



North Korea's Nuclear Program at a Glance

June 11, 2018

Nuclear arsenal

North Korea is estimated to have between 10 and 35 nuclear warheads.¹ Based on assessments of the nation's fissile material stockpiles and a modest production rate, some estimate that North Korea has as many as 50–60 weapons. These nuclear weapons have a destructive power of 10 to 25 kilotons, which is roughly equivalent to the power of the atomic bombs the United States used against Hiroshima and Nagasaki.² North Korea also claims to have created a hydrogen bomb and even demonstrated that it possesses a bomb with destructive power of 200 to 250 kilotons—equivalent to that of a hydrogen bomb.³

Nuclear program

The Yongbyon Nuclear Scientific Research Center—the heart of North Korea's nuclear program—is where North Korea produces plutonium and enriches uranium.⁴ There is speculation that a second, secret uranium enrichment facility exists as well.⁵ North Korea is estimated to have 20–40 kilograms of plutonium and 175–645 kilograms of highly enriched uranium.⁶ Experts believe that North Korea possesses enough material for between 30–60* weapons.⁷ Experts also estimate that North Korea could produce between three and seven nuclear weapons annually.⁸

Ballistic missile program

North Korea has a highly developed ballistic missile program; its operational ballistic missiles are capable of reaching a range of 120 to 1,500 kilometers.⁹ This puts U.S. allies such as Japan and South Korea—as well as the U.S. territory of Guam—well within range of an attack.¹⁰ North Korea is also thought to have 200 Nodong missiles, which can hit Japan; 600 Scud missiles, which can reach South Korea and parts of Japan; and less than 50 Taepodong and Musudan missiles, which can hit Guam and potentially the

United States' West Coast.¹¹ While North Korea has yet to prove that its intercontinental ballistic missiles can survive atmospheric re-entry and be fit with a nuclear warhead, experts believe the missiles are capable of hitting the entire United States.¹²

Chemical and biological weapons programs

North Korea has chemical and biological weapons programs, but there is little public information about the programs' scope or capacity.¹³ The chemical weapons program is believed to have up to 5,000 tons of chemical weapons agents—including sarin and VX—as well as the ability to weaponize them.¹⁴ Experts also believe North Korea has the ability to manufacture biological agents such as anthrax and smallpox, but it remains unclear if they can be weaponized.¹⁵

***Correction, September 11, 2018:** This fact sheet has been updated to reflect the accurate number of weapons experts believe North Korea could create.

Endnotes

- 1 Hans M. Kristensen and Robert S. Norris, "North Korean nuclear capabilities, 2018," *Bulletin of the Atomic Scientists* 74 (1) (2018): 41–51, available at <https://www.tandfonline.com/doi/full/10.1080/00963402.2017.1413062>; David Albright, "North Korea's Nuclear Capabilities: A Fresh Look – with Power Point Slides" (Washington: Institute for Science and International Security, 2017), available at <http://isis-online.org/isis-reports/detail/north-koreas-nuclear-capabilities-a-fresh-look-power-point-slides/>.
- 2 Siegfried S. Hecker, "What We Really Know About North Korea's Nuclear Weapons," *Foreign Affairs*, December 4, 2017, available at <https://www.foreignaffairs.com/articles/north-korea/2017-12-04/what-we-really-know-about-north-koreas-nuclear-weapons>.
- 3 Elise Hu, "North Korea Claims Successful Hydrogen Bomb Test," NPR, September 3, 2017, available at <https://www.npr.org/sections/thetwo-way/2017/09/03/523913820/north-korea-possibly-conducts-sixth-nuclear-test-south-korea-says>; Hecker, "What We Really Know About North Korea's Nuclear Weapons."
- 4 Nuclear Threat Initiative, "Yongbyon Nuclear Research Center," available at <http://www.nti.org/learn/facilities/777/> (last accessed June 2018).
- 5 Daniel Wertz, Matthew McGrath, and Scott LaFroy, "North Korea's Nuclear Weapons Program" (Washington: The National Committee on North Korea, 2018), available at https://www.ncnk.org/resources/publications/DPRK-Nuclear-Weapons-Issue-Brief.pdf#footnote6_hw74knf.
- 6 Hecker, "What We Really Know About North Korea's Nuclear Weapons"; Albright, "North Korea's Nuclear Capabilities."
- 7 Kristensen and Norris, "North Korean nuclear capabilities, 2018."
- 8 Hecker, "What We Really Know About North Korea's Nuclear Weapons"; Albright, "North Korea's Nuclear Capabilities."
- 9 Center for Strategic and International Studies Missile Defense Project, "Missiles of North Korea," available at <https://missilethreat.csis.org/country/dprk/> (last accessed June 2018).
- 10 Troy Griggs and Karen Yourish, "What Can North Korea Reach With Its Missiles?" *The New York Times*, August 10, 2017, available at <https://www.nytimes.com/interactive/2017/08/10/world/asia/what-can-north-korea-reach-with-its-missiles.html>.
- 11 Nuclear Threat Initiative, "North Korea: Missile," available at <http://www.nti.org/learn/countries/north-korea/delivery-systems/> (last accessed June 2018); Center for Strategic and International Studies Missile Defense Project, "Missiles of North Korea"; Center for Strategic and International Studies Missile Defense Project, "North Korea's Ballistic Missiles," available at https://missilethreat.csis.org/wp-content/uploads/2017/12/North-Korean-Missiles_update_12.17_reduced.jpg (last accessed June 2018).
- 12 Griggs and Yourish, "What Can North Korea Reach With Its Missiles?"
- 13 Nuclear Threat Initiative, "North Korea: Chemical," available at <http://www.nti.org/learn/countries/north-korea/chemical/> (last accessed June 2018); Hyun-Kyung Kim, Elizabeth Phillipp, and Hattie Chung, "North Korea's Biological Weapons Program" (Cambridge, MA: Belfer Center for Science and International Studies, 2017), available at <https://www.belfercenter.org/sites/default/files/2017-10/NK%20Bioweapons%20final.pdf>.
- 14 Nuclear Threat Initiative, "North Korea: Chemical."
- 15 Nuclear Threat Initiative, "North Korea: Biological," available at <http://www.nti.org/learn/countries/north-korea/biological/> (last accessed June 2018).