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

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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.1 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.²

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

¹ 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.

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 23rd 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 2049.³ 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. 4 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.⁵ 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.⁶

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

- it represents a key piece of a larger zone of maritime defense protecting China's coastal economic powerhouse regions and Beijing;⁷
- 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;8
- 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;⁹ and
- 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 Jungguk, 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.
- The three major economic centers include the Bohai Economic Rim in the northern cost, 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? Jungguk, 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.
- 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/.

 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. ¹⁰ This was paired with a firing exercise of land-based medium-range ballistic missiles, Dongfeng 21Cs, which are capable of striking Seoul. ¹¹ 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.¹² 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.¹³

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.¹⁴ 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.¹⁵ 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.¹⁶ 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.¹⁷ 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.18

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

- 10 Chang-kwon Park, "Implications of Chinese military activities."
- 11 Gi-jong Geum, "Sadeu Apbak Muryeoksiwi? JI, Gunsa 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.
- 12 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/.
- 13 Yong-won Ryu, "China says 'Don't Cross the 124 east longitude line."
- 14 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.
- 15 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.
- 16 Jeong Yong-su, "China tried muscling South Korea in Yellow Sea," Korea JoongAng Daily, November 29, 2013, https://tinyurl.com/1c64filq.
- 17 Terence Roehrig, "Challenges of a Maritime Nation."
- 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 Itttareun 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/12qhz1jj; 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; Hyeonseok Jeon, "Hanmi Jamsuham Tamji? Jungguk, 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://tinyurl.com/20xz7i6b.

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

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,²⁰ 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.²¹ 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.²²

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).²³ Unfortunately, these developments make the already opaque domestic situation in DPRK even

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.

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/3aslv6s3; Kim Min-seok, The State of the North Korean Military, Carnegie Endowment for International Peace, March 18, 2020, https://tinyurl.com/3aslv6s3; 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.

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.²⁴ 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.²⁵ 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. ²⁶
	DPRK officials announce during a series of unofficial lectures that COVID-19 had spread in three parts of the country, including North Hamgyong province. ²⁷
March	Residents of Pyongyang stop receiving the usual rations, and food stockpiles for the city reportedly run out, with unclear repercussions. ²⁸
April	DPRK authorities in the countryside begin seizing food supplies to siphon off to Pyongyang. ²⁹ A series of deaths in DPRK hospitals occurs due to "pneumonia-like symptoms." ³⁰
June	Kim holds an extraordinary Politburo meeting to discuss measures to "ensure the livelihood of Pyongyang residents." ³¹
	Nine-hundred people around the country are under quarantine in a state facility for contracting COVID-19. ³²
	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. ³³

In September 2017, the UN and the Trump administration imposed a series of sanctioned 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/4wbnjdkk; Christy Lee, "Humanitarian Groups Say Sanctions Impede Aid to North Koreans, "VOA, March 26, 2017, https://tinyurl.com/17cx14i1; 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.2017.04.15.1.71.

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.

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.

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 860Myeongttpyeongyangeun 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	DPRK government makes military rations available to civilians in Pyongyang. ³⁴
	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. ³⁵
	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."
	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. ³⁷
August	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. ³⁸
	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. ³⁹
	Military authorities quarantine an entire company of soldiers, one of the ten companies composing the 25 th border guard brigade patrolling the border with China. ⁴⁰
September	North Korean soldiers shoot and burn a ROK official found in North Korean waters. Pyongyang says it was an anti-COVID-19 measure. ⁴¹

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 &}quot;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.

Sewon Kim, "North Korea Army Quarantines Entire Company on Coronavirus Fears," Radio Free Asia, August 31, 2020, https://tinyurl.com/fijwzwyl.

^{41 &}quot;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.⁴² 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.⁴³

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.⁴⁴ 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

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 to⁴⁵:

- 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.⁴⁶

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 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.

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/nkf/wu4v; 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/1com/1com/1com/1

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.⁴⁷

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.48 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. 49 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.

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; 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.

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.⁵⁰

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.51

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

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-19⁵² 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.53 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.⁵⁴

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.

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); "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.⁵⁵ 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.

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.