



NEWS / ASIA PACIFIC

North Korea's nuclear weapons: What we know

31 Jan 2018

Here is what we know about North Korea's nuclear capabilities and motivation.

Who is in range of its missiles?

"The entire mainland of the US is within the range of our nuclear weapons and the nuclear button is always on the desk of my office," said North Korean leader Kim Jong-un during his 2018 New Year's address.

The Hwasong-15, North Korea's furthest-reaching intercontinental ballistic missile (ICBM), could theoretically travel about 13,000km. This potentially puts the whole world within range, except for:

- Latin America
- Antarctica

This theoretical range was estimated based on the Hwasong-15 performance in a test-launch on November 29, when it flew for about 53 minutes before landing in the sea.

Earlier in July, North Korea's test-launched the Hwasong-14, with a theoretical range of 10,400km. The missile flew for about 45 minutes before landing in the Sea of Japan.

On September 15, North Korea's also tested its mid-range Hwasong-12 missile which travelled about 3,700km over Japan, and has a range potential of 4,000km, which includes Guam, a US territory in the Pacific Ocean.

Can the missiles be shot down?

The US, South Korea and Japan are equipped with anti-missile systems that could potentially intercept and destroy ballistic missiles fired from North Korea, although missile intercept failures are common.

The US' anti-missile system was declared ready in 2004, but since then many intercept tests have failed.

South Korea has six Terminal High-Altitude Area Defence (THAAD) batteries deployed in Seongju, south of Seoul, and Japan is also equipped with the Patriot and the Aegis anti-ballistic missile systems.

Can it launch a nuclear attack?

North Korea claims that it can mount miniaturised nuclear warheads on its missiles, but these claims have not been independently verified.

To launch a nuclear attack, North Korea would need to produce nuclear devices small enough to fit on its missiles - this is not known to have been successfully developed and tested.

In January 2018, CIA Director Mike Pompeo predicted that North Korea will be capable of striking the US with nukes within "a handful of months".

In March 2016, North Korea's KCNA news agency released a photo of [Kim Jong-un](#) in front of a small, ball-like object which it said was a miniaturised nuclear warhead.

In September 2017, [KCNA released a photo](#) of the North Korean leader inspecting what it said was a hydrogen bomb that can be loaded on an ICBM.

How many nukes does it have?

While North Korea asserts it will keep building up its nuclear arsenal in "quality and quantity", US officials estimate it has 60 nuclear weapons, whereas independent experts estimate it has enough uranium to produce six new nuclear bombs a year.

In September 2016, Siegfried Hecker of Johns Hopkins University in Washington, DC, estimated that North Korea produced enough highly enriched uranium to make six additional nuclear bombs a year. Hecker had toured North Korea's main Yongbyon nuclear facility in 2010.

Experts and governments estimate plutonium production levels from tell-tale signs of reactor operation in satellite imagery.

Does it have the H-bomb?

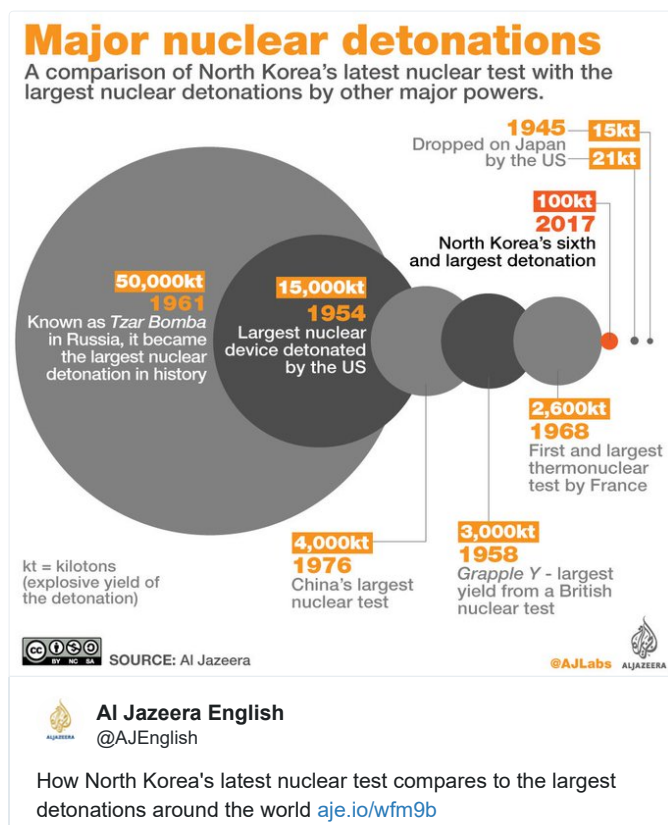
In September 2017, North Korea carried out its sixth nuclear test, this time detonating what it claimed was a hydrogen bomb (also known as an H-bomb).

The yield of the nuclear blast was estimated at about 100 kilotons, and was first detected as an earthquake of 6.3 magnitude with a depth of 23km.

The tremor was also felt in China, 400km from the test site.

An H-bomb can be 1,000 times more powerful than the atomic bomb the US dropped on [Hiroshima](#) in World War II.

In January 2016, North Korea claimed to have detonated its first hydrogen bomb, but nuclear scientists examining the impact of the test questioned if the test was really that of an H-bomb.



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How did it get nuclear weapons?

North Korea seems to be pursuing the development of nuclear weapons capability on its own.

Its nuclear programme started in the Soviet era with the construction of a nuclear reactor in Yongbyon in 1965, while its first successful nuclear test was carried in 2006.

North Korea carried its sixth nuclear test in 2017 at the Punggye-ri site.

The experiment had been expected from April. Satellite images had shown workers pumping water out of a tunnel believed to have been being prepared for a forthcoming nuclear test, US monitors had said.

North Korea has a rich source of fissile material, both plutonium from its Yongbyon nuclear reactor and highly enriched uranium from other sites, US-based researchers claim.

Although the Yongbyon nuclear facility was built with help from Soviet engineers, the Soviet Union and China have denied supplying North Korea with nuclear weapons or helping it to build them.

China fought alongside the North Koreans in the 1953 Korean War, but in the interest of political stability in the region, claims to strongly oppose North Korea's nuclear weapons programme.

Pakistan and India have both been linked to North Korea's nuclear programme.

In 2004, Pakistan's lead nuclear scientist, Abdul Qadeer Khan, was put under house arrest for transferring nuclear technology, including centrifuges, to North Korea and other countries.

A 2016 UN report accused an Indian technology institute of violating sanctions on North Korea by providing specialised training on "space instrumentation" to a North Korean student, later involved in the Unha-3 rocket launch in 2012.

Why does it test nuclear weapons?

Analysis of the North Korean government's statements suggest that the leadership in Pyongyang sees in nuclear weapons the following benefits:

1. Guaranteeing security of the state
2. Economic development and prosperity
3. Gaining respect and prestige in the international arena

In April, North Korea's vice foreign minister said: "We've got a powerful nuclear deterrent already in our hands, and we certainly will not keep our arms crossed in the face of a US pre-emptive strike."

Pyongyang suspects that the annual joint drills between the US and South Korea are a rehearsal for an invasion of North Korea.

North Korea's deputy ambassador to the United Nations, Choe Myong-nam, referred to those drills to justify his country's nuclear pursuits: "It is because of these hostile activities on the part of the United States and South Korea that we strengthen our national defence capability, as well as pre-emptive strike capabilities with nuclear forces as a centrepiece."

North Korea also accused the CIA of plotting to assassinate its leader Kim Jong-un, while CIA Director Mike Pompeo announced a dedicated Mission Centre for the "serious threats ... emanating from North Korea".

Has North Korea declared war?

North Korea has not gone to war with any country since 1950, but has threatened to launch a "great war of justice for [Korean] national reunification" and to attack the US mainland in "full-out war... under the situation where the US hurts the DPRK [Democratic People's Republic of Korea] by force of arms."

Following UN sanctions which North Korea considered a "violent violation of our sovereignty", Pyongyang has also threatened to attack Guam.

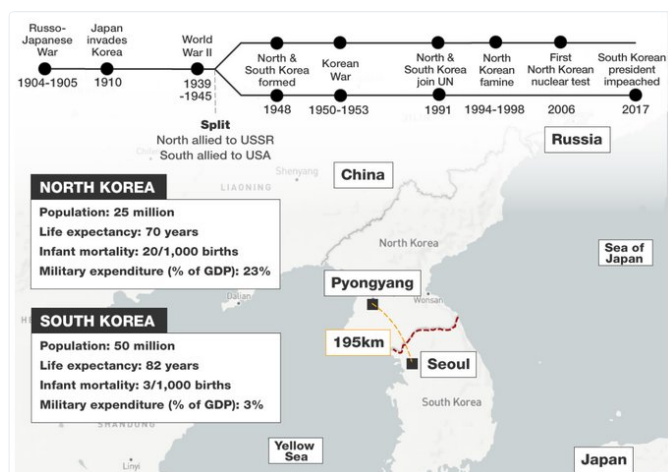
The Korean Peninsula was divided after World War II in 1945. Nearly five years later, North Korea invaded South Korea, starting the three-year Korean War. The war ended in 1953 with an armistice (not a peace treaty) which means that North Korea is still technically at war with South Korea.

The US has 28,500 troops stationed in South Korea, while the Korean Peninsula has been divided by a 4km-wide demilitarised zone stretching 250km along the border.

This year, several shows of force and provocative threats have been exchanged between the US and North Korea since the joint military drills with South Korea began in March.

On August 29, four South Korean fighter jets bombed targets in North Korea after its latest ballistic missile test-launch while in September, it simulated an attack on North's latest nuclear test site.

North Korea has defiantly carried out missile test-launches despite regional and US condemnation and continues to develop its nuclear weapons capability.



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Here's a brief history of how North and South Korea got to where they are today: aje.io/gwwn

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