

Army

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Summary

Strength

Regular: 1,010,000

Armour	T-34 tank
	T-54/55/Type 59 tank
	Chonma tank
	Pokpung tank
	Songun tank
	Type 63 light tank
	BTR-40 APC
	BTR-50 APC
	BTR-80A APC
	BTR-152 APCs
	BMP-1 infantry fighting vehicle

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Executive summary

- The ground forces of the Korean People's Army (KPA) are the largest and most formidable component, with approximately 1.02 million active-duty troops. The size, organisation, and combat capabilities of the ground forces provide the Democratic People's Republic of Korea (DPRK) with substantial defensive and offensive capabilities.
- The primary mission of the ground forces component is the defence of North Korea and the protection of its regime. Secondary missions include the reunification of the Korean Peninsula, conducting special operations, and internal security.
- During the past 20 years, under the Songun ('military first') and 'Byungjin' (parallel development of the economy and nuclear weapons) policies, the KPA has been undertaking ongoing programmes involving reorganisation, modest re-equipping, and forward redeployment of ground forces units, as well as restructuring and upgrading of reserve forces and the rear area command structure. Notable improvements include the production and deployment of small numbers of new tanks and long-range self-propelled artillery systems (240 mm and 300 mm MRLs and 170 mm self-propelled guns) and other systems; the restructuring of two mechanised corps, one tank corps, and one artillery corps into divisions; the reorganisation and expansion of light infantry units; the establishment of a number of mechanised/motorised light infantry brigades; the conversion of the Ballistic Missile Testing Guidance Bureau into the Strategic Forces and, subsequently, the detachment and elevation

of this organisation to the same level as the army, air force, and navy. As a reflection of the growing importance of asymmetric forces in North Korean military policy and doctrine, the Light Infantry Training Guidance Bureau was reorganised into the 11th 'Storm' Corps, which is responsible all special operations forces except those under the Reconnaissance General Bureau (RGB).

- Financial constraints continue to place severe limitations on equipment inventory and modernisation. Because of these constraints the KPA has focused its resources on developing and expanding its asymmetric warfare capabilities. These include weapons of mass destruction (WMD) – NBC, ballistic missiles, electronic and information warfare (IW), and special operations forces. The North Korean leadership perceives these asymmetric capabilities as projecting a greater threat and being more cost-effective than conventional capabilities. Although these asymmetric capabilities are not state-of-the-art by Western standards, they are capable of attacking and causing considerable damage to vulnerable points in the defences of Japan, South Korea, and the United States.
- In 2018 there was a dramatic improvement in the diplomatic relationship between the two Koreas, which was reflected in numerous high-level meetings between the two states. The military hotline between the two countries was reopened in January 2018 after being severed in 2016. A hotline between the South Korea's Presidential Blue House and North Korea's State Affairs Commission was also established in April 2018. In October 2018, the two countries began three-way talks with the United Nations Command on demilitarising the border and agreed to remove guns and guard posts from part of the demilitarised zone.

Deployments and operations

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Force distribution

The KPA has deployed approximately 70% of its active duty ground forces to the south of the Pyongyang-Wonsan line facing South Korea.

The HQ-level mechanised infantry and tank units are deployed to defend against amphibious landings in its strategic rear as well as along the primary avenues of approach to South Korea to provide effective support, exploit breakthroughs, and cover strategic rear areas from invasion. The artillery division is forward-deployed and well-protected in fortified underground emplacements. Without displacing, it is capable of delivering deep fire support to attacking KPA ground troops. During the past five years, the Korean People's Navy (KPN) and KPA have continued to reinforce or upgrade coastal defence artillery units along the Northern Limit Line (NLL), upgraded older MRL units with newer 240 mm versions, and constructed additional hardened underground coastal defence artillery positions.

The Pyongyang Defence Command is deployed in and around the capital of Pyongyang to provide protection in the case of invasion and to serve as a counter-coup force if required.

One of the unique aspects of the KPA is its formidable special operations force, totalling approximately 200,000 personnel; this includes division and brigade-level light infantry battalions and regiments. The primary missions of these special forces are:

- reconnaissance – establishing a 'second front' within South Korea's strategic rear
- decapitation and disruption of the South Korean/US C4ISR structure
- neutralisation of South Korean and US airbases
- neutralisation of South Korean and US missiles and WMD

The 11th 'Storm' Corps (formerly the Light Infantry Training Guidance Bureau) is the primary organisation within the KPA tasked with the training and conducting of unconventional and special warfare operations. During peacetime, it is believed to exercise administrative control over all special operations units, including those of the Korean People's Air Force (KPAF), KPN, and, to a lesser degree, the RGB. During wartime, it would function as the primary HQ co-ordinating all special operations. As part of the reorganisation and expansion of special operations forces since the mid-2000s, at least one newly organised light infantry division is reported to be deployed near the DMZ.

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Recent and current operations

Although North Korea is a member of the United Nations, the KPA makes no contributions to UN operations.

Small contingents of KPA advisers/observers have served short tours of duty in a number of developing countries over the past 30 years. Today, only a few contingents conduct short tours in friendly countries – most notably Iran, Syria, and a few African states.

Intermittent news reports such as one carried by the *Guardian* in February 2018 claim that North Korea had been assisting Syria in its ballistic missile and chemical weapons programme. However, these reports have not been confirmed.

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Organisation

Directly subordinate to SAC, the General Staff Department controls the armed forces. Subordinate to the General Staff Department are Navy Command, Air and Air Defence Command, and 25 known bureaus exercising varying degrees of control over operational units.

The ground forces comprise 16 corps-level formations: 2 district commands, 10 regular corps, 2 mechanised corps, the Pyongyang Defence Command, and the 11th 'Storm' Corps. Subordinate to these organisations are approximately 173 combat divisions and brigades:

- Infantry/Motorised Infantry Division/Brigade × 68

- Reserve Military Training Unit Division (also known as an Instruction Guidance Division) × 10
- Tank Division × 1
- Tank Brigade × 11
- Mechanised Division × 4
- Mechanised Brigade/Mechanised River Crossing Brigade × 20
- Artillery Division × 1
- Artillery/MRL/Heavy Mortar Brigade/Division × 26
- Light Infantry Division × 7
- Reconnaissance Brigade × 3
- Light Infantry Brigade × 12
- Airborne Brigade × 3
- Air Force Sniper Brigade × 2
- Navy Sniper Brigade × 2
- Sniper Brigade × 3

The KPA is also believed to possess

- Coastal Security Brigade × 6
- Border Security Brigade × 4
- Tank Regiment × 7
- Engineer River Crossing Brigade × 1
- Independent Engineer River Crossing/Tracked Amphibian Regiment × 5–8

Specialised units subordinate to the General Staff Department bureaus augment the force, including a large number of special operations-qualified personnel within the intelligence and internal security agencies.

According to the South Korean MND, during 2014 KPA ground force strength decreased by 10,000 to 1,010,000. This was offset by an increase in air and anti-air force personnel by 10,000. It is believed that this was a transfer of personnel from the ground forces to the air and air defence forces.

All major units are required to produce some of their own food and, where possible, earn currency. As a result, these units operate a wide variety of commercial entities.

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Order of battle

Although the corps is generally considered to be the largest organisation within the KPA, it has also created two 'front' or 'district' commands – the I District Command headquartered in Wonsan and the Southwestern Front Command in Hwanghae-namdo. These HQs are probably responsible for all KPA wartime operations in their area of responsibilities, possibly an acknowledgement of the difficulties of wartime control. This somewhat mirrors the later Korean War structure of the KPA that consisted of Eastern, Rear, and Western Area commands.

Defector reports state that there are five tank divisions – the 105th, 106th, 107th, 108th, and 109th – and that these are subordinate to the Tank Training Guidance Bureau. Aside from the 105th division, these units may simply be large brigades. The 109th is reportedly stationed in Pyongyang and equipped with P'okpoong, Chonma, and Songun MBTs. The 105th Tank Division is located south of the capital and is, at least partially, equipped with versions of the P'okpoong and Songun tanks.

A unique aspect of all KPA units, battalion-sized and larger, is the inclusion of special service support units. Among these units are gardens, farms, fish farms, and livestock ranches, which are controlled by the units themselves and are generally intended to provide a significant portion of the unit's food requirements. Additionally, some larger units engage in small KPA-controlled enterprises to earn foreign currency.

Unit hierarchy	Base	Type	Primary role (General)	Primary role (Specific)	Primary equipment	Notes
Korean People's Army Ground Force		Service Support	Command and Control			
General Staff Department	NDC, Pyongyang	Combat Support	Command and Control			
108 Mechanised Corps	Hamhung	Combat Arms	Infantry			

11 'Strom' Corps	NDC, Pyongyang	Combat Support	Special Operations	Location unknown; located with command unit.
1st District Command	Wonsan	Combat Support	Command and Control	
425 Mechanised Corps	Chongju	Combat Arms	Infantry	
I Corps	Hoeyang	Combat Arms	Infantry	
II Corps	Hanpori	Combat Arms	Infantry	
III Corps	Kaechon	Combat Arms	Infantry	Exact basing location unknown, located with parent unit
IV Corps	Haeju	Combat Arms	Infantry	
IX Corps	Chongjin	Combat Arms	Infantry	Likely located in North Hamgyong province, exact location unknown, placed at provincial capital

Pyongyang Antiaircraft Artillery Command	Sonnae- dong, Pyongyang	Comba t Suppor t	Comman d and Control	
Brigade 1	Sonnae- dong, Pyongyang	Comba t Arms	Artillery	Location unknown; located with command unit.
Brigade 2	Sonnae- dong, Pyongyang	Comba t Arms	Artillery	Location unknown; located with command unit.
Brigade 3	Sonnae- dong, Pyongyang	Comba t Arms	Artillery	Location unknown; located with command unit.
Brigade 4	Sonnae- dong, Pyongyang	Comba t Arms	Artillery	Location unknown; located with command unit.
Brigade 5	Sonnae- dong, Pyongyang	Comba t Arms	Artillery	Location unknown; located with command unit.
Brigade 6	Sonnae- dong, Pyongyang	Comba t Arms	Artillery	Location unknown; located with command unit.

Brigade 7	Sonnae-dong, Pyongyang	Combat Arms	Artillery	Location unknown; located with command unit.
Pyongyang Defence Command	Pyongyang-si	Combat Support	Command and Control	
Division 1	Pyongyang-si	Combat Arms	Infantry	Location unknown; located with command unit.
Division 2	Pyongyang-si	Combat Arms	Infantry	Location unknown; located with command unit.
Division 3	Pyongyang-si	Combat Arms	Infantry	Location unknown; located with command unit.
Division 4	Pyongyang-si	Combat Arms	Infantry	Location unknown; located with command unit.
Division 5	Pyongyang-si	Combat Arms	Infantry	Location unknown; located with command unit.

Division 6	Pyongyang -si	Combat Arms	Infantry	Location unknown; located with command unit.
Division 7	Pyongyang -si	Combat Arms	Infantry	Location unknown; located with command unit.
Division 8	Pyongyang -si	Combat Arms	Infantry	Location unknown; located with command unit.
Southwestern Front Command	Haeju	Combat Support	Command and Control	Likely located in South Hwanghae province, exact location unknown, placed at provincial capital
Strategic Force Command	Suhoe-dong	Combat Support	Command and Control	
ICBM Brigade 1	Suhoe-dong	Combat Arms	Surface-to-surface Missile	Location unknown; located with command unit.

IRBM Brigade 1	Suhoe- dong	Comba t Arms	Surface- to-surface Missile	Location unknown; located with command unit.
MRBM Brigade 1	Suhoe- dong	Comba t Arms	Surface- to-surface Missile	Location unknown; located with command unit.
SRBM Brigade 1	Suhoe- dong	Comba t Arms	Surface- to-surface Missile	Location unknown; located with command unit.
SRBM Brigade 2	Suhoe- dong	Comba t Arms	Surface- to-surface Missile	Location unknown; located with command unit.
SRBM Brigade 3	Suhoe- dong	Comba t Arms	Surface- to-surface Missile	Location unknown; located with command unit.
SRBM Brigade 4	Suhoe- dong	Comba t Arms	Surface- to-surface Missile	Location unknown; located with command unit.
Tank Training Bureau	NDC, Pyongyang	Comba t Suppor t	Comman d and Control	Location unknown; located with command unit.

105th Tank Division	NDC, Pyongyang	Combat Arms	Armour	Location unknown; located with command unit.
106th Tank Brigade	NDC, Pyongyang	Combat Arms	Armour	Location unknown; located with command unit.
107th Tank Brigade	NDC, Pyongyang	Combat Arms	Armour	Location unknown; located with command unit.
108th Tank Brigade	NDC, Pyongyang	Combat Arms	Armour	Location unknown; located with command unit.
109th Tank Brigade	NDC, Pyongyang	Combat Arms	Armour	Location unknown; located with command unit.
V Corps	Hupyong-ni	Combat Arms	Infantry	
VII Corps	Tongsin	Combat Arms	Infantry	
VIII Corps	Tongnim	Combat Arms	Infantry	

X Corps	Hyesan	Combat Arms	Infantry	Likely located in Ryanggang province, exact location unknown, placed at provincial capital
XII Corps	Hyesan	Combat Arms	Infantry	Likely located in Ryanggang province, exact location unknown, placed at provincial capital

Strategic Force

The Strategic Force (formerly the Strategic Rocket Forces Command) has been elevated to the same level as the army, navy, and air and anti-air force. South Korean sources estimate that it is very likely to play a role similar to that of the Chinese Second Artillery Corps and the Russian Strategic Missile Troops.

The commander of the Strategic Force in 2016 was Lieutenant General Kim Rak-gyom. The Strategic Force is headquartered at Suhoe-dong, P'yongan-namdo province, and the following units are estimated to be subordinate to it:

FROG/KN-02/300 mm MRL × 3–4

SCUD-B/C/D/ER Missile Brigade × 1

No Dong Brigade × 1

Musudan Brigade × 1

KN-08 Brigade × 1

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Pyongyang Anti-Aircraft Artillery Command

The Pyongyang Anti-Aircraft Artillery Command (PAAC) has the mission of defending the capital and its environs from air attack. The exact chain of command for the unit is unclear. However, available evidence suggests that it is subordinated to the Operations Bureau, works closely with the Pyongyang Defence Command, and is integrated into the KPAF air defence system.

The PAAC consists of an HQ, seven brigades equipped with small- and medium-calibre (for example 14.5 mm to 57 mm) anti-aircraft artillery systems, radar and searchlight units, a reconnaissance unit (a company or battalion), and support units. It is likely that the PAAC has incorporated 9K35 Strela-10 (SA-13 'Gopher') SAM units into its organisation. One source indicates that the PAAC also includes two mechanised anti-aircraft artillery regiments, seven 'anti-aircraft rocket' (for example SAM) regiments, and the 55th Anti-Aircraft Artillery Division. One regiment within the PAAC is staffed primarily by female troops. Because of its proximity to government offices, high-level officials frequently visit units of the PAAC.

It is likely that the 9K36 Strela 3 (SA-14 'Gremlin') will be deployed within the PAAC as the KN-06 SAM becomes operational.

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Pyongyang Defence Command

The Pyongyang Defence Command (which is also known as the Capital Defence Corps, Capital Defence Command, Capital Garrison Command, or the 91st Training Centre) is a corps-level unit that is tasked with the protection of Pyongyang and the surrounding areas. In this role it is very similar to South Korea's Capital Defence Command. Prior to the 1980s, the Pyongyang Defence Command, along with the Security Bureau (now Security Command), were controlled by the Guard Bureau (now Security Guard Command). The Pyongyang Defence Command consists of an HQ, eight divisions, and additional units.

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Security Guard Command

The Security Guard Command is responsible for the personal security of Kim Jong-un and other high-ranking officials. It works closely with the Ministry of State Security and, to a lesser degree, the Pyongyang Defence Command. It has an estimated strength of 50,000 and is organised into an unknown number of departments, three independent 'combat' brigades, a construction battalion, a reconnaissance unit (most likely a company), and support units. Known departments include the 1st Department, 2nd Department, 3rd Department, Communications, Political, and Rear Services. The 1st Department was charged with the protection of Kim Il-sung up until his death in July 1994. Although reduced in size since that time, it is still active and is believed to be responsible for the security of his preserved body and monuments to him. The 2nd Department – the largest one – is responsible for the personal security of the regime's leader. The 3rd Department is responsible for the personal security of General Political Bureau personnel and other high-ranking officials.

Defectors report that prospective candidates for the Security Guard Command undergo an extensive nationwide screening and selection process. Once an individual has successfully passed through this process, they must go through at least two years of intensive training before becoming active members of the Security Guard Command.

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Reconnaissance General Bureau

The RGB is the primary organisation tasked with collecting foreign tactical and strategic intelligence and co-ordinating or conducting all external special operations. It also exercises operational control over agents engaged in military intelligence activities and oversees the training, maintenance, and deployment of guerrilla teams available for operation in the south.

RGB personnel are believed to be involved in illicit financial activities around the world using positions within international organisations and institutions to circumvent sanctions. Reports by the UN Security Council's Panel of Experts on North Korea have detailed activities by RGB personnel that assist the country to evade international economic sanctions.

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Paramilitary and Reserve Forces

Augmenting the KPA's active ground force component is an immense paramilitary and reserve force of approximately 7.7 million personnel – approximately 32% of the population between the ages of 15 and 60. This sizable force has undergone reorganisation during the past 10 years and, according to South Korean sources, is organised into four primary components:

- 5.72 million Worker-Peasant Red Guard
- 0.94 million Red Youth Guard
- 0.62 million Reserve Military Training Unit (also known as Instruction Guidance)
- approximately 0.42 million miscellaneous paramilitary forces (for example the Security Guard Command, Ministry of People's Security, Speed Battle Youth Shock Troops, General Bureau of Logistics Mobilisation)

Of these, the paramilitary training unit troops, composed of discharged veterans organised into units up to division size, can be mobilised immediately as units for combat operations. Beginning during the 1980s, the KPA initiated a programme whereby these units received additional artillery and were restructured and exercised to facilitate out-of-area operations in support of regular ground force units.

A large percentage of the Red Youth Guard, composed of high school and college students, can also be mobilised quickly but would take longer to attain combat readiness.

The Worker-Peasant Red Guard and People's Guard (increasingly known as the Red Guard Army) are organised by workplace and geographic area, receive approximately 160 hours of annual

training, and would take the longest to achieve combat readiness. They are armed with various small arms and infantry-type weapons, and during wartime would defend rear areas and provide general support to the KPA. During peacetime their mission is the protection of local government and industry. With the exception of the paramilitary training units, the majority of the reserves would probably be employed as reinforcements or replacements for regular KPA units, or as rear area security units.

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Bases

Although the ground force component does possess and maintain a number of large permanent bases (typically near large cities), most elements of the KPA are deployed in smaller bases located throughout the country. The deployment and basing of the KPA reflects a preparedness for war, and the dispersion is intended in part to reduce potential vulnerability.

All major bases are garrisons. All urban centres, including many industrial and agriculture complexes, have garrisoned troops associated with them.

Name	Latitude	Longitude	Notes
Sonnae-dong, Pyongyang	39.0077778	125.6963889	
Songnim, North Hwanghae	38.7033333	125.6297222	
Yonggung-dong 2, Pyongyang	39.1211111	125.7675	
Pyongyang-si	38.969422	125.65394	
Sung-ho, North Hwanghae	39.0897222	125.8988889	
Chongju	39.6919444	125.21	
Taeon	38.8258333	125.5438889	
Sariwon	38.5852778	125.7777778	
Hoeyang	38.6941667	127.6263889	
Haeju	38.0502778	125.7138889	
Tongnim	38.9930556	125.9066667	
Kangso, South P'yongan	38.9666667	125.4669444	
Sunjibaegam, Paegam	41.3711111	129.0861111	

Koksan	38.6136111	126.5138889
Wonsan	39.1308333	127.3711111
Hyesan	41.3694444	128.1858333
Kumgnam Military City	39.0530556	125.7936111
Hamhung	39.8047222	127.545
Kaechon	39.7060735	125.8525429
Tongsin	40.3105556	126.3066667
Suhoe-dong	39.1733333	126.16
Hupyong-ni	38.6094444	127.1625
Chongjin	41.7880556	129.8388889
Rajin	42.1588889	130.1813889
Hanpori	38.23	126.4413889
Sinwon	38.1336111	125.7461111

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Personnel

- Although military service is compulsory, the average citizen views it as an honour and a means of social acceptance and advancement so instances of draft avoidance have traditionally been extremely low. Prolonged famine during the mid-1990s through early 2000s degraded the health of the average soldier and the conscript pool. Officers and enlisted personnel are undernourished, despite the armed forces' high priority in the national budget. To address the slow decline in health of the general population and erosion of physical stature and well-being of the average citizen, the KPA has been repeatedly forced to lower the minimum entry requirements for service in the armed forces. The trend is towards shorter troops with extremely little body fat and less muscle mass.
- The conscription process begins at age 14 when each youth registers as a candidate for enlistment and receives a basic physical examination at a local hospital. At 16 they undergo a second physical examination at a provincial hospital. Draft notices are typically delivered to conscripts, or their families, through their high schools the following year. The average conscript is 17–25 years of age and has completed high school. A conscript may be exempted or disqualified from service for a variety of reasons, including to attend elite colleges.

Although students at other junior or regular universities are eligible for conscription upon graduation, their area of study is considered. Also exempted are personnel deemed to possess special technical industrial expertise or those serving within the Ministry of People's Security or Ministry of State Security. Military service can last for more than 10 years for men and 7 years for women depending upon an individual's branch and rank. During this period, the average soldier is allowed to see his or her family just once or twice.

- Guidelines for yearly conscription are established by the Central Military Committee with recommendations from the WPK's Organisation and Guidance Department, SAC, and the KPA's Military Mobilisation and Personnel Affairs Bureaus. The actual conscription process is carried out in March and September through the Military Mobilisation Department of each province, municipality, and county. Since local officials conduct selection and branch assignments, favouritism and nepotism have occurred. Children of politically influential parents are frequently given choice assignments within the rear area, politically elite units, units in which their relatives have served, or units close to their hometowns. They are also frequently afforded access to military academies or civilian colleges after a shortened period of service.
- Morale tends to be low-to-average among KPA recruits. Insufficient food rations, a rigid disciplinary system, tedious indoctrination programmes, strict restrictions on leave, and monotonous camp life, combined with isolation from families and civilian life, contribute to demoralisation. Even with these challenges, the average soldier finds service acceptable and takes great pride in being a part of the KPA. Citizens still compete for positions within the KPA, and without military service a male citizen is considered unaccomplished. This is especially true for admission to military academies where competition is fierce.

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Training

- KPA training programmes are based on the principle that every servicemember must be able to perform the duties of the next higher in command. Training focuses on frequent and rapid mobilisation techniques and individual combat skills. However, owing to the lack of available fuel, KPA recruits are not thought to have sufficient opportunities to engage in large-scale training, such as ground-air combined manoeuvre exercises. For the same reason, army units do not receive sufficient training in coping with large operations, which require co-ordination with the other armed services.
- The KPA's training system is designed to produce tough, disciplined, and politically well-indoctrinated soldiers who, with superior ideological training, physical conditioning, and skills in guerrilla warfare, can defeat a numerically and technologically superior enemy. General education and political and ideological training of soldiers are stressed. Soldiers study the 'Fatherland Liberation War' (Korean War) and the 'Anti-Japanese Partisan Struggle' (period of Japanese annexation pre-Second World War) to learn from those experiences. Mountain and night combat skills are taught, and soldiers are trained in conventional and unconventional warfare. The training and education teaches the soldier to overcome all

adverse conditions. It also emphasises proficiency in conducting combined (consolidated) operations.

- The KPA's training system results in tough, intensively trained fighters who can travel farther and faster with more equipment and less food than most of their counterparts. They are mentally and physically hardened and disciplined, ready to obey orders and suffer privations that would cause mutinies in other armies. However, they are woefully undertrained for a modern war based upon rapidly changing tactical and operational situations, high mobility, and advanced technology.
- By regional standards the KPA suffers from a lack of extended, comprehensive, and realistic training for most ground force units, especially the mechanised and armoured forces. This has been changing since 2005. The annual training exercises have continued to increase in size and complexity and have included significant inter-service components. Exercise components may be more realistic under Under Kim Jong-un. While observing a December 2014 exercise Kim Jong-un stated, "It is important to organise and guide drills of military units at an intensive level by providing an unanticipated situation at an unexpected time in an unusual format and method."
- The Military Training Bureau is responsible for education and training within the KPA, including at military schools and academies. The Military Training Bureau conducts research and evaluates combat operations through a small number of research institutes and think tanks. The most significant are the Research Institute for Military Sciences and the Strategy Research Institute.
- Although there are specialised training facilities within North Korea, the majority of training occurs at small local facilities. These are either attached to, or located near, regiment, brigade, and division garrisons. During the annual training cycle, it is not unusual for units to utilise the local countryside and coastlines for training areas. The majority of ground units very rarely, if ever, train outside of the corps area to which they are assigned.

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Military exercises

The primary instrument of the multi-year training programme, established by the General Staff Department's Military Training Bureau, is the annual training cycle. It includes summer exercises held between June and mid-September and winter training exercises held between 1 December and 31 March (some sources report these as late-July to late-September and 1 December to mid-April, respectively). The size and nature of these annual training exercises have varied over the years; however, under Kim Jong-un's leadership have increased in realism and display a higher level of joint operations.

According to reports in the state-run *Rodong Sinmun* newspaper, Kim Jong-un oversaw an artillery exercise on 1 December 2016 simulating an attack on Republic of Korea (RoK)-controlled islands off the west coast of the Korean Peninsula. Kim Jong-un's visit to the coastal artillery units came a

day after the United Nations Security Council (UNSC) adopted a new resolution imposing sanctions on Pyongyang in response to the nuclear test the communist regime conducted on 9 September. According to the paper, the drill simulated artillery attacks on RoK ground and naval forces, including those on Yeonpyeong Island, where four South Koreans died after the North initiated an artillery exchange.

In April 2017, North Korea state-run television KRT broadcast footage of Kim Jong-un inspecting a live-fire exercise to mark the 85th anniversary of the founding of the North Korean army. This is believed to be the largest such exercise undertaken by the KPA and according to state media included more than 300 large-calibre self-propelled guns as well as submarines armed with torpedoes and fighter jets such as the Su-25 and MiG-23.

On 26 November 2019, *Yonhap News Agency* quoted the South Korean Ministry of National Defense (MND) in a report that stated that South Korea had lodged a complaint with North Korea over artillery firing drills conducted on 23 November 2019 from Changrin Islet just north of the NLL. This indicates that the KPA continues to conduct artillery training with live-rounds.

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Core assets and procurement initiatives

KPA ground forces, although large in size, are seriously deficient in modern and sophisticated weapon systems and equipment. Reliable details concerning the KPA's procurement requirements and programmes are sparse. From information available and information deduced from satellite and propaganda imagery, it appears that procurement requirements and programmes can be grouped into particular categories. This extends throughout the force, with the most noticeable deficits in

- ATGWs
- AFVs
- C3I
- computer and information management systems
- EW and communications intelligence (COMINT) systems
- fire direction and TA assets
- support vehicles

During 2015, the Hasong Tire Factory is reported to have modernised its production equipment and production processes to produce tyres for 42-tonne and 55-tonne trucks. Such tyres are not only used on heavy-duty mining related vehicles, but also for heavy-duty military vehicles and missile transporter erector launchers (TELS).

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Armour

In comparison with the modern tanks and AFVs deployed with the RoK Army (RoKA) and US forces in the RoK, the KPA's fleet of tanks is distinctly inferior. The KPA recognises this and continues to develop and produce small numbers of more modern tanks and kits to upgrade existing tanks. Known tank programmes include

- P'okpung ('Storm') II/III/IV MBT
- Chonma V/VI/V MBT
- Songun MBT

A sixth version of the Chonma tank has reportedly been developed. The KPA also continues to develop and acquire small numbers of new models of AFVs and utility vehicles. The vast majority of these are based upon the

- BTR-80 (armed with numerous different weapons and command installations)
- VTT-323 (armed with numerous different weapons installations)
- YW531H (armed with numerous different weapons installations)

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Artillery and artillery rockets

Artillery and artillery rockets of numerous types and calibres continue to be developed, produced, and acquired by the KPA. Among active programmes are:

- 107 mm MRL in numerous variants
- 122 mm MRL in numerous variants
- 130 mm M-1992 variants
- 130 mm SM-4-1
- 152 mm M-1991 variants
- 170 mm M-1989 variants
- 240 mm M-1985 MRL variants
- 240 mm M-1991 MRL variants
- 300 mm KN-09 variants

KN-09

In 2015, footage from the 10 October parade in Pyongyang for the 70th anniversary of the WPK provided the first visual confirmation of a new 300 mm weapon system, subsequently designated

KN-09 In images from an exercise in March 2016, this 300 mm weapon system has two pods of four tubes each. The usage of pods on missile and rocket systems is advantageous in combat scenarios because multiple pods can be pre-loaded with missiles and swapped out on the launcher, instead of re-loading individual tubes after firing. The exact capabilities of this North Korean MRL remain unconfirmed. The most similar South Korean system is the Chun-Mu MLRS (or K-239). Chun-Muo's diameter is 239 mm and can be equipped with 12 rockets that have a range over 80 km. However, the ranges reported by the South Korean military from the March 2016 exercise for North Korea's 300 mm MRL were in excess of 100 km. This suggests that North Korea's KN-09 is among the longest ranging such systems in the world.

KN-09 evolution

In August 2019, KCNA reported that Kim Jong Un had overseen a test of a newly developed “large-calibre multiple launch guided rocket system”. Two launches of this system, on 31 July and 2 August, were confirmed by South Korea's JCS with the projectiles reaching an altitude of 25-30 km and flying between 220 km and 250 km at a top speed of Mach 6.9 before falling into the East Sea. This MRL seems to be an evolution of the KN-09 and is assessed to have a diameter of approximately 400 mm

New systems

On 24 August 2019, KCNA released images of the test-firing of a “newly developed, super-large multiple rocket launcher”. South Korea's JCS said that the projectiles flew about 380 km at a top speed of Mach 6.5 and reached an altitude of about 97 km before falling into the East Sea. According to reports in the South Korean newspaper, *Dong-A-Ilbo*, US Forces Korea (USFK) has designated North Korea's “super-large multiple rocket launcher” KN-25 - assessing it to be a new SRBM. According to the USFK, the calibre of the projectiles used in the KN-25 is estimated at 600 mm. North Korea reportedly tested this new MRL in September and October 2019, with the latest launch taking place in November 2019. On 29 November 2019, a report by *KCNA* carried images of the "super-large multiple rocket launcher" and stated that the “volley” test-firings, which were carried out by the Academy of Defence Science, were aimed at verifying “the combat application” of the "super-large" MRL, and proved "the military and technical superiority of the weapon system and its firm reliability”.

The rapid development of these improved systems - the KN-09 was first introduced only in 2016 - indicates that North Korea is committed to investing in its artillery capabilities.

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Infantry

North Korea has been self-sufficient in developing and producing infantry weapon systems since the late 1960s. Although a majority of these systems are somewhat obsolete, they are by no means ineffective. The KPA annually acquires almost all its small arms from domestic sources. There are some instances of foreign acquisition of unique systems not produced indigenously such as

- advanced NBC detection and protective gear

- Chinese-manufactured ZM-87 anti-personnel lasers
- C3 systems
- laser rangefinders
- night vision devices
- some ATGM systems
- some EW and COMINT systems
- some GPS and jamming equipment

Although North Korea does produce a range of light and heavy trucks, a high percentage of such vehicles are acquired through China.

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Air defence

North Korea employs a wide range of air defence systems including AAA and SAMs. It is self-sufficient in the production of almost all AAA systems and some SAM systems. It is not self-sufficient in the development and production of radar and EW systems. Among the current programmes are

- KN-06 canister launched SAMs
- Early warning, tracking, and TA radar including variants of the 5N63 'Flap Lid', 30N6 'Tomb Stone', P-10 'Knife Rest' and P-14 'Tall King', 'Gin Sling' A/B, JY-8, and possibly the Type-120 and JY-27
- the domestic variant of the SON-9A 'Drum Tilt'
- electronic intelligence systems
- jamming systems
- SA-2/3/5 upgrades
- self-propelled variants of the SA-2/3
- Igla-1 (SA-16 'Gimlet') and other MANPADS

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Unmanned aerial vehicles

The KPA has acquired tactical UAVs from domestic (e.g., Panghyon I/II, Durumi, etc.) and foreign (e.g., Chinese Sky-09P, Russian Pchela-1T, etc.) sources. Their continued usage indicates that the KPA seeks to improve its UAV inventory. It is likely that the foreign UAVs will be covert acquisitions of civilian UAVs similar to the Sky-09P.

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Ballistic missiles

Of all the land force modernisation efforts, those dealing with the development, production, and deployment of ballistic missiles have received the greatest emphasis. The KPA produces and fields the following missile systems within its Strategic Force: Hwasong-6/-7 (Scud-B/-C/-D/-ER), KN-02/-10 (SS-21 variant), Nodong, KN-07 (Musudan), and KN-08/-14). North Korea regards its nuclear and ballistic missile development programmes as an essential bargaining tool in negotiating with the United States and as a guarantor of its security.

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Equipment in service

System name	Family name	Running gear	Mobility	Role general	Role specific	Total delivered	In service	Year of initial delivery	Notes
BRD M-2	BRD M-1	Wheeled	Self-propelled	C4/STAR	Reconnaissance	unknown	2100	unknown	
M1943	M1943			Combat/offensive		unknown	unknown	unknown	
107mm (12-Round) Type 63	107mm (12-Round) Type 63			Combat/offensive		4000	4100	unknown	
M1985	BM-11			Combat/offensive		500	900	unknown	
HQ-9	HQ-9			Combat/offensive		unknown	unknown	unknown	

ZSU-23-4	ZSU-23-4	Tracked	Self-propelled	Combat/offensive	Air defence	100	100	unknown
ZSU-57-2	ZSU-57-2	Tracked	Self-propelled	Combat/offensive	Air defence	unknown	250	unknown
37 mm M1939	M1939	Wheeled	Towed	Combat/offensive	Air defence	1000	1000	unknown
M1985	M1985	Tracked	Self-propelled	Combat/offensive	Air defence	unknown	unknown	unknown
ZPU-2	ZPU	Wheeled	Towed	Combat/offensive	Air defence	unknown	60	unknown
Type 74	Type 74	Wheeled	Towed	Combat/offensive	Air defence	500	500	unknown
M1992 37mm	M1992	Tracked	Self-propelled	Combat/offensive	Air defence	unknown	unknown	unknown
Type 65	Type 65	Wheeled	Towed	Combat/offensive	Air defence	250	250	unknown
KS-19	KS-19	Wheeled	Towed	Combat/offensive	Air defence	unknown	24	1995
85 mm M1939	M1939	Wheeled	Towed	Combat/offensive	Air defence	400	400	unknown
Strela-10	Strela-10			Combat/offensive	Air defence	4500	2500	unknown
ZPU-1	ZPU	Wheeled	Towed	Combat/offensive	Air defence	500	500	unknown
S-60	S-60	Wheeled	Towed	Combat/offensive	Air defence	600	600	unknown
ZU-23-2	ZU-23-2	Wheeled	Towed	Combat/offensive	Air defence	1500	1500	unknown

ZPU-4	ZPU	Wheeled	Towed	Combat/offensive	Air defence	unknown	unknown	unknown
Chinese Type 531A	Chinese Type 531A	Wheeled	Self-propelled	Combat/offensive	Armoured personnel carrier	500	500	1972
BTR-60PB	BTR-60	Wheeled	Self-propelled	Combat/offensive	Armoured personnel carrier	250	250	1973
M199 2/1	M199 2/1	Wheeled	Self-propelled	Combat/offensive	Armoured personnel carrier	unknown	1500	1992
BMP-1	BMP-1	Tracked	Self-propelled	Combat/offensive	Armoured personnel carrier	222	222	1972
BTR-50P	BTR-50	Tracked	Self-propelled	Combat/offensive	Armoured personnel carrier	50	50	1967
BTR-40	BTR-40	Wheeled	Self-propelled	Combat/offensive	Armoured personnel carrier	350	250	1950
BTR-152	BTR-152	Wheeled	Self-propelled	Combat/offensive	Armoured personnel carrier	400	400	1950
BTR-80A	BTR-80	Wheeled	Self-propelled	Combat/offensive	Armoured personnel carrier, Amphibious assault	32	32	2000
BTR-80	BTR-80	Wheeled	Self-propelled	Combat/offensive	Armoured personnel carrier, Amphibious assault	32	32	2000
M1975 SPG	M-46	Tracked	Self-propelled	Combat/offensive	Gun	unknown	54	unknown

Luna-2	Luna-2	Wheeled	Self-propelled	Combat/offensive	Rocket	15	15	1970
BM-21	BM-21	Wheeled	Self-propelled	Combat/offensive	Rocket	500	500	1966
14.5 mm M1983	14.5 mm M1983	Tracked	Self-propelled	Combat/offensive	Gun	200	200	1983
M1991 122 mm SPG	D-74	Tracked	Self-propelled	Combat/offensive	Gun	unknown	400	unknown
M1978 SPG	M1978 SPG	Tracked	Self-propelled	Combat/offensive	Gun	unknown	72	unknown
KN-09	WS-1	Wheeled	Self-propelled	Combat/offensive	Rocket	50	50	2012
152 mm M1937	D-20	Wheeled	Towed	Combat/offensive	Gun	100	50	1950
PT-85	PT-85	Tracked	Self-propelled	Combat/offensive		500	500	unknown
M1992 SPG	AT-S	Tracked	Self-propelled	Combat/offensive	Gun	unknown	100	unknown
M1991 130 mm SPG	M-46	Tracked	Self-propelled	Combat/offensive	Gun	unknown	200	unknown
D-20	D-20	Wheeled	Towed	Combat/offensive	Gun	200	unknown	1972

M46	M46	Wheeled	Towed	Combat/offensive	Gun	160	160	1966
SU-100	SU-100	Tracked	Self-propelled	Combat/offensive	Gun	unknown	60	unknown
BM-11	BM-11	Wheeled	Self-propelled	Combat/offensive	Rocket	750	750	unknown
VTT 323	VTT 323	Tracked	Self-propelled	Combat/offensive	Gun	250	250	unknown
M1931	D-20	Wheeled	Towed	Combat/offensive	Gun	500	250	1950
M1981 SPG	AT-S	Tracked	Self-propelled	Combat/offensive	Gun	unknown	54	unknown
M1991	M1991	Wheeled	Self-propelled	Combat/offensive	Rocket	200	200	unknown
FROG-7	FROG-7	Wheeled	Self-propelled	Combat/offensive	Rocket	9	9	1970
122 mm Howitzer M1938 (M-30)	122 mm Howitzer M1938 (M-30)	Wheeled	Towed	Combat/offensive	Gun	500	250	1989
VTT 323	VTT 323	Tracked	Self-propelled	Combat/offensive	Gun	unknown	2000	unknown
M1977	M1977	Tracked	Self-propelled	Combat/offensive	Gun	200	150	unknown

M199 2 SPM	M199 2 SPM	Tracked	Self-propelled	Combat/offensive	Gun	unknown	200	unknown
M197 4 SPH	VTT- 323	Tracked	Self-propelled	Combat/offensive	Gun	unknown	54	unknown
BMD- 20	BMD- 20	Wheeled	Towed	Combat/offensive	Rocket	200	200	1956
Songun	Songun	Tracked	Self-propelled	Combat/offensive	Tank	200	200	unknown
P'okpong	P'okpong	Tracked	Self-propelled	Combat/offensive	Tank	unknown	600	2002
PT-76	PT-76	Tracked	Self-propelled	Combat/offensive	Tank	550	450	1966
Ch'on ma-ho II	Ch'on ma	Tracked	Self-propelled	Combat/offensive	Tank	unknown	unknown	1971
T-34	T-34	Tracked	Self-propelled	Combat/offensive	Tank	650	250	1950
Ch'on ma-ho I	Ch'on ma	Tracked	Self-propelled	Combat/offensive	Tank	1400	1400	1971
Ch'on ma-ho IV	Ch'on ma	Tracked	Self-propelled	Combat/offensive	Tank	unknown	unknown	1971
YW53 1H	Type 85	Tracked	Self-propelled	Combat/offensive, Logistics/support	Armoured personnel carrier, Recovery	150	150	unknown

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Anti-tank weapons

Type	Manufacturer	Role	Original total	In service	First delivery
9K11/9M14 (AT-3 'Sagger')	n/k	Anti-tank guided missile	n/k	n/k	n/k
9K111/9M111 (AT-4a/b 'Spigot')	n/k	Anti-tank guided weapon	n/k	n/k	n/k
9P/148/9M113 (AT-5 'Spandrel')	n/k	Anti-tank guided weapon	n/k	n/k	n/k
82 mm B-10	n/k	Recoilless rifle	n/k	n/k	n/k
107 mm B-11	n/k	Recoilless rifle	n/k	n/k	n/k
57 mm M1943 (ZIS-2)	n/k	Anti-tank gun	n/k	n/k	n/k
57 mm M1943 (ZIS-3)	n/k	Anti-tank gun	n/k	n/k	n/k
85 mm D-44	n/k	Anti-tank gun	n/k	n/k	n/k
85 mm SD-48	n/k	Anti-tank gun	n/k	n/k	n/k
<p>Estimates only. No accurate information is available on the status or numbers of the DPRK's weapon systems.</p> <p>The estimated total inventory of KPA artillery, 76 mm or greater, including anti-tank weapons, is at least 8,500.</p>					

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Infantry weapons

Type	Role
7.62 mm Tokarev TT-33	Pistol
7.65 mm Type 64	Pistol
7.62 mm Type 68	Pistol
7.62 mm Type 63	Rifle

7.62 mm Type 58 (AK-47)	Assault rifle
7.62 mm Type 68 (AKM)	Assault rifle
7.62 mm Dragunov (SVD)	Sniper rifle
7.62 mm Type 49	Sub-machine gun
7.62 mm RP-46	Light machine gun
7.62 mm RPD	Light machine gun
7.62 mm SMG	Light machine gun
7.62 mm Type 64 (RPK/RPK-74)	Light machine gun
7.62 mm PK, PKB, PKS	Machine gun
12.7 mm DShK	Heavy machine gun
ROKS-3	Flamethrower
RPG-7	Rocket-propelled grenade launcher
RPG-2	Rocket-propelled grenade launcher
30 mm AGS-17	Grenade thrower
Estimates only. No accurate information is available on the status or numbers of the DPRK's weapon systems.	