

How North Korea can retaliate against military strike

Japanese Prime Minister Shinzo Abe this week raised the prospect of North Korea firing a missile tipped with sarin nerve gas. His warning in Parliament comes as the region is on edge over a possible US pre-emptive strike on North Korea, and the damaging fallout. Japan correspondent Walter Sim looks at the weapons North Korea has at its disposal and how it could cause massive casualties in South Korea, Japan and the US forces in both countries.

Direct attacks

In 2010, a North Korean submarine allegedly torpedoed a South Korean warship, killing 46 sailors. In 2015, the North allegedly snuck soldiers across the demilitarised zone (DMZ) who planted land mines that maimed two South Korean soldiers on border patrol. North Korea has denied it was behind the attacks. Its 1.2 million-strong military is one of the largest in the world, almost twice the size of the South Korean army.

Artillery

More than 10,000 artillery units are trained on the South Korean capital, home to 10 million people. Experts believe the weapons have been blunted by a lack of maintenance and old age, but can still cause widespread casualties.

Ballistic missiles

North Korea has more than 1,000 missiles of various ranges. While Pyongyang is close to an intercontinental ballistic missile test, experts say it will take some years to perfect the weapon.

It has acquired means that make its launches harder to detect, using off-road mobile launchpads and solid fuel technology.

Last August, a submarine-launched ballistic missile (SLBM) flew a record 500km towards Japan. SLBMs can be launched behind radar and evade defence systems.

Last month, it fired four ballistic missiles targeted at US bases in Japan. Three fell into Japan's exclusive economic zone after flying some 1,000km.

Experts say such swarm attack tactics will overwhelm defence systems.

In 1998, a two-stage ballistic rocket flew over Japan's mainland to land in the Pacific Ocean.

Chemical and biological warfare

North Korea is said to own stockpiles of chemical and biological weapons that it tests on its prisoners and disabled people. Such weapons include lethal nerve agents like sarin, phosgene, and VX, as well as anthrax, smallpox and haemorrhagic fever viruses.

Nuclear bombs

Satellite images show that the Punggye-ri nuclear site is "primed and ready" for a sixth nuclear test which could be 14 times more powerful than the last one in September 2016.

There are fears North Korea may soon be capable of miniaturising a nuclear warhead small enough to be attached to a ballistic missile.

Dirty bombs

Dirty bombs are packed with radioactive material but are detonated by explosive means such as TNT and dynamite. The North is said to be developing a "dirty bomb" drone called the Banghyun-5 that can cast lethal doses over a wide area.

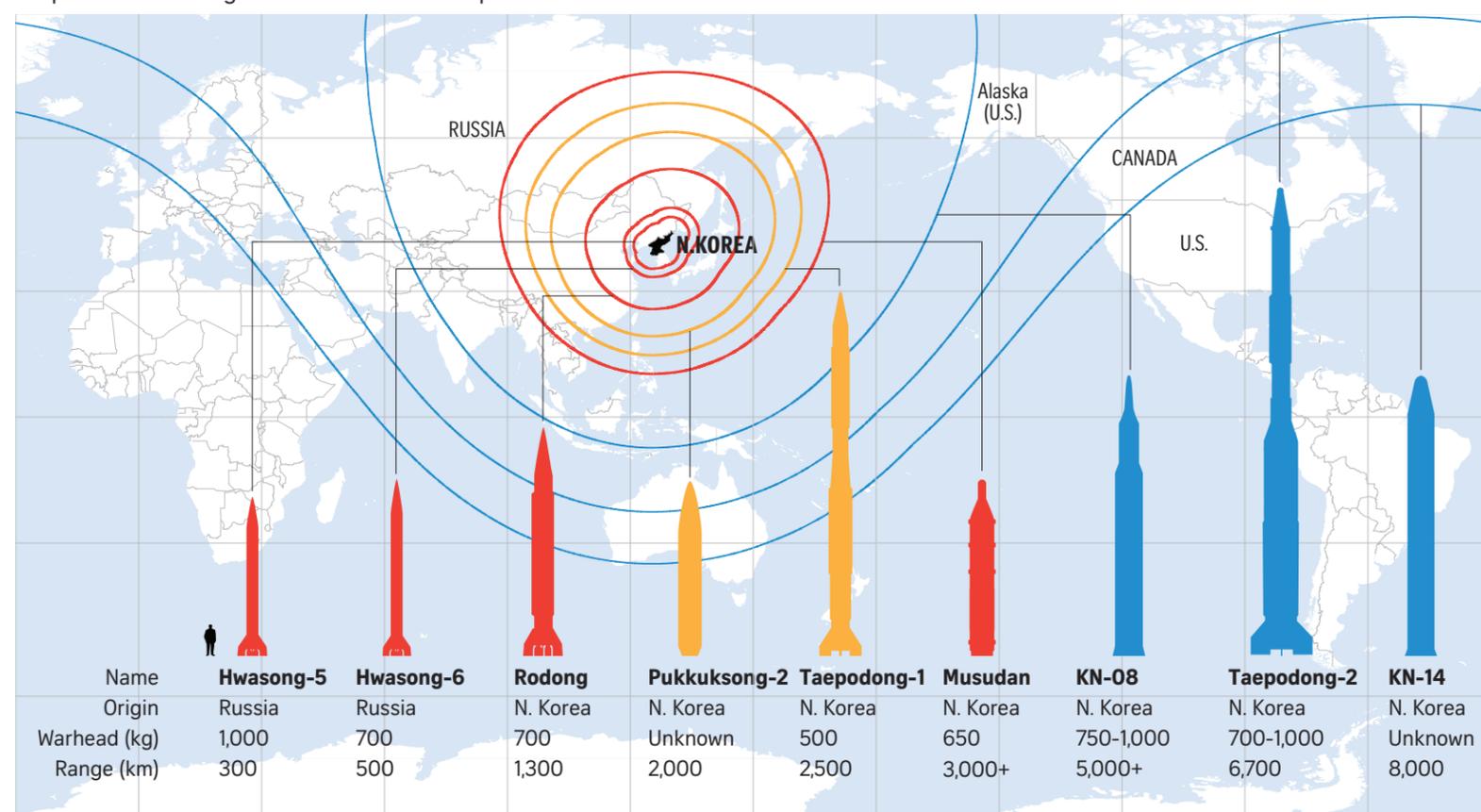
It has dug an extensive network of underground tunnels that purportedly runs under the DMZ into South Korea. Experts say agents are capable of sneaking into the South and planting the bombs at high-traffic areas.



North Korean leader Kim Jong Un with the Korean People's Army tank crew in an undated photo. PHOTO: REUTERS

North Korean missile arsenal

■ Operational ■ Flight tested ■ In development or untested



Ranges of KN-08 and KN-14 show minimum estimates from the Centre for Strategic and International Studies; Taepodong-2 shows designed range but could travel farther with lightened payload.

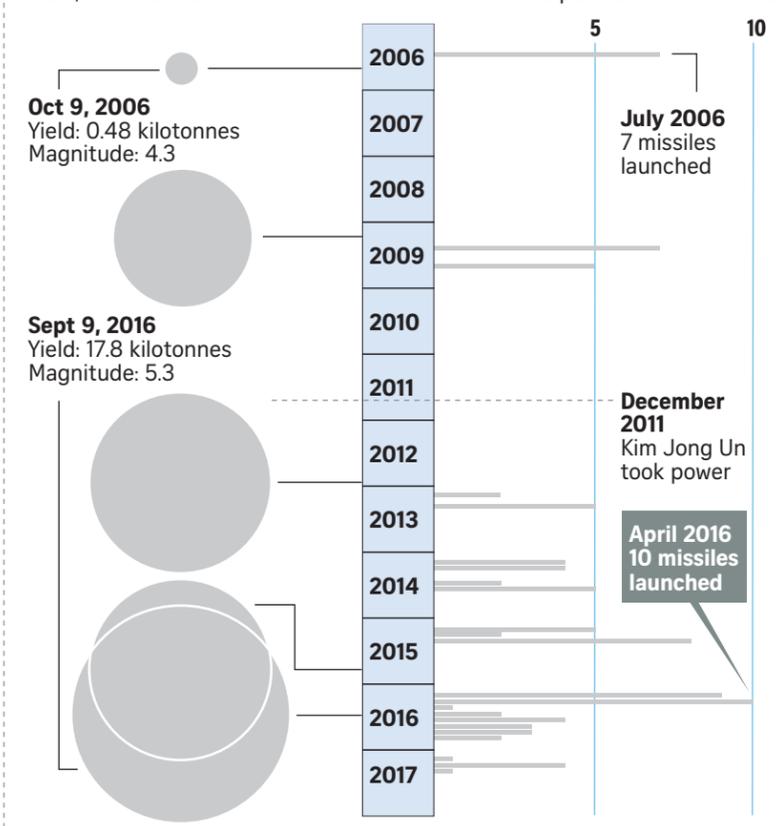
Frequency of missile and nuclear tests

Nuclear tests
Yield, in kilotonnes

Oct 9, 2006
Yield: 0.48 kilotonnes
Magnitude: 4.3

Sept 9, 2016
Yield: 17.8 kilotonnes
Magnitude: 5.3

Ballistic missile launches
Launches per month since 2003



Source: REUTERS STRAITS TIMES GRAPHICS