

# North Korea

Bruce Klingner

North Korea is a perennial problem in Asia because of the regime's consistently provocative behavior and enhanced missile, nuclear, and cyber capabilities, all of which pose a threat to the United States and its allies. These actions and capabilities, though not on the same existential scale as the threat posed by China or Russia, threaten to undermine not only regional stability and security, but the American homeland itself.

Pyongyang now has a spectrum of missile systems that threaten both the continental United States and U.S. forces and allies in Asia with nuclear weapons. On assuming power in 2011, Kim Jong-un accelerated nuclear and missile testing and oversaw an expansive diversification of North Korea's arsenal. He directed the North Korean military to develop a new strategy that would enable North Korea to use "asymmetric capabilities including nuclear weapons and missiles" to "occupy the entire South Korean territory within seven days."<sup>1</sup> New weapons overcame the shortcomings of their predecessors and now pose a far greater threat to allied forces in spite of advancements in missile defense systems.

## Threats to the Homeland

In 2017, North Korea conducted three successful launches of the Hwasong-14 and Hwasong-15 ICBMs, demonstrating the ability to target the entire continental United States with nuclear weapons. In January 2021, at the Eighth Congress of the Workers Party of Korea (WPK), Kim Jong-un announced an ambitious five-year plan to develop multiple-warhead and solid-fueled ICBMs, hypersonic glide warheads, tactical nuclear weapons, nuclear-powered submarines, military reconnaissance satellites, and a long-range nuclear-powered submarine capable of launching nuclear strategic

weapons while under water.<sup>2</sup> In November 2022, North Korea conducted the first successful test of the massive Hwasong-17, the world's largest road-mobile ICBM, after two previous failed launches earlier in the year. The Hwasong-17 is assessed to carry three or four nuclear warheads.

In April 2023, the regime successfully launched the three-stage Hwasong-18 solid-fuel ICBM, which also will likely have multiple warheads. North Korea first revealed the Hwasong-18, along with 12 liquid-fueled Hwasong-17 ICBMs, at its February 2023 military parade. Pyongyang tested the first stage of the Hwasong-18 in December 2022 and announced that the missile had a thrust of 140 tons of force,<sup>3</sup> which is greater than any U.S., Russian, or Chinese ICBM.<sup>4</sup> In general, the amount of thrust produced by an engine implies a greater ability to lift a weightier payload or to achieve a longer range. In either case, the extraordinary thrust of the Hwasong-18 implies a payload or thrust advantage over other national missile inventories.

The regime's ability to produce multiple-warhead ICBMs conceivably could overwhelm the limited missile defenses protecting the American homeland. Currently, the U.S. is defended by only 44 Ground-Based Interceptors in Alaska and California and plans to add an additional 20 by the late 2020s.

North Korea has conducted six nuclear tests, including a test in 2017 of a powerful hydrogen bomb with an explosive yield approximately 10 times the yields of the Hiroshima and Nagasaki atomic bombs of World War II. In 2017, the U.S. Defense Intelligence Agency (DIA) reportedly "estimated [that North Korea had] a stockpile of up to 60 nuclear warheads."<sup>5</sup> In addition, "[s]ome experts have estimated that North Korea could produce enough

nuclear material for an additional seven warheads per year,”<sup>6</sup> and others have estimated that the number could be as high as 12 per year.<sup>7</sup>

In recent years, North Korea has expanded and refined manufacturing facilities for fissile material, nuclear weapons, missiles, mobile missile launchers, and reentry vehicles. By 2027, according to a RAND Corporation analysis, “North Korea could have 200 nuclear weapons and several dozen intercontinental ballistic missiles (ICBMs) and hundreds of theater missiles for delivering the nuclear weapons.”<sup>8</sup>

In January 2023, Kim Jong-un vowed to “exponentially increase” nuclear weapon production to counter alleged threats from the U.S. and South Korea.<sup>9</sup> In March 2023, Kim was observed with a display of 10 Hwasan-31 tactical nuclear weapons that are compatible with eight different types of delivery systems.<sup>10</sup>

In September 2022, Pyongyang passed a new law that lowered the threshold for its use of nuclear weapons. The regime declared that it would use nuclear weapons “in response to, or *perceived preparations* for, a [U.S. or South Korean] nuclear or *non-nuclear* attack on regime leadership, nuclear command structure, or important strategic targets,”<sup>11</sup> thereby adding to the risk that North Korea might use such weapons in response to U.S.–South Korea defense activities.

Pyongyang has created a new generation of advanced mobile missiles that are more accurate, survivable, and capable of evading allied missile defenses. Its evolving nuclear and missile forces increasingly give the regime the ability to conduct surprise preemptive first-strike, retaliatory second-strike, and battlefield counterforce attacks.

The collapse of the February 2019 U.S.–North Korean summit in Hanoi led Pyongyang to initiate extensive missile testing from 2019–2023.

- In 2019, North Korea conducted 26 missile launches, its highest-ever number of violations of U.N. resolutions in a single year. The regime also unveiled five new short-range missile systems threatening South Korea, including a 400 mm multiple rocket launcher (MRL); the KN-23 maneuverable missile, which is similar to the Russian Iskander; the KN-24 missile, which is similar to the U.S. Army Tactical Missile System (ATACMS); the KN-25 600

mm MRL; and the Pukguksong-3 SLBM. The enhanced accuracy of these systems enables North Korea to accomplish counterforce operations with fewer missiles.

- In 2021, Pyongyang conducted more missile launches, revealing an additional five new missile systems, including a long-range cruise missile, an SLBM, an improved short-range ballistic missile, the first North Korean missiles launched from a train, and the Hwasong-8 hypersonic glide missile.<sup>12</sup>
- In 2022, North Korea launched at least 69 ballistic missiles and eight cruise missiles. It conducted salvo launches of multiple missiles simulating nuclear attacks on South Korean ports, airfields, and hardened military command targets.<sup>13</sup> The regime has launched missiles from road-mobile transporters, railcars, submarines, and underwater from a lake.
- In January 2022, Pyongyang test-launched its second hypersonic missile capable of evasive flight maneuvers. North Korean–released photos show a warhead design that is different from the Hwasong-8 tested the previous year. Both hypersonic missiles have detachable, maneuverable warheads that can fly at lower altitudes than standard ballistic missiles, which follow a more predictable parabolic trajectory. These characteristics make radar tracking more difficult and enable the weapons to evade allied missile defense interceptors.<sup>14</sup>

The KN-18 and KN-21 Scud variants also have maneuverable reentry vehicles, and the KN-23’s flight profile showed evasive characteristics instead of a typical ballistic parabola. The KN-23 was flown at depressed trajectories, potentially between the upper reach of Patriot missiles and below the minimum intercept altitude for Terminal High Altitude Area Defense (THAAD), with a final pull-up maneuver that provides a steep terminal descent.<sup>15</sup> The KN-23 could also be used in a first strike against leadership, hardened command and control, or high-value military targets.

North Korea has successfully tested the Pukguksong-1 (KN-11); Pukguksong-3 (KN-26); and an unidentified SLBM, which could target South Korea

and Japan, potentially with a nuclear warhead. North Korea revealed the Pukguksong-4, Pukguksong-5, and Pukguksong-6 SLBM missiles in its October 2020, January 2021, and April 2022 parades.<sup>16</sup>

In 2023, the U.S. Intelligence Community assessed that “Kim Jong-un is continuing efforts to enhance North Korea’s nuclear and conventional capabilities targeting the United States and its allies which will enable periodic aggressive actions to try to reshape the regional security environment in his favor.”<sup>17</sup>

Since September 2022, North Korea has timed its missile launches and military demonstrations to counter U.S.–South Korea exercises probably to attempt to coerce the United States and South Korea to change their behavior and counteract South Korean President Yoon’s hardline policies toward the North. Pyongyang probably wants the alliance to decrease the pace and scale of the exercises with the ultimate goal of undermining the strength of the alliance.<sup>18</sup>

Pyongyang is seeking to gain tacit acceptance of its violations of United Nations resolutions, and thereby prevent additional punitive measures, through routinization of its missile launches and reliance on Chinese and Russian obstructionism at the U.N. Security Council.<sup>19</sup> By depicting its military provocations as justified responses to resumed U.S.–South Korean military drills, Pyongyang seeks to coerce the allies into curtailing future exercises. Pyongyang has long vowed never to abandon its nuclear arsenal, which it describes as both a “trusted shield” and “treasured sword” for deterrence and preemptive attack against the United States and its allies.<sup>20</sup>

### **Threat of Regional War**

In addition to its nuclear and missile forces, North Korea has approximately a million people in its military and several million more in its reserves. Pyongyang has forward-deployed 70 percent of its ground forces, 60 percent of its naval forces, and 40 percent of its naval forces south of the Pyongyang–Wonsan line. South Korea assesses that “North Korea maintains a readiness posture capable of carrying out a surprise attack [on the South] at any given time.”<sup>21</sup>

North Korea has an extensive quantity of conventional forces, but the majority of their weapons were manufactured from the 1950s to the 1970s and are of low quality. The ground forces have approximately 3,500 tanks, 2,500 armored personnel carriers, 8,600 towed and self-propelled artillery, and 5,500 multiple rocket launchers.<sup>22</sup> North Korea’s tank inventory consists predominantly of 1950s-era and 1960s-era T-55 and T-62 tanks. It also has indigenously produced updated tank variants, but they remain outdated compared to South Korean and U.S. tanks, as do North Korea’s light armored vehicles, artillery, combat helicopters, and other ground force weapons.

North Korea has unveiled some new ground force weapons, including tanks and self-propelled artillery, at military parades in recent years, but it is not likely that significant numbers of these weapons have actually been deployed. Pyongyang has compensated for the large number of aging systems by prioritizing the deployment of strong asymmetric capabilities that include special operations forces, long-range artillery, and a broad array of newly developed missiles, several of which are assessed to be nuclear-capable.

North Korea’s naval and air forces are similarly obsolete and underequipped compared with South Korea’s. The North Korean navy has a limited number of aged surface vessels that have fared badly against South Korean naval forces in skirmishes along the maritime Northern Limit Line in the Yellow Sea. The navy has only two frigates and several hundred corvettes and other small coastal combatants.

Pyongyang has 71 submarines, but only one is a *Gorae*-class that is capable of firing ballistic missiles. The remaining force is composed of *Romeo*-class and *Yugo*-class submarines, both 1960s-vintage, and *Sango-O*-class submarines, which were fielded in the early 1990s.

The North Korean air force consists of 545 older combat aircraft that are no match for modern South Korean and U.S. aircraft. North Korean fighters include vintage Mig-15 *Fagot*, Mig-17 *Fresco*, Mig-19 *Farmer*, Mig-21 *Fishbed*, Mig-23 *Flogger*, and Mig-29 *Foxbat* aircraft.<sup>23</sup> Even the relatively small number of third-generation fighter airplanes are of 1980s design.

In September 2018, the two Koreas signed a Comprehensive Military Agreement to ease

military tension and build confidence. The agreement sought to reduce the danger that inadvertent tactical military clashes along the Demilitarized Zone (DMZ) might escalate to larger strategic conflicts. However, static defensive positions like fixed concrete bunkers and minefields are not threatening and have never been the source of military clashes on the peninsula. The greatest danger arises from the forward, offensively oriented disposition of North Korea's forces and the regime's history of making threats and initiating hostilities. The confidence-building measures implemented to date have not reduced North Korea's tactical or strategic conventional military threat to South Korea and do not represent progress in denuclearization.

Due to a predicted shortfall in 18-year-old conscripts, South Korea initiated a comprehensive defense reform strategy to transform its military into a smaller but more capable force to deal with the North Korean threat. Overall, South Korea's military manpower will be reduced by approximately 25 percent, from 681,000 to a planned goal of 500,000. The South Korean military currently has a total strength of 555,000: 420,000 in the army, 70,000 in the navy, and 65,000 in the air force.<sup>24</sup> Seoul is compensating for decreasing troop levels by procuring advanced fighter and surveillance aircraft, naval platforms, and ground combat vehicles.

### **Threat to the Commons**

Pyongyang has developed an advanced cyber warfare prowess that is surpassed by that of few other nations. Beginning with rudimentary distributed denial-of-service (DDoS) attacks against South Korea, the regime has managed to create a robust and global array of disruptive military, financial, and espionage cyber capabilities.

North Korean leader Kim Jong-un has declared that cyber warfare is a "magic weapon" and an "all-purpose sword that guarantees the North Korean People's Armed Forces ruthless striking capability, along with nuclear weapons and missiles."<sup>25</sup> In the run-up to a crisis or as an alternative to kinetic strikes, the regime could paralyze critical infrastructure systems such as communications, dams, electrical grids, hospitals, nuclear power plants, supply chains, and traffic-control systems. North Korean hackers have targeted railroad companies and airlines, including an automated operating system that controls trains' speed.

Pyongyang could also "engage in economic warfare to steal massive amounts of money or undermine the stability of the international financial system or worldwide markets" and "conduct ransomware attacks on banks to gain money or to disable or destroy computer networks as well as flood the SWIFT [financial messaging] system with fraudulent transactions."<sup>26</sup> Pyongyang has absconded with billions of dollars in money and cyber currency to evade international sanctions and increase its ability to finance its nuclear and missile programs. According to the U.S. Department of Justice, North Korean hacking of virtual currency exchanges and related money laundering "poses a grave threat to the security and integrity of the global financial system."<sup>27</sup>

To the extent that the cyber domain is a "global commons" used by all people and countries, North Korea's investment in and exploitation of cyber warfare capabilities presents a very real threat.

### **Conclusion**

North Korea's nuclear and missile forces represent its greatest military threat. Its naval and air forces would not be expected to last long in a conflict with South Korea and the United States, but they would have to be accounted for in any defense by South Korea. Pyongyang's ground forces are largely equipped with older weapons, but they also are extensive and forward-deployed. Thousands of artillery systems deployed near the demilitarized zone could inflict devastating damage on South Korea, especially Seoul, before allied forces could attrite them.

Greater North Korean nuclear capabilities could undermine the effectiveness of existing allied military plans and exacerbate growing allied concerns about Washington's willingness to risk nuclear attack to defend its allies. A more survivable North Korean nuclear force could lead North Korea to perceive that it has immunity from any international response. Pyongyang could feel emboldened to act even more belligerently and use nuclear threats to coerce Seoul into accepting regime demands. The regime could use threats of nuclear attack to force Tokyo to deny U.S. forces access to Japanese bases, ports, and airfields during a Korean conflict. Pyongyang might also assume that conditions for military action had become favorable if it believed the U.S. extended deterrence guarantee had been undermined.

The increasing rate and diversity of North Korea’s missile launches shows that Pyongyang is making significant progress toward implementing a more capable and flexible nuclear strategy, including preemptive strikes with strategic, tactical, and battlefield nuclear weapons. During a crisis, the

threshold for use of nuclear weapons could therefore be breached more easily.

This *Index* assesses the overall threat from North Korea, considering the range of contingencies, as “testing” for level of provocative behavior and “gathering” for level of capability.

## Threats: North Korea

	HOSTILE	AGGRESSIVE	TESTING	ASSERTIVE	BENIGN
Behavior			✓		
	FORMIDABLE	GATHERING	CAPABLE	ASPIRATIONAL	MARGINAL
Capability		✓			

## Endnotes

1. Jeong Yong-soo and Ser Myo-ja, "Kim Jong-un Ordered a Plan for a 7-Day Asymmetric War: Officials," *Korea JoongAng Daily*, January 7, 2015, <http://koreajoongangdaily.joins.com/news/article/Article.aspx?aid=2999392> (accessed July 12, 2023).
2. Korean Central News Agency, "Great Programme for Struggle Leading Korean-Style Socialist Construction to Fresh Victory," KCNA Watch, January 9, 2021, <https://kcnawatch.org/newstream/1610502377-14004652/great-programme-for-struggle-leading-korean-style-socialist-construction-to-fresh-victory/> (accessed July 12, 2023).
3. Korean Central News Agency, "Respected Comrade Kim Jong Un Guides Important Test of Strategic Significance," December 16, 2022, <http://kcnawatch.org/en/article/q/5423e068147b92829b052588227b402d.kcmsf> (accessed July 12, 2023).
4. Table 1, "Comparison Between a Potential Solid-Propellant ICBM by the DPRK and Some Similar ICBMs of Nuclear-Weapon States," in Tianran Xu, "DPRK Unveils Its Solid-Propellant ICBM Motor," Open Nuclear Network, December 16, 2022, p. 1, <https://opennuclear.org/sites/default/files/2023-01/Xu-DPRK%20Unveils%20Its%20Solid-Propellant%20ICBM%20Motor-16%20Dec%202022%20%281%29.pdf> (accessed July 12, 2023).
5. Mary Beth D. Nikitin, "North Korea's Nuclear Weapons and Missile Programs," Congressional Research Service *In Focus* No. 10472, updated April 14, 2021, p. 1, <https://crsreports.congress.gov/product/pdf/IF/IF10472/20> (accessed July 12, 2023). See also Associated Press, "Estimates of North Korea's Nuclear Weapons Hard to Nail Down," August 18, 2017, <https://apnews.com/53076b0dc7644f94b2751134ald9d76b/Estimates-of-North-Korea-s-nuclear-weapons-hard-to-nail-down> (accessed July 13, 2023), and Jeong Yong-soo, Lee Chul-jae, and Sarah Kim, "North Could Have 60 Nuclear Warheads," *Korea JoongAng Daily*, February 9, 2017, <https://koreajoongangdaily.joins.com/news/article/article.aspx?aid=3029689> (accessed July 12, 2023).
6. Nikitin, "North Korea's Nuclear Weapons and Missile Programs," p. 1.
7. Ankit Panda, "US Intelligence: North Korea May Already Be Annually Accruing Enough Fissile Material for 12 Nuclear Weapons," *The Diplomat*, August 9, 2017, <https://thediplomat.com/2017/08/us-intelligence-north-korea-may-already-be-annually-accruing-enough-fissile-material-for-12-nuclear-weapons/> (accessed July 12, 2023).
8. Bruce W. Bennett, Kang Choi, Myong-hyun Go, Bruce E. Bechtol, Jr., Jiyoung Park, Bruce Klingner, and Du-Hyeogn Cha, *Countering the Risks of North Korean Nuclear Weapons*, RAND Corporation *Perspective*, April 12, 2021, p. ix, <https://www.rand.org/pubs/perspectives/PEA1015-1.html> (accessed July 12, 2023).
9. Colin Zwirko, "Kim Jong Un Vows to 'Exponentially' Increase Nuke Production to Counter US, ROK," NK News, January 1, 2023, <https://www.nknews.org/2023/01/kim-jong-un-vows-to-exponentially-increase-nuke-production-to-counter-us-rok/> (accessed July 12, 2023).
10. Nam Hyun-woo, "Is NK's Recent Nuclear Warhead Display Prelude to Nuclear Test?," *The Korea Times*, updated April 2, 2023, [https://www.koreatimes.co.kr/www/nation/2023/03/103\\_348222.html#:~:text=Cheong%20Seong-chang%2C%20director%20of%20the%20Department%20of%20Reunification,be%20the%20regime%27s%2075th%20anniversary%20of%20its%20founding](https://www.koreatimes.co.kr/www/nation/2023/03/103_348222.html#:~:text=Cheong%20Seong-chang%2C%20director%20of%20the%20Department%20of%20Reunification,be%20the%20regime%27s%2075th%20anniversary%20of%20its%20founding) (accessed July 12, 2023).
11. Bruce Klingner, "The Troubling New Changes to North Korea's Nuclear Doctrine," Heritage Foundation *Backgrounder* No. 3729, October 17, 2022, p. 2, <http://report.heritage.org/bg3729>. Emphasis in original.
12. Bruce Klingner, "Why North Korea Unleashed a Flurry of Missile Tests," *1945*, October 1, 2021, <https://www.19fortyfive.com/2021/10/why-north-korea-unleashed-a-flurry-of-missile-tests> (accessed July 12, 2023).
13. Rodong Sinmun, "Respected Comrade Kim Jong Un Guides Military Drills of KPA Units for Operation of Tactical Nukes," KCNA Watch, October 10, 2022, <https://kcnawatch.org/newstream/1665469213-819475819/respected-comrade-kim-jong-un-guides-military-drills-of-kpa-units-for-operation-of-tactical-nukes/> (accessed July 12, 2023).
14. Reuters, "North Korea Launches Second Hypersonic Missile in Fiery Test," *MalaysiaNow*, January 56, 2022, <https://www.malaysianow.com/out-there-now/2022/01/06/north-korea-launches-second-hypersonic-missile-in-fiery-test> (accessed July 12, 2023), and Tianran Xu, "January 2022: Missile Tests of the DPRK," Open Nuclear Network, January 31, 2022, [https://opennuclear.org/sites/default/files/2022-12/Xu-January%202022-Missile%20Tests%20of%20the%20DPRK-31%20Jan%202022\\_0.pdf](https://opennuclear.org/sites/default/files/2022-12/Xu-January%202022-Missile%20Tests%20of%20the%20DPRK-31%20Jan%202022_0.pdf) (accessed July 12, 2023).
15. Jeff Jeong, "North Korea's New Weapons Take Aim at the South's F-35 Stealth Fighters," *Defense News*, August 1, 2019, <https://www.defensenews.com/digital-show-dailies/smd/2019/08/01/north-koreas-new-weapons-take-aim-at-souths-f-35-stealth-fighters/> (accessed July 12, 2023).
16. Bruce Klingner, "North Korea's Nuclear Doctrine: Trusted Shield and Treasured Sword," Heritage Foundation *Backgrounder* No. 3665, October 18, 2021, p. 10, <https://www.heritage.org/asia/report/north-koreas-nuclear-doctrine-trusted-shield-and-treasured-sword>, and Chaewon Chung and Jeongmin Kim, "North Korea Shows Off Apparent New Solid Fuel Missile," NK News, April 26, 2022, <https://www.nknews.org/2022/04/north-korea-rolls-out-long-range-hwasong-17-nuclear-missiles-at-military-parade/> (accessed July 12, 2023).
17. Office of the Director of National Intelligence, *Annual Threat Assessment of the U.S. Intelligence Community*, February 6, 2023, p. 20, <https://www.odni.gov/files/ODNI/documents/assessments/ATA-2023-Unclassified-Report.pdf> (accessed July 12, 2023).
18. *Ibid.*
19. Bruce Klingner, "China, Russia Again Block UN Action on North Korea," *The Daily Signal*, May 27, 2022, <https://www.heritage.org/global-politics/commentary/china-russia-again-block-un-action-north-korea>.

20. Yonhap News Agency, "N. Korea Says No Plans to Give up Nuclear Capabilities," May 28, 2013, <https://en.yna.co.kr/view/AEN20130528008400315> (accessed July 12, 2023), and Josh Smith, "'Treasured Sword': North Korea Seen as Reliant as Ever on Nuclear Arsenal as Talks Stall," Reuters, November 13, 2018, <https://www.reuters.com/article/us-northkorea-missiles-nuclear-analysis/treasured-sword-north-korea-seen-as-reliant-as-ever-on-nuclear-arsenal-as-talks-stall-idUSKCN1N1132> (accessed July 12, 2023).
21. Republic of Korea, Ministry of National Defense, *2020 Defense White Paper*, p. 31, [https://www.mnd.go.kr/user/mndEN/upload/pblicitn/PBLICTNEBOOK\\_202301171100181360.pdf](https://www.mnd.go.kr/user/mndEN/upload/pblicitn/PBLICTNEBOOK_202301171100181360.pdf) (accessed July 12, 2023). Emphasis in original.
22. International Institute for Strategic Studies, *The Military Balance 2023: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2023), p. 263.
23. *Ibid.*, p. 264.
24. *Ibid.*, p. 265.
25. "N.Korea Boosting Cyber Warfare Capabilities," *The Chosun Ilbo*, November 5, 2013, [http://english.chosun.com/site/data/html\\_dir/2013/11/05/2013110501790.html](http://english.chosun.com/site/data/html_dir/2013/11/05/2013110501790.html) (accessed July 12, 2022), and Kong Ji Young, Lim Jong In, and Kim Kyoung Gon, "The All-Purpose Sword: North Korea's Cyber Operations and Strategies," in *2019 11th International Conference on Cyber Conflict: Silent Battle*, ed. T. Minárik, S. Alatalu, S. Biondi, M. Signoretti, I. Tolga, G. Visky, NATO CCD COE [Cooperative Cyber Defence Centre of Excellence] Publications, 2019, p. 143, [https://ccdcoe.org/uploads/2019/06/CyCon\\_2019\\_BOOK.pdf](https://ccdcoe.org/uploads/2019/06/CyCon_2019_BOOK.pdf) (accessed July 12, 2023).
26. Bruce Klingner, "North Korean Cyberattacks: A Dangerous and Evolving Threat," Heritage Foundation *Special Report* No. 247, September 2, 2021, p. 10, <https://www.heritage.org/asia/report/north-korean-cyberattacks-dangerous-and-evolving-threat>.
27. Press release, "Two Chinese Nationals Charged with Laundering over \$100 Million in Cryptocurrency from Exchange Hack," U.S. Department of Justice, March 2, 2020, <https://www.justice.gov/opa/pr/two-chinese-nationals-charged-laundering-over-100-million-cryptocurrency-exchange-hack> (accessed July 12, 2023).