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The image features two flags waving against a clear blue sky. The top flag is the United States flag, with its stars and stripes clearly visible. Below it is the flag of South Korea, featuring the Taegeukgi symbol in the center and the four trigrams of the I Ching in the corners. The flags are partially overlapping and appear to be in motion.

# The Future of the US-ROK Alliance

Robert Dohner  
Markus Garlauskas  
Miyeon Oh  
Barry Pavel  
Todd Rosenblum  
Alexander Vershbow

# Mission Statement

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The Scowcroft Center for Strategy and Security works to develop sustainable, nonpartisan strategies to address the most important security challenges facing the United States and the world. The Center honors General Brent Scowcroft's legacy of service and embodies his ethos of nonpartisan commitment to the cause of security, support for US leadership in cooperation with allies and partners, and dedication to the mentorship of the next generation of leaders.

The Scowcroft Center's Asia Security Initiative promotes forward-looking strategies and constructive solutions for the most pressing issues affecting the Indo-Pacific region, particularly the rise of China, in order to enhance cooperation between the United States and its regional allies and partners. The mission of ASI is help the United States better work with Asian allies and partners in responding to the rise of China. Its mission is also to translate US policy objectives and strategic aims into nuanced messages to Asian stakeholders that incorporate Indo-Pacific voices in order to foster a community of like-minded nations committed to adapting and defending the rules-based international system. In service of these efforts, ASI leverages its mission, method, and talent to provide purposeful programming to address traditional strategic issues in the Indo-Pacific while also developing insight into emerging challenges in non-traditional areas such as global supply chains, changing trade architecture, infrastructure development, energy security, digital connectivity, and advanced technologies that are increasingly impacting the realm of national security.

# Acknowledgements

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The Scowcroft Center thanks The Korea Foundation for its generous support of our work.

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ISBN-13: 978-1-61977-159-8

Cover image: Flags of the United States and Republic of Korea, courtesy Atlantic Council.

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February 2021

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# Executive Summary

**A**s the 2020s open with a global pandemic, an enduring North Korean threat, and the continued rise of China, the US-ROK alliance faces perhaps the most complex strategic environment in its seven-decade history. To meet the range of security, political, and economic challenges in the decade ahead, the United States and Republic of Korea must develop a vision for the future of their alliance that accounts for this rapidly evolving environment. This will include the need to define an integrated strategic vision for the post-pandemic Indo-Pacific, innovate new ways forward for denuclearization efforts, and adapt the alliance's security and economic relationship to a rising China. This report by the Scowcroft Center for Strategy and Security's Asia Security Initiative, *The Future of the US-ROK Alliance*, provides an actionable roadmap for the Biden and Moon administrations, including key recommendations for the alliance's strategic role on the Korean Peninsula, across the Indo-Pacific, and around the world.

## “A New ‘National Security Alliance’: Re-setting the US-ROK Alliance for the Pandemic Era”

In chapter one, Barry Pavel, senior vice president and director of the Atlantic Council's Scowcroft Center for Strategy and Security, argues for the importance of adapting the long-standing alliance to address a dramatically changing operational landscape.

**To prepare the alliance for a post-pandemic world, Pavel recommends that the alliance:**

- **Launch a joint strategic assessment in the aftermath of the COVID-19 pandemic** that seeks to understand the core implications of the virus for national security and for the future of the US-ROK alliance and combine it with an updated assessment of the geopolitical and security situation on the peninsula, in the region, and globally;
- **Develop a new national security concept to anchor the alliance**, based on the recognition that 1) citizens in democratic societies will only support their governments' national security policies and budgets to the extent that they help protect them from pandemics as well as other major security threats, and 2) only through an integrated orchestration of national tools combined with the same from allies, harnessed by a coherent, comprehensive, long-term strategy, can a broad-based, sustained challenge of the magnitude

and breadth of that posed by China be handled skillfully and, ultimately, successfully;

- **Pursue enhancements in alliance military capabilities** geared toward increasing the ability of the alliance to handle North Korean threats of coercion, aggression, and implosion, including the specific threats of nuclear weapons launched by ballistic missiles as well as biological weapons use;
- **Take actions to address the Special Measures Agreement** by working to conclude negotiations as soon as possible while conducting discussions in a structured and predictable way so as not to undermine the strength and durability of the alliance; and
- **Initiate next steps on the operational control (OPCON) transfer path** by continuing to aim for a conditions-based transition to the Republic of Korea.

**To build out the alliance for US-China geopolitical competition, he also argues that the allies should:**

- **Diplomatically lead the world** to ensure that a “China First” global system does not come to pass by helping arrange new groupings of democratic nations to strengthen coordination among them across the key domains of the geopolitical competition including technology and the economy;
- **Level the economic playing field**, including doing much more to reduce dependence on Chinese supply chains and protect key industries from predatory Chinese practices while avoiding suggestions of complete de-coupling from China;
- **Set effective technology standards** by allying together with the other leading democracies comprising the so-called “D-10”—Australia, Canada, France, Germany, Italy, Japan, the United Kingdom, plus the European Union—to promote standards for secure 5G across the democratic world and beyond;
- **Model democratic values** of constructive democratic discourse and vibrant civil societies, freedom of speech and of the press, and the right of assembly, and other basic rights of democratic citizens; and
- **Prepare to prevent and mitigate future pandemics** by linking efforts of US and ROK governments and scientific and medical communities together to play a leading role both in the near term in a global “Counter-Coronavirus Coalition” and in the longer term on protecting the world from future pandemic threats in coordination with leading democracies.

### “The Future of the US-ROK Economic Partnership”

In chapter two, Dr. Miyeon Oh, director and senior fellow of the Scowcroft Center’s Asia Security Initiative, and Dr. Robert Dohner, nonresident senior fellow of the Asia Security Initiative, begin by arguing that the Indo-Pacific region is now facing a new geopolitical and geoeconomic environment characterized by three elements: 1) US-China strategic competition; 2) a changed view of the value of globalization and trade expansion; and 3) new technological advancements that have changed the definition of national security. The authors explore the geopolitical and geoeconomic trends shaping prospects for the US-ROK economic partnership, including the implications of the Republic of Korea’s extensive trade ties to China, embeddedness in global supply chains, and increasing technological sophistication that make the Republic of Korea central to issues of technological competition, technological development and supply of technology-intensive goods and services.

The ROK economy is highly reliant on exports, largely to China and the United States, which creates a structural vulnerability for the Republic of Korea. The Republic of Korea has been exposed to external pressure on a wide range of issues as tensions between the United States and China intensify. However, this is not just a problem for the Republic of Korea, but also for the United States, as it creates a wedge that can weaken the alliance. The authors offer specific and actionable policy recommendations that can reduce the structural vulnerability by strengthening and broadening the scope of economic cooperation between the two countries. It is important to note that it is unlikely to alter the reality that the Republic of Korea’s dependence on China’s market will remain high. Therefore, it is significant that the United States incorporate this ROK vulnerability into its strategic thinking regarding the alliance, and take steps, where possible, to mitigate rather than intensify the stresses that the Republic of Korea faces.

**To strengthen the US-ROK economic partnership, Oh and Dohner recommend that, on trade, the United States should:**

- **Revisit multilateral institutions and approaches in the Indo-Pacific**, in trade and in other areas, including by reopening discussions on joining the Trans-Pacific Partnership (now the Comprehensive and Progressive Agreement for a Trans-Pacific Partnership (CPTPP)); and
- **Clearly describe what changes should be made in the global trading order and in the WTO and other multilateral institutions**, as well as the end goals it is trying to achieve;

**Similarly, on trade, they suggest the Republic of Korea:**

- **Expand participation to include additional multi-lateral economic efforts**, including moving forward with efforts to join CPTPP; and
- **Join current multi-nation efforts on international rules and norms** such as the Ottawa Group and the US-Japan-EU initiative on WTO reform;

**On other areas, they also urge the US-ROK alliance to:**

- **Establish an economic security alliance** with other allies that collectively addresses the geopolitical challenges posed by new global threats and new commercial technologies;
- **Coordinate overlapping economic engagement efforts in the Indo-Pacific under the Biden administration’s updated US Indo-Pacific strategy and the ROK New Southern Policy**, particularly by operationalizing cooperation efforts where the US Indo-Pacific strategy overlaps with the ROK New Southern Policy’s “Prosperity” pillar
- **Launch a new, smart partnership that focuses on emerging technologies and the rapid pace of advance of the digital economy**, with a central focus on increasing product, services, and supply chain security, particularly in the ICT sector and on specific technologies such as **autonomous vehicles, artificial intelligence, 5G infrastructure, quantum computing, and semiconductors**;
- **Work together to shape a collective global response to the current pandemic and begin to prepare for future pandemics**, including efforts to enhance global resilience and health security, reduce economic impacts of pandemics, safeguard values and principles of the rules-based international system, and take the lead in energizing multilateral approaches and enhancing public-private partnerships; and
- **Cooperate to diversify global supply chains in order to increase the robustness and resilience of the existing supply chains in the Indo-Pacific**, as well as to geopolitical shocks that disrupt global supply chains, including efforts to create a steering committee with the private sector of established industries for advanced technologies that are increasingly relying on digitally integrated supply chains.

### “A Step-by-Step Strategy for Denuclearization and Peace on the Korean Peninsula: The Road Not Taken after Singapore”

In chapter three, Ambassador Alexander Vershbow, former US Ambassador to the Republic of Korea and distinguished

fellow of the Scowcroft Center for Strategy and Security, explains why the US-ROK alliance should not give up on complete denuclearization of North Korea. Accepting North Korea as a nuclear weapons state, he argues, could undermine global and regional security and increase domestic pressure on Tokyo and Seoul to acquire nuclear weapons or seek the redeployment of US nuclear weapons to Korea.

**To achieve denuclearization, Vershbow recommends building on the 2018 Singapore Summit Joint Statement. He identifies a possible multi-track, step-by-step approach for sequencing multilateral efforts moving forward that would:**

- **Begin with a “declaration for declaration” approach** that offers a symbolic end-of-war declaration and reversible easing of some sanctions as an additional incentive in exchange for a North Korean declaration of its nuclear programs and opening to international verification;
- **Break up negotiations on a peace treaty and sanctions relief** into several incremental steps to be carried out in parallel to the different stages of denuclearization;
- **Front load requirements for elimination of real capabilities**, culminating after several stages in full, final and verifiable denuclearization (FFVD) and North Korea’s adherence to the Nuclear Non-Proliferation Treaty (NPT) as a non-nuclear weapons state; and
- **Ease economic restrictions in parallel to progress on denuclearization** while negotiating, drafting, and eventually signing a peace treaty and agree to apply its terms provisionally pending FFVD.

### “The Evolving North Korean Threat Requires an Evolving Alliance”

In chapter four, Markus Garlauskas, former US National Intelligence Officer for North Korea and nonresident senior fellow in the Asia Security Initiative, 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.

**To anticipate and mitigate the risks posed by the evolving threat from North Korea, Garlauskas recommends that the US-ROK 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 con-

tinually 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);

- **Prioritize and revitalize alliance efforts to counter North Korean missile threats using the 4D (detect, defend, disrupt, destroy) approach.** 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;
- **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;
- **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; and
- **Refocus its near-term diplomatic efforts to center on preventing North Korean strategic weapons testing.** 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.

### “North Korean Non-Nuclear Threats to Stability”

In chapter five, Todd Rosenblum, Nonresident Senior Fellow of the Scowcroft Center for Strategy and Security and Markus Garlauskas identify the primary non-nuclear North Korean tactics and tools used to calibrate international and domestic perceptions of the level of instability on the Korean peninsula. They explore the risks they



pose to peace and stability on the Peninsula, as well as the geo-strategic risks they pose to the United States, China, and Japan.

**To practice vigilance and perseverance in response to Pyongyang's tactics, Rosenblum and Garlauskas argue that the US-ROK alliance should:**

- **At the strategic level**, visibly and demonstrably re-solidify the alliance and ensure international support for alliance responses to North Korean actions;
- **At the operational and tactical level**, enhance preparedness, jointness, and resiliency to reduce the potential effectiveness of North Korea's non-nuclear options;

**To achieve these goals, they recommend the allies:**

- **Resume and enhance exercises focused on countering limited North Korean aggression.** First and foremost, these exercises would signal that the US-ROK security alliance is strong. In a practical sense, they could be used to improve the preparedness of the alliance to respond quickly and effectively to North Korean limited aggression or other scenarios short of war. Large combined exercises facilitate improved crisis management by bringing together senior military officers of the two coun-

tries in a practical training environment, fostering US-ROK military cooperation at multiple levels of the chain of command, and focusing policy officials on exploring key matters that could arise in a crisis. Responsible training exercises are diplomacy by other means.

- **Bolster maritime training and patrols.** Enhanced exercises and coastal presence activities will strengthen the alliance. North Korea has a history of provocations and attacks in the area of the Northern Limit Line and the Northwest Islands, including the 2010 torpedoing of the ROK warship Cheonan and the shelling of Yeonpyeong Island, the two most violent North Korean provocations since the 1980s. As a result, preparedness and deterrence in the maritime domain could be key to either deterring or responding to North Korea's next violent provocation.
- **Leverage multinational support through the United Nations Command (UNC).** UNC and its associated Military Armistice Commission (UNCMAC) provide a multilateral mechanism to credibly investigate, consult upon and communicate the response to North Korean incursions, threats, and actions of violence that may violate the Armistice of 1953. A mechanism for multinational support for the defense of the Republic of Korea and for neutral observers should be maintained in some form as long as North Korea threatens stability on the peninsula.

# 1. A New “National Security Alliance”: Re-Setting the US-ROK Alliance for the Pandemic Era

**Barry Pavel**, *Senior Vice President and Director, Scowcroft Center for Strategy and Security, Atlantic Council*

## Introduction

Forged in 1953, in the shadow of the Korean War, the United States–Republic of Korea (US-ROK) alliance stands out in the memory of both nations because of the sacrifices that the war entailed. Yet in the decades since the Republic of Korea’s (hereinafter, South Korea or ROK) founding, both the country and the world have changed remarkably. While the alliance began with a laser-sharp focus on the conventional military threat posed by the Democratic People’s Republic of Korea (hereinafter, North Korea or DPRK)—and the backing it received from China and the Soviet Union—the United States and Republic of Korea now face a much more diffuse array of threats and challenges, as well as enormous opportunities.

As long as North Korea continues to pursue its nuclear and missile programs, US-ROK forces’ deterrent capabilities and posture must remain the bedrock of the alliance, even as the three countries continue to seek progress on denuclearization and a sustainable peace on the peninsula. But, at the same time, China has become the United States’ chief geopolitical competitor. China has displayed willingness to use both economic tools—such as in response to the joint Terminal High Altitude Area Defense (THAAD) missile defense deployment—to coerce the Republic of Korea and seek to divide the two allies, as well as military capabilities—such as on July 23, 2019, when Chinese aircraft violated ROK airspace in conjunction with Russian forces on the same morning.<sup>1</sup> The COVID-19 pandemic will continue to heighten the already rapidly intensifying US-China geopolitical competition. Despite the virus originating from China’s irresponsible wet market practices (for the second time in twenty years), the Chinese Communist Party has sought to advance its own global agenda by shaping a narrative that postures China and other authoritarian states as

more agile in crisis management and economic recovery. Moreover, China has not hesitated to use disinformation operations in key countries to advance this agenda.<sup>2</sup>

Thus, the challenges that the alliance faces are broader than ever before, including the conventional and nuclear threat posed by North Korea; the comprehensive and wide-ranging set of challenges (and some opportunities) presented by a rising China, including military, economic, technological, and, above all, ideological; and the threat of pandemics, not just COVID-19 and its subsequent waves but other pandemics to come. This suggests the need to conceive of the future of the US-ROK alliance as broader, as a “national security alliance,” not just a military alliance. The most daunting security threats and geopolitical challenges are so varied that they must be addressed by a whole-of-government approach by both countries, in which the military forces of the allies play an essential (but not the only) role.

Any effective alliance adapts when conditions in its environment change, and some such alliances have proven to adapt extraordinarily well to the extent that shared values between the allies still provide the basis for the strategic relationship. In the case of the United States and Republic of Korea, those values include freedom, open-market democracy, and the rule of law. The US-ROK alliance surely fits that model of a long-standing alliance that can and should be adapted for a dramatically changing operating landscape.

## The Highly Dynamic Geopolitical and Regional Landscape

The landscape in which the US-ROK strategic alliance has to operate between now and the 2030s is highly dynamic. The key threats, challenges, and opportunities that should be the focus of a broader alliance relationship are those posed by 1) the challenge of managing China’s rise as a geopolitical competitor of the United States; 2) the challenges associated with security in what

<sup>1</sup> Josh Smith, “Explainer: Competing claims make northeast Asian sea a flashpoint,” *Reuters*, July 25, 2019, <https://www.reuters.com/article/us-southkorea-russia-aircraft-explainer/explainer-competing-claims-make-northeast-asian-sea-a-flashpoint-idUSKCN1UK0NO>.

<sup>2</sup> William Yang, “How Chinese propaganda is reframing the coronavirus narrative,” *Deutsche Welle*, March 16, 2020, <https://www.dw.com/en/how-chinese-propaganda-is-reframing-the-coronavirus-narrative/a-52796337>; David O. Shullman, “How China is exploiting the pandemic to export authoritarianism,” *War on the Rocks*, March 31, 2020, <https://warontherocks.com/2020/03/how-china-is-exploiting-the-pandemic-to-export-authoritarianism/>.

future historians might call “the pandemic era”; and 3) North Korea.

### **US-China Global Geopolitical Competition**

Global geopolitics are shaping the US-ROK relationship more than ever before, in particular due to the growing competition between the United States and China across a wide array of domains, including military, technological, economic, informational, and, at its core, ideological. The ideological competition revolves around a central question: Should societies be organized around the consent of the governed, or by the authority of the rulers? Both the Republic of Korea and the United States continue to share core democratic values that would suggest that both countries would want to see the ideological competition result in an outcome favorable for the democratic world. Thus, the US-ROK alliance will have to account for the continuing intensification of this competition in substantial but nuanced ways.

The growing global Chinese challenge is one that directly confronts the values that underlie the US-ROK alliance: the way that democracies organize their societies, the rule of law, free markets, human rights, free speech, and more. Chinese President Xi Jinping is different from his predecessors in that he is no longer “hiding his strength and biding his time.” As of the 23<sup>rd</sup> Communist Party Plenum, President Xi came out boldly and aggressively with China’s long-term goals, which are nothing short of global domination by the one-hundredth anniversary of the founding of the People’s Republic of China in 2049.<sup>3</sup> Since then, the COVID-19 pandemic that emerged from China due to certain irresponsible and unsanitary practices at its wet markets has killed more than two million innocent people around the globe. In the

midst of this ongoing crisis, China’s diplomacy, military operations, information operations, and technology policies have become increasingly aggressive.<sup>4</sup> Clearly, Chinese Community Party (CCP) leaders see the current crisis as an inflection point at which they can advance their aim of global power at the expense of the democratic model.

As the US-ROK alliance adapts to address the global implications of China’s continued rise, it also must reckon with China’s increasing national security threat to the Republic of Korea itself, particularly in the Yellow Sea.<sup>5</sup> Just as China has been seeking to consolidate its control of the East and South China Seas, it also has been doing so, albeit more quietly, in the Yellow Sea, which lies between China’s northeastern coastline and the Korean peninsula. China has been attempting to assert *de facto* control over at least 70 percent of the sea area since the early 2010s.<sup>6</sup>

The Yellow Sea is strategically important to China for a number of reasons:

- 1) it represents a key piece of a larger zone of maritime defense protecting China’s coastal economic powerhouse regions and Beijing;<sup>7</sup>
- 2) the presence of US forces could constrain Chinese naval movement, particularly deployment of the People’s Liberation Army Navy’s (PLAN) North Sea Fleet;<sup>8</sup>
- 3) US forces could use the Yellow Sea to monitor key naval bases in Qingdao and Dalian, where the PLAN’s fledgling aircraft carrier strike force is homeported;<sup>9</sup> and

3 Franklin D. Kramer, *Managed Competition: Meeting China’s Challenge in a Multi-vector World*, Atlantic Council, December 2019, <https://www.atlanticcouncil.org/wp-content/uploads/2019/12/Meeting-Chinas-Challenges-Report-WEB.pdf>.

4 Barry Pavel and Peter Engelke, “Irresponsible wet market practices led to COVID-19. China hasn’t learned its lesson,” Euronews, April 30, 2020, <https://www.euronews.com/2020/04/30/irresponsible-wet-market-practices-led-to-covid-19-china-hasn-t-learned-its-lesson-view>.

5 See below “Background: China and the Yellow Sea.”

6 Yong-won Ryu, “Donggyeong 124 Doseon Neomji Mallaneun Jungjuk, Seohaebada-do Witaeropda” [China says ‘Don’t Cross the 124 east longitude line’...Yellow Sea under threat], Chosun Ilbo, May 21, 2020, [http://bemil.chosun.com/nbrd/bbs/view.html?b\\_bbs\\_id=10158&pn=1&num=5806](http://bemil.chosun.com/nbrd/bbs/view.html?b_bbs_id=10158&pn=1&num=5806).

7 The three major economic centers include the Bohai Economic Rim in the northern coast, Yangzi River Delta Economic Zone in the eastern coast, and Pearl River Delta Economic zone in the southern coast, and they make up for 36 percent of China’s GDP in 2017. The PLAN designates the Yellow Sea, and the East and South China Seas as “near seas” jinhai and it perceives these seas as composing a buffer zone between the China’s coastal economic centers and the First Island Chain—the geostrategic line that connects a chain of islands from the southern tip of Kyushu, Japan, through various islands to Taiwan, then down to the Philippines archipelago facing the South China Sea. See: James R. Holmes and Toshi Yoshihara, *Red Star Over the Pacific: China’s Rise and the Challenge to US Maritime Strategy*, (Annapolis, MD: Naval Institute Press, 2018).

8 Hyeon-seok Jeon, “Hanmi Jamsuham Tamji? Jungjuk, Hangukjjok Seohaee Daehyeong Bupyo 9 Gae Ttuiwo” [Monitoring US-ROK submarines? China deploys 9 large scale buoys in the Yellow Sea], Chosun Ilbo, September 14, 2018, [https://news.chosun.com/site/data/html\\_dir/2018/09/14/2018091400242.html](https://news.chosun.com/site/data/html_dir/2018/09/14/2018091400242.html).

9 Qingdao harbors China’s first aircraft carrier Liaoning and Lushunkou in Dalian is home port to China’s second aircraft carrier Shandong. Because the PLAN conducts aircraft carrier strike force exercises in the Yellow Sea, China is wary that US or ROK submarines could be monitoring its aircraft carrier development. Aircraft carriers are crucial to China’s goal of dominating Asia because they could significantly increase China’s power projection capability. Park Chang-kwon, a senior research fellow at Korea Institute for Defense Analyses (KIDA), points out that power projection capabilities require not just the acquisition and modernization of weapons systems but also countless drills and professionalized soldiers. The United States believes, he suggests, it is experience and troop quality that China is at a distinct disadvantage. Thus, he argues that China does not want the United States to obtain more information about weaknesses in China’s navy. See: Chang-kwon Park, “Junggugui Seohae Mit KADIZ Nae Gunsahwal-dong Jeungga-ga Juneun Sisajeom” [Implications of Chinese military activities in the Yellow Sea and KADIZ], KIMS Periscope, Korea Institute for Maritime Strategy, <http://www.kims.or.kr/peri146/>.

- 4) it could provide a future staging area for the Chinese to project military forces, including against the Republic of Korea.

China has used the Yellow Sea for such military operations before—in response to the ROK’s deployment of a single THAAD missile defense unit, China deployed about a hundred warships in the Yellow Sea, including the aircraft carrier *Liaoning*, to conduct a live-fire exercise.<sup>10</sup> This was paired with a firing exercise of land-based medium-range ballistic missiles, Dongfeng 21Cs, which are capable of striking Seoul.<sup>11</sup> A future crisis could see China again use the Yellow Sea as a key space to exert this kind of direct military pressure on the Republic of Korea.

### Background: China and the Yellow Sea

The Yellow Sea is a rather narrow, semi-enclosed sea area that is less than 400 nautical-miles wide from east to west at most points.<sup>12</sup> Naturally, the Republic of Korea and China have overlapping maritime entitlements in that sea area under the United Nations (UN) Convention on the Law of the Sea (UNCLOS). While the two countries have yet to reach an agreement on the delimitation of maritime boundaries, China has been attempting to assert control over the majority of that sea area.<sup>13</sup>

In November 2013, China unilaterally declared an Air Defense Identification Zone (ADIZ) that encroaches

into the section of the ROK ADIZ (“KADIZ”) over the Yellow Sea.<sup>14</sup> China has sought to normalize this newly expanded ADIZ by deploying countless numbers of surveillance aircraft and warplanes for both presence and military intelligence-gathering operations, with increasing frequency and aggression.<sup>15</sup> In the Yellow Sea, China unilaterally imposed an extended maritime boundary that lies well east of the median line between the Republic of Korea and China.<sup>16</sup> The Republic of Korea has maintained that the median line, drawn equidistant from the coastlines of Korea and China, should be used as the maritime boundary.<sup>17</sup> In order to seek to enforce its new asserted boundary, China conducted a familiar set of expansionist activities, including deploying increasing numbers of survey vessels and warships around the new boundary and setting up buoys around the boundary to act as both territorial markers and a surveillance tool.<sup>18</sup>

### The Pandemic Era

The COVID-19 pandemic is generating historic consequences in terms of geopolitical tensions, loss of human life, global economic contraction, and more, and unfortunately, there is much more to come in the near-term future. Not only will the global impact of COVID-19 be felt for decades even after the virus is under control, but the likelihood of additional pandemics is also increasing, as humans continue to encroach upon

<sup>10</sup> Chang-kwon Park, “Implications of Chinese military activities.”

<sup>11</sup> Gi-jong Geum, “Sadeu Apbak Muryeoksiwi? Ji, Gunsu Hullyeon Iryejeok Gonggae” [Flexing muscles to oppose THAAD? China reveals unprecedented military exercises], MBC, December 3, 2016, [https://imnews.imbc.com/replay/2016/nwdesk/article/4175916\\_30245.html](https://imnews.imbc.com/replay/2016/nwdesk/article/4175916_30245.html).

<sup>12</sup> Seokwoo Lee and Clive Schofield, “The Law of the Sea and South Korea: The Challenges of Maritime Boundary Delimitation in the Yellow Sea,” the National Bureau of Asian Research, April 23, 2020, <https://www.nbr.org/publication/the-law-of-the-sea-and-south-korea-the-challenges-of-maritime-boundary-delimitation-in-the-yellow-sea/>.

<sup>13</sup> Yong-won Ryu, “China says ‘Don’t Cross the 124 east longitude line.’”

<sup>14</sup> Chico Harlan, “China Creates New Air Defense Zone in East China Sea amid Dispute with Japan,” Washington Post, November 23, 2013, [https://www.washingtonpost.com/world/china-creates-new-air-defense-zone-in-east-china-sea-amid-dispute-with-japan/2013/11/23/c415f1a8-5416-11e3-9ee6-2580086d8254\\_story.html](https://www.washingtonpost.com/world/china-creates-new-air-defense-zone-in-east-china-sea-amid-dispute-with-japan/2013/11/23/c415f1a8-5416-11e3-9ee6-2580086d8254_story.html).

<sup>15</sup> China has sent warplanes into the Korean ADIZ more than fifty times in 2016, more than seventy times in 2017, and around 140 times in 2018. The ROK military has noted that such flights were conducted with more aggression and brazenness over time. Analysts have also noted that many of these flights were likely intended to collect information about the ROK’s military radar frequencies in preparation for jamming operations during a conflict, or to gauge the ROK air force’s readiness. Sang-ho Yoon, “[Yunsanghoui Milliteo-ri Poseu] Junggugui KADIZ Dobal...Seohae Hyanghan Yayok” [Yoon Sangho’s Military Posture: China’s provocations in KADIZ indicate Yellow Sea ambitions], Donga Ilbo, March 13, 2019, <https://tinyurl.com/5a6zc254>; Terence Roehrig, “South Korea: The Challenges of a Maritime Nation,” National Bureau of Asian Research, December 23, 2019, <https://tinyurl.com/10pklvu5>; “Chinese warplane violates Korea’s air defense zone again,” Korea Herald, November 29, 2019, <https://tinyurl.com/96ay8tyh>.

<sup>16</sup> Jeong Yong-su, “China tried muscling South Korea in Yellow Sea,” Korea JoongAng Daily, November 29, 2013, <https://tinyurl.com/1c64filq>.

<sup>17</sup> Terence Roehrig, “Challenges of a Maritime Nation.”

<sup>18</sup> From 2016, China has been sending an increasing number of topographical survey ships and warships on monitoring missions around the 124 degrees east longitude. PLAN warships reportedly even crossed the 124 degrees east longitude into the Korean side around ten times in 2016 and more than eighty times in 2017. Moreover, since 2017 about six to eight PLAN warships have been operating everyday near the ROK-owned leodo island located close to the 124-degree longitude. Then, between February and August 2018, China installed over a dozen buoys with the label “People’s Republic of China” along the 124 degrees east longitude, with four positioned very close to an area where the ROK navy frequently conducts operations. Naval analysts also point out that they are likely being used to monitor naval activities, including passing warships and submarines. See: Sung-ho Cho, “Junggugui Ittareun Seohae Chimbeom, Mueoseul Gyeonyanghan Himjarangin-ga?” [Why China is militarily encroaching into the Yellow Sea], Monthly Chosun, March 2, 2018, <https://tinyurl.com/152391y8>; Doo-won Ahn and Jeong-beom Kim, “Jungjamsuham Seohaebadak Satsachi Hulteotda” [Chinese submarines sweep the Yellow Sea floor], Maeil Gyeongjae, September 22, 2019, <https://tinyurl.com/12qhzjjj>; Terence Roehrig, “Challenges of a Maritime Nation”; Min-seok, Kim, “[Gimminseogui Mr. Milliteo-ri] Haejeone Ji-myeon Nara Manghaneunde, Haeyangjeollyak Eomneun Hanguk” [Kim Minseok’s Mr. Military: Losing a maritime war will be fatal, yet Korea still lacks a maritime strategy], JoongAng Ilbo, March 1, 2019, <https://tinyurl.com/o5ztb9l2>; Hyeon-seok Jeon, “Hanmi Jamsuham Tamji? Jungguk, Hangukjjok Seohae Daehyeong Bupyo 9 Gae Ttuiwo” [Monitoring US-ROK submarines? China deploys 9 large scale buoys in the Yellow Sea], Chosun Ilbo, September 14, 2018, <https://tinyurl.com/2oxz7l6b>.

wildlife ecosystems and eschew public health best practices in a world of rapid international travel.<sup>19</sup>

The incredible destructive potential of pandemics in a globalized world suggests that “pandemic security” will be at the top of most countries’ security agendas for years, if not decades, to come. The lack of coordination of the initial global response to COVID-19 has made clear the critical importance of US leadership regarding the next outbreak of a new infectious disease, which could come at any time. At the same time, the Republic of Korea’s very effective ongoing response to COVID-19 to ensure minimal numbers of cases and deaths while responding effectively to new outbreaks has earned it international recognition for leadership during the pandemic crisis. Thus, this may be a strategic moment for the US-ROK alliance to broaden its priority agenda to include the increasingly critical issue of global health security.

### North Korea

The continued pursuit by North Korea of its nuclear weapons program remains a threat not only to the Republic of Korea, but also to the United States, its allies, and the world. Despite the bold move by the United States to ramp up engagement in late 2017 and the promising appearances of the US-DPRK summits,<sup>20</sup> attempts to encourage North Korea to denuclearize have stalled again. North Korea remains both the most significant direct military threat to the Republic of Korea as well as the greatest potential threat to nuclear crisis stability globally. One also cannot rule out potentially intensified DPRK development of its biological weapons programs in the wake of COVID-19. Thus, addressing the significant security challenges that North Korea poses today and into the future should continue to be a cornerstone of the US-ROK alliance.

The strategic situation on and around the Korean peninsula always has been central to the US-ROK alliance, and it will remain so. Although in recent years we have seen intermittent progress at the rhetorical and diplomatic level, the manifold security threats posed by North Korea not only have not gone away, but they are likely to get worse. First, a

relatively unconstrained DPRK nuclear and missile arsenal, which is where current trends are headed, would be a threat not only to the Republic of Korea and other US regional allies such as Japan and Australia but also to nuclear crisis stability globally. In a crisis, North Korean leadership may not share US theories on strategic deterrence and exquisite escalation dynamics; the chances for misinterpretation of intended signals and incremental escalatory measures are high. Moreover, there can be little confidence that the policy process undergirding North Korean leader Kim Jong Un’s decision making during a crisis would be sound and rational. Thus, an accident or incident between US or ROK and DPRK forces, in a scenario in which North Korea possesses dozens of long-range nuclear missiles, could escalate quickly into one of the most dangerous nuclear crises in history.<sup>21</sup> Averting such a scenario must be a central focus of the deterrent posture of the US-ROK strategic alliance over the course of the 2020s.

Second, DPRK conventional forces are continuing to conduct exercises, maintaining roughly the same level of military readiness and spending, and sustaining their overall force posture for conventional military operations. It is centrally important to remember that North Korea has one of the largest military forces in the world with the Korean People’s Army (KPA) Ground Force, its army, numbering 1.1 million, more than double the ROK army. It also retains highly capable Special Operations Forces; it now wields one of the world’s leading (and ever-improving) cyber forces and has growing capabilities in other domains, too.<sup>22</sup>

Third, the impacts of COVID-19 on North Korea and potential exacerbation of its dire economic hardships are unclear, making strategic analysis of regime stability an enduring challenge for the alliance. While North Korea officially has maintained that it has not had a single confirmed case of COVID-19 up until early November 2020, media reports lend credence to the view that the country has had to contend with a serious COVID-19 crisis and likely worsening economic turmoil as a result since the beginning of the year (see Figure 1).<sup>23</sup> Unfortunately, these developments make the already opaque domestic situation in DPRK even

19 Barry Pavel and Peter Engelke, “Irresponsible wet market practices led to COVID-19. China hasn’t learned its lesson,” *Euronews*, April 30, 2020, <https://tinyurl.com/o2bfbcya>; David Crow, “The next virus pandemic is not far away,” *Financial Times*, August 6, 2020, <https://tinyurl.com/3w8cxxrw>.

20 Evelyn N. Farkas, “After years of frustration, a US-South Korean strategy on North Korea emerges,” *NBC News*, February 17, 2018, <https://www.nbcnews.com/think/opinion/after-years-frustration-u-s-south-korean-strategy-north-korea-ncna848956>.

21 Barry Pavel and Robert A. Manning, *Rolling Back the Growing North Korean Threat*, Atlantic Council, July 2017, <https://tinyurl.com/xfbhx6c4>.

22 Chung min Lee and Kathryn Botto, “Korea Net Assessment 2020: Politicized Security and Unchanging Strategic Realities,” *Carnegie Endowment for International Peace*, March 18, 2020, <https://tinyurl.com/3asl6s3>; Kim Min-seok, *The State of the North Korean Military*, Carnegie Endowment for International Peace, March 18, 2020, <https://tinyurl.com/3asl6s3>; Joseph Bermudez, “North Korean Special Operations Forces: Hovercraft Bases (Part I),” *Beyond Parallel*, January 25, 2018, <https://tinyurl.com/36l6t88a>; Alexandre Mansourov, *North Korea’s Cyber Warfare and Challenges for the US-ROK Alliance*, Korea Economic Institute of America, December 2, 2014, <https://tinyurl.com/7i5n5xts>.

23 Seok-jo Roh, “Bukani Korona 0 Myeong? WHO ‘1 Manmyeong Geomsa, Hwakjinja Eopdate’” [DPRK has 0 confirmed cases? WHO ‘10,000 tested, no confirmed cases’], *Chosun Ilbo*, November 10, 2020, <https://tinyurl.com/qjmsbrpk>; “North Korea declares emergency over suspected Covid-19 case,” *Guardian*, July 26, 2020, <https://tinyurl.com/wwwrn5dr>.

more difficult to assess accurately.<sup>24</sup> The Kim regime has frequently resorted to provocations in times of internal difficulties, but, due to the lack of clarity surrounding the near-term internal situation in North Korea, it is challenging to speculate when or how these provocations are likely to occur.<sup>25</sup> These three factors suggest that the foundational threat to the alliance posed by North Korea is unlikely to disappear anytime soon.

**Table 1. Open-Source Information on North Korea's Economic and Health Crises in 2020**

DATE	EVENT
January-February	DPRK shuts down cross-border trade with China. North Korean exports to China decline 74 percent to \$10 million compared to the same period in 2019. <sup>26</sup> DPRK officials announce during a series of unofficial lectures that COVID-19 had spread in three parts of the country, including North Hamgyong province. <sup>27</sup>
March	Residents of Pyongyang stop receiving the usual rations, and food stockpiles for the city reportedly run out, with unclear repercussions. <sup>28</sup>
April	DPRK authorities in the countryside begin seizing food supplies to siphon off to Pyongyang. <sup>29</sup> A series of deaths in DPRK hospitals occurs due to "pneumonia-like symptoms." <sup>30</sup>
June	Kim holds an extraordinary Politburo meeting to discuss measures to "ensure the livelihood of Pyongyang residents." <sup>31</sup> Nine-hundred people around the country are under quarantine in a state facility for contracting COVID-19. <sup>32</sup> An outbreak at two major factories in the DPRK industrial center of Chongjin city, the third largest in North Korea, leads officials to seal it off from the rest of the country. <sup>33</sup>

24 In September 2017, the UN and the Trump administration imposed a series of sanctions that banned nations and entities from engaging in trade, business, and financial transactions with North Korea in response to North Korea's sixth nuclear test on September 3, 2017. In particular, UN humanitarian workers claimed that the Trump administration's financial sanctions seriously curbed humanitarian relief efforts to North Korea. The resultant delays and funding shortfalls led the UN to reduce its 2018 relief programming and this caused preventable deaths amounting to 3,968, according to research by Dr. Kee B. Park, the director of the North Korea Program at the Korean American Medical Association. For experts' analyses of the economic impact of the COVID-19 pandemic on North Korea, see: Roh Suk-jo, "Jejae Korona Gyeopchyeo, Pyeongyangkkaji Jol-do Jikjeon" [Coronavirus on top of sanctions: even Pyongyang is about to faint], *Chosun Ilbo*, June 18, 2020, <https://tinyurl.com/3cl883zy>; Zachary Cohen and Richard Roth, "UN passes fresh sanctions on North Korea," *CNN*, September 12, 2017, <https://tinyurl.com/4wbnjddk>; Christy Lee, "Humanitarian Groups Say Sanctions Impede Aid to North Koreans," *VOA*, March 26, 2017, <https://tinyurl.com/17cx14if>; Kee B. Park, Miles Kim, and Jessup Jong, "The Human Costs of UN Sanctions and Funding Shortfalls for Humanitarian Aid in North Korea," *38 North*, Stimson Center, August 22, 2019, <https://www.38north.org/2019/08/parkkimjong082219/>.

25 Sangbeom Yoo and Sangjin Kim, "The Pattern of North Korea's Local Military Provocations," *the Korean Journal of International Studies* 15, no.1 (April 2017): 71-84, DOI : 10.14731/kjis.2017.04.15.171.

26 Bradley O. Babson, "The North Korean Economy Under Sanctions and COVID-19," *38 North*, Stimson Center, May 22, 2019, <https://tinyurl.com/1w4qwjec>; Roh Suk-jo, "Jejae Korona Gyeopchyeo, Pyeongyangkkaji Jol-do Jikjeon" [Coronavirus on top of sanctions: even Pyongyang is about to faint], *Chosun Ilbo*, June 18, 2020, <https://tinyurl.com/3cl883zy>.

27 Jieun Kim, "North Korean City of Chongjin on Lockdown After New COVID-19 Outbreak," *Radio Free Asia*, June 24, 2020, <https://tinyurl.com/cdjl8aow>.

28 Myung-sung Kim, "Buk, Naebudansok Syo... Pyeongyangkkaji 3 Gaewol Singnyangbaegeup Kkeunkyeo Minsim Pokbal Jikjeon" [North's provocations are diversionary... North Koreans at boiling point after 3 months' worth of rations for Pyongyang run dry], *Chosun Ilbo*, June 25, 2020, <https://tinyurl.com/ounjwjza>; Roh Suk-jo, "Jejae Korona Gyeopchyeo, Pyeongyangkkaji Jol-do Jikjeon" [Coronavirus on top of sanctions: even Pyongyang is about to faint], *Chosun Ilbo*, June 18, 2020, <https://tinyurl.com/3cl883zy>.

29 Jieun Kim, "Rural North Koreans Forced to Provide Food Aid to Privileged Pyongyang," *Radio Free Asia*, May 7, 2020, <https://tinyurl.com/5b9u2k9z>.

30 Jieun Kim, "Ruling Party Lecturers Admit COVID-19 is Spreading in North Korea, Contradicting Official Claims," *Radio Free Asia*, April 17, 2020, <https://tinyurl.com/10rbqhf5>.

31 Seon-taek Wang, "Buk, Gimjeongeun Jujae Dang Jeongchiguk Hoeui...Daebuk Jeondan Eongeup Eopseo"[Kim Jong-eun chairs politburo meeting... no mention of propaganda flyers from South Korea], *YTN*, June 8, 2020, <https://tinyurl.com/furevauo>.

32 Seul-gi Jang, "Buk, Korona19 Gwallyeon Siseol Gyeok-ri Yak 860Myeongtpeonyangeun Eopda?" [North Korea has 860 in Covid-19 facilities but Pyongyang has nobody quarantined], *Daily NK*, June 11, 2020, <https://tinyurl.com/2ukejcw7>.

33 Jieun Kim, "North Korean City of Chongjin on Lockdown After New COVID-19 Outbreak," *Radio Free Asia*, June 24, 2020, <https://tinyurl.com/cdjl8aow>.

July	<p>DPRK government makes military rations available to civilians in Pyongyang.<sup>34</sup></p> <p>Chairman Kim dismisses several senior officials of the National Emergency Quarantine Command, responsible for preventing the spread of COVID-19 in areas that bordered with China and Pyongyang, despite North Korea maintaining that there are zero confirmed cases within its borders.<sup>35</sup></p> <p>A resident in South Pyongan province tells Radio Free Asia that the DPRK quarantine command had completely failed in the inland areas of the province, with “many people... dying after showing symptoms of COVID-19.”<sup>36</sup></p> <p>Authorities force twenty residents of the city of Kaesong to quarantine in Pyongyang and lock down the city following a declaration of a national emergency a week after a North Korean defector swam back to the Republic of Korea to emerge in the vicinity of Kaesong.<sup>37</sup></p>
August	<p>North Korea is struck by unprecedented flash floods across the country, devastating the economy, but Pyongyang refuses international aid for fear of COVID-19 spread.<sup>38</sup></p> <p>Pyongyang makes an emergency order for the military and police to shoot on sight any North Korean citizens attempting to cross the Sino-Korean border as part of its increasingly draconian measures to prevent the spread of COVID-19.<sup>39</sup></p> <p>Military authorities quarantine an entire company of soldiers, one of the ten companies composing the 25<sup>th</sup> border guard brigade patrolling the border with China.<sup>40</sup></p>
September	<p>North Korean soldiers shoot and burn a ROK official found in North Korean waters. Pyongyang says it was an anti-COVID-19 measure.<sup>41</sup></p>

## Policy Recommendations Toward a National Security Alliance

In light of the highly dynamic projected geopolitical landscape which includes a continually rising, comprehensive geopolitical challenge posed by China and its authoritarian partners (e.g., Russia), the growing threat of pandemics, and the continually increasing North Korean threat, the US-ROK alliance should be adapted significantly. These are nothing like the conditions that were extant when the alliance was formed. The array of threats and challenges are varied, broad, and unpredictable, requiring the harnessing and integration of national instruments of the two allies in ways not previously required. The alliance will have to be broader in order to effectively defend ROK and US security through the 2020s and 2030s.

Outlined below are specific, recommended adaptations of the alliance to be able to effectively protect Korean and US national interests in the face of this trio of major challenges.

First, regarding North Korea, it is essential that the combined forces of the US-ROK alliance sustain their readiness for a wide variety of contingencies, including not only the continuing threat of North Korean incursions, coercion, and invasion, but also that of North Korean implosion. The perceived disappearance of Kim Jong Un during the COVID-19 crisis reminded the world not just how little we know about the North Korean leadership but also just how fragile the North Korean regime is and the potential concomitant instability that might occur in the wake of a sudden change of leadership in the Hermit Kingdom.

34 “Pyeongyangeseo-do Tgullyangmit Pureotdatt Tegyeou Matchwo Djigeupbun Singnyang Baegeupte” [Pyongyang city opens up military rations to civilians, just about making up for overdue rations], *Daily NK*, August 26, 2020, <https://tinyurl.com/2obuk8m9>.

35 Hyemin Son, “‘Virus Free’ North Korea Fires Health Officials for Quarantine Failures,” *Radio Free Asia*, July 9, 2020, <https://tinyurl.com/4aescj28>.

36 Ibid.

37 Sewon Kim, “North Korea Isolates Kaesong Residents in Pyongyang on Coronavirus Fears,” *Radio Free Asia*, August 4, 2020, <https://tinyurl.com/3z2shb6g>.

38 Choe Sang-Hun, “North Korea, Fighting to Hold Back Virus and Floods, Says No Thanks to Outside Aid,” *New York Times*, August 14, 2020, <https://tinyurl.com/1ha8xy3t>.

39 Sewon Kim, “North Korea Orders Troops and Police to Shoot Citizens Who Approach the Chinese Border,” *Radio Free Asia*, August 26, 2020, <https://tinyurl.com/1e985dae>.

40 Sewon Kim, “North Korea Army Quarantines Entire Company on Coronavirus Fears,” *Radio Free Asia*, August 31, 2020, <https://tinyurl.com/fijwzwy1>.

41 “North Korea ‘killed and burned South Korean official,’” *BBC*, September 24, 2020, <https://tinyurl.com/1d5qyzxo>.

Thus, the two allies not only must sustain a credible deterrent, but also a substantial force that can be employed as needed to limit the instability that would ensue in the wake of a sudden DPRK leadership succession crisis. Chaos in North Korea due to regime implosion is a scenario that has been written about extensively.<sup>42</sup> For the purposes of this chapter, suffice it to say that the implosion scenario remains a top concern. We may not know how tenuous Kim Jong Un's grip on power really is until the precise time when he loses control. Therefore, a primary mission of the alliance should continue to be to prepare effectively for such a scenario, which also likely will include the direct intervention of Chinese forces to seek to restore stability on the peninsula.

The military alliance also needs to continue adapting to be able to counter the threat of significant improvements in North Korean nuclear capabilities through the remainder of this decade.<sup>43</sup>

However, there is broader work to be done, in particular to build strategy, capability, and capacity around, above, and beyond the core military alliance to handle the new, looming challenges posed by a nationalistic, authoritarian China and pandemics. What is needed now is a *national security alliance*, which includes not just an enhanced military alliance but also broader national security policies and capabilities that would be built up and linked between the two allies. This significant adaptation of the alliance should include all of the measures outlined below.

### **Adapting the Alliance to a Post-Pandemic World**

*Joint US-ROK Strategic Reassessment Post-COVID-19.* COVID-19 constitutes a major, historic strategic shock that is still playing out. It is certain that the pandemic will affect geopolitics, the global economy, and a lot more.<sup>44</sup> The alliance will not be immune to these shifting tectonic plates and therefore should not continue with business as usual. Thus, the United States and Republic of Korea should undertake a broad strategic review of the current and projected impacts of the pandemic at all levels and in all domains, as well as other major factors in the strategic environment. The two National Security Councils should oversee this joint review, the “Joint US-ROK Strategic Reassessment Post-COVID-19.” The reassessment should seek to understand the core implications of the virus for national security and for the future of the US-ROK alliance and

combine it with an updated assessment of the geopolitical and security situation on the peninsula, in the region, and globally. This comprehensive reassessment should begin with a joint foresight program that looks ahead to geopolitical scenarios that might result from the virus, and then works backward to try to shape those outcomes in the most favorable direction possible for the two allies.

#### *New National Security Concept Anchoring the Alliance.*

Second, this reassessment should lead to a broader approach to anchoring the US-ROK alliance. Neither the set of challenges posed by China, nor the threat of pandemics, can be handled with the military in the lead nor as the only instrument to be wielded to protect the alliance's interests. The military is important for effectively addressing both challenges, providing essential readiness, deterrence, and operational capabilities to deter and dissuade Chinese coercion and aggression, as well as important intelligence, transport, logistics, command and control, and other capabilities for supporting efforts to help prevent and manage pandemics.

However, clearly, both challenges demand a much broader, integrated approach to security. Chapter 2 of this report address some of those challenges, such as supply chains, in great detail. The most important point here is two-fold:

- First, that from hereon in, citizens in democratic societies will only support their governments' national security policies and budgets to the extent that they help protect them from pandemics as well as other major security threats.
- Second, only through an integrated orchestration of national tools (including diplomatic, military, technological, economic, informational, cultural, etc.) combined with the same from allies, harnessed by a coherent, comprehensive, long-term strategy, can a broad-based, sustained challenge of the magnitude and breadth of that posed by China be handled skillfully and, ultimately, successfully.

Thus, our concept of “national security” needs to be significantly broadened. This is not at all an argument for militarization of national security; rather, it is an acknowledgement that a nation's real security—the security of citizens in the nation—includes protection against pandemics as well as defense against excessive Chinese influence, coercion, economic

42 For an analysis of the process of a regime collapse in North Korea, see Robert Kaplan's interview with Robert Collins: Robert D. Kaplan, “When North Korea Falls,” *the Atlantic*, October 2006, <https://tinyurl.com/2hp37fy9>; David Maxwell, “Kim Jong Un's Health and What Comes Next,” *Foundation for the Defense of Democracies*, April 21, 2020, <https://tinyurl.com/1a59dgkf>. For an analysis on the probability of a North Korean regime collapse, see: Oriana S. Mastro, “All in the Family: North Korea and the Fate of Hereditary Autocratic Regimes,” *Survival* 62 (2020): 78-93, <https://tinyurl.com/1fgxn1lo>.

43 This chapter assumes that there is no significant change in the on-again/off-again sets of negotiations among North Korea, the ROK, and the United States regarding a peace regime and the denuclearization of the Peninsula.

44 For an assessment of the geopolitics of the coronavirus, see: Mathew J. Burrows and Peter Engelke, “What World post-COVID-19? Three Scenarios,” *New Atlanticist*, Atlantic Council, June 8, 2020, <https://tinyurl.com/5hko4y0t>.



espionage, and the threat of outright military aggression. If the two nations of the Republic of Korea and the United States continue to share core values, then this broadening and significant adaptation of the alliance will be as effective in this century as the military-centric alliance was in the last.

**US-ROK Military Capability Enhancements.** In addition, a set of military capability enhancements should be enacted to strengthen deterrence amidst these changing security challenges. These enhancements—with no attention paid to the number of US troops stationed in and around Korea, as it is an irrelevant consideration—should be geared toward increasing the ability of the alliance to handle North Korean threats of coercion, aggression, and implosion, including the specific threats of nuclear weapons launched by ballistic missiles as well as biological weapons use. Such capabilities should include but not be limited to<sup>45</sup>:

- missile defenses;
- biological defenses;
- counter-unmanned systems particularly counter-UAS (Unmanned Aircraft Systems);
- enhanced C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance);
- fifth-generation tactical aircraft capabilities;
- advanced unmanned capabilities including UUVs (Unmanned Underwater Vehicle), UAVs (Unmanned Aerial Vehicle), and unmanned ships;
- cybersecurity and advanced cyber reconnaissance capabilities; and
- smart sea mines.

Obviously, there is a balance to be struck between ensuring ready and capable forces for deterrence and defense on the peninsula, while not conducting exercises and deploying military capabilities that could be considered overly provocative. The alliance has done an excellent job in striking this balance in recent years, and it should continue to do so.

### *Special Measures Agreement (SMA)*

US-ROK discussions should continue on the appropriate division of costs supporting the alliance going forward, but it is important that the current SMA negotiations are concluded as soon as possible, and that they are conducted in a structured and predictable way so as not to undermine the strength and durability of the alliance. SMA negotiations have been at a deadlock since they began in September 2019. The Trump administration demanded that the Republic of Korea contribute much more to collective defense—\$1.3 billion for the current eleventh SMA, a 50 percent increase in the Republic of Korea’s contribution. But the Republic of Korea has demanded a smaller margin of increase.<sup>46</sup>

Perhaps the most concerning risk of a prolonged negotiation regarding burden-sharing in the US-ROK alliance is that others may start questioning the credibility of US defense commitments to the Republic of Korea, and vice-versa, and that they may take this as an opportunity to drive a wedge between the United States and Republic of Korea to undermine the alliance. In addition, it may also lead other US allies and partners in the region to doubt the United States’ defense commitments to them, which would hamper US efforts to make necessary updates to the regional security architecture.

**OPCON Transfer Path.** As ROK military forces are continuing to develop very substantially, should the Republic of Korea want to take on additional responsibilities in the context of the alliance, the United States should encourage it to do so. The Republic of Korea is ranked as the twelfth largest economy in the world, and it is an advanced democratic country. The essence of any alliance among sovereign democratic countries is that they obligate themselves to *contribute to the self-defense* of the other country; they are not obligated to provide the sole defense for their ally, but to contribute to the ally’s self-defense. The United States should continue to contribute to the self-defense of its ally the Republic of Korea in a strategic alliance relationship. There is no doubt that the Republic of Korea will continue its development of advanced military

45 T.X. Hammes, *An Affordable Defense of Asia*, Atlantic Council, June 2020, <https://www.atlanticcouncil.org/wp-content/uploads/2020/06/An-Affordable-Defense-of-Asia-Report.pdf>.

46 Initially, the Trump administration reportedly asked the ROK to pay \$4.7 billion for 2020, a 500 percent rise on the amount it paid for the 10th SMA—the largest margin of increase demanded by the United States since the SMA was established in 1991. It was claimed that in doing so the US president also made threats to withdraw US troops from ROK if it does not agree. With these demands rejected, the Trump administration made a renewed demand for ROK to pay \$1.3 billion in early May 2020, which represented a huge reduction from its previous proposal but was a 50 percent increase from ROK’s contributions for the 10th SMA—still the largest increase demanded by the United States by some margin. The largest increase the ROK has agreed to previously was a 25.7 percent for the 5th SMA in 2002, which was in itself much higher than the usual hikes. Excluding this, the average increase in ROK contributions was 15.3 percent. After a period of no progress, reports emerged on July 17, 2020, that the Pentagon presented the White House with options for reducing US troops in South Korea. Against the backdrop of a recent decision to cut 9,500 US troops from Germany, as well as the rushed announcement of a reduction of some US forces from Afghanistan, Iraq, and Somalia, the report has been understandably received with much angst in South Korea and perhaps even doubts about US commitment to the alliance. See: Joyce Lee, Sangmi Cha, and Hyonhee Shin, “US breaks off defense cost talks, as South Korea balks at \$5 billion demand,” *Reuters*, November 18, 2019, <https://tinyurl.com/a4vg4xeg>; Yonhap “Trump threatened to pull troops if S. Korea didn’t give \$5b: Bolton memoir,” *Korea Herald*, June 22, 2020, <https://tinyurl.com/1kflwu4v>; Yonhap, “US has asked South Korea to pay \$1.3 billion in shared defense costs: official,” *Korea Times*, May 8, 2020, <https://tinyurl.com/niehvc30>; Michael R. Gordon and Gordon Lubold, “Trump Administration Weighs Troop Cut in South Korea,” *Wall Street Journal*, July 17, 2020, <https://tinyurl.com/tgow9m0f>; Michael R. Gordon and Gordon Lubold, “Trump to Pull Thousands of US Troops From Germany,” *Wall Street Journal*, June 5, 2020, <https://tinyurl.com/1c3jknr>.

capabilities in a manner commensurate with its growing economic and geopolitical heft. This is a very positive attribute of the alliance in the 2020s.

Holding back Operational Control (OPCON) transfer in the long-term is not desirable—the allies should continue to aim for a conditions-based transition to the Republic of Korea. Those conditions include the continued evolution of the threats facing the alliance as well as the capabilities of the allied forces.<sup>47</sup>

### ***Building Out the Alliance for Geopolitical Competition***

The US-China geopolitical competition in which the US-ROK alliance has so much at stake—most importantly, its core democratic values—likely will not be won on a military battlefield. The military remains an essential instrument in the broader national toolkit for ensuring deterrence of any Chinese People’s Liberation Army (PLA) attempts at coercion or aggression as well as for reassurance of other democratic allies and partners with whom the United States and Republic of Korea work closely. However, in such a dynamic and variable projected security environment, there is no need to explicitly posture current alliance forces to counter the accelerating growth of Chinese PLA military capabilities and the PLA’s increasingly aggressive operations in and around the peninsula.<sup>48</sup> The PLA Air Force’s combined incursion into ROK territorial airspace on July 23, 2019 and again on December 22, 2020, with Russian air forces was a harbinger both of what’s to come and of China’s intent. While the US-ROK alliance does not need to highlight the Chinese military threat, it should include among its portfolio of plans and capabilities some elements of preparation for contingencies involving Chinese military forces, which clearly can no longer be ruled out, particularly in areas such as the Yellow Sea.

The more important near-term priority, however, is for the two allies to work very closely together to strengthen their military capabilities for the future. The allies should intensify their cooperation on defense technologies and joint advanced defense research and development on a priority basis. This is important to ensure that the allied forces of the late 2020s and 2030s can continue to outpace any potential adversaries, including those such as China that are

rapidly incorporating emerging technologies into military capabilities. As Chinese nationalism, Chinese military capabilities, and Chinese aggressive operations all continue to grow, the alliance must be prepared to continue to deter and dissuade the PLA from considering any further aggression against ROK and US national security interests.

In addition, both allied militaries also can continue to “go out” to conduct “military diplomacy” and security cooperation on behalf of the shared values of the United States and Republic of Korea, particularly with countries of important shared interests. For example, why shouldn’t ROK forces prioritize security cooperation with selected countries in Southeast Asia on behalf of the alliance? Moreover, as NATO goes global in its approach in response to the challenges posed by China, per NATO Secretary General Jens Stoltenberg’s speech on June 8, 2020, at the Atlantic Council, NATO’s partnership with the Republic of Korea will increase in importance.<sup>49</sup> Once again, shared values among these like-minded nations should help to lift this adaptation to new and important impacts for the countries involved.

But having a stronger, capable, modern military force is no longer sufficient for the alliance in the era of geopolitical competition (and of pandemics). More likely, the geopolitical competition—in which all democratic nations have a stake—will be won in the domain of technologies, in economic power and trade, and ultimately, by soft power, the ability to attract and persuade as a model of governance, society, culture, and human rights.

### ***Diplomatically Leading the Democratic World***

As the two allies are among the most powerful democratic countries in the world, and as the broad-based challenge of authoritarianism seems poised to increase in this decade, it seems apt for Korean and American diplomats to work to lead the democratic world to ensure that a “China First” global system does not come to pass. The values undergirding a global system led by China would be patently antithetical to those at the very foundation of US and Korean societies. Therefore, US and Korean diplomats could help arrange new groupings of democratic nations to strengthen coordination among them across the key domains of the geopolitical competition including technology and the economy. Such groupings could include the increasingly

47 Correspondence with Mr. Shaun Ee, May 2020.

48 Elsa B. Kania, “AI Weapons” in *China’s Military Innovation*, Brookings Institution, April 2020, [https://www.brookings.edu/wp-content/uploads/2020/04/FP\\_20200427\\_ai\\_weapons\\_kania\\_v2.pdf](https://www.brookings.edu/wp-content/uploads/2020/04/FP_20200427_ai_weapons_kania_v2.pdf); Thomas Shugart and Javier Gonzalez, *First Strike: China’s Missile Threat to US Bases in Asia*, Center for New American Security, June 2017, <https://s3.amazonaws.com/files.cnas.org/documents/CNASReport-FirstStrike-Final.pdf?mtime=20170626140814>; Oriana S. Mastro, *Military Confrontation in the South China Sea*, Council on Foreign Relations, May 21, 2020, <https://www.cfr.org/report/military-confrontation-south-china-sea>; and Ian Easton, *China’s Evolving Reconnaissance Strike Capabilities: Implications for the US-Japan Alliance*, Project 2049 Institute, February 2014, [http://www2.jiia.or.jp/pdf/fellow\\_report/140219\\_JIIA-Project2049\\_Ian\\_Easton\\_report.pdf](http://www2.jiia.or.jp/pdf/fellow_report/140219_JIIA-Project2049_Ian_Easton_report.pdf).

49 For the secretary-general’s Atlantic Council remarks, see: David Wemer, “NATO secretary general unveils his vision for the Alliance’s future,” *New Atlanticist*, Atlantic Council, June 8, 2020, <https://tinyurl.com/5hko4y0t>.

popular “D-10” that combines the closest democratic countries from Asia, North America, and Europe in one consultative group.<sup>50</sup>

### *Leveling the Economic Playing Field*

On the economic elements of the competition, the United States and Korea should continue to lead the world with their ongoing conversions to the digital economy. Moreover, while there should be no suggestion of complete de-coupling from China, much more must be done to reduce dependence on Chinese supply chains and protect key industries from predatory Chinese practices. China has revealed its intent to use any range of economic measures coercively to get what it wants, as it did when it shut down Lotte stores in China and Chinese tourism to the Republic of Korea when China objected to the deployment of a missile *defense* unit in The Republic of Korea. Imagine how China might use such tools again, and it is easy to determine that the alliance should limit economic interdependence with China in some strategic fashion—certainly including industries related to national security and high-technology, but likely even additional sectors as well. In this context, Franklin D. Kramer’s three tiered approach to managing economic competition with China could help shape the alliance’s approach by identifying strategic sectors of the economy; non-strategic sectors that are nonetheless significantly affected—or for advanced and emerging technologies that are at future risk—by China’s state-driven structural advantages; and those areas where the market could prevail if reasonable reciprocity did occur.<sup>51</sup>

### *Setting Effective Technology Standards*

On technology, there is much that the US-ROK National Security Alliance can bring to advance the two countries’ agendas, both in terms of limiting unfair or intrusive Chinese technology companies’ reach into US and Korean societies but also in strengthening technology cooperation as a force for good in the world. For example, on 5G, Huawei and other Chinese tech companies have benefited from tens of billions of dollars of Chinese government subsidies. They are, in essence, an arm of the Chinese Communist Party. Moreover, China demonstrated that it will not hesitate to use coercive economic measures to punish countries who act in ways that it does not like when it took such measures in response to the THAAD missile defense deployment. Rather than attempt to face China’s telecom market manipulation unilaterally, both the United States and Korea should ally together with the other leading democracies comprising the

so-called “D-10”—Australia, Canada, France, Germany, Italy, Japan, the United Kingdom, plus the European Union—to promote standards for secure 5G across the democratic world and beyond.

### *Modelling Democratic Values*

Finally, the US-ROK strategic alliance also should simply model the democratic values that are still shared by the vast majority of the populations of these two long-standing allies. Constructive democratic discourse and vibrant civil societies, freedom of speech and of the press, and the right of assembly, and other basic rights of democratic citizens should continue to be safeguarded and treasured as the precious assets that they are. In a highly dynamic and dangerous world in which autocratic states are seeking to upend the rules-based order, there is no contribution that would be more valuable than if the two allies’ populations strengthened their reliance on the very democratic values that led to the founding of the alliance. In this way, the alliance’s role in the soft-power domain of the geopolitical competition would be invaluable. In order to do so, both countries should strive to increase exchanges between civil society groups in both countries, and private-sector leaders could help support such an effort, which would redound to their benefit as well.

### *Preparing the Alliance to Prevent and Mitigate Future Pandemics*

In the pandemic era, with the threat of biological contagion growing, the Korean and American governments and the scientific and medical communities should work together to ensure that their citizens are as protected as possible from the next waves of COVID-19, as well as pandemics to come. As both countries’ innovation bases are vibrant and among the best in class, they also could help lead the world in any number of areas related to pandemic security.

Hereinafter, the US-ROK alliance now must factor in this new predominant threat to their citizens’ lives. If they do not do so, then their publics will not support their broader national security and defense efforts. People in both countries would ask what utility the massive investments in conventional weapons systems are when they find themselves again locked down in their homes, afraid of being infected by a lethal virus that could have been stopped if more resources had been devoted to effective counter-virus and broader public health measures. Thus, there is no doubt that the legislatively mandated 2021 US National Security Strategy (NSS) will account for the threat

50 The D-10 is a grouping that has been advocated by the Atlantic Council since 2014. Please see “D-10 Strategy Forum,” <https://www.atlanticcouncil.org/programs/scowcroft-center-for-strategy-and-security/global-strategy-initiative/democratic-order-initiative/d-10-strategy-forum/>.

51 Franklin D. Kramer, *Managed competition: Meeting China’s challenge in a multi-vector world*, Atlantic Council, December 12, 2019, <https://www.atlanticcouncil.org/in-depth-research-reports/report/managed-competition-meeting-chinas-challenge-in-a-multi-vector-world/>.

of pandemics at a much higher level of priority than any previous NSS, with concomitant resources, both organizational and financial, supporting such a strategic priority.

If the allies decide to work together to address pandemic security in a strategic fashion, then the Republic of Korea and United States can play a leading role both in the near term in a global “Counter-Coronavirus Coalition” and in the longer term on protecting the world from future pandemic threats. Such a “CCC” could play an important role in mitigating pandemic dangers by strengthening coordination among like-minded countries based on certain global public health principles such as health data transparency, integrity, and common standards. The world’s leading democracies could form the core of such a coalition, as democratic polities are based on openness and transparency in general. The CCC could coordinate with the World Health Organization (WHO) and other relevant global public health institutions, but it could also fill important gaps where WHO mechanisms and arrangements are found wanting.

Moreover, the world-leading performance of the Republic of Korea in managing COVID-19<sup>52</sup> can create new opportunities to strengthen US and Korean security in tangible ways. Korea has executed among the world’s most effective approaches to the virus, leveraging a wide range of well-prepared national and societal instruments to ensure minimal casualties among the ROK people. The Republic of Korea’s very impressive leveraging of technologies, manufacturing capabilities, lessons from previous exercises, and medical and public communications approaches, among many others, can be considered a model of not just how to handle additional waves of COVID-19, but for enhancing the joint approaches of the two allies to counter future pandemics. As climate change continues to accelerate, the likelihood of additional dangerous globe-spanning pathogens being produced is increasing apace. Growing human encroachment on wildlife is a direct contributing factor to increasing the probability and frequency of pandemics.<sup>53</sup> That means that, for the foreseeable future, pandemic security will be a top priority on the global and bilateral security agenda.

In order to effectively broaden the alliance to address pandemic security, the following measures should be taken.<sup>54</sup>

### *Increase pandemic preparedness*

The US-ROK National Security Alliance could develop an intelligence-sharing channel on emerging infectious disease outbreaks. Situated geographically near the consistent origin locations of pandemics in Asia, the Republic of Korea could act as “early warning system.” For its part, the United States could leverage its vast intelligence networks in other parts of the world, e.g., in sub-Saharan Africa, to play an equivalent role in this channel.

### *Strengthen contact tracing and other mitigation approaches*

The two allies’ governments, municipalities, and medical communities could collaborate to develop the world’s most sophisticated contact-tracing techniques in democratic societies, with a premium on preserving privacy and security while accomplishing the goal of thorough contact tracing.

### *Ramp up related public health measures*

The allies also could undertake a wide array of other measures to strengthen their public health infrastructures and approaches. Among those, they could increase basic research on under-studied viruses and other microbes; and work to reduce the growing threat of antimicrobial resistance by reducing antibiotic use in humans and animals and increasing research and development (R&D) on new classes of antibiotics.

### *Get ahead of the coming biotech revolution*

Lastly, there is a looming biotech revolution in which both countries are poised to play leading roles. This revolution is likely to impact societies, economies, and security as much as, if not more than, the ongoing communications revolution. This suite of technologies includes genetic engineering, synthetic biology, biological computing, and the like, which together hold the promise of curing chronic diseases, extending lifespans, and generating a whole new ecosystem built around these technologies. However, there are major ethical considerations to address in some areas including cloning and genetic engineering. Moreover, China is advancing its capabilities in these areas very rapidly and

52 As of this writing, the number of coronavirus deaths per one million population in South Korea was five (compared to the United States at 356), which puts it in the same range as Taiwan, Singapore, New Zealand, and Australia, among the best in the world.

53 The 2002 SARS epidemic was thought to have been related to consumption of civet cats in China and dromedary camels were thought have been major reservoir hosts of the Middle East respiratory syndrome (MERS). See: “Middle East respiratory syndrome coronavirus (MERS-CoV),” World Health Organization, accessed November 2020, [https://www.who.int/en/news-room/fact-sheets/detail/middle-east-respiratory-syndrome-coronavirus-\(mers-cov\)](https://www.who.int/en/news-room/fact-sheets/detail/middle-east-respiratory-syndrome-coronavirus-(mers-cov)); “SARS (Severe Acute Respiratory Syndrome),” World Health Organization, accessed November 2020, <https://www.who.int/ith/diseases/sars/en/>; Rachel Nuwer, “To Prevent Next Coronavirus, Stop the Wildlife Trade, Conservationists Say,” *New York Times*, February 19, 2020, <https://www.nytimes.com/2020/02/19/health/coronavirus-animals-markets.html>.

54 I am indebted to Mr. Shaun Ee for these recommendations.

could soon become the world's leader in some of them. And the Chinese Communist Party will not impose the same ethical constraints on its own companies as those in democratic countries will.<sup>55</sup> Thus, it is imperative that the United States and the Republic of Korea begin to work together soon to set standards and develop policies governing the use and application of these life-changing technologies.

## Conclusion: Leaders of the Democratic World

The Republic of Korea and the United States should broaden their military alliance into a national security alliance in order to more effectively deal with the challenges and opportunities of this new era. There may have been a time in which the alliance could focus on only the military aspects and not take an integrated approach. However, that time has now passed. Now, the North Korean threat continues to grow, while the rise of China presents a multi-faceted challenge that will require the artful integration of defense, technology, economic, information, ideological, and other elements of national

power for both allies. With the threat of pandemics added to this mix, it is patently clear that the best approach for going forward as allies is to broaden the strategic relationship to encompass an enlarged concept of national security.

The Republic of Korea has shown a vibrancy and adaptability in its polity that will help bring the new US-ROK National Security Alliance into the future, protecting and preserving our democratic way of life and our open and vibrant societies. The American people, too, have proven resilient against the many domestic challenges that they have encountered in recent years. It is indeed the shared values of the two peoples that will keep them tightly bound together, even as geopolitical and global health storms continue to buffet our nations and societies. We are resilient people. With shared values as the underpinning of our reset National Security Alliance, we can safely, effectively, and enthusiastically adapt that alliance to better fit the changing conditions that we face. Future generations of Koreans and Americans will be grateful for the vision, planning, and hard work that we are about to do as we make the changes needed to navigate this new world.

55 Although the Chinese government's regulatory system has developed and improved in the recent couple of decades, it still remains underdeveloped and patchy, often only augmented in a knee-jerk reaction to an ex post facto public outrage over a perceived breach of commonsensical ethics. A case in point is He Jiankui, the Chinese scientist who was found guilty of "illegal medical practices" and sentenced to three years in prison for forging ethical review documents and misleading doctors into implanting gene-edited embryos unawares into two women who subsequently gave birth to babies allegedly resistant to human immunodeficiency virus (HIV). But analysts have pointed out how Chinese laws on gene-editing were insufficient in the first place and Chinese authorities did reportedly "tighten" regulation in the wake of this case. The weakness of the Chinese regulated system is related to the way China has developed as an authoritarian regime bent on economic development and also to the territorially fragmented nature of its system that render authority and enforcement difficult. Given these structural limitations and given the powerful incentives of the Chinese central government to see China race ahead of the United States in some of these technologies, we may expect that regulations on areas such as genetic engineering and other cutting-edge technologies to remain insufficient, intentionally or unintentionally. For an analysis of the development of the Chinese regulatory regime, see: Dali L. Yang, "China's Illiberal Regulatory State in Comparative Perspective," *Chinese Political Science Review* 2(1), 114-133, <https://daliyang.files.wordpress.com/2013/08/yang-chinas-illiberal-regulatory-state-in-comparative-perspective.pdf>; Sui-Lee Wee, "Chinese Scientist Who Genetically Edited Babies Gets 3 Years in Prison," *New York Times*, December 30, 2019, <https://www.nytimes.com/2019/12/30/business/china-scientist-genetic-baby-prison.html>.

## 2. The Future of the US-ROK Economic Partnership

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### Introduction

The alliance between the United States and Republic of Korea (ROK) serves as the foundation for peace and prosperity on the Korean peninsula and is the linchpin for security and stability throughout the region.<sup>56</sup> Over its nearly seventy-year history, the alliance was not only crucial to defending Republic of Korea during the Korean War but also facilitated the industrialization and democratization of The Republic of Korea. While the North Korean nuclear threat has long dominated discussions of the alliance, the breadth and depth of the bilateral relationship extend beyond security. The trade and economic partnership between these two countries remains of fundamental importance in its own right, as a key pillar of the alliance relationship, because it underpins the strength of the overall alliance.

Economic relations between The Republic of Korea and the United States are extensive and deep. The Republic of Korea is the world's tenth largest economy,<sup>57</sup> a member of the Group of Twenty (G20), and is the United States' sixth largest trading partner,<sup>58</sup> with extensive purchases of US mineral fuels (\$13 billion), machinery (\$12.2 billion), optical and medical instruments (\$3.5 billion), aircraft (\$2.5 billion), and a variety of agricultural products (\$7.6 billion).<sup>59</sup> The United States is the Republic of Korea's second largest trading partner, with large exports to the United States of vehicles (\$21 billion), electrical and non-electrical machinery (\$29 billion), and plastics (\$2.9 billion).<sup>60</sup>

The bilateral investment relationship is also robust. The United States is the second largest (after Japan) foreign direct investor in the Republic of Korea, with a total foreign direct investment (FDI) stock of \$42 billion at the end of 2018.<sup>61</sup> More ROK outward FDI has gone to the United States than to any other country, with a cumulative total of \$57.6 billion at end-2018.<sup>62</sup> ROK companies have invested or have committed to invest billions of dollars in the United States over the last two years (see Table 1). Trade and investment between the Republic of Korea and the United States support an estimated 400,000 American workers.<sup>63</sup>

**Table 1. Examples of Recent ROK investments in the United States**

LG Chem is committed to invest \$2.3 billion to build an electric vehicle battery plant jointly with General Motors in Ohio. <sup>64</sup>
Lotte Chemical completed the construction of a \$3.1 billion ethylene plant in Louisiana in 2019, with its cumulative investments reaching \$4 billion in production facilities and other areas. <sup>65</sup>
Hyundai Motor Group and Aptiv announced in September 2019 a \$4 billion autonomous driving joint venture in which the firms will each have a 50 percent stake. <sup>66</sup>

56 Harry Harris, "Speech on 'The US-ROK Alliance' at US Korea Business Council Luncheon," speech, US Embassy and Consulate in the Republic of Korea, October 11, 2019, <https://tinyurl.com/h45dr2ck>.

57 "S. Korea's GDP ranks 10th worldwide in 2019," Yonhap News Agency, May 27, 2020, <https://tinyurl.com/1lt7tsf8>.

58 "US International Trade in Goods and Services - Annual Revision," US Census Bureau Foreign Trade Division, 2019, <https://tinyurl.com/37r4kybr>.

59 US Census Bureau, US Trade Online, State Export Data by HS Classification, 2019, <https://usatrade.census.gov/>. "Korea," Office of the United States Trade Representative, accessed November 2020, <https://tinyurl.com/yw2mv7b4>.

60 "Korea," Office of the United States Trade Representative.

61 Foreign Direct Investment (FDI): South Korea, SelectUSA, 2018, <https://www.selectusa.gov/servlet/servlet.FileDownload?file=015t0000000LKNs>.

62 "OECD International Direct Investment Statistics (database)," OECD iLibrary, accessed November 2020, <https://doi.org/10.1787/idi-data-en>.

63 "Samsung on Representing the Value of a Strong US-South Korean Relationship," Samsung Newsroom, September 17, 2018, <https://tinyurl.com/7m4sunuv>.

64 Paul Lienert, "GM, LG Chem to build \$2.3 billion electric vehicle battery plant in Ohio," Reuters, December 4, 2019, <https://tinyurl.com/1ejqveos>

65 "Lotte invests cumulative \$4 bln in US," Yonhap News Agency, May 14, 2019, <https://en.yna.co.kr/view/AEN20190514001000320>.

66 Anmar Frangoul, "Hyundai unveils plan for \$35 billion investment in driving tech," CNBC, October 17, 2019, <https://tinyurl.com/7pu2ycrb>.

Samsung completed a \$8 billion acquisition of HARMAN, which was the largest foreign investment ever made by a ROK company in 2016. In the same year, it also announced a new \$380 million home appliance manufacturing facility in South Carolina and a \$1-billion expansion of Samsung Austin Semiconductor (SAS) in Austin, Texas.<sup>67</sup>

The two countries have had their share of trade and investment disputes over the years, covering issues such as market access, investment barriers, regulatory barriers, and domestic standards. However, the United States and the Republic of Korea took a significant step to deepen the economic and trade relationship by negotiating (with considerable difficulty and over a period of six years) the US-ROK Free Trade Agreement (KORUS), which took effect in March 2012, and established the Republic of Korea as the largest US free trade agreement (FTA) partner outside of North America.

The Republic of Korea reacted quickly to the incoming Trump administration's aggressive trade policy and suspicion of trade agreements including potential withdrawal from KORUS,<sup>68</sup> and successfully renegotiated a revised KORUS in 2018, which was enacted in January 2019. The amendment and modification process focused on limiting ROK steel exports to the United States to 70 percent of the annual average of the last three years (2.68 million tons) and extending the US tariffs on ROK trucks for another twenty years until 2041.<sup>69</sup> In parallel to the revised KORUS agreement, the US and ROK governments also reached a deal on US steel import quotas in response to a Section 232 investigation, a trade enforcement provision which allows the US president to restrict imports on national security grounds.<sup>70</sup> There are pending 232 investigations on auto and auto parts, and the Republic of Korea will double its quota on imports of US automobiles that meet US safety standards to approximately 50,000 cars per manufacturer per year.<sup>71</sup>

With the amended KORUS and changing economic landscape in the Indo-Pacific, the two countries should explore areas to further advance and strengthen economic cooperation. The region is now facing a new geopolitical and geoeconomic environment characterized by three major elements: 1) US-China strategic competition and potential decoupling; 2) a changed view of the value of globalization and trade expansion; and 3) new technological

advancements that have changed conceptions of national security. US-China tensions have also intensified in response to the outbreak of the COVID-19 pandemic, and global trends toward increasing protectionism and de-globalization have accelerated in response to disrupted supply chains for goods and services.

This chapter identifies areas of collaboration between the United States and the Republic of Korea under this changing geopolitical environment and post-COVID-19 world first by examining opportunities and challenges of their economic relationship, and then by offering practical policy recommendations.

## Geopolitical and Geoeconomic Trends Shaping Prospects for the US-ROK Economic Partnership

In order to identify areas to advance and broaden economic cooperation, it is important to understand the major opportunities and challenges that the United States and the Republic of Korea face, given the changing economic relationship between the two countries over the past three decades and the significant changes in the world economy and global strategic relations.

As a result of its export-oriented model of growth, the ROK economy at present is heavily dependent on global trade. Rapid and sustained economic growth that began in the early 1960s has transformed the country into one of the most successful in the world. The Republic of Korea pursued what came to be known as the East Asian model for rapid growth and industrialization based on open trade policies and exports, which started with low-skilled goods but moved over time into increasingly sophisticated products.<sup>72</sup> ROK industrialization was shaped by, and benefitted from, its presence in East Asia and the rapid growth and development of production networks in that region.

67 "Samsung on Representing the Value," *Samsung Newsroom*.

68 Steve Holland, "Trump hints at withdrawal from US-South Korea free trade deal," Reuters, September 2, 2017, <https://www.reuters.com/article/us-usa-trump-trade-korea/trump-hints-at-withdrawal-from-u-s-south-korea-free-trade-deal-idUSKCN1BD0TB>.

69 Victor Cha, "KORUS Revision: Not the Worst Outcome," Korea Chair Snapshot, Center for Strategic and International Studies, March 26, 2018, <https://www.csis.org/analysis/korus-revision-not-worst-outcome>.

70 Wendy Cutler and Hyemin Lee, *Advancing the US-Korea Economic Agenda*, Asia Society Policy Institute, January 2019, <https://asiasociety.org/policy-institute/advancing-us-korea-economic-agenda>.

71 Fact Sheet on US-Korea Free Trade Agreement Outcomes, Office of the United States Trade Representative, 2018, <https://ustr.gov/about-us/policy-offices/press-office/fact-sheets/2018/september/fact-sheet-us-korea-free-trade>.

72 There are many studies of Korea's period of rapid economic growth, many of them now dated. For a recent analysis, see: Ana Maria Santacreu, "How Did South Korea's Economy Develop So Quickly?," Federal Reserve Bank of San Francisco, March 20, 2018, <https://www.stlouisfed.org/on-the-economy/2018/march/how-south-korea-economy-develop-quickly>.

The United States no longer dominates the Republic of Korea's external market the way it did in the 1980s, when it absorbed over a third of ROK exports.<sup>73</sup> Since the 1980s, ROK conglomerates have become a major part of supply chains across East Asia, embedding the ROK economy into a regional supply chain network in which China plays a huge role. Therefore, while exports and participation in global production networks was a tremendous boon to ROK economic growth, it has made the ROK economy both sensitive and vulnerable to external events, which has constrained the Republic of Korea's policy choices.

This chapter identifies the following factors that have driven major changes in the economic relationship of the two countries. First, China has emerged as the Republic of Korea's largest trade partner and the largest market for ROK overseas sales. One of the most serious challenges is the dilemma that the Republic of Korea faces with the growing strategic rivalry between the United States and China, as well as the accelerating steps on both sides to disengage and decouple their two economies. This dynamic also includes growing protectionist pressures and skepticism about globalization in the United States that create significant challenges to the Republic of Korea, which remains deeply involved and heavily dependent on trade. Second, the Republic of Korea is deeply embedded in global supply chains, and is sensitive to any policies or events that alter geographic patterns of production. Third, the Republic of Korea has now become a major developer of cutting-edge technologies and a major supplier of information and communications technology (ICT) products and components, and thus is exposed to technological rivalries and technology decoupling of its major trading partners.

All of these factors have created major challenges, but also opportunities, for the Republic of Korea, the United States, and the US-ROK partnership. This chapter reviews these challenges and opportunities and provides policy recommendations in the sections below. The clear implication is the huge value of the two countries working cooperatively as they both face fundamental upheavals in the global economic and strategic environment.

### *China as Korea's largest trading partner*

Initially, ROK trade was heavily oriented towards the United States and Japan, but, starting in the 1990s, the share of ROK exports going to China began to grow rapidly. China is now the Republic of Korea's largest trading partner and largest external market, taking 25.9 percent of ROK exports in 2018, followed by the United States at 11.9 percent.<sup>74</sup> The Republic of Korea has a particularly high concentration of trade with China; among major economies, only Australia has comparable dependence on the Chinese market at 32.6 percent.<sup>75</sup> Gross trade figures overstate the importance of China, since much of ROK exports to China are incorporated in products that are sold in third markets. Adjusting for value-added content and the ultimate destination of exports incorporated in supply chains reduces the Republic of Korea's apparent dependence on exports to China. But even after this correction, China absorbed 25 percent of ROK export value-added in 2015, followed by the United States at 18 percent.<sup>76</sup> The Republic of Korea's export concentration on these two markets is high; the next on the list is Japan, at only 5.7 percent.<sup>77</sup>

ROK FDI is also heavily concentrated in the United States and China. China is the second largest destination for outward ROK FDI, with a total stock of \$77.6 billion in 2018 as compared to the \$90.6 billion total stock of ROK FDI in the United States.<sup>78</sup> China has become a major source of revenue for ROK firms in automobiles, cosmetics, and other consumer goods. The Republic of Korea's outward FDI is concentrated on the United States and China, compared to the third largest stock of ROK FDI in Vietnam as of \$20.4 billion.

In addition to the fact that the Republic of Korea's exports are heavily concentrated towards two countries that are now strategic rivals, the Republic of Korea is also very heavily dependent on exports for growth. Exports are 43 percent of ROK GDP, the highest in the Organisation for Economic Co-operation and Development (OECD) along with Germany. In addition, since 1998, the Republic of Korea has maintained large, persistent current account surpluses, as domestic demand (earnings from domestic sales) provides only a weak impetus to growth. Overall, 31 percent of ROK economic activity (domestic value-added) in 2015

73 Marcus Noland, "The Strategic Importance of US-Korea Economic Relations," Peterson Institute of International Economics: International Economics Policy Briefs, PB 03-6, May 2003, <https://www.piie.com/sites/default/files/publications/pb/pb03-6.pdf>.

74 Trade in Value Added: Korea, Organisation for Economic Co-operation and Development (OECD), December 2018, <https://www.oecd.org/industry/ind/TIVA-2018-Korea.pdf>; "South Korea," Organisation for Economic Co-operation and Development (OECD), <https://oec.world/en/profile/country/kor/>.

75 Direction of Trade Statistics, International Monetary Fund (IMF), data for 2017, <https://data.imf.org/?sk=9d6028d4-f14a-464c-a2f2-59b2cd424b85>; Frances Mao, "How reliant is Australia on China?," BBC News, June 17, 2020, <https://www.bbc.com/news/world-australia-52915879>.

76 Trade in Value Added: Korea, Organisation for Economic Co-operation and Development (OECD).

77 Ibid.

78 "OECD International Direct Investment Statistics (database)," Organisation for Economic Co-operation and Development (OECD), accessed November 2020, <https://doi.org/10.1787/idi-data-en>. The next largest stock of Korean FDI was in Vietnam, 20.4 billion, or 5.3 percent of the total. In contrast, China's stock of FDI in Korea in 2018 was only \$8.1 billion, under 4 percent of total inward FDI in Korea.



was driven by consumption from abroad. For the ICT and electronics industry, 78 percent of domestic value added came from overseas sales. For motor vehicles, it was 70 percent, and 60 percent of manufacturing activity as a whole depended on sales abroad.<sup>79</sup> Not only is the ROK economy dependent on rising exports to maintain growth, it is also particularly vulnerable to trade slumps during global economic downturns. In 2020, as the global economy dealt with a severe COVID-19 recession, the World Trade Organization estimated that global trade would fall by somewhere between 13 and 32 percent.<sup>80</sup> Even as the Republic of Korea has been relatively successful in dealing with COVID-19, the pandemic's impact on global trade will exact a very high cost on the Republic of Korea's economy.<sup>81</sup>

Heavy reliance on global trade has made the ROK economy vulnerable to trade policy actions or economic sanction by other countries, and the Republic of Korea has been subject to such actions by several of its major trading partners. In 2018, The Trump administration imposed safeguard tariffs on washing machines, and increased tariffs on steel on national security grounds. These measures applied to the Republic of Korea, despite the KORUS free trade agreement.<sup>82</sup> The Republic of Korea negotiated an exemption from the US steel tariff increase in exchange for a ceiling on shipments to the United States.<sup>83</sup> In addition, there is a pending decision on additional US national security tariff increases on motor vehicles and parts, although this US proposal now appears to be shelved.<sup>84</sup>

In 2016, the Republic of Korea was also hit by sanctions from China after the ROK decision to deploy the US Terminal High Altitude Area Defense (THAAD) system. China responded by effectively shutting down the Chinese operations of ROK companies including Lotte, and banned Chinese tour groups from visiting the Republic of Korea. As of 2019, Lotte was reportedly preparing to exit from China, reeling from the aftereffects of the government shutdowns

and the ensuing nationalist boycotts.<sup>85</sup> Auto sales by Hyundai and Kia in the Chinese market fell by almost half in 2017.<sup>86</sup>

More recently in 2019, Japan imposed export restrictions on the Republic of Korea by removing it from a white list of countries to which Japanese exports receive automatic approval. This endangered the secure supply of three critical materials for making semiconductors that major ROK manufacturers rely on, with potential implications for the global semiconductor supply chains. More specifically, the Japanese government's delay in granting permission to export liquid hydrogen fluoride, a key component for semiconductor production, forced ROK companies including SK Hynix, Samsung Electronics, and LG Displays to switch to suppliers in the Republic Korea that made these products at a lower quality.<sup>87</sup>

### ***The Republic of Korea is deeply embedded in global supply chains***

In addition to its geographic concentration, ROK trade is heavily embedded in global supply chains, particularly in the Asia-Pacific production networks that extend from design, to components, production, and sales being sourced throughout the region. Almost 31 percent of the value of ROK exports in 2016 was composed of imported components, which was the highest among any G20 country until 2014.<sup>88</sup> The ICT, motor vehicles, electronics, and electrical equipment industries relied on imported inputs for more than 60 percent of the value of their exports.<sup>89</sup> The Republic of Korea's heavy reliance on the global economic network means that it is especially vulnerable to the manifold threats that the global economy now faces. Disruptions in supply chains from natural disasters, pandemics like COVID-19, or external changes in trade policy such as US tariffs on imports from China will have a direct effect on ROK production further back in the supply chain.

79 Trade in Value Added: Korea, Organisation for Economic Co-operation and Development (OECD).

80 "Trade set to plunge as COVID-19 pandemic upends global economy," World Trade Organization, April 8, 2020, <https://tinyurl.com/9btrsted>.

81 The International Monetary Fund (IMF) adjusted its projected 2020 economic growth rate for Korea to -1.2 percent, while global rate projected at -3 percent, reflecting impact of the COVID-19 pandemic. Korea expected to take smaller impact than other advanced economies, as it did not implement national lockdown. See: "Republic of Korea," International Monetary Fund, accessed November 2020, <https://www.imf.org/en/Countries/KOR>.

82 Chad P. Bown and Melina Kolb, "Trump's Trade War Timeline: An Up-to-Date Guide," Peterson Institute for International Economics, March 13, 2020, <https://www.piie.com/blogs/trade-investment-policy-watch/trump-trade-war-china-date-guide>.

83 Bown and Kolb, "Trump's Trade War Timeline."

84 A US Department of Commerce report on February 17, 2019, recommended "actions to adjust automotive imports" to protect national security. President Trump asked USTR to negotiate agreements with Japan, the EU, and other countries by November 2019, while maintaining the threat to raise tariffs if negotiations failed. US auto companies strongly opposed increases in US tariffs, and, as of May 2020, no further action has been taken. See: David Shepardson, "Automakers expect White House to delay decision on auto tariffs: sources," Reuters, May 8, 2019, <https://tinyurl.com/ytub3lkc>.

85 "South Korea's Lotte seeks to exit China after investing \$9.6 billion, as Thaad fallout ensues," Straits Times, March 13, 2019, <https://tinyurl.com/1mhowojc>.

86 "South Korean companies suffering heavy losses due to THAAD retaliation," Hankyoreh, September 17, 2017, <https://tinyurl.com/ykmbfpy5>.

87 Young-ho Jung, "Nikkei, II Suchulgyujee Samseong LG Daechegongjeong Gaebal...Ilbon Tagyeok" [Nikkei, Samsung develops substitute production capabilities due to Japan's export controls...Hurts Japan], *Hanguk Gyeongjae*, May 20, 2019, <https://tinyurl.com/28lrjuau>.

88 OECD, Trade in Value Added: Korea.

89 Ibid.

Global supply chains and the firms active in them are subject to four types of risk. The first is threat of disruption from natural disasters such as the Japanese tsunami of 2011, the Thai floods of 2011, or the COVID-19 pandemic. The pandemic has already led to widespread demands for greater supply chain resiliency, as well as many calls for localization of production lines, particularly for medical supplies and equipment.

The second risk is from increases in tariffs imposed for protection of domestic industry or as a negotiating tool. US tariffs on imports from China increased in stages and were threatened in greater amounts that have so far been applied. Even after the US Phase I deal with China, US tariffs will have increased on almost two-thirds of total imports from China, and the average US tariff rate on Chinese imports has risen to 19.3 percent, from 3.0 percent at the beginning of 2018.<sup>90</sup> About 30 percent of China's imports of intermediate goods, including from the Republic of Korea, are incorporated into Chinese exports to third markets, including the United States. ROK producers, therefore, have been directly affected by the US-China trade dispute.<sup>91</sup>

The third risk is that products that flow through supply chains may be compromised along the way, either through insertion of counterfeit products or through malicious hardware components and software that allows for exercise of control, malfunction, or interception of communications for espionage or theft. While supply chain security has been a relatively long-standing issue in pharmaceuticals, ICT supply chains are now increasingly under scrutiny and suspicion. The US government has had several initiatives with industry to enhance supply chain security, but the US Commerce Department took a huge step in its announcement of proposed regulations to address ICT product and services transactions that pose national security risks.<sup>92</sup> The coverage of the proposed regulations is broad and the Commerce Department would have wide authority to prohibit, restrict, or unwind transactions.<sup>93</sup> The Commerce Department issued interim final regulations on January 14, 2021.<sup>94</sup> These regulations describe six sets of products and

services that are subject to review, provide additional detail on the procedures that the Department would follow in reviewing transactions, and list six foreign adversaries whose potential control over transactions would make them subject to review.<sup>95</sup>

At the same time, there were broader discussions within the Trump administration on limiting or excluding China from both US and global supply chains. Along with its reshoring plan, the administration created the "Economic Prosperity Network" initiative that aimed to restructure global supply chains and reduce their reliance on China, by working with allies and partners. While this new policy drive is under discussion between the governments of the Republic of Korea and the United States, the final outcome is uncertain given opposition from US firms whose production would be disrupted.<sup>96</sup>

The fourth and related source of risk and uncertainty comes from US policy initially designed to sanction and limit the activities of China's Huawei Technologies, which has developed into a broader policy of decoupling the use and development of US technology from China. Huawei is a major international supplier of communications infrastructure as well as cellphones and other equipment. The Trump administration sought to discourage allies and other countries from purchasing and installing Huawei equipment, as well as selling their components or software to Huawei. In May 2019, the administration added Huawei to the Commerce Department Entity List and restricted US firms from supplying components or software to the firm, with a limited grace period. The application of US export controls against Huawei was strengthened in May 2020 by restricting firms outside the United States that use US technology or software from selling to Huawei.

The incoming Biden administration has said that it will conduct a review of US China policy, which could affect the implementation of Trump administration initiatives that have gone to final regulations. However early indications show

90 Chad Brown, "Phase One China Deal: Steep Tariffs Are the New Normal," Peterson Institute of International Economics, December 19, 2019, <https://www.piiie.com/blogs/trade-and-investment-policy-watch/phase-one-china-deal-steep-tariffs-are-new-normal>.

91 Trade in Value Added: China, Organisation for Economic Co-operation and Development (OECD), December 2018, <https://www.oecd.org/industry/ind/TIVA-2018-China.pdf>.

92 Securing the Information and Communications Technology and Services Supply Chain, US Department of Commerce, November 27, 2019, <https://www.federalregister.gov/documents/2019/11/27/2019-25554/securing-the-information-and-communications-technology-and-services-supply-chain>.

93 Tamer A. Soliman, et al., "US Commerce Department Proposes Sweeping New Rules for National Security Review of US Information and Communications Technology or Services Transactions," Mayer Brown, December 2, 2019, <https://www.mayerbrown.com/en/perspectives-events/publications/2019/12/us-department-of-commerce-proposes-rule-for-securing-the-nations-information-and-communications-technology-and-services-supply-chain>.

94 Text of a Notice on the Continuation of the National Emergency on Securing the Information and Communications Technology and Services Supply Chain, the White House, May 13, 2020, <https://www.whitehouse.gov/briefings-statements/text-notice-continuation-national-emergency-securing-information-communications-technology-services-supply-chain/>. US Commerce Department, "Commerce Department Issues Interim Rule to Secure the ICTS Supply Chain" <https://www.commerce.gov/news/press-releases/2021/01/commerce-department-issues-interim-rule-secure-icts-supply-chain>

95 See Covington and Burling, "Department of Commerce Releases Interim Final Rule to Implement the Information and Communications Technology Supply Chain Executive Order" Jan 21, 2021. <https://www.lexology.com/library/detail.aspx?g=6382285e-d1f8-4341-ba09-5480f664649a>

96 Humeyra Pamuk and Andrea Shalal, "Trump administration pushing to rip global supply chains from China: officials," Reuters, May 4, 2020, <https://www.reuters.com/article/us-health-coronavirus-usa-china/trump-administration-pushing-to-rip-global-supply-chains-from-china-officials-idUSKBN22G0BZ>.

that the new administration will likely continue to take a tough line on China policy in issue-areas that are key to US national interests such as emerging technologies that are driving the future, as well as values and norms that are foundational to the system of democracy.<sup>97</sup>

In addition to economic considerations, national security policy has become a crucial factor in firms' decisions to do business with other firms and countries. The decision by the Taiwan Semiconductor Manufacturing Company (TSMC) to stop supplying advanced semiconductors to Huawei after the May 2020 restrictions was an especially difficult decision, as Huawei has been its number two customer.<sup>98</sup> In addition to extending export control coverage, TSMC announced on May 15, 2020 that it will build a \$12 billion plant in Arizona by 2024 to relocate some of its manufacturing activity to the United States.<sup>99</sup> US pressure on both US and foreign firms to localize production in the United States is likely to continue. Although Samsung does not have the contract manufacturing capacity of TSMC, it does plan to expand fabrication capacity. As one of the potential alternatives to TSMC, Samsung is likely to face US pressure to cut off supplies to Huawei. SK Hynix has also sought new means of decreasing its dependence on foreign suppliers, particularly Japanese imports, including three new partnerships with ROK firms to work together to develop chips over the next two years.<sup>100</sup>

### **Increasing ROK technological sophistication**

Another major change in the US-ROK economic partnership is the rapid advance of ROK technological capability that now makes the Republic of Korea central to issues of technological development, technology transfer, and supply of technology-intensive goods and services. A sharp increase in R&D expenditure by ROK firms, as well as an increasing emphasis of government policy on education and technological development, has made the Republic of Korea one

of the global leaders in these new emerging technologies, along with the United States, Japan, and China.<sup>101</sup> After a period of rapid growth that began in the early 2000s, the Republic of Korea now has the highest share of R&D expenditure within the OECD.<sup>102</sup> The Republic of Korea is now a major contributor to the development of ICT technologies, accounting for between 10 and 46 percent of patenting activity in the twenty cutting edge technologies identified by the OECD.<sup>103</sup> In addition, firms headquartered in the Republic of Korea accounted for 20 percent of all artificial intelligence (AI) related innovation in 2012–2014 (second behind Japan at 32 percent, but higher than in the United States at 19 percent).<sup>104</sup>

The economic spillover of the strategic rivalry between the United States and China has shifted emphasis from goods trade to technology flows, reflecting the greatly increased overlap between commercial and national security technology. The United States has objected to several aspects of Chinese industrial policy, in particular the use of forced technology transfer by firms operating in China.<sup>105</sup> US export controls and inward foreign direct investment review have been strengthened to reduce the flow of critical foundational technologies and emerging technologies. And, as described above, the United States has also taken a series of measures to block the flow of US technology and hardware and software components to China's Huawei Technologies.

### **Policy Recommendations for Areas of US-ROK Strategic Cooperation**

As noted above, the ROK economy is highly reliant on exports, focused on China and the United States, which creates a structural vulnerability for the Republic of Korea. The Republic of Korea has been exposed to external pressure on a wide range of issues as tensions between the United States and China intensify. However, this is not just

97 For instance, Anthony Blinken, in his confirmation hearing for Secretary of State said, "I also believe that President Trump was right in taking a tougher approach to China...I disagree very much with the way that he went about it in a number of areas, but the basic principle was the right one, and I think that's actually helpful to our foreign policy."

98 Cheng Ting-Fang and Lauly Li, "TSMC halts new Huawei orders after US tightens restrictions," *Nikkei Asian Review*, May 18, 2020, <https://asia.nikkei.com/Spotlight/Huawei-crackdown/TSMC-halts-new-Huawei-orders-after-US-tightens-restrictions>.

99 Karen Hao, "A new \$12 billion US chip plant sounds like a win for Trump. Not quite," *MIT Technology Review*, May 19, 2020, <https://www.technologyreview.com/2020/05/19/1001902/tsmc-chip-plant-and-huawei-export-ban-not-trump-win/>.

100 Song Su-hyun, "SK hynix to support 3 new partners for chip industry's localization," *the Korea Herald*, June 30, 2020, <http://www.koreaherald.com/view.php?ud=20200630000698>.

101 Taiwan is also one of the global leaders in artificial intelligence related activities. Together these top five developed over 70 percent of the top twenty cutting edge ICT technologies between 2012-2015 (OECD, *OECD Science, Technology and Industry Scoreboard 2017 – The Digital Transformation*, page 13).

102 OECD "Highlights from the OECD Science, Technology and Industry Scoreboard 2017 - The Digital Transformation: Korea" November 2017, figure 1.14.

103 *Ibid.*, page 1. Korea's share was particularly high in control arrangements, plural semiconductor devices, and organic material devices. See: OECD, *OECD Science, Technology and Industry Scoreboard 2017 – The Digital Transformation*, figure 5.

104 *Ibid.*, figure 1.25.

105 Section 301 Report into China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation, Office of the United States Trade Representative, March 27, 2018, <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2018/march/section-301-report-chinas-acts>.

a problem for the Republic of Korea, but also for the United States, since it creates a wedge that can weaken the alliance. This section offers specific and actionable policy recommendations that can reduce the structural vulnerability by strengthening and broadening the scope of economic cooperation between the two countries. It is important to note that these are unlikely to alter the reality that the Republic of Korea's dependence on China's market will both remain high and increase over time. Therefore, it is important that the United States incorporate this ROK vulnerability into its strategic thinking regarding the alliance, and take steps, where possible, to diffuse rather than intensify the stresses that the Republic of Korea faces.

## Trade

***The United States should revisit multilateral institutions and approaches, in trade and in other areas, including by reopening discussions on joining the Trans-Pacific Partnership (now the Comprehensive and Progressive Agreement for a Trans-Pacific Partnership (CPTPP)). The United States, the Republic of Korea, and other allies should establish an economic security alliance that collectively addresses the geopolitical challenges posed by new global threats and new commercial technologies.***<sup>106</sup>

The Trump administration's preference for bilateral negotiations and its suspicion of multilateral institutions produced at best modest gains in the trade sphere. This approach has damaged Washington's relationship with US allies and partners, as well as its standing as a global leader. It also has provided opportunities for US rivals like China to not only play off members of the alliance but also initiate their own multilateral trade initiatives, including the Regional Comprehensive Economic Partnership (RCEP), to further integrate Indo-Pacific countries into its sphere of influence. Finally, the United States needs a multilateral approach, especially cooperation from its allies and partners to prevent leakage of technologies with national security implications, cybersecurity, and pandemic response.

Likewise, ***the Republic of Korea should begin negotiations to join the CPTPP.*** While the Republic of Korea considered becoming a member of TPP in 2013, it missed the opportunity to join as a founding member mostly due to its relationship with China. President Moon said that the Republic of Korea is considering joining CPTPP right after the country signed RCEP in December 2020. While the Republic of Korea already has bilateral free trade agreements with most of the current CPTPP members, joining the CPTPP would greatly increase its FTA coverage by adding Japan as well

as Malaysia, and would assure the Republic of Korea participates in an agreement that is likely to define the principles of trade in the Indo-Pacific region.

Given the importance of trade for ROK economic growth, the Republic of Korea has a strong interest in maintaining the international trading order and avoiding trade protectionism. It also has a strong interest in keeping major trading powers, including the United States, involved. The latter involves directly addressing shortcomings that have been identified in current rules, including inadequate rules regarding domestic subsidies, state-owned enterprises, and policies regarding technology transfer, as well as complaints regarding WTO dispute settlement. As many of these issues are tied up in current US-China disputes, this presents tricky problems for ROK trade diplomacy. ***The Republic of Korea should join current multi-nation efforts such as the Ottawa Group and the US-Japan-EU initiative on WTO reform. The United States should support the Republic of Korea's efforts to reform international rules and institutions and avoid forcing the Republic of Korea to make explicit, public choices in disputes between the United States and China.***

***The United States should clearly describe what changes should be made in the global trading order and in the WTO and other multilateral institutions, as well as the end goals it is trying to achieve.*** When the United States takes actions outside existing rules, the rationale for doing so should be clearly articulated, as well as the conditions under which US actions would be suspended or reversed (the "off ramps" of confrontation). The United States has used tariff increases and other trade-restricting measures to protect domestic industry and to address perceived American grievances against trading partners, free trade agreements, and the WTO. These actions have raised costs to American producers, injected substantial uncertainty into global supply chains, and weakened US alliances and the credibility of US commitments. While US production costs have increased, there is little to no evidence that this policy has led to increases in overall US employment. At the same time, there are real issues facing the global trading order, which cannot be addressed without US commitment and leadership.

## Connectivity in the Indo-Pacific

**The United States and Republic of Korea should continue to coordinate overlapping economic engagement efforts and expand areas of cooperation in the Indo-Pacific under**

<sup>106</sup> Robert Atkinson and Clyde Prestowitz have made a similar proposal. See: Robert Atkinson and Clyde Prestowitz, "China's reaction to the pandemic shows why the US and its allies need a NATO for trade," Washington Post, May 20, 2020, <https://www.washingtonpost.com/opinions/2020/05/20/chinas-reaction-pandemic-shows-why-us-its-allies-need-nato-trade/>.

**the Biden administration’s updated US Indo-Pacific strategy and the ROK New Southern Policy.**<sup>107</sup> The two countries have already demonstrated clear strengths in terms of maintaining regular high-level dialogues on key economic issues and completing memorandums of understanding on priority economic engagement areas in Southeast Asia, including infrastructure and development finance, energy, science, and information communication technology. Moving forward, the alliance needs to focus on operationalizing these efforts to expand cooperation by more explicitly linking efforts where the US Indo-Pacific strategy overlaps with the ROK New Southern Policy’s “Prosperity” pillar. These efforts should include jointly led projects in the region on physical and digital infrastructure, development finance, smart cities, energy, and the digital economy.

### **Advanced Technologies and Innovation**

The United States and the Republic of Korea already enjoy a rich and well-established collaborative partnership on science, technology, and innovation-related issues; through joint research and development projects, education and training programs; and in forums, dialogues, competitions, and other avenues allowing for the exchange of people and ideas. At the same time, the pace of technological progress has accelerated sharply, and emerging technologies in the areas of big data, artificial intelligence, the Internet of Things, quantum computing, biotechnology, clean energy and renewables are likely to usher in disruptive changes in both economies and national security. ***The United States and the Republic of Korea should develop a new, smart partnership that focuses on emerging technologies and the rapid pace of the digital economy and the Fourth Industrial Revolution in the areas described below. A central focus should be on increasing product, services, and supply chain security, particularly in the ICT sector.***<sup>108</sup> The US and ROK governments should launch an annual dialogue—both at the high- and working- level—that brings together both public and private sector leaders from both countries to identify strategic industries and areas for cooperation.

- The US and ROK governments should work together to facilitate deeper US-ROK private sector partnerships on **autonomous vehicles**. As part of its plan to build a “hydrogen economy,” the Moon administration is working to support the development of battery-powered autonomous vehicles that could take up at least half of the auto market by 2030. While Hyundai is leading this development, the company lags behind firms like Google and Baidu in auto software technology, such as AI, sensors, and logic chips. Since this software technology has been a part of the value chain where the United States has enjoyed comparative advantage, ROK and US firms have already pursued some key examples of cooperation such as Hyundai-Aptiv and Hyundai-Aurora.<sup>109</sup> There is no ongoing government-level cooperation between the two countries on autonomous vehicles, since the US Department of Commerce and the ROK Ministry of Trade, Industry, and Energy held a meeting in July 2019, in Washington, DC to discuss cooperation in this sector. Collaboration at the government level to establish shared principles such as safety standards vehicles will make it easier for US and ROK firms to jointly develop autonomous technologies.<sup>110</sup>
- The United States and the Republic of Korea should cooperate to develop more secure **artificial intelligence (AI)** not merely for its economic benefits, but because cooperative leadership increases their capacity to develop and set standards for ethical use of AI. The Republic of Korea has stated explicitly that it intends to become a global leader in AI, and its hardware strengths in AI pair well with US software strengths in AI, creating an opportunity to help secure both the hardware and software supply chains for AI by relying more on one another.
- The United States and the Republic of Korea can cooperate to promote responsible global development and deployment of **5G infrastructure**. While the latest US Commerce Department restrictions on Huawei put ROK companies in a difficult position for a global initiative, there is still room for collab-

107 This report assumes that there will be a large degree of similarity between the Trump administration’s US Indo-Pacific Strategy and that of the Biden administration, particularly in terms of the basic concept and assumption that “US security and prosperity depend on free and open access to the Indo-Pacific region, which will remain an engine of US, regional and global economic growth”, which is stated in the declassified US Strategic Framework for the Indo-Pacific. While it is possible that the name will change under the Biden administration, it is likely to see the Biden administration carry over some elements of the strategy from the previous administration.

108 Beau Woods, et al., Building a Smart Partnership for the Fourth Industrial Revolution, Atlantic Council, April 2018, <https://www.atlanticcouncil.org/in-depth-research-reports/report/building-a-smart-partnership-for-the-fourth-industrial-revolution/>.

109 Although it had been previously reported that Hyundai and Apple were in talks to produce an autonomous electric vehicle, Hyundai announced in February 2021 that it is no longer in talks with Apple, leaving the future of a potential joint effort unclear.

110 Eunji Go, “Korea-US ‘autonomous vehicle’ industrial cooperation dialogue...Request for cooperation in relation to Japanese export regulations,” Yonhap News Agency, July 11, 2019, <https://www.yna.co.kr/view/AKR20190710147600003>; Song Jung-a, “Hyundai Motor and Aptiv seal \$4bn autonomous car joint venture,” Financial Times, September 23, 2019, <https://www.ft.com/content/01721eae-ddf1-11e9-9743-d5a370481bc>; Edward White, Song Jung-a, and Peter Campbell, “Hyundai faces Big Tech head-on in driverless cars battle,” Financial Times, October 24, 2019, <https://www.ft.com/content/a56e947e-146c-11e9-b018-3ef8794b17c6>.

oration between the two countries. While waiting on the new administration's policy on 5G, the two countries should consider establishing a steering committee that consists of experts from industries and policy community to offer platform to discuss how to reconcile national security concerns with economic security. These bilateral efforts could eventually be linked to emerging multilateral efforts to coordinate the world's ten leading democracies (the so-called "D-10") on 5G.

- **Quantum computing** is an area where the two countries are already working together through private sector collaboration such as Samsung's \$55 million funding for US quantum computing hardware and software company IonQ.<sup>111</sup> The United States and the Republic of Korea should work to incentivize further private and public sector linkages on quantum computing to serve their shared interests in leveraging emerging quantum technology to develop more secure networks.
- The United States and the Republic of Korea should create sector-specific steering committees in **semi-conductor**-related industries to cooperate with the private sector and work with non-governmental organizations to provide platforms to manage the convergence of business and national security risks.<sup>112</sup> The United States and the Republic of Korea, together with Japan, Taiwan, and the Netherlands, can establish these committees to identify shared geopolitical risks in their value chains, and to explore ways to enhance interdependence and secure supply chains among trusted partners.

## Global Pandemic Preparedness

**The United States and the Republic of Korea should work together to shape a collective global response to the current global pandemic and begin to prepare for future pandemics. These efforts should include measures to enhance global resilience and health security, reduce economic impacts, and safeguard values and principles of the rules-based international system.** Based on lessons learned from the Republic of Korea's strong response to COVID-19, the United States and the Republic of Korea should take the lead in energizing innovative and multilateral approaches, including public-private partnerships as follows:<sup>113</sup>

- The United States and the Republic of Korea should take the lead in transforming the broad aspirations outlined in the Extraordinary Group of Twenty (G20) Leaders' Summit Statement on COVID-19 into concrete, measurable actions across the Indo-Pacific and beyond. These efforts should include crafting guidelines on how to assure global availability of medical supplies and personnel; distribute vaccines; and strengthen existing global health institutions.
- The United States and the Republic of Korea should lead in creating a multilateral mechanism through which the G20 or likeminded countries could enable surge capacity of medical supplies and capacity and share real-time data, scientific fact-finding, and lessons learned from COVID-19 containment and mitigation.
- Most immediately, the United States and the Republic of Korea should work together to restore and diversify supply chains for essential medical supplies and equipment including personal protective equipment (PPE) in order to lead global efforts for effective distribution.
- The United States, the Republic of Korea, and other allies should jointly identify production capacity necessary for national security, broadly defined to include critical materials and infectious diseases. They should also jointly develop stockpiles of critical equipment and materials, along with protocols for sharing supply during an emergency, similar to those for petroleum stockpiles under the International Energy Agency.
- The United States and the Republic of Korea can take the lead in demonstrating that democracies have core advantages over autocracies in responding to pandemics.

## Global Supply Chains

**The United States and the Republic of Korea should work together to diversify global supply chains in order to increase the robustness and resilience of the existing supply chains in the Indo-Pacific.** The immediate reaction to the COVID-19 pandemic, coupled with effects to disengage the US and Chinese economies, has already led to numerous proposals to reallocate, shorten, and often localize global supply chains, including the Economic Prosperity Network led by the US government.

111 Francis Ho, "IonQ: An Investment in our Quantum Future," Samsung Newsroom, October 24, 2019, <https://news.samsung.com/us/ionq-investment-quantum-future/>.

112 Miyeon Oh, Robert Dohner, and Trey Herr, Global Value Chains in an Era of Strategic Uncertainty: Prospects for US-ROK Cooperation, Atlantic Council, November 2020, <https://www.atlanticcouncil.org/wp-content/uploads/2020/11/GLOBAL-VALUE-CHAINS-final-11-19-1.pdf>.

113 Miyeon Oh, Strategic Insights Memo: US-Japan-Korea Trilateral Cooperation on COVID-19, Atlantic Council, April 2020, <https://www.atlanticcouncil.org/wp-content/uploads/2020/04/US-Japan-Korea-Trilateral-Cooperation-on-COVID-19.pdf>.

- The United States should review its supply chain security proposal of November 2019 and begin a process of soliciting recommendations from the private sector in the United States and in allies like the Republic of Korea, in order to introduce a revised, more effective, and less costly proposal in the future. The United States' initiative on Securing the Information and Communications Technology and Services Supply Chain, despite substantial industry protest, grants the Commerce Department extensive powers to intervene and reverse ICT transactions. The initiative has introduced considerable uncertainty into supply chain economics, and may freeze supply chain decisions and investment until a track record on Commerce decisions is established.<sup>114</sup>
- The United States and the Republic of Korea should organize a private sector initiative to identify measures that would increase the robustness and resiliency of the *existing* Indo-Pacific supply chain. Restructuring global supply chains is a long-term, expensive task, as supply chains have developed geographically to take advantage of specializations, particularly in industries with high capital requirements, thereby strongly driven by market pressures on corporations.<sup>115</sup> More analysis needs to be done on the costs of modifying supply chains, the lead times involved, and the costs and benefits of a range of options for providing greater security of supply. Before any potentially time-consuming and costly reallocation, the private sector initiative can also offer recommendations on supply chain restructuring that would provide significant benefits at low cost.
- The Republic of Korea should join the US efforts to diversify its supply chains and increase resilience as it has learned that over-reliance on a single country could cause major supply disruptions in related industries, from China's retaliation on ROK companies over the deployment of THAAD and the trade dispute between Japan and the Republic of Korea over three chemicals that are essential to the manufacturing of semiconductors. The ROK government should develop strategies to reduce its vulnerability to supply chain disruptions through close and effective communication with ROK firms in order to find mutually beneficial ways to restructure global supply chains.
- The United States and the Republic of Korea should expand cooperation in order to mitigate geopolitical shocks that disrupt global supply chains for advanced technologies. The intensifying race to dominate global technology creates new pressure on existing supply chains, and producers are increasingly relying on digitally integrated supply chains. Given that both countries have established industries for advanced technologies, the United States and the Republic of Korea should create a steering committee that is focused on advanced technology industries including semiconductor, AI, 5G, quantum computing, and autonomous vehicles, by working with other like-minded countries.

<sup>114</sup> See, for example: Nihal Krishan, "'Enormous power grab': Business groups bash Commerce Department supply-chain security proposal," *Washington Examiner*, January 16, 2020, <https://www.washingtonexaminer.com/policy/economy/enormous-power-grab-business-groups-bash-commerce-department-supply-chain-security-proposal>. IBM's comment, in a letter of January 10, 2020, was that "the Proposed Rule would not achieve [its] objectives. It is massively overbroad, and...would harm the US economy, fail to enhance US security, and violate due process." See: "IBM Urges Commerce Department to Adjust Approach on IT Supply Chain Security," *Think Policy*, IBM, January 10, 2020, <https://www.ibm.com/blogs/policy/supply-chain-rule/>.

<sup>115</sup> Willy Shih, "Bringing Manufacturing Back to the US Is Easier Said Than Done," *Harvard Business Review*, April 15, 2020, <https://hbr.org/2020/04/bringing-manufacturing-back-to-the-u-s-is-easier-said-than-done>.

# 3. A Step-by-Step Strategy for Denuclearization and Peace on the Korean Peninsula: The Road Not Taken after Singapore

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## The US-ROK Alliance Should Not Give Up on Denuclearization of North Korea

The international diplomatic effort to achieve North Korean denuclearization has been at a standstill at least since the second Trump-Kim Summit in Hanoi in February 2019. At that meeting, President Trump rejected Chairman Kim Jong Un's proposal that would have traded dismantlement of parts of the Yongbyon nuclear complex for relief from the broad economic sanctions imposed by the UN Security Council on North Korea in 2016 and 2017.<sup>117</sup> Though many observers—particularly in the administration of ROK President Moon Jae In—were disappointed in the outcome, Trump was praised at the time by US commentators—even by longtime critics like Nancy Pelosi—for standing firm.<sup>118</sup>

Ultimately, agreeing to so much sanctions relief for North Korea in exchange for a significant, but still modest, concession on its nuclear program seemed inadvisable. Even among those US commentators who favor a “step by step” approach, there was general agreement that such sweeping sanctions relief could only come at a later stage, as

part of a “big deal” encompassing more far-reaching steps toward denuclearization by North Korea.

Most US observers have since drawn the conclusion—long the US intelligence community's view—that Kim Jong Un was probably never serious about entirely giving up his nuclear weapons in the first place, despite his pledge to work toward complete denuclearization of the Korean peninsula at the first Trump-Kim Summit in Singapore in June 2018.<sup>119</sup> As a result, many now argue that Washington, Seoul, and the international community should “face reality,” give up on denuclearization, and shift to a long-term strategy focused on either containment of the North Korean threat or peace and reconciliation.<sup>120</sup>

While this may be a realistic analysis of Kim's intentions, to entirely abandon full denuclearization as the shared objective of the US-ROK alliance would mean accepting North Korea—de facto, if not de jure—as a nuclear weapons state, one that continues to improve its capabilities to threaten the US mainland as well as US and allied forces in the region. This is a decision that would have far-reaching, long-term consequences for global and regional security and stability and should not be taken lightly. Over time, acceptance of a nuclear-armed North Korea could, for example, increase domestic pressure on Tokyo and Seoul to acquire nuclear weapons of their own, or demands from Seoul to redeploy US nuclear weapons to the Republic of Korea until North

<sup>116</sup> The author would like to thank his Atlantic Council colleague Markus Garlauskas, former US National Intelligence Officer for North Korea, for his advice and assistance on this article.

<sup>117</sup> “Senior State Department Official Remarks to Traveling Press,” US Department of State, media release, February 28, 2019, <https://www.state.gov/senior-state-department-official-remarks-to-traveling-press-3/>.

<sup>118</sup> Hyonhee Shin, “No deal blow for Moon's vision of ‘peace-driven’ Korean economy,” Reuters, March 1, 2019, <https://www.reuters.com/article/us-northkorea-usa-moon-idUSKCN1QI405>; David Ignatius, “It made sense for Trump to walk away in Hanoi,” Washington Post, February 28, 2019, <https://www.washingtonpost.com/opinions/2019/02/28/it-made-sense-trump-walk-away-hanoi/>; Clare Foran and Ashley Kilough, “Pelosi on North Korea talks: ‘I'm glad that the president walked away,’” CNN, February 28, 2019, <https://www.cnn.com/2019/02/28/politics/pelosi-trump-north-korea-kim-jong-un-vietnam-summit/index.html>.

<sup>119</sup> Daniel R. Coats, *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>; “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, press release, 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/>.

<sup>120</sup> Harry J. Kazianis, “Forget War: Containment Is The Best Way To Deal With North Korea,” *American Conservative*, June 27, 2018, <https://www.theamericanconservative.com/articles/forget-war-containment-is-the-best-way-to-deal-with-north-korea/>; Daniel R. DePetris, “Peace in Korea Can Happen Without Denuclearization,” *the Diplomat*, July 31, 2020, <https://thediplomat.com/2020/07/peace-in-korea-can-happen-without-denuclearization/>.



Korea gives up its own—which would further exacerbate regional tensions.<sup>121</sup>

The speculation surrounding Kim Jong Un’s absence from public appearances in April 2020 serves as a reminder of how much North Korea’s reliance on a single all-powerful leader with an unclear succession plan heightens the potential for instability—which would hold far greater risks if it occurred while North Korea remains a nuclear-armed state. Were Kim to die or become incapacitated suddenly while North Korea remains nuclear-armed, a succession crisis could lead to fragmentation of control over nuclear weapons and material, leading to potentially much graver consequences for any ensuing civil war, a military confrontation, or even external military intervention.

Further, the unchallenged authority of the leader in North Korea’s personalized decision-making process is also a reminder that North Korea’s intentions toward denuclearization could shift rapidly and dramatically. Kim Jong Un will not always be the leader of North Korea, and we cannot rule out that the individual or collective leadership that follows him could be influenced to have a very different view of the relative costs and benefits of denuclearization. Meanwhile, Kim’s own thinking on denuclearization could change with time and under the influence of strong incentives—while he has the power to impose a different view on anyone in North Korea who remains wedded to nuclear weapons. This means that the long-term prospects for North Korean denuclearization should not be dismissed, even if one believes its current leader does not currently intend to denuclearize.

Therefore, the United States and the Republic of Korea should uphold complete denuclearization as the ultimate goal, and Washington should seek to restart negotiations on the basis of the Joint Statement issued at the end of the Singapore Summit. That document, while ambiguous in some of its formulations, lays out the goals for a series of parallel tracks: normalization of US-North Korea relations to ensure peace and prosperity, establishment of a lasting peace regime, and denuclearization of the Korean peninsula.<sup>122</sup> While lacking many essential details, the Singapore statement is largely consistent with the principles agreed upon fifteen years ago in the September

2005, Joint Statement of the Six-Party Talks, and with the inter-Korean Panmunjom Declaration of April 2018.<sup>123</sup> These agreements still represent a potentially viable basis for a comprehensive settlement not only of the North Korean nuclear issue but also of many of the security challenges on the Korean peninsula—if Pyongyang can be convinced to recommit to them.

## Envisioning a Multi-Track and Step-by-Step Approach

Conceptually, the underlying premise of this multi-track approach is that there can be no permanent peace or security on the Korean peninsula or normalization of political and economic relations with Pyongyang without denuclearization of North Korea. At the same time, it accepts the reality that we will not be able to achieve denuclearization without convincing Pyongyang that North Korea will be both more secure and more prosperous after giving up its nuclear weapons. In essence, denuclearization, peace and security, and economic revitalization are three “prongs” to a single trident and must be implemented in parallel. Such framing is very much in line with the Moon administration’s policy toward North Korea, which has the goals of: 1) Resolution of the North Korean Nuclear Issue and Establishment of Permanent Peace; 2) Development of Sustainable Inter-Korean Relations; and 3) Realization of a New Economic Community on the Korean Peninsula.<sup>124</sup>

In practical terms, this means not only a three-pronged approach but also a step-by-step process of building trust in the relationship between the US-ROK alliance and North Korea, leading incrementally to a comprehensive deal. In this process, movement toward denuclearization, toward a new peace regime, and toward North Korea’s economic revitalization need to move at roughly the same pace along parallel tracks, so that Pyongyang, Seoul, and Washington can minimize the additional risks they are accepting and see tangible benefits at each step. This would allow the North Koreans to progressively gain confidence that their security will not be diminished or undermined, and that their economy will benefit, if they halt nuclear and ballistic missile testing and production, give up nuclear weapons

121 Toby Dalton and Ain Han, “Elections, Nukes, and the Future of the South Korea—US Alliance,” Carnegie Endowment for International Peace, October 26, 2020, <https://carnegieendowment.org/2020/10/26/elections-nukes-and-future-of-south-korea-u.s.-alliance-pub-83044>; Byong-chul Lee, “Don’t be surprised when South Korea wants nuclear weapons,” Bulletin of the Atomic Scientists, October 23, 2019, <https://thebulletin.org/2019/10/dont-be-surprised-when-south-korea-wants-nuclear-weapons/>.

122 “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/>.

123 “Joint Statement of the Fourth Round of the Six-Party Talks Beijing, September 19, 2005,” US Department of State, press release, September 19, 2005, <https://2001-2009.state.gov/r/pa/prs/ps/2005/53490.htm>; “Translation: Panmunjom Declaration,” Wikisource, accessed November 2020, [https://en.wikisource.org/wiki/Translation:Panmunjom\\_Declaration](https://en.wikisource.org/wiki/Translation:Panmunjom_Declaration).

124 Ministry of Unification Republic of Korea, “Three Goals,” accessed November 2020, [https://www.unikorea.go.kr/eng\\_unikorea/policyIssues/koreanpeninsula/goals/](https://www.unikorea.go.kr/eng_unikorea/policyIssues/koreanpeninsula/goals/).

and delivery systems, and start dismantling ballistic missile and nuclear production infrastructure.

For their part, Washington and Seoul need to work together closely and plan carefully so that progress can be made on all tracks, while mitigating the risks to the alliance and avoiding opportunities for Pyongyang to exploit different approaches from Washington and Seoul. Washington will be most concerned that Pyongyang will not be able to pocket a peace treaty or other security guarantees and economic inducements favored by Seoul in a way that would allow the regime's negotiating goals to be satisfied without ever "going all the way" to full, verifiable denuclearization. Since 2018, there have been concerns in Washington that Seoul wants to move too far along the path of peace and economic incentives without progress in denuclearization, while Seoul has sometimes bristled at Washington's perceived interference in inter-Korean initiatives—leading to the establishment of a new working group to resolve or manage these differences.<sup>125</sup>

In addition to preserving negotiating leverage and avoiding an opportunity for Pyongyang to play Seoul and Washington off against each other, it will be vital to ensure that the US-ROK alliance remains solid, and that the US extended deterrent against North Korean aggression remains credible throughout the denuclearization process. This must be done, however, in a careful way that does not provide North Korea with renewed justifications for its past claims: that its security is being threatened by alliance military coordination, that Seoul is "meddling" in bilateral US-North Korea denuclearization dialogue, or that Washington is interfering in the inter-Korean reconciliation process.

Realistically, these parallel processes would need to be carried out in stages, based on the "action for action" principle, with economic incentives at every stage in order to lubricate the process and increase the costs of "backsliding." Indeed, the pressure of sanctions and the prospect of sanctions relief may provide far more leverage for denuclearization than steps along the peace track, at least in the short term, given the evident impact of sanctions on Kim's economic goals. While we should aim to complete all three processes as quickly as possible, a step-by-step approach is one that requires patience to work as intended.

The scope and scale of eliminating all elements of North Korea's nuclear capabilities and infrastructure, with

comprehensive verification—even without considering the time necessary for negotiating the details at each step—would realistically take longer than a single four-year presidential term (barring total surrender by Pyongyang). Meanwhile, working out the details of establishing and implementing a permanent peace mechanism and economic relief would also take time, even under ideal circumstances, and would take even more time to deliver sufficient results that Pyongyang could be confident in the enduring benefits. A quick, "big bang" approach, though understandably desirable from Washington's perspective, is not realistic.

Even the best formula for sequencing is no guarantee that the North Koreans will actually give up their nuclear weapons completely. But without the proper sequencing and observance of the "action for action" principle, the negotiations will remain stuck at the starting gate, and we will, once again, miss an opportunity to limit or even roll back the expansion of North Korea's nuclear and missile capability. That would, in turn, increase the risks of divergence between Washington and Seoul, while exacerbating the security dangers in Northeast Asia.

This, unfortunately, is what has happened after the Singapore Summit. Even if one glosses over President Trump's declaration after the summit that there was no longer a nuclear threat from North Korea, it is clear that the apparent level of optimism in Washington and Seoul in the aftermath of the summit was unwarranted. In the end, momentum toward denuclearization proved difficult to establish, absent any mechanism to work out the detailed "action for action" follow-up on the Singapore Declaration.<sup>126</sup> Despite the appointment of a new US special representative in August 2018, and his inclusion in a trip led by the secretary of state to meet with Kim Jong Un in October, North Korea would not agree to a working-level process to follow up on the Singapore Summit.<sup>127</sup>

Even the prospects of working out additional details between the secretary of state and North Korean lead negotiator Kim Yong Chol quickly grew dim by late 2018, with Pyongyang canceling a November meeting between the two at the last moment.<sup>128</sup> Pyongyang apparently held to the belief that it could get the best deal by engaging with Trump himself, which led to Kim Yong Chol visiting the Oval Office in January 2019, to secure President Trump's support for a second summit, which ultimately took place the following month in Hanoi.<sup>129</sup>

125 Christy Lee, "US, South Korea to Launch Joint Working Group on North Korea," VOA News, November 3, 2018, <https://tinyurl.com/2os3kafh>; "Ministries embark on reforming Korea-US working group on N. Korea policy: lawmaker," Yonhap News Agency, September 29, 2020, <https://tinyurl.com/mhpmiyst>.

126 Donald Trump (@realDonaldTrump), "Before taking office people were assuming that we were going to War with North Korea," Twitter, June 13, 2018, <https://tinyurl.com/1qpqn2dx>; "Trump claims North Korea is 'no longer a nuclear threat,'" CNBC, June 13, 2018, <https://tinyurl.com/1wk6xzvv>.

127 Kylie Atwood, "Pompeo's six hours in Pyongyang - a reporter's notebook," CBC News, October 15, 2018, <https://tinyurl.com/1elbqox>.

128 Simon Denyer, "Pompeo's meeting with North Korean counterpart called off at last minute," Washington Post, November 7, 2018, <https://tinyurl.com/fpcn7yqo>.

129 Barnini Chakraborty, "White House: Second nuclear summit between Trump, North Korea to be held in February," Fox News, January 18, 2019, <https://www.foxnews.com/world/trump-to-meet-north-korean-official-in-the-oval-office-in-possible-prelude-to-2nd-nuclear-summit>.

The biggest challenge of a step-by-step approach is establishing simultaneous incremental steps at every stage of the process that are mutually acceptable to Pyongyang, Washington, and Seoul (as well as any other key stakeholders involved in providing incentives to Pyongyang) to build the foundation of trust needed to achieve full denuclearization and durable peace on the Korean peninsula. As the Hanoi Summit demonstrated one year later, a virtually “all-or-nothing” approach to sanctions relief from either side is likely to lead to a dead end.

It was disingenuous of the North Koreans to assert right after Singapore that the order of paragraphs in the Joint Statement required that an end-of-war declaration come *before* any steps toward denuclearization.<sup>130</sup> But the North Koreans had reason to expect movement in parallel. Movement along the peace and security track, such as a joint US-ROK end-of-war declaration, would have been one way for Seoul and Washington to show Pyongyang that the United States was serious about ending its “hostile policy” and about transforming relations, which could have persuaded North Korea to make a significant step on the denuclearization path.

## Picking up Where Singapore Left Off: An Illustrative Approach to Sequencing

What would be a more realistic approach to sequencing that could move the negotiations incrementally toward the twin goals of denuclearization and a peace treaty? A “declaration for declaration” would be a good way to get the ball rolling on implementation of the Singapore Joint Statement. Under this formula, North Korea would agree to provide a declaration of its nuclear weapons programs and agree to an international verification mechanism for this declaration. In return, the United States and the Republic of Korea would issue a joint political declaration together with North Korea and China announcing the end of the Korean war and their agreement to initiate negotiations on a permanent peace treaty to replace the 1953 Armistice. As a necessary condition, of course, Kim would also have to reaffirm North Korea’s adherence to his previous pledge not to test ICBMs or nuclear weapons, in essence nullifying his declaration at the end of 2019 that he no longer feels bound by these pledges.<sup>131</sup>

The United States and Republic of Korea would make clear that the political declaration has no immediate legal

consequences for the United Nations Command (UNC), Combined Forces Command (CFC), or US Forces Korea (USFK), although it could be accompanied by reciprocal military confidence-building measures, such as mutual pullbacks of missiles or artillery to an agreed distance away from the Demilitarized Zone (DMZ). Such measures could build upon the Comprehensive Military Agreement between the North and the Republic of Korea, instituted after the Pyongyang inter-Korean summit of September 2019.<sup>132</sup>

An end-of-war declaration alone would almost certainly not provide sufficient leverage to persuade North Korea to agree to a full and verifiable declaration of its nuclear programs and infrastructure; they will likely insist on limiting the scope of the declaration and on sanctions relief as well. Some significant, but reversible, steps to ease sanctions would be needed to secure agreement to a more comprehensive declaration encompassing previously-undeclared facilities and material outside of the well-known Yongbyon complex. This could include suspension of restrictions on inter-Korean economic projects (especially those that benefit the nascent private sector in North Korea) and temporarily easing some of the sectoral import or export sanctions imposed by the UN Security Council.

Even if the North Koreans agreed to provide a comprehensive declaration, they would probably balk at the stringent verification requirement—so this could be the stage at which the process came to a screeching halt. In that case, any sanctions relief could be quickly withdrawn and progress toward a new peace mechanism suspended. But Washington and Seoul should be prepared to provide sufficient flexibility—such as allowing for the declaration of programs and establishment of a verification mechanism to be carried out in two or three stages—to put Kim Jong Un to the test while ensuring that he would bear the blame for any breakdown.

In the more optimistic scenario in which North Korea agreed to a verifiable declaration-for-declaration package, we would then enter the stage of denuclearization—the actual, step-by-step dismantlement and destruction of the North Koreans’ nuclear weapons and programs. To maintain the “action for action” framework, we would need to break up the negotiations on a peace treaty and sanctions relief into several incremental steps to be carried out in parallel to the different stages of denuclearization.

130 Alex Ward, “Exclusive: Trump promised Kim Jong Un he’d sign an agreement to end the Korean War,” *Vox*, August 29, 2018, <https://www.vox.com/2018/8/29/17795452/trump-north-korea-war-summit-singapore-promise>.

131 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>.

132 Agreement on the Implementation of the Historic Panmunjom Declaration in the Military Domain, The National Committee on North Korea, September 2018, <https://www.ncnk.org/sites/default/files/Agreement%20on%20the%20Implementation%20of%20the%20Historic%20Panmunjom%20Declaration%20in%20the%20Military%20Domain.pdf>.

On the denuclearization side, we should aim to begin with some “front loaded” steps—a down payment by which the North Koreans could demonstrate that they are ready to take concrete steps to eliminate real capabilities (weapons, delivery systems, infrastructure) that threaten both the Republic of Korea and the United States. This could include the removal of five to ten ICBMs and ten to twenty warheads to a third country and a halt to fissile material production at all known facilities, together with a full moratorium on ballistic missile and nuclear weapons tests. There could also be reciprocal reductions in conventional forces by the US-ROK alliance and North Korea in tandem with the initial steps toward denuclearization.

Following this down payment, a second stage of denuclearization could involve taking all ICBM and IRBM launchers out of military garrisons to verifiable long-term storage sites for future dismantling or disabling; removing additional ICBMs and warheads to a third country and/or beginning their dismantlement and destruction inside North Korea under international verification; and shutting down Yongbyon and other fissile material production sites. There could, again, be accompanying conventional arms reductions and confidence-building measures.

In subsequent stages, there would be further dismantlement and destruction of weapons, delivery systems, and production facilities, culminating in the final stage in North Korea’s adherence to the Nuclear Non-Proliferation Treaty (NPT) as a non-nuclear weapons state—at which point we would declare that North Korea has achieved full, final, and verifiable denuclearization (FFVD).

Slicing the peace treaty negotiations into stages would be more complicated, but it would be essential to maintaining negotiating leverage vis-à-vis Pyongyang. A first stage could involve the United States and the Republic of Korea declaring that they have no intention to invade or attack North Korea and no intention to reintroduce nuclear weapons to the Korean peninsula, using language drawn from the September 2005, Joint Statement of the Six Party Talks.<sup>133</sup> The four parties (adding China) would then commence negotiations on a peace treaty, with the United States coordinating as necessary with other UN Sending States.<sup>134</sup>

As denuclearization proceeds to the next stage, the four parties could agree on the main elements or the actual text of the future peace treaty. Ideally, this should include not only a permanent cessation of hostilities to replace the 1953 Armistice but also additional provisions such as a mutual

non-aggression pact, declaring the Korean peninsula to be a nuclear weapons-free zone, and reciprocal arms control and confidence-building measures to ensure conventional military disengagement and de-escalation of the military confrontation on the Korean peninsula. As an additional incentive, the United States could offer the opening of diplomatic liaison offices in Pyongyang and Washington and facilitate bilateral economic and trade development projects, with full diplomatic relations and the opening of embassies taking place upon entry into force of the peace treaty.

The third stage, which would be close to the end of the denuclearization process, could be the actual signing of the peace treaty and agreement to apply its provisions provisionally pending completion of denuclearization. The final stage would be the ratification and entry into force of the peace treaty, upon completion of FFVD and North Korean re-accession to the NPT as a non-nuclear-weapons state.

Throughout the process, Washington and Seoul, working with the UN Security Council, would suspend and eventually lift virtually all economic sanctions in incremental fashion as the denuclearization process proceeds. As noted above, economic incentives may provide stronger leverage for denuclearization than movement toward a peace treaty. Along with sanctions relief and direct economic aid and investment that would likely be offered by China, Japan, the Republic of Korea, and possibly Russia, Seoul and Washington could offer to facilitate engagement between Pyongyang and various international organizations and investors. To this end, certain US and ROK domestic measures and laws would have to be waived or rescinded, such as the US Trading with the Enemy Act.

The approach set forth above is only one possible way to address the sequencing of denuclearization and a peace treaty. Starting with a “declaration for declaration,” some argue, is likely to fail; they point out that the North Koreans have stated that a full declaration can only come near the end of the process, since an early declaration of the locations of their weapons would supposedly make them more vulnerable to a US preemptive attack and force them to negotiate “without any clothes on.” If that proved to be the case, denuclearization could begin with more limited steps such as a partial declaration that includes reestablishing an International Atomic Energy Agency (IAEA) presence at Yongbyon to supervise the shutdown of fissile material production there. But deferring a detailed declaration for too long would make it harder to verify North Korean fulfillment of their commitments to denuclearization.

<sup>133</sup> September 19, 2005 Joint Statement of the Six Party Talks, The National Committee on North Korea, 2005, [https://www.ncnk.org/resources/publications/September\\_19\\_2005\\_Joint\\_Statement.doc](https://www.ncnk.org/resources/publications/September_19_2005_Joint_Statement.doc).

<sup>134</sup> The Armistice was signed by a US general on behalf of the United Nations Command, not just the United States and ROK, so other troop-contributing nations such as the UK, France, Canada, Australia, New Zealand, Denmark, Norway, Turkey, and the Netherlands, would need to be consulted.

A key part of developing the increments of “action for action” would be a clearer common understanding among the relevant officials in Washington and Seoul of the actual leverage provided by various types of economic sanctions.<sup>135</sup> Given the dramatic decline in international enforcement of UN sanctions for over a year now,<sup>136</sup> some types of sanctions relief early in the process might be a relatively small concession if this relief were offered in areas where there has been little international political will or practical ability to robustly enforce sanctions.

Despite the growing pessimism about the effectiveness of sanctions, some suggest that, if we use our economic leverage judiciously, we can afford to move toward an end-of-war declaration and a peace treaty at a faster pace than denuclearization. US and ROK security would not be jeopardized, in this view, since a peace treaty would only affect the status of the UN Command, and not the status of US Forces Korea or the US-ROK Combined Forces Command, whose legal justifications are not tied to the Korean War armistice. President Moon has advocated for revitalizing the peace process as a priority, with the intent for this to “jump-start” progress on denuclearization.<sup>137</sup>

This approach could have potential downsides, however. With the potential removal of UN Command from the equation with the end of the armistice, it would remove US allies and neutral nations, like Switzerland and Sweden, from playing their positive role for peninsular stability, now exercised through the UN Command, the UN Military Armistice Commission, and the Neutral Nations Supervisory Commission.<sup>138</sup> More fundamentally, it could encourage North Korea to take the money and run—pocketing the end-of-war declaration, peace treaty, and associated incentives, and then renouncing denuclearization forever even as a long-term goal. It would therefore be even more important in this scenario to first ensure that suspended sanctions could be easily “snapped back” with China’s support in the event Kim Jong Un failed to deliver on his end of the bargain. Alternate methods to involve US allies and trusted neutral nations in the peace mechanism could also be pursued, though North Korea would likely oppose their inclusion.

## Conclusion: Seek Denuclearization Through Multilateral Diplomacy

As noted above, many believe that, no matter how carefully we deal with sequencing, and despite the commitment to “Denuclearization of the Korean Peninsula” in the Singapore Joint Statement, the North has no intention of actually giving up its nuclear deterrent, and that this is why the process is now at an impasse. They argue that Kim Jong Un has seen what happened to countries like Libya and Ukraine after giving up their nuclear weapons voluntarily; he will therefore make unacceptable demands for reciprocal US “denuclearization” to force the United States and the international community to accept North Korea as a de facto nuclear weapons state. He would, in this scenario, use a step-by-step approach to denuclearization to obtain economic benefits and security guarantees while retaining at least some of his nuclear weapons capabilities. The US intelligence community has repeatedly stated its assessment that this is Kim Jong Un’s intention for negotiations.<sup>139</sup>

The most we may be able to achieve, in this case, would be partial denuclearization, with Kim Jong Un retaining significant, albeit reduced nuclear weapons and ballistic missile delivery capability in the short and medium term. In this scenario, we would need to decide what partial steps along the security and economic tracks (such as diplomatic normalization or limited sanctions relief) were still in our interest as part of a long-term containment and risk-reduction strategy. We would also need to decide how much to increase the pressure and incentives for the North Korean regime to go further in denuclearization, or whether to assume a posture of strategic patience.

Limiting the further qualitative improvement and quantitative expansion of North Korea’s nuclear arsenal that would come from some sort of “freeze” could be worth significant concessions from Washington and Seoul, even if this meant reducing the pressure on the regime to fully denuclearize for an extended period of time. Measures going beyond a freeze, such as a permanent reduction in the size of North

135 Markus V. Garlauskas, “A New Framework for Assessing Sanctions Is Vital for Any New US Strategy on North Korea,” 38 North, Stimson Center, October 22, 2020, <https://www.38north.org/2020/10/mgarlauskas102220/>.

136 Stephanie Kleine-Ahbrandt, “Maximum Pressure Against North Korea, RIP,” 38 North, Stimson Center, November 7, 2020, <https://www.38north.org/2019/10/skleineahlbrandt100719/>.

137 Lee Chi-dong, “Moon proposes declaring end to Korean War, requests U.N.’s support,” Yonhap News Agency, September 23, 2020, <https://en.yna.co.kr/view/AEN20200922010200315>.

138 “UNC FAQs,” United Nations Command, accessed November 20, 2020, <https://www.unc.mil/Resources/FAQs/>.

139 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>.

Korea's arsenal, would be a significant step forward, one that could justify even more substantial measures in response.

However, even in this circumstance, we should not abandon the goal of complete denuclearization and accept North Korea as a nuclear weapons state. Besides the prospect that Kim Jong Un, or a future North Korean leadership, could eventually change its mind about full denuclearization, such acceptance of a nuclear-armed North Korea would pose significant dangers to regional stability and global security, as discussed above. Abandoning denuclearization would further undermine the global non-proliferation regime, further reduce the credibility of the UN Security Council, and undermine strategic stability in Northeast Asia.

Whatever approach we take to renewed negotiations, we need to establish some sort of successor to the Six Party Talks to coordinate with all the major stakeholders, not just between the United States and the Republic of Korea, and not just with China, but also including Japan and

Russia. The lack of such a mechanism in the run-up to the Singapore and Hanoi Summits made it impossible to present a common line to the North Koreans on sequencing and the criteria for sanctions relief. This may have contributed to Kim's perception that, by dealing directly with President Trump, he could gain a much greater degree of relief than Washington would accept for what Kim was willing to offer.

Although multilateral diplomacy can sometimes be cumbersome, such a mechanism is essential to prevent the North Koreans from playing the various stakeholders off against one another, from further circumventing or weakening enforcement of sanctions, and from falling victim to misunderstandings that could arise from mixed messages from different capitals. To prevent the sanctions regime from collapsing and mitigate the risk of North Korean wedge-driving, we need a mechanism similar to the Six Party Talks but founded first and foremost on building a consensus approach between Seoul and Washington.

## 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 through 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

154 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>.

155 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>.

156 “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).

157 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>.

158 “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).

159 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>.

160 “Hwasong-10,” *Wikipedia*.

161 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>.

# 5. North Korean Non-Nuclear Threats to Stability

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## Introduction

Since the armistice of 1953, North Korea has used non-nuclear tools, including limited acts of violence and both explicit and implicit threats, to calibrate international and domestic perceptions of the level of instability on the Korean peninsula.<sup>236</sup> The Kim regime benefits from a perception that accommodating the regime is the best means to maintain the current state of fragile stability. Such stability, however tenuous, is preferable to the violence and chaos that could result from a resumption of war or even just the regime's collapse. Pyongyang uses threats, posturing, and limited acts of aggression to not only preserve the overall stability of the strategic stalemate on the Korean peninsula but also to set and reinforce red lines, intimidate adversaries into caution, signal interest for dialogue, gain leverage in negotiations, manage internal politics, enhance diplomatic maneuvering space, and justify economic assistance.<sup>237</sup>

Pyongyang often has been masterful in ratcheting the perceived level of tension up or down and careful to calibrate its actions and justifications to suit the moment. Though the Kim regime has not always effectively anticipated or managed the second order effects of its actions, it has always managed to avoid triggering international responses strong enough to directly endanger regime survival.<sup>238</sup> Pyongyang has effectively exploited the preference of the other key players for uneasy stability over the risks of conflict or a collapse of the North Korean state. Neither Washington nor Seoul are eager to fight a bloody, expensive war and neither Beijing nor Moscow want a destabilizing military conflict or chaos on their strategic doorstep. The Kim regime's approach of relying on the restraint of the United

States-Republic of Korea (US-ROK) alliance and the protection of China and Russia is inherently risky, however. Miscalculation, misperception, or unanticipated actions by lower-level individuals could lead a crisis of Pyongyang's own making to spin out of control in ways that threaten not only regional stability but the regime's very survival.

Most policy makers correctly focus on the strategic impact of North Korea's nuclear weapons program, but time and attention need to remain on North Korea's other means for threatening peace and stability on the peninsula—particularly as North Korea may perceive it has more room for escalation as its nuclear deterrent grows more credible. North Korea's varied non-nuclear threats have a higher probability of coming into play, and could have severe strategic consequences, even if the resulting crisis never crosses the threshold of nuclear use.

North Korea will continue to place primacy on actual or threatened use of non-nuclear acts of coercion, provocation, and violence to, paradoxically, maintain strategic stability and regime survival. This analysis identifies primary North Korea tactics and tools, the risks they pose to peace and stability on the peninsula, as well as the geo-strategic risks they pose to the United States, China, and Japan. The United States, Republic of Korea, Japan, and other partners will need to practice vigilance and perseverance in response to Pyongyang's tactics.

This chapter focuses on such limited actions from Pyongyang. Additional analysis related to the long-term growth in the North Korean threat, to include its nuclear capabilities, and the risks of large-scale military conflict are covered in the previous chapter of this report by Markus Garlauskas.

## Actions and Reactions: Playing the Field

North Korean actions to foment instability impact regional and global actors in different ways. Sometimes the actions benefit one or more states in the great game of regional

236 US Congress, Senate, Committee on Foreign Affairs, *North Korea's Sea of Fire: Bullying, Brinkmanship and Blackmail: Hearing before the Committee on Foreign Affairs*, 112th Congress, 1st Session (Washington DC, March 10, 2011), <https://tinyurl.com/y5gzqjh5>.

237 Dr. Jung H. Pak, "Kim Jong-un's tools of coercion," Institute for European Studies Korea Chair, June 2018, [https://www.korea-chair.eu/wp-content/uploads/2018/06/KFVUB\\_Policy\\_Brief\\_2018-6\\_JungPak.pdf](https://www.korea-chair.eu/wp-content/uploads/2018/06/KFVUB_Policy_Brief_2018-6_JungPak.pdf).

238 The United States seriously contemplated attacking North Korea's nuclear production plant at Yongbyon in 1994, which could have triggered major war because it could have threatened DPRK regime survival. See: Barbara Demick, "Q&A: Former Defense Secretary William Perry on why we didn't go to war with North Korea," *LA Times*, April 14, 2017, <https://www.latimes.com/nation/la-fg-perry-north-korea-20170414-story.html>.

and/or global politics. Other times they pose a direct threat to the national security interests of one or more states and compel placating responses by different states to ratchet down the tension.

Similarly, when North Korea perceives a challenge to its interests from a ROK or US statement or action, it will often react with threats or actions that present the risk of a destabilizing escalation to conflict, and even impose direct costs on the “offender.” In this way, Pyongyang attempts to condition the ROK and US governments, as well as ROK and US private and nonprofit sector organizations and persons, to avoid potentially threatening the regime’s interests due to the potential risk of a destabilizing reaction from Pyongyang. In essence, Pyongyang wants every ROK and US decisionmaker to ask themselves “Is this worth the risk of provoking the North Koreans?” before directly criticizing the regime or acting against its interests.

From Pyongyang’s perspective, making small escalatory steps in one direction or another often is a win-win proposition, such as when it uses a provocation to drive a wedge between the United States and Republic of Korea or between Japan and the Republic of Korea. China can be a beneficiary of these wedges, given Beijing’s strategic desire to see Japan isolated and the US presence in the region further diminished. China, however, has its limits with North Korean behavior, as its interests can be harmed if North Korean actions go too far and trigger US, ROK, or Japanese responses that run counter to Beijing’s broader interests.

Some North Korean provocations have caused at least near-term negative impacts on its ties with China, North Korea’s primary backer, however. For example, North Korea’s nuclear test in January 2016, followed by a space launch and missile tests, led the US-ROK alliance to begin consultations in February 2016, and decide in July that a US Terminal High Altitude Area Defense (THAAD) missile defense battery should be deployed to the Republic of Korea.<sup>239</sup> China had long opposed the potential deployment of a THAAD battery to the Republic of Korea, for varying reasons under the overall umbrella of a “threat” to China’s interests and to regional stability.<sup>240</sup> Though Beijing was clearly unhappy with Pyongyang for these actions having increased the

justification for a THAAD deployment (recognizing relations were already in a strained state, with the two countries’ leaders having never met in the over four years since Kim Jong Un took power). These actions, and other weapons tests that followed were almost certainly a factor in China’s willingness to agree at the UN Security Council to impose sweeping new sanctions on North Korea.<sup>241</sup>

In the end, however, China also punished the Republic of Korea economically for accepting the THAAD battery, making it probably the single largest source of strain in Beijing-Seoul relations at the time.<sup>242</sup> Since Xi and Kim appear to have later mended fences in the summits of 2018, while THAAD remains an irritant in PRC-ROK relations, the outcome may seem at least ambiguous from Pyongyang’s perspective.<sup>243</sup> This example illustrates that even when North Korea’s actions provoke a strong reaction, disagreements over the appropriate reaction can lead to further exacerbation of the existing fissures between the members of the international community who would otherwise be united in opposing North Korea’s potentially destabilizing actions.

## Means of Non-nuclear Escalation: Tricks of the Trade

Though North Korea’s nuclear tests can be part of its tactics to threaten stability for its advantage, as noted in the example above, North Korea has a range of non-nuclear means to escalate tension and threaten the status quo. Some means are long-standing tools that remain valid, others rely on techniques and technology that have been more recently developed by North Korea—all have their own unique strengths and weaknesses. Some are meant to be explicit and directly menacing, others to be more subtle and indirect—with some even conducted in ways that provide “plausible deniability” to North Korea.<sup>244</sup> North Korea has options for disrupting stability on the peninsula, more widely across the region, and even globally. Some measures are of more or less importance to China, Japan, the United States, or the Republic of Korea. Pyongyang has generally been careful in choosing its target and means of disruption, based on context and objective.

239 “US to Deploy THAAD Missile Battery to South Korea,” *US Department of Defense*, July 8, 2016, <https://www.defense.gov/Explore/News/Article/Article/831630/us-to-deploy-thaad-missile-battery-to-south-korea/>; Michael D. Swaine, “Chinese Views on South Korea’s Deployment of THAAD,” *China Leadership Monitor*, no. 1 (2017): 1, <https://www.hoover.org/sites/default/files/research/docs/clm52ms.pdf>.

240 Michael D. Swaine, “Chinese Views on South Korea’s Deployment of THAAD,” 3.

241 *Resolution 2270*, United Nations Security Council, March 2, 2016, [https://undocs.org/S/RES/2270\(2016\)](https://undocs.org/S/RES/2270(2016)).

242 Darren J. Lim and Victor Ferguson, “Chinese Economic Coercion during the THAAD Dispute,” *The Asan Forum*, December 28, 2019, <http://www.theasanforum.org/chinese-economic-coercion-during-the-thaad-dispute/>.

243 “Xi and Kim hail ‘immortal’ China-North Korea relationship,” *Channel News Asia*, October 6, 2019, <https://www.channelnewsasia.com/news/asia/xi-jinping-kim-jong-un-immortal-china-north-korea-relationship-11973904>; Reuters staff, “China says opposes US THAAD defence system in South Korea,” Reuters, May 29, 2020, <https://tinyurl.com/ptzbsmu2>.

244 Mark E. Caprio, “Plausible Denial? Reviewing the Evidence of DPRK Culpability for the Cheonan Warship Incident,” *The Asia-Pacific Journal* 8, issue 30, no 4 (July 26, 2010), <https://apjif.org/Mark-Caprio/3390/article.html>.

The military power of the Korean People's Army (KPA)—the official term for North Korea's entire armed forces—has served as the foundation of North Korea's ability to threaten, coerce, and provoke. Its capability, minus nuclear weapons and ballistic missiles, has largely stagnated since the loss of Soviet support with the end of the Cold War, particularly relative to the growing capability of the ROK military. The KPA has declined in qualitative terms relative to the ROK military, but it still outnumbers ROK conventional forces by a wide margin, according to the Carnegie Endowment for International Peace.<sup>245</sup> The KPA maintains nearly 1.3 million active duty personnel, or more than two times the nearly 600,000 active duty personnel that the ROK Armed Forces field.

### *Threatening Artillery and Rockets*

North Korean artillery have long played a key role in its threats short of war, and has even occasionally been used in limited strikes on the Republic of Korea, such as in the bombardment of Yeonpyeong Island in 2010.<sup>246</sup> North Korea has a vast arsenal of conventional rocket and cannon artillery. It has over 21,600 artillery systems, including 8,600 self-propelled (122mm, 130mm, 152mm, 170mm) and towed (122mm, 130mm, 152mm) artillery pieces; 5,500 multiple rocket launchers (107mm, 122mm, 200mm, 240mm, 300mm); and 7,500 mortars (82mm, 120mm, 160mm) according to International Institute for Strategic Studies data.<sup>247</sup> North Korea has multiple options to strike the South with its conventional artillery, which can reach a range of ROK population centers, including Seoul. Much of the KPA's artillery is located in hardened artillery sites surrounded by air defenses, making rapid air strikes and counter-battery fire to knock out this artillery a challenge for US-ROK alliance forces.<sup>248</sup>

For purposes of threats and intimidation short of war, the most strategically useful weapons in this arsenal are the "long-range artillery"—which include 170mm guns, as well as the 240mm and 300mm multiple rocket launchers—that can potentially hold the Republic of Korea's capital city of Seoul hostage to a massive barrage of shells and

rockets from firing positions north of the Demilitarized Zone (DMZ).<sup>249</sup> Periodically since 1994 and as recently as June 2020, North Korea has used variations on the phrase "sea of fire" to describe what North Korean artillery could do to Seoul if North Korea is provoked.<sup>250</sup> Such rhetoric, though exaggerated, gains credibility from Seoul's relative proximity to the DMZ combined with its tremendous concentration of population, government buildings, and economic activity—leading to a perception of great vulnerability.

The RAND Corporation notes in a recent study that 50 percent of the Republic of Korea's population and 70 percent of its economic activity are in the Seoul metropolitan area, and assessed that this population density means that the Republic of Korea could suffer tens of thousands of civilian casualties from North Korean artillery—hundreds of thousands if chemical munitions are employed—before alliance forces could knock them out.<sup>251</sup> Other analysts put forward a much lower figure, even presuming North Korea would choose to use its limited amount of long-range artillery to conduct mass murder of civilians as quickly as possible rather than using normal North Korean artillery doctrine.<sup>252</sup> Regardless, as the RAND Corporation noted, even if the KPA conducted a limited artillery strike in populated areas, the potential amount of death and destruction caused to ROK civilians and the damage to the ROK economy would be significant.<sup>253</sup>

North Korean shelling of Seoul would be an extraordinarily escalatory and probably self-defeating act, so this tool is of limited benefit in all but the most extreme of circumstances, but the threat that it could do so if provoked is useful and frequently referenced by Pyongyang. The symbolism of being able to turn Seoul into a "sea of fire" at moment's notice, even if the claim is exaggerated, sustains fear and unease—which is beneficial to North Korea when it wants to appear dangerous and unpredictable to give its adversaries pause. Back in 2011, for example, North Korea threatened early and late in the year to turn Seoul into a "sea of fire" if provoked.<sup>254</sup>

245 Chung Min Lee and Kathryn Botto, *Korea Net Assessment 2020: Politicized Security and Unchanging Strategic Realities* Carnegie Endowment for International Peace, March 18, 2020, <https://carnegieendowment.org/2020/03/18/state-of-north-korean-military-pub-81232>.

246 Joseph S. Bermudez Jr., "The Yeonpyeong Island Incident," *38 North Special Report* 11, no 1 (July 2011), <https://tinyurl.com/3fnl3fye>.

247 International Institute for Strategic Studies, *The Military Balance 2019*, IISS, <https://tinyurl.com/csr0j38n>.

248 D. Sean Barnett, et al., *North Korean Conventional Artillery: A Means to Retaliate, Coerce, Deter, or Terrorize Populations*, RAND Corporation, 2020, [https://www.rand.org/pubs/research\\_reports/RR619-1.html/](https://www.rand.org/pubs/research_reports/RR619-1.html/).

249 Michael J. Mazarr, et al., *The Korean Peninsula: Three Dangerous Scenarios*, RAND Corporation, 2018, [https://www.rand.org/content/dam/rand/pubs/perspectives/PE200/PE262/RAND\\_PE262.pdf](https://www.rand.org/content/dam/rand/pubs/perspectives/PE200/PE262/RAND_PE262.pdf).

250 "N. Korea Pulls out Old Rhetoric of "Sea of Fire" against S. Korea," *KBS World*, June 17, 2020, <https://tinyurl.com/55gvczty>.

251 Mazarr, et al., "The Korean Peninsula."

252 Kyle Mizokami, "North Korea Can't Really Turn Seoul Into a 'Sea of Fire,'" *Atlantic Sentinel*, June 28, 2012, <https://atlanticsentinel.com/2012/06/north-korea-cant-really-turn-seoul-into-a-sea-of-fire/>.

253 Barnett, et al., *North Korean Conventional Artillery*.

254 Mark Willacy, "North Korea threatens Seoul with 'sea of fire,'" *ABC News*, February 27, 2011, <https://tinyurl.com/3kc9t4o8>; CNN Wire staff, "North Korea threatens 'a sea of fire' upon South Korea," *CNN*, November 25, 2011, <https://www.cnn.com/2011/11/24/world/asia/north-korea-sea-of-fire/index.html>.



North Korea's arsenal of artillery and rockets also serves as a lethal deterrent against those contemplating limited war against the North. Prior to the establishment of a credible nuclear deterrent capability, preventive action against North Korea's nuclear facilities was largely deterred by the belief that North Korea could inflict hundreds of thousands of civilian casualties through bombarding Seoul in response—regardless of whether that belief was well-founded.<sup>255</sup>

Live-fire artillery exercises conducted near the Republic of Korea also provide a way to underscore the threat and attempt to intimidate the Republic of Korea. On November 25, 2019, Kim Jong Un personally oversaw coastal artillery live-fire training from an island along the disputed waters near the Northern Limit Line off Korea's west coast, in an event prominently covered by North Korea's media. The incident, which was a violation of a 2018 inter-Korean military agreement, occurred as Pyongyang's self-declared year-end deadline for the United States to make concessions was nearing.<sup>256</sup>

### *Provocations at and Near the DMZ*

Beyond projecting power from its artillery and rockets, North Korea has employed means to keep the DMZ appear violent and unstable. Keeping the situation on the DMZ apparently tenuous injects fear and urgency to engage, make concessions and reduce tension. Of course, this fear can only be maintained if there is a minimal level of provocation or at least awareness of the potential for provocation.

Though the DMZ was frequently the scene of firefights and ambushes in the 1960s, activity has been far more subdued since. The most dramatic and lengthy escalation along the DMZ was the confrontation of August 2015. The confrontation began with the maiming of two ROK soldiers by land mines later found to have been planted by North Koreans infiltrating into the south side of the DMZ. The Republic of Korea responded by reactivating propaganda loudspeakers on its side of the DMZ, which led to escalating threats from

North Korea. After the Republic of Korea responded to reports of North Korean firing across the DMZ with a heavy artillery barrage into the northern part of the DMZ, there were worries that this could escalate further. Marathon inter-Korean talks at the Joint Security Area in the DMZ finally de-escalated the situation.<sup>257</sup>

Smaller incidents also help to maintain the sense that the situation on the DMZ could get out of control if caution and restraint are not exercised by the Republic of Korea. On May 2, 2020, a brief burst of machine gun fire from North Korea impacted at a ROK guard post in the central border town of Chorwon, provoking delayed return fire from the ROK Army.<sup>258</sup> Though it is not clear that this was not just a simple accident, it did occur just twenty-four hours after Kim Jong Un made his first public appearance after a weeks-long absence from public view that fueled speculations about his well-being. As with many North Korean actions, such ambiguity only adds to the uncertainty and the difficulty in determining the appropriate response.

More recently, North Korea announced a cessation of dialogue with the South on June 9, 2020, claiming this was ordered by senior official Kim Yong Chol and Kim Jong Un's sister, Kim Yo Jong, because the Republic of Korea was again not preventing another wave of offensive leaflet filled balloons from being launched into North Korean airspace.<sup>259</sup> As the rhetoric escalated, North Korea then dramatically destroyed the South-North liaison office at the now-shuttered inter-Korean Kaesong Industrial Complex on June 16 and threatened further action.<sup>260</sup> Given that the facility was in North Korea and no ROK lives were threatened, the risk of a strong ROK reaction was minimal, but the destruction—shown in video by state media—sent the unmistakable message that the North was again prepared to undermine stability and resort to violence unless its concerns were satisfied. When the Moon administration responded in a manner that apparently met with Pyongyang's satisfaction, Kim Jong Un ultimately "suspended" the further escalatory measures.<sup>261</sup>

255 Mizokami, "North Korea."

256 Christy Lee, "North Korean Artillery Drill Seen as Start of Stepped-up Pressure Campaign," *VOA News*, November 27, 2019, <https://www.voanews.com/east-asia-pacific/north-korean-artillery-drill-seen-start-stepped-pressure-campaign>.

257 Choe Sang-Hun, "Koreas Agree on Deal to Defuse Tensions," *New York Times*, August 24, 2015, <https://tinyurl.com/y7ds9kep>.

258 Laura Bicker, "North and South Korea in gunfire exchange after Kim Jong-un reappears," *BBC News*, May 3, 2020, <https://www.bbc.com/news/world-asia-52518844>; Shim Kyu-Seok, "South's response to gunfire from North took over 30 minutes," *Korea JoongAng Daily*, May 13, 2020, <https://koreajoongangdaily.joins.com/2020/05/13/defense/guard-post-south-korea-military/20200513172100242.html>; Geun-pyoung Lee, "Korona Tgeoridugit-ga Bulleoon Choejeonbangui Gojang Chonggi" [Frontline guns dysfunctional due to COVID-19 social distancing], *JoongAng Ilbo*, May 15, 2020, <https://news.joins.com/article/23777844>.

259 Joshua Berlinger and Jake Kwon, "North Korea isn't talking to the South anymore. Experts say it could be trying to manufacture a crisis," *CNN*, June 10, 2020, <https://www.cnn.com/2020/06/09/asia/north-korea-south-korea-communications-intl-hnk/index.html>.

260 Min Joo Kim, "North Korea blows up joint liaison office, dramatically raising tensions with South," *Washington Post*, June 16, 2020, [https://www.washingtonpost.com/world/asia\\_pacific/north-korea-liaison-office-kaesong-explosion-demolish-dmz/2020/06/16/7c7a2dc0-af9d-11ea-98b5-279a6479a1e4\\_story.html](https://www.washingtonpost.com/world/asia_pacific/north-korea-liaison-office-kaesong-explosion-demolish-dmz/2020/06/16/7c7a2dc0-af9d-11ea-98b5-279a6479a1e4_story.html).

261 Shim Kyu-Seok, "Kim Jong-un calls off threats directed at South," *Korea JoongAng Daily*, June 24, 2020, <https://koreajoongangdaily.joins.com/2020/06/24/national/northKorea/north-korea-kim-jongun-suspension/20200624163400289.html>.

### *Incidents at Sea*

North Korea's military poses a significant localized threat in the waters between the North and South. Maritime provocations have many advantages for North Korea. Fault can be blurred or denied as international and territorial waters often are violated knowingly or unknowingly because maritime lines of demarcation can seem opaque. Incursions need not be done by official navies or even coastal patrol elements to upend quiet. Fisherman, traders, and smugglers can be used for indirect provocation.

The Republic of Korea is essentially an "island" with over 2,400 kilometers of coastline and no overland lines of communication with Asia via North Korea. Over the years, the Republic of Korea's most deadly maritime challenge has been the disputed boundary with North Korea in the Yellow Sea known as the Northern Limit Line (NLL). Negotiations settled on a land ceasefire line and the DMZ, but the two sides did not agree on maritime boundaries. The NLL was later drawn by the UN Command after the conclusion of the Korean War armistice as a "temporary" control measure to prevent an unintentional clash in these disputed waters, rather than as a plan for a de facto maritime boundary that would last for over a half-century and be fought over several times. Despite Pyongyang apparently grudgingly accepting the line, North Korean vessels have challenged it on occasion, often with violent consequences.

Violent incidents have occurred along the NLL for decades, with the first two major incidents of bloody, extended engagements between patrol boats in 1999 and 2002, known as the first and second battles of Yeonpyeong Island. In November 2009, a North Korean naval vessel crossed the NLL and exchanged fire with ROK warships near the Republic of Korea's Daecheong Island, days after Pyongyang sent a high-level delegation to the South and agreed to hold a second round of high-level talks.<sup>262</sup> A North Korean mini-submarine torpedoed a ROK Navy corvette in the Yellow Sea on March 26, 2010, killing forty-six sailors and injuring fifty-six more—though North Korea denied responsibility at the time and it took an international investigation to determine the cause of the sinking.<sup>263</sup> In

November 2010, North Korean artillery bombarded military installations and killed civilians on the Republic of Korea's Yeonpyeong Island, claiming that the Republic of Korea had provoked the response by conducting live fire exercises in disputed waters.<sup>264</sup> On October 7, 2014, a North Korea patrol boat crossed into ROK territorial waters leading to an exchange of fire with an ROK guided-missile patrol boat.<sup>265</sup>

Despite the 2018 signing of the South-North Comprehensive Military Agreement (CMA), which was in part intended to create a maritime buffer zone between the two states, incidents at sea continue. Most recently, a ROK official was killed and his body burned by the crew of a North Korean patrol boat.<sup>266</sup> Though Kim Jong Un expressed regret for the incident, it is a strong reminder of the continuing potential for violence at sea.

### *Chemical and Biological Weapons*

A North Korean threat to use chemical or biological weapons in a mass casualty attack is only of limited value because such an event could trigger a response that would threaten regime survival. Nevertheless, retaining a stockpile of chemical and possibly biological weapons reinforces strategic stability because it deters strikes against the North, and it also helps to add to the credibility of threats to inflict massive civilian casualties in the Republic of Korea.

North Korea is believed to have the world's third largest stockpile of chemical weapons, after the United States and Russia. The Republic of Korea's 2018 Defense White Paper states that the North possesses between 2,500 and 5,000 metric tons of chemical weapons.<sup>267</sup> North Korea is believed to have produced nerve agents such as Sarin and VX.<sup>268</sup> Its likely delivery means include field artillery, rockets, missiles, aircraft, and unconventional means. North Korea is suspected of maintaining an ongoing biological weapons (BW) program in violation of its international commitments, but there is no definitive information about the program's status.<sup>269</sup>

Some of these weapons are well suited for limited acts of terror that could be difficult to quickly and unequivocally attribute back to North Korea. North Korean officials arranged

262 Kyodo, "South, North Korea patrol boats exchange fire at disputed sea border," *South China Morning Post*, October 7, 2014, <https://www.scmp.com/news/asia/article/1611253/south-north-korea-ships-exchange-fire-disputed-sea-border>.

263 "Official Investigation says North Korean torpedo sank Cheonan," *Maritime Executive*, January 17, 2011, <https://www.maritime-executive.com/article/official-investigation-says-north-korean-torpedo-sank-cheonan>.

264 Bermudez, "The Yeonpyeong Island Incident."

265 "Koreas exchange fire near western sea border," *the Korea Herald*, October 7, 2014, <http://www.koreaherald.com/view.php?ud=20141007000564>.

266 Hyung-Jin Kim, "Seoul: North Korea kills S. Korean official, burns his body," *ABC News*, September 24, 2020, <https://abcnews.go.com/International/wireStory/seoul-north-korea-fired-korean-burned-body-73210057>.

267 *2018 Defense White Paper*, Republic of Korea Ministry of National Defense, 2018, [http://www.mnd.go.kr/user/mnd/upload/pblicitn/PBLICTNEBOOK\\_201907110548253080.pdf](http://www.mnd.go.kr/user/mnd/upload/pblicitn/PBLICTNEBOOK_201907110548253080.pdf).

268 Lee Yoon-Geol, "bukan, haengmankeum museoun saenghwahangmugi 5 cheon boyu [North Korea has 5,000 Tons of Chemical Weapons as Scary as Nuclear Weapons]," *Sisa Journal*, no. 1121 (April 13, 2011), [www.sisapress.com](http://www.sisapress.com).

269 "Glossary: Biological Weapon," Nuclear Threat Initiative (NTI), accessed November 2020, <https://www.nti.org/learn/glossary/biological-weapon-bw/>.

for the assassination of Kim Jong Un's older half-brother, Kim Jong Nam, with VX nerve agent in February 2017, using an Indonesian woman and a Vietnamese woman as the assassins.<sup>270</sup>

**Cyber threats.** Like many small powers, North Korea has invested and employed a host of digital tools to reach inside larger more powerful adversary nations, engage in criminal activity, and disrupt global order. Pyongyang has been investing in its cyber capabilities since at least the mid-1990s and cyberwarfare has become much more prominent in Kim Jong Un's strategy.<sup>271</sup> North Korea's cyber capabilities give it alternative options to achieve its national objectives below the threshold of lethal actions.<sup>272</sup>

North Korean nefarious cyber activities have fallen into four large categories: 1) financially motivated operations; 2) defense/intelligence activities; 3) ideological/influence operations; and 4) destructive attacks, each of which serve different purposes but all support the national objective of promoting the appearance of strength, material gain, and the ability to influence other states.<sup>273</sup>

In October 2018, North Korea hacked into a server of ROK's Defense Acquisition Program Administration—part of the ROK Defense Ministry—and stole information related to ROK's arms procurement plans.<sup>274</sup> In September 2016, it hacked into ROK's Defense Integrated Data Center and stole 235 gigabytes of classified military plans, including how the Republic of Korea would respond to North Korean commando attacks.<sup>275</sup> North Korea struck inside the United States in 2014 when it hacked into Sony Pictures Entertainment to steal and destroy business files, and release incriminating personal information—in response to a Sony movie release Pyongyang deemed offensive.<sup>276</sup>

For further information on North Korea's growing cyber capability, see the previous chapter of this report.

### UAV

North Korea has been developing Unmanned Aerial Vehicles (UAVs) since at least the late 1980s, when it reportedly acquired its first fleet from China.<sup>277</sup> It is believed to possess around 300 UAVs, some of which are manufactured in several versions, including both attack and reconnaissance drones.<sup>278</sup>

North Korea's development and use of UAVs is "relatively unsophisticated at present," but already presents a security challenge for ROK and US forces on the Korean peninsula, according to Joseph S. Bermudez, a longtime researcher and author on North Korea's military.<sup>279</sup> UAVs pose a unique threat to stability on the peninsula, especially use of small UAVs that fly below radar. Small, low-flying UAVs can be used to demonstrate the vulnerability of ROK airspace or even to deliver small ordinance packages to military targets, or to conduct terror attacks on crowded sporting events, political ceremonies, industrial parks, or urban areas.

The North has used its UAVs for reconnaissance and surveillance missions around the inter-Korean border and to overfly ROK military facilities; several North Korean drones have crashed in ROK territory.<sup>280</sup> A North Korean drone that was taking photos of the US THAAD missile defense system site in Seongju County, Gyeongsang Province, crashed and was captured by the ROK authorities in 2017.<sup>281</sup>

These are but a few of North Korea's non-nuclear tools for sustaining instability and compelling assistance. Some will almost certainly be employed going forward when words

270 "Chemical," North Korea, Nuclear Threat Initiative (NTI), accessed November 2020, <https://www.nti.org/learn/countries/north-korea/chemical/>; Hannah Ellis-Petersen and Benjamin Haas, "How North Korea got away with the assassination of Kim Jong-nam," *the Guardian*, April 1, 2019, <https://www.theguardian.com/world/2019/apr/01/how-north-korea-got-away-with-the-assassination-of-kim-jong-nam>.

271 Stephanie Kleine-Ahlbrant, *North Korea's Illicit Cyber Operations: What Can Be Done?*, Stimson Center, February 2020, [https://www.38north.org/wp-content/uploads/pdf/2020-0228\\_SKA\\_NK-Cyber-Operations.pdf](https://www.38north.org/wp-content/uploads/pdf/2020-0228_SKA_NK-Cyber-Operations.pdf).

272 Kleine-Ahlbrant, *North Korea's Illicit Cyber Operations*, 1.

273 Robert Potter, "Toward a Better Understanding of North Korea's Cyber Operations," *38 North*, Stimson Center, August 5, 2019, <https://www.38north.org/2019/08/rpotter080519/>.

274 Catalin Cimpanu, "Hackers breach and steal data from South Korea's Defense Ministry," *ZDNet*, January 16, 2019, <https://www.zdnet.com/article/hackers-breach-and-steal-data-from-south-koreas-defense-ministry/>.

275 Christine Kim, "North Korea hackers stole South Korea-US military plans to wipe out North Korea leadership: lawmaker," *Reuters*, October 10, 2017, <https://www.reuters.com/article/us-northkorea-cybercrime-southkorea/north-korea-hackers-stole-south-korea-u-s-military-plans-to-wipe-out-north-korea-leadership-lawmaker-idUSKBN1CF1WT>.

276 Todd M. Rosenblum, "Opinion: Obama needs a cyberwar cabinet," *Christian Science Monitor*, March 11, 2015, <https://www.csmonitor.com/World/Passcode/Passcode-Voices/2015/0311/Opinion-Obama-needs-a-cyberwar-cabinet>.

277 Joseph S. Bermudez Jr., "North Korea Drones On: Redux," *38 North*, Stimson Center, January 19, 2016, <https://www.38north.org/2016/01/jbermudez011916/>.

278 *Ibid.*

279 *Ibid.*

280 *Ibid.*

281 Yuna Park, Ju-min Park, and Jack Kim, "Suspected North Korea drone spied on US anti-missile system: South Korea officials," *Reuters*, June 13, 2017, <https://www.reuters.com/article/us-northkorea-southkorea-idUSKBN1940J8>.

alone do not change the unfavorable status quo, from North Korea's perspective.

## Recommendations for the Alliance—Coordination and Perseverance

North Korea has many advantages in fomenting instability. It is a single actor up against a multitude of nations, each with its own interests, rivalries, and historic fissures. It has a wide range of means to bluster, cajole, or and achieve tactical surprise with harmful actions at various levels.

The United States and the Republic of Korea can both take steps to reduce the impact of North Korea non-nuclear provocations. At the strategic level, Seoul and Washington can visibly and demonstrably re-solidify the US-ROK security alliance and ensure international support for alliance responses to North Korean actions. At the operational and tactical level, preparedness, jointness, and resiliency reduce the potential effectiveness of North Korea's non-nuclear options.

### *Resume and Enhance Exercises Focused on Countering Limited North Korean Aggression*

Historically, the US-ROK has conducted robust bilateral military exercises on a regularly scheduled basis. These were put on hold during the diplomatic thaw surrounding the Olympics in the Spring of 2018, and then dramatically scaled back by the White House in the aftermath of the Singapore Summit.<sup>282</sup> Though some bilateral military training has continued, the scope and scale of the pre-2018 exercise program has not returned, leading some experts to question how much readiness is being lost in exchange for very little or nothing from Pyongyang.<sup>283</sup> The former commander of Combined Forces Command, which leads these exercises, the now-retired General Vincent Brooks, remarked at an Atlantic Council event in October 2020, that combined military readiness is probably being affected, and the time had come to return to an exercise program that was not restrained by diplomatic considerations.<sup>284</sup>

Fully resuming these exercises—even without including the deployment of strategic military assets that could be exploited by Pyongyang as a justification for weapons testing—would be valuable for wartime preparedness, which is vital for credible deterrence. Such exercises would also provide

practical benefits for deterring and dealing with more limited forms of North Korean aggression. First and foremost, they would signal that the US-ROK security alliance is strong. In a practical sense, they could be used to improve the preparedness of the alliance to respond quickly and effectively to North Korean limited aggression or other scenarios short of war. Large combined exercises facilitate improved crisis management by bringing together senior military officers of the two countries in a practical training environment, fostering US-ROK military cooperation at multiple levels of the chain of command, and focusing policy officials on exploring key matters that could arise in a crisis. Responsible training exercises are diplomacy by other means.

### *Bolster Maritime Training and Patrols*

The US Navy conducted joint drills with the Republic of Korea, Japan, and Australia in the Western Pacific on May 23, 2019. This major exercise, formally known as Pacific Vanguard, was a positive effort to be applauded. More tailored exercises should be done, especially those involving the ROK Coast Guard focused on the protection of ROK territorial waters. Few alliance maritime exercises have taken place in or near Korean waters since the 2018 scaling back of US military exercises in Korea. Enhanced exercises and coastal presence activities will strengthen the alliance. As discussed above, North Korea has a history of provocations and attacks in the area of the Northern Limit Line and the Northwest Islands, including the 2010 torpedoing of the ROK warship Cheonan and the shelling of Yeonpyeong Island, the two most violent North Korean provocations since the 1980s. As a result, preparedness and deterrence in the maritime domain could be key to either deterring or responding to North Korea's next violent provocation.

### *Leverage Multinational Support Through the United Nations Command*

One of the most effective methods to counter North Korea's tactics of playing nations off against each other and of dodging responsibility for its actions is with the credible involvement of a range of international personnel representing countries pledged to support the defense of the Republic of Korea from North Korea through the United Nations Command (UNC).<sup>285</sup> UNC and its associated Military Armistice Commission (UNCMAC) provide a multilateral mechanism to credibly investigate, consult upon and communicate the response to North Korea incursions, threats,

282 Emily Shugerman, "US and South Korea suspend more joint military exercises following Singapore summit," *Independent*, June 23, 2018, <https://www.independent.co.uk/news/world/americas/us-politics/us-south-korea-suspend-military-exercises-north-korea-pentagon-singapore-summit-a8412671.html>.

283 Andrew Jeong, "US-South Korea Military Exercises Stay Digital, as North Korean Threat Grows," *Wall Street Journal*, August 6, 2020, <https://www.wsj.com/articles/u-s-south-korea-military-exercises-stay-digital-as-north-korean-threat-grows-11596720083>.

284 "North Korea's strategic weapons: An informed conversation," Atlantic Council, October 2, 2020, <https://www.atlanticcouncil.org/event/north-koreas-strategic-weapons/>.

285 United Nations Command, <https://www.unc.mil/>.

and actions of violence that may violate the Armistice of 1953.<sup>286</sup> The presence of Swiss and Swedish military observers facilitated by UNCMAC as part of the Neutral Nations Supervisory Commission allows for internationally respected neutral observers to provide objective, credible, and truthful information to the international community, which can counter North Korean false narratives and lend legitimacy to alliance responses.<sup>287</sup>

Though ROK citizens have understandable concerns about the potential for UNC to impinge upon ROK sovereignty,

such concerns have been exaggerated in the past, often based on misunderstandings.<sup>288</sup> When the alliance considers larger political-military questions like the transfer of wartime Operational Control (OPCON) and a potential peace treaty, it is important that the advantages provided by the multinational participants of UNC are not lost, even if UNC itself is transformed or phased out.<sup>289</sup> A mechanism for multinational support for the defense of the Republic of Korea and for neutral observers should be maintained in some form as long as North Korea threatens stability on the peninsula.

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286 "Military Armistice Commission – Secretariat," United Nations Command, accessed November 2020, <https://www.unc.mil/Organization/UNCMAC-S/>.

287 "NNSC," Swiss Armed Forces, accessed November 2020, <https://tinyurl.com/3fehgbz>.

288 "UNC rebuts media reports on its DMZ responsibilities as 'inaccurate,'" *Yonhap News Agency*, October 23, 2019, <https://tinyurl.com/jxax5dy0>.

289 Ltj. In-Bum Chun, "The Future of the UN Command," *38 North*, Stimson Center, September 12, 2017, <https://www.38north.org/2017/09/ibchun091217/>.

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