

# The Future of Nuclear Weapons, Statecraft, and Deterrence After Ukraine

*Perry World House*

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# ➤ INTRODUCTION



**In 2022, Russian President Vladimir Putin’s implied nuclear threats in the Ukraine war reinvigorated debates on the state of nuclear deterrence, statecraft, and safety. How likely is it that Moscow might utilize nuclear weapons, and what would be the consequences of such actions for the global nuclear order and the future of deterrence? Not only have Putin’s threats undermined norms in the global nuclear order, but they have also reinforced incentives for non-nuclear states to contemplate nuclearization and underscored the enormous humanitarian risks posed by the continued presence of nuclear weapons. Given this new reality of heightened nuclear risk, how should the United States and its allies and partners promote responsible nuclear statecraft, especially as states worldwide draw lessons from Putin’s nuclear threats?**

The war in Ukraine undoubtedly demonstrates risks to the global nuclear order, but it is not the only factor contributing to shifts in the non-proliferation regime. In recent years, the People’s Republic of China’s buildup of weapons and construction of missile silos has challenged the trend of arsenal reduction.<sup>1</sup> Global efforts to reduce the role of nuclear signaling have been undermined.<sup>2</sup> To examine the future of nuclear statecraft in this shifting context, Perry World House gathered experts, scholars, and practitioners for a workshop on April 4, 2023, to discuss the future of nuclear weapons and deterrence, prospects for nuclear power and safety, and the state of the legal and institutional non-proliferation regime. The workshop was structured around four panels:

1. “Nuclear Threats as an Intimidation and Negotiation Tactic: Russia, Iran, and North Korea” discussed the implications of Russia’s threats to use nuclear weapons in Ukraine for the future of the war, deterrence, and future negotiations. The panel extrapolated lessons for North Korea—which utilizes its own nuclear weapons program as leverage against the United States—and Iran, whose uranium enrichment program is viewed as a key leverage point as the international community seeks to revive the Joint Comprehensive Plan of Action. As democracies and autocracies worldwide learn from Putin’s nuclear threats, experts explored how revisionist states might update their strategies and preferences.

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1 Tong Zhao, “What’s Driving China’s Nuclear Buildup?” Carnegie Endowment for International Peace, August 5, 2021, <https://carnegieendowment.org/2021/08/05/what-s-driving-china-s-nuclear-buildup-pub-85106>; Joby Warrick, “China Is Building More Than 100 New Missile Silos in its Western Desert, Analysts Say,” *The Washington Post*, June 30, 2021, [https://www.washingtonpost.com/national-security/china-nuclear-missile-silos/2021/06/30/0fa8debc-d9c2-11eb-bb9e-70fda8c37057\\_story.html](https://www.washingtonpost.com/national-security/china-nuclear-missile-silos/2021/06/30/0fa8debc-d9c2-11eb-bb9e-70fda8c37057_story.html).

2 Toby Dalton, “Signaling and Catalysis in Future Nuclear Crises in South Asia: Two Questions after the Balakot Episode,” *Carnegie Endowment for International Peace*, June 25, 2019, <https://carnegieendowment.org/2019/06/25/signaling-and-catalysis-in-future-nuclear-crises-in-south-asia-two-questions-after-balakot-episode-pub-79373>; David Sanger, “Biden Says Russian Use of a Nuclear Weapon Would Be a ‘Serious Mistake,’” *The New York Times*, October 25, 2022, <https://www.nytimes.com/2022/10/25/us/politics/biden-russia-ukraine-nuclear.html?action=click&module=RelatedLinks&pgtype=Article>.

2. “The Future of Responsible Nuclear Statecraft” discussed macro-level solutions to the expanding list of nuclear-related risks in both nuclear and non-nuclear weapons states. With Russia’s nuclear threats against Ukraine, North Korea developing its weapons programs, and China increasing the size of its nuclear arsenal, non-nuclear weapons states may be incentivized to develop nuclear weapons to deter conventional conflict and nuclear blackmail. This panel explored how the war in Ukraine likely increases pressure for non-nuclear states to nuclearize and how public opinion might both embolden and restrain governments from seeking nuclearization.
3. “The Role of International Institutions and International Law in Enforcing Non-Proliferation and Non-Use” discussed how international organizations and laws disincentivize nuclear threats and constrain proliferation. Given the evolution of major multilateral institutions and agreements, such as the International Atomic Energy Agency (IAEA), the United Nations Office for Disarmament Affairs, and the Treaty on the Prohibition of Nuclear Weapons (TPNW), as well as the strain put on the United Nations by the war in Ukraine, how have the roles of these institutions shifted over time? This panel explored tensions in interpreting international law related to non-proliferation, the legal implications of Putin’s nuclear threats, and prospects for international non-proliferation law.
4. “Non-Nuclear States and the Crisis of Nuclear Non-Proliferation” explored ramifications beyond the great power competition of nuclear weapons states, focusing on how regional actors and non-nuclear weapons states influence the evolution of the non-proliferation regime. In an increasingly precarious global security environment, what are the prospects of new countries joining the “nuclear club” in response to adversaries developing these capabilities? Will nuclear weapons states increasingly rely on those weapons to pursue their security interests?

The recommendations and discussion in this report continue the Future of the Global Order theme’s focus on some of the most important issues facing the world, such as changing power dynamics, the impact of new and emerging technologies, and the future of international organizations. The workshop served to fulfill Perry World House’s mission to leverage Penn’s academic research to address global policy issues in part by bridging the gap between academia and the policy community for stronger policy solutions.



(Top to bottom) Thomas J. Shattuck, Global Order Program Manager at Perry World House, welcomes participants to the workshop; Eunjung Lim, Associate Professor at Kongju National University, speaks on nuclear policy developments in the Indo-Pacific; and John Ghazvinian, Executive Director of the Middle East Center at the University of Pennsylvania, discusses Iran’s uranium enrichment developments.

# ➤ KEY TAKEAWAYS FOR POLICYMAKERS



Participants focused on concrete policy takeaways and recommendations for policymakers to consider in a variety of nuclear-related areas. The discussion focused on how the Ukraine war has changed the nuclear status quo, implications for the Indo-Pacific region, and how international law and institutions work to keep nuclear norms stable.



*(Top to bottom) Fiona S. Cunningham, Assistant Professor of Political Science at the University of Pennsylvania, discusses nuclear issues in China; Eliza Gheorghe, Research Associate at Vanderbilt University, asks a question to panelists.*

## > IMPLICATIONS OF RUSSIA'S INVASION OF UKRAINE FOR NUCLEAR STATECRAFT

How do Putin's implied threats of nuclear use undermine norms in global nuclear statecraft? While those threats are aimed toward Ukraine and North Atlantic Treaty Organization (NATO) member states, how might other states react to, and learn from, Putin's threats? Countries such as China, Iran, and North Korea are likely deriving lessons from the war in Ukraine for their own foreign policy aims. While Putin's threats of nuclear use may have heightened US caution in providing aid to Ukraine or prevented its direct intervention, Putin's rhetorical tactics have not resulted in the swift achievement of Russia's war aims. This section interprets Putin's nuclear threats throughout the war and sets out recommendations to bolster nuclear statecraft in response.

### MAKING SENSE OF PUTIN'S NUCLEAR THREATS

There is debate on how seriously the international community should take Putin's threats to use nuclear weapons as he continues Russia's war. To understand Putin's intentions, participants analyzed how extreme, frequent, and new his rhetoric is vis-à-vis past behavior and threats made by other nuclear weapons states, such as North Korea.

While authoritarian states are much more likely to broadcast nuclear threats than democratic states, increased frequency of threats does not mean nuclear use is inevitable, or even likely. States like North Korea increase the threat of nuclear use to communicate dissatisfaction with developments, such as US military exercises.<sup>3</sup> At the same time, these threats often indicate where authoritarian leaders feel most threatened and what their core interests are. Putin's nuclear threats are designed to communicate boundaries and deter US and NATO support for Ukraine. These threats are about deterrence—not compellence. He miscalculated the ease of a swift victory, and his nuclear-tinged threats reveal his anxiety at being backed into a corner.

While Russia's nuclear doctrine states that it can utilize nuclear weapons in response to an existential threat, participants debated whether a threat to Putin's political power now constitutes an existential threat to the

country.<sup>4</sup> In any case, from Putin's perspective, nuclear threats have already been partially successful by producing a stalemate. However, they have failed to deter significant US support to Ukraine and further cooperation between the US and its allies and partners, especially European powers. Finland's accession to NATO in April 2023 demonstrates that Russia's rhetoric has failed to achieve one of Putin's most fundamental aims: the prevention of NATO's expansion.<sup>5</sup> Putin likely did scale back nuclear threats due to concerted pushback from the international community, especially by states who are more geopolitically aligned with him, such as India and China. Nonetheless, Putin's threats against direct US interference were effective early in the conflict, raising questions about what lessons other states take away from those threats.

### POLICY RECOMMENDATIONS

#### 1. Monitor and Analyze Nuclear Threats and Signals

Academics, research centers, and governments should more closely analyze the frequency, scope, and rhetoric of nuclear threats during peacetime and crisis. Comparing nuclear rhetoric within and across states will help leaders and analysts more systematically disentangle cheap talk from escalation pathways.

#### 2. Clarify the Role and Utility of Nuclear Deterrence

NATO and its partners should publicly state that Putin's nuclear threats cannot deter conventional behavior or support for Ukraine. US policy should not conflate threats to use nuclear weapons in crisis or conflict (which are short-term policy instruments undertaken by leaders to intimidate or coerce) with nuclear proliferation (which are long-term policies formulated by governments and mediated by structural conditions). Collectively, countries should emphasize the de-linking of Putin's nuclear threats and the conventional aspects of the war. While nuclear deterrence exists as a guardrail against adventurism, nuclear threats are often ineffective in deterring conventional behavior.

3 Lauren Sukin, "Why 'Cheap' Threats Are Meaningful: Threat Perception and Resolve in North Korean Propaganda," *International Interactions*, 48(5): 936-967, 2022, <https://www.tandfonline.com/doi/abs/10.1080/03050629.2022.2068542?journalCode=gini20>.

4 Mary Beth D. Nikitin, "Russia's Nuclear Weapons: Doctrine, Forces, and Modernization," *Congressional Research Service*, R45861, April 21, 2022, <https://sgp.fas.org/crs/nuke/R45861.pdf>.

5 North Atlantic Treaty Organization, "Finland Joins NATO as 31st Ally," Press release: April 4, 2023, [https://www.nato.int/cps/en/natohq/news\\_213448.htm](https://www.nato.int/cps/en/natohq/news_213448.htm).



(Left to right) Melissa Flagg, Visiting Fellow at Perry World House, moderates a discussion on regional nuclear developments; Izumi Nakamitsu, Under-Secretary-General and High Representative for Disarmament Affairs at the United Nations, answers participants questions about UN nuclear discussions; and Farrukh Khan, Visiting Scholar at the University of Pennsylvania, discusses nuclear norm development.

## RESPONDING TO NUCLEAR THREATS

While Putin's threats should not be dismissed as cheap talk, nuclear threats to deter behavior in the conventional sphere are far less credible than those designed to keep other states from using nuclear weapons. For example, Putin's threats failed to stop the broad, coordinated sanctions regime instituted after the Russian invasion.<sup>6</sup> But given Putin's belief that nuclear threats have facilitated at least some of his perceived success, how should the United States respond to future threats of nuclear use, let alone the detonation of a nuclear weapon?

Some participants noted that widespread international condemnation of Putin's nuclear rhetoric has reduced Russia's reliance on nuclear threats. This indicates that the United States should be less fearful of escalation and more concerned about boosting Ukraine's ability to defeat Russia on the battlefield. In contrast, others cautioned that escalation risks should not be overlooked but disagreed on the extent to which conflict could remain limited. Some argued that if Putin were to detonate a nuclear weapon in Ukraine, the United States should respond with a massive conventional attack, such as eliminating Russia's Black Sea Fleet. Yet, others argued that losing the Black Sea Fleet might be a cost Putin would be willing to pay to secure his political future and immediate war aims in Ukraine. Still, others argued for a tit-for-tat response by launching a nuclear weapon in a comparable location within Russia, a scenario that most participants rejected outright as a guaranteed pathway to global nuclear war.

The US response to Putin's nuclear threats will not only have implications for immediate deterrence in the war in

Ukraine, but also for the nuclear taboo.<sup>7</sup> While the Biden administration has suggested there is no way for Putin to detonate a tactical nuclear weapon without it "end[ing] in Armageddon," a conventional response to a nuclear weapon would undermine the deterrence dynamics of mutually assured destruction that have supported the nuclear taboo since 1945.<sup>8</sup> Ultimately, regardless of Putin's behavior, the United States should not respond to any type of Russian attack with its own nuclear weapon: it should respond with decisive action that has likely already been communicated to Russia via private channels.

## POLICY RECOMMENDATIONS

### 1. Support Prospects for Disarmament

The war in Ukraine has disincentivized disarmament. Shifting public opinion in states such as South Korea incentivizes mass and elite discussion of self-armament. Nuclear weapons states should prioritize disarmament and focus on cooperation with allies to ensure security guarantees.

### 2. Empower the United Nations to Play a Larger Role in Arms Control and Monitoring Risk

While the United Nations has existing mechanisms to support disarmament, nuclear weapons states should emphasize the role of multilateral institutions for monitoring areas of risk, such as in Iran or North Korea. Non-nuclear weapons states should develop nuclear norms and utilize multinational fora to promote responsible arms control.

6 Gerard DiPippo, "Strangling the Bear? The Sanctions on Russia after Four Months," *Center for Strategic and International Studies*, June 22, 2022, <https://www.csis.org/analysis/strangling-bear-sanctions-russia-after-four-months>; Gary Clyde Hufbauer and Megan Hogan, "How Effective Are Sanctions Against Russia?" *Peterson Institute for International Studies*, March 16, 2022, <https://www.piiie.com/blogs/realtime-economics/how-effective-are-sanctions-against-russia>.

7 Nina Tannenwald, "The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use," *International Organization*, 53(3): 433–68, 1999, [doi:10.1162/002081899550959](https://doi.org/10.1162/002081899550959).

8 Stephen Collinson, "Biden Sends a Careful But Chilling New Nuclear Message to Putin in CNN Interview," *CNN*, October 12, 2022, <https://www.cnn.com/2022/10/12/politics/joe-biden-nuclear-message-putin-cnntv-analysis/index.html>.



## > BEYOND RUSSIA: THE FUTURE OF RESPONSIBLE NUCLEAR STATECRAFT

The war in Ukraine has upended many of the assumptions that have guided the post–Cold War nuclear order. In the contemporary security environment, nuclear weapons states have little appetite to pursue disarmament, shifting what it means to be a responsible nuclear power. How do the new norms of the global nuclear order inform today’s most pressing security challenges? This section discusses the robustness of contemporary nuclear deterrence as it relates to three key areas: (1) US-China competition, (2) North Korean and Iranian proliferation risks, and (3) security assurances demanded by non-nuclear weapons states.

### IMPLICATIONS FOR US-CHINA COMPETITION

While Beijing is learning lessons from Putin’s adventurism in Ukraine, participants cautioned against directly translating Ukraine’s experiences into predictions for Taiwan. Whereas Putin expects no direct conflict between American and Russian troops in Ukraine, China fully anticipates that military action against Taiwan will result in a direct confrontation with the United States. Because such a crisis would directly involve American troops, the nuclear specter looms even larger over Taiwan than Ukraine. Both the United States and China perceive their vital interests to be at risk, leading to a greater likelihood of nuclear brinkmanship.

In addition, nuclear deterrence dynamics between the United States and China are different than those between the United States and Russia. The vast warhead imbalance between the United States and China should reduce concerns about escalation to the nuclear threshold, but it also means Beijing often searches for novel sources of asymmetric leverage against the United States.<sup>9</sup> In a Taiwan contingency, Beijing would not plan to use nuclear weapons on Taiwanese soil as Russia has threatened in Ukraine but would rather hold US assets and personnel at risk in the western Pacific.

When it comes to takeaways from Russia’s experiences in Ukraine, Beijing has taken note of how a lack of intelligence flow on the Russian side has stymied tactical gains, especially at the start of the conflict.<sup>10</sup> Russia’s

behavior has also shown that while nuclear threats may be effective in setting the boundaries of a conflict, they cannot prevent sanctions or protect international reputation. China has learned how domestic politics can increase the risk of escalation, generating incentives that hinder effective crisis management. Most recently, China and America’s competing narratives about a surveillance balloon that floated over US territory to gather intelligence bode poorly for managing future crises.<sup>11</sup> The prospect of US-China cooperation on crisis management and nuclear risk reduction is dependent on sustained goodwill on the part of its leaders—and little ground will be made until both sides push their bureaucracies to cooperate.

### POLICY RECOMMENDATIONS

#### 1. Develop Crisis Management Protocols

Washington and Beijing should develop hotlines and protocols related to nuclear risks. While it is unlikely that the two countries will sit down to negotiate arms control agreements in the short term, they should start with lower-hanging fruit in order to begin dialogue on nuclear issues. Participants emphasized the greater likelihood of a US-China conflict going nuclear much quicker than Russia’s war in Ukraine, so there is high need for dialogue and trust-building between Washington and Beijing before conflict erupts.

#### 2. De-Link Conventional and Nuclear Responses

Given the ongoing discussions about lessons from the Ukraine war for Taiwan, Washington and its allies in the region should emphasize that the two conflicts are not connected and that the threat of nuclear use would not prevent a conventional response in the event of a Chinese attack on American or allied assets and personnel. Such rhetoric may diminish the effectiveness of Beijing adopting Putin’s playbook and threatening nuclear use early in any potential conflict.

9 Fiona S. Cunningham, “Strategic Substitution: China’s Search for Coercive Leverage in the Information Age,” *International Security*, 47(1): 46-92, 2022, <https://direct.mit.edu/isec/article-abstract/47/1/46/112581/Strategic-Substitution-China-s-Search-for-Coercive>.

10 Joel Wuthnow, “Rightsizing Chinese Military Lessons from Ukraine,” *Strategic Forum*, 311: 1, September 2019, <https://ndupress.ndu.edu/Portals/68/Documents/stratforum/SF-311.pdf>.

11 Phelim Kine, “Chinese Spy Balloon Debacle Batters Bilateral Ties,” *Politico*, February 9, 2023, <https://www.politico.com/newsletters/politico-china-watcher/2023/02/09/chinese-spy-balloon-debacle-batters-bilateral-ties-00081986>; Verna Yu, “China Using Spy Balloon Drama to Drum Up Nationalistic Fervour,” *The Guardian*, February 9, 2023, <https://www.theguardian.com/world/2023/feb/09/china-spy-balloon-nationalistic-fervour-analysis>.

## IMPLICATIONS FOR IRAN AND NORTH KOREA

When considering lessons learned from the war in Ukraine, participants stressed distinctions in nuclear risk between different types of regimes. While democratic leaders must consider constituent opinion when calibrating policy and rhetoric, autocratic leaders are less bound by their domestic audiences. Autocrats can broadcast nuclear threats with fewer restrictions, and they face fewer barriers to authorization of nuclear use—raising the risk that threats can translate into action. For authoritarian states, nuclear risks are largely driven by existing alliance structures, material capabilities, and how personalistic their regimes are. For Iran and North Korea, these conditions lead to differing outcomes.

While North Korea may be emboldened by seeing Putin “get away with” implied nuclear threats, Iran is likely less affected by Putin’s behavior and rhetoric. In contrast to North Korea, participants argued that Iran’s history of nuclearization was not always driven by the United States: in the 1990s, Iran dismantled its nuclear weapons program. Thus, Putin’s threats against the United States and NATO have relatively little bearing on Iran’s foreign policy imperatives as compared with North Korea. However, autocrats are surrounded by yes-men who channel and curate information, and this may have dangerous consequences. In contrast to the opposition parties and political constituents that hold democratic leaders accountable, autocratic leaders are at risk of making precarious decisions based on incomplete information that filters out unfavorable realities.

For states such as Iran and North Korea, the personalities of individual leaders are highly important to crisis decision-making, risk acceptance, and nuclear rhetoric. While some participants discussed how many

modern wars are, in part, the result of miscalculation and leader-level narcissism, others argued that leaders have historically demonstrated a strong tendency to avoid conflict. Therefore, the treaties and crisis management mechanisms designed to reduce incentives for conflict and to lower escalation risks must consider how leaders often exhibit behavior that does not conform to rationalist expectations.

## POLICY RECOMMENDATION

### 1. Focus on Preventing Crises and Creating Off-Ramps

Given the pervasive risk of brinkmanship from states such as Russia and China, the United States should update its playbook on likely crisis triggers, escalation pathways, and off-ramps. Countries at risk for nuclear escalation, such as India and Pakistan, should similarly identify crisis triggers and off-ramps to avoid a spiral. Countries should establish best practices for bilateral communication infrastructure and dialogue mechanisms for crisis management with likely adversaries.

Autocrats are surrounded by yes-men who channel and curate information, and this may have dangerous consequences.

*(Left to right) John Gans, Vice President of Strategic Communications and Policy at the Rockefeller Foundation, asks panelists about nuclear risk; Ambassador Alexander Vershbow, Distinguished Visiting Fellow at Perry World House, discusses Russian nuclear decision-making; Rebecca E. Johnson, Director at the Acronym Institute for Disarmament Diplomacy, talks about multilateral nuclear norm-building; and Daryl G. Kimball, Executive Director of the Arms Control Association, questions panelists on Russia’s nuclear threats.*



## IMPLICATIONS FOR NON-NUCLEAR WEAPONS STATES

Participants discussed how non-nuclear weapons states view the credibility of security assurances by their nuclear allies and how nuclear weapons states can work to credibly extend security guarantees and avoid proliferation. Given Putin's brazen adventurism, should other non-nuclear weapons states learn from Ukraine's experience by pursuing a self-help strategy to avoid intervention? If Ukraine still had nuclear weapons, could it have avoided Putin's nuclear coercion?

For non-nuclear weapons states, two main factors drive proliferation concerns: existing security dilemmas and public opinion. While some participants emphasized that non-nuclear weapons states need negative security assurances—explicit guarantees by nuclear-weapons states to not threaten or use nuclear weapons against non-nuclear weapons states—to extinguish proliferation incentives, others argued that negative security assurances are both unlikely and historically ineffective.<sup>12</sup> The main two issues highlighted for the ineffectiveness of this pathway are the inability to enforce such an agreement and the cross-border effects of a nuclear weapon detonation.

In addition, the polarization of public opinion may exacerbate existing security dilemmas. For example, in South Korea, the public sphere is increasingly polarized between nuclear hawks and doves.<sup>13</sup> An increasing proportion of the public believes that the United States cannot credibly protect South Korean security interests, doubting the utility of traditional extended deterrence frameworks and often overlooking the costs associated with proliferation that might otherwise moderate political support. Because of low levels of education around proliferation, public and elite opinions often diverge on nuclear policy. In both South Korea and Japan, governments have concluded that the most viable policy option is to strengthen their respective relations with the United States. This was recently demonstrated by the Washington Declaration, which established a Nuclear Consultative Group between Seoul and Washington and has for the time being halted South Korea's potential quest to go nuclear itself. The agreement commits the United States to using its nuclear assets to provide extended deterrence to prevent a nuclear attack by Pyongyang.<sup>14</sup>

Overall, non-nuclear weapons states are effective norm creators and amplifiers in the non-proliferation sphere, especially as it relates to multilateral agreements such as the Comprehensive Nuclear-Test-Ban Treaty and TPNW. Unfortunately, Russia's behavior has contributed to a further erosion of trust in the international arena.

## POLICY RECOMMENDATIONS

### 1. Increase Education on Non-Proliferation and Disarmament

Public opinion is often limited by lack of knowledge about non-proliferation and nuclear risks. Policymakers should support public education efforts to increase awareness of nuclear risks. Universities, research centers, and advocacy groups should coordinate and produce materials that educate the public on the risks of nuclear weapons and nuclear accidents.

### 2. Support Norm Development around the Non-Use of Nuclear Weapons

Non-nuclear weapons states have been critical advocates for nuclear-free zones and norm-building around non-use. Individual states or regional blocs should promote written, institutionalized efforts to protect non-nuclear weapons states from having nuclear weapons states detonate a weapon on their territory.



(Left to right) M. Susan Lindee, Janice and Julian Bers Professor of History and Sociology of Science at the University of Pennsylvania, discusses the risks of nuclear power plants in conflict zones; Michael Ahrens, Minister-Counselor at the German Embassy in Washington, DC, highlights European thinking on nuclear norms.

12 Nuclear Threat Initiative, "Negative Security Assurances (NSAs)," <https://www.nti.org/education-center/treaties-and-regimes/proposed-internationally-legally-binding-negative-security-assurances/>; Arms Control Association, "U.S. Negative Security Assurances at a Glance," <https://www.armscontrol.org/factsheets/negsec>.

13 Mark A. Green, "Seventy-One Percent of South Koreans Now Support the Return of Nuclear Weapons to Their Country—Even if it Means Developing Their Own," *Stubborn Things*, The Wilson Center, January 31, 2023, <https://www.wilsoncenter.org/blog-post/seventy-one-percent-south-koreans-now-support-return-nuclear-weapons-their-country-even>; Erik Mobrand, "A Nuke for a Nuke? Public Debate and Political Party Views on Nuclear Acquisition in South Korea," *The RAND Blog*, RAND Corporation, March 2, 2023, <https://www.rand.org/blog/2023/03/a-uke-for-a-uke-public-debate-and-political-party.html>.

14 The White House, "Washington Declaration," *Briefing Room*, April 26, 2023, <https://www.whitehouse.gov/briefing-room/statements-releases/2023/04/26/washington-declaration-2/>.



*Nomsa Ndongwe, Research Associate at the James Martin Center for Nonproliferation Studies, discusses the growing importance of non-nuclear states in norm-building in international institutions.*

## › THE ROLE OF INTERNATIONAL INSTITUTIONS AND INTERNATIONAL LAW IN ENFORCING NON-PROLIFERATION AND NON-USE

This section will discuss emergent threats to the global nuclear order, especially in nuclear power plants and the nuclear marketplace, and how international legal norms vis-à-vis nuclear weapons can best support non-proliferation. How effective are international institutions and international law in diminishing nuclear threats and use? Given geopolitical polarization in multilateral organizations such as the United Nations, what is their role in the war in Ukraine? The international community attempted to develop global safeguards for the development of atomic energy for non-weaponized purposes through the IAEA and United Nations. But how do current dynamics challenge those norms and rules?

### AREAS OF FUTURE RISK: POWER PLANTS AND THE NUCLEAR MARKETPLACE

The war in Ukraine has highlighted not only the risks of nuclear weapons use, but also the risk that nuclear power plants might be turned into weapons of war. Early in the war, Russia seized the Chernobyl Nuclear Power Plant Zone of Alienation, then shelled and eventually took control of a functioning nuclear power plant in Zaporizhzhia as fighting continued nearby for several months.<sup>15</sup> In wartime, risks to power plants emerge from both state actors—where direct attacks or accidents would effectively turn these energy facilities into

regional weapons—and from the civilians who staff and manage the plants. Across the 400+ power plants spread around the world, over 17,000 scientists and engineers have the technical knowledge to transform a tool for green energy into a tool for immense harm. How can the international community secure and protect nuclear power plants so they cannot be exploited by militaries or non-state actors?

While there is some existing treaty protection of nuclear power plants from attack, the takeover of the Zaporizhzhia plant is a reminder of the existing vulnerability of nuclear power plants, many of which exist with less security relative to other energy production sites.<sup>16</sup> If a nuclear power plant is removed from an area's electrical grid, disaster results. An invading army seeking to inflict damage could intentionally cut a nuclear power plant off the grid or attack critical parts of the plant itself. The gravity of nuclear stalemate means that states seek means of strategic leverage: could threatening nuclear power plants offer a dangerous leverage point in a future conflict?

Laws and norms should acknowledge civilian nuclear power plants as equally important areas of strategic risk as traditional military sites. Greater transparency in nuclear energy will raise the costs of exploiting the civilian nuclear sphere during crises or conflict. For example, pressures in the nuclear marketplace might

<sup>15</sup> James Acton, "The Ukraine War's Lingering Nuclear Power Danger," *Carnegie Endowment for International Peace*, February 21, 2023, <https://carnegieendowment.org/2023/02/21/ukraine-war-s-lingering-nuclear-power-danger-pub-89080>; Nuclear Energy Agency, "Ukraine: Current Status of Nuclear Power Installations," May 12, 2023, [https://www.oecd-nea.org/jcms/pl\\_66130/ukraine-current-status-of-nuclear-power-installations](https://www.oecd-nea.org/jcms/pl_66130/ukraine-current-status-of-nuclear-power-installations).

<sup>16</sup> John Carlson, "Prohibition of Military Attacks on Nuclear Facilities," Vienna Center for Disarmament and Non-Proliferation, September 12, 2022, <https://vcdnp.org/prohibition-military-attacks-on-nuclear-facilities/>.

create incentives for nontransparent and risky transactions. Non-nuclear weapons states have greater ability to exploit these market forces to provide cover for developing weapons programs. As supplier states face competitive pressure to provide the most attractive deal, buyer states have an incentive to play suppliers off one another, leading to a decrease in transparency and potential for buyers to exploit their competitive advantage toward proliferation ends.<sup>17</sup> Organizations such as the Nuclear Suppliers Group should be reinvigorated to promote greater transparency in the nuclear marketplace.

## POLICY RECOMMENDATIONS

### 1. Increase the Protection of Nuclear Power Plants

Nuclear power plants are often minimally secured relative to other critical infrastructure. Countries should allocate funding and resources to the physical safeguarding of nuclear power plants on their territories. Multilaterally, countries should pursue agreements to establish best practices for power plant security, which may be monitored and supported via IAEA inspections.

### 2. Monitor the Nuclear Marketplace

The United Nations should help design and support supply-side international regulations that more transparently monitor transfers throughout the nuclear marketplace, reducing risks created by a lack of transparency in international transactions. These regulations should diminish the supply-side incentives that encourage proliferation risks in the global nuclear order.

## INTERNATIONAL LAW AND THE ROLE OF INTERNATIONAL INSTITUTIONS

Although the current security environment has disincentivized nuclear weapons states from reducing their nuclear arsenals and incentivized non-nuclear weapons states to pursue self-help strategies, international law and norms still constrain risky state behavior. Legally binding tools are important for establishing responsibility and transparent monitoring. International norms have been critical to non-proliferation regimes, but laws reduce the extent to which contradictory interpretations about a crisis or policy can produce divergent outcomes. Legal

protections are an especially important tool for non-nuclear weapons states in seeking protection against nuclear threat and coercion.

Participants disagreed on the extent to which nuclear threats could be considered legal violations in international criminal courts. Language from the Geneva Protocol may help underscore the illegality of nuclear weapons use. States under this convention do not have unlimited means of warfare, and nuclear weapons inherently cause superfluous damage and therefore may violate the principle of proportionality.<sup>18</sup> Others pushed back, arguing that the fundamental power of nuclear deterrence derives from the threat of massive destruction. Limiting the ability to make credible threats therefore undermines the deterrence dynamics of mutually assured destruction. There are related but separate dynamics surrounding the threat of nuclear force and the use of nuclear weapons, and international law and treaties should develop tools to deal with these dual concerns.

In addition, participants discussed the strengths and weaknesses in different types of agreements, comparing international law and bilateral treaties. While treaties cannot require states to alter the institutional management of their nuclear policy—such as forcing more steps between authorization and launch—they reinforce bilateral risk-reduction measures related to communication and perception. Similarly, dialogue through international institutions does not always constrain state decision-making but often provides mechanisms for mutually verifiable controls, such as those included in Article 6 of the Treaty on the Non-Proliferation of Nuclear Weapons. While the non-proliferation regime should encourage states to expand the level of checks and controls on their nuclear postures, bilateral and multilateral communication may reduce the risk of miscalculation during a crisis or conflict.

## POLICY RECOMMENDATION

### 1. Strengthen the Arms Control Regime

To ensure that institutional infrastructure exists for multilateral communication, both nuclear weapons and non-nuclear weapons states should prioritize the multilateral arms control regime. Participants decried the erosion of the arms control regime over the last thirty years, which has been exacerbated by an increasingly tense and dynamic security environment.

17 Eliza Gheorghie, “Polarity, Proliferation, and Restraint: A Market-Centric Approach.” In: Nina Græger, Bertel Heurlin, Ole Wæver, and Anders Wivel (eds.) *Polarity in International Relations: Past, Present, Future* (Governance, Security and Development) (London: Palgrave Macmillan, 2022), [https://doi.org/10.1007/978-3-031-05505-8\\_15](https://doi.org/10.1007/978-3-031-05505-8_15).

18 International Court of Justice, “Legality of the Threat or Use of Nuclear Weapons,” <https://www.icj-cij.org/case/95>.

# > AREAS FOR FUTURE RESEARCH



The workshop raised several questions for researchers to investigate. Exploring answers to these questions could provide useful insights for policymakers working in nuclear statecraft.

## IMPLICATIONS OF RUSSIA'S INVASION OF UKRAINE FOR NUCLEAR STATECRAFT

- If Russia did detonate a nuclear weapon in Ukraine, what are the possible scenarios for a US and NATO response, and what is the cost-benefit calculus of various responses?
- What are the most likely pathways for escalation in Ukraine in the next one to two years?
- How do emerging dual-use technologies challenge traditional nuclear deterrence dynamics?

## BEYOND RUSSIA: THE FUTURE OF RESPONSIBLE NUCLEAR STATECRAFT

- How do domestic politics in autocratic and democratic regimes lead to different risks and constraints to nuclear command and control?
- How can non-nuclear states and regional blocs practice effective norm entrepreneurship regarding disarmament?
- How do countries across the globe view the outcome of the Joint Comprehensive Plan of Action? What are Iran's nuclear enrichment prospects over the next three to five years?
- How should Washington prepare for nuclear risks and threats in a possible conflict with China in the Indo-Pacific?

## THE ROLE OF INTERNATIONAL INSTITUTIONS AND INTERNATIONAL LAW IN ENFORCING NON-PROLIFERATION AND NON-USE

- What are the current greatest risks to the safety of nuclear power plants? How can countries mitigate those risks?
- How can existing groups such as the Nuclear Suppliers Group be revitalized to address contemporary challenges in the nuclear marketplace?
- Where can legal precedent be relied on to support responsible nuclear statecraft?

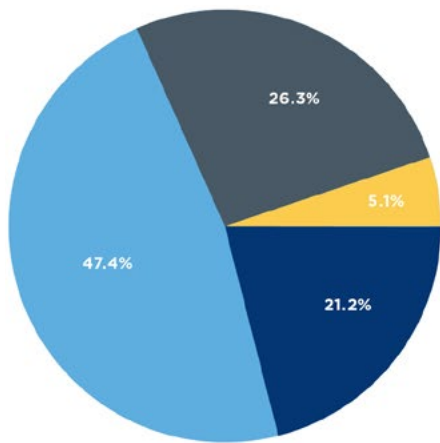


(Left to right): Alain Ponce Blancas, Research and Communication Officer at the Agency for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (OPANAL), asks a panelist a question; LaShawn Jefferson, Senior Executive Director at Perry World House, participates in the discussion.

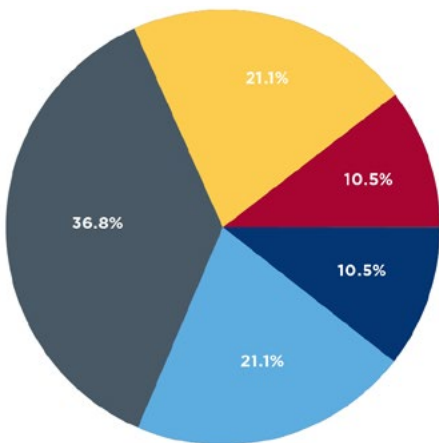
# > APPENDIX

## > SURVEY RESULTS

*Perry World House asked participants to fill out a short survey on key issues related to the theme of the workshop. The following figures are based on participants' responses. Not all participants answered all questions, and these charts should not be interpreted to represent any individual panelist's view.*

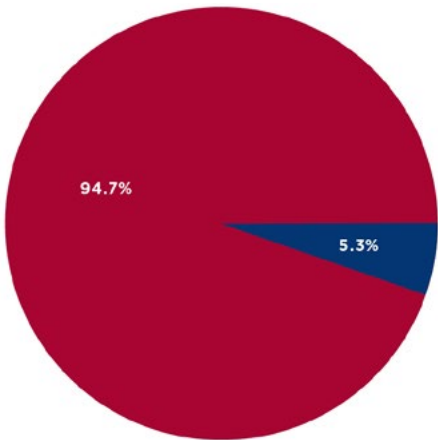


**Figure 1:** How likely is it that Vladimir Putin will use/launch a tactical nuclear weapon inside of Ukraine?



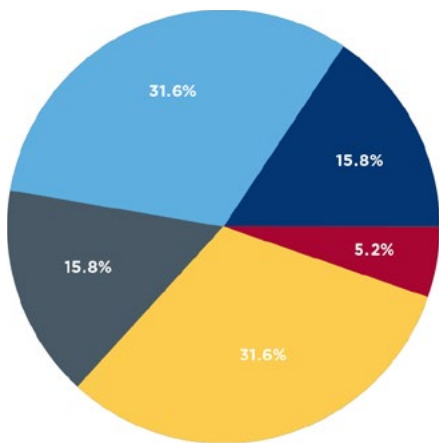
**Figure 2:** How likely is it that Iran will develop a nuclear weapon within the next five years?





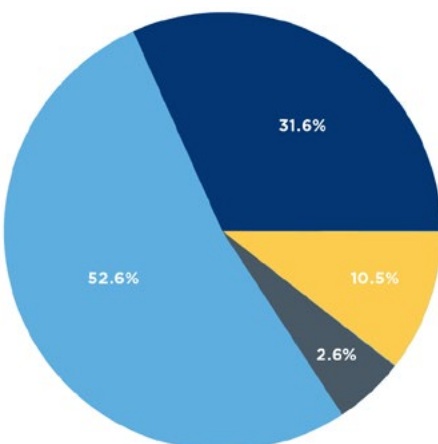
**Figure 3:** Will the attempt to bring back the JCPOA be successful?

- YES
- NO



**Figure 4:** What effect has Vladimir Putin's threats to use a tactical nuclear weapon inside of Ukraine changed the dynamic of the conflict?

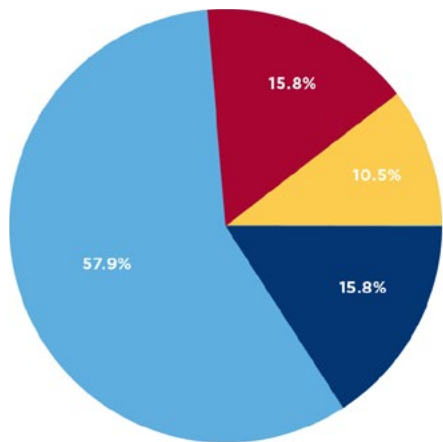
- ALMOST NO EFFECT
- LITTLE EFFECT
- NEUTRAL
- MODERATE EFFECT
- SIGNIFICANT EFFECT



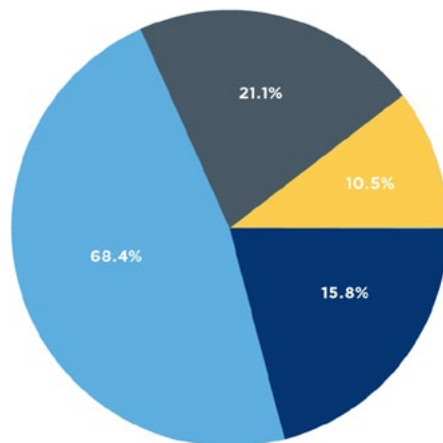
**Figure 5:** What effect has North Korea's nuclear weapons development program had on regional countries' desire to go nuclear or to arrange for a nuclear-sharing agreement?

- ALMOST NO EFFECT
- LITTLE EFFECT
- NEUTRAL
- MODERATE EFFECT
- SIGNIFICANT EFFECT



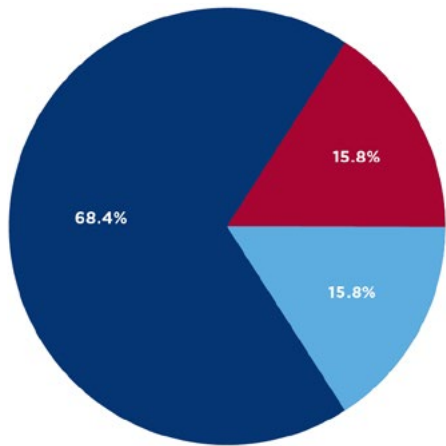


**Figure 6:** How likely is that Russia will “unsuspend” its New START participation before the end of 2023?

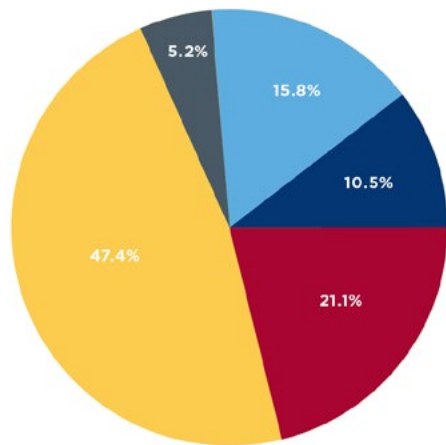


**Figure 7:** How likely is it that China will participate in nuclear arms reduction negotiation with the United States in the next five years?





**Figure 8:** How successful have international institutions, such as the International Atomic Energy Agency, been in strengthening the non-proliferation norms?



**Figure 9:** What effect has the Treaty on the Prohibition of Nuclear Weapons had in strengthening in non-proliferation norms since its inception in 2021?



## > PARTICIPANTS

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## > WHAT THE EXPERTS ARE READING

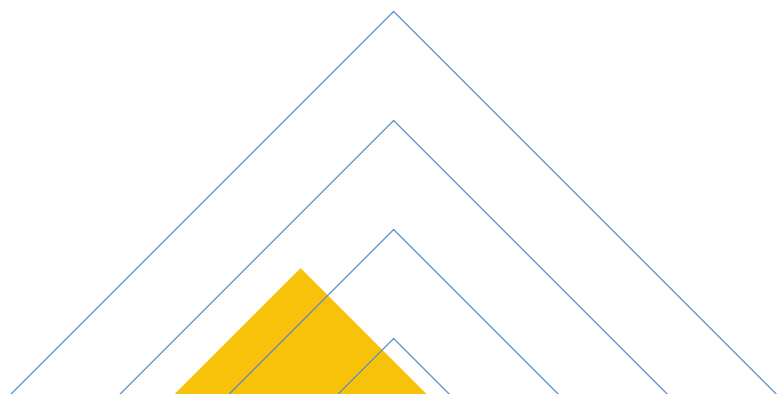
*Perry World House asked participants to name one book or article that scholars and policymakers should read on nuclear weapons, nuclear policy, arms control, and nuclear statecraft. Here is what they recommended.*

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