

LEARN ABOUT NUCLEAR WEAPONS

The history of North Korea

China considered Korea as part of its territory until 1894 when Japan invaded. The Japanese defeat in World War II was expected to lead to a united and independent Korea, but instead ended in a division of the country along the 38th latitude. The Soviet Union established a state according to its model in the north, the Democratic People's Republic of Korea (North Korea), while the US supported development in the south of the Republic of Korea. The separation set the foundation for a protracted conflict between the two parts for more than 60 years. Peace and reconciliation still appear far away.

In June 1950, North Korea attacked South Korea. The North Korean leader Kim Il Sung expected the people of the south to join its northern "liberator" and rise in rebellion against its own leaders. The UN Security Council established a UN command under US leadership within the South. While 15 states participated, the largest part of the military force was American. Under the lead of General Douglas MacArthur, South Korean territory was recaptured and the forces continued up north over the border to North Korea to overthrow the communist regime. The Chinese leaders regarded an American occupation of North Korea as a threat against China, and efficient Chinese troops countered the attack. The US troops backed down to South Korea with great losses. Finally, in 1953, a truce was established, re-forming the the 38th latitude as the border between North and South Korea. This war has never been declared finished, and US troops remain on the border.

During this war, US President Truman considered using nuclear weapons on North Korea and even against Chinese bases in Manchuria.¹ Leaders of allied states discouraged the President, partly because a war against China would severely lessen the US capacity to defend Europe from a possible Soviet attack.

The war left North Korea in ruins. Estimates of the number of deaths, either directly or indirectly as a consequence of the battles, vary between 250 000 to 2 million.

Politics and economy

During the first two decades after the war, the North Korean economy developed faster than that of South Korea, due to Soviet support, but later stagnated. Today the North Korean GDP, according to the CIA World Factbook², is only 3,3 percent of the GDP of South Korea. The northern part of the peninsula has never had enough agricultural production to support its people, and is dependent on food imports.

Some attempts have been made to create so called free trade zones, where North Koreans work in factories owned and led by Chinese or South Koreans. North Koreans have also established casinos

in the border regions. But the economic development remains weak and no long-term changes towards a more market-oriented economy can be seen. A constant lack of machinery and spare parts plague farmers of the North, and the lack of energy is a great problem. Existing hydroelectric power stations are unreliable and the high-voltage lines are badly tended. Even in the capital of Pyongyang, apartments are cold during winter, and the city is almost blacked out due to the lack of electricity.³



Photo: a satellite picture shows the absence of light during the night in North Korea in contrast to South Korea. The lack of electricity in North Korea is a great problem.

After the war, Kim Il Sung remained as the dictator of North Korea. He could now not only portray himself as the liberator and creator of his country at the liberation from Japan, but also as the victor over the US. After his death, he has remained the indefinite president of North Korea. The country is run by his son Kim Jong Il, according to the principles laid out by his father under the name *juche*.⁴

North Korea, these days, is a state without political friends and more than any other country. It is isolated from the rest of the world. Political oppression is endemic. There seems to be no political opposition. Access to information is very limited – it is not possible to e.g. read foreign newspapers, watch foreign TV channels or travel outside the country. Modern scientific literature is largely missing. There is no Internet, however a few people can receive e-mail. The isolation reduces the possibilities of North Korea to develop nuclear weapons and missiles.

North Korea has the world's fifth largest military with more than 1,2 million soldiers and another million in the reserves. This is the largest army, per-capita, in the world. One fifth of all men between 17-54 are in the military.⁵ Even if large parts of the military equipment is aged, a possible quick invasion of South Korea is estimated to reach quite far before South Korean and American troops could stop the attack. The South Korean capital of Seoul can be reached by North Korean artillery.

The greatest effect of the investment in the military is the idea that a great threat looms against the country from the south – an idea supported by the North Korean propaganda machinery every time the US and South Korea hold military exercises. The American administration's statements on a

desired regime shift in North Korea increases the suspicions of the North Korean leadership. The presence of US troops close to the demilitarised zone along the border has at times led to increased tensions.

Military power may also be a way to control North Koreans themselves. It should be noted that the international community has only a vague idea about the leadership structure and perception about the rest of the world within North Korea. Both China and South Korea fear disintegration or a sudden upheaval in North Korea. Large masses of refugees would be a great strain on South Korea. In their view, maintaining the status quo is preferable to a revolution.

Nuclear weapons development

After the end of the devastating Korean War in 1953, it appears the North Korean leadership began exploring the possibilities of nuclear weapons production. Building of a smaller 20 MWt uranium based reactor (Megawatt used to measure the thermal effect) started in 1964 in Yongbyon. North Korea has some natural uranium resources. The reactor was used between 1986-1994 and again 2003-2007. Building of two far larger reactors started, but was suspended in 1994 under an agreement between North Korea and the US and has not been resumed.

A reprocessing plant using the so-called Purex-technique exists and has been used to extract plutonium. Different estimates show that North Korea has produced between 6-24 kg plutonium – which may be enough to produce a few nuclear devices. Building a plutonium bomb is technically difficult, while a uranium-based device is relatively easy to produce.

In 1991, all US nuclear weapons were withdrawn from South Korea. North and South Korea at that time signed a pact of non-aggression and a common declaration on a nuclear weapons free Korean Peninsula. North Korea was a member of the Nuclear Non-proliferation Treaty (NPT) and signed the Safeguards Agreements of the International Atomic Energy Agency (IAEA) in 1992 that allows for inspections of nuclear facilities.

IAEA inspections countered difficulties when discovering indications that North Korea was preparing for production of nuclear weapons. The country threatened to withdraw from the NPT, and US President Bill Clinton began preparing for military action against North Korea. The former US President travelled to Pyongyang for negotiations. He managed to get Kim Il Sung to promise to suspend plutonium production. The so-called Agreed Framework was signed in 1994. According to the framework, North Korea would suspend plutonium production in exchange for two light water nuclear power reactors from the US – reactors that do not include plutonium production. The company ABB was contracted to build these.⁶ When the two new reactors were ready, the older reactors would be disassembled and the plutonium rods handed over. 16 IAEA inspectors stayed in Yongbyon to monitor the implementation of the agreement. Further, diplomatic relations between the US and North Korea would be strengthened and oil delivered to the impoverished republic.

The Agreed Framework led to the closure of the plutonium-producing reactor. However, some US sources claimed that North Korea had enriched weapons grade uranium.⁷ No convincing evidence was presented. The father of the Pakistani nuclear programme and the brain behind an international nuclear black market, A Q Khan, is said to have visited North Korea at several occasions. Most likely, he sold uranium enrichment centrifuges to North Korea. Still, the technological capacity of North Korea is so low that it is unlikely that any larger amounts of highly enriched uranium has been produced.

Suspensions against North Korea grew from within the US grew once again over time. President George W. Bush counted North Korea as part of the “axis of evil”. Oil deliveries were discontinued, the light water reactors were never built and diplomatic relations deteriorated. In 2003, North Korea announced its withdrawal from the NPT and IAEA inspectors were driven out. The reactor in Yongbyon recommenced in 2003, and in 2005 North Korea announced its production of nuclear weapons.

In 2006, the country detonated a nuclear device, amounting to a blast effect probably not larger than 1 kiloton according to CTBTO measurements. Probably North Korea aimed at a larger blast effect. The low yield indicates the test was a partial failure.⁸ No further attempts of nuclear testing have been detected, and it is uncertain if North Korea has any more nuclear devices.

The Six Party talks

New Six Party Talks continue regarding North Korea and its nuclear weapon programme, between North Korea, the US, South Korea, China, Japan and Russia. Today (April 2008), production of plutonium has been suspended, but existing assets of plutonium and possible nuclear weapons have not been satisfactory reported upon. Some delivery of oil has taken place.

More far-reaching agreements to create peace in Korea are not discussed. North Korea claims American nuclear weapons are still in South Korea – a statement heard several times by the International Physicians for the Prevention of Nuclear War (IPPNW) delegation to Pyongyang in 2005. North Korea declares that defence agreements giving the US the right to intervene if South Korea is considered under threat are invalid. Further, a non-aggression agreement with the US and finally a peace accord is also desired, but not yet discussed.

North Korea is considered to have gained remarkably from its nuclear blackmailing tactics. Thus, the country is unlikely to willingly give up its nuclear option in haste. There is, however, no reason for the US and South Korea to worry about a nuclear North Korea in the short term. It will take many years for North Korea to produce a notable amount of nuclear weapons. The conventional forces of North Korea poses a larger threat. The country has an active programme for the development of short-range missiles, sold to Iran and some other states. The Nodong missile has a range wide enough to reach Okinawa and Alaska. Missiles with a wider range have been tested but with unreliable results.

1 Cumings, Bruce (1997). *Korea's Place in the Sun: A History*. WW Norton & Company, pp 289-92.

2 CIA World Factbook. <https://www.cia.gov/library/publications/the-world-factbook/geos/kn.html>

3 Lintner, Bertil: *Great Leader, Dear Leader: Demystifying North Korea under the Kim clan*. 2004. Silkwork books, Bangkok

4 Lee, Grace: The political philosophy of Juche. *Stanford Journal of East Asian Affairs*, vol 3:1, 2003.

5 Army personnel (per capita) by country. *NationMaster* (2008).

6 <http://www.abb.com/cawp/seitp202/C1256C290031524B4125686C00433604.asp>

7 Hersh Seymour: *The Cold Test: What the administration knew about Pakistan and the North Korean Nuclear Program*. *The New Yorker* Jan 27, 2002. http://www.newyorker.com/fact/content/?030127fa_fact

8 v.Hippel,Frans,Garwin,R..A.: A technical analysis of North Korea's Oct. 89 test. *Arms ControlToday* nov. 2006. http://www.armscontrol.org/act/2006_11/NKTestAnalysis.asp