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On May 21, 2022, U.S. President Joe Biden and South Korean President Yoon Suk Yeol stated that the alliance between the United States and Republic of Korea (ROK) was, the “linchpin for peace and prosperity in the [Asia-Pacific] region.”¹⁾ Additionally, they reaffirmed, “their commitment to maintain peace and stability…freedom of navigation and overflight and other lawful use of the seas, including in the South China Sea and beyond. The two Presidents reiterate the importance of preserving peace and stability in the Taiwan Strait as an essential element in security and prosperity in the Indo-Pacific region.”²⁾ These comments came amidst growing nuclear tensions around the world and weakening nuclear institutions. Just three months before the joint statement, Russian President Vladimir Putin launched an invasion of Ukraine under the cloud of nuclear threats, and two months earlier, on March 24th, North Korea launched its first intercontinental-ballistic missile (ICBM) test since 2017. Three months after the Presidents’ meeting, the Review Conference (RevCon) of the Nuclear Non-Proliferation Treaty (NPT), the foundation of the global nuclear order, ended in failure.

The nuclear landscape is more dismal than it has been in years, with the rise of nuclear threats and breakdown of nuclear institutions. Growing nuclear arsenals in the Asia-Pacific region present a growing threat to South Korea and other U.S. allies,

1) The White House. 2022. “United States-Republic of Korea Leaders’ Joint Statement.” May 21.
<https://www.whitehouse.gov/briefing-room/statements-releases/2022/05/21/united-states-republic-of-korea-leaders-joint-statement/>

2) The White House. 2022. “United States-Republic of Korea Leaders’ Joint Statement.” May 21.
<https://www.whitehouse.gov/briefing-room/statements-releases/2022/05/21/united-states-republic-of-korea-leaders-joint-statement/>

particularly China's advances in nuclear and non-nuclear strategic capabilities. To address these diverse threats and strategic uncertainty, the United States is now focused on implementing its concept of integrated deterrence whilst deterring two near peer adversaries, but countries such as North Korea remain a strategic concern to many allies in the region. These complex strategic shifts pose challenging questions for U.S.-ROK cooperation- what issues should Washington and Seoul focus on to address the changing nuclear landscape? What tools- military, diplomatic, economic- should they use to do so? And what are the potential repercussions of these geopolitical shifts on the alliance?

In this paper, I argue that the changing nuclear landscape requires the U.S. and ROK to add another priority to their cooperation agenda: risk reduction. We are seeing a growing number of risk reduction efforts within and outside of the NPT, and Washington and Seoul are uniquely positioned to play leadership roles in this area, particularly with regards to emerging technologies. To-date, U.S.-ROK cooperation has largely focused on military and economic factors, such as recently revived joint military exercises along with a shared commitment to free and secure Internet access, as mentioned in the Presidents' joint statement and elsewhere.³⁾ Incorporating strategic risk reduction into U.S.-ROK cooperation can be achieved by introducing the topic into existing dialogues and areas of cooperation to advance joint priorities in risk reduction. But this seemingly simple recommendation comes with challenges for the United States; in particular, how to strengthen extended deterrence and assurance in the face of these rising nuclear risks? Doing so will require deepening dialogue with ROK on issues relating to deterrence, along with more extensive and timely consultations.

This paper will focus on three trends in nuclear governance and explore their implications for U.S.-ROK cooperation. The first trend is the breakdown or slow

³⁾ United States Department of State. 2022. "Declaration for the Future of the Internet." April. <https://www.state.gov/declaration-for-the-future-of-the-internet/>

erosion of existing nuclear institutions and mechanisms, as evidenced most recently by the failure of the 2022 NPT RevCon to agree on a final outcome document. Second, amidst this breakdown in nuclear governance, autocrats and “nuclear bullies” are increasingly prominent in the geopolitical landscape, with two- Chinese President Xi Jinping and North Korean leader Kim Jong Un- presenting as threats to U.S. allies in East Asia. The final trend is the changing deterrence landscape, specifically the U.S. move to “integrated deterrence” and focus on deterring two peer competitors. This will have consequences for U.S. extended deterrence and assurance guarantees.

The Slow Erosion of Nuclear Governance

Nuclear institutions are under unprecedented strain. Mechanisms such as nuclear and conventional arms control agreements are being violated or abrogated. And nuclear norms are being tested and pushed on multiple levels. Nowhere is this more evident than in the NPT, which must adapt to the changing security environment, but also because of increasing pressure from a group of Non-Nuclear Weapon States (NNWS) to show progress towards disarmament. On the one hand, the five recognized Nuclear Weapon States (NWS [China, France, Russia, United Kingdom, and United States]) are struggling to meet their Article VI commitments for a “cessation of the arms race” and “general and complete disarmament” due to the worsening geopolitical situation and competition; on the other hand, a group of NNWS insist the NWS must nonetheless make progress towards nuclear disarmament.

These tensions between NWS and NNWS, along with tensions between the NWS themselves was on full display at the 2022 NPT RevCon in August 2022. The RevCons are intended to take place every five years, with the 2020 RevCon delayed due the pandemic. As a result of the delay, the RevCon had to take into account a variety of contentious developments, including the entry into force of the new Treaty on the Prohibition of Nuclear Weapons (TPNW), the Australia-United Kingdom-United States

(AUKUS) agreement to provide nuclear submarines, and Russia's invasion of Ukraine which has multiple nuclear-related components. The mood going into the RevCon was pessimistic, with little hope for a consensus outcome Final Document, which is typically seen as the mark of "success."⁴⁾

The 2022 RevCon started out on a surprisingly productive note and by the final week, the RevCon President, Argentinian Ambassador Gustavo Zlauvenin had produced a draft document for potential consensus agreement. On the final day of the conference, however, Russia objected to five clauses in the draft, resulting in the RevCon's failure to reach consensus. One outcome, however, was agreement to establish a working group on how to improve and strengthen the review process during the intercessional period.⁵⁾ This disappointing result could further undermine the NPT and other tools of nuclear governance.

The weakening of the NPT has serious consequences for the wider nuclear order, particularly in Northeast Asia. Although North Korea withdrew from the NPT in 2003, the NPT is the foundation of norms against nuclear proliferation, nuclear testing, and nuclear bullying. Additionally, the Treaty legally obligated all NNWS to refrain from the pursuit of nuclear weapons. If the NPT were to wither away or fall apart, states might be enabled to pursue nuclear ambitions leading to a more nuclear-armed world.

While the NPT may be on a slow path towards stagnation, other tools of nuclear governance have had a more dramatic demise. Since 2000, four major arms control agreements have fallen apart: the Anti-Ballistic Missile (ABM) Treaty in 2002 when the United States withdrew, the Conventional Forces in Europe (CFE) Treaty in 2007 when Russia stated it would suspend its implementation of the treaty, the Intermediate-range Nuclear (INF) Treaty in 2019 when the United States withdrew after

⁴⁾ François Diaz-Maurin. 2022. "NPT Review Conference: Will It Rise to the Proliferation Challenges?" *Bulletin of the Atomic Scientists* (blog). August 3.
<https://thebulletin.org/2022/08/npt-review-conference-will-it-rise-to-the-proliferation-challenges/>

⁵⁾ United Nations. 2022. "Non-Proliferation Treaty Review Conference Ends without Adopting Substantive Outcome Document Due to Opposition by One Member State." August 26.
<https://press.un.org/en/2022/dc3850.doc.htm>

years of Russian violations, and the Open Skies Treaty in 2020. Other agreements, such as the Joint Comprehensive Plan of Action, or Iran Nuclear Deal, have also come under strain, leading to an overall weakening of tools for nuclear governance.

The implications of this for U.S.-ROK cooperation are two-fold. First, weakening nuclear governance could lead to weakening of nuclear norms, and embolden states such as DPRK and China. This will increase the need for U.S.-ROK cooperation and could strain U.S. extended deterrence guarantees. Second, the breakdown of nuclear governance reduces transparency and predictability in nuclear competition, and could create uncertainty for both Washington and Seoul in their strategic planning. A key question for future U.S.-ROK cooperation on nuclear governance, therefore, is how the allies can work to strengthen existing institutions and prevent their further demise, and also take steps to manage short-term and immediate risks, such as those from DPRK.

The Rise of Nuclear Bullies

A second trend in the nuclear landscape has been the rise of nuclear bullying, most noticeably from Putin in the context of the war in Ukraine. For example, in a speech on September 21st, 2022, Putin said: “I would like to remind those who make such statements regarding Russia that our country has different types of weapons as well, and some of them are more modern than the weapons NATO countries have. In the event of a threat to the territorial integrity of our country and to defend Russia and our people, we will certainly make use of all weapon systems available to us. This is not a bluff.”⁶⁾ Nuclear bullying entails escalatory nuclear threats, frequent reference to nuclear weapons for coercive purposes, and dramatic qualitative and quantitative expansion in nuclear arsenals.

⁶⁾ President of Russia. 2022. “Address by the President of the Russian Federation.” September 21. <http://en.kremlin.ru/events/president/news/69390>

But China has also become more aggressive and assertive in its nuclear policy in recent years. Open source intelligence in 2021 uncovered the development of missile silos in Western China, for example.⁷⁾ A 2021 Report to Congress revealed that many of China's nuclear developments, "may enable the PRC to have up to 700 deliverable nuclear warheads by 2027 and likely intends to have at least 1,000 warheads by 2030."⁸⁾

China's aggression is not only in the military but also diplomatic domain: wolf warrior diplomacy has gone nuclear. Beijing's diplomatic assertiveness was particularly evident with regards to the nonproliferation pillar of the NPT, which China used as a forum to object to AUKUS and raise concerns about "nuclear propulsion" exemptions as a means of sharing nuclear weapons related technology. One surprise from China's NPT activity was that it raised concerns about nuclear sharing. China's statement at RevCon included the following: "Any attempt to replicate the NATO's nuclear sharing model in the Asia-Pacific region would undermine regional strategic stability and would be firmly opposed by the countries in the region and, when necessary, face severe countermeasures."⁹⁾ It is worth noting that the American justification for AUKUS is that it is not a transfer of nuclear weapons, but rather nuclear propulsion, which is permitted under the NPT.¹⁰⁾ But Beijing's message was targeted not only at China's competitors, but also at the Global South. China portrays itself as the champion of

7) Alastair Gale. 2022. "China Is Accelerating Its Nuclear Buildup Over Rising Fears of U.S. Conflict." *Wall Street Journal*. April 9.
<https://www.wsj.com/articles/china-is-accelerating-its-nuclear-buildup-over-rising-fears-of-u-s-conflict-11649509201>

8) "Military and Security Developments Involving the People's Republic of China." A Report to Congress to the National Defense Authorization Act for Fiscal Year 2020. Department of Defense, 2021.
<https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>

9) H.E. Ambassador Fu Cong. 2022. *Upholding the Treaty on the Non-Proliferation of Nuclear Weapons for World Peace and Development*.
https://estatemements.unmeetings.org/estatemements/14.0447/20220802/d9cjQBjtSPPR/qDSy5JAAfxdY_en.pdf

10) United States Department of State. 2022. "Special Online Briefing with Ambassador Adam M. Scheinman, U.S. Special Representative of the President for Nuclear Nonproliferation." July 26.
<https://www.state.gov/special-online-briefing-with-ambassador-adam-m-scheinman-u-s-special-representative-of-the-president-for-nuclear-nonproliferation/>

nuclear responsibility, a supplier of nuclear energy for peaceful uses, and as standing up to other big powers.

Another nuclear bully, of course, is North Korea. Throughout 2022, North Korea conducted numerous missile tests, with a nuclear test expected sometime in the near future, as-of this writing in October 2022. Additionally, in September North Korea passed a law stating it was permissible to conduct a preventative nuclear strike and declared its nuclear status “irreversible.”¹¹⁾ North Korea’s nuclear bullying and nuclear threats are not new, but combined with pressures from Russia and China, along with the weakening of nuclear governance, the Kim regime could be emboldened to use its nuclear weapons in an effort to extract concessions from the United States and/or South Korea, or Pyongyang may perceive a weakening U.S. security guarantee to Seoul in the face of competing threats.

Nuclear bullying tests alliances and the credibility of extended deterrence guarantees. It tests “fair-weather” partnerships, and proves the depth of true alliances. The U.S.-ROK partnership has proven durable over decades and in the face of other strategic challenges, but it may have to adapt to greater complexity and uncertainty from multiple nuclear bullies simultaneously. A key question for the U.S.-ROK alliance, therefore, will be how the United States can continue to demonstrate the credibility of its security commitments to ROK, and how the allies might respond to continued nuclear bullying by North Korea.

Integrated Deterrence and Allies

As a result of increasingly aggressive behavior by Russia and China, to include the expansion of their nuclear and non-nuclear strategic arsenals, the United States faces a difficult strategic puzzle: how to deter two peer adversaries at once? Recent U.S.

¹¹⁾ *Al Jazeera*. 2022. “US Aircraft Carrier Heading to South Korea for Joint Drills,” September 19. <https://www.aljazeera.com/news/2022/9/19/us-aircraft-carrier-heading-to-south-korea-for-joint-drills>

strategy documents point to the forthcoming challenge of deterring two peers (or near peers) simultaneously, whereby Russia is an acute threat and China is the pacing challenge. The 2022 National Security Strategy outlined the concept of “integrated deterrence” to meet this threat. According to the Strategy, integrated deterrence has five main components: integrating across domains, regions, the spectrum of conflict, the U.S. Government, and with allies and partners. The AUKUS Agreement is frequently cited as an example of integrated deterrence in partnership with allies. The agreement is intended to reassure Australia and other allies in the region, and is directly tied to the expansion of China’s arsenal. According to Under Secretary of Defense for Policy, Colin Kahl: “the expansion of existing nuclear submarine forces (i.e. vertical proliferation) and potential entry of new operating navies preceded AUKUS and were mainly motivated by extant threat perceptions in the neighborhood. AUKUS may serve as a contributing influence, not necessarily the cause, of this proliferation.”¹²⁾

But facing two peer competitors and implementing integrated deterrence will also present challenges particularly for U.S. extended deterrence. First and foremost, framing Russia as the acute challenge could be perceived as giving the European theater priority over the Asia-Pacific in the short-term. Relatedly, for many actors in the region, including South Korea, DPRK is a *more* acute challenge than China, which is not explicitly captured by the concept of “two peer competitors.” Another challenge will be how this evolving deterrence strategy manifests in technological competition. In July 2021, Secretary Austin said, “Integrated deterrence includes having the best weapons systems and the latest technologies that make adversaries think twice.”¹³⁾ Numerous recent studies, such as the National Security Commission on Artificial

¹²⁾ Collin Koh. 2022. “AUKUS and Risks of Submarine Proliferation: A Preliminary Assessment.”

Asia-Pacific Leadership Network, September 22.

<https://www.apln.network/projects/aucus/aucus-and-risks-of-submarine-proliferation-a-preliminary-assessment>

¹³⁾ U.S. Department of Defense. 2021. “Defense Secretary Says ‘Integrated Deterrence’ Is Cornerstone of U.S. Defense.” April 30.

<https://www.defense.gov/News/News-Stories/Article/Article/2592149/defense-secretary-says-integrated-deterrence-is-cornerstone-of-us-defense/>

Intelligence, point to the need to out-compete China in emerging and advanced technologies. But the United States is also committed to maintaining nuclear superiority. Deciding which domains to invest in will be a challenge for Washington, but will also be closely observed by allies.

Competitors, of course, are also putting pressure on America's relations with its allies. Russia is seeking to drive a wedge among the European allies. The Alliance's cohesion and resolve over support for Ukraine, for example, may be challenged by Russia's grip over European energy sectors, especially as an energy crisis looms ahead of winter.¹⁴⁾ And China is taking a page from Russia's playbook, particularly with regards to disinformation, to try and divide the US from its allies, both in Europe and the Asia-Pacific.¹⁵⁾

Interestingly, the pressure to deter two peer competitors, which could increase extended deterrence commitments, comes at the same time as pressure to abandon extended deterrence from another direction- the Treaty on the Prohibition of Nuclear Weapons (TPNW). The TPNW bans nearly all nuclear weapons-related activities, to include possession or threats to use. The TPNW held its first Meeting of States Parties in June 2022 and currently has 68 members, most of whom are from the Global South. Since its inception, TPNW supporters have been focusing their efforts on undermining extended deterrence and the U.S. "nuclear umbrella" as a potential opportunity for progress towards nuclear disarmament.

This final trend of increasing competition and pressures on extended deterrence has important implications for U.S.-ROK cooperation and nuclear governance. Recent polling suggests the South Korean public would welcome the return of U.S. nuclear weapons, or might be interested in developing an independent nuclear capability. A

¹⁴⁾ Eleanor Beardsley. 2022. "Russia's Effort to Break European Energy Unity Seems to Be Failing at Least for Now." NPR. September 2. <https://www.npr.org/2022/09/02/1120518928/russia-europe-energy>

¹⁵⁾ David Bandurski. 2022. "China and Russia Are Joining Forces to Spread Disinformation." The Brookings Institution (blog). March 11. <https://www.brookings.edu/techstream/china-and-russia-are-joining-forces-to-spread-disinformation/>

February 2022 report by the Chicago Council on Global Affairs noted that 71% of South Korean respondents favored the development of an independent nuclear capability, while 56% supported the U.S. deploying nuclear weapons to South Korea. When asked to choose between the two options independent program or nuclear sharing the 67% of respondents preferred an independent nuclear capability.¹⁶⁾ Additionally, the AUKUS Agreement has revived interest in South Korea for an SSN capability.¹⁷⁾ The challenge, therefore, will be for the United States to conduct a strategic communications campaign, to include extensive consultations and demonstrations, of its commitment to the security of ROK. Such a campaign might entail public statements, visits by high-level officials, or more regular consultations to provide clarification on issues such as what does “integrated deterrence” *actually* mean, and what will it look like in practice for U.S.-ROK relations. This will have an indirect impact on nuclear governance, as well, if it promotes transparency but also ensures ROK does not pursue an independent nuclear capability or demand the return of U.S. nuclear weapons to the peninsula, which likely would be perceived as undermining the nuclear order and the NPT.

Recommendations and Conclusion

To summarize, this paper looked at three trends in the nuclear landscape that will impact U.S.-ROK cooperation: the breakdown of institutions and tools for nuclear governance; the rise of nuclear bullying, to include by Russia, China, and North Korea;

¹⁶⁾ Toby Dalton, Karl Friedhoff, and Lami Kim. 2022. “Thinking Nuclear: South Korean Attitudes on Nuclear Weapons.” The Chicago Council on Global Affairs. February 21.
<https://globalaffairs.org/research/public-opinion-survey/thinking-nuclear-south-korean-attitudes-nuclear-weapons>. Pg. 2.

¹⁷⁾ Joel Petersson Ivre. 2021. “After AUKUS, South Korea May Join the Underwater Nuclear Race | Asia-Pacific Leadership Network.” Asia-Pacific Leadership Network (blog). September 27.
<https://www.apln.network/analysis/commentaries/an-underwater-nuclear-race-after-australia-south-korea-may-be-next-to-take-the-plunge-in-asia-pacific>

and, finally, the emerging and evolving concept of integrated deterrence as the United States plans to face two peer competitors, and what it means for alliances. It is important to caveat, that these trends are not exhaustive and they capture a decidedly U.S.-centric perspective. Overall, however, these trends capture the big picture of the nuclear landscape and competing tensions of rising risks and competition in the face of a breakdown in institutions and tools designed to manage those risks. As allies with decades of experience in cooperation, both committed to the NPT, and facing complex threats, Washington and Seoul are uniquely positioned to make a positive contribution to strengthening and restoring stable nuclear governance. Doing so will require at least three priorities.

First, U.S.-ROK cooperation should increasingly focus on strategic risk reduction. This might entail joint studies and dialogues into the impact of emerging technologies. It also might include greater information and technology sharing, particularly with regards to disinformation campaigns and the manipulation of social media for geopolitical purposes and divisive narratives, which could negatively affect the alliance and crisis dynamics. Joint efforts on strategic risk reduction will have a second-order effect of also building “deterrence IQ” in Northeast Asia. Following the end of the Cold War, nuclear weapons largely disappeared from public consciousness in many countries, resulting in reduced awareness and understanding of the fundamentals of nuclear deterrence. Unfortunately, nuclear weapons are back in the news and U.S.-ROK cooperation will benefit from a renewed shared understanding of deterrence issues. This can happen by addressing deterrence head-on, but also through discussing strategic risks, such as escalation, and how these risks might be jointly managed.

Second, the U.S. and South Korea should look to strengthen and build forums for dialogue on nuclear governance and strategic risk reduction. Existing forums such as Track 2 and Track 1.5 dialogues offer important such opportunities. Another forum for strengthening nuclear governance might be the Creating an Environment for Nuclear Disarmament (CEND) initiative. Launched in 2019, CEND is an informal Track

1 dialogue with a mix of nuclear possessors and non-possessors, including non-NPT members India, Israel, and Pakistan. The United States and South Korea co-chair subgroup 2, which previously focused on nuclear institutions and mechanisms but is getting a revamp to have new focus areas. As CEND co-chairs, the forum is a unique opportunity not only for the U.S. and South Korea to cooperate, but also to shape the agenda, quite literally, on nuclear governance in a diverse and unique international forum.

As a final recommendation, U.S.-ROK relations are the underpinning of any cooperative efforts on nuclear governance. Keeping this relationship strong during trying times should also be a priority for nuclear governance, especially if it strengthens regional stability and allays proliferation concerns. Consultation will be essential- true consultation, to include an exchange of ideas and perceptions as equals. The forthcoming rollout and implementation of U.S. strategy documents, such as the National Security Strategy and Nuclear Posture Review are important and timely opportunities for such dialogue. Washington can clarify its priorities and objectives in nuclear governance, extended deterrence, and assurance to allies. And Seoul can ask questions- sometimes, difficult questions- about what deterring two peer competitors will mean for Northeast Asia, and how allies can cooperate to advance strategic risk reduction priorities.■

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