenges.

The U.S. considers Russia's high-handed foreign policy, China's aggressive posturing, North Korea's nuclear and missile provocations, Iran's actions fomenting tensions and crises in the Middle East and ISIL and other terrorist organizations as the five major threats. In order to respond to these security threats, the U.S. is providing strong and consistent leadership, while establishing a framework of cooperation with its allies and partners.

To maintain a stable security order in the Asia-Pacific region, the U.S. is strengthening military cooperation not just with its regional allies such as the ROK, Japan and Australia, but also with countries like the Philippines, India, Singapore and Vietnam.

¹³⁾ The highest-level national security document submitted to the Congress by the executive branch of the U.S. government.

¹⁴⁾ A top-level document prepared by the Chairman of the U.S. Joint Chiefs of Staff outlining the strategic aims of the armed services.

By amending the ‘Guidelines for U.S.-Japan Defense Cooperation’ in April 2015, the U.S. has made it possible for Japan to expand the role of the Japanese Self-Defense Forces. Meanwhile, the U.S. is moving toward closer cooperation with Australia in an effort to counter ISIL in Iraq and Syria. Furthermore, in April 2014, the U.S. and the Philippines signed the Enhanced Defense Cooperation Agreement (EDCA), granting the U.S. armed forces the right to access and use military bases and installations in the Philippines. The U.S. is also widening the scope of security cooperation with India. They released a ‘Joint Strategic Vision’ statement in January 2015 and signed an acquisition and cross-servicing agreement in June 2015, during the U.S.-India summit meeting. In December 2015, by amending the ‘Agreement on Defense Cooperation,’ the U.S. and Singapore agreed to cooperate in the fields of military, policy, strategy and technology, and to jointly respond to non-traditional threats. In May 2016, the U.S. fully lifted the ban on arms sales to Vietnam during President Obama’s visit to the country.

While strengthening its bilateral ties with its allies and partners, the U.S. is also managing its foreign policy in an aggressive manner through the security networking of its allies and partners into trilateral or multilateral structures such as the ROK-U.S.-Japan relationship, the U.S.-Japan-Australia relationship, and the U.S.-Japan-India trilateral relationship.

On the military front, the U.S. is developing a joint warfare concept, as exemplified by the Joint Concept for Access and Maneuver in the Global Commons (JAM-GC), which reflects new operational requirements, and is deploying cutting-edge sea and air-based war-fighting capabilities to the Asia-Pacific, including stealth fighters like the F-22 and the F-35, the maritime patrol and reconnaissance aircraft P-8 Poseidon, Virginia-class nuclear submarines, unmanned undersea vehicles, and strategic bombers.

The Army plans to reduce the size of its troops from the current 500,000 to 460,000 by September 2017, while the Navy is planning to deploy 60% of its forces to the Asia-Pacific region by increasing the number of vessels operating in the region as it continues to expand its fleet size until 2020.

The Air Force is also set to procure next-generation fighter aircrafts, aerial refueling tankers, transport aircraft and long-range stealth bombers. It is also improving the ground attack and electronic combat capabilities of the F-22 and is developing the LRS-B¹⁵⁾ which will replace the B-2 and B-52.

The U.S. military is also bolstering efforts to strengthen its cyber-security posture. In December 2014, the U.S. Congress passed the Cybersecurity Enhancement Act, and in 2016, the CTIIC¹⁶⁾ was established.

15) Long Range Strike Bomber.

16) Cyber Threat Intelligence Integration Center

The CNAP,¹⁷⁾ unveiled in February 2016, stresses the need for cooperation in the cybersecurity field with allies and partners, including the ROK and Japan, calling cyber-threats serious threats to national security.

Although there may be changes in the U.S. foreign policy and military strategy under the new Trump administration, set to take office in January 2017, the importance of Asia, as part of the country's global strategy, including the ROK-U.S. Alliance and the U.S.-Japan Alliance, is expected to remain undiminished.

| Japan | In July 2014, under the mantra of 'proactive pacifism,' Japan changed its constitutional interpretation of the use of the right to collective self-defense and is expanding the role of the Self-Defense Forces. By revising the 'Guidelines for U.S.-Japan Defense Cooperation' in April 2015 and amending national security laws and regulations in September of the same year, Japan created a legal basis to be able to use force by activating the right to collective self-defense even when it is determined that there is a threat to the existence of Japan even if there is no direct attack on Japan. When a situation is deemed to importantly affect Japan, it is now possible for Japan to provide rear-area support such as fueling aircraft preparing to take off, without geographical limitations, and supplying ammunition to not only U.S. forces but forces of any other nation. The range of activities permitted to the Self-Defense Forces has been extended to include rescue operations for Japanese nationals residing overseas, protection of U.S. troops and other foreign troops in action with the JSDF, and escort missions in the context of peacekeeping operations (PKO).

Under the new concept of a 'Dynamic Joint Defense Force' adopted in the 2013 by 'Defense Program Outline' and 'Mid-term Defense Program,' Japan is expanding the fighting capabilities of the ground, air and maritime Self-Defense Forces.

The Japan Ground Self-Defense Force (JGSDF) deployed a coast observation unit near the Senkaku/Diaoyudao Islands for the surveillance of this area and is currently preparing to create an amphibious rapid deployment brigade to carry out amphibious operations. A centralized ground command¹⁸⁾ is set to be established for the rapid and flexible deployment of divisions and brigades. To swiftly respond to new developments in its territorial islands, some of the divisions and brigades are scheduled to be converted to mobile divisions and brigades.

The Japan Maritime Self-Defense Force (JMSDF) is planning to expand its fleets of destroyers including Izumo-class helicopter destroyers and submarines by 2023. Meanwhile, to enhance Japan's defense capabilities against ballistic missiles, the number of AEGIS destroyers will be increased from the current six to eight.

17) Cybersecurity National Action Plan

18) An operation command unit equivalent to the ROK's Ground Operation Command.

In April 2014, the Japan Air Self-Defense Force (JASDF) set up the Airborne Early Warning Group, equipped with the E-2C, in Okinawa to strengthen the surveillance of Japan's territorial islands. In January 2016, the 9th Air Wing was established by adding an additional F-15 fighter squadron. The JASDF is currently integrating the latest airborne early warning and control systems, long-endurance unmanned air vehicles (UAVs), vertical takeoff and landing aircraft, aerial refueling tankers and transport aircraft into force structures.

To prepare for cyber warfare, the Cyber Defense Unit, integrating the cyber warfare functions of all three branches of Self-Defense Forces, including ground, air and maritime forces, was created in March 2014, within the Ministry of Defense. This was followed by the establishment of the Cybersecurity Strategy Headquarters and the National Center for Incident Readiness and Strategy for Cybersecurity in January 2015. Japan is also enhancing its capacity for monitoring ballistic missiles, using the reconnaissance satellite, and is improving its space surveillance system for stable use of the space.

Moreover, the Japan Self-Defense Forces are participating in counter-piracy and international emergency relief efforts. They have dispatched two destroyers, two P-3C units and support troops to Somalia and the Gulf of Aden. Navy ships, transport aircraft and disaster relief medical teams were also dispatched in December 2014 to support the search for the missing Indonesian plane, and in April 2015 to assist the recovery effort in the aftermath of the Nepal earthquake.

| China | China has set the goal of creating a 'moderately prosperous society' (*xiaokang-shehui*)¹⁹⁾ by 2020, the 100th anniversary of the founding of the Chinese Communist Party, and becoming a prosperous, democratic, harmonious and strong socialist country by 2049, the 100th anniversary of the People's Republic of China.

In the 2015 Chinese defense white paper, 'China's Military Strategy,' it emphasized that "China's dream is that of a strong nation, and the military's dream is that of a strong military," and made clear its resolve for a China-led regionalism in East Asia by declaring a new security concept whereby 'the people of Asia uphold the security of Asia.'²⁰⁾ Under the slogan of 'winning local wars under the conditions of informatization,' China is innovating its military strategy and optimizing its military structure. Following the announcement by President Xi Jinping during the 2015 Victory Day parade, commemorating the 70th anniversary of the end of World War II, to reduce the manpower of the People's Liberation Army by 300,000 troops,

19) "Xiaokangshehui" is a stage of social development in China that is supposed to follow the stage of 'wenbao,' meaning warmth and fullness. While 'wenbao' is about meeting the basic needs of citizens, 'xiaokangsheshui' refers to a middle-class society in which its members are able to enjoy culture and leisure.

20) This concept was proposed by Chinese President Xi Jinping during his keynote speech at the fourth Conference on Interaction and Confidence-building Measures in Asia (CICA) Summit in May 2014.

a sweeping military reshuffle occurred, with an anti-corruption campaign currently underway to restore discipline in the ranks.

The People's Liberation Army Ground Force (PLAGF) set up a Ground Forces Command in 2015 to enhance capabilities in precision operations, multi-dimensional operations, full-spectrum operations, multi-function operations and sustainment operations.

The People's Liberation Army Navy (PLAN) has shifted its operational mode to maritime operations that combine the defense of coastal waters and guarding offshore areas, and is working to improve its capabilities for strategic deterrence, counterattacks, maritime mobile operations, joint maritime operations and integrated defense operations. The Chinese Navy is deploying four nuclear ballistic missile submarines loaded with JL missiles²¹⁾ with a minimum range of 8,000 km and 870 surface and underwater vessels. It also has field deployed the Liaoning, an aircraft carrier with a flight deck capable of carrying some twenty J-15 fighter jets, and is currently developing several aircraft carriers.

The People's Liberation Army Air Force (PLAAF) is building an aerospace defense force system in an effort to take its attack, defense, air, and aerospace capabilities to a new level, with a particular focus on strengthening its capacity for strategic early warning, air strikes, air and missile defense, air transportation operations, strategic lifting and integrated support. The PLAAF currently possesses close to 3,000 military aircraft, with Y-20 strategic lifters operationally fielded. After the recent test flight of the J-20 prototype the J-20, the actual J-31 was also unveiled.

The Rocket Force, formerly the Second Artillery Corps (strategic missile unit), is deploying some 500 ballistic missiles, including the DF-31A with a maximum range of 8,000km and the DF-5B with a range of 15,000km. Moreover, the DF-41, a new intercontinental ballistic missile (ICBM), is said to be under development.

China is also heavily investing in satellite communications, intelligence, surveillance and reconnaissance, satellite-based navigation, meteorology, and space exploration in pursuit of becoming a space powerhouse. In 2016, China successfully completed the launches of the carrier rockets, Long March/Changzheng 7 and 5. The launch of the Chang'e 4, the lunar exploration spacecraft, is scheduled for 2018.

| Russia | According to the fourth 2014 'Military Doctrine' and the revised 2015 'National Security Strategy,' Russia's current strategy is centered on 'proactive defense through strong military power,' and is executing a bold defense reform initiative focused on reorganizing the military structure and capacity, raising the salaries of servicemen, and overhauling the military housing system.

21) Ju Lang.

The Russian Army disbanded division-size units and partially staffed units and established eighty-five brigades. In the western region, three new divisions were set up to prepare for the increasing threat posed by NATO²²⁾ forces deployed along the western border area.

In 2014, the Russian Navy established the Arctic Joint Strategic Command with the Russian Northern Fleet at its core. In 2015, the Navy conducted an amphibious exercise in the Arctic islands for the first time, as Russia seeks to strengthen the effective control of the Arctic region.

The Russian Aerospace Forces were founded in 2015 by merging the Air Force and the Space Force to swiftly and effectively respond to potential aerospace attacks.

In 2016, the Strategic Missile Troops conducted sixteen rounds of ICBM test fire exercises to enhance its combat readiness posture and field adaptability capabilities. Also, Russia is currently developing a 'railway-based combat rocket system' with the goal of completing the project by 2020.

In December 2015, the Eastern Military District located in Khabarovsk fielded advanced SU-35 fighters for the first time. Weapons modernization is also in progress with the field deployment of the Alexander Nevsky, the nuclear ballistic missile submarine, the Iskander-M ballistic missile system, and the S-400 surface-to-air missile system.

22) North Atlantic Treaty Organization.

Section 3 North Korean Situation and Military Threats

Since Kim Jong-un's assumption of power, North Korea has focused on consolidating the new leader's monolithic rule and stabilizing the regime. The era of Kim Jong-un was officially proclaimed at the Seventh Congress of the Workers' Party of Korea. To gain the upper hand in inter-Korean relations, North Korea has resorted to dual-track tactics of provocation and dialogue, while engaging in diplomacy in an attempt to avoid sanctions and reduce its isolation from the international community. The continuing provocations by the North, in the form of developing WMDs such as nuclear capabilities and ballistic missiles, expanding its conventional forces, carrying out armed provocations in contact areas, conducting cyber-attacks, and small-sized drone infiltrations, are serious threats to regional stability in Northeast Asia as well as global peace.

1. North Korean Situation

| Internal Situation | In April 2012, after the completion of power transfer, Kim Jong-un consolidated his rule through a vast reshuffle of the party, state, and military leadership. By purging, demoting, or rehabilitating the senior-level party, state, and military officials, he sought to stabilize his regime and strengthen his one-man rule.

The Seventh Congress of the Workers' Party of Korea held in May 2016 marked the official beginning of the Kim Jong-un era and made clear its intention not to abandon the nuclear program. The ruling party was reorganized around Kim Jong-un, and members of his close entourage were appointed to key positions to cement his monolithic rule and strengthen the cohesion of the regime. Kim Jong-un received the title of "Chairman of the Workers' party", a new top leadership position, and the Secretariat was dissolved to be replaced by a new organization called the Executive Policy Bureau, with Park Bong-ju and Choi Ryong-hae added as new standing members of the bureau.

During the Fourth Plenary Session of the 13th Supreme People's Assembly, the State Affairs Commission was newly established to replace the National Defense Commission with Kim Jong-un appointed as its first Chairman, in another move to consolidate his one-man rule.



7th Congress of the Workers' Party of Korea (May 2016)

In 2016, promoting its status as a nuclear state, North Korea continued with its provocations by conducting the fourth nuclear test, which was followed by test launches of a long-range missile, submarine-launched ballistic missile, and short and medium-range missiles. Just eight months after the fourth nuclear test in September of the same year, on the anniversary of the founding of the communist regime, North Korea pushed ahead with the fifth nuclear test. North Korea is bolstering its combat readiness posture by expanding its arsenal of 300mm multiple rocket launchers and anti-tank guided weapons while also continuing with test flights of drones, GPS signal jamming, and cyber-attacks.

To steer out of its chronic economic crises, North Korea has been implementing the so-called “New Economic Management Improvement Measures”²³⁾ since Kim Jong-un’s assumption of power. While the stated goal is to improve the living standards of North Korean people under the policy of combining economic growth with the development of nuclear weapons and the “People First” policy, no real progress has been seen in this area as vast financial resources were expended in large-scale projects such as the nuclear program and the Masik Pass Ski Resort that are aimed at the self-aggrandizement of the Kim Jong-un regime. The living conditions of the North Korean people have in fact worsened due to the frequent labor mobilization for campaigns like the “70-day battle and the 200-day battle.”²⁴⁾ Amid the heightening sanctions and pressure from the international community, defection of senior-level officials has increased since the mass-defection of China-based North Korean restaurant workers in April 2016. In an attempt to stymie the wave of defection, North Korea is currently taking measures to strengthen the internal cohesion of the regime by stepping up the ideological education and surveillance by public security forces.

| Inter-Korean Policy | To gain the upper hand in inter-Korean relations and force changes to the ROK government’s North Korea policy, North Korea is employing the dual-track tactics of provocation and dialogue.

On February 12, 2013, North Korea carried out its third nuclear test and on April 8 temporarily suspended the operation of the Kaesong Industrial Complex. However, observing how the hard-line approach failed to yield the expected benefits due to the widespread anti-North Korea sentiment in the international community and Seoul’s consistent North Korea policy, North Korea agreed to resume the operation of the Kaesong Complex on August 14, after seven rounds of working-level talks. On August 23, during an inter-Korean working-level Red Cross meeting, the North agreed to reunions of the separated families. However, on September

23) A new economic policy implemented since 2012, whose core concept is to increase the autonomy and incentives of individual economic actors such as cooperative farms and cooperative factories.

24) A speed-battle slogan used as a rallying cry for the mobilization of civilian labor.

21, just four days before the scheduled date of the reunion, North Korea abruptly cancelled the event through a statement by the Committee for Peaceful Reunification of the Fatherland, citing political reasons.

The dual-track tactics of provocation and dialogue continued in 2014. In his New Year's Address, Kim Jong-un spoke of the need to create the mood for improving inter-Korean relations, and the National Defense Commission released a "Critical Proposal to the South,"²⁵⁾ in an all-out peace offensive. However, during the family reunions at Geumgangsan Mountain between February 20 and February 25, North Korea fired rockets and ballistic missiles. In March and April, remains of small UAVs, presumed to have been made in North Korea, were discovered in Paju, Gyeonggi-do, Paengnyeongdo Island, and Samcheok, Gangwon-do. On March 31 and April 29, North Korea fired massive artillery rounds near the Northern Limit Line (NLL)²⁶⁾ and on May 22, fired at the ROK navy vessels on patrol in the West Sea. On October 4, Hwang Pyong-so, the chief of the General Political Bureau, Choi Ryong-hae, and Kim Yang-gon, three top leaders of the North Korean regime attended the closing ceremony of the Asian Games in Incheon and agreed to resume high-level meetings between the two Koreas. However, on October 7, only three days after this agreement, the North initiated a skirmish near the NLL in the West Sea, and on October 10, the North Korean military fired at the balloons launched by a ROK civilian organization. Using this incident as a pretext, Pyongyang requested an emergency meeting, and an inter-Korean meeting between the military authorities was held on October 15.

North Korea raised issues such as the prevention of maritime conflicts in the West Sea and the launching of propaganda leaflet balloons by civilian groups. The ROK officials demanded that the North respect the NLL and acknowledge its responsibility in the sinking of the ROKS Cheonan and the shelling of Yeonpyeongdo Island while proposing to set up a hotline between the two militaries. The meeting ended without result, with the North Korean side claiming that Seoul rejected its proposals.

In 2015, North Korea continued its provocations all the while engaging in a deceptive charm offensive by professing the desire to improve inter-Korean relations in its New Year's Address and in a statement by the National Defense Commission. Starting in February, North Korea launched short-range missiles and in May, conducted an SLBM ejection test. On August 4, North Korea's provocation using a wooden-box land mine broke out in the DMZ,²⁷⁾ and on August 20, the North Korean military carried out artillery provocations, ratcheting up

25) The proposal includes suspension of mutual criticism and hostile military actions, and denuclearization.

26) The Northern Limit Line is the *de facto* maritime border between the two Koreas, which has been in effect since its establishment on August 30, 1953. The waters south of the NLL are under the ROK jurisdiction.

27) Demilitarized Zone.

tensions. Later, with the “August 25 Agreement,”²⁸⁾ reached through high-level meetings between the two Koreas to de-escalate the tensions, there were some signs of a positive shift in inter-Korean relations. However, the high-level talks concluded without any breakthroughs due to North Korea’s strong insistence on the resumption of the suspended Geumgangsans Mountain tour.

On January 6, 2016, when North Korea conducted the fourth nuclear test, the ROK government responded by expressing its resolve to impose tough sanctions on North Korea and by resuming loudspeaker propaganda broadcasts towards the North. North Korea responded in kind by broadcasting propaganda towards the South via loudspeakers and by dropping leaflets. As a result, inter-Korean relations were further aggravated. On February 7, even as discussions on North Korean sanctions were underway in the international community, North Korea launched a long-range missile.



A long-range missile launch (December 2016)

On February 10, the ROK government announced the complete suspension of operations at the Kaesong Industrial Complex, and the North Korean authorities closed down the complex on the following day, exacerbating the tension.

Incensed by the unilateral announcement of North Korean sanctions by the ROK government as well as the Key Resolve (KR) exercise²⁹⁾/Foal Eagle (FE) training,³⁰⁾ North Korea threatened to attack the Blue House and government organizations of the South through a “critical statement” on February 23 by the Supreme Command of the Korean People’s Army and a “critical report” on March 23 by the Committee for the Peaceful Reunification of the Fatherland. Pyongyang escalated tensions by releasing images of a nuclear warhead³¹⁾ and a KN-08 intercontinental ballistic missile and showed off its various delivery vehicles by test-launching an SLBM and short and medium-range missiles.

While continuing its deceptive offensive for dialogue such as proposing inter-Korean military talks during the Seventh Congress of the Workers’ Party of Korea, North Korea

28) On August 20, 2015, in the wake of the wooden-box mine provocation in the DMZ of August, 4, North Korea shelled across the border two separate times, to which the ROK military returned fire. The two countries then held a 43-hour marathon talks in a bid to end the standoff and reached a six-point agreement on easing military tensions, resuming separated family reunions, and inter-Korean dialogue and future talks, whose details were made known through a joint press release on August 25.

29) Key Resolve is a ROK-U.S. combined military exercise conducted annually to practice procedures for rapid, safe deployment of US augmentation forces during contingency on the Korean Peninsula.

30) Foal Eagle is a combined field training annually conducted by the ROK armed forces and the U.S. Forces, Korea to prepare for a rear infiltration by the enemy.

31) The so-called “nuclear warhead” shown in the photos released by North Korea appears to be a standard implosive fission device. However, limited information is available to determine whether it is a mockup or an actual warhead.

attempted to divide the ROK public opinion using its dual-track tactics of provocation and dialogue, carrying out rhetorical threats on the decision by the ROK government to deploy the THAAD system on one hand and showing off its missile strike capabilities on the other. Starting in late October, North Korea engaged in a war of public opinion and cyber-psychological warfare as part of its scheme to instigate social unrest in the South.

Moving forward, North Korea is likely to continue with its rhetorical threats and escalation of military tensions while shifting the blame for the worsening of inter-Korean relations to the South. At the same time, North Korea will attempt to resume civilian exchanges and cooperation with ROK, strengthening its unified front tactics.

| Foreign Policy | Despite criticism and sanctions from the international community, Kim Jong-un is intent on ensuring the survival of his regime by further developing North Korea's nuclear capabilities and gaining recognition as a nuclear state.

The UN Security Council adopted Resolutions 2087³²⁾ and 2094³³⁾ against North Korea following its long-range missile launch in December 2012 and the third nuclear test in February 2013, respectively. After the fourth nuclear test conducted in January 2016, the UN Security Council unanimously adopted Resolution 2270 which contains significantly ““tougher and more effective”” measures against North Korea. Following the fifth nuclear test in September 2016, the UN Security Council further strengthened the sanctions against the North Korean regime through Resolution 2321, which, among others, placed a cap on coal exports and added new items to the list of banned export items.

After the U.S.-North Korea “Lead Day Deal”³⁴⁾ of 2012 was breached, all official channels of dialogue were cut off between the two countries.

Without responding to the U.S.’ call for dialogue on denuclearization and an improvement of its human rights situation, North Korea carried out nuclear tests and missile test launches in 2013 and 2016. In 2016, while issuing threats of preemptive attack and churning out diatribes against the U.S., the Kim Jong-un regime demanded that Washington end the hostile policy against North Korea. Since July 2016, North Korea has been pushing for a structure where ROK, U.S., and Japan on one side are in conflict with North Korea, China, and Russia on the other side by bandwagoning on the opposition by China and Russia to the USFK decision to

32) The resolution condemns the launch of a long-range missile by North Korea, strengthens the North Korean sanctions and warns of further significant measures (per the trigger clause) in the event of a future provocation, while also expanding the scope of the existing sanctions.

33) The resolution, expressing grave concerns on North Korea's nuclear tests, bans the import and export of materials deemed for use in the development of nuclear weapons and ballistic missiles and places restrictions on the movement of financial assets.

34) During the third high-level talks held in Beijing between February 23 and 24, 2010, North Korea agreed to a series of denuclearization measures, including a moratorium on nuclear and missile tests, suspension of its Yongbyon Nuclear Complex and the return of IAEA (International Atomic Energy Agency) inspectors, in exchange for 240,000 tons of “nutritional assistance” from the U.S.

deploy THAAD. North Korea also launched a Rodong missile into Japan's exclusive economic zone (EEZ), while pinning the blame for the heightened tensions on the Korean Peninsula on the U.S.

North Korea-China relations that took a turn for the worse following the third nuclear test showed signs of thawing in 2015 when a standing member of the Chinese Communist Party's Political Bureau traveled to Pyongyang to attend the celebration of the 70th anniversary of the founding of the Workers' Party of Korea. However, the relationship between the two countries cooled off again after the fourth and fifth nuclear tests and a long-range missile launch by North Korea. North Korea is currently trying to improve its relationship with China by taking advantage of China's objection to the deployment of THAAD and holding bilateral talks with China during the ASEAN Regional Forum. North Korea is also avoiding UN sanctions by maintaining its trade with China.

By declaring the "Year of Friendship between North Korea and Russia" in May 2015, North Korea has expanded its exchanges and cooperation with Russia, and the two nations agreed to strengthen their economic cooperation during the celebration of the 67th anniversary of the Agreement between North Korea and Russia on Economic and Cultural Exchanges in March 2016. Although Russia has indicated the intention to join the sanctions against North Korea and implement the UN resolutions, it is allowing the Najin-Hasan project³⁵⁾ as an exception considering the impact of the draconian sanctions against North Korea on its own economy. Also, North Korea is looking to expand exchanges with Russia in many areas including politics, economy, culture, and academics.

No real improvement has occurred in North Korea-Japan relations despite the hint of a thaw in the wake of the Stockholm Agreement³⁶⁾ in May 2014. In 2016, after the fourth nuclear test by North Korea, Japan stepped up its unilateral sanctions against North Korea. North Korea retaliated by halting the re-investigation into Japanese abductees while strongly criticizing Japan's past history and conservative swing.

Meanwhile, Pyongyang is vehemently protesting the UN resolution on the human rights situation in North Korea. In March 2016, North Korean Foreign Minister Ri Su-yong stated that the country "will no longer attend meetings that attacks North Korea's human rights issues and will not accept resolutions of any kind." North Korea continues to claim that its possession of nuclear weapons is due to Washington's hostile policy and nuclear threats.

While protesting that UN Security Council Resolution 2270 of March 2016 is unfair, North

35) This project began in 2000 when Russian President Putin and North Korean leader Kim Jong-il agreed to jointly develop the Najin-Hasan railway and connect it with the Trans-Siberian Railway (TSR) and the Trans-Korean Railway (TKT)—the 54km railway between Hasan near Russia's far-eastern border— and includes modernization of the port of Najin and logistics projects in North Korea.

36) During the director-level talks between the two countries' foreign ministries held in Stockholm, Sweden on May 26, 2014, North Korea agreed to launch a new inquiry into Japanese abductees and other Japanese nationals residing in its territory in exchange for partial easing of sanctions imposed by Japan.

Korea focused on trade with China per the clause for exceptions for livelihood purposes, all the while smuggling and continuing to accumulate hard currency. With new tough sanctions imposed based on UN Security Council Resolution 2321, which was adopted in November 2016, North Korea is striving to find a way around them.

North Korea is likely to carry out additional nuclear tests to earn recognition as a nuclear state from the U.S. and continue with the demand for a peace treaty between the two. At the same time, North Korea will try to resume high-level contacts with China in the hopes of repairing the relationship with China and easing sanctions imposed on them while also attempting to break out of international isolation by stepping up diplomacy focused on friendly countries.

2. Military Strategy and Military Command Structure

| Military Strategy | In 1962, in accordance with the principle of “self-reliance in defense”³⁷⁾ embedded in the *Juche* ideology, North Korea adopted four military guidelines and has since continued to build up military strength under its *Songun*(military first) Politics.

While maintaining a military strategy centered on guerrilla warfare, hybrid warfare and blitzkrieg, North Korea is also exploring various tactics. After his succession to power, Kim Jong-un strengthened North Korea’s system for conducting not only local provocations, but also a total war. To secure military strength superior to that of ROK, North Korea is heavily investing in asymmetric capabilities such as nuclear weapons and WMD,³⁸⁾ missiles, long-range artillery, underwater capabilities, special force units and cyber-units while continuously enhancing the performance of its conventional weapons. Notably, North Korea has developed a 6,800-strong unit of trained cyberwarfare specialists who are launching various forms of cyber-attacks.

During contingency, North Korean forces are likely to resort to hybrid and guerilla warfare and blitzkrieg. There is a strong possibility that they will launch massive surprise attacks on limited targets, mainly using their asymmetric capabilities.

| Military Command Structure | Kim Jong-un, who is concurrently serving as the Chairman of the State Affairs Commission, Supreme Commander of the Korean People’s Army, and the Chairman of his party’s Central Military Commission, maintains practical

³⁷⁾ Article 60 of the North Korean Constitution stipulates, “The State shall implement the line of self-reliant defence, the import of which is to train the army into a cadre army, modernize the army, arm the entire populace, and fortify the country on the basis of equipping the army and the people politically and ideologically.”

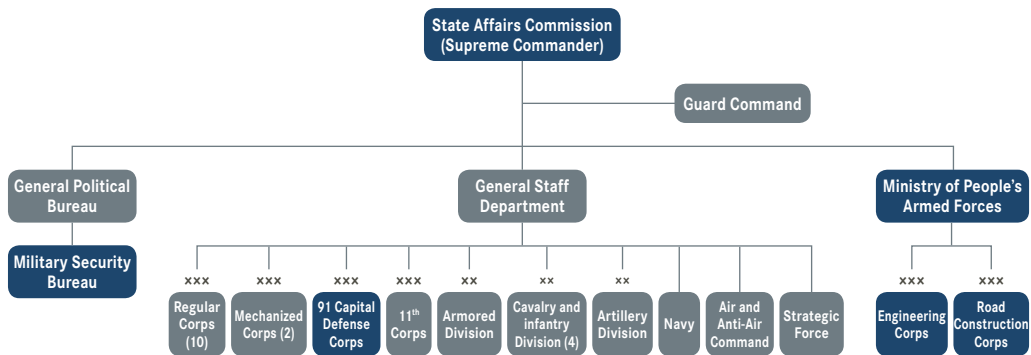
³⁸⁾ Weapons of Mass Destruction.

command and control over the North Korean military.

The State Affairs Commission oversees the affairs of the North Korean state and decides upon policies that are of importance to the country. The Supreme Commander of the Korean People's Army has under his command the General Political Bureau, General Staff Department and the Ministry of People's Armed Forces. The General Political Bureau supervises party organs within the military and is responsible for matters related to political ideology. The General Staff Department has the command authority over military operations while the Ministry of People's Armed Forces, which externally represents the North Korean military, is responsible for military diplomacy and administers military logistics, procurement and finance.

The Central Military Commission, pursuant to the Charter of the Workers' Party of Korea, deliberates and decides upon measures necessary for implementing the party's military policy and guidelines and provides guidance in overall defense affairs at the party level. The military command structure of North Korea is visualized in <Chart 1-3> below:

<Chart 1-3> North Korea's Military Command Structure



* State Affairs Commission: Former National Defense Commission, Military Security Bureau: Former Military Security Command, 91 Capital Defense Corps: Former Pyongyang Defense Command, xxx: Corps, xx: Division

3. Military Capabilities

| Ground Force | The Ground Force is composed of 10 regular corps, two mechanized corps, 91 Capital Defense Corps, 11th Corps (known as “Storm Corps”), one armored division and four mechanized infantry divisions under the control of the General Staff Department. Following the re-organization of the seventh and eighth General Bureaus of the Ministry of People's Security into the Engineering Corps and Road Construction Corps, the Ground Force was placed under the control of the Ministry of People's Armed Forces.

The General Staff Department, recently restructured by adding the Command Information

Bureau among others, has implemented an integrated tactical command and control system³⁹⁾ to strengthen C4I (Command, Control, Communication, Computer and Intelligence) capabilities, while building up cyberwarfare capabilities through the expansion of trained manpower and organizational reinforcement.

With about 70% of the Ground Force positioned south of the Pyongyang-Wonsan line, North Korea maintains a readiness posture capable of carrying out a surprise attack on the South at any time. The forward-deployed 170mm self-propelled guns and 240mm MRLs, for instance, provide North Korea with the means for massive, concentrated surprise fire on the greater Seoul metropolitan area. The recently-developed 300mm MRLs are capable of reaching the middle part of ROK. North Korea has reinforced its artillery forces, including the 122mm towed MRLs, in coastal areas north of the NLL in the West Sea and frontline areas. Mechanized units, warships, aircraft and special force units have been deployed forward in a move to strengthen its provocation and attack capability in the five Northwest Islands and surrounding regions and in frontline areas.

North Korea is also improving its operational capabilities through equipment modernization, with its armored and mechanized units now being equipped with Chonma-ho and Songun-ho main battle tanks.

North Korea's special operations force is currently estimated to be 200,000-strong. The special operations units are strategic, operational and tactical units composed of diverse elements such as the 11th Corps, light infantry divisions and brigades and sniper brigades of the Forward Corps, sniper brigades belonging to the Navy, and the Air and Anti-Air Force. In wartime, special operations units are likely to infiltrate both the forward and rear areas through underground tunnels and the DMZ or with the help of other means of infiltration, such as submarines, landing craft air cushions (LCACs), AN-2 aircraft and helicopters, to conduct hybrid operations by attacking vital units, facilities and installations, assassinating key figures, and disrupting rear areas. The key assets of the North Korean Ground Force are as shown in <Chart 1-4> below:

<Chart 1-4> Key Assets of the North Korean Ground Force

				
Tanks Approx. 4,300	Armored Vehicles Approx. 2,500	Cannons Approx. 8,600	MRLs Approx. 5,500	300mm MRLs Approx. 10

³⁹⁾ A system supporting decision-making and strike orders by the commander (GS-2000).

| Navy | The Navy, organized under the Naval Command, is composed of two fleet commands for the East and West Seas, respectively, 13 naval squadrons and two maritime sniper brigades.

Although the North Korean Navy possesses the capability to carry out a surprise attack at any time with 60% of its forces positioned south of the Pyongyang-Wonsan line, its capacity for deep-sea operations are limited due to the small, high-speed vessels that make up much of the fleet.

Surface forces are mostly composed of small, high-speed vessels such as guided missile boats, torpedo boats, small patrol craft and fire support patrol craft. Their mission is to support the advancement of the Ground Force in connection with ground operations, while also carrying out coastal defense. More recently, the Navy has added new mid- to large-size vessels and various types of VSV⁴⁰⁾ to enhance its surface strike capability.

<Chart 1-5> Key Assets of the North Korean Navy



| Air Force | The Air Force Command of North Korea has been renamed the Air and Anti-Air Force Command. Five flight divisions, one tactical transport brigade and two air force sniper brigades and air defense units are under its command.

The North Korean Air Force, with around 1,630 aircraft, has positioned its forces in four different zones. Close to 40% of fighter aircraft are forward positioned south of the Pyongyang-Wonsan line. With the recent forward deployment of additional bases, the North Korean Air Force has achieved a posture capable of delivering swift strikes with minimum preparations.

Through the enhancement of SAMs⁴¹⁾ and improvement of the performance of weapons systems including long-range missiles, the North Korean Air Force has attained the capacity to carry out surprise attacks against ROK’s surveillance and reconnaissance assets, command and control facilities, anti-air assets and industrial facilities without deploying additional aircraft. Its AN-2 aircraft and helicopters can transport large-scale special operations forces

40) Very Slender Vessel.


41) Surface-to-Air Missile.

for infiltration. The Air Force has also been producing and deploying UAVs and light aircraft for reconnaissance and strikes.

The North Korean air defense system, built around the Air and Anti-Air Force Command, integrates aircraft, surface-to-air missiles, anti-aircraft artillery and radar air defense units. SA-2⁴²⁾ and SA-5⁴³⁾ surface-to-air missiles are deployed to forward areas in eastern and western regions, while SA-2 and SA-3⁴⁴⁾ surface-to-air missiles and anti-aircraft artilleries are concentrated around the Pyongyang area to form a layered air defense system.

A large number of radar air defense units such as the ground controlled interception bases and the early warning bases are spread out across North Korea, allowing the regime to scan the entire Korean peninsula. To increase the detection accuracy of radar air defense units and reduce the response time, North Korea is currently setting up an automated air defense command and control system. The key assets of the North Korean Air Force are shown in <Chart 1-6> below:

<Chart 1-6> Key Assets of the North Korean Air Force

				
Fighter Aircraft Approx. 810	Surveillance and Control Aircraft Approx. 30	Transport Aircraft (including AN-2s) Approx. 330	Training Aircraft Approx. 170	Helicopters (of all three services) Approx. 290

| Strategic Force | The Strategic Rocket Command has been renamed the Strategic Force and has been promoted to a military command at the same level as the Ground Force, Navy, and Air and Anti-Air Force Command. The Strategic Force is likely to perform similar functions as China's Rocket Force and Russia's Strategic Missile Troops. Future reinforcement efforts are expected, with a particular focus on asymmetric forces.

| Reserve Forces | The Reserve Forces of North Korea are composed of the Reserve Military Training Unit, which is subject to combat mobilization, the workplace-based or regional Worker-Peasant Red Guards, the Red Youth Guard, which is a military organization in high schools, and paramilitary units. Eligible ages of mobilization are from 14 to 60 years of age, which corresponds to 7,620,000 or roughly 30% of the population.

⁴²⁾ A guided missile system for striking mid- to high-altitude targets, with a maximum range of 56km.

⁴³⁾ A guided missile system for striking high-altitude targets, with a maximum range of 250km and developed to complement the SA-2.

⁴⁴⁾ A guided missile system for striking medium-range, low to mid-altitude targets, with a maximum range of 25km.

The Reserve Military Training Unit, which can augment the combat capability of the regular armed forces during contingency, is 600,000-strong. The unit maintains a level of training comparable to that of the regular armed forces. The status of the reserve forces in North Korea is shown in <Chart 1-7>:

<Chart 1-7> North Korean Reserve Forces

Category	Strength	Remark
Total	Approx. 7.62 million	
Reserve Military Training Unit	Approx. 0.6 million	Equivalent to ROK's Mobilization Reserve Forces (Men between 17-50 and women between 17-30)
Worker-Peasant Red Guards	Approx. 5.7 million	Equivalent to ROK's Homeland Reserve Forces (Men between 17-60 and women between 17-30 who are not in Reserve Military Training Unit)
Red Youth Guard	Approx. 1 million	Advanced middle school military organization (boys and girls between 14-16)
Paramilitary units	Approx. 0.32 million	The Guard Command, Logistics Mobilization Guidance Bureau, etc.

| Strategic Weapons | To bolster its strategic attack capabilities, North Korea has continuously developed nuclear weapons, ballistic missiles, and chemical, biological, and radiological weapons. North Korea first gained access to nuclear materials in the 1980s after operating the 5MWe reactor located in the Yongbyon Nuclear Complex by reprocessing spent fuel rods. Later in October 2006, May 2009, February 2013, and January and September 2016, North Korea conducted five nuclear tests. North Korea is estimated to possess around 50kg of weapons-grade plutonium obtained from several rounds of reprocessing spent fuel rods. North Korea is also believed to have made significant headway in its HEU⁴⁵⁾ program. Its ability to miniaturize nuclear weapons also seems to have reached a considerable level.

After beginning ballistic missile developments in the 1970s, North Korea produced and fielded Scud-B and C with ranges of 300km and 500km, respectively, in the mid-1980s. In the late 1990s, North Korea fielded the Nodong missile with a range of 1,300km, and later the Scud-ER, which extends the range of scud missiles. In 2007, North Korea fielded the Musudan missile with a minimum range of 3,000km without a test-launch. Through these successive additions to its missile inventory, North Korea has gained direct strike capabilities against ROK and the surrounding countries of the Korean Peninsula.

As part of an effort to develop a long-range ballistic missile capable of threatening the con-

45) Highly Enriched Uranium.

continental U.S., North Korea test-launched a Taepodong-1 in 1998, and Taepodong-2 missiles in 2006, 2009, April and December 2012, and February 2016. Starting in 2012, North Korea released footages showing the ICBM-class KN-08 on three occasions and KN-14 on one occasion.

To flaunt its various delivery capabilities, North Korea released images of various tests conducted since March 2016, including a simulated test of its warhead re-entry technology, solid-fuel rocket engine test, and a ground test of an ICBM engine.

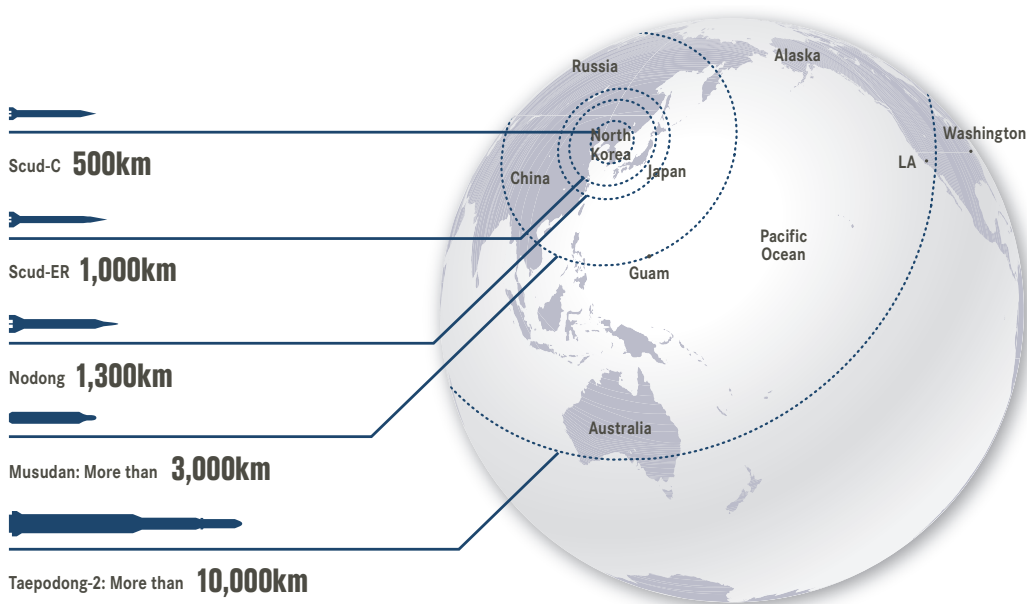
Between April and October 2016, North Korea conducted eight test-launches of Musudan missiles, of which only one was estimated to have been partially successful.



SLMB launch (April 2016)

North Korea is continuing with its development of SLBMs, releasing footages of test launches four times between May 2015 and August 2016. North Korea is expected to heavily invest in SLBMs at the regime level to prepare for additional test-launches and build submarine operation capabilities. The types of ballistic missiles currently in North Korea's inventory are shown in <Chart 1-8>.

<Chart 1-8> Types of North Korean Ballistic Missiles



North Korea began producing chemical weapons in the 1980s and currently holds a stockpile of an estimated 2,500 to 5,000 tons of chemical weapons. Sources indicate that North Korea is capable of cultivating and producing various types of biological agents such as anthrax, smallpox, and pest on its own.

| War Sustainment Capability | Despite the ongoing economic crisis, North Korea is channeling resources into developing the defense industry as a top priority in order to maintain its war sustainment capability. North Korea has an estimated 300 armament factories, and civilian factories designated for transition to armament production are capable of shifting to a wartime mobilization mode in a short period of time.

With most of its war supplies stored in tunnel storage facilities, North Korea is assessed to possess a stockpile of war supplies that can last one to three months. However, without external assistance, North Korea's ability to sustain a prolonged war is likely to be limited.

Chapter 2

National Security Strategy and Defense Policy



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2016 Year-End the ROK Armed Forces Senior Leaders Seminar (November 2016)

Section 1 National Security Strategy

The Park administration is implementing its national security strategy to realize a “New Era of Hope” in the security sector. The government intends to push ahead with its “Trust-Building Process on the Korean Peninsula” on the foundations of a robust defense strategy and trust-based diplomatic relations, thereby protecting national sovereignty and the safety of the Korean people.

1. National Vision and Security Objectives

The Park administration has set forth its national vision of a “New Era of Hope” where the Republic of Korea’s development and the happiness of individual citizens form a virtuous cycle. Under this overarching vision, the administration has selected “economic revival,” “welfare of the people,” “cultural enrichment” and “establishment of a foundation for peaceful reunification” as its four principles. “Establishment of a foundation for peaceful reunification” is a priority encompassing national security issues. To this end, three national security objectives have been established: “Safeguarding the territory and sovereignty of ROK and ensuring the safety of the people,” “establishing sustainable peace on the Korean Peninsula and preparing for an era of reunification,” and “promoting cooperation in Northeast Asia and contributing to world peace and prosperity.”

First, the government will concentrate its efforts on protecting the nation’s territory and sovereignty as well as the people’s lives and properties from multifaceted and complex threats. They include armed provocations by North Korea as well as current, future, and transnational threats.

Second, the government seeks to realize sustainable peace on the Korean Peninsula and prepare for the era of reunification by building trust between the two Koreas. Above all, the



2016 New Year Briefings to the President by Government Agencies dealing with Foreign Affairs and National Defense (January 2016)

government will make the utmost effort to closely cooperate with neighboring countries and the international community to pave the way for North Korea to abandon its nuclear program and make the right choice. It is also committed to achieving the normalization and stable development of inter-Korean relations and aims to bring reunification to the Korean Peninsula by building up resolve, support and readiness for reunification both domestically and internationally.

Third, the ROK government seeks to bolster national security by promoting cooperation in Northeast Asia and contributing to world peace and prosperity. Initially it seeks to build trust among the various nations in the Northeast Asian region through dialogue and cooperation. Moreover, it is pursuing to expand on the synergy generated by coexistence and reconciliation. The government will encourage cooperation among Eurasian nations and advance toward peace, stability and shared prosperity in the wider region that encompasses Asia and Europe.

2. Tenets of the National Security Strategy

To successfully carry out the task of establishing a foundation for peaceful reunification, a set of three strategies to be implemented in the fields of defense, reunification, and foreign affairs have been selected: “Establishing a robust security posture,” “pursuing a trust-building process on the Korean Peninsula,” and “promoting trust-based diplomacy.”

First, strong national security is the basis for the very existence of a nation, improved inter-Korean relations, and enduring peace on the Korean Peninsula. The ROK government will also further strengthen a thorough response posture to deter provocations by North Korea and resolutely retaliate to any provocation by North Korea. The government will also be equipped with the capability to effectively take measures against North Korean nuclear and missile threats while further reinforcing the ROK-U.S. combined readiness posture to achieve sufficient deterrence capabilities against Pyongyang. Any transnational threats such as terrorism, cyber-attacks, pandemics, and national disasters, as well as current and future threats, will be addressed proactively and preemptively. In order to meet these security challenges, the government will expand security cooperation by strengthening bilateral and multilateral relations through the development of the ROK-U.S. Alliance and strategic cooperation with neighboring countries.

Second, through the trust-building process on the Korean peninsula, the ROK government intends to induce changes in North Korea, normalize and promote the development of inter-Korean relations as well as achieve sustainable peace. The government will cooperate with regional neighbors to resolve the North Korean nuclear issue, bring peace to the Korean Peninsula and shape conditions for reunification. By adopting a reunification policy supported

by the Korean people, the Government plans to bridge the divide on the North Korea and reunification issues and for such a national consensus to build momentum towards establishing a reunified Korea.

Third, the ROK government seeks to make full use of its trust-based diplomacy to resolve the so-called “Asia’s Paradox” in which the level of political and security cooperation lags far behind the deepening economic interdependency. The Northeast Asia Peace and Cooperation Initiative (NAPCI) is a key policy to realize trust-based diplomacy in Northeast Asia. Through this initiative, the ROK government seeks to establish a custom of multilateral cooperation in the region starting with those issues that countries can easily engage in cooperation, such as climate change, terrorism, drug trafficking and the environment. Building on this feat, ROK will aim to broaden the scope of cooperation to include more controversial issues. The government will seek to build greater consensus on the need for change in North Korea, and further strengthen cooperation with the international community to induce North Korea to renounce its nuclear development and promote human rights. In the process, the government will further garner support from the international community for reunification. As a middle power, the government will also strive to earn greater trust from the international community and promote an attractive national image by fully committing to its responsibilities and role in the international arena.

Section 2 National Defense Policy

To achieve the national defense vision of “Advanced Elite Military,” the Ministry of National Defense (MND) has selected and is implementing seven Key Tenets of the National Defense Policy. In tandem, the Ministry is maintaining a robust military readiness posture which is the fundamental duty of the military. Furthermore, it is strengthening the fundamentals by establishing a barracks culture that the people understand and the servicemembers appreciate. Moreover, while bolstering its future-oriented defense capacity based on a robust ROK-U.S. Combined Defense System, the ministry is additionally creating a strategic environment favorable towards promoting our national interest and preparing for reunification.

1. National Defense Objectives

The National Defense Objectives are: “protecting the nation from external military threats and attack,” “supporting a peaceful reunification of the Korean peninsula,” and “contributing to regional stability and world peace.” These objectives are discussed below in detail:

First, the constant military threats and provocations from North Korea are the primary security threats the ROK faces today. In particular, North Korea’s nuclear weapons including ballistic missiles, weapons of mass destruction (WMD), cyber-attacks and terrorism pose major threats to our national security. As long as these threats persist, the North Korean regime and its military will remain an enemy insofar as they are the agents carrying out these threats. At the same time as contending with these threats, the ROK will also continuously expand its capacity to respond to potential threats against its peace and security as well as transnational and non-military threats.

Second, the ROK will achieve sustainable peace that is oblivious to the fear of nuclear proliferation, and make preparations for a blissful era of reunification that both Koreas can look forward to.

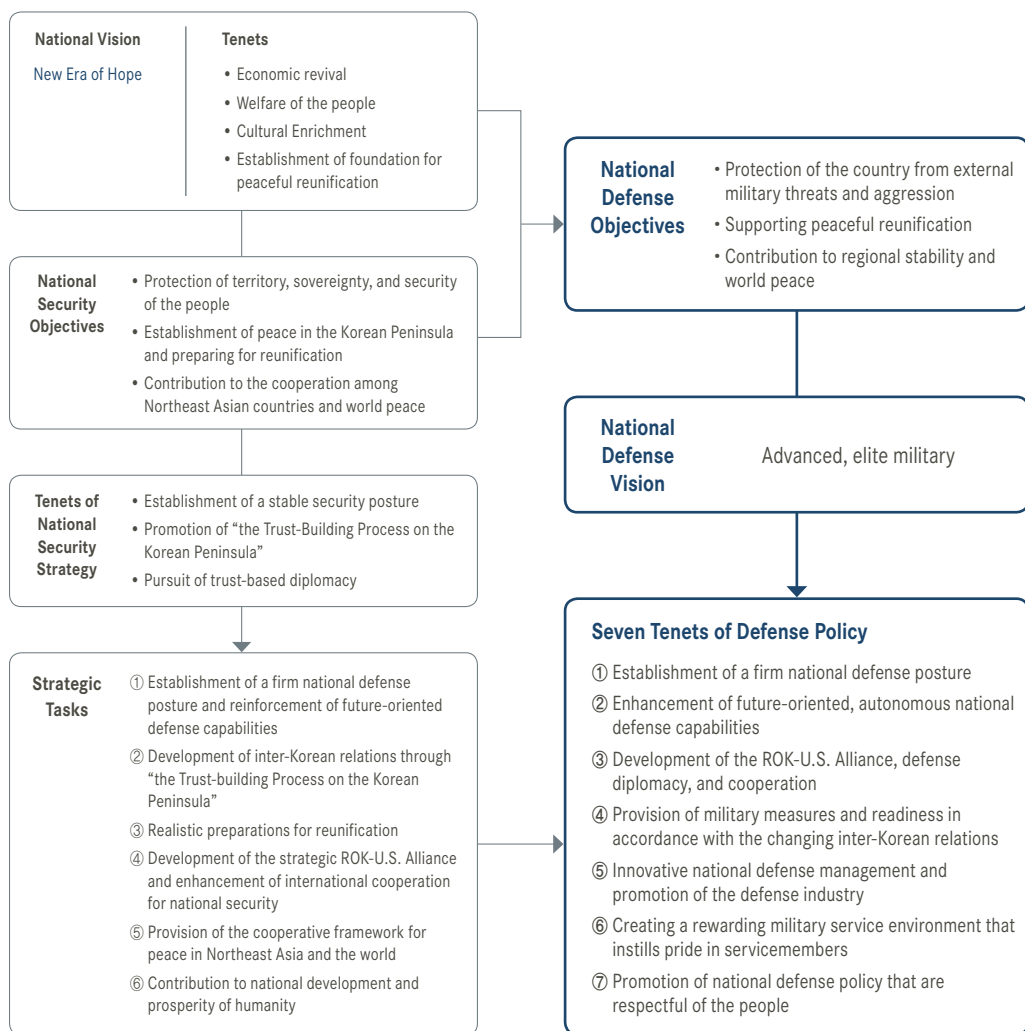
Third, within the framework of the ROK-U.S. Alliance, the ROK will promote common interests with regional neighbors and increase strategic cooperation to mitigate anxiety over security in the region. Moreover, by strengthening bilateral and multilateral cooperation with countries around the world that share the ROK strategic interests, the ROK will strive to broaden the scope of security cooperation.

2. National Defense Vision and Tenets of the National Defense Policy

| National Defense Vision | MND has set forth a new national defense vision for the ROK military: “Advanced Elite Military.” The term “advanced” refers to a military for the people in which all troops have upright values and mindsets; a military whose barracks culture is trusted by the people; and a military of the people that serves as an example to the world through a creative and efficient defense operations system with superior defense capabilities. The term “elite” refers to a military in which strong and brave servicemembers are equipped with optimal weapons and equipments, while also being trained in real combat-like situations so as to display the highest level of unified combat power. The combined term “advanced elite military” means a military that is elite, advanced and has the posture and capability to fight against the enemy and win.

| Tenets of the National Defense Policy | The ROK military has identified and is pursuing the following seven key Tenets of the National Defense Policy as its consistent policy direction toward achieving the National Defense Vision: (1) Establishing a robust defense posture; (2) Strengthening future-oriented and autonomous defense capabilities; (3) Developing the ROK-U.S. military alliance and reinforcing defense diplomacy and cooperation; (4) Providing military measures and readiness in accordance with the changing inter-Korean relations; (5) Bolstering innovative defense management and promoting the defense industry; (6) Creating a proud and rewarding environment for military servicemembers; and (7) Implementing defense policies that are respectful of the people. The National Security Strategy and the National Defense Policy are summarized in <Chart 2-1>.

<Chart 2-1> The National Security Strategy and the National Defense Policy



3. Objectives and Four Priorities in Defense Management

The ROK Armed Forces has set "Defense with a Robust Foundation, Defense Preparing for the Future" as the goal of national defense agenda in consideration of its National Defense Vision, Tenets of the National Defense Policy and the drastically changing security environment. "Defense with a Robust Foundation" refers to the concept of making working conditions for all servicemembers safe and enjoyable while maintaining strict discipline; creating an environment for national defense where the servicemembers can focus on their combat missions; and building a full-spectrum national defense posture to fight enemies through realistic training and combat preparation.

“Defense Preparing for the Future” refers to fostering an “Advanced Elite Military” that can contribute greatly to regional stability and world peace by shaping a strategic environment favorable of the ROK to take the initiative in defending and unifying the Korean Peninsula.

To achieve such a goal, the ROK Armed Forces has specified and is actively pursuing four priorities in defense management: “Building a robust national defense posture,” “creating a fulfilling and advanced service environment,” “strengthening future-oriented defense capabilities,” as well as “developing the ROK-U.S. Alliance and strengthening external defense cooperation.”

| Building a Robust National Defense Posture | The ultimate and unchanging goal of the ROK military is to ‘fight the enemy and win.’ On the foundation of the ROK-U.S. combined defense system, the ROK military maintains a strong readiness posture and is developing an integrated civilian-government-military-police defense system based on the concept of total war. In the face of nuclear missile and WMD threats, it is building up the ROK-U.S. Tailored Deterrence Strategy¹⁾ and its counter-missile operational posture, while also establishing the Korean triad system²⁾ for effective deterrence and decisive retaliation against North Korea’s provocation.

The ROK military will strengthen response capabilities in the face of potential threats while proactively and preemptively responding to any transnational as well as non-military threats. It is introducing and prioritizing training based on real-world combat scenarios to create a combat-mission-oriented military that can fight the enemy and win. Furthermore, the military is enhancing the servicemembers’ mentality so they can cultivate the traits of a warrior and patriot while forming a clear understanding of the enemy, commendable character, and civic consciousness.

| Creating a Fulfilling and Advanced Service Environment | To become the “Advanced Elite Military” trusted and respected by the Korean people, the ROK military is shaping a new culture that can be appreciated and approved by the people and the servicemembers. It is creating conditions to allow the servicemembers to pursue personal development so that military service may be a productive experience for them. It is also improving the standard of basic necessities provided to servicemembers such as food, clothing and shelter. Moreover, it is modernizing barracks facilities and broadening support toward military families. The ROK Armed Forces will reform the military health care policy to ensure that servicemembers injured while serving the country are continuously and comprehensively treated by the government and to create a health care system that focuses on preventive measures.

¹⁾ Deterrence strategy of the ROK-U.S. Alliance optimized for the Korean Peninsula against North Korea’s nuclear and WMD threats

²⁾ 1: Kill Chain, 2: Korea Air and Missile Defense (KAMD), 3: Korea Massive Punishment and Retaliation (KMPR)

The military is implementing various policies to improve the level of welfare such as ensuring stable living conditions for long-term servicemembers and improving child care facilities for the families of servicemembers.

| Strengthening Future-oriented Defense Capabilities | The ROK military is expanding its defense capabilities in order to proactively respond to North Korea's various provocations and to the full spectrum of transnational and non-military threats. It will bring its defense reform plan up to date to re-align it with the changing environment, overhaul the troop structure in favor of elite personnel, and put in place an advanced, high-efficiency defense management system. Furthermore, it plans to integrate creativity and cutting-edge civilian Information and Communication Technology (ICT) capabilities into the process of operating and building the ROK Armed Forces to introduce innovations and bring about progress across all areas of defense.

For the advancement of defense science and technology, the ROK Armed Forces will increase investment in defense research and development and promote technology cooperation between the military and civilian sectors by transferring technologies to the civilian sector and applying civilian technologies in the defense field. By managing defense projects in a systematic manner, the military will ensure the normal pursuit of defense programs and boost their competitiveness.

| Developing the ROK-U.S. Alliance and Strengthening External Defense Cooperation | The ROK and the United States are building a full-spectrum combined defense system to maintain peace and stability on the Korean Peninsula above all else. By holding defense dialogues both on a regular and ad-hoc basis, the two countries will closely coordinate policies, effectively manage issues of importance to the ROK-U.S. Alliance, ensure conditions necessary for the deployment of rotational forces, and continuously carry out combined exercises and training.

The transition of the wartime operational control will proceed in a stable manner by periodically evaluating whether the required conditions are met and the two countries will broaden the level and scope of cooperation to include space and cyber cooperation, as well as international peacekeeping activities, humanitarian aid, and disaster relief.

The ROK military will improve strategic communications with neighboring countries by installing hotlines between defense and military authorities and holding frequent senior-level strategic dialogues while engaging in international peacekeeping operations more actively in order to contribute to world peace and stability.

Chapter 3

Establishing a Robust Defense Posture



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ROK Army Reconnaissance Patrol Training in the DMZ

Section 1 Military Organization and Forces

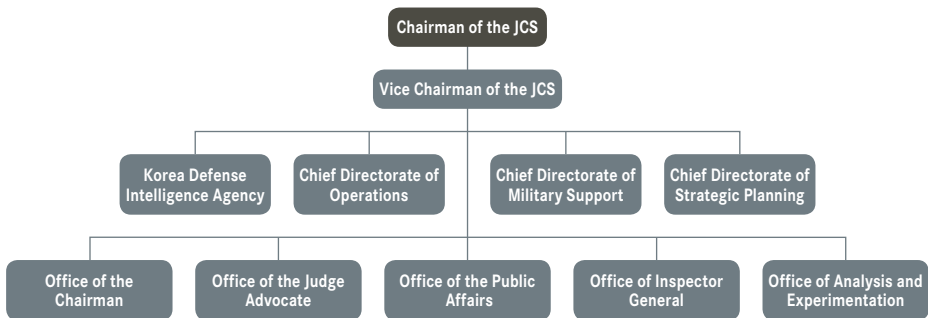
In the face of increasing North Korean threats, the ROK military is enhancing its command and unit structure to maximize its capacity for joint and combined operations in diverse future operational environments and is continuously expanding its strength, while increasing the efficiency of its current capabilities, to be able to respond to any type of provocations.

1. Organization of the Joint Chiefs of Staff

The Joint Chiefs of Staff (JCS) conducts joint and combined operations through operational command and supervision over combat operation units and through command and supervision over joint units.

The JCS was initially set up and operated within MND as a non-permanent organization¹⁾ until it was officially established in 1963 under its current name. The JCS presently operates through one vice chairman, four chief directorates and five offices under the chairman of the JCS. The organization of the JCS is as shown in <Chart 3-1> below:

<Chart 3-1> Key Organizations of the Joint Chiefs of Staff



The JCS is developing its task performance system toward close mutual support and integration among the Army, Navy and Air Force by strengthening their jointness. In preparation

1) 'Combined Chiefs of Staff Council in 1948', 'Joint Chief of Staff Council' in 1954 and 'Combined Chief of Staff Bureau' in 1961.



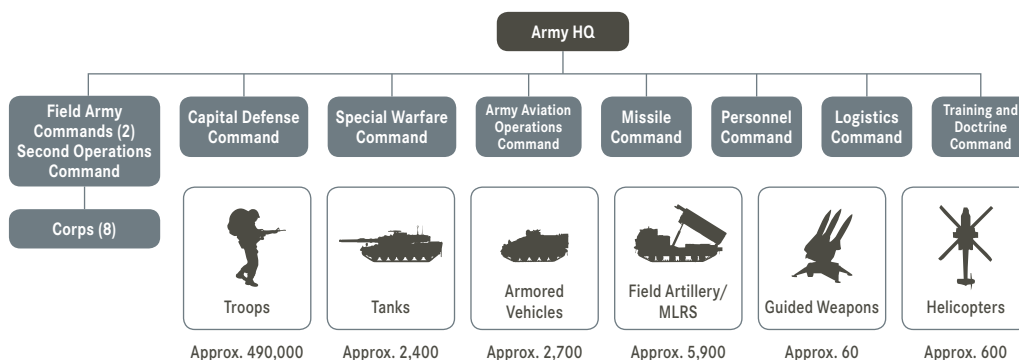
ROK Armed Forces

for the anticipated wartime operational control (OPCON) transition, the JCS is enhancing its organizational structure and functions of the ROK military and its capabilities through a systematic approach to strengthen the warfighting capabilities led by the ROK forces.

2. Organization and Key Assets of the Three Services

| Army | The Army consists of the Army Headquarters, two Field Army Commands, the Second Operations Command, Capital Defense Command, Special Warfare Command, Army Aviation Operations Command, Missile Command and support units. The key organizations and assets of the Army are detailed in <Chart 3-2>:

<Chart 3-2> Key Organizations and Forces of the Army



* Tanks, armored vehicles, field artillery/MLRS include the forces of the Marine Corps

The two Field Army Commands are responsible for defense in their respective forward areas, up to the Military Demarcation Line (MDL). The mission of the Second Operations Command is to maintain the stability of the rear area and war sustaining capabilities. Meanwhile, the Capital Defense Command is responsible for the protection of key facilities and urban infrastructure of Seoul to help the city maintain its functions as the capital. Other commands are responsible for special operations, aviation operations, personnel and logistics support and education and training.

The Army, while maximizing its current capabilities through their efficient deployment, is also continuously reinforcing its intelligence, surveillance and reconnaissance (ISR) capabil-

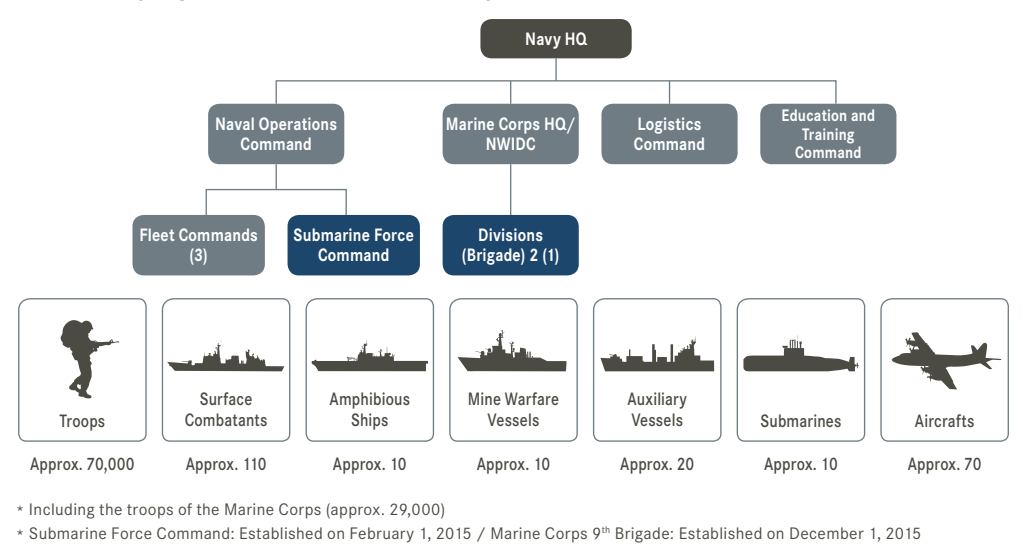


Army

ities including reconnaissance UAVs capable of carrying out integrated offensive, full-battle-field operations, as well as maneuver and strike forces such as K2 battle tanks, K-21 infantry fighting vehicles and attack helicopters, and counter-fire operations capabilities including the multiple launch rocket system.²⁾

| **Navy** | The Navy, organized under the Navy Headquarters, is composed of the Naval Operations Command, Marine Corps Headquarters, Northwest Islands Defense Command (NWIDC), and various support units. The key organizations and assets of the Navy are shown in <Chart 3-3>:

<Chart 3-3> Key Organizations and Forces of the Navy



The Naval Operations Command has command authority over naval operations as a whole, conducting anti-surface operations,³⁾ anti-submarine operations,⁴⁾ mine and counter-mine operations⁵⁾ and amphibious operations. The Fleet Commands conduct defensive missions by deploying surface combatants such as destroyers, frigates, patrol vessels and patrol killer mediums (PKMs). Meanwhile, the Submarine Headquarters carries out operations involving the use of submarines. The Marine Corps Headquarters is in charge of amphibious operations,

2) A launch system in which multiple rockets are mounted in a rectangular or cylindrical-shaped launchers, delivering massive and concentrated fire power.
 3) Operations aimed at securing or maintaining maritime control and neutralizing or destroying the enemy's maritime surface forces, using surface combat warships, submarines and aircrafts.
 4) Operations to neutralize or destroy submarines to guarantee the free use of maritime space.
 5) Operations consisting in stopping or neutralizing the enemy's naval forces with the help of mines or repulsing the enemy's attempts at using mines.

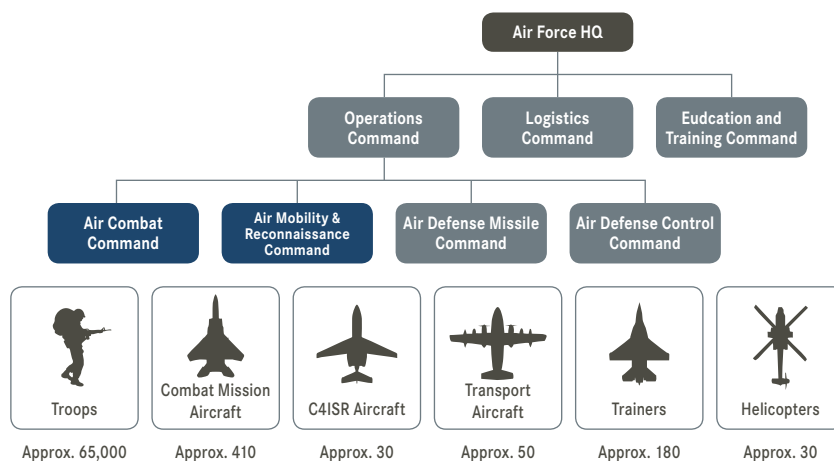


while also being responsible for defense operations in its assigned areas and coastal islands. The Marine Corps Headquarters operates the Quick Task Forces and the Quick Reaction Forces. The Northwest Islands Defense Command is responsible for security and defense missions of the northwestern islands and also provides logistics support and training support to the Navy.

To be able to effectively respond to the various types of surface, underwater and airborne threats, the Navy plans to acquire next-generation submarines (KSS-III), Aegis-class destroyers, destroyers (KDDX), frigates (FFX), patrol killer mediums, surface patrol aircraft and maritime operations helicopters for integrated deployment. The Marine Corps will be developed into a force capable of carrying out a diverse range of missions including multi-dimensional high-speed amphibious operations and the defense of strategic islands.

| Air Force | The Air Force is composed of the Air Force Headquarters, Air Force Operations Command and various operations and support units. The key organizations and assets of the Air Force are as shown in <Chart 3-4>:

<Chart 3-4> Key Organizations and Forces of the Air Force



* Air Combat Command: Established on January 1, 2016, Air Mobility & Reconnaissance Command: Established on January 1, 2016

The Air Force Operations Command (AFOC) has command authority over overall air operations, carrying out counter-air operations (CAOs),⁶⁾ air interdiction (AI) operations⁷⁾ and close

6) Operations aimed at neutralizing or destroying the enemy's aerospace forces and anti-air system to gain air superiority.

7) Operations aimed at restricting the enemy's ability to augment or replenish forces and mobility before its potential military capabilities can be effectively used against the ROK Army and Navy, by stopping, disrupting or destroying them.



Air Force

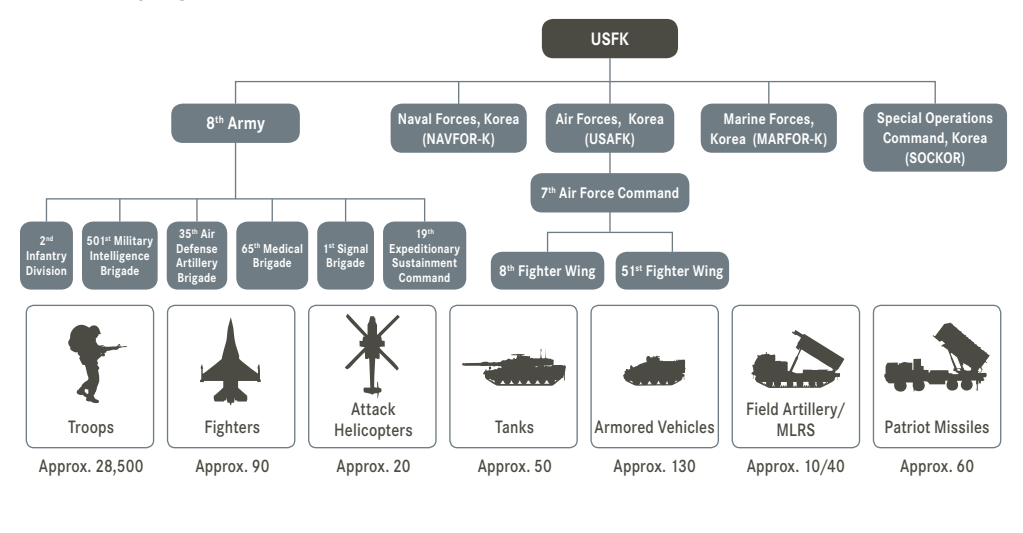
air support (CAS) operations.⁸⁾ As part of a move toward a more centralized control of air operations, the AFOC has recently re-organized its Southern and Northern Combat Commands into the Air Combat Command and the Air Mobility and Reconnaissance Command, respectively. The Air Defense Missile Command carries out full-spectrum air defense missions against airborne attacks by enemy aircraft and missile attacks. The Air Defense and Control Command is responsible for air control within the Korean peninsula theater, air surveillance, aircraft identification and air operation support.

The Air Force will integrate next-generation F-X fighters and Korean indigenous fighters (KF-X) into force structures to achieve decisive air superiority, while introducing large-size transport aircraft and aerial refueling tankers to strengthen its long-range operational capabilities.

3. United States Forces Korea and Augmentation Forces

The United States Forces Korea (USFK) is composed of the Eighth U.S Army (EUSA), U.S. Naval Forces, Korea (NAVFOR-K), U.S. Air Forces, Korea (USAFK), U.S. Marine Forces, Korea (MARFOR-K), and the Special Operations Command, Korea (SOCKOR). The Commander of USFK concurrently serves as the Commander of the United Nations Command and the Commander of the ROK-U.S. Combined Forces Command. The key organizations and assets are as shown in <Chart 3-5>:

<Chart 3-5> Key Organizations and Forces of the USFK



8) Operations consisting in attacking hostile targets in close proximity to friendly forces to support surface attack, counter-attack or defense operations and to thereby help achieve the military goal and guarantee the survival of troops.

The U.S. augmentation forces to be deployed to the Korean peninsula in the event of a war to support the defense of the ROK, consist of 690,000 ground, naval and air force troops, 160 vessels and 2,000 aircrafts. Pursuant to Article 2 of the Mutual Defense Treaty between the ROK and the U.S., the augmentation forces are to be increased progressively based on how the crisis situation develops, in two different modes; namely, the Flexible Deterrence Options (FDO)⁹⁾ and the Time Phased Force Deployment Data (TPFDD).¹⁰⁾ The FDO are enacted during the initial stages of a conflict when the level of crisis rises in the Korean peninsula, to deter war and mitigate the crisis situation by deploying designated forces. If the attempt to deter war fails, combat and support forces, as pre-planned under the TPFDD, will be deployed to execute the ROK-U.S. combined operation plans.

9) A series of political, economic, diplomatic and military options that are part of the crisis action procedures laid out in the CFC Crisis Action Standard Operating Procedures, which have to be promptly executed to deter war.

10) Force deployment list and data of the U.S. Augmentation Forces for the execution of combined operational plans.

Section 2 Maintaining a Readiness Posture against Local Provocations

For early detection of signs of military provocations from North Korea, the ROK military operates the ROK-U.S. combined intelligence assets. To prepare for diverse infiltration attempts and provocations, combined crisis management exercises have been ramped up, with the system for surveillance, decision-making, and strike being optimized on land, sea, and airspace across enemy contact areas.

1. Developing Early Warning and Crisis Management Systems

| Establishing Surveillance and Early Warning Capabilities | For early detection of signs of North Korean provocations and the speedy transmission of detected data, the ROK military operates the ROK-U.S. combined information assets which include signal and imagery assets and satellites, while also periodically holding enemy provocation threat evaluation meetings. The ROK and the U.S. jointly evaluate the various signs of provocations, including the launch of long-range missiles and nuclear tests. All available intelligence gathered by domestic and foreign organizations are comprehensively analyzed and shared with appropriate operational units in a timely manner.

To be able to detect the earliest signs of North Korean provocations, the ROK military plans to continuously expand its independent surveillance capabilities by acquiring mid- to high-altitude reconnaissance UAVs, multi-purpose satellites and military reconnaissance satellites.

| Developing the Crisis Management System | To effectively respond to various threats of provocations from North Korea, the ROK military is firmly establishing its crisis management system and the ROK-U.S. Joint Response System. Security manuals were revised in accordance with the newly-amended ‘National Crisis Management Fundamental Guidelines’ (May 2015), with operational plans and operating procedures also updated and improved appropriately. Meanwhile, through the National Security Strategy Game, attended by high-level decision-makers of relevant government organizations, efforts are underway to develop concrete response strategies for different types of crisis situations, while also exploring government-wide response strategies. Crisis management exercises are held on a regular basis, and the level of crisis management and related task performance capabilities are also period-

ically evaluated and monitored, maintaining an around-the-clock crisis management posture.

To be able to firmly respond to any type of provocation from North Korea, the ROK military is also continuously upgrading the ROK-U.S. combined crisis management system by strengthening combined crisis management exercises and enhancing interoperability between the two countries' command and control communications systems.

2. Bolstering the Readiness Posture against Land, Sea and Airspace Infiltration and Provocations in Contact Areas

North Korea is regularly carrying out provocations on land, at sea and in the air of contact areas, that are in direct violation of the Armistice Agreement and the non-aggression agreement entered with the ROK. The ROK military maintains a robust readiness posture based on the ROK-U.S. combined defense system to deter provocations from North Korea and sternly retaliate should deterrence fail.

Surveillance equipment such as thermal observation devices, short-distance surveillance cameras, and CCTVs has been reinforced in enemy contact areas, while a scientific guard system has been set up at all GOPs to allow efficient surveillance over wider areas, using fewer personnel. The number of shelters and other protective facilities has also been increased, and the capability to respond to enemy fire provocations has been strengthened by fielding multiple launch rockets.

In spite of agreeing to the issues related to Northern Limit Line (NLL) through the Agreement on Reconciliation, Nonaggression and Exchanges and Cooperation (1991) and the Protocol on The Implementation and Observance of Chapter 2, Nonaggression (1992), North Korea is continuing to carry out high-intensity provocations in the northern waters of the West Sea and in waters near the northwestern islands in order to nullify the NLL. The NLL is the practical maritime boundary line that the ROK military has firmly defended through the years. The ROK military will continue to maintain the principle of observance of the NLL and will sternly respond to any type of provocations against this demarcation line.

To prepare for North Korean artillery provocations and raids to forcibly occupy the northwestern islands, the ROK military is continuously expanding its surveillance, reconnaissance and strike capabilities by increasing the deployment of missiles, maritime operation helicop-



Dokdo



Border watch in the central frontline inside the DMZ



155 miles of wire fence at the front line is safe and sound today



Defense Minister Han Min-koo inspects the readiness posture in Yeonpyeong Unit

[illegible]

56 Chapter 3 Establishing a Robust Defense Posture

ters, and long-range air-to-surface missiles. In addition, protective capabilities for the northwestern islands will also be strengthened through increased fortification, in a proactive effort to prepare for North Korean infiltration attempts and provocations.

The ROK military maintains a full readiness posture to effectively defend the five northwest islands as well as the ROK's territorial land,

waters and air space in the East, West, and South Seas, including Marado Island, Ulleungdo Island and Dokdo Island. Its resolute and readiness posture to defend Dokdo, an island whose territorial appurtenance to the ROK is indisputable based on historical and geographic evidence and international laws, remain particularly strong.

The ROK military is reinforcing its air surveillance and immediate response posture across the Korean peninsula. Vigilance against North Korean drone threats (small UAVs) has been stepped up by strengthening anti-aircraft surveillance and enhancing the air defense operations execution system in areas including detection, identification, tracking and striking procedures.

To be able to effectively respond to the changing operational environment, the ROK military will optimize its surveillance, decision-making and strike system on land, at sea and in the airspace of contact areas and bolster its core fighting capabilities.



Defense Minister Han Minkoo inspects the readiness posture in northwestern islands (September 2016)

3. Maintaining Readiness Posture against Other Types of Provocations

To proactively respond to potential terrorism and cyber-attacks against the capital area and critical national infrastructures in rear areas, the ROK military operates surveillance assets while also tightening cooperation with relevant government organizations. In particular, by operating a combined coastal surveillance system, the ROK military is preparing for enemy attempts at maritime infiltration and is enhancing its reconnaissance and surveillance capabilities. Meanwhile, to ensure the smooth execution of integrated defense operations, the C4I (Command, Control, Communications, Computer and Intelligence) system has been linked with local government agencies. Operational plans have been improved to better prepare for enemy provocations in both the capital area and rear areas, whether in the form of infiltration or terrorist attacks. To enable a quick response to enemy provocations, the initial response system has been strengthened by newly establishing the Quick Reaction Forces in the Special Warfare Command and the Marine Corps.

To counter North Korean attempts to disturb GPS signals, the civilian-government-military

cooperation system has been reinforced by setting up a collaboration system with the Ministry of Science, ICT and Future Planning and revising the GPS Signal Disturbance Crisis Response Manual. Meanwhile, to prepare for cyber-attacks from North Korea, the cyber-operations execution system has been upgraded, with a new cyber strategy unit created within the Joint Chiefs of Staff.

In accordance with the ‘Act on Anti-terrorism for the Protection of Citizens and Public Security’ and the Enforcement Decree of the said Act, the ROK military is methodically implementing its ‘Joint Chiefs of Staff Terrorism Readiness Comprehensive Development Plan,’ while also continuously improving its preparedness and response capability against attempts to disturb our GPS signals and cyber-attacks by North Korea.

Section 3 Maintaining a Readiness Posture against Aggression

To prepare for a full scale war initiated by North Korea, the ROK military is enhancing its operational plans and is conducting joint and combined exercises and training. Plans are underway to revamp the wartime mobilization system for troops and munitions to achieve greater efficiency, and to create the Army Mobilization Force Command to compensate for the shortage of active-duty troops, resulting from the reduction of service personnel, through highly-trained reserve forces. The procurement, maintenance and logistics systems are drastically overhauled, and all available resources of the civilian, government and military sectors, located both inside and outside the country, are to be utilized to strengthen the war sustainment capability.

1. Enhancing Wartime Operational Capabilities

North Korea is expanding its asymmetric warfighting capabilities, including nuclear and missile capabilities, while continuing to maintain a large conventional force. Its key forces are positioned mostly south of the Pyongyang-Wonsan line for a posture capable of launching surprise attacks and engaging in lightning warfare without needing to redeploy its forces.

In preparation for the threats of a full scale war from North Korea, the ROK military is continuously developing ROK-U.S. joint operational plans to new levels of effectiveness and increasing its wartime operational capabilities through scientific and systematic training. During a contingency, the ROK-U.S. combined and joint forces, based on the robust military alliance between the two countries, will be operated in an offensive manner to carry out simultaneous, integrated operations on land, at sea and in the air, as well as in cyber-space, to seize the initiative at the earliest stages of war. By annihilating North Korea's warfighting capabilities and destroying its will to fight, the combined and joint forces will achieve a decisive victory in a short period of time.

2. Providing High-level Training to Reserve Forces (Building an Elite Reserve Force)

| Establishing a Firm Mobilization Posture | To secure a sufficient deterrence capacity to

prevent war and strengthen the capability to sustain war, should one occur, the ROK military is continuously improving its mobilization plans to more efficiently marshal available human and material resources to support wartime military operations as well as disaster or emergency response operations.

The ROK military is pursuing a revision of the relevant laws and regulations so that the units required to execute operations can be selectively and partially mobilized during a situation when an ‘integrated defense situation’ is declared in order to minimize the impact on the lives of citizens and the national economy.

In 2016, Mobilization Supplement Battalions complete with troops, equipment, supplies and ammunition were established as part of an effort to create a wartime supplementation system. Meanwhile the zone-based mobilization designation system,¹¹⁾ which was piloted in 2013, is set to be progressively expanded until 2018 for optimal implementation results. The transportation plan for the mobilized resources in the Seoul metropolitan area is also being reviewed and revised appropriately by taking into consideration operational and traffic conditions.

In 2017, the Army Mobilization Force Command is planned to be established to strengthen the fighting capability of wartime mobilized ground forces.

Through the establishment of this Command, the Army’s frontline operations execution conditions will be improved as the forces mobilized for those units that are critical for operations during the early stages of war will be trained to be elite forces. The part-time military service program,¹²⁾ which was piloted in 2014 to guarantee the immediate combat power of the mobilized forces during a contingency, is scheduled to be expanded in scope and eligibility by 2020 to compensate for the reduction of active-duty personnel.

The process of troop mobilization is assisted by the National Defense Mobilization Information System and the Mobilization Designation System of the Military Manpower Administration to ensure that the operational requirements of the military are met. The management of mobilization operations will also be continuously improved for both wartime and peacetime mobilization by upgrading the National Defense Mobilization Information System and linking it with systems of other government agencies. Peacetime mobilization operations are evaluated for improvement both through drills and actual mobilization during the Chungmu Exercise, as part of a sustained effort to guarantee the effectiveness of wartime mobilization.

While appropriately adjusting the wartime mobilization system for supplies and munitions based on combined requirements with the Ministry of Public Safety and Security and other

11) The system manages mobilization resources by dividing the country into two zones and assigns mobilization reserve forces based on units in which they served during the period of active duty.

12) A program in which volunteering officer reservists, enrolled in a mobilization reserve division or reserve replacement battalion, serve for 20 days annually, participating in unit training and managing mobilization resources, to achieve a readiness posture capable of promptly carrying out missions during a contingency.

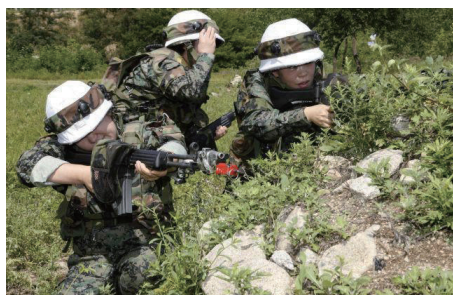
government agencies, MND is continuously enhancing the system by conducting a joint government survey on mobilization resources so that optimal resources can be mobilized. The effectiveness of the mobilization mechanism for troops and resources is also annually tested and improved through the events held on the ‘Critically Managed Resources Testing Day.’

| Organization of Reserve Forces and Resource Management | Reservists are organized and managed as part of the national total war system. Reservists constitute an important force for meeting operational requirements of the standing force during wartime and ensuring security and responding to disasters and emergencies in their respective regions during peacetime. Organized in accordance with the Reserve Forces Act and the Military Personnel Management Act, reservists are mobilized either to augment active-service units during wartime or for local and workplace defense missions during wartime or peacetime.

The number of reservists amounts to 2,750,000 as of September 2016. Volunteer reservists,¹³⁾ nearly 8,000 nationwide, including women reservists and special operations reservists, contribute to rear-area operations.

Reservists are organized into local reserve units at the level of a town, township or neighborhood, and workplace reserve units and are separately managed depending on the number of years served or type of wartime missions to which they are assigned. Reservists are managed locally, although the Minister of National Defense has the overall responsibility for their management, as this responsibility is delegated to military units assigned to respective towns or townships. In 2016, standardized reserve companies (town, township or neighborhood-based) were set up, and their wartime and peacetime deployment plans were established by taking into consideration operational deployment and resource management.

MND plans to efficiently manage reservists so that they can display their combat power as substitute forces for the standing force which is being reduced. At the same time, it will continue to enhance the reservist system by considering economic conditions and conditions related to the livelihood of reservists in the perspective of benefiting the people.



Female reservists in training, using MILES equipment (September 2015)

| Enhancing Homeland Defense Operation Capabilities | MND operates reserve units for

13) ROK citizens aged 18 and older who applied to join the reserve forces and were selected pursuant to Article 3 of the Reserve Forces Act..

regional and workplace defense, and is operating a reserve force management organization¹⁴⁾ in order to guarantee the efficient mission execution by administrative zone-based reserve units. For administrative zone-based reserve units, reserve force regional units are organized in cities and counties and reserve force companies in towns (eup) and neighborhoods (dong) with squads and platoons organized under companies.

For combat equipment and supplies for reserve forces, MND is working toward the goal of replacing them by 2020, either by transferring the equipment and supplies of active-duty forces or acquiring new ones. To guarantee conditions necessary for operational sustainment support for reserve units in wartime and peacetime, MND is continuously enhancing its plans by assisting with the development of reserve forces by local government agencies and through the Integrated Defense Council.

3. Reinforcing War Sustainment Capabilities

War sustainment capability means the ability of a country to maintain tangible fighting capabilities such as troops, equipment, supplies and munitions that are necessary to conduct a war.

Requirements and capabilities necessary for carrying out a war are annually assessed through the Defense Requirement Information System (DRIS),¹⁵⁾ and any shortfalls are remedied through progressive acquisitions based on a stockpile plan.

The ‘Wartime Logistics Support Requirements and Capabilities Assessment’ is a document providing estimated logistics support requirements for the first year of a hypothetical war and the capability to meet the requirements. This document is used as reference information when drafting the ‘Joint Military Strategic Capabilities Plan,’ ‘Defense Mobilization Operations Plan’ and the ‘Defense Wartime Budget Bill.’ Through this process, war sustainment capabilities are being reinforced by acquiring and maintaining equipment and supplies needed to conduct a war based on estimated wartime requirements and currently available capabilities.

The expanded application of the performance-based logistics (PBL)¹⁶⁾ system has helped to increase the utilization rate of equipment, and the field maintenance support center, a civilian-government-military consortium facility, provides speedy maintenance services to field

14) An organization managing reserve forces, including regional reserve force units, reserve force companies and reserve force training units.

15) An information system to estimate logistics support requirements for the first year of a hypothetical war and the capability to meet them (current stockpile and available resources in wartime).

16) A program compensating military contractors providing equipment maintenance services and supplying spare parts based on their performance by measuring the performance according to pre-established indicators including target operating rates.

operation units.

For timely procurement of spare parts that are indispensable for the operation of equipment in both wartime and peacetime in a timely manner and comprehensive management of assets, a model for predicting demand for spare parts and managing inventories has been developed, enabling more efficient budget operations.

Amid the increasing importance of guided missile ammunitions during war, MND presented a direction on ways to maintain and store guided missiles by publishing the ‘Guided Missile Management Instructions’ whose purpose is to systematically manage these guided missile ammunitions, and, through this initiative, it is extending its wartime ammunition support capability. Moreover, to guarantee immediate access to ammunition procured from overseas sources during a contingency, MND is continuously cooperating with partners worldwide.

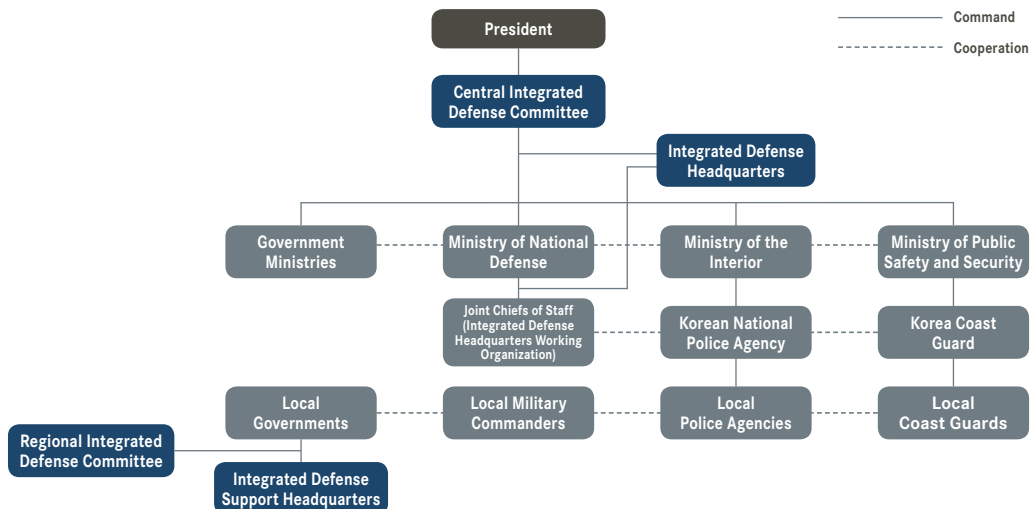
Section 4 Establishing an Integrated Civilian-Government-Military-Police Defense Posture

To effectively respond to increasingly diversifying security threats, the ROK military is continuously enhancing the integrated civilian-government-military-police defense posture¹⁷⁾ by organically linking all elements of national defense and building a cooperation system with relevant government agencies and local governments.

1. Operation of Integrated Defense Organizations

In an effort to achieve an integrated defense posture, the government operates organizations such as the Central Integrated Defense Committee, Integrated Defense Headquarters, Regional Integrated Defense Committees and the Integrated Defense Support Headquarters. The command structure and cooperation system for integrated defense are as shown in <Chart 3-7>.

<Chart 3-7> Integrated Defense Command and Cooperation System



¹⁷⁾ A national defense posture against infiltration attempts and provocations both in peacetime and wartime, based on the integration of all defense elements including the government, local government agencies, military, reserve and police forces, the Civil Defense Corps and critical national facilities, under a centralized command system.

The Central Integrated Defense Committee is the highest decision-making body in matters related to integrated defense, reporting to the Prime Minister. The Committee deliberates and decides upon national-level integrated defense policies, integrated defense operations and training guidelines, and the declaration or lifting of an ‘integrated defense situation.’

The Integrated Defense Headquarters is comprehensively responsible for integrated defense operations. With the Chairman of the Joint Chiefs of Staff placed in charge of its direction, the organization establishes and coordinates integrated defense policies, evaluates and supervises the integrated defense posture, and conducts comprehensive analysis of the status of integrated defense operations and devises response measures, while also developing the ‘Integrated Defense Operations and Training Guidelines’ and related plans and overseeing their implementation.

The Regional Integrated Defense Committee is set up in 230 cities, counties and municipal wards across the country, including Seoul and 16 other Metropolitan Cities. The Committee deliberates and decides upon matters including declaring or lifting an integrated defense situation at a local level, establishing support measures for integrated defense operations and designating ‘vulnerable areas’ of the community or repealing the designation thereof.



2016 Seoul Metropolitan City Integrated Defense Committee
(February 2016)

The Integrated Defense Support Headquarters, established at the level of a Metropolitan City, province, municipality, county, city ward, town, township and a neighborhood, establishes ordinances and standard operating procedures related to integrated defense, develops and implements plans for supporting integrated defense operations and training, while also operating an integrated defense situation room. The Integrated Defense Support Headquarters is responsible for fostering and supporting all national defense elements including civilian, government, military and police elements.

2. Consolidation of the Integrated Defense Posture

To more effectively respond to increasing and diverse security threats, MND is revamping the integrated defense posture of the ROK.

While maintaining the existing framework for integrated defense, disaster response and terrorism response, the linkage between the various elements, including laws and regulations, operations, organizations and facilities, resource allocation and exercises, has been tightened

in a manner to maximize the capability for integrated responses.

To prepare for infiltration attempts and provocations by the enemy in peacetime and build the capability for rear-area operations in wartime, the Integrated Defense Headquarters conducts a comprehensive rear-area exercise on a biennial basis. In 2015, a rear-area exercise was conducted in Seoul and seven other cities and provinces. Under the supervision of the Integrated Defense Headquarters led by heads of local government, joint military-police operations were performed to help improve the capacity for carrying out integrated defense operations to protect critical national facilities and urban infrastructures. The exercise was reviewed to identify tasks for improvement, which were then factored into policy decisions.

At the level of operations, joint exercises between the military and police first responder teams are planned to be held regularly. Meanwhile, to effectively maintain the response posture against acts of terrorism, exercises for the protection of vital national facilities have been introduced along with onsite security inspection activities. Moreover, a master plan was established to prepare for potential biological threats, and infrastructures for effectively responding to cyber-threats were expanded by creating new response organizations and training manpower.

The various crisis management organizations scattered across local government agencies and situation rooms of different types are currently being consolidated. The Integrated Protection Plan has also been improved by adding more surveillance equipment, central situation rooms and security facilities for critical national infrastructures, and entering into security agreements with relevant organizations.

In the perspective of utilizing resources, C4I systems have been set up in the Integrated Defense Central Situation Rooms, with a CCTV Integrated Control Center set to be established by 2018 to enable speedy first responses during a contingency.

Section 5 Reinforcing Response Capabilities against North Korean Nuclear and WMD Threats

While closely adhering to the government's policy for the denuclearization of the Korean peninsula, the ROK military is strengthening both ROK-U.S. combined capabilities and independent capabilities and heightening its defense posture to effectively deter and respond to mounting nuclear and missile threats from North Korea. To facilitate the practical implementation of the ROK-U.S. tailored deterrence strategy and acquire autonomous deterrence and response capabilities, while reinforcing the posture for bilateral counter-missile operations, the ROK military is building a 'triad system,' adapted to the Korean defense environment. In tandem, efforts are also underway to enhance its response capability against various chemical and biological threats.

1. Developing Deterrence and Response Strategies against North Korean Nuclear and Missile Threats

| Implementation of the ROK-U.S. Tailored Deterrence Strategy | The ROK and the U.S. are actively implementing the 'tailored deterrence strategy,' a strategy optimized for the Korean peninsula, developed to effectively respond to any and all situations based on the special characteristics of the North Korean leadership and current and potential nuclear and missile threats.

During the 1978 ROK-U.S. Security Consultative Meeting (SCM),¹⁸⁾ in accordance with the Mutual Defense Treaty between the two countries, the U.S. side promised to provide a 'nuclear umbrella'¹⁹⁾ over the ROK. In 2006, during the 38th SCM, in the wake of the first nuclear test by North Korea, 'extended deterrence'²⁰⁾ was mentioned for the first time. In 2009, at the 41st

18) The highest defense-related consultative body convened annually between the ROK and the U.S.

19) The guarantee by a nuclear weapons state to defend a non-nuclear allied state using its nuclear capabilities, considered a major non-proliferation tool.

20) The use of all available types of military capabilities by the U.S. as means of deterrence to protect its allies from nuclear and missile threats from an enemy, including nuclear umbrella, conventional strikes and counter-missile defense capabilities.

SCM, convened after the second nuclear test by North Korea, a joint statement was issued, outlining concrete details of extended deterrence that will be provided to the ROK; namely, deterrence based on all military capabilities including the U.S. nuclear umbrella, conventional strike and missile defense capabilities. In 2013, during the 45th SCM, the U.S. Secretary of Defense and the ROK Minister of Defense signed the tailored deterrence strategy, and in September 2016, during a bilateral summit, the U.S. commitment to the defense of the ROK, including extended deterrence, was reaffirmed.

The tailored deterrence strategy, a bilateral deterrence strategy which takes the existing concept of extended deterrence to a new level, comprises both military and non-military response measures that can be implemented in various phases of a security crisis, from the stage in which North Korea threatens to use nuclear weapons to the stage in which nuclear weapons are actually used. The tailored deterrence strategy is significant insofar as it provides a joint response framework which makes most of deterrence methods and means available to the two allies in a manner to maximize the effect of allied capabilities.

In April 2015, to facilitate the practical implementation of the tailored deterrence strategy, the ROK and the U.S. consolidated the Extended Deterrence Policy Committee (EDPC)²¹⁾ and the Counter-Missile Capability Committee (CMCC)²²⁾ into the Deterrence Strategy Committee (DSC), a new deputy minister-level consultative body. Together with the Korea-U.S. Integrated Defense Dialogue (KIDD), the Deterrence Strategy Committee convenes in April and September every year, conducting annual exercises involving the use of extended deterrence means. In particular, during the meeting of the Deterrence Strategy Committee in September 2016, in the wake of the fifth nuclear test by North Korea, various deterrence methods and response strategies against North Korean nuclear and WMD threats, including the nuclear umbrella, were discussed.

In October 2016, during the 48th SCM, to ensure the effective implementation of extended deterrence commitments by the U.S., the representatives of the two countries decided to strengthen high-level policy and strategic cooperation within the framework of the Extended Deterrence Strategy and Consultation Group (EDSCG).

Going forward, the ROK military will further enhance its capability for the implementation of the tailored deterrence strategy by regularly holding policy consultations and conducting exercises for the deployment of extended deterrence means and combined exercises.

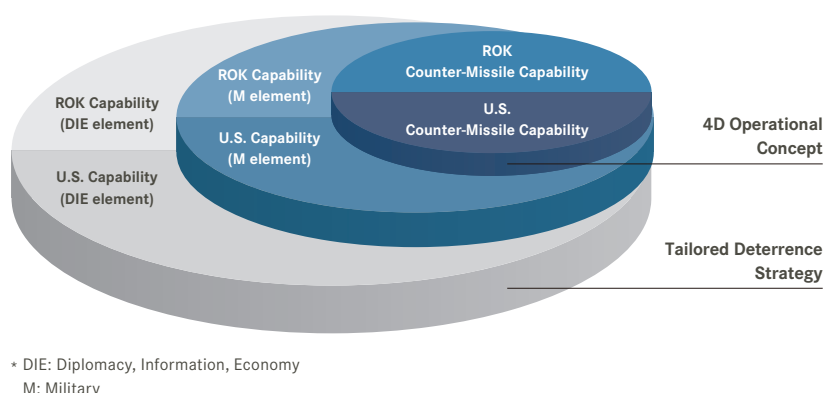
| Establishing and Developing the Alliance's Counter-Missile Operations Concepts |

21) A bilateral committee between the ROK and the U.S. was established in 2011 to guarantee the effectiveness of non-proliferation efforts by the U.S.

22) A consultative body evaluating the ROK-U.S. Alliance's response capabilities against North Korean missile threats and estimating requirements for the development of allied forces.

In 2014, during the 46th SCM, the ROK and the U.S. agreed on the concepts of comprehensive counter-missile operations; namely, to detect, disrupt, destroy and defend against North Korean ballistic missiles (4D operations).²³⁾ A year later, during the 47th SCM held in 2015, the two sides adopted a set of guidelines for the implementation of the concepts of 4D operations and agreed to methodically carry out tasks under the said guidelines. Based on these guidelines, the ROK and the U.S. plan to continuously enhance the Alliance's capacity for the practical implementation of the 4D concepts in five fields including decision-making, planning, command and control, exercises and training, and capability development, while striving to further develop their counter-missile capabilities and posture.

<Chart 3-8> Tailored Deterrence Strategy and 4D



| Building the Triad System | To effectively deter and respond to North Korean nuclear and missile threats, the ROK military is putting in place the ‘triad system’ to equip itself with autonomous deterrence and response capabilities.

The Kill Chain, currently under development as one of the three axes of this system, is for striking North Korean nuclear and missile operations systems, including missiles, mobile missile launchers and the paths of movement thereof, the command and control system and relevant fixed installations. The Kill Chain is an attack system comprising a series of steps, from the real-time detection of enemy missile threats and identifying the target locations to deciding on the most effective means of strike and launching the strike.

Missile capabilities are currently being expanded with particular focus on ground, surface

23) Detect: support efforts to disrupt, destroy and defend through the operation of intelligence, surveillance and reconnaissance (ISR) assets;
Disrupt: strike fixed infrastructures providing support for the North Korean operation of missiles;
Destroy: directly strike North Korean ballistic missiles and transporter and erector launchers (TEL);
Defend: intercept North Korean ballistic missiles in flight toward the ROK soil.



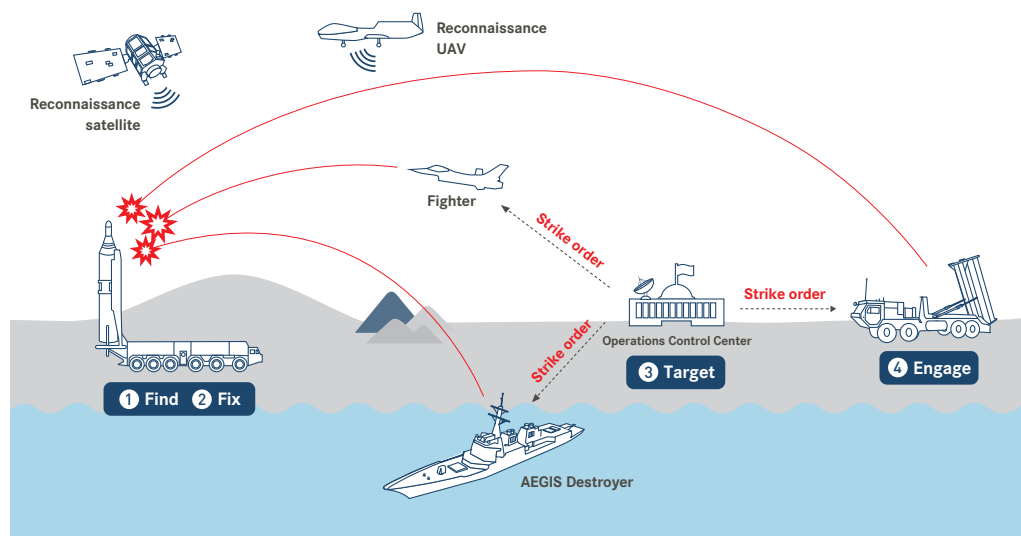
ROK-U.S. Foreign and
Defense Ministers' Meeting

and subsurface-launched ballistic and cruise missiles, and air-launched guided bombs and missiles. Surveillance and reconnaissance capabilities will also be strengthened through integration of high-altitude reconnaissance UAVs (HUAUVs) and military reconnaissance satellites into force structures. To build the surveillance, identification and strike capacity against signs of attack throughout North Korea, additional surface-to-surface missiles, long-range air-to-surface missiles, intermediate-range air-to-surface missiles and joint direct attack munitions (JDAM) and laser guided missiles will be added into force structures. At the same time, maritime strike capabilities will also be boosted by enhancing the performance of submarine-to-surface and ship-to-surface missiles and developing a strategic ship to surface missiles.



F-15K fighter loaded with long-range air-to-surface missile (Taurus)
(December 2016)

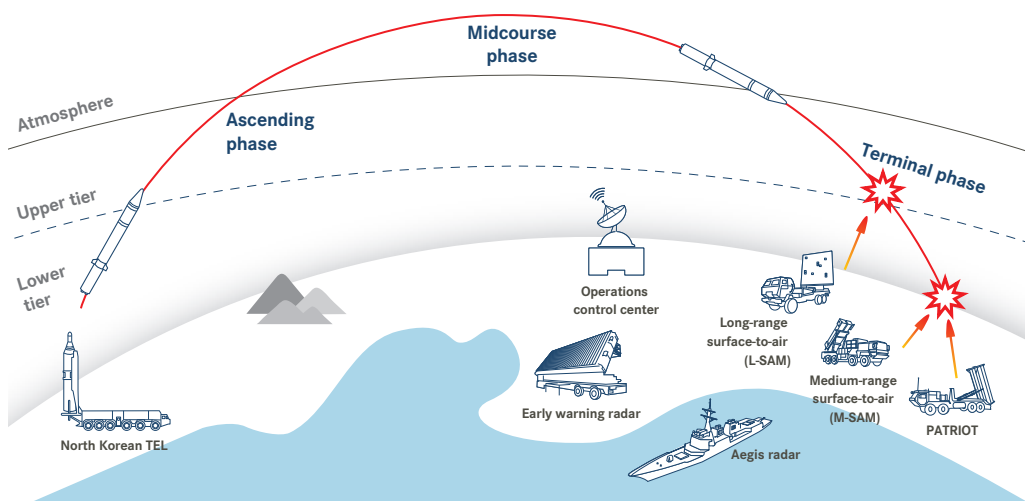
<Chart 3-9> Kill Chain



The Korea Air and Missile Defense (KAMD), the second axis of the triad system enabling the interception of missiles launched by North Korea before they hit their targets on the ground, is continuously being enhanced. The KAMD is a multi-tier missile defense system that takes into consideration the battlefield environment of the Korean peninsula. For the time being, the system is centered on low-tier defense at the final stage of the trajectory.

The KAMD consists of three main components: the early warning system, command and control system and the interception system. An enemy missile is detected through the ballistic missile early warning radar system or the radar system of an Aegis ship. When the detection data are analyzed by the operations control post and transmitted to the appropriate missile-interceptor battery, the battery that has received the interception order tracks the missile, using its own radar system, and intercepts it. With the ballistic missile early warning system, Aegis ship and Patriot missile batteries currently integrated into the force structure, the ROK military possesses the capability to detect and defend against ballistic missiles targeting key capital area facilities and major air bases. In addition, upgraded Patriot missiles, medium-range surface-to-air missiles (M-SAM) and long-range surface-to-air missiles (L-SAM) are under development, based on home-grown technology. When they are fielded in the mid-2020s, this will expand the geographic coverage of the KAMD and improve its interception capability.

<Chart 3-10> Korea Air and Missile Defense (KAMD)

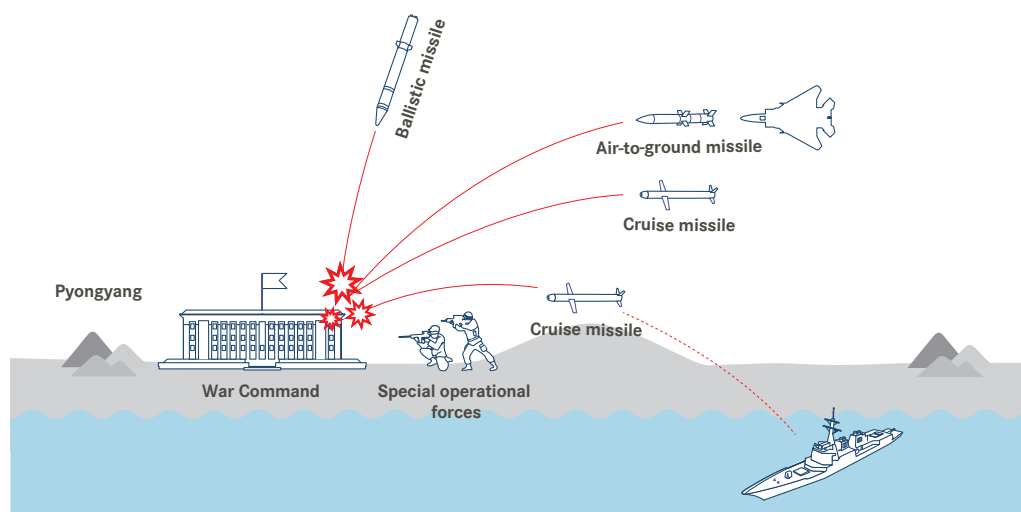


The ROK military will continuously identify new requirements to further develop the KAMD and expand interoperability with the U.S. system in a sustained effort to strengthen the capacity to effectively deploy its counter-missile capabilities and the reliability of its missile defense system.

The concept of the Korea Massive Punishment and Retaliation (KMPR), plan which constitutes the triad system, along with Kill Chain and KAMD, is continuously being developed and refined. The idea is to punish and retaliate against North Korea in the event of a strike against the ROK by directly targeting its leadership, including its war headquarters, through deployment of missiles capable of simultaneous, massive-scale precision strikes, and special opera-

tions units. While the ROK military already possesses ballistic and cruise missile capabilities that are sufficient to deliver a considerable level of punishment and retaliation, the KMPR will maximize the capacity by developing a new optimized missile launch system and large-capacity, high-performance warheads and by creating specialized units with select, elite special operations units.

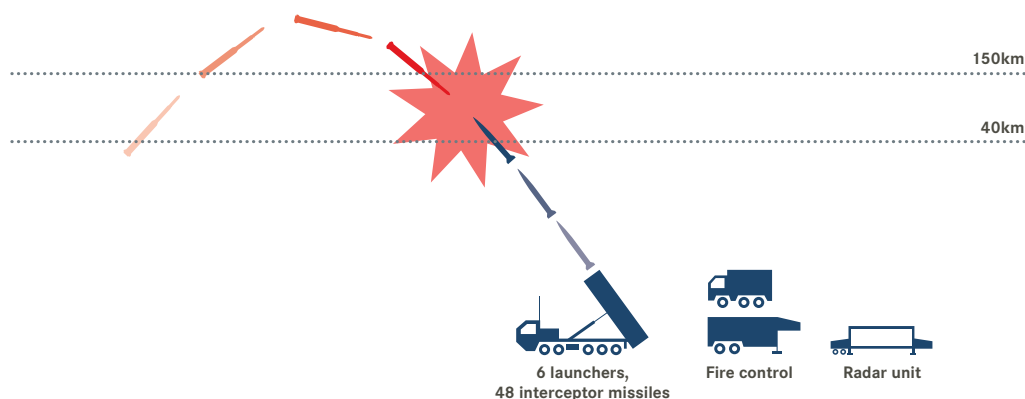
<Chart 3-11> Korea Massive Punishment and Retaliation (KMPR)



| Deployment of the THAAD System by the USFK | To ensure the security of the ROK and its people, and to protect alliance military forces from increasing North Korean nuclear and missile threats, the ROK and the U.S. together decided to deploy the Terminal High Altitude Area Defense (THAAD) system by the United States Forces, Korea as a self-defense measure.

The THAAD system is a ballistic missile defense system capable of directly targeting and destroying short to medium-range ballistic missiles during their descent, at an altitude of 40-150 km. A THAAD battery consists of one fire control system, one radar unit, six launchers and 48 interceptor missiles.

<Chart 3-12> Terminal High Altitude Area Defense System (THAAD)



The THAAD system, as it is capable of intercepting North Korean nuclear missiles at a high altitude of over 40km, can prevent casualties and damage on the ground. By creating a layered defense system together with the Patriot system, jointly operated by the ROK and the U.S., and the medium-range surface-to-air missiles (M-SAM) and long-range surface-to-air missiles (L-SAM) that are currently under development, the THAAD system can help raise the success rate of interception dramatically while providing defense to a significantly wider geographic area (from one half to two-thirds of the ROK territory).

Tasks that lie ahead include negotiations for the provision of land pursuant to the Status of Forces Agreement (SOFA), and design and construction work to build the required facilities. The ROK and the U.S. will make their best efforts to complete the deployment of the THAAD system and make it operational by the end of 2017.

2. Development of Response Capabilities against Chemical and Biological Threats

North Korea's growing chemical and biological weapons capabilities have commensurately increased the threat of an attack based on such weapons, whether in the form of terrorism or diseases. As a result, the importance of the ROK military's ability to respond to chemical, biological, radiological and nuclear (CBRN) attacks has increased.



Forces that protect us
USFK THAAD Deployment

Using the ROK-U.S. combined intelligence assets, the ROK military maintains surveillance over North Korea's chemical and biological weapon-related facilities continually and is prepared to detect early signs of an attack and neutralize the attack. CBRN units in place at various levels of force structures form a system capable of rapidly providing support necessary for CBRN defense operations. The stockpile of personal protective equipment and supplies and medical supplies including preventive and treatment drugs is continuously expanding.

To prepare for chemical and biological threats and the spread of new infectious diseases like Middle East Respiratory Syndrome (MERS), realistic readiness exercises are held every year. Since 2011, the U.S. Department of Defense, MND and the Ministry of Health and Welfare jointly conduct the Able Response (AR) exercise on an annual basis to test the adequacy of the response system in place against a



ROK-U.S. Able Response exercise (September 2015)

potential biological crisis in the Korean peninsula and enhance the national-level response capability. Some 200 people from 40 government organizations of the two countries participate in the AR exercise which include table top exercises, field exercises and senior-level seminars. The AR exercise is contributing to improving the biological defense capability of the two countries, as well as strengthening bilateral cooperation in this area.

In 2014 and 2016, the AR exercise was conducted in conjunction with the Ulchi Freedom Guardian (UFG) exercise.

Meanwhile, the ROK-U.S. Biological Defense Task Force, set up in 2012, is facilitating the sharing of crisis response experiences between the two countries and is contributing to the advancement of cooperative tasks for enhancement of the Alliance's biological defense capabilities in wide-ranging areas, from joint research and education and training to the procurement of medical resources and sharing of biological surveillance data.

Moving forward, MND will further strengthen the ROK military's readiness and response posture against natural and manmade chemical and biological weapons and take its biological and chemical warfare capabilities and response capabilities against CBRN terrorism to new heights by improving its capabilities related to diagnostics, treatment and decontamination as well as its research and development capacity.

3. Development of Defense Space Power

| Overhauling the Space-related Legal and Institutional Framework | After unveiling

the ‘Basic Plan for the Development of Defense Space Power,’ MND established the Defense Space Development Committee and the Defense Space Development Working Group in 2014, to develop defense space capabilities and provide effective support for military operations related to space.

In June 2014, MND completed the amendment of the Aerospace Development Promotion Act through cooperation with relevant government agencies. The current plan is to establish the ‘Aerospace Development Execution Plan’ for the defense field, through intragovernmental cooperation with the Ministry of Science, ICT and Future Planning and the National Intelligence Service, to enable the sharing of space policy visions for defense purposes and ensure that related projects are carried out in a coordinated fashion.

| Building a Domestic and International Cooperation System | MND is tightening cooperation with the civilian and government sectors as well as allies overseas to efficiently build the defense space capabilities of the ROK military. Since 2013, MND has been cooperating with the industry, academia and research institutions in space technology.

In 2012, MND signed the ‘Terms of Reference for the ROK-U.S. Space Cooperation Working Group’ with the U.S. Department of Defense. The Space Cooperation Working Group met eight times, starting in 2013, to discuss a wide range of topics, from information sharing to exchange of space manpower and cooperation in space situational awareness. Defense space cooperation between the two countries is to be expanded over a long term to include space-based counter-terrorism, disaster relief, search and rescue and many other fields. In 2014, the two countries signed the ‘Memorandum of Understanding for Sharing Space Situational Awareness²⁴⁾ Services and Information,’ which granted the ROK access to various types of data related to space objects and services provided by the U.S. Strategic Command at any time.

²⁴⁾ Space situational awareness refers to the collection and analysis of data from ground and space systems to prepare for and control dangers from space in the form of falling or colliding space objects.

Section 6 Establishing a Response System against Transnational and Non-military Threats

The ROK military has designated counter-terrorism quick response forces under the Special Operations Forces and the Marine Corps to ensure swift response to various types of terrorist threats. By conducting civil-government-military-police integrated defense exercise, the military has also established a posture to execute and support counter-terrorism operations. Against cyber threats, the ROK military has responded preemptively by establishing a system centered on the JCS for executing cyber operations and by expanding the cyber defense system. Finally, to ensure systematic disaster management from prevention and preparation to reconstitution during national catastrophe and disaster, the military has established a civil-government-military collaboration system and strengthened its disaster response capacity.

1. Reinforcing the Readiness Posture against Terrorism

As seen in the examples of attacks in Brussels, Orlando, Istanbul and the Dhaka region of Bangladesh, terrorist attacks are becoming increasingly more complex—attacks occur simultaneously or consecutively in multiple locations, causing massive casualties and damage. Spontaneous lone wolf attacks by sympathizers of ISIL and other violent extremist terrorist groups or those who are motivated by social discontent are also on the rise, as well as acts of terrorism by unidentified attackers.

To rapidly respond to these various types of terrorist threats, the government enacted the Act on Anti-terrorism for the Protection of Citizens and Public Security and set up the National Counter-Terrorism Center (NCTC). The military amended the “MND Directive on Counter-terrorism Activities” and updated its terrorism response manual while carrying out exercises that are tailored to different types of terrorist attacks.

The JCS is reinforcing the posture to conduct and support counter-terrorism operations within military installations as well as in areas outside military installations by holding joint tactical discussions with relevant government organizations and conducting integrated civilian-government-mil-



Combined Civilian-Government-Military Counter-Terrorism Exercise (May 2016)

itary-police exercises. Simulation exercises are conducted based on various different scenarios of terrorist attacks. Meanwhile, to enable real-time operational command and the sharing of visual information, a C4I system has been put in place. Necessary conditions have been shaped for sending initial response units by sharing domestic and international terrorism information with other government agencies and signing memoranda of understanding between local governments and local military units.

In order to rapidly carry out counter-terrorism operations, additional counter-terrorism units responsible for their respective local areas have been designated to augment the capabilities of the existing units such as the 707th Special Mission Battalion for counter-terrorism and the Special Mission Battalion of the Navy Special Warfare Flotilla.

Thanks to these efforts, the military was able to successfully provide security support for major international events such as the 2015 Summer Universiade in Gwangju (June 2015), Seoul Defense Dialogue (September 2015) and the CISM²⁵⁾ Military World Games in Mungyeong, Gyeongsangbuk-do (October 2015).

To effectively respond to international terrorist threats, combined counter-terrorism exercises are conducted with key partner states. The Special Forces for Counter-Terrorism of the ROK Army and Navy participated in the combined maritime security and counter-terrorism exercises organized by ASEAN Defense Ministers' Meeting-Plus (ADMM-Plus), playing a leading role and thereby enhancing the ROK's status as a member of the Expert's Working Group on Counter-Terrorism.

The ROK military will continue to take an active part in international counter-terrorism efforts, including joint response and cooperation activities, and strengthen cooperation with member states to share information on terrorism.



Maritime Security-Counter-Terrorism Combined Field Training Exercise in Brunei and Singapore (May 2016).

2. Bolstering Response Capabilities against Cyber Threats

| Developing Cybersecurity Policies and Systems | North Korea continues expanding its

25) Conseil International du Sport Militaire



cyberwarfare forces and its provocations in the cyber domain such as its hacking of the ROK hydropower and nuclear power plants.²⁶⁾ More recently, North Korea sent out a large number of emails containing malwares, pretending to be a government agency and the Blue House, and hacked into smartphones of senior military officials, intensifying the level of its cyber threats. To provide an overall vision for cybersecurity efforts and medium/long-term directions for their development, MND is drafting the “National Defense Cybersecurity Strategy,” and to install rapid decision-making and response procedures for cyber crises, MND has developed the “National Defense Cyber-Crisis Response Action Manual.” In 2015, the JCS created a new unit in charge of overseeing cyber-operations and conferred upon the Chairman of the JCS the authority to command and control cyber-operations. The cyber-operations execution system was unified into a centralized system under the Joint Chiefs of Staff, and this structural realignment is well reflected in the newly-issued “Joint Cyber-Operations Manual.”

| Fostering Cyber Experts | Academic departments dedicated to cyberwarfare-related military studies have been created in civilian higher education institutions to train cyber experts. To ensure that cyber experts are assigned to appropriate tasks based on their respective areas of expertise, sustained efforts are made to enhance the manpower management system. In 2016, to help cyber experts continue to improve their knowledge and skills, intermediate and advanced programs were expanded, and a new cybersecurity expert program designed to foster top-level specialists was created within the National Defense Information Protection curriculum, which is offered to all military personnel. A scientific cyber-training facility is also planned for construction to offer comprehensive tactical training based on various cyberwarfare scenarios.

| Acquiring Technologies and Systems to Respond to Cyber-threats | To prepare for potential cyber-attacks from North Korea, a framework for protecting critical national infrastructures and military-operated systems is currently under development. Security analysis and evaluation have been conducted to identify and complement vulnerabilities in the existing systems, and each unit is evaluating its cyber-protection readiness posture.

Efforts have been dedicated to developing core cyberwarfare technologies while rapidly integrating commercial information security technologies and systems to the defense sector. To keep abreast of the rapidly evolving cybersecurity technology environment through rapid transfer and application of civilian response technologies and systems against cyber-threats, a fast-track acquisition program has been established. Moreover, in an effort to strengthen

²⁶⁾ An incident in which an unidentified hacking group leaked the internal data of Korea Hydro and Nuclear Power on six successive occasions, from December 15, 2014 to March 12, 2015, demanding the government to stop the operation of nuclear power plants and threatening to disclose additional information.

research capability in this field, a research and development institution wholly dedicated to defense cyber technology has been created. At the same time, joint research and development projects are carried out with the civilian and government sectors for optimal outcomes.

| Closer International Cooperation to Promote a Common Response to Cyber-threats |

The ROK and the U.S. are broadening cooperation in the cyber field. The ROK-U.S. Cyber Cooperation Working Group (CCWG) has been meeting on a biannual basis since 2014. In 2015, the two countries agreed on the Information Assurance/Computer Network Defense Standard Operating Procedure (IA/CND SOP) for effective information sharing. In 2016, the “ROK-U.S. Cyber Working-level Consultative Group” was formed to discuss concrete strategies for defense cyber cooperation.

During Seoul Defense Dialogue (SDD), the Cyber Working Group (CWG) is convened to promote multilateral cybersecurity cooperation by finding common ground and building confidence between participating countries. Cyber cooperation with partner nations also continues to be developed.



Cyber Working Group meeting during the Seoul Defense Dialogue (September 2016)

3. Building a Disaster Prevention and Response System

| Bolstering Disaster Response Capabilities | The ROK military has established a civilian-government-military joint collaboration system for systematic disaster management from prevention and preparation to reconstitution, and is strengthening disaster response capabilities through education and training.

The military takes an active part in the annual “Safe Korea Exercise” organized by the Ministry of Public Security and Safety to improve its field response capabilities. In 2016, 247 units participated in an integrated civilian-government-military exercise to hone their skills for responding to various disaster situations such as large fires, typhoon and earthquakes.



Joint Civilian-Government-Military Aircraft Crash Recovery Exercise (November 2016)

To promote an in-depth understanding of disaster management among officers tasked with

the related duties, MND annually organizes a military-wide conference for disaster management officers. Specialized training for disaster management officers has been reinforced in all three branches of the military along with safety education and training for commanding officers.

To maintain a rapid situation reporting system and swiftly provide relief in areas requiring military assistance, the three branches of the military operate 410 disaster situation rooms at units of every echelon.

Moreover, to minimize potential disruption of public services in the event of an illegal action by personnel managing a critical national infrastructure, the military is training specialists to replace civilian manpower. The current number of technical and skilled military specialists is as shown in <Chart 3-13> below:

<Chart 3-13> Management of the Military Functional Specialists

As of November 2016

Category	Total	Railroad/Electric motor cars	Power generation	Gas	Cargo transportation
Persons	2,143	537	510	304	792

| Consolidating the National Disaster Recovery Support Posture | To provide emergency rescue support in the event of a large scale accident such as sinking of a ship or an airplane crash, the military operates six disaster relief units and 17 search and rescue units. To better prepare for contingency, a close cooperation system has been established with relevant government agencies and local governments, and civilian-government-military-police integrated exercises are held regularly for various types of disasters.

Over the last three years, the ROK military has provided close to 710,000 troops and 18,000 equipment to disaster relief efforts.

In February 2014, heavy snow in the east coast areas caused severe damage, leaving people in isolation. The military committed 120,000 troops and 2,000 equipment to remove snow, provide medical assistance, and deliver supplies to residents of isolated communities. The military also assisted with search and rescue efforts in the aftermath of the sinking of the Sewol ferry by committing 370,000 troops and 11,000 equipment.

Upon the outbreak of foot-and-mouth disease and highly-pathogenic avian influenza (HPAI) in Chungcheongbuk-do and Gyeongsangbuk-do between September 2014 and May 2015, the



2016 Safe Korea Exercise

military actively assisted with the culling of cattle and poultry, and disease control and prevention activities. It also operated mobile checkpoints with 1,200 troops and 420 equipment.

In 2015, when the country was hit by the worst drought in 40 years that caused heavy crop damages, the military sent 8,100 troops and 2,000 equipment to the affected communities, supplying water and assisting with the dredging of reservoirs to secure irrigation water.

With the MERS outbreak in May 2015, military medical support teams, composed of army doctors, nursing officers and medical support staff, were sent to civilian hospitals and community health centers. The Armed Forces Capital Hospital and the Armed Forces Daejeon Hospital were temporarily repurposed as MERS treatment centers and provided care to civilian patients.



Launch ceremony of the MERS Military Medical Support Team (June 2015)

In September 2016 when an unforeseen earthquake shook Gyeongju and the nearby region, some 1,200 troops assisted with recovery efforts. In the wake of typhoon Chaba, nearly 45,000 troops and 482 equipment were quickly sent to the affected areas, including Ulleungdo Island, Ulsan, and Daegu, helping with the repair of roads and bridges.



Troops assisting relief efforts in the aftermath of typhoon Chaba (September 2016)

Upon the outbreak of avian influenza in September, in Eumseong, Chungcheongbuk-do, some 1,400 troops, equipped with 150 decontamination vehicles, assisted with disease control and prevention efforts. When the lives of people in the affected areas were further disrupted by labor strikes by railroad and transportation workers' unions, the military sent 466 technical troops to alleviate the situation.

Emergency assistance and support activities for civilians conducted by the ROK military during the past four years are summarized in <Chart 3-14>:

<Chart 3-14> Military Aid to Civilian Authorities over the Past Four Years

As of November 2016

Year	Activities	Support persons	Equipment
	Total	812,401	19,885
2013	Heavy rainfall, typhoon, and heavy snowfall damage restoration	42,528	303
	Pine wilt disease control	14,290	0
	Forest fire support, search and rescue, red tide control	10,134	278
2014	Heavy rainfall, typhoon, and heavy snowfall damage restoration	146,733	2,532
	Foot-and-mouth disease, and AI control	60,488	204
	Sewol ferry (search and rescue, carrying caskets and medical support)	370,710	11,387
	Forest fire support, marine pollution control, red tide control, building collapse aid, harmful chemical substance leak control	17,101	406
2015	Drought aid (water for living and farming, dredging a reservoir)	8,174	2,003
	Search and rescue on missing civilians	8,419	185
	Foot-and-mouth disease, AI, and MERS control	10,893	480
	Forest fire support	15,637	438
	Heavy rainfall, typhoon, and heavy snowfall damage restoration, building collapse aid, red tide control, marine pollution control, pine wilt disease control	5,416	274
2016	Forest fire support	5,633	190
	Earthquake damage restoration	1,956	39
	Drought, heavy rainfall, typhoon damage restoration	53,864	482
	Heavy snowfall damage restoration, building collapse aid	5,413	32
	Search and rescue on missing civilians, marine pollution control	2,072	89
	Railroad and cargo labor union strike control	32,367	400
	Foot-and-mouth disease, and AI control	421	97
	Others (pine wilt disease, drought)	152	66

| Broadening Overseas Disaster Relief Support and Cooperation | Damages caused by a series of large disasters that have struck several countries recently have been so massive in scale that recovery and relief efforts by the affected countries alone have proven to be insufficient. Pursuant to the Overseas Emergency Relief Act of 2007, the ROK government has deployed the Korea Disaster Relief Team to countries and regions hit by major disasters to assist with recovery, thereby doing its fair share in humanitarian assistance as a responsible member of the international community and putting humanitarian values into concrete actions.

The ROK military established the “Transport Aircraft Mission Support System for Overseas Emergency Relief” in May 2010, maintaining a readiness posture capable of sending its

overseas emergency relief units to 15 Asian countries within 48 hours after a major disaster.

The military is taking an active part in disaster relief exercises held by the ASEAN Regional Forum (ARF) and the ADMM-Plus to join the regional effort in strengthening the cooperation for humanitarian assistance and disaster relief.

In May 2013, the ROK military jointly hosted the largest ever ASEAN Regional Forum Disaster Relief Exercise with Thailand, where 1,800 persons from 27 countries participated. In November of the same year, in the aftermath of typhoon Haiyan, the ROK military provided transport planes to assist with recovery and relief efforts, ensuring fast transportation of emergency relief manpower and supplies.

In April 2016, after the outbreak of an earthquake in Kumamoto Prefecture in Japan, the military again provided transport planes to take part in recovery efforts for quick delivery of relief supplies such as tents, blankets and bottled water, thereby greatly contributing to raising the ROK's stature in the region.

The overseas emergency relief assistance provided by the ROK military during the past 10 years is summarized in <Chart 3-15>:

<Chart 3-15> Overseas Disaster Relief Support

Date	Region (Type of Disaster)	Details
May 2008	China (Earthquake)	• 3 transport aircraft(C-130) , 26.6 tons of relief supplies including military tents
November 2009	Cambodia (Typhoon)	• 1 transport aircraft (C-130), 7 tons of relief supplies including daily necessities
January 2010	Haiti (Earthquake)	• 1 Air Force rescuer (medical support)
March 2010	Chile (Earthquake)	• 136 military tents
March 2011	Japan (Earthquake, tsunami)	• 10 transport aircraft(C-130) (four sorties), 58.8 tons of relief supplies. Transported 102 rescue personnel
October 2011	Turkey (Earthquake)	• 100 military tents
November 2013	The Philippines (Typhoon)	• 9 transport aircraft (C-130) (four sorties), 329 tons of relief supplies. Transported 2,022 personnel, including a rescue team
April 2016	Kumamoto Prefecture, Japan (Earthquake)	• 2 transport aircraft(C-130), USD 110,000 worth of relief supplies (tents, blankets, rice, and drinking water)

Section 7 Reinforcing Realistic Training and Moral Education

In order to acquire superior manpower in a stable manner and manage them efficiently, MND is acquiring tailored manpower through agreements with universities and is gradually increasing the quota of long-term service junior officers while further utilizing highly skilled female personnel. Improvements are being made in the school education system to foster creative individuals. Also, scientific training programs are being carried out to reinforce realistic combat training while moral education for troops is being strengthened.

1. Acquiring Superior Manpower and Developing Professional Manpower

| Securing Stable Supply of Superior Manpower | To gain a stable access to superior manpower, MND is acquiring manpower that is tailored to the military's requirements through agreements with higher education institutions and is conducting a pilot operation of the 'Reserve Non-commissioned Officers Training Corps.'

Under military-university agreements entered into partnerships with higher education institutions offering military studies and non-commissioned officer (NCO) degree programs, mid-term service officers and combat and technical NCOs are recruited for all three branches, among college graduates who have completed courses related to military competence.

Meanwhile, the program under which all students who enroll in the military studies program at four universities that entered into a cooperation agreement with the military in 2013 are given military scholarships and are commissioned as officers upon graduation has been changed. Now, those students who enroll in this program have to be selected as military scholarship students through competition with applicants from regular colleges in order to receive this benefit.

Currently, the military has made agreements with military studies departments in 18 universities and NCO programs in 53 technical colleges. As part of an ongoing effort to acquire quality NCOs, the 'Reserve Non-commissioned Officers Training Corps' pilot program is being operated in six technical colleges since 2015.

| Recruitment Quota of Long-term Service Junior Officers Progressively Increased | To increase the number of career officers, the recruitment quota was raised for long-term service officers by readjusting the overall quota of officers. By reducing the number of sergeants and

first and second lieutenants, the numbers of first sergeants, captains and majors have been commensurately increased. The relative share of long-term servicemembers to the overall personnel is to be progressively increased from 23% officers and 34% NCOs in 2015 to 30% officers and 47% NCOs in 2025.

| Making Better and Broader Use of Female Talents | To make broader use of talented female individuals in the defense field, the military is increasing its quota of service-women. The goal of raising the percentage of service-women to 7% for female officers and 5% for female NCOs by 2020 has been partially achieved, with the target set for officers already reached in 2015. The target for female NCOs is also expected to be reached earlier than the planned date in 2017. Meanwhile, to widen opportunities for women's entry into the armed forces, the number of student training corps in women's colleges was increased from two to three, while also expanding the size of recruitment. In 2014, additional three combat branches of the Army (artillery, armored, and air defense) were opened to women, while easing the criteria related to the location of assignment to create conditions necessary for service women to fully unleash their potential. In parallel with the expansion of female personnel, efforts are also being undertaken to improve the service environment for them. Various measures, programs and facilities are being put into place to minimize the conflict between work and personal life of female servicemembers as a mother or wife, including support for maternity care costs, longer paid maternity and parental leaves and leave for intertillity treatment.

| Fostering Creative Military Specialists | MND is fostering creative military specialists capable of proactively responding to future battlefield environments such as cyber-war and space war. The specialist development program is managed separately for its two components: degree programs in specialized fields and overseas military education.

Doctoral degree programs are aimed at producing professors, researchers and experts in special technology fields. About 20 candidates are selected every year to receive education in quality civilian higher education institutions in domestic or overseas locations.

For master's degree programs, generally in cutting-edge science and technology fields, such as robotics, artificial intelligence and big data, and interdisciplinary engineering and military fields, 230 candidates are selected every year.

Overseas military education is aimed at equipping future specialists with wide varieties of



Invincible warriors
(service women)

military knowledge and training them into regional experts, specialized in their respective linguistic regions. About 300 candidates are selected every year to study in command and general staff colleges, military branch schools and military academies located in 30 countries, including the U.S., Japan and the U.K. Going forward, overseas military education will be offered in more diverse countries, including Middle-Eastern, South American and African countries, to enhance the status of the ROK military on the international scene and broaden the geographic reach of military diplomacy.

2. Improvement and Effective Utilization of the Development and Refresher Training System

| Improvement of School Education Methods | The school education system has been improved in a manner to better support the overarching goal of fostering creative individuals. The education system was shifted from a lecture-centered system to a one that is oriented toward discussions, hands-on learning and problem solving.

Through education focused on discussion and practical exercises as well as prerequisite learning using video lectures ahead of a class, education and evaluation methods have been improved so that students are able to learn and master a subject on their own.

To equip junior officers with strong command skills, education in military leadership and military ethics has been reinforced. Courses on human rights, military law and military ethics have been added to the Officer Basic Course (OBC), the first training program offered to junior officers upon their initial commissioning, to instill positive values and morals in them. Meanwhile, to help them acquire command skills needed in uncertain battlefield situations, a leadership training camp is operated. MND is set to develop and distribute such reading materials for junior officers as ‘Positive Leadership’ and ‘Guide to Military Service Regulations’ and smartphone apps with instructional content in an effort to actively support the moral and leadership education of field forces.

| Improving the Military Academy Integrated Education System | To promote the mutual understanding of the respective cultures of the three armed forces among cadets of Army, Naval and Air Force academies and increase jointness between the three forces, an integrated military academy education program has been conducted since 2012. Integrated education has resulted in considerable improvement in terms of intimacy and camaraderie between students of the three academies. Moving forward, integrated education will be enhanced by reflecting the special characteristics of each branch in instruction and prioritizing field trips and hands-on experiences to further improve mutual understanding between the three branches

and help cadets understand the need for joint operations training and the joint operations system.

| Military-Massive Open Online Courses (M-MOOC)²⁷⁾ Project | The Military-Massive Open Online Courses are a tailored online learning support system allowing all service-men and women to study required military subjects online, from their respective locations of assignment, which integrates distance education programs of all three forces. A mobile learning system will also be developed and launched in the near future to make education available to military personnel at any time, from anywhere. The online learning system has eliminated time out of the office that onsite education entails, offering the possibility of self-paced learning without temporal and spatial constraints.

3. Reinforcing Realistic Unit Training

| Unit Training | In order to train strong elite forces capable of defeating any enemy, the ROK military conducts intensive and realistic combat training, with particular focus on such core areas as mental training, firing, physical training and combat skills. About one half of the available time each year is used for tactical training so that soldiers can thoroughly familiarize themselves with combat actions and perform as intended by their command officers, in actual combats.

To enhance combat mission capabilities, each unit sets a realistic training goal and continues training until the goal is reached, while also carrying out scientific training, using the multiple integrated laser engagement system (MILES)²⁸⁾, data communications, satellites and other cutting-edge technology-aided tools.

To provide conditions necessary to conduct realistic and scientific training, the Army is setting up corps-level scientific training sites while creating training zones and consolidating smaller training sites located in the same geographic areas. The Navy is in the process of constructing the Integrated Maritime Tactical Training Ground. The Air Force



Scientific training for Army using MILES equipment

27) A military education system (Military) without maximum enrollment limits (Massive), open to all (Open), offering web-based (Online) courses (Courses).

28) A combat engagement training system based on cutting-edge optical technology including laser beam transmitters and detectors.

is building the Integrated Air Base Defense Training Ground, while also implementing the Integrated Scientific Training System for Air Defense Artillery.

Training evaluation officers are appointed for each corps to objectively and impartially evaluate the quality of training conducted. Meanwhile, to provide conditions conducive to the creation of combat duty-centered forces, restrictions are placed on the transfer of troops from units of sizes smaller than battalions, and the cool-down period after a field tactical training session has been included in the training period so that no additional tasks are assigned during this period.

| Key Training by the Army, Navy, Air Force and the Marine Corps | The Army focuses on realistic training which reflects actual battlefield situations, such as nighttime training and combat firing training, coupled with training involving the MILES and scientific training like battle command training and virtual simulation training. To realistically prepare troops for various types of enemy attack, the Army is stepping up nighttime training and combat firing training. Particularly intensive training is conducted for night-time firing and long-range firing of mortars and artillery. Combat firing exercises are carried out together with sustainment support units, attachment units and joint forces in an effort to maximize combat operation capabilities.

Training using MILES equipment is conducted in infantry, mechanized and special warfare units, at the platoon to company level, depending on the type of forces. The company-level MILES, introduced in 2014, offers the possibility of an after-action review to analyze the results onsite, immediately upon the completion of an engagement exercise, providing clear and objective training results.

This has lifted the morale and spirits of the troops participating in training, cemented camaraderie between them and reduced accidents, producing an overall positive effect on the barracks life.

The Korea Combat Training Center (KCTC) is planning to expand its training field and carrying out plans to develop its training devices for simulating weapons systems, including artillery, tanks and helicopters, for high-level units that provide support to regiment-size units,



Counter-fire live fire exercise using the K-9 thunder (April 2015)



Army firepower

as well as battlefield effects. When these plans are completed, regiment-size units will be able to train on the KCTC training grounds starting in 2017.

The Battle Command Training Program (BCTP) uses computer simulation techniques to create an environment similar to actual battlefield situations to enhance the combat command capability of commanding officers and staff members, based on a ‘mission command’²⁹⁾ system.

Simulator training, consisting of firing and control training and tactical simulation, is currently used both for the purpose of education in school settings and for unit training. Providing newly-enlisted soldiers and reservists who are unfamiliar with combat equipment with an opportunity to learn about operating and targeting procedures, simulator training has helped them to acquaint themselves with real-world combat situations and develop confidence. The simulator-aided experience of various unforeseen situations that may occur in real battlefield improves their ability to respond to actual combat situations, also contributing to the reduction of budget requirements related to training equipment.

Current plans are to build 15 (6 corps-level, 9 division-level) scientific combat firing training centers capable of holding realistic combat firing exercises and providing objective after-action reviews and to implement a Live, Virtual, Constructive-Gaming (LVC-G) -based integrated training system which combines actual terrain training situations (Live), simulation equipment-assisted training (Virtual) and computer simulation technique-aided combat command exercises (Constructive).

The Army also conducts various types of combine exercises, ranging from special operations and unconventional warfare to air infiltration, WMD removal operations, combined arms exercises, air assault and high-altitude low-opening training. In August 2015, an integrated live fire exercise of the largest scale in the history of the Army was carried out, with close to 2,000 participants from 47 units including a tank battalion, showcasing ROK-U.S. combined operational capabilities to the ROK public. Combined exercises carried out by the Army during the past two years are as listed in <Chart 3-16>:

29) A command model in which the command officer, while communicating his intent and presenting planned missions to his staff with clarity, providing resources and means necessary to carry them out and guaranteeing conditions for their effective execution by subordinate command officers, delegates decisions related to their actual execution down the hierarchy as much as possible, to encourage autonomy, creativity and active involvement on the part of units under his command carrying out the missions.



Army special
Warfare Command
HALO training

<Chart 3-16> Army Combined Exercises during the Past Two Years

Unit: a time

Category	Total	Domestic			Overseas		
		Subtotal	ROK-U.S. combined	Multilateral combined	Subtotal	ROK-U.S. combined	Multilateral combined
2015	37	36	36	-	1	1	-
2016	21	20	20	-	1	1	-

The Navy conducts realistic maritime training, adapted to the respective battlefield environments of the East, West and South Seas. Cooperative and joint training are carried out with the participation of ground and air forces and consist of component training and mission-based training. Component training is basic training that is conducted according to the characteristics of the combat environment, such as anti-surface, anti-submarine, anti-air, anti-amphibious and anti-ballistic operations. Mission-based training is specialized training which includes maneuver training, northwestern island defense training, joint response training against local provocations near the NLL and maritime interdiction training. State-of-the-art surface combatants, submarines, amphibious ships, maritime patrol aircraft, and maritime operations and utility helicopters participate in mission-based training.

Combined training falls into two categories which are ROK-U.S. combined training to strengthen the combined defense system and multilateral combined training aimed at promoting humanitarian assistance and military cooperation. The ROK-U.S. combined training is carried out in various forms to enhance the operational execution capabilities of the combined forces and increase interoperability between the two Navy forces, such as maritime counter-SOF training, anti-submarine maritime search training, amphibious operations training, mine warfare training, rescue warfare and joint logistics over-the-shore (JLOTS) training. Examples of multilateral combined training and exercises include the Cobra Gold Exercise, West Pacific Mine Counter-Measure Exercise (WPMCMEX), Rim of the Pacific Exercise (RIMPAC), anti-ballistic



Missile live fire exercise in the East Sea (May 2015)



Live fire exercise
in the East Sea



Navy anti-air, anti-surface,
anti-submarine fire training



Navy UDT SEAL
cold weather
training

missile training, and the Search and Rescue Exercise (SAREX) conducted with neighboring nations such as Japan, China and Russia. The combined training and exercises carried out during the past two years are detailed in <Chart 3-17> below:

<Chart 3-17> Navy Combined Exercises during the Past Two Years

Unit: a time

Category	Total	Domestic			Overseas		
		Subtotal	ROK-U.S. combined	Multilateral combined	Subtotal	ROK-U.S. combined	Multilateral combined
2015	20	16	14	2	4	1	3
2016	21	15	14	1	6	-	6

Cruise training³⁰⁾ takes place for a period of 90-120 days every year, alternately in one of the four navigation routes in the world's four sea areas. In 2015, cruise training covered 15 countries. Combined anti-air operations and combined multilateral naval communications process exchanges with navy forces and air forces of host countries are contributing toward the enhancement of task performance capabilities of midshipmen as well as military cooperation and exchange with these countries.

To carry out these training realistically, the Navy is building a scientific training system by setting up the Integrated Maritime Tactical Training Ground and the Guided-Weapon Tactical Simulation Center, both of which make use of simulation equipment to reflect changes in naval weapons systems. This is coupled with a plan to construct a modern standard training center enabling naval ships damage control training³¹⁾ in an environment similar to an actual ship.

The Air Force is carrying out realistic combat training, including local provocation readiness training, wartime operations readiness training and specific mission-based training, under the goal of fostering elite warriors, trained primarily for combat missions, that are able to promptly respond to all types of situations and threats. The various kinds of local provocations readiness training conducted by the Air Force include Northwestern Islands (NWI) provocation readiness training, combined coastal infiltration training, maritime infiltration interdiction training, nighttime infiltration and attack training, aircraft hijacking and air terrorism response training, and guidance training for aircraft carrying defectors and refugees.

Two types of wartime operations readiness training are conducted which are independent

30) The cruise training is offered to seniors of the Navy Academy.

31) This training is aimed at improving the ability to control all types of damage to naval ships and risk factors, from ensuring the effective readiness posture in peacetime to response to and recovery from damage situations so that fighting capabilities are maintained at their maximum level at all times.

training solely by the ROK Air Force and the ROK-U.S. combined training. Independent training and exercises conducted by the ROK Air Force includes combat readiness training, wartime battle space management training, wing/combat command air strike package training and large-scale campaign-level training (Soaring Eagle). The ROK-U.S. combined training and exercises include a

large-scale combined air campaign exercise (Max Thunder), aerial refueling exercise, a multinational combined tactical training (Red Flag-Alaska), and humanitarian assistance and disaster relief training (Cope North).

Specific mission-based training by the Air Force ranges from defensive counter-air training to air interdiction training, close air support training, air transport/special operations training and combat search and rescue training. Defensive counter-air training to counter attempts at intruding into the ROK air space by enemy infiltration forces is carried out in the form of massive track infiltration response training or combined air-defense training. Air interdiction training is aimed at disrupting, delaying and destroying enemy support forces that have been augmented to the front area before they become a threat to the ROK military. With focus on enhancing the capacity to detect and attack moving targets, air interdiction training is regularly carried out together with ground forces, the Joint Surveillance and Target Attack Radar System (JSTARS), and Special Warfare Command aircraft strike controllers, as a combined or joint exercise. Close air support training to support operations by ground and naval forces is conducted both as daytime and nighttime exercises, urban and maritime exercises and in the form of rear-area close air support training.

Airborne/special operations training, aimed at enhancing operational capabilities related to low-altitude infiltration and airborne missions, takes the forms of air transport training and air mobility aircraft airdrop package training. Meanwhile, to improve the capability for wartime combat search and rescue operations, joint search and rescue training with the Special Warfare Command, maritime search and rescue operations under lighting support, and combat search and research taskforce training are conducted.

In tandem, scientific training, assisted by ground simulation training equipment, the air



Multilateral combined tactical training (October 2016)



2016 air defence
artillery competition



2016 multinational combined
tactical training (Red Flag-Alaska)

combat maneuvering instrumentation (GPSACMI) and the electronic warfare training system (EWTS), is also carried out due to limitations in carrying out actual air maneuvers training. Combined training by the Air Force during the past two years is listed in <Chart 3-18> below:

<Chart 3-18> Air Force Combined Exercises during the Past Two Years

Unit: a time

Category	Total	Domestic			Overseas		
		Subtotal	ROK-U.S. combined	Multilateral combined	Subtotal	ROK-U.S. combined	Multilateral combined
2015	5	3	3	-	2	-	2
2016	5	3	3	-	2	-	2

The Marine Corps conducts a wide variety of education and training programs to build the capability to operate as effectively on the ground and at sea as in the air, and satisfactorily fulfill amphibious operations, Northwest Islands defense operations, and stabilization operations.

Commanding officers and staff members undergo battle command training aided by computer simulation techniques to thoroughly familiarize themselves with command procedures and strengthen operational execution capabilities. This is coupled with combined arms training specialized for each unit and wintertime cold weather training.

To foster battle-ready operational execution capabilities, the Marine Corps participates in the Cobra Gold Exercise, Khaan Quest Exercise, RIMPAC and other overseas training and carries out combined types of training such as the ROK-U.S. Marine Combined Amphibious Exercise (Ssang Yong) and the Korea Marine Exercise Program(KMEP).³²⁾ The northwest islands defense training program is notably conducted using a method centered on past precedents to allow the Marine Corps to maintain a preemptive readiness posture. The combined amphibious exercise (Ssang Yong) is carried out in a manner to improve the capability for combined forcible entry operations.



Combined Amphibious Operations Exercise (March 2016)

32) A ROK-U.S. combined training program for tactical marine units conducted in the ROK with the objective of enhancing combined operational execution capabilities and increasing interoperability between the two countries' marine corps through a systemic approach.



Maritime firing
exercise near the
Northwestern Islands



Navy-Marine Corps
joint amphibious
operations exercise



ROK-U.S. Marine
Corps combined air
land battle training

Combined training and exercises by the Marine Corps during the past two years are detailed in <Chart 3-19>:

<Chart 3-19> Marine Corps Combined Exercises during the Past Two Years

Unit: a time

Category	Total	Domestic			Overseas		
		Subtotal	ROK-U.S.	Multilateral	Subtotal	ROK-U.S.	Multilateral
2015	21	17	16	1	4	1	3
2016	22	18	17	1	4	1	3

| Joint³³⁾ Exercise³⁴⁾ and Training³⁵⁾ | In the face of the dire security conditions on the Korean peninsula, the ROK military maintains a robust readiness posture by concentrating on reinforcing joint and combined operational capabilities.

The Taegeuk Exercise is an annual command post exercise led by the Joint Chiefs of Staff to enhance wartime and peacetime operational capabilities and command capabilities. After receiving back the peacetime operational control of the ROK armed forces, the Joint Chiefs of Staff in 1995 began the Taegeuk Exercise to strengthen operational execution capabilities. With the participation of operations commands (corps-level) since 1999, the Taegeuk Exercise has grown into a theater-level command post exercise. A theater-level joint operations simulation model has been introduced for a more realistic exercise, improving its overall effectiveness. Since 2014, the focus in the exercise has been placed on increasing proficiency with operational procedures, particularly in areas that are actually important for the ROK forces to prepare.

The Hoguk Training is a military-wide field training carried out annually under the command of the Joint Chiefs of Staff to ramp up the operational execution capabilities of large-size units. Starting in 2015, the Hoguk Training has been linked with the Hwarang and other similar training programs, with the East and West Sea exercises becoming integrated, in an effort to enhance the efficiency of training and strengthen its jointness.

The Hwarang Training is a rear-area training participated by all national defense elements including civilian, government, military and police forces. The goal of the training is to

33) Activities, operations and organizations participated by two or more branches of the armed forces of the same country for a common goal.

34) Exercise aimed at improving proficiency with operations execution procedures, and conducted as close as possible to the real combat while considering operational plans, doctrines, and battlefield environments.

35) Training to help individuals and units acquire skills necessary to carry out their assigned tasks through practice.



Hoguk Training
(Namhangang
River river-crossing
training)

achieve proficiency with implementation procedures for wartime and peacetime operational plans and firmly establish the integrated civilian-government-military-police defense posture. The Hwarang Training is scheduled to be upgraded to a realistic integrated defense exercise into which all national defense elements are concentrated by 2018, through consolidation with the Chungmu Exercise.³⁶⁾

| Combined³⁷⁾ Training and Exercise | The Key Resolve (KR) exercise and the Foal Eagle (FE) training are a ROK-U.S. combined theater-level command post exercise (CPX) and a combined field training exercise (FTX) that are carried out annually, during the first half of the year.

The KR exercise focuses on monitoring and testing the combined defense posture and improving proficiency with warfighting procedures.

In 2015, the establishment of the Opposing Force (OPFOR) Operation Plan led by the Joint Chiefs of Staff, coupled with a follow-up review, helped to increase the ROK military's ability to take the initiative in theater-level combined exercises. Five countries contributing combat forces to the United Nations Command (UNC), including Australia, Canada, Denmark, the UK and France, attended the combined exercise as observers. To enhance the ROK military's planning capability, the ROK and the U.S. agreed to have the ROK military take the lead in planning starting in 2017.

The FE training is a field training aimed at improving the ROK-U.S. combined operations and rear-area protection operations capabilities. Since 2008, the Foal Eagle Exercise has been conducted together with the KR exercise in an integrated manner. In 2016, the exercise was carried out by a ROK-US combined force that was enhanced quantitatively and qualitatively as a multilateral combined forces exercise with the participation of Canadian, Australian and New Zealand forces.

The Ulchi Freedom Guardian (UFG) exercise is a theater-level command post exercise aimed at enhancing the independent capabilities of the ROK military as well as the ROK-U.S. combined capabilities against local provocations by North Korea and the warfighting capabilities of the ROK-U.S. combined forces in the event of a full-scale war. In 2015, the effective-



Key Resolve (KR) exercise 2016

³⁶⁾ An emergency readiness exercise to test and ascertain the effectiveness of wartime readiness plans and improve proficiency with their implementation procedures, centered on hands-on exercises.

³⁷⁾ Refers to the relationship of cooperation between military units or government organizations of two or more countries or allied nations.

ness of the exercise was increased through close cooperation with the United States Pacific Command (USPACOM). Seven countries providing combat forces to the UNC, including the U.K., France, Australia, Canada, Denmark, New Zealand and Colombia attended the UFG exercise as observers.

In accordance with the conditions-based wartime operational control (OPCON) transition plan, the ROK and the U.S. will continuously explore ways to develop future-oriented combined exercise execution means to build the ROK military's capability to take the initiative in combined exercises. The Joint Warfighting Simulation Center (JWSC), newly established in 2014, has developed and is fully utilizing the Joint Training System (JTS). The Center develops war game models for joint and combined drills and provides exercise control and simulation control services, playing the role of a control tower. Battle simulation centers (BSC), located in the U.S. mainland and on the Korean Peninsula, are connected to each other through a dedicated war game network, providing support toward joint and combined exercises as well as independent exercises by the ROK military and the USFK, and war game conducted by educational institutions.



Joint Warfighting Simulation Center

4. Strengthening Moral Education of Servicemembers

| Moral Education System and the Current Status | To nurture a sound defense and security vision in servicemembers and arm them with a soldierly mindset and an unwavering resolve to prevail, the ROK military is strengthening its moral education.

Under the banner of 'Mental Armament before Combat Skills Learning,' the regular curriculum for newly-enlisted soldiers is extensively allocated to moral education subjects such as 'Military Spirit,' 'National Vision' and 'Security Vision.' Training programs and barracks life as a whole are used as platforms for moral education.

School-based moral education is focused on the thorough internalization of national, security and military values. To help officers acquire the requisite capabilities of future military instructors, strong emphasis is laid on presentations and discussion-oriented education and hands-on training for student-instructors.

For unit-level education, intensive moral education sessions are offered on a daily, weekly and half-year basis to bolster the mental readiness of troops and their determination to prevail. Educational effectiveness is amplified through video lectures by experts via Defense TV and

IPTV, self-study and practical experiential education. In addition to the regular curriculum, a newspaper in education (NIE) program has been introduced as a special moral education tool to increase the awareness of the security situation among servicemembers and nurture sound values in them.

To magnify the effectiveness of moral education, diverse and creative content that can appeal to the current generation of servicemen and women is produced, and support is also provided toward the production of such content. Specialists in relevant fields are invited as guest lecturers to conduct battalion-level moral education seminars.

Meanwhile, the ‘Unification and National Security Vision Contest’ during which servicemembers present content they prepared themselves helps them to spontaneously internalize defense values and put them into actions, at the same time as adding excitement to life in barracks.



2015 Unification and National Security Vision Contest (July 2015)

| Establishment and Operation of the National Defense Agency for Spiritual and Mental Force Enhancement | In 2013, the National Defense Agency for Spiritual and Mental Force Enhancement was established by consolidating mental and moral education functions scattered across each service agency, to strengthen education on national and security values. Under its initiative, a new military spirit curriculum has been created for field-unit combat troops and officers from the rank of Lieutenant Colonel to Major. The curriculum consists of case studies on military spirit, discussions about role models and trips to historic battlefields. The agency also carries out a variety of research and development activities, including hosting seminars to promote the development of mental force, calling for papers on mental force-related themes and developing content.

| Personality Education of Servicemembers | To foster outstanding servicemembers who are also positive and responsible citizens of a democratic society, a character education system has been established, with emphasis on seven fundamental values including creativity, courage, responsibility, respect, cooperation, loyalty and justice. Intensive education by civilian experts in character education is coupled with video-based education in everyday ethics.

Chapter 4

Strengthening Future-Oriented National Defense Capabilities



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Section 1 Refinement and Development of Defense Reform

MND continues to push ahead with the Defense Reform Basic Plan (2014-2030)— which reflects both domestic and foreign security situations as well as changes in the defense environment—with the aim of fostering an “advanced elite military.” While the military is undergoing structural reform in order to become more responsive to contingencies of future warfare, MND has also been seeking innovative ways of establishing a highly efficient and advanced management system for national defense. Lately, the reform has been gaining even more ground via additional developments in “Creative Defense.”

1. Status and Progress of Defense Reform

In December 2005, MND established its first Defense Reform Basic Plan (2006-2020) in response to the changing patterns in warfare— mainly precipitated by scientific advancements—and heightened demand for more innovative defense management in general. Aiming to transform the military from a quantitative structure revolving around manpower into a qualitative structure centered on information and knowledge, MND has not only expanded the country’s civilian-ruled defense, but also transformed the military structure into one that is more suitable for future warfare. In addition, MND has also sought to improve barracks culture in order to meet the contemporary standards and allow systematic reform for low-cost yet highly efficient defense management.

Since then, MND has amended and reinforced the basic plan according to assessments made every five years under the National Defense Reform Act on domestic and foreign security situations and the overall progress of defense reform. In 2009, MND adopted the newly revised Defense Reform Basic Plan (2009-2020), which prioritized countermeasures to military threats from North Korea, such as long-range missile launches and its second nuclear test, before moving on to other agenda, such as cultivating future warfare experts and improving the effectiveness of research and development through the private sector.

In August 2012, MND once again modified the Defense Reform Basic Plan (2012-2030) in order to reflect further changes in the domestic and foreign security environment, especially after the attack against the ROKS *Cheonan* and the shelling of Yeonpyeongdo Island. By extending the target year for the completion of reforms from 2020 to 2030, MND primarily

focused on increasing the ROK's deterrence capabilities against North Korea and restructuring the armed forces into the most optimized unit structure for responding to North Korean provocations.

Since 2013, there has been an upsurge in North Korea's asymmetric threats—nuclear and other WMD threats— and a heightened demand for a more efficient defense management system. As a result, in March 2014, the Defense Reform Basic Plan (2014~2030) was set in motion with the intention of training an “advanced elite military force backed by innovation and creativity.” The primary focus of the plan is not only on attaining the capabilities required to simultaneously prepare for North Korea's asymmetric threats and those of local and full-scale war, but also on improving the military structure— by such means as increasing the number of officers and NCOs—to prepare against a reduction in military resources. Moreover, the combat capacity of the nation's military forces is being boosted by realistic training and more effective management of military personnel while efforts such as improving mobilization, training reserve forces into an elite force, and innovating logistics operations are pursued to establish an advanced defense management system.

In 2016, MND drafted the Defense Reform Basic Plan (2014~2030) Change 1 based on its assessment of the progress achieved by all the defense reforms over the preceding ten years. After devising the optimal countermeasures against military threats from North Korea, MND rectified its plans for the reorganization of troops and focused on securing core combat power linked to structural reform while considering the nation's fiscal outlook. Furthermore, the new revision also reflects other areas that may contribute to future advancements in national defense, such as the creative development of human resources, and the establishment of ICT-based training environments and the foundation for advanced national defense informatization.

Since 2015, as part of the efforts to re-establish the direction of the defense reforms and formulate a blueprint for the future, MND has been pushing ahead with its Creative Defense¹⁾ paradigm, which has so far proven to be a promising new stimulus for reform.

2. Major Achievements of Defense Reform (2013-2016)

In terms of military structure, the ability to execute joint and combined operations has been

1) A new paradigm in defense development that generates innovative defense value through convergence of creativity and scientific technology with national defense affairs

※ Innovative defense value refers to generation of creative military management, pioneering of unprecedented types of military strength, realization of highly efficient and advanced defense management, and construction of a convergent ecosystem that enables civilian and military structures to co-exist with mutual benefits.

strengthened by carrying out organizational restructuring within the Joint Chiefs of Staff (JCS), Army, Navy and Air Force. In order to enable offensive integrated operations²⁾ under a network-centric environment, the mobilization division of the Army was reformed along with the creation of the Navy's Submarine Command, Marine Corps'9th Brigade, and the Air Force's Tactical Air Control Wing. Between 2006 and 2016, the number of standing troops was reduced by almost 56,000 personnel, while the proportion of officers was increased by 6.2% as part of the transition to an elite military structure. Furthermore, K2 tanks, Korea Utility Helicopters (KUH), submarines, frigates (FFX) and Medium-range Surface-to-Air Missiles (M-SAM) were all reinforced in order to help cope with North Korea and other potential threats.

In the field of defense management, military occupational specialties open to female servicemembers have now been expanded to include all specialties, and the number of training corps for female cadets has been increased from two to three. In order to form elite mobile reserve forces, a part-time service system for officer reservists was carried out in a trial run, while in the case of homeland defense reservists, old or obsolete personal firearms have been entirely replaced with M16s.

A total of eighteen organizations, including the Joint Interoperability Technology Center, have been designated as organizations operating under the responsibility of the military, while the efficiency of defense management has been enhanced by replacing noncombatant military vehicles with commercial vehicles. Meanwhile, investments in defense R&D have been expanded gradually in order to ensure optimal conditions for more creative research and development.

In order to enhance the sense of pride and raise the morale of the men and women of the armed forces, salaries have been increased and recreational facilities expanded. Also, the childcare environment of military families has been improved through the establishment of military day-care centers and joint childcare facilities. Meanwhile, a system for remote medical examination and treatment as well as medical evacuation helicopters have been provided for servicemembers serving in areas with limited accessibility, such as the frontline guard posts (GP) and coastal guard posts.

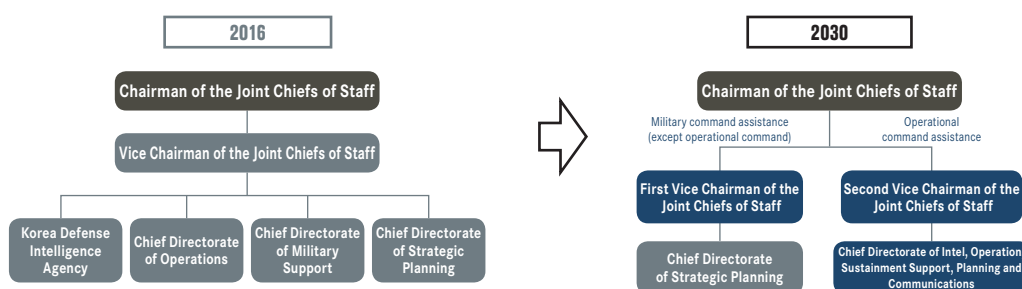
3. Direction of Military Structure Reform

| **Command Structure** | The command structure will be restructured in the direction of

2) A concept to win a war by paralyzing the enemy's center of gravity through the preemptive and proactive integration of capabilities and activities across all areas of land, sea, air, space and cyberspace while adhering to an offensive mindset under a Network-Centric Operational Environment (NCOE)

strengthening jointness and preparing for the future operational environment on the Korean Peninsula while maintaining the current joint forces system. The Joint Chiefs of Staff (JCS) is establishing a theater operation command and execution system with the JCS at the center by focusing on reinforcing military command³⁾ assistance, intelligence and operations functions. The JCS will be restructured to distinguish the operational command section that carries out theater operations⁴⁾ and the military command assistance section that carries out military strength build-up and military structure development. The reorganization plan for the JCS is shown in <Chart 4-2>.

<Chart 4-1> Organization Plan of the Joint Chiefs of Staff



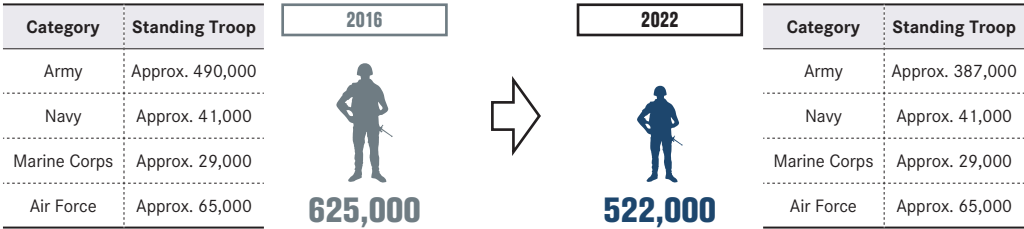
As the Republic of Korea and the United States of America have agreed during the 46th Security Consultative Meeting in 2014 to shift gears from the current Combined Forces Command structure into a ROK-led Future Command⁵⁾ based on the Future Command Structure concept, a Future Command organization will be gradually established within the JCS to strengthen the ROK's combined command capabilities in conjunction with the pursuit of the "conditions-based wartime operational control transition".

| Troop Structure | In an effort to transform the military from a conventional quantitative structure to an advanced qualitative structure, the number of standing troops will be reduced to 522,000 by 2022. The cutback will fall specifically on the Army alone, where it is estimated that approximately 387,000 troops of the current 490,000 will remain, while the number of personnel in the Navy, Marine Corps and Air Force will remain the same. The reduction will

- 3) The military command responsible for the establishment of operations for strategic planning and military strength build-up as well as operational command and management of operation forces.
- 4) The authority for planning and enforcing joint and combined operations, independent operations and operations against local provocations as well as for leading military training relevant to such operations.
- 5) As a ROK military-led theater operations command consisting of a ROK-U.S. combined staff, the Future Command will be responsible for the ROK's defense and combined operations during wartime.

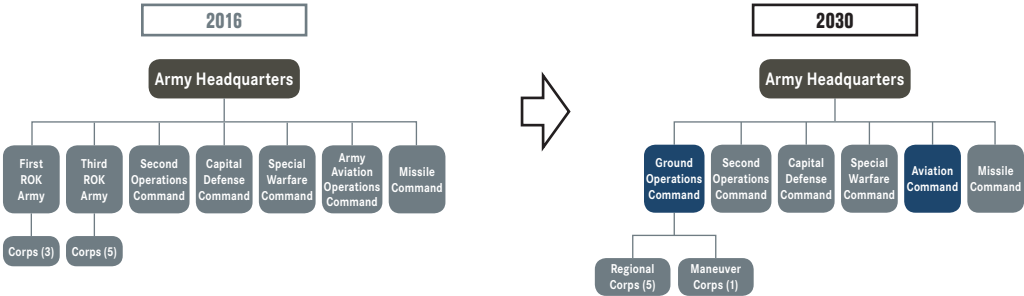
occur gradually, taking into consideration the timing of both the restructuring of troop formations and the build-up of military strength in relation to weapons systems. The aim is to increase the cadre force to consist more than 40% of the entire manpower by 2025, with the ultimate goal of forming a more elite military force centered on the cadre force. The standing troop reduction plan is shown in <Chart 4-2>.

<Chart 4-2> Standing Troops Reduction Plan



| Unit Structure | The Army will be restructured into a unit based structure capable of executing integrated offensive operations under a network-centric operational environment. In order to effectively command and control operations at the frontline, whether in times of war or peace, the Army will combine the First ROK Army (FROKA) with the Third ROK Army (TROKA) to form the Ground Operations Command. The Ground Operations Command, which will focus mainly on the crucial functions of operations command such as communications, intelligence, operations and firepower, will command the ground operations units at the corps level, while a ground intelligence group, intelligence communications group and service support group will be organized under the Ground Operations Command in order to support ground operations. The plan for the reorganization of the Army’s unit structure is shown in <Chart 4-3>.

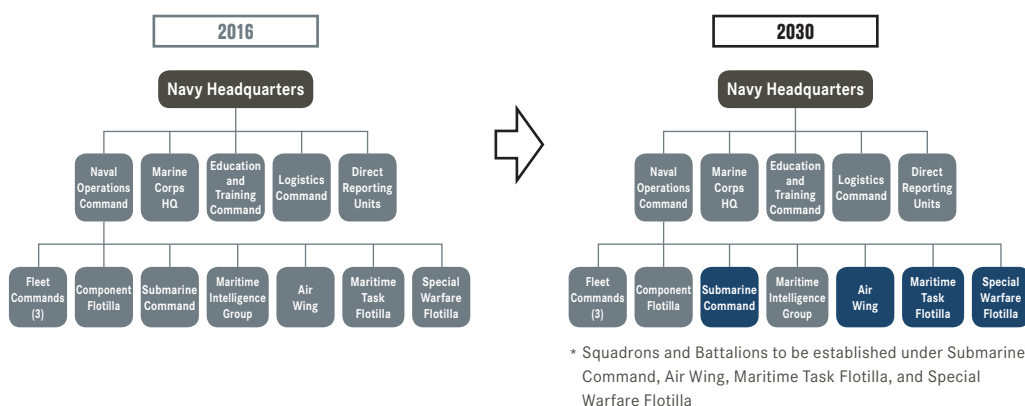
<Chart 4-3> Army Unit Structure Reorganization Plan



As the highest tactical echelon for ground operations, the regional corps will be reinforced, so that it will be able to execute independent operations, defend the frontline at each axis, and be utilized as the primary unit during offensive operations. Aviation groups, air defense artillery groups, and the logistics support brigade will be organized for each corps to reinforce both combat and combat support capabilities. This reorganization will be carried out with regard to the eastern and western operational environments. Meanwhile, the Maneuver Corps is expected to be employed as the main operational unit in the event of multi-dimensional, high-speed maneuver warfare. It will maintain its mechanized infantry divisions while reinforcing its intelligence and combat support in order to swiftly respond to changes in the operational environment on the Korean Peninsula.

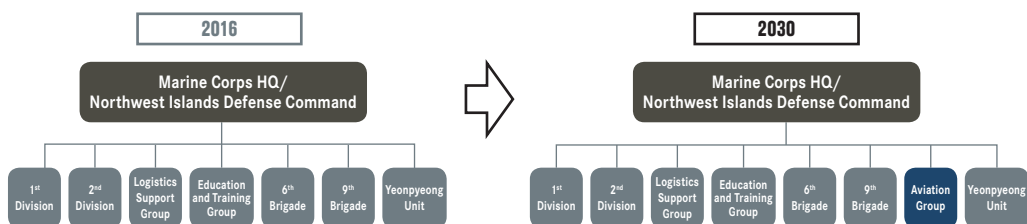
The Navy will not only prepare against the known threats by securing the ability to jointly operate its forces on a multi-dimensional level—above water, underwater and in the air—but will also strive to become capable of protecting national interests of all types, including maritime routes and resources. In line with plans to field KSS-III submarines, Aegis destroyers, naval operations helicopters and maritime patrol aircrafts, the Submarine Command, Air Wing, and Maritime Task Flotilla will be reorganized, and the special warfare flotilla's combat operations unit will be strengthened. The plan for the reorganization of the Navy's unit structure is shown in <Chart 4-4>.

<Chart 4-4> Navy Unit Structure Reorganization Plan



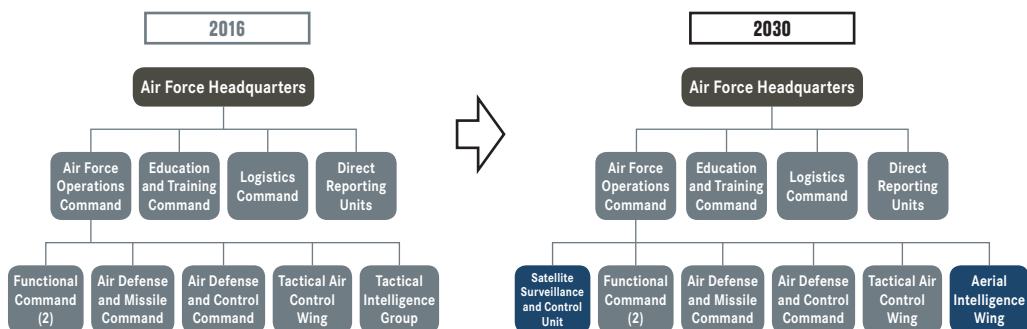
The Marine Corps will be transformed into a marine-air-ground task force that is capable of executing various types of missions, such as defending strategic islands and carrying out multi-dimensional, high-speed amphibious operations. Marine divisions will undergo restructuring via a build-up of its military strength in battlefield surveillance as well as its ability to strike and defend. Aligned with the plan to field amphibious task helicopters, the Marine Corps will also establish the Marine Aviation Group. The plan for the reorganization of the Marine Corps' unit structure is shown in <Chart 4-5>.

<Chart 4-5> Marine Corps Unit Structure Reorganization Plan



The Air Force will develop its structure to primarily focus on joint operations, specifically of air and space, in order to conduct offensive, effects-based operations. It will also create a Satellite Surveillance Control Unit that will help monitor satellite activities above the Korean Peninsula and restructure its Tactical Intelligence Group as the Aerial Intelligence Wing. The plan for the reorganization of the Air Force's unit structure is shown in <Chart 4-6>.

<Chart 4-6> Air Force Unit Structure Reorganization Plan



| Military Force Structure | The military force structure is being reformed with the focus on securing the capability to effectively respond to provocations from North Korea and other potential threats. In addition to attaining early warning and realtime surveillance capabilities, the military will establish a command and control system designed to enable network-based simultaneous integrated operations. The force structure will also be reorganized into a maneuver and strike system backed by cutting-edge science and technology.

The surveillance and reconnaissance forces will continue to monitor the Korean Peninsula and the surrounding regions, while reconnaissance satellites and surveillance drones (Unmanned Aerial Vehicles) will also be reinforced in order to assist battlefield visualization across all echelons. Moreover, command and control intelligence systems, which include command and control systems and satellite communication systems, will also be strengthened in order to assist the communication of battlefield situations and various command decisions.

Given that the operational field for ground forces will expand as a result of unit reorganization, the ground forces will be reinforced with the introduction of the 230-mm Multiple Launch Rocket System (MLRS), mid-size tactical vehicles and Korea Utility Helicopters (KUH), while K2 tanks, K-9 self-propelled guns and light armed helicopters will also be acquired to strengthen maneuver and strike capabilities.

Meanwhile, the naval forces will aim to control the surrounding seas and execute multi-dimensional, high-speed amphibious operations by acquiring various vessels such as destroyers (KDDX), frigates (FFX), submarines (KSS-III) and landing crafts (LST-II).

The Air Force will secure F-X fighters, the ROK's indigenous KF-X fighters, aerial refueling tankers and long-distance transport aircraft in order to bolster its ability to conduct long-range air operations.

They will also acquire defensive military strength, such as surface-to-air missile systems (i.e. PATRIOT), shoulder-launched surface-to-air missiles, and new protective gears against Chemical, Biological, Radiological, Nuclear and high-yield Explosive (CBRNE) attacks. The Kill Chain, Korea Air and Missile Defense (KAMD) system, and Korea Massive Punishment and Retaliation (KMPR) plan will provide further countermeasures to North Korea's nuclear and missile threats.



High-altitude unmanned surveillance aerial vehicle



230 mm MLRS



Destroyer (KDDX)

4. Direction of Defense Management Reform

| Improvements in Defense Training and Personnel Management | In order to help cultivate the ability to carry out combat missions during various battle situations and to implement systematic training, scientifically advanced training centers will be established at fifteen pre-existing military training grounds, and by 2030, roughly 3,300 training sites will be integrated by region for army and division level units and by garrison for echelons at bat-

talion-level and higher. The military will draw up a plan to acquire and utilize elite manpower that have creativity and the ability to integrate, increase the selection ratio of long-term service for junior-level officers, and seek to extend the retirement age for each rank for career military servicemembers.

| Improving the Mobilization System and Training of Elite Reserve Forces | The military will modify the laws and regulations related to mobilization to enable immediate mobilization of essential forces during contingency, and pursue the establishment of the Army Mobilization Command which will be able to systematically manage and control the mobilized resources. The system that manages mobilization by region will be expanded in order to ensure efficient use of the mobilized resources and the ability to exert their combat power immediately. To train reserve cadres into an elite force, the peacetime non-standing cadre force service system will be expanded in phases until 2020. Battalion-level reserve force training sites will be integrated with brigade-level training sites by 2024 in order to provide a highly scientific training.

| Innovating the Logistics Operation System and Expanding the Utilization of Civilian Resources | MND will establish a military distribution system that reflects ongoing changes in the distribution environment, and modernize its distribution facilities through standardization. It will adopt the concept of a user-centered one-stop distribution support system,⁶⁾ and develop a logistics intelligence system that will allow the immediate support of materials and resources by keeping track of logistics assets in realtime. Furthermore, MND will continue to endeavor for efficient defense management by continuing to expand the utilization of civilian resources, such as commissioning military base management to the private sector, outsourcing the maintenance of military equipment, and renting commercial vehicles.

| Advancing Defense Science Technologies and Strengthening Cyber Warfare Response Capabilities | MND plans to foster the Agency for Defense Development into a world class research facility with the aim of promoting joint research and development between the private and military sectors as well as developing state-of-the-art weaponry and core defense technologies. The groundwork for the defense industry will be strengthened as MND plans to welcome inputs from firms that possess cutting-edge technologies, enabling R&D projects of more creative and inventive ideas for future weapons systems. The fast-track method will be introduced and an educational institute specializing in defense acquisition will also be established in order to improve the overall defense acquisition system. As for bolstering response

6) Reducing costs in budget, manpower and facilities by eliminating any factors that may hinder the efficiency of the current military distribution system and also reducing the number of stages in the distribution process from 5 stages to 3 stages in order to allow more timely and systematic distribution for the user

capabilities against cyber warfare, MND will foster cyber experts and continue to develop new cyber technologies.

| Improving Welfare and Conditions for Military Service | To enhance the quality of life for military personnel, childcare facilities and services within the military will be improved, additional culture centers and recreational facilities will be opened within the barracks, and better welfare will be provided to servicemembers and their families. In some cases, MND may introduce certain forms of social compensation for servicemembers, such as allowing them to trade in their military experience for college credits. MND will also operate an increased number of professional counselors available for servicemembers by making these counselors available up to the battalion-level for GOP units and up to the regiment-level for general units. It will also create a healthy barracks environment focused on disease prevention, improve the military's medical support system, and pursue the establishment of a military trauma center as a specialized trauma patient treatment organization.

Section 2 Force Enhancement based on Jointness

MND continues to strengthen its defense capabilities in order to establish a robust security posture against diverse threats including the increasing threats of North Korean nuclear weapons and missiles. To this end, the ROK military has adopted a counter-fire reinforcement plan that will help realize the concept of joint military strategies and joint operations based on assessments of strategic environments and threat analyses.

1. Basic Direction of Force Enhancement

In order to effectively respond to various military threats from North Korea, MND is enhancing its forces based on selection and concentration strategy within a framework of available funds. MND will enhance those forces required to prepare against North Korea's nuclear and missile threats, which are difficult to withstand, as the top priority. With regard to those forces required to prepare against North Korea's local provocation threats which have a large policy and strategic impact, MND will acquire vital forces first focused on gaining an edge over North Korea. Forces to prepare against terrorism, cyber threats and a full scale war will be gradually reinforced considering the availability of financial resources.

In terms of key battlefield functions, battlefield awareness will be improved by acquiring, in phases, reconnaissance satellites, multi-purpose satellites and various other manned and unmanned surveillance aircraft, as well as signal intelligence collection systems. Such acquisitions are expected to furnish the ability to survey and reconnoiter the Korean Peninsula and its surrounding areas, in addition to securing early warning systems and enhancing battlefield visualization capabilities. As for command and control and communication forces, MND will focus on establishing a realtime network for sharing information on battlefield situations by improving the interoperability of command and control systems for each echelon and building a high-speed, high-capacity, digital-based communications system. The underlining purpose is to create a network-based operational environment by expanding both the capacity for timely decision support and command and control.

As for ground forces, MND will continue to acquire the K-series tanks and self-propelled artillery, 230-mm MLRs, KUHs, and long-range missiles in order to enhance the ground

forces' capacity for offensive integrated operations. Also, considering that the area of operational responsibility for each echelon is expanding, MND will acquire an automated combat system with enhanced maneuverability, firepower and defensive capabilities, as well as intelligent ammunitions of a new concept.

Meanwhile, the naval forces will acquire KSS-III submarines, maritime patrol aircraft and amphibious attack helicopters in order to boost its capabilities for maritime control of areas surrounding the Korean Peninsula and multi-dimensional amphibious operations.

The air forces will progressively acquire F-X fighters and KF-X fighters to enhance its air operation capabilities, and will improve its long-range air operations and ability to launch precision strikes on strategic targets by acquiring aerial refueling tankers and precision-guided weapons.

The defense forces will gradually enhance their defense capabilities against aircraft and ballistic missiles as well as EMP⁷⁾ and chemical, biological and radiological attacks. Defense capabilities for individuals, facilities and equipment will also be reinforced to help guarantee a higher survival rate during the early stages of a war.

2. Major Force Enhancement Projects

| 2013 Force Enhancement Projects | The 2013 defense budget amounted to 34,497 billion won, of which 10,174.9 billion was allocated to the force improvement budget, representing a 2.8% increase from 2012. The major force enhancement projects for 2013 are as shown in <Chart 4-7>.

<Chart 4-7> Major Force Enhancement Projects for 2013

Weapon Systems	Ongoing Projects	New Projects
Battlefield Awareness/ Command and Control, Communications	<ul style="list-style-type: none"> • High-altitude unmanned surveillance aerial vehicle (HUAUV) • Satellite all-military air defense warning system 	<ul style="list-style-type: none"> • Performance upgrade of reconnaissance UAVs for corps • Portable satellite / air-to-ground communication radio
Maneuver / Fire	<ul style="list-style-type: none"> • K-2 Tank • K-10 ammunition supply vehicle 	<ul style="list-style-type: none"> • Remote fire control system • K-56 ammunition supply vehicle
Maritime Assets	<ul style="list-style-type: none"> • Amphibious Ship (LST-II) • Jangbogo II-class submarine 	<ul style="list-style-type: none"> • Auxiliary training ship • Amphibious attack helicopter
Air Assets	<ul style="list-style-type: none"> • Intermediate-range GPS-guided bomb 	<ul style="list-style-type: none"> • Tactical Air Control Wing

7) Electro-Magnetic Pulse

| 2014 Force Enhancement Projects | The 2014 defense budget amounted to 35,705.6 billion won, of which 10,509.6 billion was allocated to the force improvement budget, representing a 3.3% increase from 2013. The major force enhancement projects for 2014 are as shown in <Chart 4-8>.

<Chart 4-8> Major Force Enhancement Projects for 2014

Weapon Systems	Ongoing Projects	New Projects
Battlefield Awareness/ Command and Control, Communications	<ul style="list-style-type: none"> • High-altitude unmanned surveillance aerial vehicle (HUAV) • Thermal observation device (TOD-III) 	<ul style="list-style-type: none"> • Mobile sea surveillance radar • Air traffic control radar
Maneuver / Fire	<ul style="list-style-type: none"> • K-2 Tank • Counter-fire radar 	<ul style="list-style-type: none"> • 230mm MLRs • Remote controlled munitions
Maritime Assets	<ul style="list-style-type: none"> • PKX-B (Batch-I) • Jangbogo II-class submarine (Batch-I) 	<ul style="list-style-type: none"> • Amphibious Transport Ships
Air Assets	<ul style="list-style-type: none"> • F-X 	<ul style="list-style-type: none"> • Korean indigenous fighters (KF-X)

| 2015 Force Enhancement Projects | The defense budget for 2015 amounted to 37,555 billion, of which 11,014 billion was allocated to the force improvement budget, representing a 4.8% increase from 2014. The major force enhancement projects for 2015 are as shown in <Chart 4-9>.

<Chart 4-9> Major Force Enhancement Projects for 2015

Weapon Systems	Ongoing Projects	New Projects
Battlefield Awareness/ Command and Control, Communications	<ul style="list-style-type: none"> • High-altitude unmanned surveillance aerial vehicle (HUAV) • Thermal observation device (TOD-III) 	<ul style="list-style-type: none"> • Reconnaissance UAVs for Divisions • Tactical Information Communication Network (TICN) • Korean Joint Tactical Data Link
Maneuver / Fire	<ul style="list-style-type: none"> • K-2 Tank • K-9 Self-Propelled Artillery 	<ul style="list-style-type: none"> • New 7.62mm machine gun • Minefield Clearing Line Charge
Maritime Assets	<ul style="list-style-type: none"> • Gwanggaeto III-class Destroyer • Jangbogo III-class submarine (Batch-I) 	<ul style="list-style-type: none"> • Submarine Rescue Ships (ASR-II) • New sea surveillance radar
Air Assets	<ul style="list-style-type: none"> • F-X • Aerial Refueling Tanker 	<ul style="list-style-type: none"> • Basic training helicopter

| 2016 Force Enhancement Projects | The 2016 defense budget amounted to 38,842.1 billion won, of which 11,682.4 billion was allocated to the force improvement budget, representing a 6.1% increase from 2015. The major force enhancement projects for 2016 are as shown in <Chart 4-10>.

<Chart 4-10> Major Force Enhancement Projects for 2016

Weapon Systems	Ongoing Projects	New Projects
Battlefield Awareness/ Command and Control, Communications	<ul style="list-style-type: none"> • High-altitude unmanned surveillance aerial vehicle (HUAV) • Tactical Information Communication Network (TICN) 	<ul style="list-style-type: none"> • Joint Operation Analysis Model-II (R&D)
Maneuver / Fire	<ul style="list-style-type: none"> • K-2 Tank • K-9 Self-Propelled Artillery 	<ul style="list-style-type: none"> • Wheeled Armored Combat Vehicles • Medium Range Infantry Missiles
Maritime Assets	<ul style="list-style-type: none"> • Gwanggaeto III-class Destroyer • Jangbogo III-class submarine (Batch-I) 	<ul style="list-style-type: none"> • Amphibious Attack Helicopters • 2.75-inch Guided Rocket
Air Assets	<ul style="list-style-type: none"> • F-X • Aerial Refueling Tanker 	<ul style="list-style-type: none"> • GPS Guided Bomb (500lbs class) • Air Combat Maneuver Training System

3. 2017-2021 Defense Mid-term Force Enhancement Plan

Beginning in 2017 and continuing for the next five years, the focus will remain on establishing the Kill Chain and the Korea Air and Missile Defense (KAMD) to defend against North Korea's nuclear weapons and missiles, reinforcing the main forces that are undergoing military restructuring under the current defense reforms, and strengthening the nation's military capacity to respond to local provocations and a full scale war.

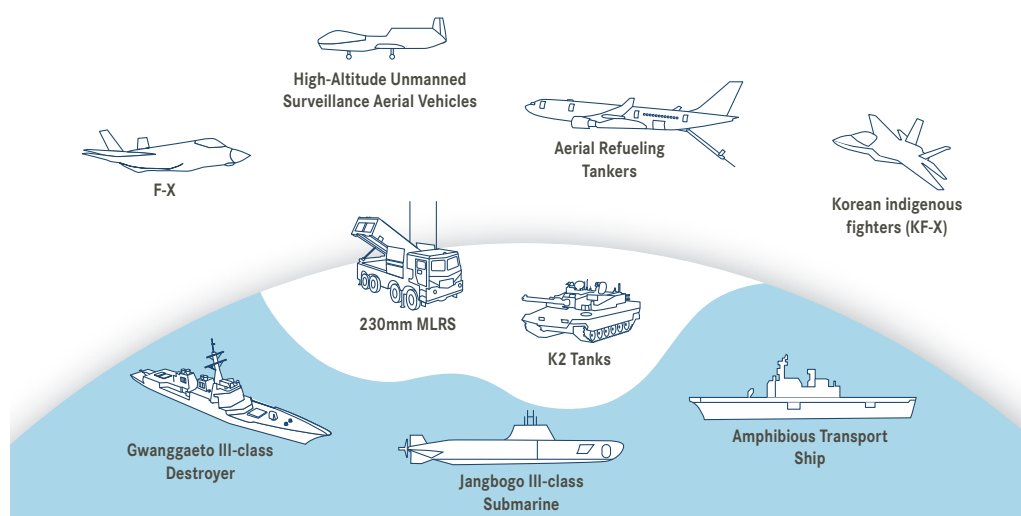
In preparation against North Korea's nuclear and missile threats, the ROK military will enhance its ability to detect, distinguish and attack any and all parts of North Korea by acquiring mid- and high-altitude surveillance drones, long-range air-to-surface guided missiles, and early warning radars for ballistic missiles. The ability to detect submarine-launched ballistic missiles (SLBM) will be particularly reinforced so that the Kill Chain and the KAMD can be introduced at the most appropriate time.

To prepare for the expansion of the operational arena and the reduction of troop numbers as elements of the national defense reform, MND will acquire the forces essential for military restructuring at the most suitable time. The surveillance area will be expanded by reinforcing the unmanned reconnaissance aircraft for each echelon, and the employment of forces will be reduced but more efficient by procuring and upgrading various items of military equipment such as K2 tanks and 81-mm mortars. Furthermore, personal night vision goggles and communication equipment will be supplied to troops at the battalion-level and lower units in order to strengthen the unit's combat power.

In order to strengthen its defense capacity against local provocations and a full scale war, the ground forces will attain the capability to strike North Korea's newly developed 300-mm multiple rocket launcher by acquiring tactical surface-to-surface guided weapons and 230-mm multiple rocket launchers. They will also strengthen the capability to prepare against covert

enemy invasions and surprise attacks by field deploying local air defense radars and Mine Detector II. Meanwhile, naval and amphibious forces will deploy new high-speed boats and 2.75-inch guided rockets in order to prepare against Northern Limit Line (NLL) provocations and ambushes of islands. Ulsan-class frigates and 3,000-ton submarines will help strengthen surface and underwater operations, while amphibious operation capabilities will also be enhanced by reinforcing large transport vessels and landing ships. The air forces will secure their ability to perform covert infiltrations and long-distance operations, as well as its strike ability against all parts of North Korea by field deploying the F-35A and aerial refueling tankers. It will also aim to gain the upper hand in air operations by enhancing the performance of the KF-16 and by conducting further research and development on the KF-X fighter.

<Chart 4-11> 2013~2016 Major Force Enhancement Projects



4. Efficient Pursuit of Defense Force Improvement Project⁸⁾

| Modification of Laws and Regulations regarding Defense Acquisition | In order to carry out defense force improvement projects in a transparent and efficient manner, defense project related laws and regulations are being revised.

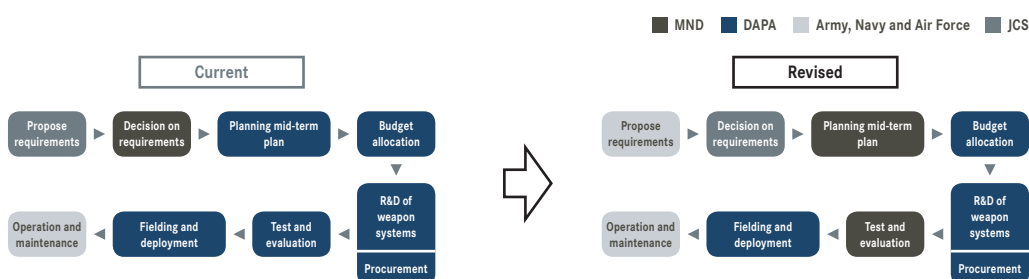
In 2014, the authority to decide the requirements concerning weapon systems was handed from MND to the Joint Chiefs of Staff, while the authority to establish the mid-term defense

⁸⁾ Project to enhance military capabilities by purchasing weapon systems, carrying out R&D including new development and performance enhancement, and establishing relevant facilities required for such activities (Article 3 of the Defense Acquisition Program Act)

plan, prepare the test and evaluation plan, and reach a decision on the evaluation was transferred from the Defense Acquisition Program Administration (DAPA) to MND in order to strengthen the connection between defense policies and defense force improvement projects and to improve the independence and objectivity of tests and evaluations. Henceforth, DAPA will focus on drawing up the defense budget for defense force improvement, program management, and the execution of contracts.

Through such a restructuring of functions and management between the relevant organizations, defense acquisition is now expected to become more systematic and efficient than ever before.

<Chart 4-12> Modification due to the Revision of Defense Acquisition Program Act (2014. 11. 10.)



Since 2015, intellectual property rights concerning defense R&D contributed by non-profit entities, such as universities and government-funded research institutes, have been acknowledged in an effort to encourage greater participation by the private sector. Furthermore, if a core research and development project proposed by an appointed research institute⁹⁾ is selected, the corresponding research institute responsible for the project will be given the authority to lead the project.

In December 2015, the Defense Industry Technology Protection Act was enacted in order to systematically protect valuable technologies and prevent them from being leaked overseas.

| Requirement Review and Analysis and Evaluation | MND, bearing in mind the defense budget and finances, currently enforces a requirement review framework – as determined by the JCS – that inspects the adequacy and validity of weapons systems as part of the effort to promote efficient defense acquisition.

The Force Requirements Review Committee (FRRC) has greatly contributed to making the defense acquisition process more efficient, having reviewed a total of 36 requirement cases

9) An institute appointed by the Administrator of the DAPA to develop, test and measure defense commodities; manufacture and inspect relevant machinery and tools; analyze the defense industry; and develop related software (Article 3 of the Defense Acquisition Program Act)

over the last three years, of which 25 cases were identified in the very early stages as requiring revision or carrying potential risk factors. Since 2015, MND has been operating an integrated system of requirement review that determines the relative priority of the requirements, and such information has been reflected in the establishment of the mid-term defense plan.

As of late November 2016, a total of 161 cases of analysis and evaluation have been carried out in order to support various decision-making processes about whether to pursue a certain project. Henceforth, the analysis and evaluation process will be developed into a method for distinguishing redundancies and connections among similar or related defense acquisition projects and prioritizing each project from a comprehensive perspective. In addition, there are plans to establish a database management system in order to make it more convenient to accumulate, manage and share the results of conducted analyses and evaluations and to increase the transparency and efficiency of the process.

| Timely Execution of Tests and Evaluations | Tests and evaluations are conducted in order to determine whether a weapons system or a core technology that is due to be acquired or developed meets the military's performance standard and criteria.

As of November 2016, MND has tested and evaluated a total of 86 projects, including the procurement of aerial refueling tankers, in the two years since taking over the responsibility from the DAPA in 2014. The results of these tests and evaluations have since been utilized in the decision-making process of whether or not to pursue the field deployment of such projects. MND will continue its efforts to conduct timely tests and evaluations in order to select only the finest weapons systems whose superior performance has been verified.

Section 3 Defense R&D and Promotion of the Defense Industry

MND is increasing the R&D budget and expanding civilian-military technology cooperation as a means to promote a future-oriented defense R&D that is both creative and challenging. MND is pursuing innovation of the defense industry in order to establish fair competition and nurture defense companies while improving the transparency, efficiency, and expertise of the industry.

1. Advancing Defense Technologies and Expanding Civilian-Military Technology Cooperation

| Promoting Creative and Challenging Defense R&D | MND is in the process of changing the paradigm of its defense R&D from one that followed advanced countries into one that is creative, challenging and future-oriented,¹⁰⁾ and at the leading edge of the industry based on a “selection and concentration” strategy.

The proportion of the overall defense budget occupied by the defense R&D budget is rising.¹¹⁾ In addition, the policy of prioritizing domestic R&D has resulted in an improvement of the ROK’s defense technology, placing the country in 9th place in the world in terms of defense technology capabilities¹²⁾ as of 2015.

In January 2014, the Institute of Advanced Defense Technology Research was set up within the Agency for Defense Development to strengthen R&D on cutting-edge weapons systems and core technologies for the future, and to apply advanced technologies developed by the private sector to national defense. The number of R&D personnel involved in developing strategic weapons and new technologies is being increased in stages, and research facilities such as those dedicated to preparing for future warfare are also being strengthened. Furthermore, the designation of defense research organizations and the establishment of specialized research centers have been expanded to increase cooperation with civilian research centers and universities.

In addition, efforts are being made to create an environment that facilitates creative and

¹⁰⁾ Research and development that has considerable impact on the advancement of weapon systems or defense technology

¹¹⁾ 2013: 2.44 trillion won → 2014: 2.33 trillion won → 2015: 2.44 trillion won → 2016: 2.56 trillion won

¹²⁾ ‘2015 Analysis of National Defense Science and Technology’ (Defense Agency for Technology and Quality, 2015)

challenging R&D. The R&D budget for new technologies has been increased, and a pilot system for certifying efficient R&D¹³⁾ has been introduced. In addition, the authority to select core technology development projects has been transferred to the Agency for Defense Development in order to grant more independence to researchers. Naming civilian experts as project managers (PM) is also encouraging the execution of creative and challenging research.

In order to secure the ability to develop cutting-edge weapons systems, the R&D budget will be gradually increased until it accounts for about 15% of the entire defense budget. In addition, investment will be concentrated on future warfare, including reconnaissance, precision bombing, automation and defensive technologies.

| Strengthening Civilian-Military Technology Cooperation | Civilian-military cooperation is being promoted to contribute to strengthening the nation's defense and industrial capabilities. Civilian-military cooperation projects are conducted under the 'Civilian-Military Technology Cooperation Project Promotion Act,'¹⁴⁾ in close collaboration with the ministries concerned, including the Ministry of Science, ICT and Future Planning and the Ministry of Trade, Industry and Energy. As part of these efforts, the budget for joint civilian-military projects was raised to 67.7 billion won in 2016 (from 41.6 billion won in 2013). The joint projects are divided into the following four main categories: civilian-military technology development aimed at developing technologies or materials that can be used both by the military and the private sector; civilian-military technology transfer projects, which facilitate the mutual transfer of technologies; the civilian-military standard standardization project, which unifies and standardizes standards for the civilian and defense sectors; and civilian-military technology information sharing projects.

To promote civilian-military technology cooperation project, the R&D Support Center and the Institute of Civilian-Military Technology Cooperation were set up within the Agency for Defense Development in 2014.

Parts, technologies and materials developed through cooperation projects are widely used in a variety of areas of defense. Examples include the auxiliary power unit fitted in the Surion helicopter; core components of the mid-sized waterjet system used in the Navy's high speed boats; carbon and carbon compound materials used in the brake discs of the landing gear of the KF-16 fighter jet; and the technology¹⁵⁾ used in the production of components for the air vent of the T-50 jet.

13) A system that reduces potential disadvantages for R&D personnel whose project results prove to be inadequate or even a failure, and grants them the opportunity to reattempt a project if it is determined that their research has been conducted in good faith.

14) A bilateral law enacted in April 1998 between the Ministry of Trade, Industry and Energy and the Ministry of National Defense.




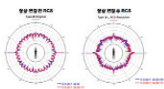

15) The technological skill that involves taking materials this is hard to process, such as subminiature titanium alloy or aluminum alloy, and freely shaping them - like one would with plastic - in order to unify the complex forms of multiple structures into a single form and lighten their weight.

<Chart 4-13> Examples of Civilian Technology Utilized in the Military

Civ. Technology	Auxiliary power unit	Small-medium waterjet system	Carbon composites	Micro aerospace component
Examples				
	Surion Helicopter	Navy Vessel	KF-16 Fighter	T-50 Advanced Pilot Training

The transfer of technologies developed with the defense R&D budget to the private sector is also on the rise.¹⁶⁾ MND has been selecting 100 items considered to have great potential for civilian applications annually since 2013; and has also placed 2,249 patented technologies in the defense technology trading system. Such efforts have led to the execution of fifteen civilian projects including the development of a cyber monitoring system for computer networks, an optical transmission and reception module, and security and certification for mobile devices.

<Chart 4-14> Examples of National Defense Technology Civilian Applications

Defense Technology	QVGA level uncooled infrared detector	Real time network traffic tracking	Vehicle radar system and target detection	Vessel RCS prediction S/W design using SBR	Security access point
Civil Applications					
	Surveillance camera	Computer network cyber detection	Optical transmission and reception module	Radar cross section prediction/analysis	Mobile terminal security authentication system

Civilian-military cooperation will continue to be strengthened and expanded to create a favorable environment for growth in both the civilian and military sectors.

2. Strengthening Competitiveness of the Defense Industry

| Strengthening the Defense Industry | The government operates a range of support measures aimed at strengthening the country's defense industry. In order to establish fair competition, the government has been widening the application of the “uni-resource, multi-sup-

16) 2013: 52 cases → 2014: 81 cases → 2015: 97 cases

plier” system.¹⁷⁾ As of November 2016, 62 defense resources are being supplied by multiple suppliers. In addition, the study of defense industry fundamentals has been systemized, and new suppliers are being encouraged to join the industry by gradually expanding the disclosure of defense resources.¹⁸⁾

Defense suppliers are also given support specifically tailored to the size of each company. The support measures for SMEs and venture companies have been put in place, and, as of November 2016, 231 companies are operating out of eight Defense Venture Centers located across the country. Companies that are evolving into established defense contractors are provided with support in developing key technologies and components. SMEs with technological capabilities and the potential to enter overseas markets are provided with support in technology development, consulting, and aid in developing export strategies. The government will continue to provide support for improving local firms’ technological capabilities and the quality of their products in order to nurture globally competitive defense companies.

| Promoting Defense Exports | The export of defense goods results in improving defense firms’ operating rates and profitability, which in turn facilitates the growth of the country’s defense industry, while the export of items of defense equipment leads to a stable revenue stream as they require a steady supply of parts after the initial sale, which has a large job creation effect.

The government has been working to secure markets and sales routes, providing strategic support for export items, and strengthening the necessary infrastructure in order to increase defense equipment exports.

As the purchasers of defense equipment are generally foreign governments, the ROK government is expanding intergovernmental cooperation, including signing defense and acquisition agreements, holding defense acquisition conferences, and encouraging interaction among high level defense officials. The government certifies the quality of local defense equipment through military aircraft airworthiness certification¹⁹⁾ and DQ mark certification²⁰⁾ among others. In addition, the government operates systems designed to assure foreign governments of the quality of domestic products, such as the defense acquisition support system. In

17) The system where additional supplier for certain resource is designated through evaluation in case a new supplier applies for the job

18) Surveying the domestic level of skills and technologies that are available as well as the conditions for production in order to procure a new supplier for pre-existing defense commodities, while simultaneously attracting private entities to join the defense industry as a result.

19) A government-sponsored certification that verifies whether a military aircraft is safe to operate within the scope of operation and whether it has the requisite capacity and functions to do so.

20) A certification bestowed by the government to sanction the quality of a military-produced export commodity in order to enhance its competitiveness as an export good (DQ means Defense Quality).



2016 Black Eagles
Singapore Airshow



2015
Seoul ADEX

addition, events such as Seoul ADEX²¹⁾ and MADDEX²²⁾ are held to publicize South Korean products and to create export opportunities.

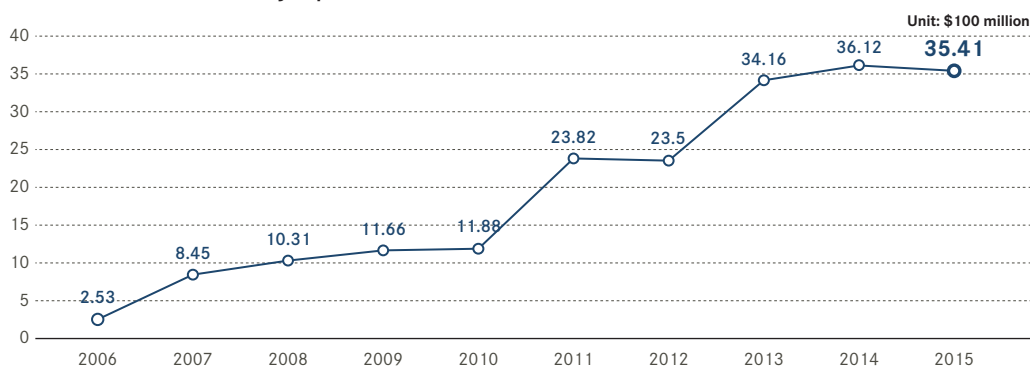
The government also provides training programs for SMEs that lack manpower, and holds regular meetings with exporters.



Seoul International Aerospace and Defense Exhibition 2015 (Seoul ADEX)

Such efforts have enabled defense exports to increase rapidly since 2006, with authorized exports amounting to USD 3.541 billion in 2015, and remaining above the USD 3 billion mark for three consecutive years. Refer to <Chart 4-15> for annual exports.

<Chart 4-15> Defense Industry Exports



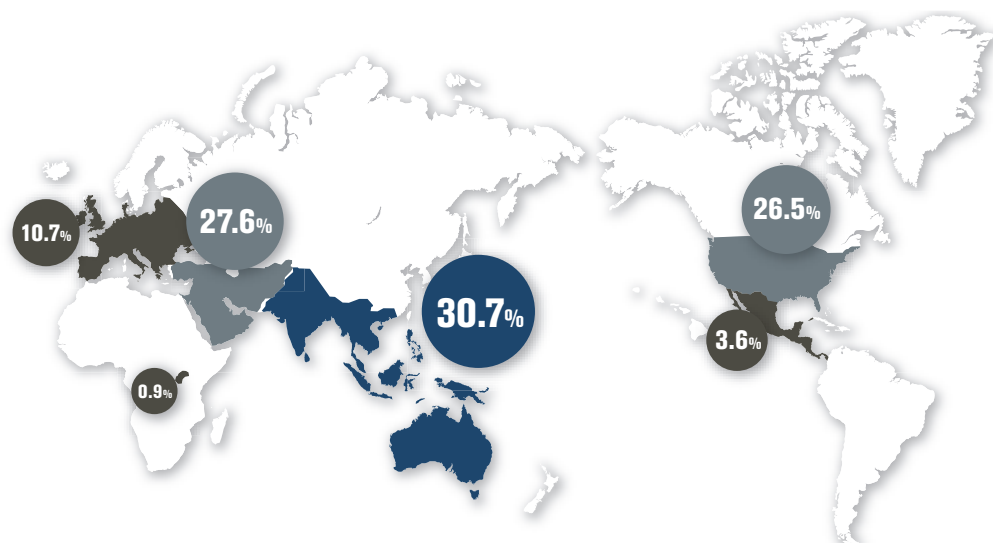
Export destinations have also diversified from the North American and Asian markets to the Middle East, Europe and South America. As a result, the number of countries to which the ROK exports defense equipment increased from 47 in 2006 to 90 in 2015. The number of exporters has also increased, from 47 in 2006 to 156 in 2015. The nature of the exported items

²¹⁾ Seoul International Aerospace & Defense Exhibition

²²⁾ International Maritime & Defense Exhibition

has also become increasingly diverse; where exports were once dominated by ammunition and fire extinguishers, but today the country's most successful exports consist of aircraft, submarines and support ships.

<Chart 4-16> 2010~2015 Defense Industry Exports by Region



The government plans to implement export policies tailored to each specific export destination as part of its plans to nurture the defense industry as a powerful engine of economic growth. For emerging nations, the government will seek defense industry cooperation in connection with cooperation on defense and economic support. For nations with advanced defense industries, the ROK government plans to expand defense industry cooperation through technological cooperation, purchasing, and joint projects.

3. Efforts to Innovate the Defense Industry

MND and the DAPA are seeking various innovation measures with a view to improving the fundamental problems of the defense industry. They are working to create a transparent business environment, improve the management system and operation of the defense industry, establish an efficient work performance system, and continue seeking ways to strengthen the competitiveness of the industry. They will also periodically analyze and evaluate the results of the implementation plan and continue to supplement it so that actual innovation plans are established as early as possible.

| Promotion Focus | MND, the ROK Joint Chiefs of Staff (JCS), the DAPA, and the civilian advisory council members will form a defense industry innovation task force to diagnose the causes of corruption and mismanagement in the defense industry, and to strengthen the transparency, expertise, efficiency and competency of the industry by executing 44 innovation projects in four major areas.

<Chart 4-17> Priorities and Tasks per Innovation Area of the Defense Industry

Category	Priorities and tasks
Creating a Transparent Business Environment	<p>Priority: Promote transparent business practices trusted by the people</p> <p>Tasks: Create a defense project director position, improve independence of military personnel management within DAPA, strengthen punishment for corrupt public servants, implement corruption reporting and reward system</p>
Establishing a Professional and Efficient Business Execution System	<p>Priority: Establish efficient task system through communication and collaboration and foster professional personnel to promote requirement plan/total life cycle system management</p> <p>Tasks: Expand participation by advisory committee, establish specialized education institution for defense acquisition, prepare a weapon acquisition manual, reorganize DAPA's manpower structure, expand the transfer of items related to force operation projects to the Public Procurement Service, internally strengthen the operation of the ICT²³⁾, etc</p>
Strengthening the Competitiveness of Defense Industry	<p>Priority: Fulfillment of a defense industry with technical superiority</p> <p>Tasks: Promote fidelity recognition system, modify defense material designation system, modify national defense standard (NDS), introduce price ceiling for compensation of deferment, etc</p>

| Creating a Transparent Business Environment | In order to create a transparent business environment that the public can trust, a monitoring system has been developed to prevent corruption in advance and enable defense industry workers to carry out their tasks reliably. MND has carried out pre-verification of the defense industry including investigation and prevention of corruption, and expanded the provision of information on budget and required capability that businesses demanded. It also made it clear that corrupt public servants will be severely punished regardless of their status and severity of their corruption, while the reward for whistleblowers has been raised from a maximum of KRW 20 million to KRW 200 million.

To prevent external influences and interventions that may arise in the execution of defense programs, the personnel system has been improved so that military service members above the rank of colonel serving at DAPA will only work in the DAPA until discharge. Also, MND will seek an extension of the period during which retired public officials are restricted in getting a job position in the private sector. MND will continue to enhance the transparency of defense projects by expanding the participation of civilian experts in each phase of a project, strength-

23) Integrated Concept Team

ening restrictions against public servants, and activating the reward system for whistleblowers.

| Establishing a Professional and Efficient Business Execution System | Considering that defense programs are technologically complex and have complicated procedures, it is necessary to establish an information management system and to establish detailed work manuals, among other measures, so that defense programs are managed by expert personnel. Above all, an efficient defense program management through communication and coordination with the relevant agencies is required.

To improve the professionalism of employees in the defense acquisition field, the government is promoting the establishment of a specialized education institution for defense acquisition; and reducing the ratio of military personnels working at DAPA from 50% to 30% and increasing the ratio of public servants from 50% to 70% by 2018.

| Strengthening the Competitiveness of the Defense Programs | To acquire optimal weapon systems that can meet the performance criteria demanded by the military at a reasonable cost, a method of evaluation that prioritizes performance has been introduced, improving upon the previous low-cost bidding system. In order to revitalize the weapons system and core technology and secure equity between domestic and foreign companies, the deferred cash fund²⁴⁾ has been limited to 10% of the contract amount, and a creative and challenging R&D environment is being created by introducing the ‘fidelity recognition system,’ which reduces the liability for core technology R & D failures if the researcher in question is judged to have executed the research in good faith.

24) The contract partner must pay in cash the percentage of a contract amount specified by the Ordinance of the Ministry of Planning and Finance multiplied by the number of days of delay if the contractual partner delays in fulfilling its contractual obligation.

Section 4 Securing an Adequate Defense Budget and Enhancing the Efficiency of Defense Budget Management

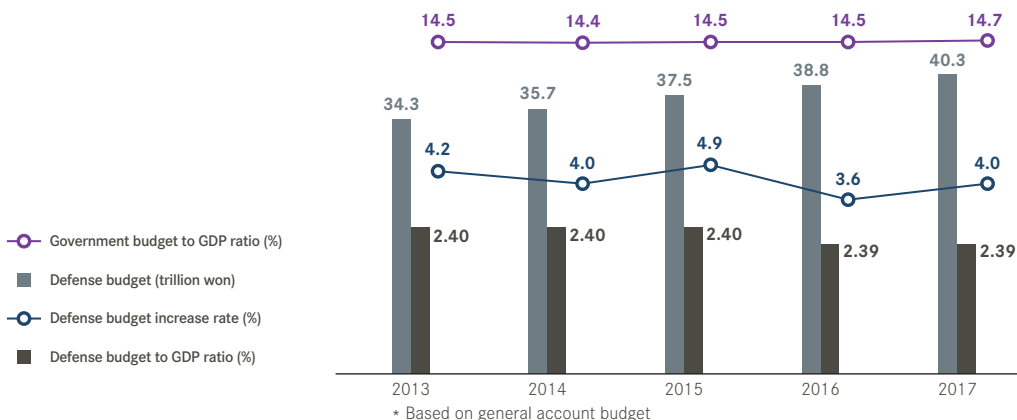
To maintain a firm security posture and promote stable defense reform, an adequate defense budget must be guaranteed. As such, MND is striving to secure an appropriate national defense budget while promoting efficient use of civilian resources and efficient management in all areas of defense, ensuring transparency and efficiency in budget execution.

1. Defense Budget Status

The national defense budget is required for building, operating, and maintaining military forces in order to produce a public good called national defense. The size of the defense budget is determined by the costs of responding to security threats and the ability of the state to bear the financial burden.

The ROK is continuously exposed to various security threats such as North Korea's military threats and the accelerating arms race among its neighboring nations; however, it is difficult to secure an adequate defense budget due to fiscal constraints and the increase in the demand for welfare caused by a low birthrate and an aging population. As of 2017, the national defense budget accounts for 2.39% of the GDP and 14.7% of the government budget.

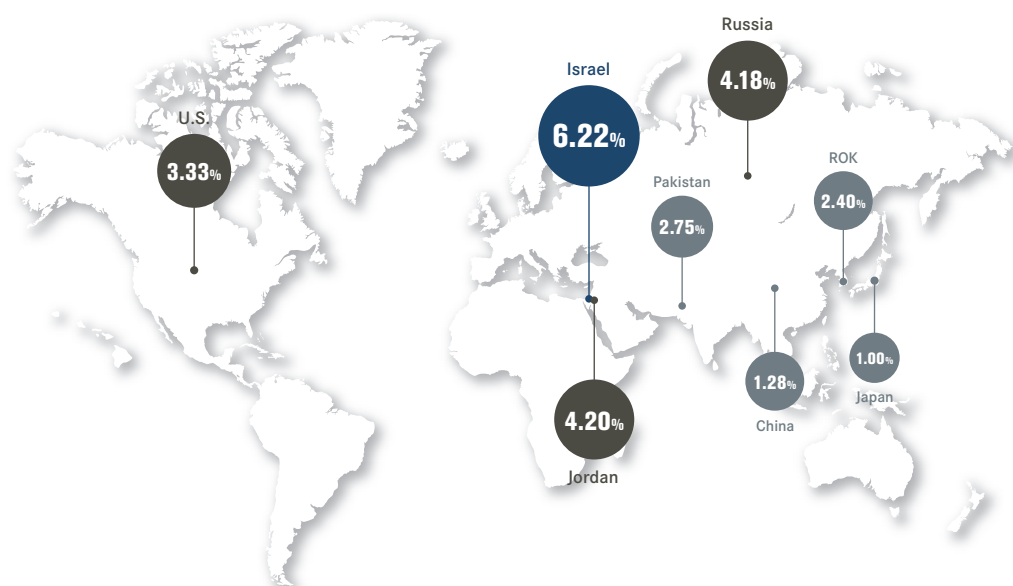
<Chart 4-18> Defense Budget for the Past Five Years



Each country's national defense budget tends to be proportional to the severity of the security threats it faces. As of 2015, countries that are relatively stable in terms of their security environment, such as Germany and Italy, spent approximately 1-2% of their GDP on their defense budget, whereas countries such as Israel and Jordan, which have profound security concerns, spent approximately 4-6% of their GDP on national defense.

In 2015, the ROK's ratio of defense budget to its GDP was higher than the world average of 2.14%, but lower than those of major nations involved in conflicts or military confrontations, such as Israel, Jordan, and Pakistan.

<Chart 4-19> Defense Budget to GDP Ratios of Key Nations



* Source: The Military Balance 2016 (International Institute for Strategic Studies (IISS), February 2016)

2. The Necessity of Securing an Adequate Defense Budget

The ROK faces significant challenges in a constantly changing strategic environment. Its Northeast Asian neighbors are accelerating their arms race, and North Korea is continuously conducting extreme provocations such as its fourth and fifth nuclear tests and ballistic missile test launches even during the discussions by the international community to condemn and impose additional sanctions on the regime. Considering the heightened public interest towards military culture innovation, MND will continue to foster a service environment that allows servicemembers to concentrate on combat missions safely in high spirits. The national defense reform must follow the plan in order to transform the military into an information and technol-

ogy-intensive military structure since a reduction in manpower resources due to the declining birthrate is anticipated.

When a large portion of the defense budget is spent on legal expenses, essential basic expenses, and continuing expenses, it is difficult to effectively cope with the rapidly changing security environment at the current growth rate of the defense budget.

To protect the ROK from North Korea's nuclear and WMD threats and guarantee a stable, peaceful life for the Korean citizens, it is necessary to maintain the military at a level commensurate with the size of the ROK economy, and secure an adequate defense budget to support it.

3. Defense Budget and the Mid-Term Defense Plan

| 2017 Defense Budget | For 2017, to secure robust security capabilities trusted by the public, the defense budget was set at 40.33 trillion won, representing an increase of 4.0% from the previous year's budget. Within the budget, the cost for improving defense capabilities with regard to the acquisition and development of weapons system was 12.2 trillion won, and the force operating cost required to operate and maintain the troops and the existing forces was 28.14 trillion won. The National Defense Budget for 2017 is shown in <Chart 4-20>.

<Chart 4-20> 2017 Defense Budget (General Account)

Unit: billion won, %

Category		FY 2016		FY 2017(B)	Changes(B-A)	Increase rate(%)
		Main Budget(A)	Including supplementary budget			
Total Defense Budget		38,799.5	38,842.1	40,334.7	1,535.2	4.0
Force Operating Costs	Subtotal	27,159.7	27,159.7	28,137.7	978.0	3.6
	Troop Operating Costs	16,406.7	16,406.7	17,146.4	739.7	4.5
	Operations and Maintenance Costs	10,753.0	10,753.0	10,991.3	238.3	2.2
	Force Improvement Budget	11,639.8	11,682.4	12,197.0	557.2	4.8

The force operating cost, which accounts for 70% of the defense budget, was increased by 3.6% over the previous year to 28,137.7 billion won, reflecting the focus on improving service conditions by establishing a strong defense posture and fostering an open barracks culture.

To establish a strong defense posture that is trusted by the public, it is necessary to guarantee

logistics support for equipment maintenance, parts repair, and fuel, so that the forces currently in operation can demonstrate their optimal combat power. MND reinforced the operational and boundary facilities in the frontline areas by fortifying the Northwest Islands and reinforcing GOP fences and tactical roads while prioritizing investment in the establishment of realistic training grounds similar to the battlefield environment and expansion of scientific training using the multiple integrated laser engagement system (MILES).

To nurture an open barracks culture, professional counseling centers and various gym facilities, including indoor gymnasiums and futsal stadiums, have been expanded, and book cafes have been installed.

Much effort has been dedicated to improving service conditions to create a rewarding and pridesworthy service environment as well. In 2013, the salaries of military personnel began to increase drastically and the trend continued for 2017 with the growth rate set at 9.6%. This resulted in salaries more than doubling the level paid in 2012. In order to guarantee a hygienic environment and training conditions for the servicemembers, restrooms of outdoor training facilities were improved, and air conditioning was installed in the living quarters and mobilization training rooms.

The defense capability improvement budget ratio increased by 4.8% from the previous year to 12,197 billion won. This budget focuses on strengthening core combat power against North Korean provocations, securing essential forces through unit reorganization to execute the ROK military's defense reforms, strengthening core capabilities to establish a self-reliant defense posture, and carrying out creative national defense R&D.

To prepare for North Korea's asymmetric threats through the early fielding of the Kill Chain and KAMD, 1,697.6 billion won has been allocated to 29 projects, including the high-altitude unmanned surveillance aerial vehicle (HUAV) and the PATRIOT upgrade projects.

To secure the necessary force for defense reform in connection with the designated period of unit reorganization, 3,473.4 billion won has been allocated to 40 projects including the establishment of the Tactical Information Communication Network (TICN) for new weapons of the future and new technology development, while advanced operating forces such as large attack helicopters, frigates, and the F-35A have been secured in order to strengthen the ROK's self-reliant defense capabilities.

| Mid-Term Defense Program for 2017-2021 | The Mid-Term Defense Program is a blueprint for the construction and operation of military forces over the next five years in response to the anticipated threats now and in the future, as well as ongoing changes in the security environment. From 2017 to 2021, the focus will be on strengthening the forces to deter and counter North Korean nuclear and missile threats, promoting defense reforms, and preparing for the transition of wartime operational control. In addition, it is expected that the

troop maintenance costs necessary to improve the troops' welfare as well as to augment the number of cadres will increase significantly. Likewise, the logistics support requirements necessary for the expanded operation of advanced equipment are also expected to increase.

The total budget allocated to the “Mid-Term Defense Program 2017-2021” is 226.5 trillion won. In order to increase the feasibility of the mid-term plan, the average annual growth rate of the fiscal resources required for the plan has been reduced from 7% to 5%.²⁵⁾ The quantity of each asset has been reduced to reflect the concept of future joint operations, and their fielding schedules have been adjusted in consideration of their priorities. Resources have been saved by increasing management efficiency by integrating redundant and dispersed tasks.

<Chart 4-21> ‘2017~2021 Mid-Term Defense Program’ Budget Breakdown

Unit: trillion won

Category	2016	2017~2021 Mid-Term Defense Program Budget Breakdown					
		2017	2018	2019	2020	2021	Total
Defense Budget (Increase Rate)	38.8 (3.6%)	41.0 (5.6%)	43.2 (5.4%)	45.4 (5.1%)	47.5 (4.6%)	49.4 (4.1%)	226.5 (5.0%)
Force Operating Costs (Growth Rate) (Share)	(27.2) (2.7%) (70.1%)	(28.3) (4.2%) (69.0%)	(29.5) (4.3%) (68.3%)	(30.6) (3.8%) (67.4%)	(31.8) (3.7%) (66.9%)	(32.9) (3.6%) (66.6%)	(153.1) (3.9%) (67.6%)
Force improvement budget (Growth Rate) (Share)	(11.6) (5.7%) (29.9%)	(12.7) (9.0%) (31.0%)	(13.7) (7.8%) (31.7%)	(14.8) (7.9%) (32.6%)	(15.7) (6.4%) (33.1%)	(16.5) (5.2%) (33.4%)	(73.4) (7.3%) (32.4%)

The force operation portion of the Mid-term Defense Program was drafted with the emphasis on enabling the existing operational forces to demonstrate their capabilities and creating a fulfilling and advanced service environment. In order to ensure the performance of existing operating forces, MND will establish an advanced security system through the reinforcement of facilities such as GP and GOPs in contact areas and the modernization of combat support facilities. It will also ensure proper logistics support for core weapons systems such as the F-35A and attack helicopters to fully exercise their combat powers. Scientific training equipment and training grounds required for realistic education and training have been reflected in the program, and the budget for reserve force training will be gradually increased,²⁶⁾ improving training conditions with additional combat equipment.

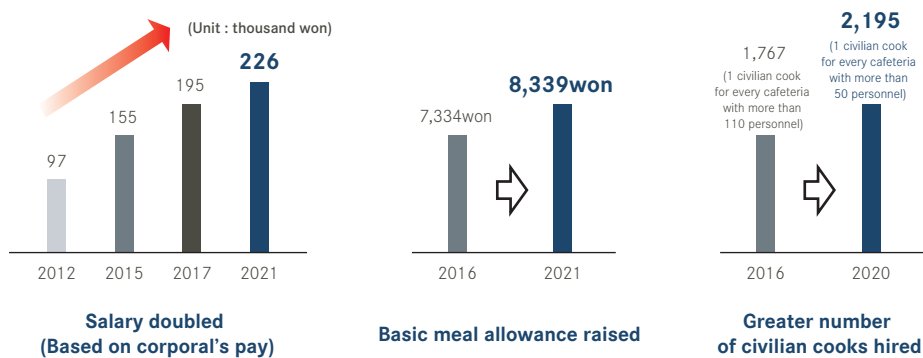
25) 6 trillion won less than the “Mid-Term Defense Program 2016-2020” (Average annual growth of 7%; total financial resources of 232.5 trillion won)

26) Planned for increase from 12 thousand won (2016) to 30 thousand won (2021)

As a means to build up a fulfilling and advanced service environment, the basic meal allowance has been raised, and a greater number of civilian cooks have been hired. The quality of distributed supplies has been improved as well to reflect the feedback from the servicemembers. All these measures combined have led to improved servicemember welfare and morale.

The main plan for improving the food and living conditions for servicemembers is shown in <Chart 4-22>.

<Chart 4-22> Main Plan to Improve Service Conditions for Servicemembers



Improving the military's medical support system by establishing a remote medical treatment system for units located in isolated areas and a military trauma center for trauma patients and those wounded in action during peace/wartime have also been reflected in the program. The Mid-Term Defense Program for defense capabilities improvement allocates top priority to establishing the Kill Chain and KAMD in order to respond to the North Korean nuclear and missile threats. Other focus areas include force reinforcement in preparation for troop reduction, improving local provocation and full-scale war response capabilities, and strengthening defense R&D capabilities to secure organic development capabilities of advanced weapons systems.

A total of 5.4 trillion won has been allocated for securing the Kill Chain to enhance the capabilities to detect target indications, and identify and strike the targets across the entire region of North Korea. Furthermore, an additional 2.5 trillion won has been allocated for KAMD to reinforce capabilities to detect SLBM and ballistic missiles launched from anywhere in North Korea, defend key facilities, and to intercept targets.

20.3 trillion won has been allocated to reinforce the ROK military's surveillance and reconnaissance capabilities for monitoring the operation areas that have been expanded as part of the defense reform and to establish a command and control system capable of transmitting data and imagery to tactical-level echelons.

In order to strengthen its capabilities against North Korea's local provocations and full scale war, the ROK has allocated 24.1 trillion won to strengthen its counterfire, surface, and under-

water operational capabilities and to secure clandestine infiltration, strike, and long range operational capabilities. To ensure conditions for creative R&D that can lead the development of advanced weapons systems, the proportion of R & D expenditure will increase to 9.2% by 2021, and resources will be allocated to developing new future technologies such as unmanned systems.

4. Enhancing the Efficiency of Defense Management

| Promoting Defense Fiscal Reform | In order to spread advanced management techniques to the defense sector and increase efficiency of defense operations, the Defense Management Efficiency Inspection Committee has been in operation since 2013. In 2013, the committee selected thirty major projects and conducted preliminary feasibility studies and in-depth evaluations of force operation projects. In 2014, the committee expanded the defense management streamlining activities to all defense organizations, selecting 14 tasks in 3 areas, such as streamlining manpower and organization, improving standards and procedures, and streamlining defense finance.

In 2015, the Defense Management Efficiency Inspection Committee was transformed into the Defense Fiscal Reform Promotion Group, which selected and managed projects requiring substantial financial reform over a long term. During the same year, MND created a support team for *Jaundae* and integrated combat support missions— which had been conducted in a redundant, dispersed manner by 17 units in the *Jaundae* area— to streamline its manpower, budget, equipment, and facilities.

MND has improved the credibility of defense budget execution by modifying the salary payment system, thus resolving the annual labor cost shortage problem. Furthermore, by integrating the facilities program in the defense capability improvement field, which has shown a low execution rate, with the facilities program in the force operation field, MND saved budget and improved the execution rate.

In 2016, MND focused on achieving tangible results by expanding the fiscal reforms to include the defense capability improvement field and introducing an incentive-based system. In order to increase the effectiveness of the ROK military's force reinforcement plan, previously determined force reinforcement projects have been reviewed at the origin in order to remove or revise unnecessary projects. In the field of defense facilities, a new facility management system²⁷⁾ has been applied to the divisional class units to eliminate the imbalance

27) A management system that derives appropriate surface areas of facilities belonging to units of each echelon based on the Defense Organization Quota and uses the results as objective standards for identifying scarce facilities, project priorities, and maintenance budget.

of facility management by each unit and to secure transparency of facility budgeting and efficiency of execution. The defense planning and management system has been improved on a step-by-step basis in order to respond flexibly to changes in the defense environment, to optimize the planning document system for rational allocation and efficient operation of limited defense resources, and to implement the fast-track system for weapons systems.

| Operation of the Military Executive Agency System | In order to enhance expertise and efficiency in carrying out defense related duties, appropriate organizations are designated and operated as military executive agencies²⁸⁾ under the principle of competition.

From its pilot operation from 2009 to 2016, eighteen agencies in six areas covering maintenance, supply, medical, research, printing, and information services, have been designated and operated as organizations responsible for military management.

Organizations designated as military executive agencies are also generating tangible results, increasing productivity and improving service qualities. For instance, the Korea Armed Forces Printing & Publishing Depot's rate of printing error has been reduced from 1.68% to 0.41% since its designation in 2009; the Armed Forces Capital Hospitals reduced their private referral consultation rates from 8.5% to 2.97%, and were certified as general hospitals in 2015, contributing to increased reliability. Military executive agencies have increased their competitiveness and gained trust on the quality of their products and services by applying for 71 patents based on proactive work ethics and acquiring 59 external certifications.

| Securing Fair Value of Former Military Real Estate | Although enormous fiscal resources are required for facility projects of unit reorganization under defense reforms, budget shortage is expected given the fiscal conditions and the size of the defense budget. In order to secure the large funds needed for the facility projects, the city management plan involving disposal of military real estate that are unused after unit relocation have been developed in consultation with local governments to resolve the problem of undervaluation of state-owned properties.

In the future, continuous efforts will be made to reduce the financial burden of the state and to steadily pursue facility projects by securing appropriate value of unused military sites arising from the relocation process.

28) A system where a publicly employed chief of an agency is given the administrative and financial autonomy and the responsibility for the outcome

5. Efficient Use of Civilian Resources

MND has established the five-year ‘Basic Plan for the Use of Civilian Resources in Defense’ to reduce annual military expenditures and improve service quality by utilizing civilian personnel, capital, facilities, and management techniques in such areas as logistics, facility management and welfare facility operations.

In accordance with the Basic Plan for the Use of Civilian Resources in Defense (2016-2020), service support duties of supply units, such as laundry, waste collection, repair services, and snack transportation and distribution, have been contracted out to civilian companies to enhance the welfare of servicemembers and create an environment in which they can concentrate on combat missions.

Through the introduction of the performance-based logistics support (PBL)²⁹⁾ system with civilian performance management techniques, the parts procurement period has been shortened and the equipment operation rate improved. ESCO and WASCO³⁰⁾ projects have been undertaken to improve the existing energy and water supply facilities, thus reducing costs.

To contribute to the welfare of servicemembers and reduce the budget, the ROK will continue to find areas that can draw upon the expertise and creativity of the private sector and improve the quality of combat service support functions by promoting the combat mission-oriented environment.

<Chart 4-23> ‘Basic Plan for the Use of Civilian Resources in Defense (2016~2020)’

Category	Tasks
Outsourcing to Private Sector	Outsourcing service support duties of supply units, military facility management, and snack transportation.
Applying Management Techniques and Infrastructure	Medical supply prime vendor system, Performance-Based Logistics (PBL), etc.
Inducing Private Participation and Attracting Private Capital	Military supply commercialization, ESCO and WASCO projects, building field maintenance support center, military residence and private investment into informatization business such as BTL/BTO, etc.
Utilizing Civilian Manpower	Employing civilian cooks, etc.

29) The military provides performance measurement indicators such as the target utilization rate while contractors perform dedicated maintenance and repair parts support and pay the performance based logistics (PBL).

30) A project to attract private sector investment with energy and water saving expertise, which improves military facilities without the initial financial investment and reduces utility fees (ESCO: Energy Service Company, WASCO: Water Saving Company)

Section 5 Development of Defense Informatization

By utilizing advanced information and communication technologies, it is possible to visualize the battlefield and to share realtime information by linking all the elements required for battlefield management and defense management according to their purpose, function, and level. MND has initiated the transition to a function-oriented information system and is currently establishing an integrated service system based on big data.

1. Development of Defense Informatization Development Framework

| Development of the Basic Defense Informatization Implementation Plan | MND has been developing its “Defense Informatization Basic Plan” so as to reflect the changing security environment and ICT development trends. The plan proposes medium- and long-term development directions for implementing the defense vision and objectives in the defense informatization field. The main objectives are to enhance the timeliness of decision-making capability and maximize the effects of successful missions by distributing realtime information among various operational elements; and to optimize the defense resource management and operations maintenance capability by providing the users with customized decision-making information in the defense management field. To achieve these objectives, MND has been sophisticating the defense architecture and enabling the introduction of new technologies in IT; the information system is being converted from a simple information processing system into a more service-oriented system in order to provide comprehensive and analytical decision-making information; and a cloud-based computing ICT environment that assures distribution of information and mobility on a massive scale.

| Timely Introduction of Advanced Information Technology | MND has pushed ahead with the Defense Experiment project and government-wide IT Convergence R&D Cooperation projects to introduce new and advanced civilian IT such as the Internet of Things, Cloud, Mobile, Big Data, Artificial Intelligence, UAV, and Virtual Reality in a timely manner.

The “Defense Experiment” project aims to pilot test outstanding new civilian IT in the defense area and then gradually introduce them to the entire military after evaluating its effectiveness. From 2007 to 2015, a total of 37 projects were selected and processed, and out

of these projects, 21 projects have been verified in its applicability to military and currently expanding its implementation. Such project includes artillery battalion smart alert system to reinforce the surveillance capability for the areas occupied by battalion level units.

In 2016, four projects were selected as defense experiment projects, including the establishment of a mobile command and control system to reinforce counter-terrorist command and communications. Since 2007, the government-wide IT Convergence R&D Cooperation projects have continuously pursued the discovery and promotion of collaborative tasks with various government ministries in a drive to apply the leading domestic IT to the defense area. In 2015, MND collaborated with the Ministry of Science, ICT, and Future Planning to pursue R&D and demonstration projects in the force support area, innovation of defense management and the military culture, and the cultivation of professional technical manpower. As part of the IT cooperation projects carried out between the ministries, 18 collaborative projects are being carried out, including the establishment of a smart training management system for army training centers to improve the efficiency of training and unit management.

In the future, MND will continue to expand demonstration projects that combinew new IT such as IoT, big data, intelligence information technology, UAV, 3D printing and so on.

2. Sophistication of Information Communication Infrastructure and Information System

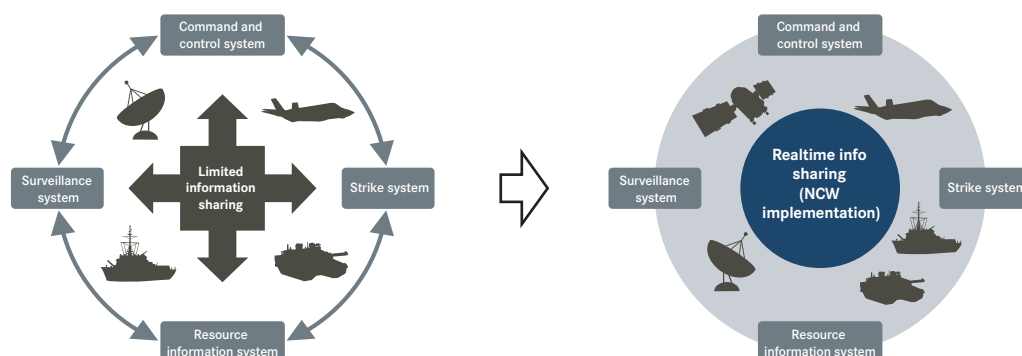
| Sophistication of Information Communication Infrastructure | MND has been building a high-speed, high-capacity strategic and tactical communication network and developing a defense information communication infrastructure in order to build a mobile and cloud computing based service environment. To ensure systems operations in various tactical situation developments, such as improving the performance of the Military Broadband Convergence Network (MBCN) established in 2011, step-by-step consolidation of the purpose-built wired information communication and operations networks, and conversion to the next-generation Internet Address System (IPv6)³¹⁾ are underway.

| Establishing Information System and Ensuring Interoperability | MND continues to streamline extensive defense related duties and support rational decision-making, primarily by sophisticating its information systems to become more centered on key functions such as personnel, military, mobilization, and medical care, and by building an integrated service system that is based on big data.

³¹⁾ An Internet Protocol developed by the Internet Engineering Task Force in 1994 (IPv6: Internet Protocol version 6)

In order to execute Network Centric Warfare (NCW), a key characteristic of modern warfare, decisions have to be made quickly by sharing information on the situation in realtime, which is made possible when elements such as monitoring, command and control, strikesystems, and resource information systems are all connected. For this to be realized, interoperability³²⁾ of battlefield elements is vital.

<Chart 4-24> Concept and Vision of Defense Interoperability



MND has revised the Defense Informatization Standards,³³⁾ established the integrated management system for information system interconnection, and implemented the interoperability evaluation and certification³⁴⁾ system according to the international standards in order to ensure the interoperability of weapons systems and the force support system.

In the future, MND will develop a defense interoperability policy by establishing mid- to long-term development plan that reflects the latest IT developments and changes in the interoperability environment.

32) A characteristic which allows the sharing, exchange, and operation of information or data between ground-sea-air forces and battlefield elements.

33) An information technology standard applied when developing force support systems and securing compatibility and interoperability among systems.

34) A system used by MND to evaluate the status of reflection and implementation of the interoperability requirements in the development processes of weapons and force support systems.

Section 6 Promoting Defense Logistics Innovation

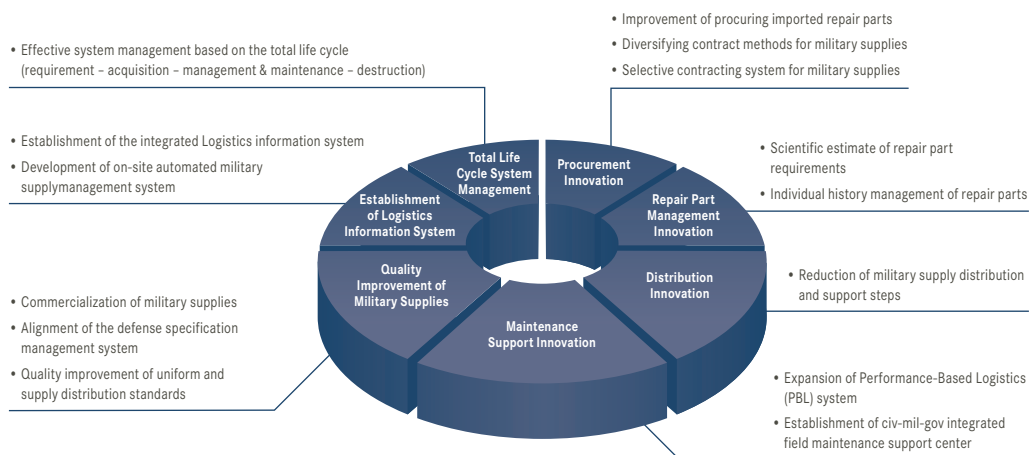
In order to solve deep-rooted structural problems in the defense logistics field, such as rising equipment maintenance costs, difficulties with the timely procurement of overseas purchases, the abolition of treasury bonds, and the weakening of the military supplies distribution channel, MND, through defense logistics innovation, is preparing comprehensive and fundamental solutions in the diverse logistics field which include determination on requirements, production and R&D, procurement, supply, maintenance, and transportation.

1. Background and Direction

The introduction of state-of-the-art weapons systems has inevitably led to a large increase in maintenance requirements. Thus, to resolve the limitations on the timely procurement of repair parts of equipment purchased overseas, MND has been pursuing national defense innovations since 2014.

In 2016, MND began focusing on seven areas: procurement innovation, repair part management innovation, logistics innovation, maintenance support innovation, quality improvement of military supplies, establishment of logistics information system, and establishment of total life cycle system management. In 2017, MND will carry out innovations across all areas, including the three areas of ammunition support, unified logistics support during wartime and peacetime, and the optimization of military manpower.

<Chart 4-25> Concept of Logistics Innovation



2. Procurement and Repair Parts Innovation

| Procurement Innovation | Procurement Innovation is being pursued to ensure the stable supply of high-quality military supplies timely manner and at the appropriate price for each unit. Regarding repair parts for foreign equipment with limited timely procurement, MND analyzes procurement time by using the non-responsive items procurement manual, and is improving the procurement success rates by devising solutions for each limiting cause. The contract types are also being diversified to suit the characteristics of each item of military supplies.

In order to stabilize the procurement of military supplies and to shorten the contract administration period caused by annual contract renewal process, MND has expanded the criteria of items subject to long-term contracts and applied the multiple awards schedule (MAS)³⁵⁾ to supply materials that meet the demand of the demanding forces. To stably supply repair parts, the ‘performance ceiling contract’ is also applied.

| Repair Part Management Innovation | In order to supplement the problems of acquisition, operation and inventory management of repair parts, MND has been innovatively improving the repair parts operating system since 2014. Accurately predicting the demand for repair parts of each major equipment by applying the repair parts requirement estimation model resolves chronic problems such as the issue of inventory depletion and repair parts that have not been used for a long time are being resolved. At the same time, MND has readjusted the item inventory level according to items to be able to deal with the changes in demand more effectively while reducing the total inventory of repair parts. In addition, MND has established a system that centrally adjusts and controls the inventory levels in real time by managing historical inventory level of each repair part item.

3. Distribution Innovation and Maintenance Support Innovation

| Distribution Innovation | To ensure war sustainment capability, it is important to have a distribution system that can provide timely logistics support in accordance to combat units’ demands. MND has been improving the military materials supply support phase in order to shorten the lead time for the user, i.e. combat units. When a combat unit requests military supplies considering the priority level of each item and the inventory level, logistics support

³⁵⁾ This is a contract system in which, at the time of procuring military materials, the contracting agency has to conclude unit price contracts with two or more vendors that supply the same or similar products of the same or similar quality and function. Then, the demanding forces select the product and the selected vendor supplies the products.

units directly supplies military materials to each requesting unit thereby reducing the average supply support phase from four to five phases to two to three phases and curtailing the average user waiting time to within 10 days. The 2014 pilot project revealed that the distribution speed was improved by more than 40% and the transportation costs were reduced by 50%. Accordingly, each branch of the military is expanding its pilot programs and military-wide implementation of this system will start from 2018.

| Maintenance Support Innovation | Rapid maintenance support of combat equipment is crucial for maintaining seamless combat readiness during peacetime and maximizing the combat-sustainment capability during wartime. With increase in introduction of advanced weapons systems, the military is considering various measures to utilize the specialized maintenance capabilities of the military and the private sector, and aims to prevent overlapping investments and improve maintenance efficiency.

The expansion of the Performance-Based Logistics (PBL) support system is underway to keep the operation rate of major equipment stable. Since the introduction of the system in 2010, the average procurement period for repairs has been shortened by 73% and the equipment operating rate has been improved by 3%. As a result, the range of application of systems, previously used mainly for air weapons systems, has been expanded to ground and naval equipment such as self-propelled guns, tanks, and ship engines. Thus in the future, the system will be applied not only to currently operated equipment but also to equipment for weapons systems that will be acquired.

An integrated civil, government, and military field maintenance support center is being established to utilize the skills and resources of a large number of civilian maintenance companies scattered throughout the country to provide quick maintenance support. The field maintenance support center in the western part of Gyeonggi-do was completed in 2015 and is currently operating a pilot project. Based on the pilot project results, an eastern center in Gangwon-do is planned to be set up in 2019 to increase the utilization rate of combat equipment by shortening the maintenance period and to vitalize the regional economy.

4. Improvement of Military Supplies Quality

By reflecting servicemember's opinion, MND has been pursuing commercialization of military supplies to improve quality and to increase private companies' participation in military procurement markets.

After identifying commercially replaceable military supplies, MND implements pilot testing of the items, and quickly purchases and distributes the military-grade commercial items to

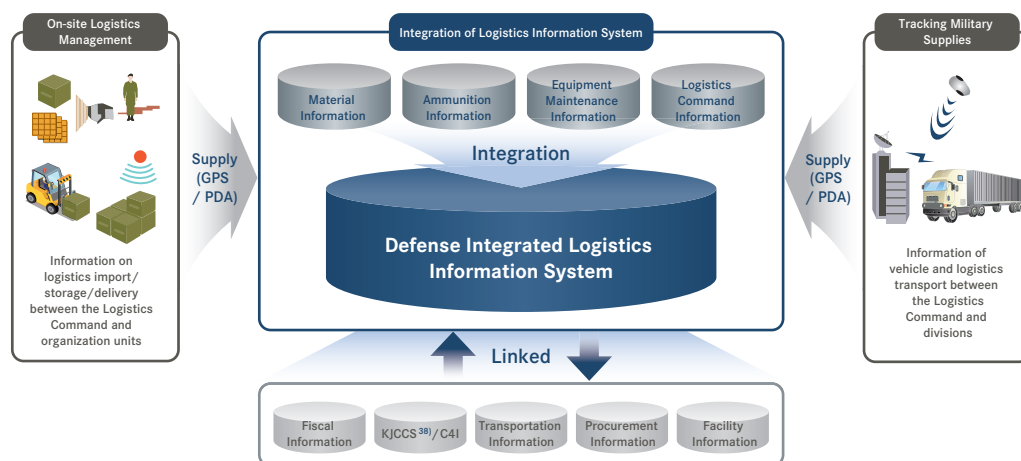
improve military supplies' quality, to save budget and to secure an alternative supply source.³⁶⁾ This enhances military supplies operation.

MND is making improvements to the supply standard and quality of clothes and materials frequently used by servicemembers, thereby improving the satisfaction of soldiers and improving their combat efficiency.

5. Building a Foundation for Innovation

| Establishment of Logistics Information System | MND is establishing an integrated logistics information system in order to efficiently manage resources and improve logistical support capabilities via the realtime monitoring of logistics assets such as equipment, materials, and ammunition. The integrated logistics information system is an information system that covers all fields of military support³⁷⁾ by integrating military materials, ammunition, and maintenance support of each service. The system is designed not only to synchronize with the battlefield management system and private systems to provide timely information provision in wartime and peacetime situations, and also to the reliability of logistics information. The conceptual layout of the integrated logistics information system is shown in <Chart 4-26>.

<Chart 4-26> Concept of the Integrated Logistics Information System



³⁶⁾ Budget savings resulting from the 2016 commercialization of military supplies: total of 64 billion won (61 billion won from commercial vehicle purchases, 3 billion won from conversion of ordinary items)

³⁷⁾ 15 areas including requirements, planning and budgets, procurement, funds, properties, payments, transportation, storage, inspections and tests, equipment operation, maintenance and management, disposal handling, command evaluations, common support, and lists and specifications.

³⁸⁾ Korean Joint Command and Control System

MND is also developing a ‘military supplies field management automation system’ that enables realtime asset management by applying automatic barcode recognition and mobile technology during the process of importing, inspecting, storing, and delivering military supplies. In 2014, a pilot system for 16 supply units was built, and MND is planning to reflect this system into the mid-term plan and budget after supplementing and establishing operational concepts so that the system can be applied in all services after resolving inconvenience in usage and improving requirements.

| Promoting Total Life Cycle System Management | MND manages performance, cost, technology, and information from a holistic perspective of the total life cycle process, ranging from the weapons systems planning stage to acquisition, operation maintenance, and disposal from a holistic perspective. Also, by analyzing the specifications of weapons systems that are actually operated by field units, MND is establishing an analytical evaluation and feedback system to apply in the development of similar weapons systems.

6. Force Support System Development

While the force support system³⁹⁾ is considered the key element for ensuring the combat performance of weapons systems and troop survival, as it consists of military supplies used mainly by troops, such as equipment, materials, food, clothing, etc., the development of the force support systems is relatively lagging compared to that of weapons systems.

To enhance the level of force support system area to that of advanced countries, MND is promoting large-scale developments aimed at increasing the efficiency of the acquisition system and project management, and strengthening expertise-based acquisition work.

First, the acquisition system area must establish mid-term and long-term acquisition strategies to create future-oriented requirements that take into account the development of science and technology; and re-establish the requirements planning system to increase the connectivity among planning, programming and budgeting. While in the R&D area, cooperation among industry, academia, and government is being strengthened to foster greater participation by companies and increase the utilization of the R&D capacity of other government departments. To this effort, in addition to existing government invested R&D methods, MND is implementing improved procurement method and procedures which include diversification of R&D investment methods, simplification of regulation regarding acquisition, expansion of company

³⁹⁾ All elements used to support the combat performance of troops and weapons (other than weapon systems), such as equipment, materials, general facilities, resource management, and base system software. The term “non-weapon system” was changed to “force support system” on January 1, 2012.

invested R&D and civil-military cooperation.

MND plans to shorten the acquisition period and reduce the budget by applying a test and evaluation method appropriate to the item's characteristics, and to establish the acquisition project management information system in order to manage the progress status in realtime and share development information between business organizations. In addition, by utilizing contracted specialists, MND has actively improved any outdated or impractical defense standards from 20 to 30 years ago and also has utilized the Internet to widely disclose such standards⁴⁰⁾ so that it may help in lowering the entry barriers of the military supplies market and in promoting fair competition among contractors.

In order to strengthen the acquisition infrastructure, MND plans to establish a special research institute and to support systematic and scientific acquisition work. By discovering superior civilian technologies and commercial items and applying them to the force support system, the institute will serve as a window for civil-military technology cooperation. Moreover, a professional training program will be put in place, and improvements will be made to the human resource management system to increase the professionalism of the personnel in charge of acquisition work; and acquisition related laws will be adjusted in order to foster improvements in work stability and work efficiency.

Through such large scale improvements to the acquisition process, MND will strengthen the transparency, efficiency, and expertise of the force support system thereby providing the service members with better quality military supplies.

7. Strengthening International Logistics Cooperation

To enhance the war sustainment capability, not only domestic military and civilian resources need to be efficiently utilized but also an international logistics cooperation system that allows us to receive continuous military support from allies and friendly nations needs to be established.

Since its first meeting in 1979, the ROK-U.S. Logistics Cooperation Committee (LCC), which is a subcommittee of the ROK-U.S. Security Consultative Meeting (SCM), has served as a channel for reinforcing cooperation and discussing matters regarding logistics, such as repair parts, ammunition, and oil support. Its 48th meeting was held in 2016. ROK-U.S. Mutual Logistics Support Agreement was signed in 1988 to provide emergency requirements such as an unexpected demand for fuel, repair parts and services that occur during combined training

40) Of the total 21,599 cases of standards, 11,017 cases (51%) are undergoing expansion (4,143 cases in 2013 → 4,623 cases in 2014 → 8,961 cases in 2015 → 11,017 cases in 2016)

maneuvers or joint missions. In 1991, the ROK and the United States concluded the joint “Umbrella Agreement” concerning Wartime Host Nation Support (WHNS UA) to increase the defense capability on the Korean Peninsula by supporting the rapid deployment of U.S. reinforcements during wartime. To achieve this, a wartime supportplanning and application process covering twelve areas, including engineering, maintenance, and supply, will be carried out every two years. In 2016, the two countries agreed to the principle of costsharing for the twelve areas of wartime support, and are also pursuing a “MOA on Wartime Host Nation Support (WHNS MOA)” which will specify the details of the agreement.

To ensure seamless mission execution of friendly countries during contingencies and to effectively confirm logistics support for the ROK military’s overseas deployment activities, MND has signed MLSA with friendly countries including the UK. The ROK has concluded MLSAs with fifteen countries, including Germany,with whom the ROK concluded the “Agreement on Cooperation in Military Operations and Disaster Relief and Humanitarian Assistance,” Thailand, New Zealand, Turkey, Australia, Canada, the United Kingdom, and Spain. The MLSA status is shown in <Chart 4-27>.

<Chart 4-27> Mutual Logistics Support Agreements Status

Nations that have concluded MLSAs with the ROK (Concluded Years)
U.S. (1988), Thailand (1991), New Zealand (2007), Turkey (2008), Philippines (2009), Israel/Australia (2010), Canada (2010), Singapore/Indonesia (2011), Cambodia/Spain/UK (2012), Mongolia (2013), Germany (2016)

In addition, MND engages in discussions on current logistics issues and methods to enhance cooperation among the parties concerned at regular logistics cooperation meetings with major allied countries such as Australia, Singapore, and Israel. MND also actively participates in multilateral logistics cooperation symposiums such as PASOLS.⁴¹⁾

To enhance defense cooperation and to vitalize defense exports, MND is strategically transferring military supplies which the ROK Military no longer uses to friendly nations. In the past, MND transferred military supplies mainly to Asian countries, but recently the transfer of military supplies has been expanded to various countries in Latin America and Africa. Transfer items are also diversifying from vessels, aircraft, maneuvering/engineering equipment to weapons, ammunition, etc. The transfer status of military supplies is shown in <Chart 4-28>.

41) Pacific Area Senior Officer Logistics Seminar

<Chart 4-28> Transfer Status of Military Supplies

Period	Region	Transfer Items
1993~1999	Asia	Vessel, aircraft, vehicle, combat gear, etc.
2000~2009	Asia, Latin America	Vessel, aircraft, engineering equipment, maneuvering equipment, etc.
2010~present	Asia, Latin America, Africa, Oceania	Vessel, engineering equipment, maneuvering equipment, weapons, landing gear, ammunition, etc.

Chapter 5

Development of the ROK-U.S. Alliance and Reinforcement of Defense Exchanges and Cooperation



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Section 1 Development of a Future-Oriented ROK-U.S. Alliance

The ROK and the United States are committed to maintaining a strong combined defense posture capable of responding to any North Korean aggression and military provocation, and will continue promoting the smooth transition to a new combined defense system that is led by the ROK military and a future command system supported by the USFK. The ROK-U.S. Alliance is developing into a comprehensive strategic alliance that extends beyond cooperation on national defense to encompass politics, economy, society, and culture. For its part, MND is committed to ensuring the USFK's stable settlement through the successful implementation of the USFK base relocation project and to further developing and deepening the ROK-U.S. Alliance.

1. Developing into a Comprehensive Strategic Alliance

The ROK-U.S. Alliance continues to work as a cornerstone of the ROK's efforts to achieve liberal democracy and economic prosperity even in the face of persistent North Korean threats and provocations.

The ROK-U.S. Alliance has been developing into a comprehensive strategic alliance by incorporating the common values and mutual trust that are set forth in the June 2009, "Joint Vision for the ROK-U.S. Alliance," and reiterated in the May 2013 Joint Declaration in Commemoration of the 60th Anniversary of the ROK-U.S. Alliance," and the 2015 Joint Fact Sheet titled *The Republic of Korea-United States Alliance: Shared Values, New Frontiers*.

The ROK-U.S. Alliance aims not only to ensure security on the Korean Peninsula but also to contribute to building peace and prosperity in Northeast Asia and the wider world. Against this backdrop, the ROK and the United States are continuing to strengthen their cooperation on a wide range of global security challenges that are of interest to the two nations beyond the scope of maintaining peace on the Korean Peninsula including international peacekeeping activities, stabilization and reconstruction efforts, and humanitarian assistance and disaster relief.

The two countries have strengthened their cooperation in the outer space and cyberspace domains. The agreement for the ROK-U.S. Defense Space Cooperation Working Group (SCWG) were concluded in 2012, and a memorandum of understanding (MOU) concerning sharing space situational awareness services and information was concluded in 2014.

Two countries share a belief in the importance of strengthening mission assurance for space capabilities, and are engaging in joint exercises for space missions and senior-level table top exercises (TTX) involving space experts. The ROK is working towards dispatching its officers to the U.S. Air Force for space education and training.

Furthermore, advancements in the ROK-U.S. Alliance's abilities in the cyber sector are being made. Relevant agreements were concluded in 2013, and the ROK-U.S. Cyber Cooperation Working Group (CCWG) now convenes twice each year, while the operational rules for information exchange were established in 2015 to build an infrastructure that allows both countries to exchange cyber related information in an effective and timely manner. In 2016, the ROK-U.S. Cyber Task Force was formed in order to examine specific defense cyber cooperation plans.

In the future, the ROK government will work with the Trump Administration to share the ROK-U.S. Alliance's current and future development plans, and to keep discussions open on key issues while maintaining close consultation throughout the policy formulation process.

2. Maintaining a Firm ROK-U.S. Combined Defense Posture

| Strengthening ROK-U.S. Combined Defense Posture | The ROK and the United States are committed to maintaining a robust ROK-U.S. combined defense posture capable of firmly responding to any North Korean aggression or provocation. The two countries are continuously developing joint operation plans as well as performing joint training exercises, such as the Key Resolve (KR), Foal Eagle (FE), and the Ulchi Freedom Guardian (UFG), in order to verify the operation plans and enhance their combat capabilities. To maintain an effective combined defense posture, the two countries operate various security consultative bodies such as the Security Consultative Meeting (SCM), the ROK-U.S. Military Committee Meeting (MCM¹⁾), and the Korea-U.S. Integrated Defense Dialogue (KIDD²⁾). In June 2016, the ROK-U.S. Combined Division was organized to enhance the execution capabilities of combined operations at the tactical level.



Celebration of 100th anniversary of 2nd Infantry Division and establishment of ROK-U.S. Combined Division (December 2016)

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- 1) The highest level consultative body among the ROK-U.S. military authorities, held annually at the Joint Chiefs of Staff of the two countries
 - 2) Various ROK-U.S. defense councils were integrated into the KIDD to improve efficiency and effectiveness and it has been in operation since 2012

The Division has enhanced the Korean military's ability to carry out combined operations by contributing to advancements in the combined operational plans and by fostering low-level and mid-level officers and NCOs with combined operations capabilities.

In events of intensified crisis on the Korean Peninsula due to North Korea's strategic provocations, the United States has been deploying its strategic assets to deter further North Korean threats. Shortly after North Korea's fourth and fifth nuclear tests and launching of long-range ballistic missiles, the U.S. Air Force deployed B-52 and B-1B bombers, F-22 stealth fighter jets, USS North Carolina nuclear submarine, and the USS John Stennis Air Wing as a strategic deterrence.



Deployment of B-52 and F-22 on the Korean Peninsula

In the future, the combined operational plans will be reinforced on the basis of regular joint exercises and stable management of the current Alliance situation by operating various security consultative bodies, in order to continue strengthening the ROK-U.S. combined defense posture.

| Conditions-based OPCON Transition Plan | Operational control (OPCON) is the authority to command military units to carry out a specific operation at a designated time and space, and is distinguished as either armistice or wartime OPCON. Under the current ROK-U.S. combined defense system, the ROK Joint Chiefs of Staff exercises OPCON during armistice; on the other hand, during wartime, the Combined Forces Command controls the military units designated by the Presidents of the ROK and the United States via the ROK-U.S. Security Consultative Meeting (SCM) and the ROK-U.S. Military Committee Meeting (MCM). As the security environment deteriorated with the North Korean nuclear and WMD threats becoming ever more imminent, the ROK and the United States assessed that the ROK military would need to be equipped with initial critical response capabilities before the transition of wartime OPCON.

At the 46th SCM held in October 2014, both countries agreed to pursue the transition once the

ROK military is ready to lead the combined forces and security environment situations meet the conditions required for the wartime OPCON transition³⁾. The conditions-based wartime OPCON transition plan⁴⁾ was approved by the 47th SCM consultation held in November 2015.

To meet the conditions for the transition of wartime OPCON, the ROK and the United States agreed to secure various core military capabilities such as the Kill Chain and the Korea Air and Missile Defense (KAMD). Also, the two countries are verifying the ROK-led future command structure through combined exercises by applying the new command structure in these exercises. The preparations for the transition of wartime OPCON, including the transfer of forces, planning and policy, and alliance management, are periodically evaluated by the three subcommittees of the combined governance system, i.e. the Steering Committee, the ROK-U.S. MCM, and the SCM.

The two countries will exert their best efforts to meet all of the necessary conditions for wartime OPCON transition by mid-2020 by meticulously handling the preparation process for transition, the timing of transition, and post-transition establishment of the ROK military-led combined training exercise system and formation of the ROK-U.S. Combined Forces Command (tentative name: Future Command).

3. Ensuring a Stable Stationing Environment for United States Forces Korea

| USFK Base Relocation | The ROK and the United States are currently consolidating the USFK bases scattered throughout the country into two hub bases in Pyeongtaek and Daegu to ensure a stable stationing environment for the USFK and the balanced development of the ROK territory.

The USFK base relocation project consists of two plans, the Yongsan Relocation Plan (YRP), which entails the relocation of the USFK headquarters in Yongsan to Pyeongtaek, and the Land Partnership Plan (LPP), which entails the relocation of the U.S. 2nd Infantry Division in Dongducheon and Uijeongbu to Pyeongtaek.

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- 3) The ROK and the United States agreed upon the following three wartime OPCON transition conditions. 1) To secure the military capabilities required to lead the ROK-U.S. combined defense after the wartime OPCON transition. The United States will continue to provide bridging and enduring capabilities. 2) To secure the essential response capabilities of the ROK forces against North Korean nuclear and missile threats during the early phases of local provocations or aggression. The United States will provide and operate extended deterrence measures and strategic assets. 3) To manage security environment on the Korean Peninsula and in the region that is conducive to a stable wartime OPCON transition.
- 4) A document that replaces the existing "2015 Strategic Alliance," a comprehensive document of the ROK-U.S. Alliance implementation plan (COTP: Conditions-based OPCON Transition Plan).



Deployment of US B-1B bomber on the Korean Peninsula

The construction of the Pyeongtaek base, where the USFK headquarters and the U.S. 2nd Infantry Division will relocate to, is approximately 92% complete as of November 2016. In May 2016, the advance units of the Eighth Army headquarters in Yongsan successfully moved to Pyeongtaek, and the relocation of most of the USFK units will be completed by 2017. In accordance with the ‘Special Act on Support, etc. for Pyeongtaek-si, etc. following Relocation of U.S. Military Bases in Korea,’ the construction of residential support facilities and amenities - including roads, waterworks, sewerage facilities, and town halls for the inhabitants of Pyeongtaek who were displaced due to the relocation - are also under way. As of November 2016, fifty-four USFK bases have been returned to the ROK’s control and twenty-six more are scheduled to be returned.

Both countries recognize the importance of the relocation and return of USFK bases, and will continue to cooperate closely with each other for the success of the YRP and LPP.

| Defense Burden Sharing | “Defense burden sharing” refers to the ROK government bearing a portion of the total stationing costs of the USFK, which plays an important role in the defense of the Korean Peninsula. According to Article 5 of the Status of Forces Agreement (SOFA)⁵⁾ concluded by the ROK and the United States in 1966, the United States is to bear the stationing costs of the USFK, and the ROK is to grant the facilities and sites. However, until 1991, the United States not only covered the stationing costs but also provided funds for the construction of necessary facilities in consideration of the economic situation of the ROK. In 1991, the ROK and the United States concluded the Special Measures Agreement (SMA)⁶⁾ relating to Article 5 of the SOFA in consideration of the financial conditions of the ROK government, and since then the ROK has been sharing a portion of the USFK’s stationing costs.

The defense burden sharing cost is organized into three categories: personnel expenses, the ROK funded construction, and logistics cost. The amount of the defense burden sharing cost has been determined according to the comprehensive considerations of the USFK’s defense contribution to the Korean Peninsula, the need to provide a stable stationing environment for the USFK, and the ROK’s financial capacity and security situation.

In accordance with the 9th SMA concluded in February 2014, the ROK’s total contribution was 920 billion won; and future increments will be no more than 4% of the annual contribu-

5) Article 5 of the Status of Forces Agreement (SOFA) (Facilities and Areas – Cost and Maintenance)

- Section 1: The United States shall bear the expenses incurred by the maintenance of the USFK without imposing any burden on the Korean side.

- Section 2: The Korean side shall provide facilities and areas without imposing any burden on the U.S. side.

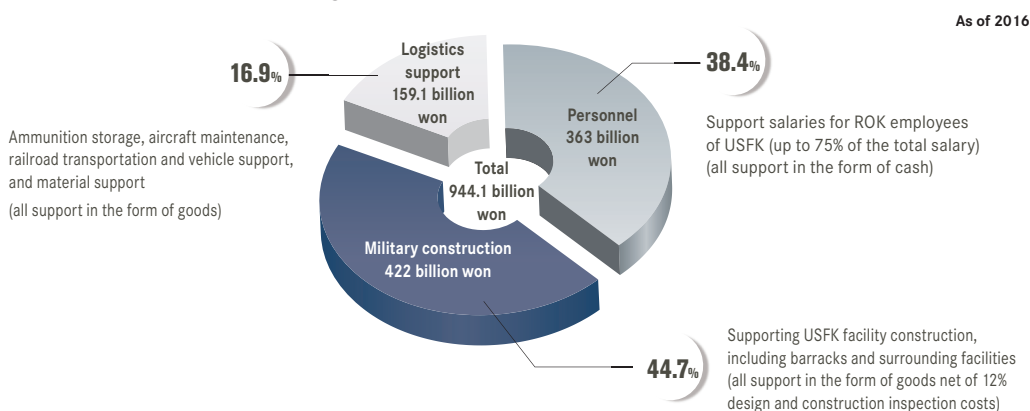
6) Signed every two to five years since 1991 (SMA: Special Measures Agreement)

tion, and will be reflective of the previous year's consumer price index⁷⁾. To enhance the transparency and accountability in executing the burden sharing funds,⁸⁾ the ROK and the United States concluded the "Exchange of Notes on System Improvements."

More than 90% of the defense burden sharing cost has been redirected to the ROK's economy since contributions to regional economic development are made in the form of creating demand for equipment, services, construction and jobs for Korean employees. The labor costs are used for Korean employees working at the USFK. It can be said that 88% of ROK funded construction cost is actually returned to the ROK economy since domestic companies execute the construction contracts, orders, and construction management, except for design and construction oversight costs, which account for 12% of the total. Thus, all of the logistics cost sharing is returned to the ROK economy since domestic Korean contractors are executing the projects.

The ROK and the United States will continue to cooperate closely to carry out improvements to the system and to execute and operate the burden sharing program smoothly.

<Chart 5-1> Defense Burden Sharing Status



| Enhancing ROK-U.S. Mutual Understanding | The ROK government and military have regularly invited USFK personnel to diverse events and carried out mutual exchange programs to strengthen trust and friendship between the blood-forged allies. Since 1972, more than 18,000 USFK soldiers have participated in various Korean cultural experience events - including Taekwondo camps, temple stay, National Palace and museum tours - and relationship

7) The contribution to the defense budget in 2015 was 932 billion Won (2013 inflation rate of 1.3% applied); 944.1 billion won will be provided in 2016 (inflation rate of 1.3% applied).

8) ① Strengthening pre-coordination from the allocation stage; ② establishing a system of advance consultation in the field of military construction; ③ removing or easing the difficulties of SMEs; ④ USFK Efforts to improve the welfare of Korean workers and increase transparency in personnel expenses; ⑤ Increased transparency in budgeting and budgeting.

strengthening events in a bid to enhance their understanding of Korean history and culture and to forge a stronger sense of friendship. Various private events are also being actively conducted to express appreciation for the USFK's unyielding commitment to the ROK. In 2013, to commemorate the 60th anniversary of the ROK-U.S. Alliance, the ROK-U.S. Alliance Academic Seminar, the ROK-U.S. Alliance Vision Development Seminar, the ROK-U.S. Alliance Frontier Marathon, the ROK-U.S. Alliance Band Concert, and the ROK-U.S. Alliance Concert were held to promote harmony between the two countries.

For its part, the USFK also organizes various events and programs. The “Good Neighbor Program,” officially launched in 2003, promotes the positive role of the USFK and mutual understanding by recognizing organizations that contribute to the development of the Alliance. The Program includes such events as open house events, local festivals, friendship dinners, visits to U.S. military vessels and English classes for local residents. For soldiers who are new to Korea, USFK also runs various programs designed to help them overcome cultural differences between the two countries and to gain a better understanding of Korean culture.



USFK servicemembers experience Korean culture

Section 2 Expansion of Defense Exchanges and Cooperation

The ROK Military is developing cooperative defense relations with Japan, China, and Russia based on the ROK-U.S. Alliance in order to ensure peace and stability on the Korean Peninsula. Moreover, by expanding the scope of defense diplomacy to Southeast Asia, the Middle East, Central and South America, and Africa, and actively participating in multilateral security consultative bodies, MND is contributing to world peace.

1. Enhancing Defense Exchanges and Cooperation with Neighboring Countries

| Defense Exchanges and Cooperation with Japan | The ROK and Japan share the basic values of liberal democracy and market economy, and cooperate in securing the peace and prosperity of not only the Northeast Asian region but also the world.

The two countries have periodically held Defense Ministerial Meetings since 1994. At the 14th meeting in 2009, the two countries concluded the Letter of Intent on Defense Exchanges between the Republic of Korea and Japan. At the 16th meeting in 2015, the two countries agreed to enhance cooperation to respond to North Korea's provocations and to provide humanitarian disaster relief. During the Seoul Defense Dialogue (SDD) held in October 2015, the Defense Ministers of the ROK and Japan met to share thoughts on defense exchanges and cooperation between the two countries and agreed to continue making efforts for the stable development of the ROK-Japan relationship. In November 2016, the ROK-Japan General Security of Military Information Agreement (GSOMIA) was concluded to effectively deter North Korean nuclear and missile threats by utilizing Japanese intelligence capabilities to enhance the ROK's security benefits.



ROK-Japan Defense Ministerial Meeting (October 2015)



Defense exchanges and cooperation

In addition, the two countries are striving to broaden their mutual understanding through Defense Policy Talks, working-level meetings on defense exchanges and cooperation, and security policy consultative meetings. The Search and Rescue Exercise (SAREX) is conducted biennially to enhance cooperation in the area of disaster relief.

However, some Japanese political leaders' regressive perception of history and unjust claims of dominion over Dokdo Island have become obstacles to the future development of the relationship between the two countries.

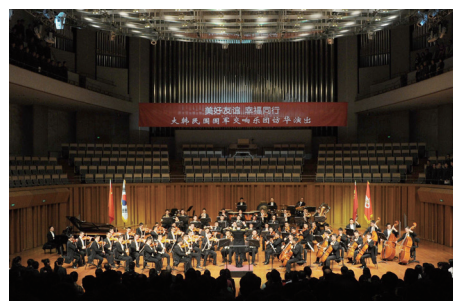
MND will respond stringently to Japan's unjust claims on Dokdo Island while continuously cooperating on major security issues, including North Korean nuclear threats, for the peace and stability of Northeast Asia.

| Defense Exchanges and Cooperation with China | The ROK and China have worked at developing their relationship in various areas, including politics, economy, society, and culture, since the establishment of diplomatic relations in 1992.⁹⁾ In particular, the “ROK-China Joint Statement for a Future Vision” and the ROK-China Joint Statement adopted in 2013 and 2014, respectively, have been opportunities for establishing a comprehensive, multi-layered strategic communication channel in the political and security areas.

In June 2013, the Chairman of the ROK Joint Chiefs of Staff (JCS) met with the PLA Chief of General Staff of China for talks. In February 2015, the ROK Defense Minister had talks with the Chinese Defense Minister, and both countries exchanged broad opinions about the situation in the Northeast Asian region and on the Korean Peninsula, as well as discussing ways to promote exchanges and cooperation including strategic communications between the two countries and the repatriation of the remains of Chinese troops. In September 2015, three representatives from the ROK Army, Navy, and Air Force attended China's military parade commemorating the 70th anniversary of Victory over Japan Day of World War II.

A channel of cooperation and communication regarding the security status on the Korean Peninsula and in the wider Northeast Asia region was established with the opening of a hotline between the ROK and the Chinese Ministry of Defense in December 2015.

Additionally, the ROK-China relations are gradually improving as the two countries expand their exchanges in many other areas,



Korean National Military Symphony Orchestra's performance in China (March 2014)

9) Friendship and cooperative relations (upon the resumption of diplomatic relations in 1992), Cooperative Partnership (1998), Overall Cooperative Relations (2000), Total Cooperative Partnership (2003), Strategic Cooperation Partnership Relations (2008)

such as meetings between the JCS and the Chinese General Staff, the ROK-China Defense Policy Talks, the repatriation of the remains of Chinese troops, the performance by the Korean National Military Symphony in China, and the Military World Games, as well as exchanges by military research institutes, and mutual education exchanges by respective education institutes.

In the future, MND will strive to contribute to peace and stability on the Korean Peninsula and in Northeast Asia by continuously expanding defense exchanges and cooperation with China at a level commensurate with the mature “strategic cooperative partnership” between the ROK and China.

| Defense Cooperation with Russia | Since the beginning of diplomatic relations in 1990, the relationship between the ROK and Russia has improved in a number of vital areas such as politics, economy, energy, science and technology. Ever since the two countries’ relationship was elevated to a “strategic cooperative partnership” in 2008, the ROK and Russia have been strengthening their cooperation, which includes substantive cooperation to resolve the North Korean nuclear issue, by holding two ROK-Russia summits in 2013, and the G20 Summit in September 2016.

To enhance trust between the two countries, the ROK and Russia are expanding exchanges of senior-level personnel. In particular, the ROK Vice Minister of National Defense visited Russia in March 2013 and established the momentum to reinforce strategic communication regarding military cooperation between the two nations. In November 2015, the Deputy Minister for Policy of MND and the Vice Minister for International Cooperation of the Russian Ministry of Defense held a strategic conference in order to conduct regular meetings among high-ranking national defense personnel.

In addition, through JCS chief director-level dialogue and joint military committee meetings, the two countries are continuing to develop their strategic cooperation at the working level, and broadening the scope of their military cooperation via exchanges between units and mutual education exchanges.

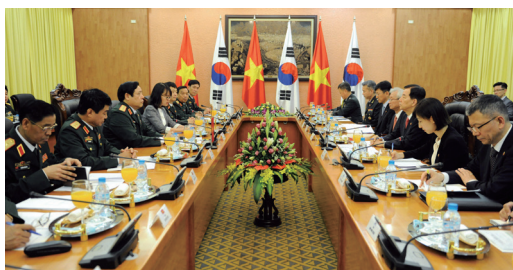
In order to enhance military trust, the two countries are committed to continuously reviewing the implementation status of the “ROK-Russia Maritime Accident Prevention Agreement” signed in 1994 and are pursuing the establishment of a hotline between the two countries’ air forces in accordance with the “Agreement on the Prevention of Dangerous Military Activities.”

MND will develop the relationship between the two countries into one that will contribute to peace and stability on the Korean Peninsula and in Northeast Asia by expanding defense exchanges and cooperation with Russia and enhancing the military trust between the two countries.

2. Expanding Defense Exchanges and Cooperation with Key Countries in Each Region

| Southeast Asia and Oceania | MND

actively engages in defense exchanges and cooperation with a number of countries in Southeast Asia and Oceania to enhance the ROK's national interests while seeking peace and stability in the Asia-Pacific region. In addition, MND actively pursues defense and defense industry cooperation with Southeast Asian countries through mutual visits of high-ranking personnel.

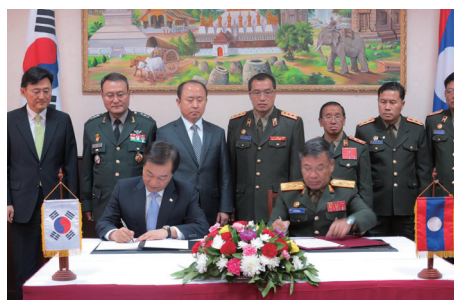


ROK-Vietnam Defense Ministerial Meeting (May 2015)

In May 2015, the Defense Ministers of the ROK and Vietnam agreed to cooperate on cyber security, military education activities, and international peacekeeping operations (PKO). In September 2015, at the Vice Ministerial Defense Strategy Dialogue the two countries discussed specific measures and signed a “Memorandum of Understanding on Cooperation for United Nations Peacekeeping Operations between the ROK and Vietnam” for mutual cooperation in international peacekeeping operations.

Practical cooperation plans, including mutual visits of high-ranking military personnel and military education exchanges, were discussed during the ROK-Philippines Defense Ministerial Meeting held in September 2015. Also, the legal foundations for comprehensive exchanges of military intelligence and secrets were established under the “Agreement on the Protection of Classified Military Information between the ROK and the Philippines.” In November 2016, the Philippines Defense Secretary had the opportunity to meet with the ROK Defense Minister to discuss the expansion of reciprocal defense cooperation.

In June 2016, the ROK's Vice Defense Minister visited countries with traditional ties with North Korea, such as Cambodia and Laos, to agree on ways to cooperate in resolving the North Korean nuclear issue, including the faithful implementation of the UN Security Council resolutions to sanction North Korea; discussions were centered on various cooperation measures such as military education



ROK-Laos Signing the Letter of Intent for Opening a Military Attaché Office (June 2016)

exchanges, peacekeeping activities, anti-terrorism measures, and the removal of landmines and other abandoned ordnance. In September 2016, the ROK and Cambodian Defense Ministers

held talks and reaffirmed their willingness to develop the defense cooperation between the two countries.

In addition to senior-level personnel exchanges, the ROK MND has laid foundations for defense cooperation with various countries in Southeast Asia through the mutual opening of military attaché offices. In November 2015, the Cambodia Military Attaché Office in the ROK was opened, and in August 2016 a ROK defense attaché was stationed at the ROK Embassy in Cambodia. In June 2016, MND agreed to establish a military attaché office in Laos and, in August 2016, MND agreed to pursue separately memorandums of understanding on defense cooperation with Cambodia, Laos, and Myanmar.

To enhance the measures for defense cooperation with key middle-ranking powers of Oceania such as Australia and New Zealand, MND engages in discussions with their high-ranking military personnel.

In September 2015, the ROK and Australia held the 2nd ROK-Australia Foreign and Defense Ministers Meeting, after which the Foreign and Defense Ministers of the two countries announced the “ROK-Australia Defense and Security Cooperation Blueprint” in accordance with the “Vision Statement for a Secure, Peaceful and Prosperous Future between the Republic of Korea and Australia.” The Blueprint comprises the plans for cooperation on nine security and defense areas, including combined training, military education exchanges, and cyber security, etc. Following the ROK-Australia Foreign and Defense Ministers Meeting, the 4th ROK-Australia Defense Ministerial Meeting was held to conclude the “Implementing Arrangements on Defense Education and Training Engagement between the ROK and Australia” and laid the foundation for systematically developing cooperation and exchanges in the area of military education.

MND also concluded the “ROK-New Zealand Agreement on Defense Cooperation” with New Zealand in April 2014. The two countries agreed to earnestly pursue cooperation on defense at the Defense Ministerial Meeting held in September 2015. In the future, the ROK and New Zealand will cooperate in such areas as military education exchanges, participation in combined training, etc.

| Southwest Asia | MND is pursuing various forms of defense cooperation with key Southwest Asian countries through exchanges of senior-level officials, regular meetings, and other initiatives.

At the ROK-India Defense Ministers’ Meeting held in April 2015, the two countries held discussions on military exchanges and mutual defense industry cooperation plans; following the visit of the Prime Minister of India in 2015, the leaders of both countries agreed to strengthen cooperation in such areas as maritime security, cyber security, and military education exchanges, and to open a bilateral foreign and defense ministerial meeting.

The ROK-Pakistan defense industry cooperation improvement plans were discussed when Pakistan's Defense Industry Minister attended the Seoul International Aerospace & Defense Exhibition (Seoul ADEX) in October 2015. Discussions on detailed cooperation plans concerning the defense industry's current situation took place at the ROK-Pakistan Joint Committee Meeting on Defense and Military Affairs held in December 2015.

In the future, MND will continue pursuing the expansion of national defense and defense industry cooperation with key Southwest Asian countries through exchanges of senior-level officials and regular meetings.

| Central Asia | Most Central Asian countries became part of the Commonwealth of Independent States (CIS)¹⁰⁾ after achieving independence from the former USSR. Central Asia spans an immense territory stretching from the area bordering China to that bordering Europe. Amongst the diverse Central Asian countries, five have achieved political stability and economic growth since gaining their independence.

MND signed the “ROK-Uzbekistan MOU on Military Education Exchanges and Cooperation” with Uzbekistan in April 2015; the two countries are now holding annual Defense Policy Talks to discuss plans for enhancing cooperation between them.

An “MOU on Defense Exchanges and Cooperation” was concluded with Azerbaijan in December 2013 to establish a foundation for enhancing defense exchanges and cooperation. In 2016, Azerbaijan dispatched a military officer to the ROK military education institute for the first time.

With the visit of the President of Turkmenistan to the ROK and the signing of a “MOU on Defense Cooperation between the Republic of Korea and Turkmenistan” in 2015, foundations for systematic defense cooperation between the two countries were laid. Currently, MND is preparing for the establishment of a regular consultative body, such as the Defense Policy Talks.

In order to achieve substantial defense cooperation with the CIS countries, the ROK military attaché offices were established in Turkmenistan (August 2015), Azerbaijan (September 2016), Uzbekistan (August 2016) and Kazakhstan (August 2016).

Defense exchanges and cooperation have also been expanded with Mongolia in various areas, including personnel, education and academic exchanges, and participation in the Khaan Quest exercise.¹¹⁾

10) Currently, there are nine CIS member countries including Russia, Belarus, Moldova, Armenia, Azerbaijan, Kazakhstan, Uzbekistan, Tajikistan and Kyrgyzstan, while Turkmenistan is an informal observer (CIS: Commonwealth of Independent States)

11) This was originally a bilateral exercise involving only the United States and Mongolia, but it became a multilateral exercise in 2006. The UN peacekeeping activity guidelines and standards are applied, and the UN standard exercise model is practiced.

| The Middle East | The Middle East is a critical region for securing energy resources. As the importance of cooperation with Middle Eastern countries is increasing, national defense and defense industry cooperation is being expanded.

To discuss the expansion of military cooperation with MND's senior-level personnel, Saudi Arabia's Assistant to the Defense Minister and the Director General of Public Administration for Science and Technology of the Saudi Ministry of Defense visited the ROK in January 2015 and May 2015, respectively. The Saudi Arabian Chief of Staff, during a visit to Korea for the Fourth Security Dialogue in September 2015, spoke with the ROK Vice Defense Minister and agreed on the necessity of revitalizing military exchanges between the two countries. In April 2016, Saudi Arabia's Director General of Public Administration for Science and Technology of the Ministry of National Defense visited the ROK to attend the ROK-Saudi Arabia Defense Policy Talks and exchanged opinions on overall defense cooperation with MND. In October, Saudi Arabia's cabinet advisors visited the Defense Minister and discussed ways of developing cooperation on national defense between the two countries.

In December 2015, delegates of MND visited Jordan to meet with key military personnel including the chairman of the Joint Chiefs of Staff and to promote national defense cooperation between the two countries. In July and November of 2016, the Defense Minister of Qatar and the Defense Minister of UAE visited Korea, respectively, and discussed ways of expanding national defense cooperation with the ROK Defense Minister.

MND will continue to pay close attention to changes in the security environment in the Middle East, and will strive to develop national defense and defense industry cooperation with key countries in the region, such as Saudi Arabia and the UAE, by holding regular meetings and working-level meetings with their senior-level personnel.

| Europe | The ROK is developing military cooperation with various countries in the European region through exchanges of senior-level military officials while simultaneously expanding cooperation with the European Union (EU) and the North Atlantic Treaty Organization (NATO).

At the ROK-U.K. Defense Ministerial Meeting held in January 2015, ministers of the two countries evaluated the traditional relationship of amity and cooperation established between the ROK and U.K. during the Korean War, and discussed issues pertaining to national defense, defense industry cooperation, and future cooperation. In November 2016, the ROK Air Force (ROKAF) and the Royal Air



ROK-U.S.-U.K. Air Force Combined Training (November 2016)

Force (RAF) participated in the ROK-U.S.-U.K. Air Forces joint training conducted at Osan Base in the ROK. This drill broadened the horizon of future national defense cooperation discussed at the meeting between the ROK and U.K. Defense Ministers.

The ROK and Poland agreed to closely discuss the need to expand education and training exchanges and defense industry cooperation at the ROK-Poland Defense Ministerial Meeting held in March 2015.

The ROK Vice Defense Minister met with the Vice Defense Ministers of Poland, the Czech Republic, and Hungary to discuss ways to carry out national defense and defense industry cooperation in a practical manner with Central European countries, the new growth engines within Europe.

At the ROK-France Summits held in November 2015 and June 2016, the leaders of the two countries agreed to strengthen cooperation in the defense and security fields. In June 2016, at the ROK and France Defense Ministerial Meeting, the ROK and France agreed to strengthen strategic cooperation in the fields of international peacekeeping activities, cyber security, and defense industry.

MND concluded MOUs on national defense cooperation with the Czech Republic and Bulgaria in February and May 2015, respectively. In December 2015, the ROK MND concluded an agreement on the exchange and mutual protection of classified military information with Hungary; and it continues to make efforts to establish an institutional basis for defense cooperation with other European countries

At the first ROK-Visegrad Group¹²⁾ Meeting held in December 2015, the ROK and the Visegrad Group countries agreed to strengthen national defense and defense industry cooperation.

To strengthen cooperation with NATO, MND delegates attended a NATO training exercise in the crisis management field for the first time in Belgium in March 2015. The ROK Defense Minister met with NATO's Chairman at the Asia Security Summit held in May 2015. In December 2016, NATO strongly condemned North Korea's nuclear and missile development and provocations and adopted the statement against North Korea at the special meeting on North Korean Nuclear Weapons at the North Atlantic Council, NATO's supreme decision-making body.

In order to promote cooperation with the European Union, the EU High Representative for Foreign Affairs and Security met with the ROK's Defense Minister during a visit to the ROK

12) Visegrad stands for the Central European Community comprised of the Czech Republic, Poland, Hungary and Slovakia. The first meeting was held in 1991 in the Hungarian city of Visegrad, from which the name derives.



in May 2015. In September 2015, the first ROK-EU Security Defense Conference was held to discuss plans for cooperation in the fields of crisis management, cyber security, and other matters.

MND will continue to cooperate with the European Union and NATO while simultaneously pursuing to mature bilateral defense cooperation with traditional allied nations such as the U.K. and France, and promoting national defense cooperation with Central European countries such as Poland, the Czech Republic and Hungary.

| Central and South America and Canada | With Central and South American countries and Canada, the ROK is actively carrying out cooperation in the economic field and based on this momentum, MND is continuing to pursue ways to vitalize cooperation with these nations in the defense field through exchanges of high-ranking military personnel and other means.

In July and November of 2013, the Vice Defense Minister of Colombia met with the ROK Vice Defense Minister and the Defense Minister of Peru met with the ROK Defense Minister, respectively, to discuss plans for cooperation on defense and defense industry. During the discussions with the Vice Defense Ministers from Peru and Chile who were visiting the ROK to attend the 3rd Seoul Defense Dialogue in October 2014, the ROK Vice Defense Minister reviewed the ongoing defense industry issues with Peru, and agreed on establishing a regular consultation body and vitalizing military education exchanges with Chile. The ROK also signed the “MOU on ROK-Colombia Defense Cooperation” with Colombia at the ROK-Colombia Defense Ministerial Meeting held in March 2015.

In April 2015, the Presidents of the ROK and Peru promoted the excellence of the KT-1P at its launch and flight ceremony held in Peru. Also, during the ROK President Park Geun-Hye’s visit to Chile, the “ROK-Chile Defense Industry and Logistics Cooperation Agreement” was concluded, thus establishing the legal and institutional basis for defense industry cooperation between the two countries.



The flight and launch ceremony of the KT-1P held in Peru (April 2015)

In January 2016, the Paraguay Defense Minister visited the ROK and met with the ROK Defense Minister to discuss ways of promoting national defense and defense industry cooperation between the two countries and concluded the “ROK-Paraguay MOU on Defense Cooperation.”

Meanwhile, Canada’s Senior Associate Deputy Minister for Defense, during a visit to the ROK for the 4th Seoul Defense Dialogue in September 2015, discussed ways to boost cooperation on security and national defense between the two countries.

In the future, MND plans to actively promote defense-related cooperation while maintaining its friendship by promoting regular exchanges of senior-level personnel with key countries in Latin America.

| Africa | Following the ROK-Botswana Summit in October 2015 during President of Botswana's visit to the ROK, the two countries discussed ways to promote defense and defense industry cooperation. Deputy Chief of Defence Forces of Uganda, who visited the ROK in October 2015 to attend the CISM World Games, agreed to expand cooperation between the two countries on national defense and defense industry issues.

In May 2016, the ROK Vice Defense Minister visited Ethiopia and Uganda to conclude MOUs on national defense cooperation aimed at laying the foundations for cooperation in the fields of military education, anti-terrorism, and defense industry.

The ROK MND will continue to pursue the establishment of a foundation for mutually feasible defense exchanges and cooperation plans with key African countries.

3. Strengthening Multilateral Security Cooperation

Various multilateral security cooperation activities aimed at establishing peace and stability in the region are now under way. In order to encourage the participation of the relevant countries, cooperation activities in the fields of transnational and non-military security threats, such as terrorism, piracy and natural disasters, are actively being pursued. MND is actively participating in multilateral security conferences in the Asia-Pacific region to that end, and, since 2013, it has also been participating in the largest multilateral security consultative body in the Americas, namely, the Halifax International Security Forum (HISF), in order to expand the stage for multilateral security cooperation.

Participation in multilateral security consultative bodies contributes to increasing the International Community's understanding of the North Korean nuclear and missile threats and to expanding support for the ROK government's policy towards North Korea and unification. Also, through its opportunities to attend multilateral security conferences, MND is able to engage in bilateral and multilateral talks with a view to developing national defense cooperation with major countries. <Chart 5-2> lists the Asia-Pacific multilateral security consultative meetings in which MND participates.

<Chart 5-2> Asia-Pacific Multilateral Security Consultative Meetings Participated by MND

Track 1 ¹³⁾ Multilateral Security Forums	Track 1.5 ¹⁴⁾ Multilateral Security Forums
<ul style="list-style-type: none"> • ASEAN Defense Ministers' Meeting-Plus (ADMM-Plus) • ASEAN Regional Forum (ARF) • Tokyo Defense Forum (TDF) 	<ul style="list-style-type: none"> • Seoul Defense Dialogue (SDD) • Asia Security Summit (ASS) • Jakarta International Defense Dialogue (JIDD) • Halifax International Security Forum (HISF) • Xiangshan Forum • Northeast Asia Cooperation Dialogue (NEACD)

| Seoul Defense Dialogue | The ROK MND has held the Seoul Defense Dialogue (SDD), attended by vice-minister level defense officials from the Asia Pacific region, since 2012 to build military confidence and improve the security environment of the Asia Pacific region, including the Korean Peninsula. It is becoming a global security cooperation consultative group as the participants are not just from the Asia-Pacific region but also from America, Europe, Middle East, and Africa.

The first SSD was attended by representatives from 15 countries and 2 international organizations, and included a seminar for meaningful discussions on “Cooperation for a safer Asia-Pacific region and solutions.” This successful launch was followed by a second meeting attended by representatives from European countries and international organizations (20 countries and 3 international organizations), and a third meeting attended by representatives from 24 countries and 3 international organizations. SDD is gradually becoming more firmly established, and in particular, the third SDD in 2014 officially launched the Cyber Working Group Meeting, laying the groundwork for dialogue on the need for multilateral security cooperation on cyber security.

At the fourth SDD, held in 2015 and attended by representatives from 30 countries and 4 international organizations, the Declaration on the Vision of Defense Dialogue for the Promotion of Multilateral Defense Cooperation was adopted. Six key agendas were discussed, and the opening keynote speech explained the efforts of the ROK government to maintain peaceful cooperation in East Asia and to resolve the security crisis on the Korean Peninsula; the ROK also asked for further support from other participating countries.

In 2016, the fifth anniversary of the SSD was held on a grand scale, attended by delegations from 34 countries and 5 international organizations. It was the first time that deputy-level officials attended the SDD from Uganda and Ethiopia in Africa, and the Czech Republic, Poland, Hungary and Slovakia in Eastern Europe, all of which have formed close ties with

13) Multilateral security conferences held between governments to promote regional and global peace and stability

14) Multilateral security conferences involving governments, private organizations and scholars to promote regional and global peace and stability

ROK; transforming the SDD into a global security dialogue.

The Secretary-General of the Organization for the Prohibition of Chemical Weapons (OPCW¹⁵⁾) stated in his keynote speech that North Korea would pose a threat to the wider world if it did not abandon the development of WMD, and emphasized the importance of unity and cooperation of the International Community to create principle-based international norms for the Korean Peninsula and world peace.

Under the theme ‘Complex Security Crisis: Challenges and Solutions,’ discussions were focused on the complex security threats that the International Community is facing, such as the North Korean nuclear issue, maritime security, cyber security, and terrorism by extremists. Notably, in the first plenary session on ‘Denuclearizing North Korea and international cooperation,’ defense officials and civilian security experts from ROK, the U.S., Japan, China, and Russia participated in the discussions to resolve the North Korean nuclear issue, and agreed that they should carry out their commitments thoroughly and summon the collective will and capabilities of the International Community to deliver a decisive and consistent message to North Korea. In addition, in the bilateral talks with 20 countries including the U.S., Japan, Uganda, and Ethiopia, and during the ‘ROK-Visegrad Group Vice Ministers’ Meeting, ways to carry out defense cooperation were discussed and participants’ determination to continue to expand the level of cooperation was reaffirmed.

The ROK will continue to develop the SDD as a ‘forum for multilateral security cooperation’ that will contribute to world peace, stability in Northeast Asia, and unification of the Korean Peninsula.



Seoul Defense Dialogue 2016 (September 2016)



Korea-Visegrad Group Vice Ministerial Defense Dialogue (September 2016)

| ASEAN Defence Ministers’ Meeting Plus (ADMM-Plus) | MND has been attending the ADMM-Plus since 2010. At the Third Council Meeting in Malaysia in 2015, the ROK Minister

15) Organization for the Prohibition of Chemical Weapons



2016 SDD

of National Defense expressed the ROK's position on the North Korean nuclear issue and unification.

Regarding the South China Sea issue, the ROK has officially expressed its position that “freedom of navigation and commercial aviation in the South China Sea should be guaranteed, and that disputes should be settled peacefully in accordance with the relevant agreements and the internationally established norms of conduct.”

From 2014 to 2016, the ROK participated in the International Peacekeeping Operations (PKO) Expert Working Group (EWG), one of the six EWGs of the ADMM-Plus, as co-chair with Cambodia; from 2017 to 2019, it will participate in the Marine Security EWG as co-chair with Singapore.



Minister of National Defense attending the ASEAN Defense Ministers' Meeting in 2015 (November 2015)

| Asia Security Summit | Since 2004, the ROK Minister of National Defense has been participating in the Asia Security Summit, which is the highest-level defense meeting in the Asia-Pacific region.

In 2015, at the 14th Summit, the ROK Minister of National Defense emphasized the support of the International Community to deter North Korea's provocations and threats posed by its nuclear weapons and missiles in his luncheon speech and separate dialogue sessions. In 2016, at the 15th Summit, the plenary speech by the ROK was well-received by the participating countries, in which ROK asserted that the International Community should faithfully fulfill the United Nations Security Council Resolution No. 2270 to lead the denuclearization of the Korean Peninsula.

| Other Multilateral-Security Cooperation Forums | Since 2003, MND has been participating in the ASEAN Regional Forum (ARF), and since then, the ROK has been gradually expanding its role in the ARF as seen through its role as co-chair with the U.S. and Indonesia in the maritime security domain from 2012 to 2014.

The ROK Vice Defense Minister participated in the Jakarta International Defense Dialogue (JIDD) in 2014, and shared the ROK's international efforts to promote maritime security by introducing the successful rescue operation of the Samho Jewelry crew abducted by Somali pirates in 2011.

In addition, the ROK annually participates in the Tokyo Defense Forum (TDF), a director general-level security consultative meeting; and the annual Xiangshan Forum held in China. It also participates in the Northeast Asia Cooperation Dialogue (NEACD), comprising the member states of the Six Party Talks, with a view to building military confidence and to

securing peaceful cooperation in Northeast Asia. In 2016, all participating countries of the NEACD, with the exception of North Korea, agreed on the denuclearization of North Korea and discussed measures for peace and stability on the Korean Peninsula.

MND will continue to participate in multilateral security cooperation activities to share the position of the ROK government regarding peace and stability in the Korean Peninsula and Northeast Asia with the countries concerned, and will continue its efforts to gain support from the International Community on the ROK's security policy.

4. International Nonproliferation and Counter-proliferation

| International Non-proliferation Activities¹⁶⁾ | The International Community is working to strengthen the international regulations to prevent the proliferation of weapons of mass destruction (WMD), conventional weapons, and ballistic missiles. The ROK has been actively participating in arms reduction and non-proliferation agreements and multilateral export control regimes since its admission to the UN in 1991.

The ROK has been diligently carrying out its responsibilities as a member of the Nuclear Non-Proliferation Treaty (NPT) since becoming a member in 1975, and actively participates in the International Community's efforts to prevent nuclear proliferation. It is also a member of the Chemical Weapons Convention (CWC), the Biological Weapons Convention (BWC), and the Missile Technology Control Regime (MTCR), working to deter the expansion of weapons of mass destruction (WMD), and is jointly providing international chemical protection courses with the Organization for the Prohibition of Chemical Weapons (OPCW).

The ROK is also participating in the Wassenaar Arrangement and the Arms Trade Treaty (ATT) and is strengthening its nonproliferation efforts such as controlling the export and transfer of weapons systems. In April 2013, the Arms Trade Treaty, in which the ROK participated as a signatory, was adopted as the first legally binding regulation regarding the international trade of conventional weapons.

The ROK chaired the Nuclear Security Summit (2012), the UN Security Council, and the Hague Code of Conduct against Ballistic Missile Proliferation (HCOC) from 2011 to 2013. In 2016, ROK served as the Chair of the MTCR and the Nuclear Suppliers Group (NSG), greatly contributing to strengthening of the international non-proliferation regime.

16) Non-proliferation efforts to prevent the spread of weapons of mass destruction and various types of arms, such as conventional weapons.

| International Counter-proliferation¹⁷⁾ Activities | The International Community is strengthening its activities to prevent the proliferation of WMD, ballistic missiles, and other threats.

The ROK government officially became a member of the Proliferation Security Initiative (PSI)¹⁸⁾ in 2009 to actively participate in the international endeavor to prevent the proliferation of WMDs. In 2010, it joined the Operational Expert Group (OEG), which is a group of countries leading the initiative. The ROK hosted PSI exercises in 2010 and 2012 and carried out discussions on preventing WMD proliferation and seizing WMDs while conducting maritime interdiction training. In September 2012, the ROK held the PSI's Annual OEG meeting in Seoul. Since 2014, six countries, namely the ROK, the U.S., Japan, Singapore, Australia and New Zealand, have been organizing annual training programs to prevent WMD proliferation.¹⁹⁾

In 2016, the ROK actively participated in tabletop exercises and maritime interception training organized by Singapore for international cooperation and interdiction activities to prevent the proliferation of WMD.



Airborne infiltration drills to block ships carrying weapons of mass destruction

<Chart 5-3> PSI training participation status

Year	2009	2010	2011	2012	2013	2014	2015	2016
Location	Singapore	ROK	N/A	ROK, Japan	UAE	U.S.	New Zealand	Singapore

Since 2011, the ROK and the U.S. have conducted the annual “Able Response” exercise (AR)²⁰⁾ to prepare for potential biological weapons threats, inspect the national integrated response system, and improve their combined biological defense capabilities. Also, the two countries hold the Countering WMD Committee Meeting on an annual basis to discuss and develop the readiness posture against North Korea’s nuclear, biological, chemical, radioactive weapon threats.

17) Counter-proliferation efforts to protect their territories and peoples by reducing or eliminating actual threats posed by weapons of mass destruction or by restraining the enemy's desire to use them.

18) The Proliferation Security Initiative (PSI) was launched in June 2003 as a U.S.-led international cooperation activity to prevent the international spread of WMD. It includes the sharing of information between member states, prohibition of the transportation of WMDs, prohibition of the exportation of illegal weapons, and joint operations

19) Starting in the U.S. in 2014, it will be held in New Zealand in 2015, in Singapore in 2016, in Australia in 2017, in Japan in 2018, and in ROK in 2019.

20) Combined Biomonitoring Exercise with 200 participants from 40 associated organizations.

Section 3 Overseas Deployments and Peace Keeping Operations (PKOs)

After overcoming the tragedy of the Korean War with the support of the UN and the international community, the ROK has become a donor country and a middle power that actively participates in peace-keeping operations (PKOs) thanks to economic growth and democratization. As of November 2016, the ROK is participating in various missions²¹⁾ through the deployment of approximately 1,100 troops to UN PKOs, multinational peace operations, and defense cooperation activities. This has elevated the ROK's standing in the world.

1. UN Peacekeeping Operations

UN peacekeeping operations began with the establishment in 1948 of the United Nations Truce Supervision Organization (UNTSO) in Palestine. Currently, 16 missions²²⁾ are carrying out mandates such as monitoring the armistice and providing reconstruction and medical support in conflict areas around the world.

The ROK which joined the UN in September 1991 has continuously participated in UN peacekeeping operations since it first deployed an engineering unit to Somalia in 1993. As of November 2016, there are 647 deployed troops in 8 regions, including Dongmyeong Unit's 329 troops in Lebanon and Hanbit Unit's 293 troops in South Sudan.

The information above is reflected in <Chart 5-4>.

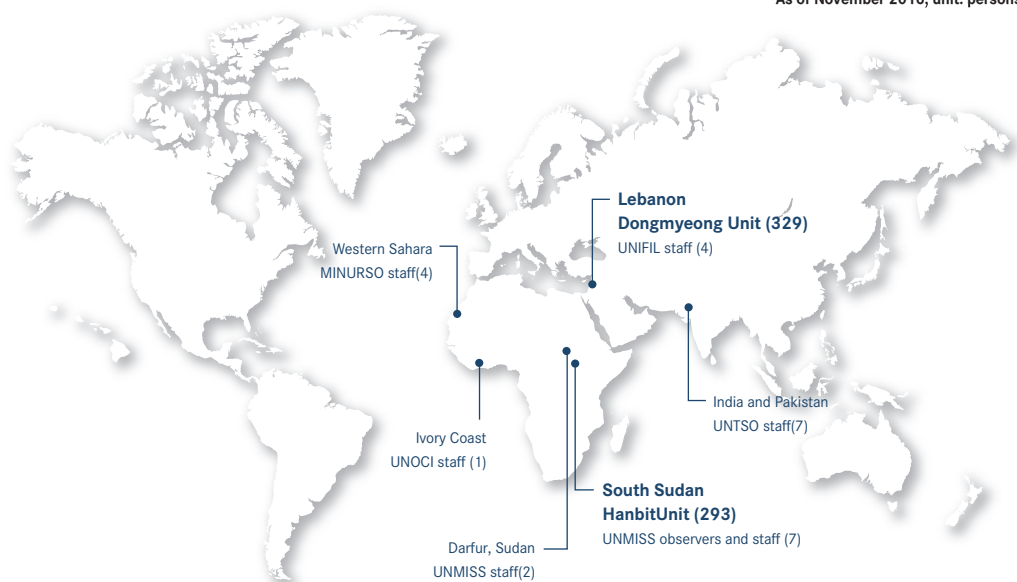
21) Comparison of various missions

Category	UN PKO	Multinational(MNF) Peace Operations	Defense Cooperation Activities
Host	Led by the UN	Led by a regional security organization or a particular nation	Led by the sending country
Command and Control	PKF commander appointed by the UN Secretary-General	MNF commander	Military commander of the sending country
Expenses	Borne by the UN	Borne by each country	Borne by each country

22) Currently, there are nine Missions in Africa (Western Sahara, Central African Republic, Mali, Democratic Republic of the Congo, Sudan Darfur, Abyei, Liberia, South Sudan and Cote d'Ivoire), three in the Middle East (Lebanon, Syria), two in Europe (Kosovo and Cyprus), one in South America (Haiti), and one in Asia (India and Pakistan). In total, the Republic of Korea has deployed approximately 120,000 personnel to 128 countries to date.

<Chart 5-4> ROK Participation in UN Peacekeeping Operations

As of November 2016, unit: persons



| Dongmyeong Unit in Lebanon²³⁾ | The UN deployed the United Nations Interim Force to Lebanon (UNIFIL), based on UN Security Council Resolutions,²⁴⁾ in 1978. Ever since, UNIFIL has conducted its armistice monitoring mission in Lebanon. In 2006, as the conflict between Israel and Hezbollah in the southern part of Lebanon intensified, the UN significantly increased the number of its peacekeepers from 2,000 to 15,000 thereby requesting greater participation from member states. In July 2007, with the consent of the National Assembly, the ROK government deployed a peacekeeping unit (Dongmyeong Unit) of 350 troops to Tyre in the southern part of Lebanon. Dongmyeong Unit conducts reconnaissance and surveillance activities to interdict the entry of illegal weapons and militants into the region. In addition, Dongmyeong Unit has carried out various civil-military operations and humanitarian assistance activities.²⁵⁾ To date, more than 90,000 patients have been treated, and through Dongmyeong Unit's support projects, such as



Surveillance activity at a fixed guard post

23) "Dongmyeong," means "bright light from the east" and signifies the hope of a bright future and peace.

24) UN Security Council Resolution 425 and 426 (March 19, 1978).

25) It renovated old school buildings, built new roads, improved existing roads, and provided medical support activities for local residents.



Overseas deployment

improving the sewage system and school facilities, as well as building libraries, local living conditions have improved.

Dongmyeong Unit's successful civil-military operations were well received in Lebanon, and it has contributed significantly to stabilizing the situation in Southern Lebanon. The major activities of Dongmyeong Unit are listed in <Chart 5-5>.

<Chart 5-5> Dongmyeong Unit's Major Activities

As of November 2016

Operational Activities	<ul style="list-style-type: none"> • Static surveillance operations: 33,190 times • Combined on-foot and vehicular reconnaissance with the Lebanese military: 3,780 times • Independent On-foot and vehicular reconnaissance with EOD reconnaissance: 38,384 times
Civil-Military Operations	<ul style="list-style-type: none"> • Medical support for local residents: 91,627 patients • Treatment of livestock: 22,314 heads • Computer, Korean, Taekwondo, and sewing classes: 5 towns • Local projects for the residents: 284 projects (public facilities, school facilities, sewage facilities, and others) • Lebanese military support: 79 times

| Hanbit Unit²⁶⁾ in South Sudan | After Sudan gained its independence from the United Kingdom and Egypt, a civil war broke out between South and North Sudan in 1955 due to various political and religious reasons. After two peace agreements, South Sudan became an independent country in July 2011. The UN installed the United Nations Mission in the Republic of South Sudan (UNMISS) and requested troop contributions from member states.

After receiving the consent of the National Assembly in September 2012, the ROK government established an engineering unit called the South Sudan Reconstruction Support Group (Hanbit Unit) in January 2013 and deployed the unit to South Sudan on March 31, 2013.²⁷⁾ Hanbit Unit is successfully conducting reconstruction activities such as the construction and repairs of roads, airports, and bridges, while also carrying out humanitarian assistance missions such as refugee protection as well as the provision of drinking water and medical support in Bor, which was devastated by the civil war.

In 2014, Hanbit Unit constructed an impermeable embankment extending 17 kilometers



Protective barrier improvement project at the Bor base
(November 2016)

²⁶⁾ A 'big bright light that leads the world' supporting the reconstruction of South Sudan and humanitarian activities.

²⁷⁾ Deployment to South Sudan is the ROK's 7th United Nations peacekeeping force deployed after Somalia (reconstruction assistance), Western Sahara (medical support), Angola (reconstruction assistance), East Timor (security and border control), Lebanon (armistice supervision), and Haiti (reconstruction assistance).

along the White Nile; and, in 2015, it repaired 125 kilometers of road from Bor to Mangalla which serves as the main supply route for the Bor region as well as the UN mission. Hanbit Unit also operates the Hanbit Agricultural Technology Research Centre (HATRC) and the Hanbit Vocational School to help farmers to become self-reliant by teaching farming technology suitable to local conditions and supporting professional training. Hanbit unit's major activities are shown in <Chart 5-6>.

<Chart 5-6> Hanbit Unit's Major Activities

As of November 2016

Reconstruction Operations	<ul style="list-style-type: none"> • Expansion of the Bor Airport parking ramp (410m×110m) • Bor Airport runway repairs (1.8km×45m) • Construction of the Bor Airport heliport (70m×70m), helicopter maintenance area construction (1ea) • Bor~Mangalla road repairs (125km), Bor~Anyidi road repairs (24km) • Construction of landfill treatment (2 sites), sewage treatment (50m×50m, 3 sites) in Jonglei
Civil-Military Operations	<ul style="list-style-type: none"> • Medical support: Approx. 16,000 patients • Construction of Rwaldit Elementary School • Construction of an impermeable embankment along the White Nile River • Construction of a pump site at the impermeable embankment along the White Nile River • Operation of Hanbit farm: planted 600 saplings of mango and guava • Hanbit Agricultural Technology Research Centre: 113 students completed, 4th class in session • Hanbit vocational school (4 areas including civil engineering): 72 students completed, 2nd class in session
Refugee Protection	<ul style="list-style-type: none"> • Construction of a refugee camp • Treatment of gunshot wound patients: 819 patients • Water supply support • Protective wall around the refugee camp, construction of internal roads
UN Forces Facility Construction Aid	<ul style="list-style-type: none"> • Construction of quarters: Eastern command (35), Ethiopia battalion (35), employee lodging (30), Nepal police base (8), Sri Lanka hospital(12), sewage treatment site (4) • Reinforcement of Bor Base Security: protective wall, internal operation roads, guard posts, shelters for UN employees (4 sites, 16 buildings), base field of fire clearance (1.5km) • Improvement of base drainage facilities: construction of receiving reservoirs (4 sites, 525kton), waterway/road repairs (7.5km) • Pibor base employee lodging, reinforcement of security (protective wall, shelter, incineration plant, etc.)

| Activities of Observers and Staff Officers in UN Missions | The ROK government has dispatched more than 20 observers and staff officers to UN missions in major areas of conflict, including Lebanon, South Sudan, Western Sahara, India and Pakistan, as well as Haiti. Observers monitor armistice violations and conduct diverse missions including patrols, investigations, reporting, as well as mediation under the control of each Mission HQ. Staff officers perform their missions in major staff offices such as intelligence, operations, logistics, and others.

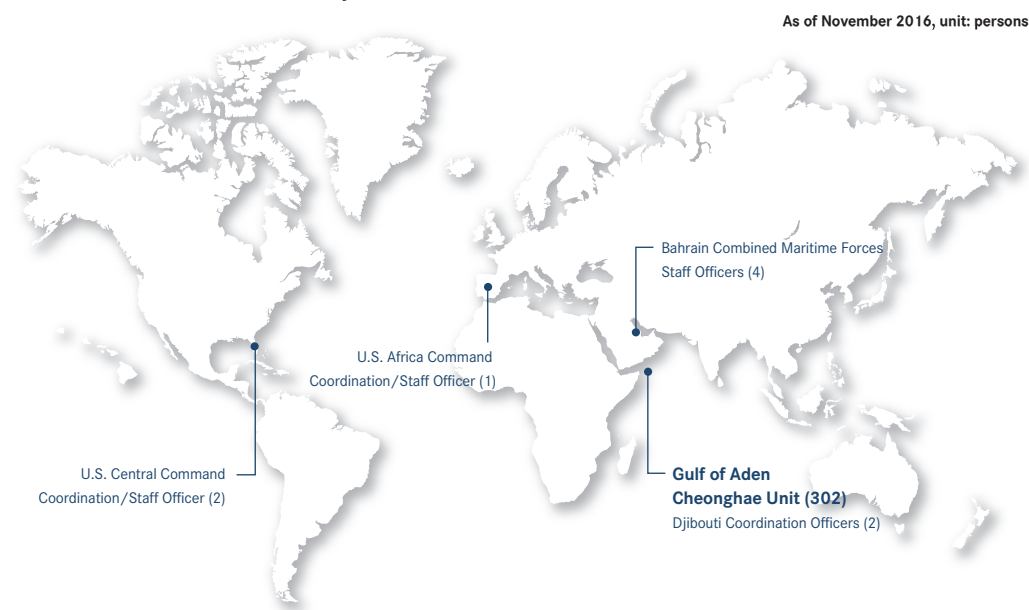
2. Multinational Forces' Peace Operations

Multinational Forces' (MNF) peace operations are peacekeeping activities performed by multinational forces that have been established and led by a regional security organization or a particular country based on UN Security Council resolutions. In collaboration with UN peacekeeping operations, MNF peace operations play an important role in the stabilization and reconstruction of conflict regions.

In 2010, the ROK government deployed Ashena Unit to support reconstruction and stabilization missions in Afghanistan.

As of June 2014, Ashena Unit protected the reconstruction activities of the Provincial Reconstruction Team (PRT) without experiencing any loss or damage during the span of more than 1,800 escort and surveillance operations. As of November 2016, the ROK has deployed a total of 311 troops to MNF peace operations. Major MNF activities are shown in <Chart 5-7>.

<Chart 5-7> Multinational Forces' Major Activities



| Cheonghae Unit in Somali Waters | Due to the civil war in Somalia, there was a significant increase in the amount of damages caused by piracy in the waters off the coast of Somalia beginning from 2004. Consequently, the UN Security Council adopted Resolution 1838²⁸⁾ and

28) ① Urges member nations to dispatch naval vessels and military aircraft; ② allows naval vessels and military aircraft to use all measures within the scope of international law to combat piracy; and ③ calls for cooperation with the Somali Transitional Government to combat piracy. ④ The mechanism will ensure that food sent under the WFP (World Food Program) is transported safely.

requested its members to deploy military vessels and aircraft to the region. The ROK government deployed Cheonghae Unit to the Gulf of Aden, off the coast of Somalia in March 2009 with the consent of the National Assembly.

Cheonghae Unit's major missions are to ensure the safety of the ROK vessels, participate in the maritime security operations of the Combined Maritime Forces (CMF), and protect the ROK citizens against all contingencies. It is composed of one destroyer, one helicopter, three rigid-hull inflatable boats (RIBs), and 302 troops as of November 2016.

Cheonghae Unit successfully executed "Operation Dawn of the Gulf of Aden" in January 2011, during which the unit rescued a ROK ship and its crew from pirates. In March 2011 and August 2014, the unit successfully executed evacuation operations for the ROK nationals in Libya by safely evacuating them as well as other foreign nationals to nearby countries when the political situation in Libya became unstable. Such accomplishments raised the stature of the ROK armed forces in the world.



Rescue operation for Korean nationals in Yemen (April 2015)

In April 2015, the first "floating" ROK embassy was opened on the destroyer *Wang Geon* to safely evacuate the ROK citizens who were caught in Yemen's capital Sana'a as well as to maintain contact with and protect any ROK citizens who remained in Yemen. This is a stellar example of the ROK's protection of its overseas citizens through cooperation between MND and the Ministry of Foreign Affairs. Piracy in the Gulf of Aden is gradually declining, but as it is the main transport route for strategic goods such as crude oil and LNG, while 29% of the total maritime cargo volume of the ROK flows through the Gulf of Aden, maintaining security in the region is still paramount.²⁹⁾

The major activities of Cheonghae Unit are shown in <Chart 5-8>.

29) Two Chinese destroyers and one logistics support vessel are participating in anti-piracy operations. Japan has committed two vessels and two patrol aircraft since 2009 while also providing one vessel to the CTF-151 in 2014, and acting as a commander of the CTF-151 in 2015.



<Chart 5-8> Cheonghae Unit's Major Activities

As of November 2016

Convoy		Safe voyage escort		Maritime security operations	Counter-piracy operations
ROK vessels	Foreign vessels	ROK vessels	Foreign vessels		
476	1,736	11,555	2,842	386 times (783 days)	21 times / 31 vessels
Protecting people					
Operation Dawn of the Gulf of Aden (2011. 1.)			Rescued all crew including the captain, shot 8 pirates, captured 5 alive		
Evacuation operation of ROK nationals in Libya (2011. 3.)			37 ROK nationals evacuated to Malta and Greece from Libya		
Evacuation operation of ROK nationals in Libya (2014. 8.)			18 ROK nationals and 86 foreigners evacuated to Malta from Libya		
Evacuation operation of ROK nationals in Yemen (2015. 4.)			6 ROK nationals and 6 foreigners evacuated to Oman from Yemen		

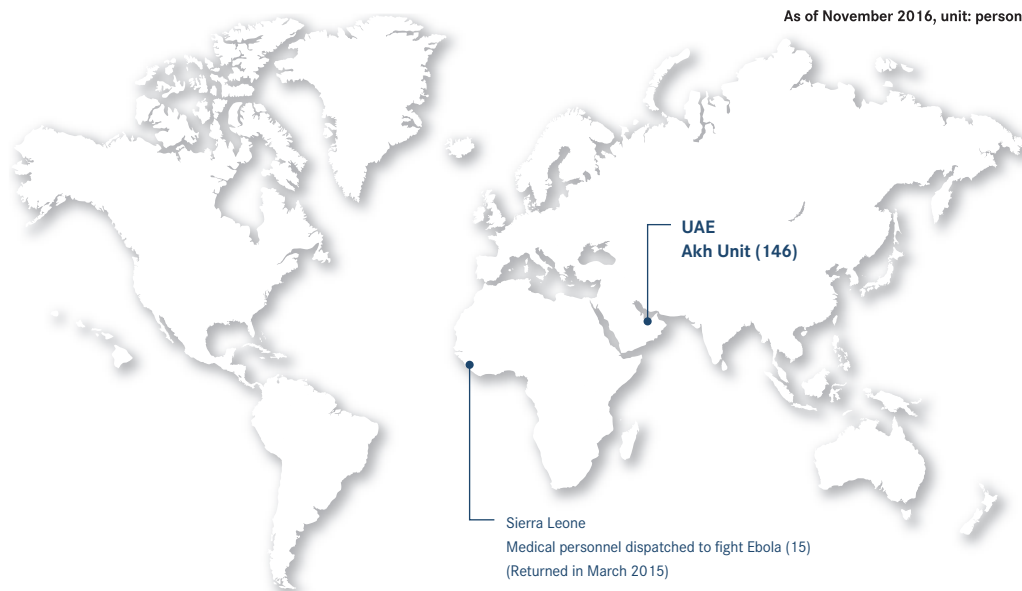
| Staff and Coordination Officers in Multinational Forces | The ROK military has dispatched a total of ten staff and coordination officers to the CMF in Bahrain, the Combined Joint Task Force-Horn of Africa (CJTF-HOA) in Djibouti, and the U.S. Central Command, in order to support unit-level multinational force deployment activities. Their major missions include performing staff duties for the CMF, establishing combined operational plans, supporting the rotation and combat services of the ROK military units deployed overseas, and cooperating with local allied forces.

3. Defense Exchanges and Cooperation Activities

At the request of a given country, the ROK military deploys its forces to non-conflict areas, where their safety can be secured given the low risk of battle, to conduct defense exchanges and cooperation activities such as education and training, humanitarian assistance, as well as disaster relief. In November 2013, the ROK government dispatched the Joint Support Group for the Philippines (Araw Contingent) to support recovery efforts in the Philippines, which had been hit by severe typhoons. Araw Contingent successfully accomplished its mission of reconstructing the damaged area and withdrew from the site in December 2014. In March 2014, following the disappearance of a Malaysian aircraft with 239 passengers on board, Malaysia requested support from its allies and partners to search for the wreckage. Although the ROK forces did not discover any wreckage of the missing aircraft during the maritime search operation, they conducted a prolonged, overseas multinational search operation despite a short preparation time. As of November 2016, a total of 146 ROK troops are engaged in military support and cooperation activities abroad, which is shown in <Chart 5-9> below.

<Chart 5-9> Participation in Defense Cooperation Activities

As of November 2016, unit: persons



| Akh Unit³⁰⁾ in the United Arab Emirates | The UAE military requested the deployment of a ROK unit in August 2010 to improve their education and training standards as well as to develop their defense structure by benchmarking the ROK military. In January 2011, the ROK government deployed the UAE Military Training Cooperation Group (Akh Unit) comprised of approximately 150 troops to Abu Dhabi in response to the request.

Akh Unit provides education and training to the UAE special warfare units, conducts combined exercises and training with the UAE forces, while also protecting the ROK citizens during contingencies. Akh Unit successfully enhanced the operational capabilities of the UAE special warfare units by improving their training mechanisms. Also, through desert training in a dry environment characterized by very high temperatures that our troops cannot experience back home and by training with the high-tech facilities and equipments of the UAE armed forces, the ROK combined special operations capability in the Middle East has improved greatly. In particular, high-altitude and nighttime HALO training, which used to take as many as



Akh Unit training for special operations

30) The name "Akh" means "brother" in Arabic.



Akh Unit special operations training

6-7 years to complete, can now be completed in 6 months; sharing the UAE's state-of-the-art facilities and equipment has also saved on the required training budget.

The ROK and the UAE have engaged in active exchanges as well as cooperation in many defense areas since the deployment of the Akh Unit. In particular, through mutual visits by representatives of special warfare training and other various specialties in the Army, Navy, and Air Force, the two countries continue to strengthen mutual trust. Their major activities are as summarized in <Chart 5-10>.

<Chart 5-10> Akh Unit's Major Activities

As of November 2016

Enhancement of the UAE's military capabilities	<ul style="list-style-type: none"> • Contributing to the development of the UAE Armed Forces by improving their special warfare capabilities • Improving the education and training system of the UAE Armed Forces
Enhancement of ROK's military capabilities	<ul style="list-style-type: none"> • Utilizing the high-tech facilities and equipment of the UAE to enhance special operations capabilities • Training to enhance survivability under harsh conditions (high temperatures above 50°C, desert) • Long-range live fire training and HALO training
Expansion of defense exchanges	<ul style="list-style-type: none"> • UAE observation of major ROK exercises and participation in ROK-UAE combined exercises • Exchanging officers for consignment education by each service of the ROK and UAE armed forces • Medical cooperation including treatment of UAE military patients and families at ROK civilian hospitals • Establishment of a hub for defense diplomacy including defense industry export cooperation in the Middle East

| Deployment of Military Medical Personnel to the Ebola Outbreak

Based on the urgent need for medical personnel to prevent the spread of the Ebola virus, the ROK government decided to send the Korea Disaster Relief Team (KDRT), a medical team comprised of civil and military medical personnel, to West Africa.

From December 2014 to March 2015, the ROK military deployed 6 military doctors and 9 military nursing officers along with civilian medical personnel to Sierra Leone, one of many countries most severely affected by the Ebola outbreak in West Africa.



Treatment of an Ebola patient in Sierra Leone (February 2015)

4. Expanding the Foundation for PKOs

| Establishing a Legal Basis for Overseas Deployments | The overseas deployment of the ROK military was based on the ROK Constitution, but there were no laws or regulations stipulating the details of the deployments. In January 2010, the ROK government enacted the

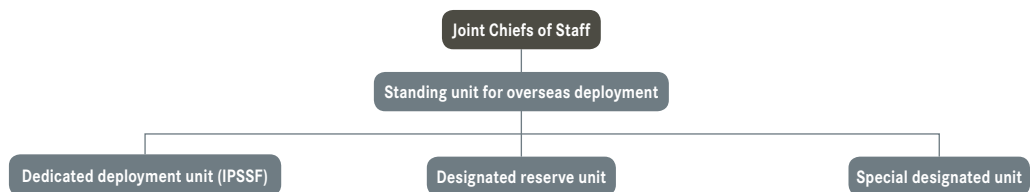
[United Nations Peacekeeping Operations Participation Act] to establish the legal basis for efficient deployment of ROK military units to UN peacekeeping operations. However, there is still no clear legal basis for MNF peace operations and defense cooperation activities. A legislative bill to establish a legal basis for various overseas deployment activities, the bill for the [Act on the Armed Forces' Participation in Overseas Deployment Activities] has been proposed and is being deliberated by the National Assembly.

The bill stipulates the requirements and procedures for the deployment of troops, as well as the National Assembly's democratic control over the deployment of troops, while also including the legal protection for deployed servicemembers, the National Assembly's right to demand the withdrawal of troops, and the mandatory submission of performance reports after withdrawal. Once enacted, the procedures and contents of the ROK's overseas deployment will be more clearly defined. The Act is also expected to increase the transparency and predictability of overseas deployment activities.

| Operation of a Standing Unit for Overseas Deployment | Since December 2009, a standing unit for overseas deployment comprised of approximately 3,000 troops has been on standby, ready to deploy within one or two months after a PKO mission order is given.

The standing unit consists of a dedicated deployment unit, a designated reserve unit, and a special designated unit, each of which are approximately 1,000 strong. The dedicated deployment unit is the first to prepare for deployment in the event of an order to deploy. In July 2010, the International Peace Support Standby Force (IPSSF, *Onnuri Unit*³¹⁾) was established as a unit solely devoted to overseas deployment. The designated reserve unit prepares for the rotation of deployed personnel or additional deployment, and the special designated unit prepares for various deployment requirements. <Chart 5-11> below shows the structure of the standing unit for overseas deployment, and <Chart 5-12> shows the number of deployed personnel.

<Chart 5-11> Structure of the Standing Unit for Overseas Deployment



* Special designated units: Engineering, medical, military police, guard (Marine Corps), transportation (Navy and Air Force, UAVs, helicopters)

31) In the Korean name *Onnuri*, the syllable "On" means 'holistic' or 'whole' and "Nuri" means the world inhabited by people. Thus the name *Onnuri* signifies a unit that performs its missions all over the world.

<Chart 5-12> Number of Personnel Deployed from the Standing Unit

2010-November 2016

Dongmyeong Unit	Ashena Unit	Akh Unit	Hanbit Unit	Total
1,071(8 rotations)	991(8 rotations)	1,650(11 rotations)	1,758(7 rotations)	5,470

| Reinforcing the Functions of the PKO Center | The PKO Center was established as a dedicated education organization for PKOs at the Joint Staff College in August 1995. In 2015, MND changed the affiliation of the PKO Center to the Korea National Defense University based on the [Act on the Establishment of the Korea National Defense University] and reinforced its functions of education and research.

The PKO Center is exclusively responsible for providing pre-deployment education to key officers and staff members of a deployed unit as well as to personnel deploying on individual assignments. It is also advancing its education system by pursuing exchanges and cooperation with the UN's Department of Peacekeeping Operations (DPKO), the UN Division at the Ministry of Foreign Affairs, PKO Centers in other countries, police PKO centers, and other national PKO related institutions. When the deployed units or individuals complete their missions, the PKO Center publishes and distributes to relevant offices a booklet on the lessons learned from the deployment while also including post-action reports.

In November 2013, the PKO Center acquired an education certificate for its UN Staff Course from the UN Department of Peacekeeping Operations (DPKO), thus obtaining universal recognition for its educational expertise. It is now striving for its Military Specialist Course to be recognized by the UN. The PKO Center will gradually expand its functions and roles to systematically support research, education, and training for PKOs. The number of personnel who have been trained at the PKO Center is shown in <Chart 5-13>. As of 2017, the ROK is preparing to hold military instructors' training for UN member states in cooperation with the UN. The ROK has also been selected as the host country of the annual conference of the Asia-Pacific Peacekeeping Operations Center in 2018. The PKO Center will accordingly expand its capabilities as a prime PKO education and training center. The number of personnel trained by the PKO Center is shown in <Chart 5-13>.

<Chart 5-13> Number of the Personnel Trained in the PKO Center

2015-November 2016

UN PKO	MNF Peace operations	Others	Total
1,976 (8 programs)	70 (5 programs)	646 (8 programs)	2,692

| Co-Chair of Experts Working Group on Peacekeeping Operations of the ASEAN Defence Ministers' Meeting Plus | From 2014 to 2016, the ROK served as the co-chair

for the Experts' Working Group on Peacekeeping Operations (PKO EWG)³²⁾ of the ASEAN Defence Ministers' Meeting Plus (ADMM-Plus) along with the Kingdom of Cambodia.

In September 2014 and September 2015 as well as October 2016, PKO EWG conferences were held in Seoul, during which current issues faced by the UN Department for Peacekeeping Operations were discussed.

In March 2016, as the co-chair of the EWG, the ROK held an international PKO FTX in India³³⁾ to share the ROK's outstanding capabilities in international peacekeeping operations as well as to gain recognition as a leading country in peacekeeping operations within the international community.

As a co-chair of the EWG, the ROK will continue to work to establish a practical cooperation system among the member states. Through multilateral security meetings, the ROK will further enhance its role in many agendas such as maritime security.



ADMM-Plus Expert's Working Group on PKO (October 2016)

| Promoting ROK-Vietnam Cooperation for PKO Activities | The ROK is actively promoting cooperation on international peacekeeping activities with Vietnam after signing a Memorandum of Understanding on cooperation with Vietnam in September 2015. In December 2015 and September 2016, the ROK sent an expert on international peacekeeping operations to the Vietnamese PKO Center to provide advice on preparations for PKO deployments to overseas missions. The ROK expert passed on the expertise and know-how of the ROK, based on the ROK's PKO deployment experiences, to the Vietnamese military and trained the participants on specific crisis scenarios as well as survival methods necessary for the protection of military bases.

In September 2016, MND invited Vietnamese officers to the four-week long UN Staff Program held at the ROK PKO Center to share its know-how in conducting UN peacekeeping missions as military staff officers, thus contributing to strengthening the Vietnamese military's international peacekeeping operations capabilities.

32) The ADMM-Plus is comprised of Expert's Working Groups (EWG) on ① peacekeeping operations, ② counter-terrorism, ③ maritime security, ④ military medicine, ⑤ humanitarian aid and disaster relief, ⑥ humanitarian mine action, and on ⑦ cyber security. One ASEAN country and one PLUS country assume co-chairmanship of each EWG. There are 10 ASEAN countries (Laos, Malaysia, Myanmar, Vietnam, Brunei, Singapore, Indonesia, the Philippines, Cambodia, and Thailand) and 8 PLUS countries (Republic of Korea, USA, China, Japan, Russia, Australia, New Zealand, and India).

33) In March 2016, the first joint Field Training Exercise on international peacekeeping operations and humanitarian mine action was held in Pune, India with a total of 280 personnel from the 18 countries that participate in the ADMM-Plus. From the Republic of Korea, 31 instructors and members of Onnuri unit, ROK Peace Keeping Forces, participated in training sessions for on-foot reconnaissance and checkpoint operation, escort operation, and search and interdiction operations.

Chapter 6

Military Measures in Accordance with Changing Inter-Korean Relations



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Advancements in Inter-Korean Relations

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The ROK Army's day patrol at the fences

Section 1 Promoting Military Confidence-building Considering Advancements in Inter-Korean Relations

Although the ROK government has persistently exerted its efforts to build military confidence and reduce military tension between the two Koreas in order to end the vicious cycle of progress and setbacks in inter-Korean relations and to induce North Korea to become a responsible member of the international community, North Korea continues to carry out reckless provocations with its nuclear tests and long-range ballistic missile tests. Nevertheless, MND is carrying out diverse efforts to establish a sustainable peace on the Korean peninsula. If North Korea Peninsula to abandon its nuclear project and walk the path of mutual prosperity, the ministry will gradually pursue military confidence-building measures while providing military assurance for inter-Korean exchanges and cooperation projects.

1. Reducing Inter-Korean Military Tension and Pursuing Military Confidence-Building

In order to establish a sustainable peace on the Korean Peninsula, reducing military tension and building military confidence are essential, along with making headway in inter-Korean relations. As part of the struggle to transform the demilitarized zone, which is currently heavily armed on both sides, into an area of peace and confidence, the ROK government proposed working together with North Korea to create the DMZ World Eco-Peace Park during the first inter-Korean authorities talks held from December 11 to December 12, 2015 in Kaesong.

MND has attempted to raise the issue of reducing tension and building military confidence with North Korea on every occasion they have met. For instance, during the inter-Korean high-level military talks¹⁾ that took place on February 12 and February 14, 2014 at Panmunjom, the participating MND delegates actively addressed the ROK's desire to reduce military tension and put an end to the mutual slander and defamation. Furthermore, even during the inter-Korean high-level military talks held in October 15, 2014, the ROK once again urged the North to

1) "High-level inter-Korean military contact" in the "2014 Defense White Paper" has been changed to "inter-Korean high-level military talks" in order to prevent overlap and confusion with various other inter-Korean bilateral talks.



6th anniversary
of the shelling of
Yeonpyeongdo Island

cooperate in reducing military tension and building military confidence by accentuating such matters as respecting and observing the Northern Limit Line (NLL), acknowledging responsibility for the sinking of the ROKS Cheonan and the shelling of Yeonpyeongdo Island in 2010, and establishing a direct inter-Korean military hotline.

In order to resolve the heightened tensions caused by the land mine and artillery provocations by North Korea in August 2015, the two Koreas held an inter-Korean high-level talks through which the “8·25 Agreement”²⁾ was drafted. In the agreement, North Korea clearly expressed its regret for the provocations and agreed to work towards effectively preventing the recurrence of such incidents.



High-level talks between the ROK and North Korea
(August 2015)

The agreement was especially meaningful in that it not only ended the vicious cycle of retaliation, but also presented an opportunity to instill the idea that for any type of provocation, responsibility inevitably follows. During the two days of talks held on December 11 and 12, it was emphasized that North Korea’s nuclear issues have to be resolved first for continued advancement in inter-Korean relations.

Despite such efforts, North Korea continues to criticize and threaten the ROK by continuing its nuclear tests, test firing ballistic missiles, and making impractical demands such as suspending the ROK-U.S. combined exercises. The ROK government currently devotes— and will continue to channel— all its energy and resources necessary to persuading North Korea to abandon its nuclear program, which gravely threatens both the Korean people and the entire international community. If inter-Korean relations develop in the way the ROK envisions it, the ROK government plans to continue with its efforts to establish the DMZ World Eco-Peace Park and build military confidence. In the event that inter-Korean authorities talks and military talks take place in the future, MND will demand North Korea to implement those matters that have already been agreed to, such as non-aggression and the non-use of military force, mutual cessation of slander and defamation, prevention of accidental conflicts, and the installation of military hotline, while gradually pursuing measures to reduce military tension and build confidence.

2) Key components include agreeing to host high-level talks in the near future; expressing regret for the ROK servicemembers who were maimed; agreeing to cease loudspeaker propaganda broadcasts towards North Korea as long as “abnormal situations” do not occur; lifting North Korea’s quasi-state of war; reuniting separated family members; and promoting various types of exchanges in the private sector.

2. North Korea's Offensive Towards the ROK and the ROK's Response

In order to influence our government's policies, North Korea is repeatedly making threats in an attempt to create a division in our society and carrying out deceptive peace offensives. By launching long-range ballistic missiles on December 12, 2012 and undertaking its third nuclear test on February 12, 2013, North Korea put pressures on the incoming ROK administration to change its North Korea policy. Moreover, North Korea continued to heighten tensions by arguing for full abrogation of the Armistice Agreement and the Inter-Korean Non-Aggression Agreement and nullification of the Joint Declaration of Denuclearization. In addition, the North cut off the inter-Korean military hotlines and shut down the Kaesong Industrial Complex, banishing the ROK workers and liquidating our assets in the process. Military threats and provocations, such as the firing of intermediate and short-range ballistic missiles, infiltration via miniature UAVs, and the gunning down of propaganda balloons of civilian organizations using anti-aircraft machine guns, have also persisted.

The military tension between the two Koreas mounted to unprecedented levels amid the landmine and artillery provocations inside the DMZ by North Korea in August 2015. The military standoff that resulted from these provocations seemed to abate temporarily after the signing of the 8-25 Agreement, but it was short-lived as North Korea used the ROK's distribution of civilian-made propaganda leaflets, the enactment of the North Korean Human Rights Act, and the ROK President's speech at the UN General Assembly as pretexts for resuming its criticisms and threats against the ROK.

Despite emphasizing the need to improve inter-Korean relations and proposing to hold inter-Korean military talks during his New Year's address on January 1, 2016, Kim Jong-un conducted North Korea's fourth nuclear test on January 6 and test-fired SLBMs as well as various other types of ballistic missiles. Roughly eight months later, on September 9, Kim initiated the fifth nuclear test, bringing the numbers of nuclear tests and ballistic missile launches to three and about 30, respectively, since the start of his regime.

Regarding North Korea's disregard for warnings given by both the ROK and the international community, as well as actions that clearly violate the UN Security Council resolutions, such as carrying out nuclear tests and launching missiles, the ROK government is in the process of drawing up more powerful measures—on an entirely different scale from those of previous methods—in a bid to force North Korea to face the consequences and ultimately abandon its nuclear program. In order to force North Korea into abandoning its nuclear program, greater emphasis has been placed on diplomatic moves, such as adopting UN Security Council Resolution 2270—a much stricter sanction on inspecting cargoes to and from North Korea—and 2321, which placed a cap on North Korea's coal exports and added new materials to the trade ban list. Additionally, the ROK government imposed unilateral sanctions of its own including

the total suspension of the Kaesong Industrial Complex.

Following the Seventh Congress of the Workers' Party of Korea in May 2016, North Korea continued its deceptive peace offensive in order to evade sanctions and pressure from the international community. During the congress, North Korea took on a two-faced approach of clearly stating its resolve to continue the pursuit of its "Byungjin" (Parallel Development) policy of economic and nuclear developments in the Party's charter and its threats³⁾ against the ROK, while also stating that it would work toward holding talks and negotiations at each level and improving inter-Korean relations. Furthermore, North Korea continued its insincere united front tactics against the ROK by proposing inter-Korean military talks through joint statements by the government, party, and other organizations and through public letters by the National Defense Commission, and a great gathering for unification under names of various agencies, the party, and other organizations.

The ROK government responded by expressing disappointment and concerns that North Korea had proposed inter-Korean military talks without any mention of its nuclear situation while stressing that North Korea's provocative actions, such as conducting nuclear tests and test-firing missiles, were mainly to blame for the heightened tension on the Korean Peninsula. Likewise, the ROK government demanded a forthright statement of the North's position on denuclearization and reiterated that if they were truly sincere about establishing peace and stability on the Korean Peninsula, they should first and foremost express their clear intent for denuclearization and then progress through their actions.

While keeping a close watch on potential changes in the U.S.' North Korea policy during the Trump administration, the ROK government will continue to maintain its current policy tenets, such as the position of not recognizing North Korea as a nuclear state and not accepting dialogue for the sake of dialogue, and will strive to induce changes in the North Korean regime through different measures.

3. Developing Arms Control Policies and Strengthening Arms Control Capacity in Preparation for Unification

In order to achieve a sustainable peace on the Korean Peninsula, the ROK government is working to build inter-Korean military confidence and improve its arms control policy.

3) Persistent threats made against the ROK during the economic debate of the 7th congress of the WPK, such as "pursuing 'military-first' policies regarding nuclear weapons and uniting their two 'liberation' operations – one of Seoul and one of the southern half of the peninsula – into one."



MND briefing on North Korea's 5th nuclear test

Although the two Koreas jointly attempted to pursue some military confidence measures such as mutual non-aggression and the suspension of slandering, North Korea's violation of the agreement and its continued military provocations have led to little or no confidence-building in inter-Korean arms control.

The ROK government is actively participating in major international disarmament and non-proliferation regimes such as the Nuclear Non-Proliferation Treaty (NPT), Chemical Weapons Convention (CWC), and Missile Technology Control Regime (MTCR) in order to promote transparency and confidence regarding arms control while also contributing to global peace and security. Meanwhile, North Korea is not part of any of these regimes and is rejecting its duties and responsibilities toward peace and security of the international community by violating UN Security Council resolutions and adhering to its nuclear and missile development. Until North Korea abandons its nuclear program and becomes a responsible member of the international community, the ROK government will continue to exert pressure and impose sanctions on North Korea in concert with the international community.

In spite of the ongoing inter-Korean political and military confrontations, MND is seeking various new ways to shape the conditions for promoting arms control through such means as linking the military and non-military domains between the two Koreas. For example, MND hosted an arms control seminar in order to gather experts' opinions on arms control policies and has run an advisory committee since. It has also published various publications such as the *"East Asian Strategic Review"* and *"Arms Control on the Korean Peninsula."*

Meanwhile, the Korea Arms Control Verification Agency provides a specialized course on arms control via commissioned education and conducts the ROK-U.S. combined inspection training. The agency is looking to further strengthen global cooperation through exchanges and cooperation with other arms control verification agencies in the U.S., Germany, and the Czech Republic, among others.

MND plans to gradually promote inter-Korean arms control as part of the government's larger goal of supporting unification policies and making headway in inter-Korean relations. The basic plan for improving arms control is to prioritize confidence-building measures to the extent of gaining North Korea's cooperation and decide whether to pursue either operational arms control or structural arms control depending on the progress in inter-Korean relations. MND will continue to improve the conditions and capacity for arms control in preparation for unification while maintaining a firm defense posture and stably managing the security situation on the Korean Peninsula.

Section 2 Ensuring Inter-Korean Exchanges and Cooperation, and Providing Humanitarian Assistance

In order to provide military support to the government's North Korea policy, MND is carrying out military assurance measures for inter-Korean exchange and cooperation projects such as inter-Korean crossings and the operation of military hotlines. The ministry is also trying to find humanitarian solutions to issues pertaining to prison of war (POW). In a similar context, the remains of Chinese soldiers buried in the ROK soil since the Korean War have been repatriated, and the ministry is planning to pursue the "Inter-Korean Joint Remains Excavation Project," provided that appropriate conditions are met in inter-Korean relations.

1. Military Assurance for Inter-Korean Crossings

Direct inter-Korean crossings have so far been carried out via land, sea and air routes. The majority of such crossings occur via land and occasionally by air, but since the May 24 Measure,⁴⁾ navigation by North Korean ship in the ROK territorial waters has been prohibited. Land crossings are permitted via roads and railroads that lie within the Joint Administrative Areas in the western and eastern corridors; however, railroad crossings remain suspended since December 2008. Most of the land crossings are for the purpose of entering the Kaesong Industrial Complex and thus take place through the western corridor while eastern corridor crossings occur only when they are required for such events as reunions of separated families. Moreover, the ROK military provides military assurance during land crossings as previously agreed with the United Nations Command (UNC) and the North Korean military, thereby providing security and allowing convoys within the DMZ.

Air crossings are generally carried out via a direct route over the West Sea. During the 2014 Incheon Asian Games, North Korean athletes and other high-ranking officials used airplanes to enter and leave the ROK. In 2015, two ROK members visited the North using the air route—one being Lee Hee-ho, the widow of the former ROK President Kim Dae-jung, and the other being members of an inter-Korean workers' soccer tournament. The ROK military considers the level of military security that can be provided whenever there is a flight request from

4) The ROK government's North Korea policy established in response to North Korea's attack on the ROKS Cheonan that prohibits North Korean ship in our waters, trade and commerce (excluding the Kaesong Industrial Complex), and new investments into North Korea, and temporarily suspends our North Korean aid and support projects.

North Korea in order to assure the safe passage of aircraft and prepares contingency plans for emergency situations.

2. Inter-Korean Military Hotlines

The ROK and North Korea have long maintained hotlines between their respective military situation rooms located in the eastern and western corridors. These hotlines do not only aid the process of inter-Korean crossings, but can also serve as a channel for communication during emergency. Therefore, the ROK government has always made an effort to ensure that the communication lines remain properly functioning and active at all times. Old hotlines have been upgraded, while other materials and equipment have been reinforced, in order to maintain a stable communication system.

In spite of such efforts, North Korea continues to occasionally act on its own accord by cutting the communication lines depending on inter-Korean relations at the time. This has already happened twice, once in 2013 and again in 2016. Even when it has cut off the military hotlines, North Korea would send a telephone message if it has a clear agenda for discussions, such as holding military talks.

The role of the military hotline becomes even more crucial during periods of acute inter-Korean tension. Military hotlines must always be maintained not only to support stable inter-Korean exchanges and cooperation but also to prevent accidental conflicts; the hotlines must not be disconnected unilaterally by one side.

3. Resolving the ROK POW Issues

| ROK POWs: Whereabouts, Family Reunions and Repatriation | The ROK government continues to propose to North Korea peaceful, humanitarian ways of resolving issues pertaining to the ROK POW's survival and repatriation.

As of 2015, the number of surviving POWs that have been confirmed through reunions of separated families was 52, of whom 18 have so far been reunited with their families.

The ROK government is also working to safely repatriate POWs and their families who escaped to a third country. Once it is confirmed that a POW and his or her family have escaped North Korea, a “government-wide ROK Military POW task force” is formed in order to guarantee their safety, as well as their swift repatriation to the ROK.

In 2015, the Act on the Repatriation and Treatment of the Republic of Korea Armed Forces Prisoners of War was amended in order to allow legal aid and support by the ROK government

in the process of repatriating POW remains.

From 1994 to 2016, a total of 80 POWs were successfully returned to the ROK, as outlined in more detail in <Chart 6-1>. Since 2011, however, there has not been any additional repatriation of the ROK POWs due to the aging of the prisoners and the tougher defector surveillance by North Korea.

<Chart 6-1> Repatriated POWs

As of November 2016, Unit: person

Year	Total	1994	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011~2016
POW	80	1	1	4	2	9	6	6	5	14	11	7	4	6	3	1	-

| Supporting Resettlement of the Repatriated ROK POWs | Following the repatriation of the late Lieutenant Cho Chang-ho in 1994, the ROK government enacted the “Act on the Repatriation and Treatment of the Republic of Korea Armed Forces Prisoners of War,” which is designed to support the resettlement of repatriated prisoners of war in the ROK. In addition, families of the deceased prisoners of war who come to the ROK are registered as family members of a prisoner of war from the place of detention.⁵⁾ Such persons are not only provided with support designed for North Korean defectors, but are given additional subsidies as family members of prisoners of war. In 2013, the related laws were revised to help the repatriated prisoners of war to adapt to society, and measures such as pensions, housing, and medical subsidies were introduced.

As of November 2016, the number of surviving repatriated prisoners of war stood at 36. In total, 80 former prisoners of war have been repatriated. Since 2012, the government has been supporting the settlement of former prisoners of war through professional civilian organizations. The government also holds meetings and visitations to listen to their needs.

The government will continue to work towards resolving the issues surrounding prisoners of war, as well as strengthening international cooperation to facilitate their repatriation, and ensuring the safety of prisoners of war and their families who escape from North Korea.

5) The term “family members of a prisoner of war from the place of detention” refers to persons who are members of a family that a ROK military prisoner of war, who died while being detained or before being registered pursuant to Article 6 or who have returned to the ROK, had formed in the place of detention, and who have not acquired the nationality of a foreign country since escaping from the place of detention. (Clause 3 of Article 2 of the Act on the Repatriation and Treatment of the Republic of Korea Armed Forces Prisoners of War)

4. Inter-Korean Joint Excavation of Remains of Soldiers, and Repatriation of Chinese Soldiers' Remains

During the second inter-Korean ministerial talks held in November 2007, the two Koreas agreed to cooperate in resolving issues regarding the excavation of the remains of soldiers who died during the Korean War. However, implementation of the agreement has been stalled for nearly ten years by North Korea's refusal to cooperate. As emphasized in the Ministry of National Defense's report published in January 2015, the ministry plans to execute the inter-Korean joint excavation project once the conditions are set.

From humanitarian perspective, the Ministry of National Defense has repatriated the remains of Chinese soldiers excavated in the ROK on a yearly basis. The repatriation of soldiers' remains was suggested by the ROK in June 2013, and so far 541 sets of remains have been returned to China, beginning with those of 437 soldiers sent to China in March 2014. The nationality of the soldiers whose remains are found is determined by a committee comprised of civilian experts. Among the criteria considered in determining the nationality of the remains are forensic anthropological analysis, which looks at such elements as ethnicity, gender, and age, as well as analysis of battle records, physical remains and articles found at the site of excavation. In addition, DNA analysis and other scientific methods were added in 2015 to improve the accuracy and credibility of the analysis.

The project to return the remains of Chinese soldiers is considered to have allowed the two countries to not only consolidate their relationship as "strategic partners" but also to instill a sense of friendship. "We express our solemn respect upon the return of the souls of Chinese soldiers," the spokesperson of the Ministry of Foreign Affairs of the People's Republic of China stated in a briefing. President of the People's Republic of China Xi Jinping also expressed sincere gratitude for the ROK's help in returning the remains at the 2014 Nuclear Security Summit held in The Hague, the Netherlands. Chinese media and the public also expressed their appreciation at the efforts made by the ROK government in the course of the project.

The remains of Chinese soldiers who died during the Korean War will continue to be returned to China annually before China's Qingming Festival in early April as agreed between the two nations.



The Transfer Ceremony of Chinese soldiers' Remains
(March 2016)

Chapter 7

Creating a Proud and Rewarding Environment for Military Service



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Unveiling ceremony of the “Foot of Peace,” a sculptural work created to honor the soldiers wounded by North Korean landmines. (December 2015)

Section 1 Barracks Culture Innovation

MND is implementing policy initiatives to fundamentally resolve issues such as malicious behaviors in barracks and relaxation of military discipline and to establish “barracks culture trusted by the people.” Pursuing “autonomy and discipline,” “safety and communication,” and “human rights and character building” MND is striving to build barracks that are safe and sound, communicate with the society, respect human rights, balance autonomy and responsibility, and uphold strong discipline. To this end, efforts have been directed to amending relevant laws and regulations, raising standards for conscription, cultivating good character and moral principles, and enhancing junior-level officer leadership.

1. Focus of Policy Implementation

Under its goal of establishing an “open barracks culture trusted by the people,” MND is pursuing the values of “autonomy and discipline, safety and communications, and human rights and character,” and is innovating barracks culture according to the following five themes: ① safe and sound barracks; ② open barracks that communicate with society; ③ barracks where human rights are guaranteed; ④ barracks where autonomy and responsibility are harmonized; and ⑤ strong and disciplined barracks.

In 2015, MND laid the foundations for innovation by consolidating the relevant laws and regulations and, in 2016, established a consensus on these innovations within the barracks, and continued to expand its effort on this initiative. This has led to the tangible results of reduction in the loss of life, fewer accidents, and greater public trust towards the military. MND will continue striving to establish a bright, healthy barracks culture by regularly evaluating the achievements of the drive to meet the innovation goals.

<Chart 7-1> Open Barracks Culture Innovation Plan

Phase 1 (2015)	Phase 2 (2016)	Phase 3 (2017-2018)
Establishment of a foundation (Laws and system maintenance, budget allocation)	Achievement of greater results (On-site focused implementation)	Establishment of an open barracks culture (complete goals, stable promotion)

2. Implementation by Theme

| Safe and Sound Barracks | MND has amended and improved the relevant laws and regulations to create a service environment that allows the parents of the servicemembers to

send their children to the military without concern and ensures the health and safety of servicemembers during their term of service. In order to prevent the enlistment of those who are unfit for active service, MND has enhanced the system for assessing a person's fitness for military service by improving the methods of psychological examination adopted by the Military Manpower Administration,¹⁾ employing more personnel specialized in psychological examinations, toughening the requirements for admission to active duty, and extending the period during which military service candidates can undergo a physical checkup. Once servicemembers join the military, MND conducts personality tests, suicide prevention education, socio-metric tests of interpersonal relationships,²⁾ and other measures in order to identify servicemembers early on who cannot adapt to military service due to personality, family background, interpersonal relationships or other problems. Maladjusted servicemembers are systemically managed through treatment programs ranging from counseling by professional counselors to admission to the Green Camp and psychiatric treatment.



Suicide prevention education for the ROK Air Force

<Chart 7-2> Plan to Increase the Number of Professional Counselors for Servicemembers

Unit: person

Category	2014	2015	2016	2017
No. of counselors	246	297	346	383

* Operating 23 professional counselors for sexual harassment since 2015

The outdated facilities of fourteen Green Camps were renovated throughout 2015 and 2016, and MND aims to employ one professional counselor for each regimental unit by 2017. MND is also establishing a support system for the Green Camp program by setting up mental health centers within eight military hospitals including the Armed Forces Capital Hospital and the Armed Forces Yangju Hospital.

Remote units and small-scale barracks facilities which can easily escape the commanders' attention are being integrated into battalion-level camps, and more CCTVs will be installed to manage units.

1) A psychological examination that evaluates the degree of illness and mental and physical disability and determines whether candidates are suitable for military service.

2) A psychological examination that complements the limits of the existing self-report test, it is designed to obtain objective information on an individual through the evaluation of that individual by other members of the group to which she or he belongs, and to evaluate the degree of maladjustment to military service and interpersonal interaction within the group.

| Open Barracks that Communicate with Society | The ROK military is fostering an open barracks environment that communicates with society to enable servicemembers to carry out their military service in a productive manner without feeling disconnected from their parents and friends during their military life.

The military has established more SNS communication channels, and installed receive-only mobile phones for common use and public video telephones in company- and platoon-level units, while running Internet cafes in division-, battalion- and higher-level units and regularly holding open-door events at each post.

In order to create a favorable environment for servicemembers' self-development and recreational activities, the military has operated the "Talent Donation Bank for Soldiers" since 2016, which involves civilian groups and experts from a wide range of fields including education, culture, arts and craft, and sports.³⁾ The military also provides servicemembers with access to online learning contents in diverse areas including language courses and education for certificates.



Recycling Craft Club

The military also supports servicemembers' efforts to overcome the interruption to their studies caused by military service and to carry out a productive military service. The military plans to continue its discussions with other relevant institutions such as the Ministry of Education and universities in a bid to encourage more universities to offer remote learning courses for the military and award academic credits for completion of the military specialist curriculum and, eventually, for military service experience.

| Barracks Where Human Rights are Guaranteed | Based on the awareness that true comradeship and the development of a strong military are only possible when servicemembers' human rights are respected, the military is establishing "barracks where human rights are guaranteed" by providing stronger character- building education, guaranteeing the rights of servicemembers, and toughening the punishments for those who violate human rights.

In order to cultivate knowledge in the humanities among servicemembers and create a culture of respect and care for others, more time has been allocated for character building on officer training courses, while participation-oriented, self-directed character education for servicemembers are being conducted by civilian experts. The military is also striving to

3) A program that provides servicemembers with opportunities to learn in classes in various areas such as music, foreign languages, and sports with the involvement of civilian groups and experts

establish a reading culture among servicemembers by expanding the reading coaching program and setting up book cafes for remote units. By doing so, the military is creating an environment where servicemembers learn to fully respect and appreciate human rights while building their character.

The military has improved the military judicial system for ensuring its independence and professionalism and reflecting the public's demands. The general court-martials held in peacetime at the division level have been abolished, and only corps or higher-level units are allowed to run a military court. The system that appoints a field officer as a judge has been restricted to cases that require advanced military expertise and experience, and can be operated only after approval by the Chief of Staff of each service or the Minister of National Defense. The relevant laws have been amended so that the jurisdiction authorities can only reduce the sentence of any given crime to two-thirds of the stipulated sentence. Also, cases where the fairness of the investigation could be infringed are to be moved to the jurisdiction of upper units in accordance with the amendments.

In order to eradicate beatings and cruel treatments in barracks, the military criminal law, which had previously imposed additional punishment only for assaults and threats against superior officers, sentries, and soldiers on duty, has been revised and a special clause on the punishment for assaults and threats between servicemembers has been created so that any such acts of violence occurring in the military can be prosecuted with or without the victim's consent.

Furthermore, the involvement of external agencies and civilian experts - such as the police, the National Forensic Service, and forensic research institutes of university hospitals - in the early stages of an investigation has been expanded to ensure objectivity, fairness and transparency in the handling of such incidents.

MND has increased the number of counselors at MND Help Call Center to provide 24-hour counseling on the difficulties experienced during military service. MND is also operating the Military Human Rights Guard System to enable servicemembers to report human rights violations via the Internet, as well as the National Defense Human Rights Monitoring Group, which comprises diverse members such as soldiers and soldiers' parents. The identity of an informant must be protected since clauses guaranteeing confidentiality for those reporting human rights violations in the military and prohibiting disadvantages against those who request a grievance



Military book cafe in a remote unit

review are now stipulated in the relevant laws.⁴⁾

The ROK military is constantly striving to eliminate harmful practices in barracks stemming from wrong customs and to create warm barracks where mutual respect and care is guaranteed and where servicemembers recognize their subordinates as precious human beings and colleagues.

| Barracks Where Autonomy and Responsibility Are Harmonized | In order to create “barracks where autonomy and responsibility are harmonized,” and in which servicemembers act autonomously and take responsibility for their actions, MND has formulated and implemented behavioral standards which require them to concentrate on education and training during their work hours while guaranteeing them sufficient time to spend on self-development and hobbies after work.

MND is implementing a system that allows soldiers to choose their leave dates, and grants visits to border patrol units including general outposts (GOPs) on holidays and regular units on weekdays. Through this system, which is tailored to the specific conditions of each unit, MND strives to alleviate servicemembers’ feelings of pressure during military service and their sense of isolation from society.

MND is also making efforts to boost the morale of servicemembers by upgrading small, outdated military barracks and expanding cultural and sports facilities including indoor fitness centers, futsal fields and military community centers, while improving working conditions for servicemembers by outsourcing unit maintenance works including cleaning, laundry and facility management to civilian firms.

| Strong and Disciplined Barracks | In order to foster elite forces capable of fighting and defeating an enemy, the military is establishing strong and disciplined barracks by strengthening leadership and military ethics education, rewarding meritorious services and punishing wrongdoing in accordance with the laws and regulations, and creating comprehensive measures aimed at eliminating sexual violence.

The military has toughened the criteria for evaluations to screen inapt personnel, such as the aptitude evaluation for commissioning, to prevent people of poor character from being commissioned, while cultivating proper values in officers through the expansion of education on leadership and military ethics.

4) The Framework Act on Military Status and Service (Enforced on June 30, 2016)



Holiday visits border
patrol units

The military deals strictly with any acts that disturb harmony and unity within units, such as disorder in the command system, work-related bribery, and driving under the influence, in a bid to foster united units characterized by mutual trust between superiors and subordinates, strong leadership, and authority. The requirements for the promotion of NCOs based on years of continuous service and the criteria in screening the inapt for active service have been toughened to bar in sincere members who lack the qualities required of officers from being promoted and to retire them early.

The military has established a gender equality center in each service, employed gender equality officers in division-level units, and implemented comprehensive measures to stamp out sexual violence in barracks, including the development and utilization of smartphone applications for reporting sexual abuse. To prevent and eradicate sexual violence in barracks, education centered on discussions and case studies, and lectures on sexual violence prevention are held every quarter for field officers and higher-ranking officers. The military will keep a record of the officers who do not complete the education or fail to pass an assessment, and reflect it in personnel management. Sexual offenders receive a criminal punishment as well as disciplinary measures at the same time, while those subject to severe disciplinary actions are brought before the Active Service Inaptitude Evaluation Board. In addition, the relevant laws have been revised to restrict those with a sexual abuse criminal record from being appointment as a cadre, and to punish those who condone, or had been negligent in taking action against, sexual violence.

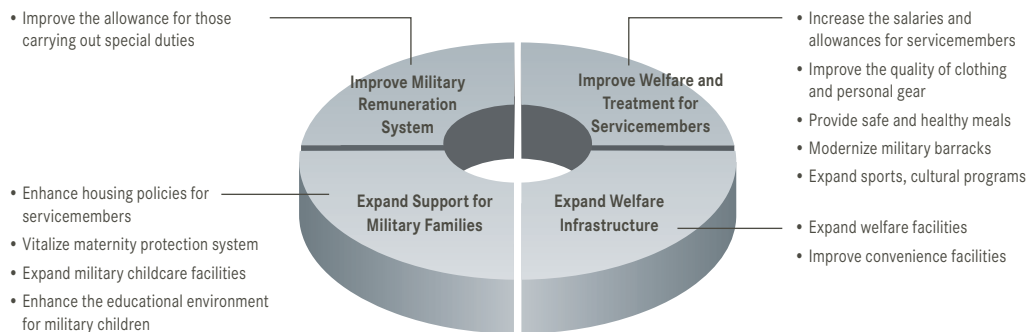
Section 2 Improvement of Welfare for Servicemembers

Based on the Second Military Personnel Welfare Basic Plan (2013~2017) drawn up in 2013, MND is enhancing its basic welfare for servicemembers including food, clothing and shelter, modernizing barracks facilities, and expanding its sports and culture programs. MND has secured additional welfare facilities, expanded the welfare infrastructure including the enhancement of convenience facilities, and improved the remuneration system for military personnel. Furthermore, the range of supportive measures for military families has been expanded to help military personnel focus on their mission of safeguarding the ROK territory and people.

1. Implementation of the Second Military Personnel Welfare Basic Plan

MND is pursuing seventy-seven detailed tasks encompassing soldiers' welfare, housing security and family welfare under the "Second Basic Plan for Military Welfare" established in 2013. MND is striving to ensure that delayed projects are carried out according to plan by securing the required budget in close consultation with the relevant ministries and the National Assembly and rationalizing the implementation plans.

<Chart 7-3> Major Details of the Second Military Personnel Welfare Basic Plan



2. Improvement of Welfare and Treatment for Servicemembers

| Increasing the Salaries and Allowances of Soldiers | For the state to guarantee the basic costs needed during military service, the military will double soldiers' salaries between 2012 and 2017, with a corporal's monthly salary reaching 195,000 won by 2017.

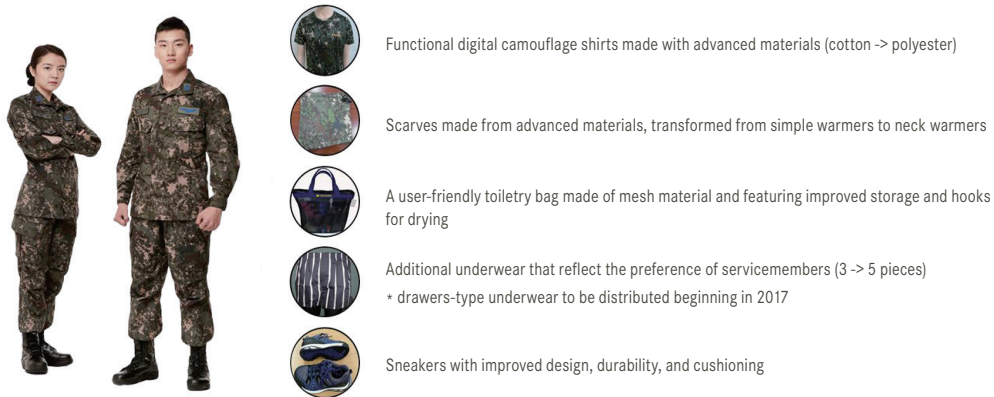
In order to improve the remuneration of soldiers working in harsh environments such as remote areas, the special location allowances have been raised by 50 percent. With this increase, soldiers in GPs are paid 25,000 won/month in special location allowances and 15,000 won in additional allowances, while military personnel such as marines who are dispatched to carry out special missions are given 3,000 won/day in hazardous duty allowances.

In 2016, services of the Narasarang Card were expanded to include much needed benefits for barrack life, such as discounts at military supermarkets and on public phone use. In addition, the free insurance offered to servicemembers provides up to 150 million won of coverage in the event of an accident during leave or an off-post visit, a significant increase from the previously available amount. Under the newly established "Love Your Fellow Soldiers Insurance" program, 100 million won in insurance is paid to servicemembers who pass away during military service, except in cases of suicide. The military has also launched the "Prepare for Your Dream Fund" program to help servicemembers save up a lump sum for their personal development after their military service.

| Improving the Quality of Clothing and Personal Equipment | MND has continued to enhance the quality of servicemembers' clothing and personal equipment to help boost their combat execution capabilities. Since the beginning of 2016, MND has provided functional winter wear to security and ambush troops, and plans to develop and supply inner and outer layers of winter jackets and combat uniforms that not only are more comfortable to wear but also provide better camouflage in combat environments. MND will also improve the quality of uniforms⁵⁾ that are frequently worn in barracks and gradually distribute them after modifying the supply standard accordingly.

5) Uniforms that are closely related to service members' daily life in barracks or frequently worn by service members.

<Chart 7-4> Uniform Improvements



MND is enhancing the quality of personal equipment by incorporating various functions designed to improve the survivability of combat personnel, and distributing bulletproof body armor, bulletproof combat helmets, personal tents, combat backpacks, combat vests and other equipment as a package. New personal gear was supplied to the GOP divisions in 2015, and will be distributed to all combat supporting units by 2020.

| Safe and Healthy Meals | The ROK military offers safe and nutritious meals to servicemembers to help them maintain their health and combat capability. The military provides 3,100 kcal (which is considerably higher than the recommended daily amount of calories for civilians) of nutrition in the daily menus for servicemembers, who are generally required to perform strenuous physical activities in their training. MND has also continuously increased the basic meal allowances for servicemembers in an effort to provide a diverse diet options along with high-quality snacks and desserts attuned to the preferences of young servicemembers.

<Chart 7-5> Basic Meal Allowance⁶⁾ (per diem)

Category	2011	2012	2013	2014	2015	2016
Unit price (won)	5,820	6,155	6,432	6,848	7,190	7,334
Increase rate (%)	3.0	5.8	4.5	6.5	5.0	2.0
Average increase rate (%)	4.5					

* The average inflation rate for food in the last three years (2013~2015) according to Statistics Korea is 0.87%

6) Net food material cost, including the cost of main meals, snacks and desserts.

The military also conducts an annual survey on servicemembers' satisfaction regarding their meals and reflects the results in its menus in order to provide them with delicious meals which take into account their preferences. In addition, the employment of civilian cooks in military kitchens in units of various levels will be expanded to the kitchens of all company-level units by 2020.

<Chart 7-6> Plan to Increase the Number of Civilian Cooks

Category	2016	2017	2018	2019	2020
Total number (person)	1,767	1,841	1,989	2,140	2,223
Supply rate (%)	79	83	89	96	100

The military thoroughly manages the safety and hygiene in all stages of meal preparation from the signing of food supply contracts to the serving of meals, as the meals are consumed by many people at the same time.

The military gives preference to the Hazard Analysis and Critical Control Point (HAC-CP)⁷⁾-certified companies when signing food supply contracts, and conducts a joint hygiene inspection of the contractors with the Ministry of Food and Drug Safety (MFDS) twice each year. In the event that any problems with food supplies are detected, the military reports the facts to the MFDS and the relevant local governments so that the defective materials can be retrieved and disposed of, while the suppliers involved are excluded from participating in any future military meal service contract biddings. Since 2014, the “mothers’ military meal monitoring group” has been paying regular visits to military cafeterias where meals are served to servicemembers, as well as conducting inspections of the meal service quality; in 2015 the military introduced a system for displaying potential food allergens.⁸⁾ The military has continued to improve the safety of meals for servicemembers and strengthen hygiene management by launching modernized military food distribution centers in Jangseong (for the Jeolla region), Daejeon (for the Chungcheong region), and Daegu (for the Gyeongsang region).

7) Evaluation of hazards in each production process to prevent the contamination of food by hazards.

8) This system displays the ingredients of a meal when foods and additives containing allergens, such as buckwheat, peanuts, crab, pork and peach, are used as ingredients



Mothers' military meal monitoring group



Food distribution center for the Chungcheong region in Daejeon

| Modernizing Military Barracks and Reducing Inconveniences during Barrack Life |

Since 2003, the military has been carrying out a project to modernize small and outdated barracks in a drive to improve living conditions for servicemembers and ensure they have a pleasant life in their barracks. The large platoon-sized (30-50 members) floor-type sleeping space has been transformed into a smaller squad-sized (8-10 members) structure equipped with proper beds, and the living space per person has been enlarged from 2.3m² to 6.3m². Sanitary and convenience facilities - including washrooms, toilets, libraries and fitness centers - have been incorporated into the interior space of the barracks. The modernization of the barracks structure from floor-type to bed-type is significant in that it has transformed the overall concept of the barracks from a simple accommodation space into a fully integrated living space for servicemembers.

<Chart 7-7> Comparison between Before and After Modernization of Barracks

Category		Before modernization	After modernization (Integrated barracks)
Space allocation within barracks		<ul style="list-style-type: none"> • (soldiers) barracks • (officers) company commander's room, company administration section 	<ul style="list-style-type: none"> • (soldiers) barracks, sanitary, convenience facilities, etc • (officers) company commander's room, company administration section, office of battalion staff, etc
Space for soldiers	Barracks	<ul style="list-style-type: none"> • platoon-sized (30-50 members) floor-type structure • 2.3m² per person 	<ul style="list-style-type: none"> • squad-sized (8-10 members) bed-type structure • 6.3m² per person
	Sanitary facilities	<ul style="list-style-type: none"> • Located in separate buildings outside barracks • No shower room or facilities for washing combat boots 	<ul style="list-style-type: none"> • Modernized washrooms, toilets and bathes inside barracks • Shower room, facilities for washing combat boots newly installed
	Convenience facilities	<ul style="list-style-type: none"> • Located in separate buildings outside barracks • No cyber knowledge information facilities, fitness centers, table tennis facilities, etc 	<ul style="list-style-type: none"> • Libraries, cyber knowledge information facilities, fitness centers and other convenience facilities newly installed or expanded inside barracks • Kiosks inside barracks
Space for officers	Administration, operations and training facilities	<ul style="list-style-type: none"> • Only company commander's room and company administration section are inside barracks • Battalion administration facilities are in separate buildings outside barracks 	<ul style="list-style-type: none"> • Commander's room, office of staff section, command and control room, communications office, meeting rooms inside integrated barracks

In addition, the military has established military community centers equipped with a wide range of convenience facilities such as libraries, cyber knowledge-information facilities, karaoke rooms, kiosks and barber shops, for units where modernization projects are not implemented or units scheduled to be shut down or relocated, so that the members of such units can still spend their spare time in a healthy and sound atmosphere.

The military is also striving to address inconveniences experienced by servicemembers in their barracks. To that end, kitchens and water supply facilities have been renovated,⁹⁾ the hot water supply in summer¹⁰⁾ has been increased, and vacuum cleaners have been distributed to all platoon- and higher-level units.

Starting in 2013, cyber knowledge-information facilities in remote units such as GPs and GOPs were opened to servicemembers free of charge. Meanwhile, the usage fees for other units will continue to be reduced, and all servicemembers will be able to use the facilities free of charge by 2017 when the related project, funded by private sector investment, comes to an end.

| Expanding Sports, Cultural Programs | The military supports servicemembers' participation in sound and healthy leisure activities by installing various sports facilities such as indoor gymnasiums and futsal fields, purchasing more books, and organizing more culture and arts programs for servicemembers.

In order to improve the physical training environment for servicemembers, the military has built 495 indoor fitness centers and distributed exercise equipment based on the supply plan according to the size of units. For units in forward and remote areas, 496 futsal fields and 355 small-size basketball courts have been installed.

The military is also providing opportunities for servicemembers to experience various kinds of culture and arts by constantly hosting performances by civilian artists and organizing the Barracks Culture and Arts Experience Project in which civilian instructors visit military bases and teach servicemembers about theater, musical instruments, and magic.

3. Expansion of Welfare Infrastructure

| Expanding Welfare Facilities | MND has expanded welfare facilities in consideration of the unique characteristic of military service, i.e. long periods of standby duty, and specific

9) Proportion of renovated kitchens: 74.3%(2016) → 86.9%(2021), proportion of improved water supply facilities: 46.7%(2016) → 52.2%(2021).

10) Starting in 2017, hot water will be available six times a week (181 days), an improvement from five times a week (168 days).

environmental conditions as most units are located on islands and in mountainous areas.

In 2010, the independent welfare agencies of the Army, Navy and Air Force were merged into MND Welfare Agency, which has streamlined the management of welfare facilities and carried out various welfare projects to allow servicemembers to receive more welfare benefits.

MND has improved welfare and living conditions for servicemembers by acquiring welfare facilities and residential buildings in Wirye New Town, including MND Culture and Research Center, dormitories for servicemembers' children, and military apartments. MND also plans to construct an integrated welfare center in Baengnyeongdo Island to enhance the living conditions of servicemembers and their families in this deprived area.

Furthermore, MND will reconstruct the Korean Army Hotel, an outdated welfare facility in Seoul, into a culture and welfare complex equipped with rooms exclusively for soldiers, in order to provide them with a space where they can relax and enjoy cultural activities.

| Improvement of Convenience Facilities | MND has implemented a number of projects to renovate outdated welfare centers and military supermarkets. MND renovated 26 welfare centers in 2014 and another 20 in 2015, as well as 241 military supermarkets in 2014 and 137 in 2015, creating a pleasant environment for servicemembers.

4. Improving the Remuneration System for Servicemembers

MND is improving the remuneration system for servicemembers to reflect the distinct characteristics of military service, such as rank, mission and working environment, in the system. In order to boost the morale of soldiers working under harsh conditions and motivate them to do their best, MND has been raising the amount of allowances for servicemembers who carry out core combat missions involving special warfare, aircraft and vessels to a realistic level in line with the degree of expertise required and the difficulty of the missions.

Starting in 2015, the military has been paying additional hazardous duty allowances to staff sergeants and above dispatched to carry out special missions, including members of the Special Warfare Command, and has doubled the additional special locations allowances paid to soldiers who are stationed in the five islands in the West Sea so as to maintain a military posture capable of combat at any time.

In 2016, MND raised the air crew allowances for fighter pilots, the additional submarine mobilization allowances for submarine crews, and the hazardous duty allowances for para-troopers.

5. Expansion of Support for Military Families

| Implementing an Effective Military Residence Support Program | Guaranteeing stable housing conditions is extremely important for soldiers who are required to move frequently and work in remote areas. Since the establishment of the legal grounds for housing support for soldiers with the enactment of the Basic Military Welfare Act, the military has continuously improved small military residences and provided loans for leasing private residences to families that cannot move into military residences.

MND has also implemented various policies designed to boost the number of career servicemembers that own houses. These include revision of the relevant laws to offer opportunities for priority and preference in special housing to servicemembers who do not own a house and have served in the military for at least ten years.

In 2016, MND established the “comprehensive plan for the development of military housing policies” to ensure stable housing conditions for servicemembers, while reducing its financial burden at the same time. MND plans to utilize private housing to a greater extent, moving away from the traditional system of the military building its own residences, and to manage military residential accommodations more efficiently by managing them by region in an integrated manner rather than by units.

| Vitalizing the Maternity Protection System | MND has implemented policies related to pregnancy, childbirth and childcare policies to help career servicemembers attain a good work-family life balance. Starting in 2015, leave of absence due to infertility and subfertility is guaranteed, and both male and female servicemembers can take leave. The duration of leave has also been extended to up to two years, and the portion of salary¹¹⁾ paid during leave has been raised. In 2016, MND expanded the eligible members for exemption from night duty due to pregnancy and childbirth to include female military civilians, while raising the allowance paid during maternity leave to 200,000 won. The military will maintain its efforts to foster a family-friendly military culture by continuously improving the relevant systems together with the related publicity activities and education.

| Expanding Military Childcare Facilities | MND has secured childcare facilities by phases in conjunction with the military residence construction plan to improve the military’s challenging childcare environment. The military now operates 105 military daycare centers (as of October 2016), and plans to build an additional 172 by 2021. The military is striving to reduce childcare blind spots in forward areas by adjusting the requirements for the installation of a

11) 70% of salary in the first year of leave, 50% in the second year.

daycare center. Daycare centers were previously available to units with 100 or more military households, but are now available to units with 15 or more children who require daycare. In areas where childcare centers cannot be installed, MND has established the “cooperative childcare space” concept in coordination with the Ministry of Gender Equality and Family and private-sector firms. MND opened the first cooperative childcare space in Cheolwon, Gangwon-do in December 2013, and is now operating 18 of them (as of the end of 2016).

| Enhancing the Educational Environment for Military Children | Career servicemembers have long faced the challenge of providing good quality education for their children as they frequently relocate and often work in remote areas. In order to assist the education of children who face challenges stemming from the frequent relocations of their parents, the military provides support when children transfer to a school that has reached full capacity and helps them to participate in academic activities outside school, such as the “Dream Class Vacation Camp.” The military also builds dormitories for servicemembers’ children and provides information related to university admissions as well as assistance for their applications to universities’ special admissions programs. Furthermore, the military offers them scholarships and interest-free loans for university tuition fees. MND has established the Hanmin High School, a boarding school which provides a stable study environment to military children. The foundation of a boarding school has boosted the morale of career servicemembers and helped the military to secure talents, as children who are admitted to the Hanmin High School can focus on their studies without having to transfer to another school because of their parent’s relocations, while their parents can focus on their military career thanks to the alleviated educational burden.

Section 3 Development of the Defense Medical System

The ROK military strives to prevent and diagnose diseases early on and provide the best treatment for all manner of injuries and diseases to help healthy servicemembers who join the military to stay healthy during their term of service. In order to establish a medical system that is trusted by servicemembers and the public alike, the military will advance its medical service by acquiring skilled medical personnel and pursuing the establishment of the Armed Forces Trauma Center while actively cooperating with the private sector.

1. Implementation Focus

Under the goal of establishing a “military medical service that servicemembers can easily access and trust,” MND has focused on prevention and the early diagnosis of diseases, swift transportation of patients, and provision of the best medical treatment in accordance with the “Development Plan of the Armed Forces Medical System (2017-2021).” MND has improved servicemembers’ access to health and medical services by conducting regular medical checkups for every service member to help diagnose diseases early on, and by boosting the survivability of emergency patients with the opening of the medical operations command center and the formation of MEDEON dedicated to the transportation of patients by air. Under the Development Plan of the Armed Forces Medical System (2017-2021), MND will focus on setting the goals for the military medical system, restructuring the military medical system, acquiring more medical personnel and improving services for customer satisfaction.

2. Disease Prevention and Early Diagnosis

| Tailored Control of Infectious Diseases | The ROK military administers national immunization program vaccinations and eight types of preventive vaccines in consideration of the characteristics of infectious diseases that tend to be prevalent in the military. Four kinds of

preventive vaccines¹²⁾ are administered to all newly enlisted servicemembers, and all service-members are vaccinated against influenza in the winter season. Three additional preventive vaccines¹³⁾ are given to servicemembers who work in areas at risk of outbreaks of infectious diseases.

The number of outbreaks of infectious diseases within the military has decreased significantly thanks to the enhanced conditions of the barracks and the expansion of the vaccination program. To systemically manage the record of vaccines administered in the military, MND will set up a vaccination data management system, which will enable servicemembers to utilize their vaccination records after being discharged from military service.

| Projects to Improve Servicemembers' Health | MND offers health counseling to privates and checkups to corporals so that illnesses can be prevented or diagnosed before any symptoms appear. The health counseling program for privates was launched in 2012, giving new recruits an opportunity to receive a one-on-one consultation from a medical officer. The health checkup program for corporals has been fully implemented since 2013, offering screenings that meet the standards of the National Health Insurance. Through these programs, 71 servicemembers received an early diagnosis of serious diseases including thyroid cancer in 2014, and 124 were diagnosed with diseases including leukemia in 2015. They received medical treatments with the support of the military.

In 2016, MND launched an anti-smoking campaign in cooperation with the Ministry of Health and Welfare (MOHW) and began systematically managing servicemembers' health based on the body mass index (BMI).¹⁴⁾

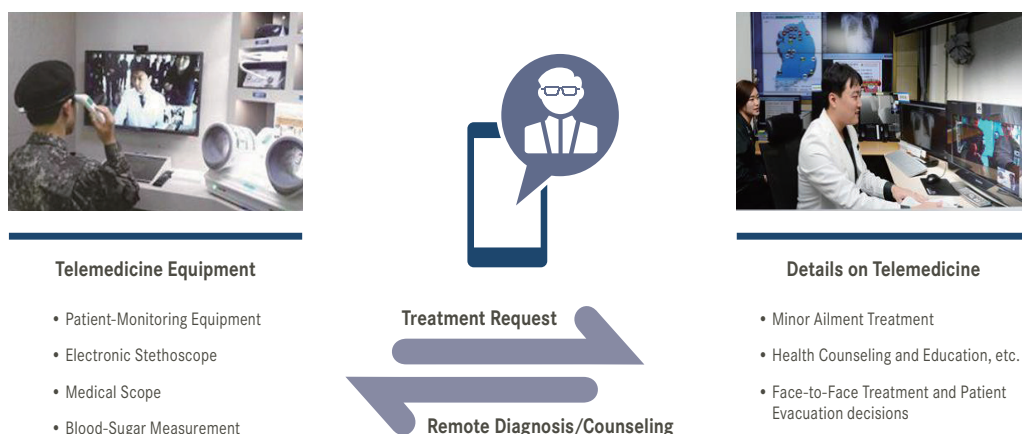
| Remote Medical Treatment | MND has adopted a telemedicine system for remote units stationed at guard posts (GPs) and islands, allowing servicemembers to receive treatments from medical officers 24 hours a day via videoconferencing and improving those units' access to medical services. MND commenced a telemedicine pilot project for GP units in 2014, and carried it out at 63 locations in 2016. It plans to extend the project to 76 locations in 2017.

12) Tetanus, mumps, meningococcal meningitis, hepatitis A

13) Hemorrhagic fever with renal syndrome, malaria, typhoid fever

14) Body mass index (BMI), i.e. a person's weight (kg) divided by their height (m).

<Chart 7-8> Remote Unit Video Telemedicine



3. Improvement of Evacuation and Medical Treatment Capabilities

| Strengthening the Patient Transportation System | The Emergency Patient Support Center, established under the Armed Forces Medical Command in 2012, was expanded as a medical operations command center in 2015. The command center has assumed the role of an active control tower for military emergency patients as it performs first-aid at the site of an emergency incident, dispatches available resources such as ambulances and evacuation helicopters, and helps secure the “golden time” for treating emergency patients by ensuring that the available military and civilian hospitals are ready to receive patients.

MND has built the best domestic emergency patient evacuation system by cooperating with the MOHW and other relevant ministries to share evacuation helicopters. Additionally, in 2015, by establishing the MEDEON unit dedicated to evacuating emergency patients by helicopter, MND was able to shorten the time necessary for evacuation and boosted the number of emergency flights.



Medical evacuation helicopter

| Building an Efficient, Elite Military Medical System | Based on the principle of “selection and concentration” and the future direction of the reorganization of military structure, the military is reducing the number of military hospitals but significantly reinforcing their capacity, while redefining the functions of each military medical institution according to the level of the medical services it offers.

First of all, the number of hospital-level medical institutions will be reduced to 13 by 2020, the year in which the reorganization of the military structure will be completed. The 13 hospitals will secure adequate facilities, equipment and personnel so that all of them can be certified¹⁵⁾ as medical institutions under the Medical Service Act. The Armed Forces Trauma Center will also be established under the Armed Forces Capital Hospital and begin operating in 2020. Through the new trauma center, the Armed Forces Capital Hospital, as the principal hospital in the military medical system, will secure the highest level of medical treatment capabilities for the most common illnesses and injuries occurring in the military, such as external wounds as well as military-specific gunshot wounds.



Aerial view of the Armed Forces Trauma Center

In addition, the functions and sizes of the military hospitals scheduled to be shut down will be trimmed, but they will remain open as “outpatient centers” in the regions they serve. Despite the absence of hospitals nearby, this will allow servicemembers to receive treatments that do not require hospitalization, surgery or a health checkup without having to travel a long distance. Lastly, medical units and medical offices at division-level or lower will continue to offer treatments to outpatients and first aid for simple illnesses, with unnecessary hospitalization minimized. This will help patients who need treatments receive the proper treatment in a timely manner at a large medical institution.

<Chart 7-9> Military Hospital Reorganization Plan from the ‘Development Plan of the Armed Forces Medical System (2017~2021)’

Unit: ea

Category		Present	After reorganization
Military Hospital	Total	17	13
	Armed Forces Capital Hospital	1	1 (established Armed Forces Trauma Center inside)
	Hospitals in the forward area	8	5 (Cheongpyeong, Wonju, Gangneung hospitals closed)
	Hospitals in the rear area	4	3 (Busan hospital closed)
	Specialized hospitals	4	4
Outpatient centers		-	3 (Cheongpyeong, Busan, Gangneung)

15) A program operated by the Korea Institute for Healthcare Accreditation to encourage the improvement of safety of patients and quality of medical care. The Institute evaluates applicant institutions in 500 criteria covering the whole aspects of the institutions ranging from facilities and equipment to personnel and systems and certifies them if they meet the standards.



Necessity of building Armed Forces Trauma Center

| Increasing the Number of Military Medical Personnel and Enhancing Professionalism | MND will gradually replace “unlicensed medics” with licensed officers to stop the problematic practices of medics without medical licenses assisting with military medical procedures. Also, efforts will be made to ensure that servicemembers who enlist with medical licenses perform their duties in their field of expertise.

MND will structurally improve the proficiency of military medical personnel by nurturing each year some 15 to 20 long-term serving medical officers and around 20 medical non-commissioned officers with professional qualifications, such as medical technologists. MND will outsource the necessary training and education to universities.

| Strengthening Capabilities for Military Medical Research | The Armed Forces Medical Research Institute conducts various military medicine studies related to the unique circumstances the military faces, such as preventing infectious diseases and responding to biological warfare. The Institute has acquired the capabilities to examine and diagnose infectious diseases that are more prevalent in communal settings such as influenza and Middle East Respiratory Syndrome (MERS), and has applied for a patent for a method of diagnosing diseases related to the Ebola virus, an original technology recently acquired by the military.

In addition, the Institute has elevated the status of the ROK military’s medical research by establishing mutually cooperative relationships with various relevant agencies. Examples of such collaborative work include the sharing of test equipment and facilities with a municipal health and environment institute; joint research on the diagnosis of zoonoses and related research techniques with the National Institute of Food and Drug Safety Evaluation; as well as mutual cooperation on vaccine research with the Animal and Plant Quarantine Agency.

4. Improvement of Support Associated with Civilian Medical Care

| Expanding Support for Medical Expenses at Civilian Hospitals | The Military Pension Act has been revised so that the state covers the medical expenses of career servicemembers¹⁶⁾ until their full recovery¹⁷⁾ in the event that they become ill or are injured on duty but have to be treated in a civilian hospital because the necessary treatments are unavailable in a military hospital. Under the revised law, they will receive the equivalent support when an aftereffect

¹⁶⁾ When service members on active duty become ill or are injured on duty and are treated in a civilian hospital because they cannot receive treatment in a military hospital, the state will cover their medical expenses regardless of the duration of the treatment under the law on military health care. After retiring from military service, under the National Merit Reward System, they are eligible to receive treatment at a veterans’ hospital free of charge as well as reimbursement of medical expenses incurred at civilian hospitals.

¹⁷⁾ Prior to the revision of the Military Pension Act, the military only covered medical expenses for up to 30 days of treatment.

occurs or an illness recurs, and will be supplied with the very best prosthetic arms or legs regardless of the cost, provided that their needs related to physical disabilities are approved in the relevant reviews.

| Improving the Medical Expenses Payment Procedure | The medical expense payment review procedure has been simplified¹⁸⁾ so that servicemembers who are injured on duty can be swiftly reimbursed for medical expenses incurred by treatment at a civilian hospital. MND has also introduced a post-treatment payment system¹⁹⁾ in which civilian hospitals do not charge servicemembers for treatment, but the military directly pays the hospitals when it is clear that the servicemembers have been injured on duty.

| Strengthening Support for Patients | Servicemembers may become ill or injured on duty but may not be able to receive proper support because they are unaware of the procedures regarding support for civilian medical care or have not been informed at the right time. In order to avoid such situations, the Medical Operations Command Center provides professional counseling services 24 hours a day while operating a “team dedicated to referred patients” that can provide patients and their guardians with tailored guidance on medical treatments, reimbursement, and the related administrative support procedures.

| Vitalizing Civilian-Government-Military Cooperation on Medical Treatment | MND has signed mutual agreements with the Ministry of Public Safety and Security, the Korean Red Cross, and Gangwon-do to cooperate on emergency patient transportation, first-aid training, emergency treatments, and infectious disease management in vulnerable areas.

Military hospitals and division-level medical units of each Service have also concluded agreements on medical treatment with civilian hospitals in the nearest areas, and have responded effectively and promptly to emergency incidents. MND will continue to improve the conditions under which servicemembers receive medical care by expanding its agreements on medical treatment with civilian and public medical institutions.

18) In the past, the medical expenses review processes consisted of four stages (military hospital → each service → Armed Forces Medical Command → MND). It has now been reduced to three stages (military hospital → Armed Forces Medical Command → MND).

19) In July 2016, MND signed an agreement with the Korean Hospital Association on the settlement of medical expenses incurred by service members who have been injured on duty and treated in civilian hospitals.

Section 4 Expansion of Support for Retiring Servicemembers

The best welfare for servicemembers planning to retire after years of dedication to national security is ensuring their employment after military service. Providing national support for retiring servicemembers' seamless transition to civilian careers for veterans is important not only for boosting the morale of active-duty servicemembers, but also for attracting new talents. MND has strengthened its outplacement education and job search support for all servicemembers retiring after serving their mandatory term or beyond in order to assist their smooth return and integration into society, while operating a military pension system that guarantees a stable life for career servicemembers who have retired after devoting their lives for the defense of the nation.

1. Enhancing Outplacement and Career Transition Services and Expanding Job Opportunities

| Establishment and Operation of MND Outplacement Training Institute

| A considerable number of retired servicemembers find it difficult to adjust to civilian life because they retire at a stage in their careers when the level of living expenditures is the highest after a long period of service under unique conditions. In January 2015, MND established MND Outplacement Training Institute to provide retiring military officers with well-planned transition programs to assist their outplacement.

MND Outplacement Training Institute conducts various kinds of outplacement education such as career education, consulting and training courses tailored to corporate needs. The Institute also provides various employment support programs including job fairs, a dual on-the-job training system, and an employment academy in cooperation with companies and recruitment agencies.

Since the establishment of the Institute, outplacement and careers transitions services benefits, previously limited to long-term servicemembers, has been extended to short- and mid-term servicemembers. The Institute provides mainly career education to short-term



MND Outplacement Training Institute
(established in January 2015)

servicemembers while mid-term servicemembers are provided with professional education necessary for a stable livelihood. On the other hand, long-term servicemembers receive education to begin a new career that will help them contribute to society. The Institute also conducts research on military expertise associated with various jobs outside the military such as professional defense-related licenses. With the amendment of the relevant laws and regulations, MND will begin recognizing the training period of mid-term servicemembers as qualified service, starting from 2017. Furthermore, MND will carry out an educational program to help them design their lifelong career paths while serving in the military.

By improving the way in which it operates, as well as developing diverse support programs and establishing cooperative relationships with the relevant agencies, MND Outplacement Training Institute is striving to become an organization that can provide practical assistance for retiring servicemembers returning to society.

| Securing Jobs for Retiring Servicemembers | In order to guarantee stable living conditions for retiring servicemembers, MND has worked to secure 50,000 jobs for servicemembers who have retired or will retire between 2013 and 2017.

MND searches for jobs for retiring servicemembers in two categories, i.e. jobs within the military that can utilize their military-related experiences and expertise, as well as employment in the public and private sectors. As a result of these efforts, MND has secured a total of 45,528 positions as of September 2016, including 9,626 within the military, such as professional evaluators for education and training, reserve force managers and civilian employees in the military, as well as 35,902 in the public and private sectors including emergency planning officers and instructors for the Reserve Officer Training Corps.

MND will create more jobs within the military and the public sector, such as civilian employees in the military and emergency planning officers, while continuously securing positions in the private sector by signing cooperative agreements with companies and recruitment agencies and providing job information to servicemembers.

<Chart 7-10> Status of Secured Job Positions for Retiring Servicemembers

As of September 2016, Unit: ea

Category	Total	Secured job positions			Plan		
		Subtotal	- 2015	September 2016	Subtotal	October-December 2016	2017
Total	50,000	45,528	38,053	7,475	4,472	1,410	3,062
Military positions	10,500	9,626	8,896	730	874	480	394
Public and private positions	39,500	35,902	29,157	6,745	3,598	930	2,668

2. A Pension System that Reflects the Characteristics of Military Service

| Characteristics of the Military Pension System | The military pension system aims to contribute to stable living conditions for career servicemembers and improve welfare benefits for them. The military pension provides them and their families with proper monetary compensation when they retire after years of faithful service, when they have to retire or pass away due to physical or mental disabilities, or when they have to receive medical treatment due to diseases or injuries acquired on duty.

Servicemembers perform duties which pose a risk to their lives, such as participating in battles and dangerous training exercises. Furthermore, most live and work in remote or forward areas under harsh working conditions that involve missions and long periods of standby duty. As they have to retire at the age set for each rank, most retire between the ages of 45 and 56, when the level of living expenses tend to be the highest. The military pension system, which reflects these unique circumstances of military service, not only serves the basic purpose of a pension system as a social insurance that ensures income for one's later years, but also works as a national program that guarantees a stable livelihood for servicemembers retiring early and compensates those who sacrifice themselves for the country.

The military pension has an important role in helping career servicemembers to focus on their duties without having to worry about life after retirement. Developed countries provide more preferential benefits to military pension funds compared to other public pension programs in consideration of the specific characteristics of a military pension.²⁰⁾

| Efforts toward Financial Stability for the Military Pension | The military pension was first paid out in 1961, during the very early stages of its introduction, when the military pension system had not yet had the opportunity to accumulate sufficient funds, and so the state has been making up for the shortfall in the military pension fund. MND has revised the relevant laws and continuously improved the related systems in order to stabilize the fund. In 2013, the Military Pensions Act was modified to raise contributions borne by individuals and make servicemembers who have served for 33 or more years to continue paying contributions while reducing pension payouts by setting an upper limit for pension payments.

| Improving Compensation for Accidents and Injuries | MND has modified the criteria for determining whether cases of disease, injury or death have occurred on duty, and now allows compensation for accidents to be paid when the causes of suicides and injuries are

²⁰⁾ Servicemembers' pension contribution rate is lower than that of government employees in the U.S., the U.K., and Australia, while the pension payment rate for servicemembers is higher than that for government employees in the U.S., Australia and Japan.

reviewed and verified. MND plans to reorganize the accident review system and adjust the amount of accident compensation to a realistic level by enacting the “Military Accident Compensation Act.”

3. Strengthening the Privileges and Social Compensation for Serving in the Military

| Recovering Korean War Remains²¹⁾ | In 2007, MND founded MND Agency for KIA Recovery and Identification (MAKRI), a special organization dedicated to recovering the remains of troops killed during the Korean War, paying tribute to these brave men who had sacrificed their lives for the country, all the while elevating their honor and addressing the bereaved families’ long held wishes. Approximately 200 personnel are working in five divisions, including planning, investigation, recovery, identification and international cooperation, with a total of eight recovery teams in action.

As of 2015, a total of 10,314 sets of human remains²²⁾ were recovered, while DNA samples were taken from 32,160 bereaved family members. By additionally confirming the identities of KIAs, 109 sets of remains have been returned to bereaved families. In order to recover more remains while Korean War veterans and bereaved families are still alive, MND has reinforced the organization and personnel and is carrying out a systematic recovery project under the “Five-year Plan for the Recovery of Remains.”

<Chart 7-11> Remains Recovery Status

As of December 2016, (): Mil-police											
Total	2000~2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
10,904	1,504	534	837	1,278	1,443	1,387	1,042	731	921	637	590
(9,436)	(1,183)	(378)	(673)	(1,137)	(1,331)	(1,300)	(990)	(666)	(817)	(580)	(381)

* Total number of remains recovered: 10,904 (mil-police 9,436, UN forces 15, enemy 1,254, processing 128, no DNA info 71)

<Chart 7-12> Status of DNA Sampling and Identification Confirmation of Korean War KIAs

As of December 2016, Unit: person												
Category	Total	2000~2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
DNA sampling	36,143	1,923	1,455	2,282	4,524	3,388	4,252	4,765	4,005	2,645	2,921	3,983
Identification confirmation	118	22	9	13	10	6	8	11	5	7	8	9

21) A national project to search for the unfound remains of about 130,000 troops who died during the Korean War, in order to return them to their bereaved families.

22) 9,055 Korean soldiers, 15 from the United Nations Forces, 703 North Korean soldiers, 541 Chinese soldiers.



Korea War
remains recovery

In November 2015, at the 47th ROK-U.S. Security Consultative Meeting (SCM), the two countries discussed ways to cooperate on the recovery of Korean War remains. During the meeting, MND and the U.S. Defense Prisoner of War/Missing in Action Accounting Agency (DPAA) signed a memorandum of agreement.²³⁾ In 2016, the two countries exchanged 15 sets of remains of Korean KIAs kept in the U.S. and two sets of remains of American KIAs kept by the ROK.

As the experiences and techniques accumulated by the Korean War remains recovery project have reached a level that is globally recognized, the agency assisted Libya's project to recover and identify missing people for two years between 2012 and 2014.²⁴⁾ In September 2015, the Vietnamese Deputy Minister of Defense and his delegation visited the ROK to learn the remains recovery expertise of the ROK military's advanced program, including identification, detection, recovery and follow-up management²⁵⁾.

The circumstances of the Korean War remains recovery project are becoming increasingly challenging. The number of witnesses and informants has decreased year by year, while land development has resulted in geomorphic changes.

The Agency has collected and analyzed the outcomes of basic surveys for the locations of remains and materials about domestic and foreign KIAs. Based on these findings, the Agency organized a team that traces bereaved families, and is actively investigating the areas they may live in. The Agency will do its utmost to return more remains of KIAs to their bereaved families by pursuing a scientific and systematic remains recovery project that utilizes a “comprehensive remains location analysis map”²⁶⁾ and the Killed in Action Total Information System (KIATIS).²⁷⁾

| Verifying Non-military Participation in the Korean War | MND registers non-military personnel who took part in the Korean War as meritorious individuals through the “deliberation committee for verification of participation in war.” MND helps these individuals to receive various benefits including an honorary allowance for participating in the war, a support fund from local governments, placement in national cemeteries, reduced medical costs

23) An agreement to ① mutually provide policy support related to the recovery of remains, ② cooperate on the provision of data to help find the locations of those who died and went missing during the Korean War, ③ conduct joint investigation and remains recovery, and ④ hold an annual meeting to discuss common interests and ensure cooperation.

24) A support team for the identification of missing persons in Libya, consisting of seven MAKRI personnel, was deployed to Libya from July 2, 2012 to July 28, 2014.

25) Fifteen representatives from Vietnam including the Deputy Defense Minister Nguyen Thanh Cung visited Korea from September 29 to October 4, 2015.

26) A comprehensive analysis map that is continuously updated with the suspected burial locations of Korean War KIAs: The locations are estimated based on testimonies from Korean War veterans and survivors who lived in the areas during the war.

27) The Killed in Action Total Information System (KIATIS) was developed by MAKRI in December 2010. It incorporates digital maps, on which the geographic coordinates of sites can be added in real time, and allows users to store data on investigations, recovered remains, conditions of remains, and depth of burial in a database and manage them.

at veterans' hospitals, and free entrance to palaces and national parks.

Since 1996, MND has issued a confirmation letter of participation in the war to about 36,000 individuals.

<Chart 7-13> Non-military Personnel War Participation Confirmation Letter Status

As of December 2016, Unit: persons

Category	Total	Student Volunteer Army	Laborer	National Guard	Civilian component	Ranger	Volunteer police	Railway official	Ganghwa Youth Guerrilla	Youth corps	Others
Total	36,008	1,172	4,172	1,577	1,520	8,541	6,466	6,018	2,403	572	3,567

In order to enhance the efficiency of confirming the participation of non-military personnel in the Korean War, MND is establishing a database of war records and conducting an evaluation of evidential materials concerning participation in the war led by Scientific Investigation Laboratory under MND's Criminal Investigation Command (CIC). MND also holds a regular advisory session with war history experts of the Institute for Military History Compilation, and is establishing a system of utilizing the collections of the National Assembly Library and the National Archives of Korea.

In building the database of records on non-military personnel's participation in the war, MND is incorporating materials acquired or created since 1996 into the database so that they can be searched and provided immediately upon request by the relevant agencies including the National Patriots and Veterans Review Commission. MND also scientifically analyzes photographs and documents, having previously been dependent solely on visual verification. MND is also striving to verify the details of testimonies by those who participated in the war, by collecting various materials including historical records of battles, situation logs produced during the Korean War, records of the police and the Ministry of Justice, and materials kept by the U.S. National Archives and Records Administration (NARA).

In addition to these efforts, MND continues to modify laws and systems in cooperation with relevant agencies such as the Ministry of Patriots and Veterans Affairs, and supports various ceremonies to commemorate veterans of the war and transmit their patriotic spirit to future generations.

Section 5 Improvement of Benefits for the Public

MND is committed to improving the military service system to prepare for the time when military resources become scarce, and is striving to improve the system of fairness in fulfilling the duty of military service. To ensure convenience and benefits for the public, the military has improved the methods of and environment for reserve force training, identified regulations that need to be amended, and devoted efforts to cleaning up the environment. The military is also planning to carry out various public relations activities to communicate and establish an understanding with the public.

1. Advancing the Military Service System

| Stable Recruitment of Military Resources | The rise in the birthrate between 1990 and the early 2000s has led to a temporary increase in the number of people waiting to enlist in the military. It also led to the problem of military service candidates not being able to enlist when they wish to. This situation is expected to continue until the early 2020s. After this period, however, a shortage of military resources caused by low birthrate is expected. Regarding the waiting period to enlist in the military, MND is considering various measures including temporarily allowing more people to enlist and adjusting the standards for military duty assignments, for example, by toughening the criteria for draft physical examination for determining the type of military service.²⁸⁾ In preparation for the shortage of military resources, MND will fine-tune the requirements for military duty assignments and increase the utilization of female cadres. MND will also look into ways to gradually downsize the number of switchover and alternative service personnel and comprehensively take into account various factors in doing so.

The military has long operated secondment and alternative service programs²⁹⁾ that allow people to fulfill their military service obligation outside the military to the extent that it does not disrupt the recruitment of military resources. However, a shortage of military resources

²⁸⁾ The term “criteria for physical checkups for conscription” was changed to “criteria for draft physical examination” according to the revision of the Military Service Act which took effect on November 30, 2016

²⁹⁾ The secondment service system allows active duty service candidates to fulfill their military service obligations as enlisted police officers, enlisted coast guard personnel or enlisted firefighters. Under the alternative service system, active duty service candidates are allowed to work in jobs with public purposes such as public health doctors or to remain as civilians and work in companies designated by the Military Manpower Administration as industrial technical personnel or in other roles for a set period of time, in lieu of actual military service.

caused by low birthrate is expected from the early 2020s, so the number of switchover and alternative servicemembers will have to be cut down gradually over time. MND is devising the best possible measures through close consultation with the relevant ministries by comprehensively taking into account various elements including proper maintenance of the defense posture, fairness in fulfilling the duty of military service, and efficient utilization of talents.

| Operating and Improving the Recruitment System | While conscription is the standard system of enlistment in Korea, the military also operates a recruitment system where volunteers are recruited in the areas required by the military. A certain percentage of the Army soldiers and all enlisted personnel of the Navy, Marine Corps, and Air Force are recruited through this system.

Anyone who has a degree associated with certain skills or has a relevant license can apply to serve as volunteers, and the relevant laws have been revised so that the military pays travel expenses incurred by applicants during the recruitment process, including transportation, accommodation and meal costs. Currently, fifty-five percent of all enlisted personnel are volunteers, and the military plans to continue expanding the system in order to make the best use of individuals' qualifications and improve the outcomes of military service that are linked to society.

| Job-tailored Specialist Program | Since 2014, MND has operated the “job-tailored specialist program” for military service candidates with a high school diploma or lower educational qualifications to help connect their military service with employment.

Anyone eligible for active duty aged between 18 and 24 with a high school diploma or lower education is eligible to apply for the program. Applicants can participate in the Successful Employment Package program of the Ministry of Employment and Labor to receive technical training that corresponds to their aptitudes and enlist in the military as technical specialists. After being discharged from military service, they will receive support and assistance in finding employment related to their military experience. If they are hired within three months of retirement, they will be awarded successful employment allowances based on the length of continuous service.

2. Improvement of Military Administration

| Creating an Environment for Fair Military Service Fulfillment | MND has implemented various policies aimed at improving transparency and fairness in fulfilling the duty of military service and at establishing a social atmosphere in which those who faithfully fulfill their duties

are respected.

MND is implementing the “intensive military service records management system for military service candidates of public interest” in order to alleviate public distrust surrounding the fulfillment of military service by those who attract a great deal of social and media attention, such as high-ranking public officials and their children, celebrities and athletes. Under the Military Service Act which was revised in December 2015, the military records of high-ranking public officials and their children are categorized and managed separately, and MND is now pursuing a similar measure for the records of celebrities and athletes.

Since 2004, MND has implemented the “renowned military service family honors program.” Renowned military service families selected from among those with three generations of active military service are awarded an official commendation by the military and a certificate attesting to their status as a ‘renowned military service family,’ and are offered such benefits as discounts and fee waivers when using national, public and civilian facilities.

<Chart 7-14> Number of Selected Renowned Military Service Families

As of September 2016, Unit: family

Category	Total	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Applied	5,938	234	357	337	227	253	251	398	498	485	928	695	585	690
Selected	3,431	40	84	92	73	132	147	192	302	301	545	497	466	560

| Improving the Physical Examination System for Determining the Type of Military Service | MND has continuously improved the physical examination system for determining the type of military service³⁰⁾ in order to enhance fairness in military duty assignments and recruit talented individuals. MND has acquired more advanced medical equipment and professional medical personnel to ensure precise physical and psychological checkups, and is strengthening the psychological examination system by increasing the number of clinical counselors and expanding the number of questions included in psychological tests. MND will continue to improve the physical examination system by adopting a comprehensive psychological examination system.

| Improving Accuracy in the Determination of Military Service Type | When people who have been determined as active-duty candidates or replacement personnel based on the results of the physical examination system postpone their enlistment for a long period of time, they will be obliged to undergo another physical examination five years after the initial determina-

30) With the enhancement of military administration vocabulary, the term “checkup for conscription” was modified to “draft physical examination.”

tion and fulfill their military service according to the result.

When a physical re-examination is required, people can choose the date and location of the re-examination. In this way, MND is promoting an atmosphere in which people can fulfill their military duty on their own accord, and is improving conveniences for military service candidates.

3. Improvement of Reserve Force Training Methods and Conditions

MND conducts reserve force training for all reservists except training-deferred reservists.³¹⁾ The reserve force training is divided into mobilization training, supplementary mobilization reserve training, and homeland defense basic training. The training schedule categorized by reservist and training types is shown in <Chart 7-15>.

<Chart 7-15> Reserve Force Training Schedule

As of 2016

Category			Mobilization training	Supplementary mobilization reserve training	Homeland defense basic training	Homeland defense operations training	Roll Call
Soldiers	1-4 th year	Designated for mobilization	2 nights and 3 days	-	-	-	-
		Non-designated	-	24 hrs	-	12 hrs	
	5-6 th year	Designated for mobilization	-	-	8 hrs	6 hrs	4 hrs
		Non-designated			8 hrs	12 hrs	
	7-8 th year		Organized without training				
Officers and NCOs	1-6 th year	Designated for mobilization	2 nights and 3 days	-	-	-	-
		Non-designated		2 nights and 3 days			
	7 th year and up		Organized without training				
Volunteers						6 hrs	

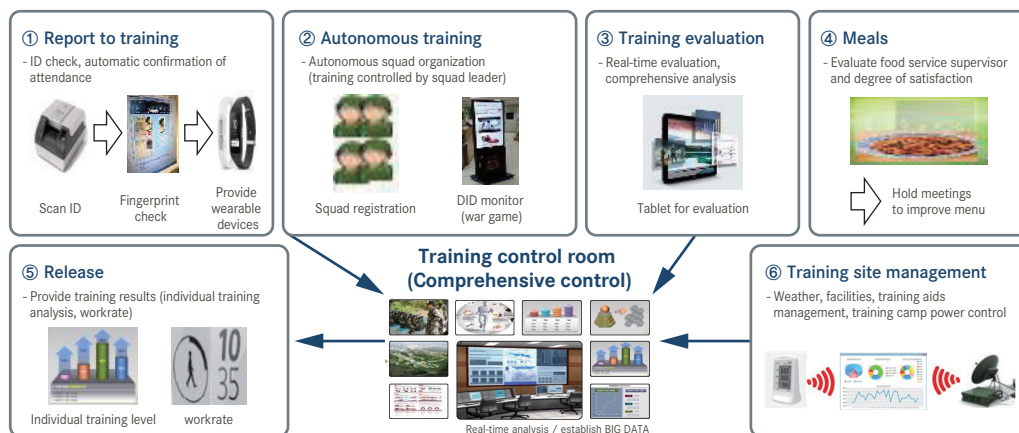
31) Those whose training has been deferred or processed as completed under the Establishment of Homeland Reserve Forces Act. They are chosen from certain groups of occupations, or according to qualifications and standards to be determined when deemed necessary. They include police officers and firefighters.

Since 2015, MND has implemented the voluntary reserve force training system to provide benefits for reservists who voluntarily participate in and pass the planned training. For homeland defense training, which is an assessment-based form of training, the pass system and early release program have boosted the effectiveness of the training.

Mobilization training, which used to be carried out in a separate training area, has been improved such that reservists camp in the mission execution area of each unit and receive training for realistic situations. Some standing divisions and regiments have been testing simultaneous integrated training, thereby improving the speed of mobilization.

Scientific regimental-level reserve force training units have been formed within the forward corps and homeland defense divisions for realistic reservist training; and 208 battalion-level reservist training sites will be merged into 44 brigade-level training units by 2024. MND also plans to install up-to-date combat training facilities, such as imagery firing simulation training equipment and reservist battle training equipment at the training sites and to establish the smart reserve force training management system, which evaluates and manages all training stages from entrance to release in real time through a network. The reserve force training sites will be made community-friendly by opening them up to local residents on weekends to support their recreational and sports activities.

<Chart 7-16> Smart Reserve Force Training Management System



The military is trying to improve the conditions for participation in reserve force training. Training is held on weekends for reservists who struggle to attend on weekdays due to their livelihood and other reasons, while the period from which reservists can choose training dates when registering online has been extended from 3 days to 15 days to help them receive training according to the schedule of their choosing.

Three major inconveniences in the reserve force training system related to meals, trans-

portation, and training site convenience facilities have also been improved. The military is striving to improve the quality of reservists' meals by reflecting their tastes in the menus and organizing surveys and reservist meal contests. The training allowance for a participant was raised to 12,000 won in 2016, and will increase annually to around 30,000 won by 2021. In addition, starting in 2015, reservists can receive medical treatment and compensation for accidents that occur on their way to and from reserve force training. Since May 2015, safety facilities at shooting ranges have been reinforced and safety measures have been established to ensure that reserve force training is held in a safe environment.

MND will replace outdated reservist cafeterias and security education centers with new facilities and continue improving the conditions and environment for reserve force training to help reservists to concentrate exclusively on their training.

4. Improvement of National Defense Regulations and Normalization of Abnormal Practices

| Improving Regulations Pertaining to National Defense | MND is implementing regulatory reforms regarding military facilities, the military industry, and mobilization to guarantee as many conveniences and benefits for the public as it can to the extent that national security and public safety are not affected.

Model examples of regulatory reforms from each year are as follows. In 2013, MND Welfare Agency improved its military supply system, giving outstanding companies opportunities to supply goods to the military, and thereby securing the supply of excellent commercial products to the military. In the same year, MND expanded the weekend reserve force training to accommodate 35,000 reservists (up from 25,000), alleviating the inconveniences experienced by small business owners.

In 2014, MND abolished the upper age limit for those taking an examination to become civilian employees of the military, and helped vitalize the exports of Korean-made components by enhancing the “Quality Certification Program for Parts Localization” by which the government guarantees the quality of export goods.

In 2015, MND expanded opportunities for ordinary companies to participate in the defense industry by allowing non-defense companies to participate in projects to localize parts or projects to develop domestic maintenance capabilities for those items that require maintenance abroad. It also helped the heads of single-parent families with low income to focus on childcare and their livelihood by exempting them from reserve force training obligations.

In 2016, MND adopted a ten-percent limit on the penalties imposed on delays in R&D projects for weapons systems or core technologies, in a bid to boost fairness for domestic and

foreign vendors and promote R&D in the sector. MND has also made sure that students who have participated in reserve force training do not suffer disadvantages caused by their participation in the training. When MND plans to add or reinforce defense-related regulations pertaining to various laws, MND Regulatory Reform Review Committee evaluates the appropriateness of the regulations. MND is constantly improving regulations by collecting opinions from the public through the Debate with the Public (2014), the Defense Regulatory Reform Challenges Contest (2015), surveys on local governments' needs, and a platform through which people can make suggestions on regulatory reforms. MND will continue to implement the “win-win defense regulatory reforms for civilians and the military” with creative measures to resolve any inconveniences experienced by the public.

| Normalization of Abnormal Practices | MND has pursued three tasks in line with the government's implementation of the “Normalization of Abnormal Practices” policies: “improving reliability in the handling of fatal accidents in the military,” “improving the unauthorized occupation of private and public land and utilizing unused military land,” and “eradicating sexual violence in the military.”

MND established within the ministry the Central Distinguished Service Mortality Evaluation Committee, the majority of whose members are civilian experts. The Committee actively ensures the participation of bereaved families in the process of handling fatal accidents in a bid to handle deaths in the military fairly and transparently. Furthermore, MND amended the relevant laws to increase the possibility of those categorized as ordinary deaths being buried in national cemeteries, and strengthened the respectful treatment of servicemembers who made the ultimate sacrifice for the country. MND now grants to servicemembers who have died during military service, but who cannot be buried in national cemeteries, funerals and ceremonial procedures equivalent to those offered to servicemembers who have died in the line of duty. Through these efforts, 113 of 191 sets of remains and bodies left unclaimed for a long time were taken home by the bereaved families.

With regards to “improving the unauthorized occupation of private and public land and utilizing unused military land,” the military has taken such measures as buying, leasing or returning private and public land that the military has occupied without permission, as well as selling, exchanging and transferring to the government those military reservations that are not required. As of October 2016, around 32.75 million m² of public and private land occupied without permission and around 21.69 million m² of unutilized military reservations were processed.

In order to eradicate sexual violence in the military, MND has established the zero tolerance principle of kicking out sexual offenders from the military while guaranteeing the victims of sexual violence the right to transfer to their desired location so as to protect their rights. In

addition, MND continues to cooperate with the Ministry of Gender Equality and Family in strengthening gender sensibility training to prevent sexual violence in advance.

MND will continue to make efforts to identify normalization tasks and fundamentally correct abnormal practices and systems that have become entrenched in the defense sector over a long period.

5. Streamlining Regulations related to Military Installation Protection Zones

| Reasonable Management of Military Installation Protection Zones | In order to guarantee the general public's property rights and contribute to the development of local communities, the military is adjusting and reducing its military installation protection zones to the extent that it does not disrupt military operations.

In 2008, the range of Civilian Control Line was adjusted from 15 km less than to 10 km away from the Military Demarcation Line (MDL). As of 2016, a total of 402.37 million m² of land has been removed from the list of military installation protection zones, while a total of 307.3 million m² of controlled protection zones³²⁾ had been eased to restricted protection zones.³³⁾

<Chart 7-17> Area of Military Installation Protection Zones that Have Been Removed or Eased

Unit: 10,000 m²

Category	Total	Before 2010	2011	2012	2013	2014	2015	2016
Removed	40,237	25,093	4,954	159	2,779	2,672	2,036	2,544
Eased	30,730	24,333	570	625	76	4,653	451	22
Total	70,967	49,426	5,524	784	2,855	7,325	2,487	2,566

For the development of local communities and the convenience of the local residents, the military has expanded the land entrusted to local governments to 1.51126 billion m² (as of 2016), so that local governments may approve of activities within industrial complexes in rural areas with a minimal impact on military operations, without having to consult the relevant military units.

32) Protection zones adjacent to the MDL requiring a high level of security for military operations, and protection zones requiring that the functions of important military bases and installations be preserved.

33) Protection zones necessary for the smooth execution of military operations, and protection zones requiring the protection of military bases and installations or the safety of local residents.

<Chart 7-18> Area of Land Entrusted to Local Governments

Unit: 10,000 m²

Category	Total	Before 2010	2011	2012	2013	2014	2015	2016
Area	151,126	87,339	5,524	4,056	9,349	4,723	34,417	5,718

In parallel with the cancellation and downgrading of military installation protection zones, MND is striving to streamline its administrative procedures and improve fairness in its review processes. In 2015, MND shortened the consultation period for construction works within military installation protection zones from 30 days to 20 days if consultation with relevant military units were made in advance. The military has also improved the public's right to know and the transparency of its review processes by disclosing the operability review criteria, which had remained closed to the public, and by inviting officials from the relevant government institutions to participate in the military base and military facility protection deliberation committee in the event of a second review.

The military will continue to actively ease regulations that cause inconveniences to the exercise of public property rights by improving the relevant regulations and systems and rationally adjusting the military installation protection zones to the extent that it does not disrupt military operations.

| Adjusting the Ammunition Safety Distance and Relocating Ammunition Facilities | For areas near ammunition facilities, MND has set a minimum safety distance to protect local residents and their property, while researching the Korean-style ammunition and explosives safety standard for the development of safe ammunition storage techniques. MND will continue its active efforts to guarantee the people's safety and property rights. MND is also devising mid- and long-term measures to reduce the safety distance, with the possibility of building new tunnel-type ammunition storages being considered.

6. Relocation of Military Airbases and Noise Prevention Measures

The Special Act on the Relocation of and Support for Military Airports was enacted in 2013 to alleviate public inconveniences, including the constraints on development projects caused by the presence of military airbases in city centers and noise pollution. Under the law, the Military Airbase Relocation Bureau can start a relocation project after reviewing the validity of the relocation petition submitted by the head of a local government that hosts a military airbase and choose a site to relocate to. In the review, the Bureau considers such factors as

operation execution efficiency, degree of damage caused by noise, and funding methods among others.

MND is operating an advisory committee that formulates policies/plans related to the relocation of military airbases and evaluates relocation petitions. In order to handle conflicts that may arise during the implementation of a relocation project, MND runs a conflict management council composed of representatives from MND, the Armed Forces, and the local government as well as local residents. Regarding the relocation petitions submitted by Suwon City, Daegu Metropolitan City and Gwangju Metropolitan City, their validity has been approved, and MND is in the process of selecting candidate sites for relocation.

The military is continuously trying to minimize the harm caused to local residents by noise from military airbases and shooting ranges by installing noise prevention facilities, improving flight procedures, altering flight routes, restricting night flights and firearms/weapons training, and avoiding flights over highly populated areas.

7. Eco-Friendly Military Management

| Operating and Improving Military Pollution Prevention Facilities | The ROK military has installed and operated environmental contamination prevention facilities in order to prevent pollutants generated by the military, including wastewater, from contaminating neighboring areas. The military is cooperating with local governments to have domestic sewage discharged from the military treated by the local governments' public sewage treatment facilities. In addition, by upgrading the relevant facilities and establishing a water contamination prevention system, the military is creating a pleasant barracks environment as well as contributing to improvement of the surrounding environment.

To preserve the soil environment, MND has been carrying out soil environment restoration activities, including examinations of soil contamination and decontamination works. MND is also upgrading aged pipes, installing pipes above ground, and improving soil contamination prevention facilities in order to prevent leakage accidents at oil storage facilities.

| Cleaning Up and Utilizing Returned USFK Bases | Returned USFK bases are thoroughly inspected for possible soil pollution. When soil contamination is detected, MND handles the case according to the Soil Environment Conservation Act and the Special Act on Support for Areas, etc. Adjacent to Districts Granted to the United States Armed Forces in Korea. By 2016, 54 of the 80 USFK bases scheduled to be returned had been handed over, and 24 of 25 returned bases that did not meet domestic environmental pollution standards have since been cleaned up, while the one remaining location is currently undergoing the purification process.

When soil decontamination works are completed, the sites have to undergo an inspection by an organization certified by the Ministry of Environment and receive local government approval of completion of decontamination so that the public can use them with confidence.

| Pursuing Eco-friendly Defense Installation Projects | MND carries out a strategic environmental assessment and an environmental assessment based on the Environmental Assessment Act whenever it plans and implements a defense and military installations project. During the early stage of planning, MND reviews the feasibility of the site and the adequacy of the land use plan; and in the subsequent implementation planning stage it establishes measures to reduce a project's potential impact on the environment by forecasting and analyzing the impact in advance. During the construction and operation phases, MND conducts a survey on the impact of a project on the environment. In 2016, it conducted a survey on the Jeju Naval Base.

8. Strengthening Communications with the Public

| National Defense 3.0 | MND is implementing National Defense 3.0,³⁴⁾ which reflects the unique characteristics of national defense in the basic concept of Government 3.0.³⁵⁾

In order to incorporate the core values of “openness,” “communications,” “cooperation” and “unity” into the public's way of life, MND is providing integrated services tailored to each policy user and strengthening defense policy capabilities through cooperation and communication. MND is also expanding the amount of public information available to the public, and is realizing scientific administration by utilizing big data and information and communication technology (ICT).

The greatest achievement of National Defense 3.0 is that employees of MND think about and perform their duties from the viewpoint of the public and servicemembers. Using mobile phone applications, for example, member of reserve forces can freely register for reserve force training or postpone their training schedule, and check height restrictions in flight safety zones before commencing the construction of a building. Transparency in the defense business sector has been significantly improved thanks to the active disclosure of information on defense business, while any member of the public can help improve the quality of military supplies by

³⁴⁾ A new paradigm by which the defense administration will strive to effectively attain the national defense goals of strengthening national security by innovating the way of working with the focus on the public and of consolidating the capabilities of civilians and the military.

³⁵⁾ A paradigm of transparent, competent service-oriented government that provides tailored administrative services to the public through the active disclosure and sharing of public information, and communication and cooperation among agencies.

submitting suggestions to the military supply improvement proposal bulletin board on MND website. Servicemembers can access integrated records of all physical checkups received during their military service, while telemedicine has enabled them to receive treatment from a specialist at any time even when they are stationed at remote units.

MND has also actively participated in cooperative efforts among ministries including the responses to national-level and natural disasters such as railway strikes, the MERS crisis, droughts and floods. Furthermore, MND is helping to accelerate the implementation of scientific administration based on the adoption of cutting-edge technologies. MND, for example, has created a smart trainee management system for the Korea Army Training Center that utilizes wearable devices, and developed a salary prediction model based on big data analysis.

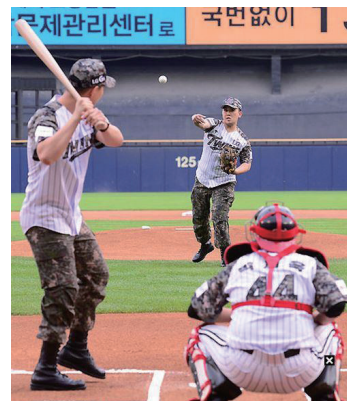
MND will continue to generate tangible, visible outcomes for the public by actively implementing National Defense 3.0 under the banner of “Strengthening national security to make the people’s life convenient.”

| Promoting National Defense Policies | MND is staging various public relations activities to communicate and to establish an understanding with the public by actively utilizing visual media and social networking services (SNS).

MND strives to convey positive images of the military by using visual media familiar to the public, such as renowned domestic and international film festivals and entertainment programs. The “Korea Armed Forces 29 Second Film Festival” (March 2015) and the “Korea Armed Forces Image Advertising Idea Contest” (September 2016) held in collaboration with the Seoul International Extreme-Short Image & Film Festival helped the general public to understand the ROK military and the newly reformed barracks culture.

MND is also expanding opportunities for the public to suggest policies for the advancement of national defense, such as the Creative National Defense Ideas Contest (2015-2016) and the Regulatory Reform Ideas Contest. MND is focusing public attention on the military by organizing diverse events based on public participation such as the “Back to the Reservists” event, in which members of the public can experience the advanced reserve force system; MND slogan and calligraphy contest; and the “Come & Play ROK Armed Forces” interactive event.

In 2016, the military launched “Thank You, Soldiers,” a “love servicemember campaign” designed to convey the public’s gratitude and respect to servicemembers and provide them with real benefits. During this campaign, MND organized the “Heart Project” to cheer on service-



Ceremonial first pitch event in June 2016 with the service members injured in the land mine provocation

members in cooperation with companies, as well as the “ceremonial first pitch” event which involved the servicemembers who were injured in the landmine provocation by North Korea and servicemembers who returned home from overseas deployment. Furthermore, MND appointed LABOUM, a popular girl group, as the celebrity cheerleader to visit forward units and boost morale.

The Korea Defense Daily, which has a daily circulation of 150,000 copies, is being used as a Newspaper In Education (NIE) on military science courses in universities across the country. In addition, the military is delivering defense news to servicemembers as well as ordinary citizens through various culture, current affairs and entertainment programs of Defense TV and Defense FM, including *Visiting Train*, the nation’s longest running television show.



Thank you! Soldiers!
(Encourage servicemembers injured
in the landmine provocation)