

# South Korean Armed Forces: Watching Across The DMZ

No country would wish to border a pariah state intent on developing nuclear weapons, yet this is the unenviable position that South Korea finds itself in. Its North Korean neighbour has the world's third largest army of more than 1.1 million active-duty soldiers and 4.7 million reservists. This massive Democratic People's Republic of Korea (DPRK) force is perpetually poised near the Demilitarised Zone (DMZ), ready for a sudden attack across the border.

by **Gordon Arthur**



*Until the introduction of the K2, the ROKA's premier MBT is the K1A1 as pictured here, armed with a 120mm main gun. (Gordon Arthur)*

**W**hile the Cold War in Europe ended two decades ago, there has been no thaw on the Korean Peninsular, home to the world's most heavily fortified border. North Korea launched a suspected Taepodong-2 ballistic missile on April 5th. Reacting to subsequent UN Security Council condemnation, the DPRK abandoned six-party negotiations, promised to restart its Yongbyon nuclear reactor, and repudiated the 1953 Armistice Agreement. Relations between the two Koreas had soured markedly by the end of April, exacerbating strained relations after President Lee Myung-bak took office in February 2008. If any country ever needed to invest heavily in its armed forces, South Korea is a prime candidate!

### Armed forces modernisation

Since its formation in 1948, the ROK Armed Forces have swelled to an estimated 655,000 active and 3,040,000 reserve personnel. The security-threat environment takes priority when it comes to funding the Ministry of National Defense (MND). The primary goal is securing national survival by protecting against an incursion from the numerically superior North. The FY2009 defence budget provided a 7.4 percent increase in spending over 2008's expenditure of \$28.5 billion, equating to 2.76 percent of GDP. It was also in alignment with the \$491 billion allotted to Defence Reform 2020, a 15-year programme that began in 2005 with the aim of thoroughly modernising the ROK Armed Forces and making them technologically self-sufficient. By 2011, the defence budget should rise to 2.89 percent of GDP.

The \$156 billion Mid-Term Defense Plan (2007-11) is the first stage of Defense Reform 2020, with an increased emphasis on research and development. South Korea wants a high-quality force equipped with advanced technology and good morale. By 2020 the military will have been reduced to 500,000 troops, the army losing a third of its manpower down to 371,000. Reserves will also be cut in half from 3 to 1.5 million. However, defence reforms will be pared back because of the current financial crisis, meaning scheduled reforms may not be completed before 2020. A revised plan, addressing this issue was submitted to President Lee on June 26th for signing off.

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#### Maturing defence industry

The Defense Acquisition Program Administration (DAPA) announced that ROK defence exports exceeded \$1 billion in 2008. This statistic illustrates how the nation's defence sector has matured, propelled by deliberate governmental policies of stimulating the domestic economy and promoting military self-reliance. DAPA, formed in 2006 as an independent agency to oversee military procurement and sales, has brought greater efficiency to that process. Defense Minister Lee Sang-hee declared on January 8th, that defence industries needed to focus on research and development to become an economic "engine of growth." Defence exports in 2009 are expected to grow by 20 percent to \$1.2 billion.

Another way of improving efficiency is privatisation, with the government recently declaring it was selling its 30 percent stake in Korean Aerospace Industries (KAI). This asset sale will give foreign companies a strategic foothold. Similarly, the government is considering selling its 19.1 percent stake in the country's largest naval shipbuilder, Daewoo Shipbuilding & Marine Engineering (DSME). South Korea wants both indigenous development and cost effectiveness, so one solution is demanding high technology-transfer levels and offsets from foreign companies. As South Korea becomes more self-reliant militarily, there is less concern with maintaining interoperability with the US, South Korea's traditional defence supplier. This will see enhanced competition and diversification of suppliers, with European competitors becoming more significant.

South Korea has been nurturing new export markets and fostering military relationships with countries like the

Philippines. On 4 December 2008, 15 retired T-41D basic trainer aircraft were delivered to the Philippine Air Force. Turkey adopted the basic design of Samsung Techwin's K9 Thunder 155mm self-propelled howitzer, cementing another strategic relationship. Known as T-155 Firtina and modified to meet Turkish requirements, Turkey is license-producing up to 350 systems. Otokar is manufacturing Turkey's new Altay Main Battle Tank (MBT) under an August 2008 contract. Beating bids from traditional tank-building countries, Rotem (part of the Hyundai Motor Group) scored a coup after being declared the key technology partner. In June 2007, Turkey also announced a \$450 million deal for KT-1 basic trainers from KAI.

South Korea is a leading shipbuilder, and when domestic companies started producing foreign naval designs, they developed further skill sets that eventually has enabled them to build advanced warships. Korea designed and will build the first two Makassar-class LPDs for the Indonesian Navy, with a remaining pair slated for construction in Indonesia.

#### Army capitalises on technology

The ROK Army (ROKA) is the sixth largest in the world, comprising 522,000 soldiers and a pool of approximately three million reservists. It boasts 2,500 tanks, 2,500 armoured vehicles and 7,000 artillery pieces. South Korean males are required to complete approximately two years of military service. A streamlining of the Army is occurring with the reorganisation of three army groups into two operational commands. The Army serves a vital function in guarding the DMZ, plus the country's mountainous terrain ensures infantrymen will always be an important asset.

The army possesses around 1,500 K1 or

*This is Doosan Infracore's Black Fox 6x6 APC, which is contending for a ROKA requirement for wheeled armoured vehicles. (Gordon Arthur)*



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K1A1 MBTs. Although the K1A1 is far more advanced than anything North Korea fields, the ROKA has been developing the state-of-the-art K2 since 1995. A Rotem K2 prototype employing an autoloader, laser defensive suite and reactive armour was publicly unveiled in March 2007. The Doosan Infracore K21 Infantry Fighting Vehicle (IFV), armed with a 40mm cannon and lighter than similar designs because of its fibreglass chassis, is supplementing the K200 Armoured Personnel Carrier (APC). Approximately 1,000 are to be built up until 2015. New armoured vehicles like the K2 and K21 demonstrate how South Korea has successfully utilised designs from well-established international manufacturers, initiated local assembly and infrastructure, and then built on its experience by developing its own

*The T-50 Golden Eagle advanced trainer symbolises how far the South Korean defence industry has progressed. (Gordon Arthur/Andrei Chang)*

vehicle designs.

South Korea has taken delivery of its first of 48 second-hand Patriot PAC-2 missile systems from Germany, these are deemed essential for

defence against its northern neighbour. However, the Patriot network will not be operational until 2010 after acceptance tests have taken place.

Helicopters are another important element in forthcoming programmes. The new Korean Utility Helicopter (KUH) is being designed first as part of the Korean Helicopter Program (KHP). The KUH requirement with a \$1.3 billion budget is for 245 helicopters that carry eleven troops, with Eurocopter providing technical assistance, autopilot and transmission to KAI. Some speculate the 8-tonne design is based on the AS565 Panther. A KUH prototype should fly this year, with deliveries occurring in the latter half of 2012. Eurocopter and KAI have also set up a 50/50 subsidiary to market an export version.



*An army UH-1H conducting a medevac mission. The new KUH will enable replacement of elderly helicopters. (Gordon Arthur)*

Rather than buying off-the-shelf systems, the MND opted to indigenously develop attack helicopters in conjunction with foreign manufacturers. The Korea Attack Helicopter (KAH) will replace Cobra AH-1S and Hughes 500MD helicopters, and it will share components with the KUH. A contract is eagerly awaited by foreign helicopter manufacturers, but one challenging aspect of the project is the army wants a craft deployable between 2013 and 2018. Therefore, it is possible 36 AH-64D Apache helicopters could be acquired as a gap-filler.

Samsung Techwin supplies artillery systems, and recently won a \$1 billion order for K9 howitzers plus K10 Ammunition Resupply Vehicles. Although officials did not reveal the number ordered, it is estimated to be several hundred systems on top of the 200-300 already in service. Deliveries are underway, due for completion by 2012.



**Air Force set to soar**

The ROK Air Force (ROKAF) is a modern force of 400 combat aircraft, predominantly of American origin. In any encounter, these would face 1,600+ North Korean aircraft of obsolete Chinese and Russian design. Its inventory includes 180 KF-16C/D, 60 F-15K Slam Eagle, 135 F-5E/F and 130 F-4D/E fighters. The ROKAF maintains high readiness levels, and under the 2020 reforms, its manpower will remain unchanged at 65,000.

South Korea produces the impressive T-50 Golden Eagle advanced trainer. Developed jointly by KAI and Lockheed Martin, the first supersonic T-50 was delivered to the ROKAF in December 2005 for evaluations. The ROKAF will eventually receive more than 80 T-50/TA-50 aircraft, but already KAI is developing new KTX-2 versions such as the FA-50 light combat aircraft to replace the elderly F-5 fleet.

The ROKAF wants 420 fighters by 2018. As a first phase of the all-important F-X pro-

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gramme, the F-15K Slam Eagle was procured. The ROKAF received its fortieth F-15K in October 2008, this fighter having won out against the Rafale, Typhoon and Su-35 thanks to budgetary and industrial policy reasons. The second phase was agreed in early 2008, with an intent to acquire a further 21 F-15K fighters powered by Pratt & Whitney F100-PW-229EEP engines from 2010-12. A third phase in the KFX Future Fighter programme will kick in with a requirement for 40-60 advanced multirole strike aircraft by 2014 to replace F-4s and F-5s. Since the F-22 Raptor is not for sale, the KFX programme will eventually deliver an indigenous twin-engine stealth fighter, with the

advanced single-seat design. The KFX fighter is being developed by KAI, but details remain sketchy at this stage.

DAPA issued a requirement for 177 air-launched cruise missiles for its F-15Ks, but when only one bidder responded (Taurus Systems KEPD-350), the tender was re-launched. It is hoped Lockheed Martin's AGM-158 Joint Air-to-Surface Standoff Missile (JASSM) and MBDA's Storm Shadow will bid next time around. There is media speculation these 400km-range missiles could target North Korean nuclear facilities. In May, the Korea Medium-Range Surface-to-Air Missile (KMSAM) was successfully tested, to eventually replace the Hawk SAM.

The E-X Airborne Early Warning (AEW) programme will enable detection of hostile aircraft. KAI is also developing the KO-1, a Forward Airborne Controller craft based on the KT-1 basic trainer. The first observation aircraft rolled out in December 2006. DAPA has selected the national airline, Korean Air, to develop a new Medium-

**South Korea produces its own UAVs, this being the RQ-101 Intruder 1 mounted on a truck-based launcher. (Gordon Arthur)**



Altitude Long-Endurance (MALE) UAV with 24-hour endurance. The company is expected to work with a foreign partner for entry into service in 2016.

### **Navy charts course for blue-water capability**

Korea is credited as the first user of ship-board guns when its vessels defeated 500 Japanese boats in 1380. The ROK Navy (ROKN) has advanced well beyond this auspicious beginning, its primary task now being to counter aggression from North Korea's littoral naval force. Personnel total 68,000 (including 27,000 in the ROK Marine Corps) while the fleet numbers around 170 major ships. Defense Reform 2020 is to cut 4,000 personnel. Backed by an extensive shipbuilding industry, the ROKN has embarked on an ambitious modernisation plan to become a blue-water navy by 2020, with the need to rapidly protect vital Sea Lanes of Communication (SLOC) to safeguard exports and imports.

In 2001, the ROK president announced a plan to establish a Strategic Mobile Fleet in addition to the East Sea, West Sea and South Sea fleet commands. This reorganisation will strengthen control over surrounding waters and produce one of Asia's leading naval forces. To cement this transition from coastal force into blue-water

navy, a number of new vessels are being built for the mobile flotilla. These include the ROKS Dokdo a 14,000-ton amphibious landing ship able to carry seven helicopters and 700 troops was commissioned in July 2007, making it ideal for combat or humanitarian-assistance missions, Aegis-equipped guided-missile destroyers - the first of three Sejong the Great-class destroyers was commissioned in 2009 and finally the Chungmugong Yi Sunshin-class destroyers, six 4,500-ton destroyers already in service. A new \$850 million naval base is also

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being built for the Strategic Mobile Fleet on Jeju's southern coast by 2014. Defense Reform 2020 will also upgrade ROKN submarine and naval aviation commands, with aircraft numbers doubling to around 100.

Korean Destroyer Experimental (KDX) is a three-phase programme aimed at modernising surface combatants. The final phase is being achieved with the aforementioned 7,600-ton Sejong the Great class (KDX-III) that sees South Korea become a member of the exclusive Aegis club. DSME launched the second KDX-III in late 2008. The ROKN also has options for three further vessels as part of the navy's stated six-vessel requirement. South Korea is concerned about the DPRK's unpredictable missile programme, so these vessels offer effective missile-defence capabilities.

Other projects underway are the Frigate Experimental (FFX), Landing Platform Experimental (LPX), Patrol Killer Experimental (PKX) and Korean Submarine (KSS). The 2,300-ton FFX to eventually replace Ulsan-class frigates

*The ROKS Dokdo (LPH 6111) is the lead ship in a new class of Landing Platform Helicopter (LPH) vessels. (Gordon Arthur/Andrei Chang)*

and Pohang-class corvettes will have shipbuilders salivating and competing fiercely. The modular and stealthy design will likely come from an international source, with up to 24 frigates being built by 2020. Hyundai Heavy Industries (HHI) will build the lead ship for commissioning in 2011. The FFX is being equipped with Phalanx CIWS, Rolling Airframe Missiles and an embarked Lynx anti-submarine warfare helicopter.

Hanjin Heavy Industries is designing the LPX, with this Next Amphibious Ship Project providing four 4,500-ton amphibious craft from 2014-17. The same shipbuilder is also building the much smaller PKX to give a fleet of next-generation fast attack patrol craft armed with 76mm guns and KSSM anti-ship missiles. The Geomdoksuri-A PKX will be a 400-ton craft with anti-ship missiles, while the Geomdoksuri-B is a 200-ton patrol craft. There is speculation 18 A and 24 B versions will be built for introduction by 2015.

The Korean Submarine (KSS) programme will greatly expand the underwater fleet. The ROKN currently has nine Type 209 submarines, and is planning to acquire up to nine KX-II Type 214 vessels. The German-designed Type 214 Son Wonyil class employs Air Independent Propulsion (AIP) for up to two weeks of continuous underwater operation. HHI is responsible for the first three license-built 1,800-ton Type 214 submarines, the first launched on 9 June 2006 and the second diesel-electric vessel handed over on 2 December 2008. Late in 2008, DSME was awarded a contract to build the fourth Son Wonyil-class submarine. Even while production of the Type 214 is ramping up, Samsung Techwin is poised win a contract to supply radar and combat management systems for the next-generation KSS-III submarine. Work on the indigenously



*The spectre of invasion hangs over South Korea, with this Military Policeman standing on the frontline at the Joint Security Area (JSA). (Gordon Arthur)*

designed KS-III began in 2007, with the first of up to nine 3,000-ton submarines scheduled to appear in 2017.

The ROKN flies eight P-3B Orion Maritime Patrol Aircraft (MPA), which are undergoing a \$496 million Update III refurbishment programme to P-3CK configuration. System integration problems meant delivery of the first Orion was delayed until December 2008. The first two are being upgraded in the USA while KAI will upgrade the remainder. The ROKN wants new mine countermeasure helicopters by 2012, with the AgustaWestland EH-101, NH-90 and MH-60 Seahawk considered contenders.

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### Alliance with the USA

The USA is South Korea's most important strategic partner in accordance with the 1953 Mutual Defense Treaty. Combined Forces Command (CFC) has overseen South Korean defence for the past three decades since it stood up in 1978 as successor to the United Nations Command. It is currently commanded by General Walter Sharp who, in wartime, would command both South Korean and American forces. An important milestone occurs on 17 April 2012 when this joint U.S.-ROK headquarters is disbanded and operational control is transferred fully to South Korea. American forces stationed on the Peninsular will remain at the current level of 28,500, although this new supporting role will give the USA more flexibility to redistribute forces when responding to global events.

Associated with, but not dependent on the command transition, U.S. forces are gradually realigning south of the Han River. They are congregating on two major hubs, one in the Pyeongtaek area and the other further south near Daegu/Pusan.

Recently, the U.S. Senate passed legislation to upgrade Seoul to the status of 'most-favoured nation'. Although largely symbolic, this appellation does give South Korea easier access to American military hardware. "We have a strong alliance that both countries are committed to. I think it's not just an alliance for the ROK and USA, it provides stability for the region too," commented Colonel Jon Sachrison of the USMC, Deputy Chief of Combined Policy at CFC, in an interview with the author.

### Future prospects

Although South Korea's biggest concern is the DPRK juggernaut across the DMZ, it is also involved in international missions. South Korea has a 1,400-strong contingent deployed with UNIFIL in Lebanon, and it dispatched a KDX-II destroyer to the coast of east Africa with the multinational counter-piracy effort. Owing to its geopolitical position adjacent to the world's most unpredictable and dangerous country, South Korea has been forced to, and succeeded in, creating one of the world's most capable armed forces. As long as North Korea holds to its confrontational path, South Korean eyes will remain steadfastly fixed across the DMZ. [AMR](#)

