

## 4. The Evolving North Korean Threat Requires an Evolving Alliance

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### Introduction—An Alliance to Deter and Defeat North Korea

The enduring military alliance between the Republic of Korea (ROK) and the United States began with the impetus to deter—and defeat if necessary—renewed aggression after the armistice of 1953. Though the alliance has since expanded into a broader and deeper relationship, its cornerstone document remains the Mutual Defense Treaty of 1953, in which Seoul and Washington declared “publicly and formally their common determination to defend themselves against external armed attack so that no potential aggressor could be under the illusion that either of them stands alone in the Pacific area.”<sup>140</sup> With the withdrawal of the Chinese People’s Volunteers from North Korea in 1958, North Korea became and has remained the “potential aggressor” receiving the alliance’s overriding focus.

Though the threat of aggression from North Korea may be seven decades old, the nature of the threat North Korea poses has evolved considerably over those decades. Over that time the alliance has periodically been forced to react to limited acts of aggression, and has changed equipment, force structure, tactics, operational plans, and training methods to keep pace with North Korea’s changing political posture and military capabilities. In order to most effectively and efficiently provide for deterrence of—and defense against—future North Korean aggression, the alliance must continue to adapt as the nature of the North Korean threat changes. This chapter provides a foundational evaluation of how the North Korean threat has evolved and will evolve, followed by an examination of the resulting implications for the alliance, leading to recommendations that will help the alliance anticipate and mitigate the risks posed by the evolving threat from North Korea.

### A Dynamic North Korean Threat

Since the assumption of power by Kim Jong Un after his father’s death in December 2011, the threat posed by

North Korea has evolved rapidly, seeing the most dramatic changes in any decade since the armistice was signed. In less than a decade, North Korea’s new leader consolidated power, enshrined new policies, pursued a risky course of escalating strategic weapons testing, pivoted to a focus on diplomatic outreach while mitigating the effects of international sanctions, and now appears to have returned to a path of confrontation.

Traditionally, strategic analysts have defined the level of “threat” in terms of the combination of threatening intentions and threatening capabilities. In the case of North Korea, it is the growth of capability combined with an enduring, if limited, aggressive intent, that characterizes the threat. Though Pyongyang’s current aggressive intentions appear limited in scope—coercion rather than conquest—this chapter contends that North Korea still poses a growing threat to the alliance because its capabilities are increasing so dramatically.

#### *Shifting Intentions: From Reunification by Invasion to Survival and Supremacy by Nuclear Coercion*

North Korea, despite its economic and demographic weakness vis-à-vis the Republic of Korea and United States, poses a credible threat to the alliance, in part because of its leadership’s aggressive, militaristic intentions. Pyongyang regularly threatens or employs violence against the alliance, and has invested a large portion of its limited resources into maintaining and expanding military capabilities that far exceed what would be typical for a state of its relatively small size and very limited economic power.

As North Korea’s leadership transitioned from Kim Il Sung to Kim Jong Il to Kim Jong Un, North Korea’s intentions for its military’s employment evolved from an overriding focus on forcible reunification toward a focus on threats and coercion to achieve a secure and dominant position for the Kim regime. Meanwhile, Pyongyang’s intentions for its nuclear program have evolved over the last three decades from offering near-term denuclearization in exchange for economic benefits to re-casting denuclearization as a long-term process in an attempt to establish North Korea as an accepted de facto nuclear-armed state.

140 “Mutual Defense Treaty Between the United States and the Republic of Korea; October 1, 1953(1),” the Avalon Project, Yale Law School Lillian Goldman Law Library, 1953, [https://avalon.law.yale.edu/20th\\_century/kor001.asp](https://avalon.law.yale.edu/20th_century/kor001.asp).

### *The North Korean Regime's Strategic Intentions Prior to Kim Jong Un's Ascension*

By 1950, just two years after the founding of the Democratic People's Republic of Korea, North Korean leader Kim Il Sung's intention to unify the Korean peninsula by force was clear. Though he had attempted to use subversion and guerrilla warfare to dominate the Republic of Korea and thereby achieve a political unification, by the time his tanks rolled across the DMZ en masse in June 1950, he had committed himself to reunification through military occupation of the Republic of Korea. He clung steadfastly to this goal, even as the intervention of US-led United Nations Command (UNC) forces, combined with a resurgent ROK military, stopped Kim's Korean People's Army (KPA) at the Naktong River north of Busan. In his single-minded pursuit of reunification, Kim overextended his forces, providing the opportunity for the UNC landing at Incheon to cut off and destroy most of his army. Though the early successes of the Chinese military intervention encouraged false hope for a time that Communist forces could overrun the entire peninsula, reunification by conquest remained out of reach after the frontline stabilized and armistice negotiations began. After the armistice was signed, the prospects for reunification receded further and further as decades passed.

Though Kim Il Sung was never able to build the KPA into a force capable of overcoming the alliance and achieving forcible reunification, he invested tremendous resources from 1954 to 1994 to expand the KPA's size and combat power—including initiating a nuclear weapons program. In 1962, Kim promulgated his “four military lines,” precepts to militarize North Korean society to better defend the state, party, and regime against domestic and external threats—signaling the start of a halting shift away from aspirations of reunification accomplished via a Soviet-style offensive toward a primary focus on regime survival and a military doctrine more in line with Maoist concepts of People's War.<sup>141</sup> Meanwhile, although a successful full-scale invasion was beyond North Korea's reach, it committed small-scale acts of violence in the 1960s, 1970s and 1980s, in an effort to coerce both the Republic of Korea and United States, at times attempting to even undermine the Republic of Korea's domestic stability.

However, at least as late as 1987, the US intelligence community concluded that North Korea still remained committed to reunification on its own terms and was seeking

favorable conditions for forcible unification. A now-declassified National Intelligence Estimate that year judged that North Korea was aware its military advantage over the Republic of Korea had peaked and begun to decline, but that it still refrained from a military offensive to reunify the peninsula by force primarily because it was deterred by the US commitment to the defense of the Republic of Korea and US nuclear weapons.<sup>142</sup>

By the 1990s, North Korea's situation had grown far worse. It was faced with the aftermath of the end of the Cold War and the fall of the Soviet Union, leading to the interconnected consequences of economic collapse, famine, and a steep decline in support from Moscow and Beijing. While the regime transitioned from the leadership of Kim Il Sung to his son Kim Jong Il in this period, the prospects for North Korean-led reunification by force seemed truly remote—even as the long-sought nuclear weapons to counter the United States were within reach.

Though the rhetoric of reunification under the KPA's banner remained, in the 1990s a focus on survival in the face of rising challenges led North Korea to shift resources and attention accordingly. Kim Jong Il instituted a policy of “military-first politics” to reinforce his domestic position, and prioritized developing asymmetric capabilities and long-range artillery capable of threatening Seoul—instead of trying to improve or even fully maintain the conventional military forces that would be necessary for a full-scale invasion of the Republic of Korea.<sup>143</sup>

At the same time, Kim Jong Il showed his willingness to trade, or at least defer, nuclear weapons capability for economic benefits though the 1994 Agreed Framework and subsequent denuclearization negotiations with the United States. Whether or not this apparent willingness to denuclearize was a deceptive tactical expedient due to North Korea's dire economic situation or whether a sincere decision for denuclearization was ultimately reconsidered is still argued by western observers to this day, but is now only historical context given what has transpired since.

### *The North Korean Regime's Under Kim Jong Un and Its Current Strategic Intentions*

Though there is still some question about exactly how strong Kim Jong Un's position was within the regime in the

141 Joseph S. Bermudez Jr., North Korea's Development of a Nuclear Weapons Strategy, US-Korea Institute at the Johns Hopkins University School of Advanced International Studies (SAIS), 2015, [https://www.38north.org/wp-content/uploads/2015/08/NKNF\\_Nuclear-Weapons-Strategy\\_Bermudez.pdf](https://www.38north.org/wp-content/uploads/2015/08/NKNF_Nuclear-Weapons-Strategy_Bermudez.pdf).

142 National Intelligence Council, National Intelligence Estimate: The Korean Military Balance and Prospects for Hostilities on the Peninsula, US Central Intelligence Agency (CIA), 1987, [https://www.cia.gov/readingroom/docs/DOC\\_0005569324.pdf](https://www.cia.gov/readingroom/docs/DOC_0005569324.pdf)

143 International Institute for Strategic Studies, The conventional military balance on the Korean Peninsula, June 2018, <https://www.iiss.org/-/media/images/comment/military-balance-blog/2018/june/the-conventional-military-balance-on-the-korean-peninsula.ashx?la=en&hash=C51D23B426579E41B43CF30A0D8969328FE57803>; 2000 Report to Congress: Military Situation on the Korean Peninsula, US Department of Defense, (September 12, 2000), <https://archive.defense.gov/news/Sep2000/korea09122000.html>.

immediate aftermath of his father's death in December 2011, his dominant position is now clear. In a series of purges and leadership reshuffles—most notably the execution of his uncle, Jang Song Thaek—Kim fully consolidated power in his hands.<sup>144</sup> Though bloody, the process does not appear to have been challenged, given that his grandfather and father had already set the ideological and institutional groundwork.

Like his father and grandfather before him, Kim Jong Un is now the ultimate and unchallenged decision maker in North Korea, able to both set the direction of policy and to change the top officials that advise him upon and execute his decisions. The illusion that there are “doves” and “hawks” vying for supremacy over policy in Pyongyang is one that is helpful for North Korea's negotiation tactics, but is no more valid than it was under Kim Jong Il's rule, and should not serve as a basis for alliance understanding of today's North Korean decision making.<sup>145</sup>

Kim Jong Un has doubled down on his father's focus on the survival of the regime, as the Korean Workers Party apparatus, under his direction, has further reinforced that Kim's survival and the continued rule of the Kim family bloodline are paramount considerations. Though the regime's true intentions toward reunification remain murky, its reliance on coercion and threats as tools of statecraft remains consistent. Meanwhile, Pyongyang's commitment to nuclear weapons has clarified and hardened under Kim Jong Un's rule. By 2016, North Korea had fully shifted from portraying ambiguously-defined and negotiable nuclear and missile capabilities, to a transparently declaring a non-negotiable commitment to possessing a nuclear deterrent against the United States until there is a complete end to any potential US threat to North Korea.<sup>146</sup>

Though late 2017 saw a temporarily rhetorical shift to declaring the nuclear deterrent “complete” to justify a pause in nuclear

and missile testing and a shift to diplomacy,<sup>147</sup> by 2019 shorter-ranged missile testing had resumed,<sup>148</sup> beginning a gradual shift toward the drumbeat of strengthening North Korea's “nuclear war deterrent” as the party line for 2020.<sup>149</sup>

Despite Kim Jong Un's consolidation of power, questions about his status re-emerged in international media in 2020. After period of unsubstantiated rumors about a serious health problem being the cause of Kim's absence from public appearances<sup>150</sup> for several weeks, recent speculation has centered around the cause of Kim Jong Un's “delegation” of power to key officials, including his sister, Kim Yo Jong—who seems to enjoy a special status despite a second-tier rank in the party.<sup>151</sup> This is neither surprising nor a sign of instability. Empowering key, trusted subordinates of the leader and entrusting them with responsibility, while also giving special status and roles to offspring of the “royal” bloodline are hardly unprecedented or destabilizing in a personalized dictatorship. Though the potential for Kim's sudden death or incapacity, bringing with it a probable succession crisis and internal instability, can never be fully ruled out, this still should be considered a low-probability scenario for the alliance's planning purposes.

Kim's delegation and empowerment of key subordinates should instead be viewed as a manifestation of the maturity of his rule and his ability to entrust key subordinates with focus on priority efforts. With this in mind, the elevation of Ri Pyong Chol should be of particular concern. Ri has been credited by North Korean state media with a key role in weapons tests, and his profile and status within the regime have risen dramatically in recent years.<sup>152</sup> He has been regularly sitting next to Kim at high profile party meetings, and was formally promoted to the Central Committee's Presidium in August 2020—placing him at the pinnacle of the party, alongside Kim and only three other officials.<sup>153</sup> If “personnel are policy” in North Korea, then this move further reinforces

144 James R. Clapper, *Worldwide Threat Assessment of the US Intelligence Community*, US Central Intelligence Agency, February 11, 2014, [https://www.dni.gov/files/documents/2014%20WMTA%20SFR\\_SASC\\_11\\_Feb.pdf](https://www.dni.gov/files/documents/2014%20WMTA%20SFR_SASC_11_Feb.pdf).

145 B.R. Myers, “The West's North Korean Delusion,” *Wall Street Journal*, December 7, 2020, <https://tinyurl.com/197pgqc6>.

146 Choe Sang-hun, “North Korea Says It Won't Denuclearize Until US Removes Threat,” *New York Times*, December 20, 2018, <https://www.nytimes.com/2018/12/20/world/asia/north-korea-denuclearization.html>.

147 Uri Friedman, “North Korea Says It Has ‘Completed’ Its Nuclear Program,” *The Atlantic*, November 29, 2017, [https://www.theatlantic.com/international/archive/2017/11/north-korea-nuclear/547019/?gclid=CjwKCAjwnef6BRAGIiwAgv8mQdputji9CAzNcbzE9EhGoZ\\_180OZxrlD963\\_xRqLK4u9V5xZZaOrERoCPZcQAvD\\_BwE](https://www.theatlantic.com/international/archive/2017/11/north-korea-nuclear/547019/?gclid=CjwKCAjwnef6BRAGIiwAgv8mQdputji9CAzNcbzE9EhGoZ_180OZxrlD963_xRqLK4u9V5xZZaOrERoCPZcQAvD_BwE).

148 David E. Sanger and Choe Sang-hun, “North Korea Tests New Weapon,” *New York Times*, April 17, 2019, <https://www.nytimes.com/2019/04/17/world/asia/north-korea-missile-weapons-test.html>.

149 Radina Gigova, “Kim Jong Un wants to increase North Korea's ‘nuclear war deterrence,’ state media reports,” *CNN*, May 23, 2020, <https://www.cnn.com/2020/05/23/world/north-korea-vows-increase-nuclear-war-deterrence/index.html>.

150 Will Ripley, Jake Kwon, Sophie Jeong, and Tara John, “Amid mounting speculation, South Korea says Kim Jong Un is ‘alive and well,’” *CNN*, April 27, 2020, <https://edition.cnn.com/2020/04/26/asia/kim-jong-un-north-korea-health-intl/index.html>.

151 Joshua Berlinger and Jake Kwon, “Kim Jong Un delegates some powers to sister Kim Yo Jong, South Korean intelligence says,” *CNN*, August 21, 2020, <https://www.cnn.com/2020/08/21/asia/north-korea-kim-yo-jong-intl-hnk/index.html>.

152 Markus V. Garlauskas, “Ri Pyong Chol: Kim's New Right Hand Man?,” *38 North*, Stimson Center, August 5, 2020, <https://www.38north.org/2020/08/mgarlauskas080520/>.

153 Shim Kyu-seok, “Workers' Party Central Committee to meet Wednesday,” *Korea JoongAng Daily*, August 18, 2020, <https://koreajoongangdaily.joins.com/2020/08/18/national/northKorea/plenary-session-Workers-Party-Politburo/20200818174600398.html>.

that Kim is placing a very high priority on further strategic weapons development, testing, and deployment.

In sum, Kim Jong Un is likely to remain in control for decades to come, continuing to prioritize expanding and improving his nuclear and missile arsenal. Further, he will continue to favor actions and rhetoric the alliance will find provocative, to include weapons development and testing. Whether or not Kim intends to actually rule the whole peninsula or would settle for ejecting the United States from Korea and dominating the Republic of Korea under a “loose confederation” is an open question. However, whether the ultimate goal is reunification or even just regime survival alone, it is very likely that Kim intends to leverage nuclear weapons and coercion short of war to undermine the credibility of US extended deterrence and to neutralize the alliance. Therefore, this should be the future strategic threat of greatest concern to the alliance, not the prospects of a 1950-style invasion to absorb the Republic of Korea.

### *The Rapid Evolution of North Korea’s Capabilities Under Kim Jong Un*

North Korea’s military capabilities have evolved significantly in recent years as Kim Jong Un has pushed for improvements despite continuing resource constraints. Given these constraints—and that a large-scale ground offensive to seize the Republic of Korea is no longer practical or perhaps even desirable—the resource priority for improvements has not been on the ground forces, but on the capabilities most useful in a confrontation short of full-scale war. As a result, the most dramatic increases have been in missile, nuclear, and cyber warfare capabilities, while other key priority areas have included submarines, air defense, artillery, unmanned aerial vehicles, and special operations forces.<sup>154</sup> In addition to expensive equipment upgrades, Kim has attempted to make low-cost qualitative improvements across the force, including more realistic training and emphasizing the selection of military commanders for their expertise and competence, not just their loyalty and length of service.<sup>155</sup>

### *New Liquid-Propellant Missiles Capable of Credibly Threatening the United States*

The most fundamental change in North Korea’s capabilities has been the development and test-launches of new, mobile ballistic missiles that can reach US territory. These include Intermediate Range Ballistic Missiles (IRBMs) that could reach US bases in Guam and Alaska, and Inter-Continental Ballistic Missiles (ICBMs) capable of reaching Hawaii and the continental United States.

Until 2016, the only systems North Korea had test launched with even a theoretical range to reach US territory were its space launch vehicles (SLVs). Though SLVs can be and have been used as the basis for ICBMs, the North Korean SLVs tested from 1998 to 2016 are cumbersome systems launched from fixed facilities, and demonstrated the ability to launch satellites into orbit rather than to test ICBM re-entry vehicles.<sup>156</sup> In short, even after North Korea’s relatively successful February 2016 satellite launch, North Korea’s capability to strike the United States was still untested, arguably theoretical.<sup>157</sup> This changed rapidly over the next year and a half.

North Korea’s first test-launches of an IRBM, the Hwasong-10 (popularly known as the Musudan), followed the satellite launch in 2016. IRBM testing had an inauspicious start, with repeated failures featured in the international press and picked apart by missile experts over the course of 2016.<sup>158</sup> The failures were so frequent that they even led the *New York Times*’ David Sanger to later speculate that they had been caused by US cyber interference.<sup>159</sup>

In the end, only one of several IRBM flight tests in 2016 demonstrated performance sufficient to be considered even a partial success by international experts,<sup>160</sup> though Kim Jong Un clearly appeared elated by the outcome of this test when it was prominently covered in North Korean state media—to the point where he hugged the aforementioned Ri Pyong Chol.<sup>161</sup> Then, in his New Year’s address

<sup>154</sup> Daniel R. Coats, *Worldwide Threat Assessment of the US Intelligence Community*, Office of the Director of National Intelligence, January 29, 2019, <https://www.dni.gov/files/ODNI/documents/2019-ATA-SFR---SSCI.pdf>.

<sup>155</sup> Anna Fifield, “North Korea’s military buildup isn’t limited to its nukes,” *Washington Post*, June 7, 2016, <https://tinyurl.com/12sfa2yy>; Daniel R. Coats, *Worldwide Threat Assessment of the US Intelligence Community*, Office of the Director of National Intelligence, May 23, 2017, <https://tinyurl.com/1qasa19q>.

<sup>156</sup> “Kwangmyŏngsŏng program,” *Wikipedia*, accessed November 2020, [https://en.wikipedia.org/wiki/Kwangmy%C5%8Fngs%C5%8Fng\\_program](https://en.wikipedia.org/wiki/Kwangmy%C5%8Fngs%C5%8Fng_program).

<sup>157</sup> Choe Sang-hun, “North Korea Launches Rocket Seen as Cover for a Missile Test,” *New York Times*, February 6, 2016, <https://www.nytimes.com/2016/02/07/world/asia/north-korea-moves-up-rocket-launching-plan.html>.

<sup>158</sup> “Hwasong-10,” *Wikipedia*, accessed November 2020, <https://en.wikipedia.org/wiki/Hwasong-10>; Ankit Panda, “What’s Up With North Korea’s Repeated Failed Musudan Launches?,” *the Diplomat*, June 7, 2016, <https://thediplomat.com/2016/06/whats-up-with-north-koreas-repeated-failed-musudan-launches/>; Anna Fifield, “North Korea’s missile launch has failed, South’s military says,” *Washington Post*, April 15, 2016, [https://www.washingtonpost.com/world/asia\\_pacific/north-koreas-missile-has-failed-officials-from-south-say/2016/04/14/8eb2ce53-bc38-40d0-9013-5655bed26764\\_story.html](https://www.washingtonpost.com/world/asia_pacific/north-koreas-missile-has-failed-officials-from-south-say/2016/04/14/8eb2ce53-bc38-40d0-9013-5655bed26764_story.html).

<sup>159</sup> David E. Sanger and William J. Broad, “Trump Inherits a Secret Cyberwar Against North Korean Missiles,” *New York Times*, March 4, 2017, <https://www.nytimes.com/2017/03/04/world/asia/north-korea-missile-program-sabotage.html>.

<sup>160</sup> “Hwasong-10,” *Wikipedia*.

<sup>161</sup> Explore DPRK, “[EN] Kim Jong Un Guides Successful Test-fire of Ballistic Rocket Hwasong-10,” YouTube video, 7:57, <https://www.youtube.com/watch?v=wedRAPgkIE>.

for 2017, Kim set the stage for even more ambitious test launches by announcing that North Korea was finalizing preparations for ICBM testing.<sup>162</sup>

In early 2017, North Korea began flight testing the new Hwasong-12 IRBM, quickly demonstrating both superior performance and reliability over the Hwasong-10.<sup>163</sup> Despite the fact that the Hwasong-12 cannot reach the continental United States, it marked a major advance over previous North Korean mobile ballistic missiles, and has clear strategic significance. North Korea state media claimed that it can carry a “large-size heavy nuclear warhead,” and a range of non-government institutions assess that it can carry a nuclear payload.<sup>164</sup>

The Hwasong-12’s range is sufficient to pose a threat to US bases on Guam, particularly Anderson Air Force Base, capable of supporting heavy bomber deployments.<sup>165</sup> Though estimates vary as to the Hwasong-12’s maximum range, it could also potentially reach key US military targets in Alaska with particular significance for the missile defense of the United States. One such potential target is the COBRA DANE radar on Shemya Island, which provides intelligence, space tracking and data to support missile defense interceptions, according to the US Missile Defense Agency.<sup>166</sup> Another potential key target in Alaska is Fort Greely, which includes both launchers and fire control for ground-based missile-defense interceptors.<sup>167</sup>

On July 4, 2017, North Korea followed through on the claim in Kim’s New Year’s address with its first ICBM test-launch,

firing a new mobile ICBM named the Hwasong-14. Another launch followed later that month. North Korea claimed that these tests proved North Korea could strike the entire United States.<sup>168</sup> Though these launches were acknowledged by the US government<sup>169</sup> and international experts<sup>170</sup> as ICBMs, doubts remained as to whether the Hwasong-14 actually had the combination of range and payload capacity to be able to reach all of the continental United States with a nuclear warhead. Some experts questioned whether it could even reach the US west coast unless it was carrying a payload lighter than what they believed would be the plausible weight for a North Korean warhead.<sup>171</sup> Complicating the analysis of range was the fact that these launches were “lofted” into the Sea of Japan on very high trajectories far into space rather than fired on a flatter path out into the Pacific—meaning that the actual distance between point of launch and point of impact was just one variable to consider.<sup>172</sup>

Then, in late November, North Korea launched the much larger Hwasong-15, which it claimed could deliver a “super-heavy” warhead like the Hwasong-12 IRBM, but to anywhere in the United States.<sup>173</sup> State media photos and video of the Hwasong-15 quickly helped to dispel doubts about range and payload by showing how it dwarfed the Hwasong-14, with one US missile expert noting the size of the new missile’s nosecone as so massive that it might be meant to hold multiple warheads or decoys.<sup>174</sup> Again, the launch was lofted into the Sea of Japan and the payload weight unknown, so experts examined the state media coverage and the available flight data to estimate the

162 “North Korea’s leader Kim Jong Un hints at long-range missile test launch,” *Fox News*, January 1, 2017, <https://www.foxnews.com/world/north-koreas-leader-kim-jong-un-hints-at-long-range-missile-test-launch>.

163 “Hwasong 12,” *Wikipedia*, accessed November 2020, <https://en.wikipedia.org/wiki/Hwasong-12>.

164 Ralph Savelsberg, “A Quick Technical Analysis of the Hwasong-12,” *38 North*, Stimson Center, May 19, 2017, <https://www.38north.org/2017/05/hwasong051917/>; Zach Berger, “Hwasong-12/KN-17,” *Missile Defense Advocacy Alliance*, May 2017, <https://missiledefenseadvocacy.org/missile-threat-and-proliferation/todays-missile-threat/north-korea/hwasong-12/>; Missile Defense Project, “Hwasong-12,” *Missile Threat*, Center for Strategic and International Studies, last modified June 24, 2019, <https://missilethreat.csis.org/missile/hwasong-12/>.

165 Brad Lendon, “US Air Force pulls bombers from Guam,” *CNN*, April 24, 2020, <https://www.cnn.com/2020/04/24/asia/guam-us-air-force-bombers-pull-out-intl-hnk/index.html>.

166 *Cobra Dane*, US Department of Defense Missile Defense Agency, September 2020, <https://www.mda.mil/global/documents/pdf/cobradane.pdf>.

167 *Fact Sheet: Ground-based Midcourse Defense*, US Department of Defense Missile Defense Agency, May 2015, <https://www.mda.mil/global/documents/pdf/gmdfacts.pdf>.

168 Missile Defense Project, “Hwasong-14 (KN-20),” *Missile Threat*, Center for Strategic and International Studies, last modified November 5, 2019, <https://missilethreat.csis.org/missile/hwasong-14/>.

169 Tom Bowman, “North Korea Launched ICBM, Secretary Of State Tillerson Says,” *NPR*, July 5, 2017, <https://www.npr.org/2017/07/05/535578431/north-korea-launched-icbm-secretary-of-state-tillerson-says>.

170 Choe Sang-hun, “US Confirms North Korea Fired Intercontinental Ballistic Missile,” *New York Times*, July 4, 2017, <https://www.nytimes.com/2017/07/04/world/asia/north-korea-missile-test-icbm.html>.

171 John Schilling, “What Next for North Korea’s ICBM,” *38 North*, Stimson Center, August 1, 2017, <https://www.38north.org/2017/08/jschilling080117/>.

172 “Trajectories of Hwasong-14,” *Wikipedia*, accessed November 2020, [https://en.wikipedia.org/wiki/Hwasong-14#/media/File:Trajectories\\_of\\_Hwasong-14.svg](https://en.wikipedia.org/wiki/Hwasong-14#/media/File:Trajectories_of_Hwasong-14.svg); John Schilling, “What Next for North Korea’s ICBM,” *38 North*, Stimson Center, August 1, 2017, <https://www.38north.org/2017/08/jschilling080117/>; Missile Defense Project, “Hwasong-14 (KN-20),” *Missile Threat*, Center for Strategic and International Studies, last modified November 5, 2019, <https://missilethreat.csis.org/missile/hwasong-14/>.

173 Dave Majumdar, “Hwasong-15: North Korea’s New Missile That Shocked the World,” *National Interest*, November 29, 2017, <https://nationalinterest.org/blog/the-buzz/hwasong-15-north-koreas-new-missile-shocked-the-world-23416>.

174 Dave Majumdar, “Does North Korea’s New Hwasong-15 ICBM Have Soviet and Chinese ‘DNA?’,” *National Interest*, November 30, 2017, <https://nationalinterest.org/blog/the-buzz/does-north-koreas-new-hwasong-15-icbm-have-soviet-or-chinese-23434>.

likely range for a given payload weight. A range of credible experts and organizations assessed that the test flight showed performance consistent with North Korean claims, ultimately concluding that the Hwasong-15 is capable of delivering a payload well within the plausible size and weight of a North Korean nuclear warhead to the entire continental United States.<sup>175</sup>

Though these tests seem to have definitively established the inherent capability of a North Korean ICBM to reach US territory with even a relatively heavy and large warhead, the credibility and reliability of the threat to the continental United States is still in question to some degree. Given that the North Koreans did not allow international expert observers to examine these missiles or be present for the launches—and that the US and ROK intelligence communities have been protecting their sources and methods—even the world’s top non-government missile experts do not have all the information they would ideally require to have the highest level of confidence. In addition, much of the uncertainty revolves around re-entry vehicle performance, due to the different stresses that occur during re-entry on different trajectories. Early reports that the Hwasong-15 re-entry vehicle (RV) was observed breaking up in the atmosphere have also been called into question, and may have been inaccurate.<sup>176</sup>

Given the relatively small number of test launches of these new missiles, particularly the single lofted launch of the Hwasong-15, understandable skepticism remains on the part of some experts and non-experts as to what North Korea really proved in 2017. Though there is no consensus on how much additional testing would be required to dispel lingering doubts about the credibility of these new missiles, there is a clear consensus among experts that additional testing would allow North Korea to increase the reliability of these systems. Additional test launches—particularly a successful ICBM test on a flatter trajectory approximating what would be used to attack the United States—could also provide more conclusive proof of North Korea’s capability to strike the United States with a nuclear weapon.

In addition, North Korea’s display of four ICBMs much larger than a Hwasong-15 in a parade on October 10, 2020, provides North Korea with a potential pathway to increase the credibility of the threat without a fully realistic flight test. Based on expert analysis of the dimensions of this new ICBM, it almost certainly has the ability to deliver either a large “overbuilt” RV that would be far more certain to carry a reliable warhead and to survive the stress of re-entry, or multiple RVs, to the continental United States.<sup>177</sup>

Multiple RVs per missile would increase the prospects that at least one RV would hit the target even if the RV design did not have high accuracy or reliability, and even if some RVs are intercepted by US missile defenses. The potential for the new ICBM—or even the Hwasong-15, according to some analysts—to carry multiple RVs and/or decoys increases the credibility of the ICBM threat, particularly in the face of missile defenses.<sup>178</sup> Though North Korea is unlikely to have perfected multiple independently targetable re-entry vehicle (MIRV) technology, it probably does have the technology necessary to simply lob a pattern of multiple re-entry vehicles (MRVs) at a single target.<sup>179</sup>

Ultimately, however, some doubts will remain until North Korea fires an ICBM on a trajectory that shows successful RV performance under realistic conditions, and even then, there may even be lingering doubts if North Korea does not also prove accuracy as well. Though such skepticism is understandable, it can be taken too far. It must be kept in mind that, no matter how challenging it may be to perfect an ICBM, this is not a new technology. The Soviets had already mastered single-RV ICBMs over a half-century ago, and began flight testing a MRV ICBM in 1968.<sup>180</sup>

In addition to the thorny technical issues related to testing, there is also the open question of the operational status and current size of the North Korean IRBM and ICBM force. Though it is possible to count the number of mobile launchers during parades to establish a minimum number available of launchers available to North Korea, the number of missiles constructed would be much more difficult

175 Michael Elleman, “The New Hwasong-15 ICBM: A Significant Improvement That May be Ready as Early as 2018,” *38 North*, Stimson Center, November 30, 2017, <https://www.38north.org/2017/11/melleman113017/>; “Hwasong-15/KN-22,” Missile Defense Advocacy Alliance, November 2017, <https://missiledefenseadvocacy.org/missile-threat-and-proliferation/todays-missile-threat/north-korea/hwasong-15/>.

176 David Wright, “Did Pilots See North Korea’s Missile Fail during Reentry?,” *Union of Concerned Scientists*, December 5, 2017, <https://allthingsnuclear.org/dwright/did-pilots-see-nk-missile-fail>.

177 Michael Elleman, “Does Size Matter? North Korea’s Newest ICBM,” *38 North*, Stimson Center, October 21, 2020, <https://www.38north.org/2020/10/melleman102120/>; Markus V. Garlauskas, “North Korea’s New ICBM: Why the “Monster Missile” Matters,” *National Interest*, October 19, 2020, <https://nationalinterest.org/blog/korea-watch/north-korea%E2%80%99s-new-icbm-why-%E2%80%9Cmonster-missile%E2%80%9D-matters-170981>.

178 David Majumdar, “Expert on North Korea’s New Hwasong-15 ICBM: “You Cannot Stop This Thing,”” *National Interest*, December 2, 2017, <https://nationalinterest.org/blog/expert-north-koreas-new-hwasong-15-icbm-you-cannot-stop-23476>.

179 Markus Garlauskas and Bruce Perry, “What an ‘October surprise’ from North Korea might actually look like,” *New Atlanticist*, Atlantic Council, October 1, 2020, <https://www.atlanticcouncil.org/blogs/new-atlanticist/what-an-october-surprise-from-north-korea-might-actually-look-like/>.

180 Robert S. Norris and Hans M. Kristensen, “Nuclear US and Soviet/Russian Intercontinental Ballistic Missiles, 1959–2008,” *Bulletin of the Atomic Scientists* 65, no.1 (2009): 62–69, <https://www.tandfonline.com/doi/pdf/10.2968/065001008>; *The Soviet Land-Based Ballistic Missile Program 1945–1972*, United States Cryptologic History, accessed November 2020, <https://www.archives.gov/files/declassification/iscap/pdf/2010-005-doc2.pdf>.

to determine without reference to sensitive means that would be closely held, indeed. Though North Korean state media claimed that Kim had ordered the new missiles into mass production<sup>181</sup> in early 2018, there is no hard information available to the public about how many of these missiles can be built in a year, particularly given the challenges North Korea must be facing in obtaining the necessary materials given international sanctions. Though the October 10 parade makes it possible to confirm that North Korea has at least eight operational ICBM-class transporter-erector-launchers (TELs)—four for the Hwasong-15 and four larger ones for the new ICBM—there is no guarantee that the missile airframes displayed on these TELs displayed are ready for use.<sup>182</sup>

### *North Korea's Growing Nuclear Weapons Capability*

Though the specifics of North Korea's nuclear arsenal are closely guarded secrets, this arsenal clearly has grown, and almost certainly continues to grow, in terms of both size and sophistication.

We do know that North Korea has conducted underground nuclear tests on six occasions, in 2006, 2009, 2013, twice in 2016, and its largest in 2017. The last two tests probably mark particularly key milestones for North Korea's nuclear armament, corresponding to two different nuclear warhead designs displayed in its state media while being inspected by Kim Jong Un—including a spherical warhead and a “peanut-shaped” thermonuclear warhead.<sup>183</sup>

North Korean state media described the second nuclear test of 2016, in September, as of a “standardized warhead design” that could be carried on missiles.<sup>184</sup> This test came a few months after North Korean state media displayed a spherical nuclear warhead (or realistic mockup) in a manner apparently calculated to show that it had developed a warhead

that could fit into its missile re-entry vehicles. International expert estimates of the test's yield based on seismic analysis indicate that it was around 20 kilotons, a yield consistent with the design displayed—and a similar yield to the weapon that destroyed Nagasaki, Japan in 1945.<sup>185</sup>

A year later, in September 2017, North Korea displayed a thermonuclear ICBM warhead design—again in a manner calculated to show it would fit in a re-entry vehicle—and hours later conducted an underground test of far higher yield. North Korea claimed this was a test of a hydrogen bomb that could be fired on an ICBM, with an adjustable yield of up to “hundreds” of kilotons.<sup>186</sup> Though international estimates of the yield based on seismic analysis vary widely, there is a clear consensus that it was at least 100 kilotons, probably more, and probably a thermonuclear blast.<sup>187</sup> The then-commander of US Strategic Command, General John Hyten—now vice-chair of the Joint Chiefs of Staff—noted to the press that he assumed that it was a thermonuclear explosion.<sup>188</sup>

Taken together with the assessments of the payload size and weight of the Hwasong-15 and Hwasong-12, this means that North Korea probably has the capability to reach all bases and cities on US territory with a weapon that has sufficient yield to effectively destroy them. Though there are other technical milestones that North Korea has not yet proven it can reliably overcome, ultimately we cannot be certain if such a warhead would reliably arrive at the intended target and detonate at the intended altitude.

There is less evidence to work with to assess North Korea's nuclear arsenal from a quantitative standpoint. Detailed information has not been published by North Korea, nor US and ROK intelligence, about the size and composition of North Korea's nuclear warhead stockpile, nor its annual capacity to produce fissile material.

181 Daniel R. Coats, *Worldwide Threat Assessment of the US Intelligence Community*, Office of the Director of National Intelligence, January 29, 2019, <https://www.dni.gov/files/ODNI/documents/2019-ATA-SFR--SSCI.pdf>.

182 Melissa Hanham, Matthew Frank, Xu Tianran, and Katsuhia Furukawa, “North Korea's New ICBM and Transport Truck,” *Datayo*, October 16, 2020, [https://datayo.org/p/stories/9cyjM94n9UXNers\\_/north-koreas-new-icbm-and-transport-truck](https://datayo.org/p/stories/9cyjM94n9UXNers_/north-koreas-new-icbm-and-transport-truck).

183 David Martin, “The American scientist who's seen North Korea's nuclear secrets,” *60 Minutes*, January 14, 2018, <https://www.cbsnews.com/news/the-american-scientist-whos-seen-north-korea-nuclear-secrets/>.

184 Leo Byrne, “North Korea announces nuclear ‘standardized’ warhead test,” *NK News*, September 9, 2016, <https://www.nknews.org/2016/09/north-korea-announces-nuclear-standardized-warhead-test/>.

185 Jack Kim, “South Korea says North's nuclear capability ‘speeding up’, calls for action,” *Reuters*, September 8, 2016, <https://uk.reuters.com/article/uk-northkorea-nuclear-idUKKCN1F02D>; Daniel R. Coats, *Worldwide Threat Assessment of the US Intelligence Community*, Office of the Director of National Intelligence, March 2017,

<https://www.dni.gov/files/documents/Newsroom/Testimonies/SSCI%20Unclassified%20SFR%20-%20Final.pdf>; “September 2016 North Korean nuclear test,” *Wikipedia*, accessed November 2020, [https://en.wikipedia.org/wiki/September\\_2016\\_North\\_Korean\\_nuclear\\_test](https://en.wikipedia.org/wiki/September_2016_North_Korean_nuclear_test); *Hiroshima and Nagasaki Occupation Forces*, Defense Threat Reduction Agency, September 2015, [https://www.dtra.mil/Portals/61/Documents/NTPR/1-Fact\\_Sheets/NTPR\\_Hiroshima\\_Nagasaki.pdf](https://www.dtra.mil/Portals/61/Documents/NTPR/1-Fact_Sheets/NTPR_Hiroshima_Nagasaki.pdf).

186 Choe Sang-Hun, “North Korea Claims to Have Developed a Missile-Ready Hydrogen Bomb,” *New York Times*, September 2, 2017, <https://www.nytimes.com/2017/09/02/world/asia/north-korea-hydrogen-bomb-missile.html>.

187 Ankit Panda and Vipin Narang, “WELCOME TO THE H-BOMB CLUB, NORTH KOREA,” *War on the Rocks*, September 4, 2017, <https://warontherocks.com/2017/09/welcome-to-the-h-bomb-club-north-korea/>.

188 “US nuclear commander assumes North Korea tested H-bomb Sept. 3,” *CBS News*, September 15, 2017, <https://www.cbsnews.com/news/u-s-nuclear-commander-assumes-north-korea-tested-h-bomb-sept-3/>.

North Korea's initial path to producing fissile material utilized the well-known Yongbyon reactor and reprocessing facility to produce plutonium. This provided—particularly when combined with North Korean declarations and international observations of activity at Yongbyon—a firm analytic basis for estimating North Korea's growing plutonium stockpile.<sup>189</sup> However, it also developed a second path to fissile material with an uranium enrichment program, including a centrifuge cascade also located at Yongbyon, first revealed to former Los Alamos National Laboratory Director Siegfried Hecker in 2010.<sup>190</sup> Hecker and other international nuclear weapons experts have warned over the years that North Korea has additional, hidden, uranium enrichment activity producing fissile material for nuclear weapons.<sup>191</sup>

As a result of North Korea's concealment of the full scope of its uranium enrichment activity, combined with the understandable reluctance of the US and ROK intelligence communities to reveal their information, there is no precise and truly authoritative assessment of the total amount of fissile material North Korea has produced or even how much it can produce. However, to provide a scope of how much the nuclear threat has grown and will grow, it is necessary to at least estimate the size of North Korea's stockpile of warheads and rate of production.

International estimates of North Korea's stockpile have coalesced around a few dozen warheads as of 2020, and around a half-dozen or more additional warheads added each year. The US Army's latest unclassified publication on North Korea includes an estimate of twenty to sixty, with the capability to produce six new devices each year.<sup>192</sup> The Stockholm International Peace Research Institute (SIPRI) estimated that North Korea has thirty to forty nuclear

warheads this year, up from twenty to thirty last year.<sup>193</sup> The Arms Control Association shares SIPRI's estimate, and assesses fissile material production as sufficient for six to seven warheads per year.<sup>194</sup>

In sum, even the most conservative estimates credit North Korea with twenty nuclear warheads as of this writing, growing to at least fifty by 2025, but the number could be nearly one hundred by 2025, even presuming North Korea does not dramatically expand its production capacity.

### *Advancing Solid-Propellant Missile Capabilities Enhance Threat to ROK and Region*

North Korea has also made major progress in recent years in the capability of its solid propellant ballistic missiles, which offer key advantages—including shorter preparation time, greater mobility, and enhanced survivability—over North Korea's longstanding liquid-fueled missile systems.<sup>195</sup> Since at least 2010, North Korea has been expanding its ability to produce solid-propellant missiles of greater size, capability and quantity.<sup>196</sup> So far, however, these have been missiles with a relatively shorter range—North Korea does not appear to have built solid-fuel missiles with a range beyond the region.<sup>197</sup>

North Korea's flight tests of a new generation of solid-fuel ballistic missiles began with the Pukguksong (Polaris) submarine launched ballistic missile (SLBM), which had successful flight tests in 2016.<sup>198</sup> This was followed in early 2017 by test launches of the very similar Pukguksong-2 design from a canister mounted on a tracked armored vehicle assessed to have been produced in North Korea.<sup>199</sup> In 2018, test flights of solid-fuel ballistic missiles stopped along with other missile tests, as Kim restrained tests as part of his diplomatic “charm offensive.”

189 David Albright, “North Korean Plutonium Production,” *Science and Global Security* 5, (1994): 63-87, <http://scienceandglobalsecurity.org/archive/sgs05albright.pdf>.

190 Siegfried S. Hecker, “What I found in Yongbyon and Why It Matters,” *APS News*, March 2011, <https://tinyurl.com/7dd9gaus>.

191 Peter Crail, “N. Korea Judged to Have More Enrichment Sites,” *Arms Control Today*, March 2011, <https://www.armscontrol.org/act/2011-03/n-korea-judged-more-enrichment-sites>; Jack Kim and Jack Pearson, “North Korea ramps up uranium enrichment, enough for six nuclear bombs a year: experts,” Reuters, September 13, 2016, <https://www.reuters.com/article/us-northkorea-nuclear-fuel/north-korea-ramps-up-uranium-enrichment-enough-for-six-nuclear-bombs-a-year-experts-idUSKCN11K07Y>.

192 Choi Si-young, “NK estimated to possess up to 60 nuclear bombs: US Army,” *Korea Herald*, August 18, 2020, <http://www.koreaherald.com/view.php?ud=20200818000729>.

193 “Nuclear weapon modernization continues but the outlook for arms control is bleak: New SIPRI Yearbook out now,” *SIPRI for the media*, SIPRI, June 15, 2020, <https://www.sipri.org/media/press-release/2020/nuclear-weapon-modernization-continues-outlook-arms-control-bleak-new-sipri-yearbook-out-now>.

194 “Nuclear Weapons: Who Has What at a Glance,” Arms Control Association, August 2020, <https://www.armscontrol.org/factsheets/Nuclearweaponswhohaswhat>.

195 Robert Beckhusen, “Missiles Are Scarier Than Another Nuclear Test,” *National Interest*, April 15, 2017, <https://nationalinterest.org/blog/the-buzz/north-koreas-solid-fuel-missiles-are-scarier-another-nuclear-20210>.

196 “Expansion of North Korea's Solid Fuel Ballistic Missile Program: The Eight Year Old Case of the Chemical Materials Institute,” *38 North*, Stimson Center, July 25, 2018, <https://www.38north.org/2018/07/cmi072518/>.

197 Missile Defense Project, “Missiles of North Korea,” *Missile Threat*, Center for Strategic and International Studies, last modified July 16, 2020, <https://missilethreat.csis.org/country/dprk/>.

198 Missile Defense Project, “Pukguksong-1 (KN-11),” *Missile Threat*, Center for Strategic and International Studies, last modified November 1, 2019, <https://missilethreat.csis.org/missile/KN-11/>.

199 Missile Defense Project, “Pukguksong-2 (KN-15),” *Missile Threat*, Center for Strategic and International Studies, last modified April 15, 2020, <https://missilethreat.csis.org/missile/pukguksong-2/>.



In 2019, after Kim Jong Un's demands at the Hanoi summit were not met, North Korea unveiled and flight-tested a series of even more advanced solid-fuel ballistic missiles from land-based mobile launchers—though North Korea was noticeably cagey about the terminology used to describe these systems, probably to help mitigate the international response to these tests.<sup>200</sup> One of these missile designs was compared to the Russian “Iskander” in terms of both its appearance and performance, with analysts expecting that it could hit targets throughout the Republic of Korea with great accuracy and could possibly carry a nuclear warhead.<sup>201</sup>

By October 2019, however, North Korea unambiguously crossed the threshold of testing a nuclear-capable ballistic missile, with the successful launch of the new Pukkuksong-3 SLBM.<sup>202</sup> Then, in the Spring of 2020—despite the challenges of dealing with COVID-19—North Korea continued to demonstrate progress in solid-fuel missiles by conducting a series of tests of a missile that may be nuclear capable and has the range to strike deep into the Republic of Korea.<sup>203</sup>

In its parade on October 10, 2020, North Korea displayed the new land-based solid-propellant missiles with their new mobile launchers in sizeable numbers, suggesting that North Korea has been producing these systems in sufficient numbers that they are either deployed to operational units or soon could be.<sup>204</sup> In addition, North Korea displayed the as-yet untested Pukkuksong-4, whose markings suggests it is a new SLBM like the Pukkuksong-1 and -3.<sup>205</sup> Though apparently larger than its predecessors, even the high-end estimates of this new SLBM's range would still place it firmly in the category of a regional threat, short of reaching Guam from waters near Korea.<sup>206</sup>

Though it is not clear how many actual airframes North Korea has produced of its new road-mobile solid-fuel

ballistic missiles, and whether or not they are operationally deployed, the repeated apparently successful flight tests and the large number of mobile launchers displayed so far suggest that these missiles are at least approaching initial operational capability. It is also not clear how quickly North Korea intends to phase out its force of older, but well-tested, liquid-fueled Scud and Nodong missiles (known in North Korea as Hwasong-5 through -9), in favor of transitioning entirely to a solid-fuel ballistic missile force for systems of peninsular and regional range.<sup>207</sup> These systems were entirely absent from the parade on October 10, 2020.<sup>208</sup>

Though it will probably take years, if not decades, before North Korea can completely replace its Scud and Nodong missile forces with these new systems, this transition appears to have begun. Any future plan for the US-ROK alliance should therefore account for the capabilities of more accurate, survivable and mobile solid-propellant ballistic missiles integrated into North Korea's missile force structure.

#### *Growing and Advancing Cyber Capability*

Though less visible than its missile capabilities, North Korea's offensive cyber capabilities have also grown dramatically during Kim Jong Un's rule. According to the US Office of the Director of National Intelligence, “North Korea poses a significant cyber threat to financial institutions, remains a cyber espionage threat, and retains the ability to conduct disruptive cyber attacks.”<sup>209</sup> In 2020, a US government alert notification<sup>210</sup> credited North Korea with the “capability to conduct disruptive or destructive cyber activities affecting US critical infrastructure,” further demonstrating the seriousness of the threat. A former deputy director of the US National Security Agency called it one of the most effective cyber programs on the planet, given the low cost for what it has managed to achieve.<sup>211</sup>

200 Duyeon Kim and Melissa Hanham, “North Korean missiles: Size does not matter,” *Bulletin of the Atomic Scientists*, May 15, 2019, <https://thebulletin.org/2019/05/north-korean-missiles-size-does-not-matter/>.

201 Robert E. McCoy, “North Korea's “Songun Iskander” test: what observers might have missed,” *NK News*, May 29, 2019, <https://tinyurl.com/2yqg695p>.

202 Missile Defense Project, “Pukguksong-3 (KN-26),” *Missile Threat*, Center for Strategic and International Studies, last modified June 23, 2020, <https://missilethreat.csis.org/missile/pukguksong-3/>.

203 Michael Elleman, “Preliminary Assessment of the KN-24 Missile Launches,” 38 North, Stimson Center, March 25, 2020, <https://tinyurl.com/4r8ok2ee>.

204 In-Bum Chun, “Crocodile Tears and a Monster Missile: A South Korean Assessment of North Korea's Military Parade,” 38 North, Stimson Center, October 21, 2020, <https://www.38north.org/2020/10/ichun102120/>.

205 “N. Korea's new SLBM labeled ‘Pukguksong-4(shiot),’ not ‘Pukguksong-4A: Navy chief,” *Korea Herald*, October 15, 2020, <http://www.koreaherald.com/view.php?ud=20201015001085>.

206 Vann H. Van Diepen and Michael Elleman, “North Korea Unveils Two New Strategic Missiles in October 10 Parade,” 38 North, Stimson Center, October 10, 2020, <https://www.38north.org/2020/10/vdiepenmelleman101020/>.

207 Scott LaFoy, “The Hwasong That Never Ends,” *Arms Control Wonk*, August 28, 2017, <https://www.armscontrolwonk.com/archive/1203797/the-hwasong-that-never-ends/>.

208 Jenny Town, “After the parade, North Korea's steady progress matters more than its big new missile,” *Bulletin of the Atomic Scientists*, October 16, 2020, <https://thebulletin.org/2020/10/after-the-parade-north-koreas-steady-progress-matters-more-than-its-big-new-missile/>.

209 Daniel R. Coats, Statement for the Record: Worldwide Threat Assessment of the US Intelligence Community, Office of the Director of National Intelligence, January 29, 2019, <https://www.dni.gov/files/ODNI/documents/2019-ATA-SFR---SSCI.pdf>.

210 Guidance on the North Korean Cyber Threat, Cybersecurity and Infrastructure Security Agency, April 2015, <https://us-cert.cisa.gov/ncas/alerts/aa20-106a>.

211 David E. Sanger, David D. Kirkpatrick, and Nicole Perloth, “The World Once Laughed at North Korean Cyberpower. No More,” *New York Times*, October 15, 2017, <https://www.nytimes.com/2017/10/15/world/asia/north-korea-hacking-cyber-sony.html>.

In 2014, North Korea's cyberattack against Sony Pictures Entertainment was one of the financially costliest cyberattacks against a US-based business in history, and even led then US President Barack Obama to appear on national television to counter the threats of the attackers.<sup>212</sup> Though the US government remains confident Sony was hacked by elements under control of the North Korean government, the hack also illustrates how North Korea can use cyberattacks to launch limited attacks and evade responsibility—some noted cyber experts still do not believe North Korea conducted the attack.<sup>213</sup>

Six years later, North Korea's capability to conduct another major attack has almost certainly improved. North Korean cyber actors currently appear focused on lucrative operations to steal funds to help the regime overcome the effects of sanctions, but the estimated 7,000 North Korean cyber actors could turn their capabilities against various vulnerable targets in the Republic of Korea and the United States.<sup>214</sup>

## Implications of the Evolving Threat for the US-ROK Alliance

From these assessments, the US-ROK alliance should draw a series of key conclusions about the strategic significance of what has changed about the North Korean threat, and what is likely to change in the next five to ten years: Growing nuclear ICBM threat to United States poses new challenges; likelihood that a large-scale war would become nuclear; improving options for limited and ambiguous attacks, and; probability of enduring confrontation, not “re-unification offensive.”

### *North Korea's Threats to the United States Growing More Credible*

Regardless of whether North Korea's ICBMs have yet been proven to be able to reliably destroy US cities with thermonuclear yields, North Korea's capabilities are now sufficiently developed and tested to pose a credible and growing threat. Further, given the progress North Korea demonstrated on ICBMs three years ago in 2017, it is

reasonable to assume that the next round of North Korean ICBM flight tests will demonstrate further progress. Given that key US military leaders have said for years that they operate from the assumption North Korea's ICBMs now have the capability to strike the United States, so should the alliance.<sup>215</sup>

The US-ROK alliance should take it as a strategic-level assumption that North Korea already has a minimally credible capability to strike the continental United States with nuclear weapons, and that credibility of this threat will increase in the years ahead—particularly if there is more ICBM flight testing. For the purposes of sowing uncertainty about the United States' will to provide extended deterrence to the Republic of Korea, it does not matter exactly what North Korea's capability is.

### *Full-Scale War with North Korea is Likely to Become Nuclear*

As Keir Lieber and Daryl Press first explained in *Foreign Affairs* in 2013, there is a substantial risk that a conventional war with North Korea would lead to North Korea employing nuclear weapons.<sup>216</sup> Unless alliance military actions were so limited that the North Korean regime was convinced there was little risk of its nuclear-armed forces being neutralized or its leadership being destroyed, the North Korean regime would have strong incentives to employ nuclear weapons in an attempt to end the conflict on more favorable terms. The North Korean regime would be faced with a “use it or lose it” situation, where the rational choice would be to make limited use of nuclear weapons in an attempt to turn the tide rather than to wait and allow either themselves or their nuclear capabilities to be destroyed. This, in turn, creates the dilemma for the alliance of either choosing to have strictly limited operations and objectives, or to run the risk of pushing North Korea into nuclear war.

### *Improving Options for Limited and Ambiguous Attacks*

As North Korea's capabilities improve, the alliance will face an increasingly difficult threat in the years ahead from North Korea's long-established and growing ability to operate in

212 Richard Stengel, “The Untold Story of the Sony Hack,” *Vanity Fair*, October 6, 2019, <https://www.vanityfair.com/news/2019/10/the-untold-story-of-the-sony-hack>.

213 Tatiana Siegel, “Five Years Later, Who Really Hacked Sony?” *The Hollywood Reporter*, <https://www.hollywoodreporter.com/features/five-years-who-hacked-sony-1257591>.

214 Ellen Loanes, “Kim Jong Un has quietly built a 7,000-man cyber army that gives North Korea an edge nuclear weapons don't,” *Business Insider*, July 17, 2020, <https://www.businessinsider.com/north-korea-kim-jong-un-cyber-army-cyberattacks-nuclear-weapons-2020-6>.

215 Cathy Burke, “Joint Chiefs Chair: US Should Assume NK Nuke Can Hit US,” *Newsmax*, September 26, 2017, <https://www.newsmax.com/Newsfront/joint-chiefs-of-staff-chairman-joseph-dunford-nuclear-weapons/2017/09/26/id/815927/>; Nathan Vanderklippe, “The method to North Korea's missile mania: proving its weapons can hurt the US,” *The Globe and Mail*, June 11, 2017, <https://www.theglobeandmail.com/news/world/north-koreas-missile-tests-aim-to-prove-its-weapons-can-hurt-the-us/article35280399/>.

216 Keir A. Lieber and Daryl G. Press, “The Next Korean War,” *Foreign Affairs*, April 1, 2013, <https://www.foreignaffairs.com/articles/north-korea/2013-04-01/next-korean-war>.

a “gray zone” of coercion and aggression short of war.<sup>217</sup> North Korea’s longstanding options for “gray zone” aggression and provocation—including cyberattacks, unmanned aerial vehicles, assassinations, submarines, mines, sabotage, terrorism, and commando raids—will only grow more dangerous as the technology available to North Korea improves and as North Korea observes the success of other actors using such techniques. North Korea has already proven adept at using traditional weapons in very limited violent surprise attacks under ambiguous circumstances for which they could at least delay an attribution of responsibility—such as the submarine torpedo attack that sank the Cheonan in 2010, and the clandestine placement of land mines that maimed two ROK soldiers in 2015.<sup>218</sup>

In addition, North Korea’s combination of an increasingly credible ability to hold the United States at risk using large nuclear-capable ballistic missiles with the improving ability to strike specific targets in the Republic of Korea with new solid-fuel missiles, as described above, could pose a more difficult dilemma for alliance responses in than the past. This combination of capabilities gives North Korea more ability to make credible threats and attempt controlled escalation.

North Korea would have the option to conduct a precision attack on one or more military facilities with only a small number of missiles, and then to credibly threaten nuclear retaliation against the United States if US forces escalate in response. Unlike in the shelling of Yeonpyeong Island in 2010—where North Korea fired a large number of rockets and artillery shells at a ROK marine base, failed to destroy its targets, and killed as many civilians in a nearby village as military personnel at the target site<sup>219</sup>—these new solid-fuel missiles present the potential to destroy a military target in the Republic of Korea with only a handful of missiles and a much lower prospect of unintended civilian casualties. This combination of enhanced capabilities could not only complicate the alliance’s calculus for response to limited aggression, but also potentially embolden Kim Jong Un to have more confidence that he could undertake limited aggression or coercion while maintaining control of escalation.

### *Probability of Enduring Confrontation, Not “Reunification Offensive”*

Given what we know about North Korea’s leadership, capabilities and its intentions, it is very likely that the alliance faces a long-term politico-military confrontation from North

Korea, with possible periods of escalation and the resultant risk of miscalculation leading to war. In contrast, there is minimal risk of North Korea attempting forcible unification, at least while the US commitment to the alliance remains intact and credible, and while China remains unwilling support such an offensive.

Given the combination of an unclear succession system and the reliance that North Korea places on a single leader who may unexpectedly be incapacitated, rapid emergence of instability and internal change in North Korea remains a plausible low-probability, but high-impact scenario. This comes with many risks, but also the potential for a more positive trajectory. Given the forces of marketization and the rising generation of pragmatists in the elite, the transformation of a post-Kim North Korean government that is more tractable, though unlikely, cannot be ruled out. Longer-term, the alliance may have to contend with a scenario where China becomes a more direct threat to the alliance, either through overt support to North Korea, or in a scenario where North Korea is collapsing and China intervenes to assert its interests. These types of scenarios, however, are far less likely than a continued confrontation with North Korea punctuated by periods of crisis escalation.

In the next few years, the most likely scenario remains that North Korea will continue to be ruled by Kim Jong Un, that it will adapt to the sanctions regime while retaining nuclear weapons capability, and that it will continue to behave aggressively and confrontationally—at least some of the time. Even beyond the next few years—as China’s power continues to rise—it is also reasonable to assume that the alliance will still face an evolving military threat from a confrontational North Korea. Therefore, strategies, plans and policies for the future US-ROK alliance, including its military force structure, should be founded on this assumption.

Though a repeat of a 1950-style ground offensive intended to seize all of the Republic of Korea and forcibly unify the peninsula under Kim family rule does not appear viable, North Korea’s range of military options short of an all-out offensive against the Republic of Korea continue to expand and improve, as noted above. Further, a wide body of international research indicates that a limited military engagement—either initiated by North Korea or an unintentional clash—could rapidly escalate to a larger conflict. This is a far more likely scenario for war than one that opens with North Korean ground forces crossing the Demilitarized Zone (DMZ) en masse.

217 Jung H. Pak, “Kim Jong-un’s Tool of Coercion,” *Brookings Institution*, June 21, 2018, <https://www.brookings.edu/blog/order-from-chaos/2018/06/21/kim-jong-uns-tools-of-coercion>.

218 Bruce Klingner, “The Cheonan: a Retrospective Assessment,” *the Heritage Foundation*, May 25, 2011, <https://www.heritage.org/asia/commentary/the-cheonan-retrospective-assessment>; Ashley Rowland and Yoo Kyong Chang, “Land mine blast highlights difficulty of monitoring Korea’s long DMZ,” *Star and Stripes*, August 16, 2015, <https://www.stripes.com/news/land-mine-blast-highlights-difficulty-of-monitoring-korea-s-long-dmz-1.363176>.

219 Joseph S. Bermudez Jr, *The Yōnp’yōng-do Incident, November 23, 2010 Special Report 11-1, 38 North*, January 11, 2011, [https://www.38north.org/wp-content/uploads/2011/01/38North\\_SR11-1\\_Bermudez\\_Yeonpyeong-do.pdf](https://www.38north.org/wp-content/uploads/2011/01/38North_SR11-1_Bermudez_Yeonpyeong-do.pdf).

## Adapting the Alliance to the Evolving North Korea Threat

The above implications logically lead to recommendations to address these implications. These are not mutually exclusive with the recommendations from Barry Pavel in the first chapter of this report.

- Establish Alliance Foundational Intelligence Estimate
- Reinvigorate Alliance Efforts to Counter the Missile Threat
- Prepare for a Conventional War Transitioning to Nuclear War
- Establish Cyber-Defense and Deterrence Mechanism
- Refocus Diplomatic Efforts on Preventing Missile Testing

### *An Alliance Intelligence Estimate*

***The alliance should establish a system to annually publish a unified and unclassified intelligence estimate of the current state and future direction of the North Korean threat, and make it publicly available in English and Korean.***

Such an estimate would provide a continually updated foundation for understanding the evolving threat from North Korea to inform the debate around important alliance decisions regarding force structure and procurement, as well as policy issues like the timeline for the transition of wartime operational control (OPCON).

Although there have long been alliance mechanisms in place for classified US-ROK assessments<sup>220</sup> on North Korea, and unilateral vehicles that the Republic of Korea and United States use to disseminate unclassified authoritative assessments on North Korea, there is no authoritative assessment of the North Korean threat that reflects both an alliance view and can be shared publicly. This is a critical shortfall that

means that policy discussions in the alliance will almost inevitably be based on different foundational assumptions about North Korea's capabilities and intentions. Though such a process will not be without its challenges, the building blocks are present to make it practical, if the political will is there in Seoul and Washington to direct such an estimate.

The US mechanisms for unclassified strategic intelligence on North Korea include portions of the Annual Worldwide Threat Assessment (ATA) provided to the United States Congress, which represents top-line threat assessments from the entire US intelligence community looking ahead to at least the following year. Though the various elements of North Korea material in the ATA typically amounts to a total of less than two pages, it has included authoritative judgments about North Korea's intentions and the progress of its strategic capabilities, particularly in its most recent edition.<sup>221</sup> Though no ATA was provided in 2020 at all, North Korea has been addressed in each edition since 2006.<sup>222</sup> Another US vehicle for unclassified strategic-level analysis of North Korea has been an annual report to the Congress from the Department of Defense first mandated by Congress in 2012. The most recent report publicly available<sup>223</sup> is the one from 2017, which does not address significant developments and analysis since 2017, such as the new solid-fuel systems test-launched in 2019 and 2020.

Similarly, every two years since 2010, the Republic of Korea has published an unclassified Defense White Paper<sup>224</sup> which includes detailed analysis of the threat from North Korea. Compared to the US unclassified sources, it provides much richer detail on North Korea's force structure and conventional military equipment, but lacks the US reports' focus on North Korea's strategic weaponry.

Ideally, such a product would be the truly integrated work of intelligence communities of both countries, including a full range of participation from both civilian and defense agencies. It would benefit from contributions by the Central Intelligence Agency and the National Intelligence Service, as well as the specialized expertise from smaller intelligence elements, such as those of the US Department of the

220 *Statement of General Walter L. Sharp Commander, United Nations Command; Commander, Republic of Korea-United States Combined Forces Command; and Commander, United States Forces Korea Before The Senate Armed Services Committee*, East Asia Institute, March 19, 2009, <http://www.eai.or.kr/data/databank/201004011446323.pdf>.

221 Daniel R. Coats, *Statement for the Record: Worldwide Threat Assessment of the US Intelligence Community*, Office of the Director of National Intelligence, 2019, <https://www.dni.gov/files/ODNI/documents/2019-ATA-SFR---SSCI.pdf>.

222 *Annual Threat Assessment of the Director of National Intelligence for the Senate Armed Services Committee*, Office of the Director of National Intelligence, 2006, [https://www.dni.gov/files/documents/Newsroom/Testimonies/20060228\\_testimony.pdf](https://www.dni.gov/files/documents/Newsroom/Testimonies/20060228_testimony.pdf).

223 *Military and Security Development Involving the Democratic Republic of Korea 2017*, Center for Homeland Defense and Security, 2017, <https://www.hsdl.org/?abstract&did=810813>.

224 "Defense White Papers," Ministry of National Defense Republic of Korea, accessed November 2020, [https://www.mnd.go.kr/cop/pblicitn/selectPublicationsUser.do?siteId=mndEN&componentId=51&id=mndEN\\_031300000000](https://www.mnd.go.kr/cop/pblicitn/selectPublicationsUser.do?siteId=mndEN&componentId=51&id=mndEN_031300000000).

Treasury and the ROK Ministry of Unification.<sup>225</sup> However, if a full bilateral interagency effort proved to be impractical, particularly for the first year, the most important element would be that it would be a bilateral document that reflected a consensus of unclassified assessments of the defense intelligence communities, using the ROK Defense White Paper and the US Department of Defense (DoD) Annual Report to Congress as a foundation.

Given the challenges, it is also perfectly natural and understandable if key elements of the assessment, particularly technical details, must remain classified. A classified annex to such a report to allow such specific information to be explored while ensuring that sources and methods are protected would not only be acceptable, but perhaps well-advised. By whatever means it is pursued, such an effort is vital—absent such a firm foundation of intelligence, future alliance discussions will inevitably be hampered by differing foundational views, muddled by reliance upon conjecture and leaks, and at risk of being based upon either wishful thinking or “worst-case” speculation.

### ***Reinvigorating and Prioritizing Alliance Efforts to Counter North Korean Missiles***

***The alliance should prioritize and revitalize alliance efforts to counter North Korean missile threats using the 4D (detect, defend, disrupt, destroy) approach.***<sup>226</sup> Whether short-ranged or long-ranged, and whether they are intended to deliver conventional, nuclear, or other weapon of mass destruction (WMD) warheads, ballistic missiles clearly represent the most dramatically improving component of North Korea’s arsenal and the component which poses the greatest risk to alliance deterrence efforts.

Unilateral efforts are helpful, but insufficient, to meet the threat. The Republic of Korea, has underscored its own counter-missile approach<sup>227</sup> by re-branding it in 2019 as the “three axis system” of “overwhelming response,” strategic target strike,” and “Korea-style missile defense.” At the same time, alliance-centered initiatives to counter North Korean missiles have faded into the background. The official

summaries of the last three Security Consultative Meetings—yearly bi-lateral meetings led by ROK defense minister and the US defense secretary—do not even include the terms “counter-missile” nor “4D”, after appearing in annual communiqués from 2013 to 2017.<sup>228</sup> Instead, the emphasis of readouts from more recent meetings on counter-missile issues has highlighted US “tailored deterrence” of North Korea’s nuclear and missile threats, and discussed the logistics of stationing a single US THAAD missile defense battery in South Korea, rather than an alliance strategy to counter the growing threat of North Korean ballistic missiles.<sup>229</sup>

Judging the alliance’s counter-missile efforts by what shows up in understandably circumspect public summaries may seem unfair, and vague terminology does not mean the alliance is doing nothing on this front. However, such events and their readouts send important signals to domestic audiences and adversaries as authoritative reflections of priorities for the alliance’s defense posture. Therefore, alliance counter-missile efforts should be given much greater primacy in alliance defense meetings, to ensure both a higher profile and accelerated material efforts for advancing counter-missile capabilities.

If such efforts are taking place at highly classified level in plans and exercises, and therefore largely unknown, this still is insufficient to enhance deterrence of North Korea and allied mutual confidence that is vital for extended deterrence guarantees. Operationally significant details need not be revealed, but greater transparency would be useful for enhancing deterrence, reducing North Korea’s confidence that its growing capabilities could decouple the Alliance, and for helping to reduce the benefits North Korea perceives that it is gaining by increasing its missile capabilities.

### ***Coming to Grips with Nuclear Capabilities***

***The alliance should prepare for the prospect of a conventional war with North Korea leading to North Korean nuclear use.*** This would include preparing to prevent a conventional war from turning into a nuclear one, and how to fight a nuclear war as an alliance if this effort fails. If wartime OPCON

225 “Structure,” Ministry of Unification Republic of Korea, accessed November 2020, [https://www.unikorea.go.kr/eng\\_unikorea/about/strcture\\_function/structure/](https://www.unikorea.go.kr/eng_unikorea/about/strcture_function/structure/).

226 See Markus Garlauskas and Bruce Perry, “What an ‘October surprise’ from North Korea might actually look like,” *The New Atlanticist*, October 1, 2020, <https://www.atlanticcouncil.org/blogs/new-atlanticist/what-an-october-surprise-from-north-korea-might-actually-look-like/>.

227 “S. Korea renames ‘three-axis’ defense system amid peace efforts,” *Yonhap News Agency*, January 10, 2019, <https://en.yna.co.kr/view/AEN20190110014000315>.

228 *Joint Communiqué, The 45th US-ROK Security Consultative Meeting*, US Department of Defense, 2013, <https://archive.defense.gov/pubs/Joint%20Communique,%2045th%20US-ROK%20Security%20Consultative%20Meeting.pdf>, *Joint Communiqué, Joint Communiqué of the 49th US-ROK Security Consultative Meeting*, US Department of Defense, 2017, <https://dod.defense.gov/Portals/1/Documents/pubs/20171028-Joint-Communique-OSD-MND-October-17-Final-version.pdf>.

229 *Joint Press Statement for the 18th Korea-U.S. Integrated Defense Dialogue*, US Department of Defense, 11 September 2020, <https://www.defense.gov/Newsroom/Releases/Release/Article/2344927/joint-press-statement-for-the-18th-korea-us-integrated-defense-dialogue/>; *Joint Communiqué of the 52nd US-ROK Security Consultative Meeting*, US Department of Defense, October 2020, <https://www.defense.gov/Newsroom/Releases/Release/Article/2381879/joint-communicue-of-the-52nd-us-republic-of-korea-security-consultative-meeting/>.

transition is to proceed in the foreseeable future, given that North Korea will not be giving up its nuclear weapons for the foreseeable future (as noted above), OPCON transition must account for the fact it would be a war with a nuclear-armed power. A conflict sufficiently large in scope to require a war-time command structure is almost certain to see North Korea consider and threaten the use of nuclear weapons, and with a very real risk that it would then follow through. (See discussion on this subject above in “implications.”) Even if North Korea ultimately chooses not to use nuclear weapons, commanding a war against North Korea would inevitably at least involve consideration of nuclear deterrent and response options.

Besides the implications for planning, training, equipping, and warfighting, there is a practical alliance management consideration as well. One of the most credible and powerful arguments put forward against OPCON transition has been the premise that a ROK commander could not lead a war against North Korea if it becomes a nuclear conflict, because nuclear warfighting doctrine and capability is the exclusive province of the United States within the US-ROK alliance. Probably speaking for many others, General Burwell “B.B.” Bell (US Army, retired, former USFK commander), wrote in a 2013 letter<sup>230</sup> that “from this point forward and as long as North Korea possesses nuclear weapons, I will no longer support OPCON transfer. . . . Until the North completely terminates its nuclear program, it is now the responsibility of the US to lead the military effort to deter or, if necessary, defeat the North.” Therefore, for deterrence, warfighting readiness and alliance management considerations, OPCON transition preparations and certification must explicitly and openly prepare for the possibility that the alliance would face a nuclear war in the post-transition command arrangement.

### ***Establish an Alliance Cyber-Defense and Cyber Deterrence Mechanism***

**The alliance should establish a cyber-defense and cyber deterrence mechanism.** Though cyber-defense efforts typically remain largely in the shadows to avoid providing a potential attacker with insights that may be useful to planning an attack, high-profile US-ROK alliance efforts in cyberdefense would be useful from the perspective of both providing the political capital and resources to enable

improving defenses and deterring North Korean aggression in cyberspace. As noted above, North Korea’s proliferating options to use cyber attacks against Republic of Korea and US “soft targets” could present a key vulnerability for the alliance, a vulnerability which can only be mitigated with consistent effort over time.

NATO provides a potential model for this type of alliance effort. In 2008, NATO established a *Cooperative Cyber Defence Centre of Excellence* to support member nations and NATO itself with unique “unique interdisciplinary expertise in the field of cyber defence research, training and exercises covering the focus areas of technology, strategy and law.”<sup>231</sup>

Given that North Korea has not launched a cyberattack of the scale and impact of the Sony Hack in 2014, it might seem hard to justify such a move. However, as noted above, North Korea’s capabilities are growing. Though it may not seem urgent today, if such a mechanism is implemented by the alliance, it could help reinforce defenses against future attacks. Further, the public profile of such a center could help reinforce strategic deterrence, by making it clear that the alliance is responding to the cyber threat with both deterrence by denial and deterrence by punishment approaches. This center could explore the range of full options available to respond to North Korean cyberattacks, including methods to hold North Korea accountable for its actions.

### ***Refocus Diplomatic Efforts to Prevent North Korean Weapons Testing***

**The alliance should refocus its near-term diplomatic efforts to center on preventing North Korean strategic weapons testing.**<sup>232</sup> Given the major setbacks faced by the alliance in diplomacy with North Korea since the optimism of 2018, it is probably time to recalibrate the alliance’s diplomatic approach toward the North. In particular, North Korea’s clear unwillingness to entertain the alliance’s ambitious approaches toward negotiated denuclearization and trust-building after initial progress in 2018 is good reason to scale back the ambition of the alliance’s diplomatic objectives vis-à-vis North Korea, at least for the near term. Though the signing of the US-NK Singapore Declaration,<sup>233</sup>

230 Ashley Rowland, “Former USFK commander speaks out against giving S. Korea operational control,” *Stars and Stripes*, April 29, 2013, <https://www.stripes.com/news/pacific/former-usfk-commander-speaks-out-against-giving-s-korea-operational-control-1.218742>.

231 “About us,” NATO Cooperative Cyber Defence Centre of Excellence (CCDCOE), accessed November 2020, <https://ccdcOE.org/about-us/>.

232 See Markus Garlauskas, “We Must Prevent North Korea from Testing Multiple Reentry Vehicles,” *Beyond Parallel*, November 5, 2020, <https://beyondparallel.csis.org/we-must-prevent-north-korea-from-testing-multiple-re-entry-vehicles/>.

233 *Joint Statement of President Donald J. Trump of the United States of America and Chairman Kim Jong Un of the Democratic People’s Republic of Korea at the Singapore Summit*, the White House, June 12, 2018, <https://www.whitehouse.gov/briefings-statements/joint-statement-president-donald-j-trump-united-states-america-chairman-kim-jong-un-democratic-peoples-republic-korea-singapore-summit/>.

as well as the Panmunjom Declaration and the follow-on ROK-NK Comprehensive Military Agreement<sup>234</sup> raised hopes that a major diplomatic breakthrough was underway, North Korea proved unwilling to stay on the path of denuclearization and reconciliation.

However, one tangible positive element of the diplomatic engagement of 2018 was the accompanying lack of major weapons tests. As noted above, testing is not merely symbolic—it matters for technically refining a new weapons system, as well as establishing its reliability and credibility. The strategic weapons tests of 2016 and 2017 dramatically improved the credibility of North Korea’s capability to strike the United States with nuclear weapons, while the shorter-ranged test-launches of 2019 and 2020 probably improved North Korea’s capability to overcome theater missile defenses and strike key targets in the Republic of Korea. In 2018, North Korea reaped no such benefits for its ability to threaten the alliance.

Absent some new stimuli that changes North Korea’s calculus, further testing of weapons that can threaten the Republic of Korea is probably inevitable. This could also escalate to renewed testing of ICBMs and even nuclear warheads—particularly considering the warning from Kim on January 1, 2020 that he no longer feels bound by pledges not to test ICBMs and nuclear weapons.<sup>235</sup> If North Korea were to use testing to refine reliable missiles that further shorten potential warning time and improve the ability to overcome missile defenses, such testing could also dramatically improve both the credibility and effectiveness of North Korea’s missile forces vis-à-vis the alliance.

Furthermore, such testing also has negative effects in the diplomatic sphere. It undermines the credibility of the UN Security Council’s resolutions prohibiting such activity for North Korea, as well as creating a dilemma for alliance diplomacy with North Korea. Diplomatically engaging with North Korea shortly

after such a test risks appearing to condone such testing, and might even be seen as encouraging North Korea to use such tests as leverage to gain a meeting. However, a firm alliance refusal to meet with North Korea in the weeks or month after such a test could also be problematic, as it constrains the ability of alliance diplomats to engage in potentially constructive dialogue with North Korea and risks the alliance appearing unreasonable or disengaged to other countries with a stake in diplomacy on North Korea.

Given that diplomacy did help to achieve a halt to major North Korean weapons tests in 2018, a diplomatic focus on forestalling further weapons testing looks to be a modest, but potentially achievable goal. Success, even for a few months or years, would increase the prospects for success of other long-term diplomatic goals, while also serving a practical purpose of helping to limit the expansion of the threat posed by North Korea in the years ahead. Setting the diplomatic conditions for North Korea’s return to a hiatus in major weapons tests, though not as impressive as irreversible denuclearization and lasting peace, is a far more realistic goal for ROK and US diplomats to pursue.

## Conclusion

Taken together, these five recommendations, if fully implemented, would set the alliance on a much stronger path to deter and defeat the new threat from North Korea as it continues to evolve in the years ahead in a sustained strategic confrontation. Though the US-ROK alliance’s collective military capabilities will continue to grow stronger in general, and its diplomats will continue their efforts to pressure and restrain North Korea, implementing these recommendations would help to ensure that alliance efforts more effectively meet the challenge of North Korean confrontation, deter North Korean aggression, control escalation, and reduce catastrophic risks in a conflict with North Korea.

<sup>234</sup> Song Young Moo and No Kwang-chol, *Agreement on the Implementation of the Historic Panmunjom Declaration in the Military Domain*, (as archived by the US National Committee on North Korea), September 19, 2018, <https://www.ncnk.org/sites/default/files/Agreement%20on%20the%20Implementation%20of%20the%20Historic%20Panmunjom%20Declaration%20in%20the%20Military%20Domain.pdf>.

<sup>235</sup> Choe Sang-Hun, “North Korea Is No Longer Bound by Nuclear Test Moratorium, Kim Says,” *New York Times*, December 31, 2019, <https://www.nytimes.com/2019/12/31/world/asia/north-korea-kim-speech.html>.