Atlantic Council
SCOWCROFT CENTER
FOR STRATEGY AND SECURITY

ISSUE BRIEF

Toward Trilateral Arms Control: Options for Bringing China into the Fold

FEBRUARY 2021
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Executive Summary

During the Cold War and in its aftermath, the United States and the Soviet Union (later the Russian Federation) engaged in successive nuclear arms control treaties, which placed negotiated limits on strategic weapons and increased transparency. In the past few years, US relations with the People's Republic of China have deteriorated, and the US National Security Strategy has identified China as the priority of US national security efforts.[1] The US government publicly estimates that China's nuclear arsenal will double in size within the decade.[2] These developments, combined with uncertainty about the future of US-Russia arms control, underscore the urgency of bringing China into the nuclear arms control fold. Yet China has refused to consider such a notion, and some Western analysts have dismissed trilateral arms control as a fool's errand.[3]

Convinced that trilateral arms control among the United States, Russia, and China could advance international security and that pursuing it is a worthwhile endeavor, Los Alamos National Laboratory and *Forward* Defense, a practice area of the Atlantic Council's Scowcroft Center for Strategy and Security, convened a workshop on this topic under non-attribution rules on August 4,

1 White House, *National Security Strategy of the United States of America*, December 2017, *https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf*.

2 Joe Gould, "China plans to double nuclear arsenal, Pentagon says," *Defense News*, September 1, 2020, *https://www.defensenews.com/congress/2020/09/01/china-planning-to-double-nuclear-arsenal-pentagon-says/*.

3 Ministry of Foreign Affairs of the People's Republic of China, "Department of Arms Control and Disarmament Holds Briefing for International Arms Control and Disarmament Issues," July 8, 2020, *https://www.fmprc.gov.cn/mfa_eng/wjbxw/t1795979.shtml*; Robert Farley, "Can China Be Compelled Into Arms Control?," *Diplomat*, June 8, 2020, *https://thediplomat.com/2020/06/can-china-be-compelled-into-arms-control/*.

US Air Force Flickr, https://tinyurl.com/y6qlyhbz.

2020. At this workshop, the participants discussed several concrete proposals for trilateral arms control, incentives for China to join such negotiations, and short-term steps that Washington could take to encourage Chinese participation.

This issue brief evaluates a number of possible trilateral arms control frameworks, including equal and unequal weapons caps, a fissile material cutoff, and US-Russian reductions contingent on a Chinese nuclear freeze. Chinese incentives to participate in arms control possibly include: limiting US and Russian nuclear and nonnuclear weapons, US acknowledgement of mutual vulnerability with China, achieving international recognition as a nuclear superpower, and avoiding the deleterious impacts of a nuclear arms race. Even with these incentives, modest short-term steps will likely be necessary to kick-start trilateral negoti-

ations. These steps could include a joint US-Russian commitment to incorporate China into New START extension negotiations, Chinese participation in the New START verification process, trilateral dialogues on strategic stability, and other confidence-building measures. Successfully placing negotiated limits on Chinese strategic forces will be challenging, but it will be necessary if arms control is to have a role in addressing the most important strategic challenge of the twenty-first century.

This issue brief will continue in five parts. First, it will briefly review the history of nuclear arms control and the contemporary strategic context for arms control negotiations. Second, it will present possible frameworks for nuclear arms control with China. Third, it will discuss potential incentives for China to join trilateral negotiations. Fourth, it will consider short-term steps to move toward trilateral arms control. Finally, it will offer a brief conclusion and discuss possible next steps.

I. Strategic Context

The twentieth-century arms control framework is on its last legs because the twenty-first century strategic environment presents different nuclear and geopolitical challenges. These challenges include Russian development of nonstrategic and "exotic" nuclear weapons, the emergence of great-power competition with China, and China's nuclear arms buildup.

While the history of nuclear arms control has focused on the strategic nuclear weapons of the United States and the Russian Federation, the greatest challenges to nuclear deterrence today emanate from Russia's nonstrategic nuclear weapons and novel nuclear systems. From the 1970s onward, accords like the Strategic Arms Limitation Talks (SALT) and the Anti-Ballistic Missile (ABM) Treaty were key to slowing the pace of the nuclear arms race. Near the end of the Cold War, the Intermediate-Range Nuclear Forces (INF) Treaty and the Strategic Arms Reduction Treaty (START) were key to drastically reducing nuclear arms stockpiles. In the early 1990s, the United States and Russia eliminated many of their nonstrategic (short-range) nuclear weapons as part of the Presidential Nuclear Initiatives. The 1992 Open Skies Treaty extended this unprecedented transparency to conventional forces by allowing states to conduct observation flights over others' territory. New START, the most recent nuclear arms control agreement between the nuclear superpowers, was signed in 2010.

But the strategic environment which made those treaties possible and desirable has changed, and the Cold War legacy arms control framework is unraveling as a result. In the wake of the terrorist attacks on the United States on September 11, 2001, and growing concerns about nuclear proliferation to rogue states, the George W. Bush administration elected to withdraw from the ABM Treaty and pursue national missile defense.

A more significant threat to this legacy of arms control comes from Russia's increased reliance on nuclear weapons in its strategy and its willingness to violate international agreements. Beginning in the early 2000s, and facing conventional inferiority vis-à-vis NATO, Moscow began placing greater emphasis on nuclear weapons as part of its military strategy.[4] In the 2010s, Russia, seeking to counter China's growing military strength and increase its strike options against Europe, developed intermediate-range missiles in violation of the INF Treaty, prompting a US withdrawal in 2018.[5] Similarly, the United States withdrew from the Open Skies Treaty in 2020, reacting to bad-faith Russian efforts to manipulate the agreement for unfair military advantage.[6] While Moscow eliminated many nonstrategic weapons at the end of the Cold War, it maintained a large arsenal of thousands of short-range, low-yield, nuclear-armed devices, including gravity bombs, missiles, land mines, and torpedoes. It is now building a new generation of these forces.[7] Moreover, Russia is endangering nuclear arms control by producing new, exotic nuclear weapons systems (including a cruise missile powered by a nuclear reactor and a nuclear-armed submarine drone) that are not covered

4 Matthew Kroenig, *The renewed Russian nuclear threat and NATO nuclear deterrence posture*, Atlantic Council, February 3, 2016, *https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/russian-nuclear-threat/*; Matthew Kroenig, *A strategy for deterring Russian de-escalation strikes*, Atlantic Council, April 24, 2018, *https://www.atlanticcouncil.org/in-depth-research-reports/report/a-strategy-for-deterring-russian-de-escalation-strikes/*.

5 Hilary Hurd and Elena Chachko, "U.S. Withdrawal From the INF Treaty: The Facts and the Law," *Lawfare*, October 25, 2018, *https://www.lawfareblog.com/us-withdrawal-inf-treaty-facts-and-law*.

6 US Deputy Assistant Secretary of State for Defense Policy, Emerging Threats, and Outreach in the Arms Control, Verification and Compliance Bureau Thomas Dinanno, "United States Withdrawal from the Treaty on Open Skies," virtual remarks to the Open Skies Conference of the States Parties, Vienna, Austria, July 6, 2020, *https://www.state.gov/united-states-withdrawal-from-the-treaty-on-open-skies/*.

7 US Department of Defense, *Nuclear Posture Review*, 2018, *https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF*.

by existing arms control agreements.[8] New START covers 94 percent of US nuclear forces, but only 57 percent of Russia's nuclear forces.[9] By locking US nuclear forces in place through New START and building up its own forces that are unconstrained by the treaty, Moscow appears to be seeking a nuclear advantage within New START.

The other most significant change to the strategic context is the rise of great-power competition with China. The 2017 National Security Strategy of the United States of America declares the return of great-power competition to be the greatest threat to the national security and economic well-being of the United States.[10] China's stated desire to displace the United States as the leading state in the Western Pacific—and, eventually, the world—by the hundredth anniversary of the founding of the people's republic in 2049 is a clear long-term challenge to US national interests.[11] In the coming decades, the United States faces plausible conflicts with China over the South China Sea, the East China Sea, and Taiwan. The shadow of nuclear weapons would loom over any military conflict between these nuclear-armed states.

Moreover, China is engaging in a nuclear-arms buildup. US government officials believe that China's nuclear arsenal (currently numbering in the low two hundreds of warheads) is set to at double in size by the end of the decade.[12] China is improving the quality of its ballistic missile submarine force and plans on fielding heavy strategic bombers, completing its nuclear triad.[13] China's vast arsenal of land-mobile, intermediate-range, dual-use missiles presents a serious threat to US forces, bases, and allies in the Indo-Pacific.[14] For decades, the United States enjoyed a quantitative and qualitative nuclear advantage over China that facilitated Washington's strategy of extending deterrence to vulnerable allies in Asia. But US officials have long feared that China would attempt to "sprint to parity" and build a superpower arsenal. While China's current planned buildup does not constitute a "sprint to parity," it is troubling. A growing Chinese force increases China's ability to hold the US homeland at risk, undermining key goals of US nuclear strategy articulated in the *2018 Nuclear Posture Review*, including deterrence, assurance, and limiting damage if deterrence fails. Moreover, China's large theater nuclear force

US State Department Flickr, https://tinyurl.com/yxdt4lv2.

8 Matthew Kroenig, Mark Massa, and Christian Trotti, *Russia's exotic nuclear weapons and implications for the United States and NATO*, Atlantic Council, March 6, 2020, *https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/russias-exotic-nuclear-weapons-and-implications-for-the-united-states-and-nato/*.

9 Defined as the quotient of the total strategic (offensive) forces and total stockpile, ignoring any warheads that are retired and awaiting dismantlement. Data from: Hans M. Kristensen and Matt Korda, "United States nuclear forces, 2020," *Bulletin of the Atomic Scientists* 76 (1): 46-60, DOI: 10.1080/00963402.2019.1701286; Hans M. Kristensen and Matt Korda, "Russian nuclear forces, 2020," *Bulletin of the Atomic Scientists* 76 (2): 102-117, DOI: 10.1080/00963402.2020.1728985.

10 White House, *National Security Strategy*.

11 Graham Allison, "What Xi Jinping Wants," *Atlantic*, May 31, 2017, *https://www.theatlantic.com/international/archive/2017/05/what-china-wants/528561/*.

12 Gould, "China plans."

13 Minnie Chan, "Chinese navy puts two new nuclear submarines into service," *South China Morning Post*, April 29, 2020, *https://www.scmp.com/news/china/military/article/3082195/chinese-navy-puts-two-new-nuclear-submarines-service*; Roderick Lee, "China's Air Force Might Be Back in the Nuclear Business," *Diplomat*, September 9, 2020, *https://thediplomat.com/2020/09/chinas-air-force-might-be-back-in-the-nuclear-business/*.

14 Paul Sonne, "China is ramping up nuclear and missile forces to rival U.S., Pentagon says," *Washington Post*, September 1, 2020, *https://tinyurl.com/yyat89cb*.

threatens Washington's objective, articulated in the *2018 National Defense Strategy*, to maintain a favorable balance of power in the Indo-Pacific.[15]

In the face of a Chinese strategic nuclear buildup and theater nuclear advantages, US nuclear force requirements may need to increase to meet stated strategic objectives. Washington would like to maintain a clear quantitative and qualitative strategic edge over China to preserve nuclear deterrence and to assure vulnerable allies.[16] Indeed, recent social science research demonstrates that nuclear-superior states are less likely to be targeted with military challenges and more likely to achieve their geopolitical goals in high-stakes crises.[17] Moreover, a larger Chinese nuclear arsenal would present a greater number of nuclear targets for the United States to cover to limit damage should deterrence fail. Even the likely prospect of a Chinese nuclear buildup requires the United States to ensure the capacity to hedge against an uncertain future.[18] Finally, the United States is already planning to build and deploy intermediate-range missiles in the Indo-Pacific. While current plans call for conventional intermediate-range forces only, those plans could plausibly change in the future as a means of offsetting China's theater nuclear advantage.

The pressures to build up on both sides could lead to a new strategic arms competition between Washington and Beijing. Indeed, US Special Envoy for Arms Control Marshall Billingslea recognized this possibility and stated, "[the United States] know[s] how to win these races and we know how to spend the adversary into oblivion."[19] While the United States might prevail in an arms race, doing so may not be desirable. US nuclear modernization costs are already slated to peak in 2022 as part of the "bow wave" of nuclear modernization.[20] And defense budgets are likely to come under pressure as deficit spending from the coronavirus pandemic and other domestic priorities demand additional resources.[21]

To head off such an arms race, the United States should engage China in arms control negotiations. It does not make strategic sense to focus arms control efforts solely on Moscow when the greater long-term challenge arguably comes from Beijing. Moreover, in addition to these strategic concerns, it will become increasingly difficult politically to gain bipartisan consensus for a continuation of US-Russia arms control agreements while China's arsenal grows unconstrained.

The very future of arms control, therefore, may depend on bringing Beijing into the arms control fold. But doing so will be challenging. What would a trilateral nuclear arms control agreement look like? It is to that question that we will turn in the next section.

II. Proposals for Trilateral Arms Control with China

While there has been a great deal of discussion about the difficulties of trilateral arms control, there has been less writing on concrete proposals to advance arms control among the United States, Russia, and China. This section considers possible frameworks, including an unequal treaty, a nuclear freeze, a reductions-for-freeze arrangement, an equal treaty, a fissile material cutoff, and a new intermediate-range treaty.

Unequal treaty. From a US perspective, an attractive trilateral arms control treaty would simply codify the existing nuclear balance—one thousand five hundred and fifty accountable warheads possessed by the United States and Russia and a warhead count in the low two hundreds for China. China, however, would almost certainly refuse such a proposal for at least two reasons. First, China is currently engaged in a nuclear buildup that it will be reluctant to reverse. Second, China is hypersensitive about "unequal treaties" reminiscent of its treatment by Western powers

15 US Department of Defense, *Summary of the 2018 National Defense Strategy of the United States of America: Sharpening the American Military's Competitive Edge*, 2018, *https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf*.

16 Matthew Kroenig, *The Logic of American Nuclear Strategy: Why Strategic Superiority Matters* (Oxford: Oxford University Press, 2018).

17 Erik Gartzke and Matthew Kroenig, "Nukes with Numbers: Empirical Research on the Consequences of Nuclear Weapons for International Conflict," *Annual Review of Political Science* 19 (May 2016): 397-412, *https://doi-org.proxy.library.georgetown.edu/10.1146/annurev-polisci-110113-122130*.

18 For the goals of the US nuclear strategy see: US Department of Defense, *Nuclear Posture Review*.

19 Reuters staff, "U.S. prepared to spend Russia, China 'into oblivion' to win nuclear arms race: U.S. envoy," May 21, 2020, Reuters, *https://www.reuters.com/article/uk-usa-armscontrol/u-s-prepared-to-spend-russia-china-into-oblivion-to-win-nuclear-arms-race-u-s-envoy-idUSKBN22X2LS*.

20 Jon Harper, "DoD Beginning to Tackle Nuclear 'Bow Wave,'" April 1, 2016, *National Defense Magazine*, *https://www.nationaldefensemagazine.org/articles/2016/4/1/2016april-dod-beginning-to-tackle-nuclear-bow-wave*.

21 Matt Vallone, "U.S. Defense Spending During and After the Pandemic," July 31, 2020, *War on the Rocks*, https://warontherocks.com/2020/07/u-s-defense-spending-during-and-after-the-pandemic/.

during its "Century of Humiliation" in the hundred-year period prior to the founding of the people's republic.

Nuclear freeze. A nuclear freeze—an agreement that would lock all participants into their current or lower number of warheads—would have the same practical effect as a treaty with asymmetric limits, since the current arsenal sizes are already unequal. Legally and diplomatically, however, this approach might be less of a slight to China, because the text of the agreement would impose the same limit on all states—freezing at current levels—and not single out China for unequal treatment. The United States is in the midst of modernizing its nuclear forces, a process that Russia has mostly completed. Thus, a freeze would have to be carefully construed to be clear that it covers delivery vehicles and warheads but does not prohibit the United States from continuing its nuclear modernization program. Halting the much-needed modernization of US nuclear forces would not be in Washington's interests.

US-Russian reductions for a China freeze. The United States and Russia could commit to nuclear weapon reductions in exchange for a Chinese freeze. To achieve this arms control framework, the United States and Russia would negotiate a follow-on treaty similar to New START with a cap on accountable warheads. Written into the treaty would be the current cap of one thousand five hundred and fifty warheads as well as a lower cap. This lower cap—a number below the current one thousand five hundred and fifty, but appreciably above China's arsenal in the low two hundreds—would become operative only if China agreed to a verifiable freeze of its own nuclear expansion.

Equal treaty. An equal treaty would codify the same number of accountable warheads for all three states. This could be the current New START number of one thousand five hundred and fifty accountable warheads. The downside of this option for the United States and Russia is that it would either legitimize a Chinese nuclear buildup or would require the United States and Russia to cut their arsenals to the lower Chinese level. The United States and Russia would be dissatisfied by this treaty as they do not want to legitimize a Chinese nuclear buildup or slash their own arsenals. As discussed above, a much larger Chinese nuclear arsenal could undermine the key goals of the US nuclear strategy, including deterrence, assurance, damage limitation, and hedging against an uncertain future.

Fissile material cutoff. A commitment by the United States, China, and, perhaps, Russia to cut off future fissile material production would create a *de facto* trilateral arms control measure in a verifiable manner without getting into thorny issues of warhead numbers. China likely has enough plutonium for four hundred warheads, with an upper bound of eight hundred. A fissile material cutoff would, therefore, allow China to grow its arsenal without reaching parity with the United States or Russia. The United States has already concluded its fissile material production, and, therefore, would not be significantly affected by this measure. Chinese resumption of fissile material production would likely be observable by "national technical means," so verification would not be a major challenge. The United States and Russia might be amenable to this proposal because they observe voluntary moratoria on fissile material production.[22] China, by contrast, might be predisposed to rejecting this approach, given that Beijing has been unwilling to sign on to fissile material cutoff treaties in the past.

Intermediate-range treaty. An intermediate-range treaty would cap the number of nuclear-capable missiles with a range (500-5,500 km) covered by the now-defunct INF Treaty. It is difficult to see a path forward for this treaty. Russia likely cheated on the INF Treaty in part so that it could target China with intermediate-range missiles. China's vast intermediate-range arsenal, which contains many dual-capable missiles, is an important part of its deterrent against Russia, India, the United States, and US allies. Even the United States has expressed an interest in deploying conventional intermediate-range missiles to the Indo-Pacific. All three powers seem to want more, rather than fewer, intermediate-range missiles, so controlling these weapons seems an unlikely path to trilateral arms control. One possibility, however, might be to place a negotiated cap on the number of intermediate-range missiles that the three powers could deploy. For example, the three states could agree not to deploy more than several hundred of these missiles. There might also be a regional component to the agreement. Russia and the United States might agree to deploy these weapons in the Indo-Pacific while keeping them out of the European theater. Striking this type of agreement will also be difficult, however, as China already has hundreds of missiles in this category and may be reluctant to cut its arsenal or legitimize a Russian or US buildup of these weapons.[23]

22 For details of this proposal, see: James M. Acton, Thomas D. MacDonald, and Pranay Vaddi, *Revamping Nuclear Arms Control: Five Near-Term Proposals*, Carnegie Endowment for International Peace, forthcoming.

23 International Institute of Strategic Studies, *The Military Balance 2020*, 2020, 259.

III. Incentives for China to Enter into Arms Control Discussions

It is likely that any of the above frameworks alone would be unacceptable to at least one of the states in question. While running a nuclear arms race is undesirable for all three states, the United States, Russia, and China would prefer nuclear buildups to signing an agreement that compromises core national interests. As a result, negotiators must consider a host of incentives, side deals, and compromises which could incentivize states to join arms control negotiations. Because China has been the most reluctant to join nuclear arms control negotiations, this section considers incentives for China to join such discussions.

Limits on US and Russian Intermediate-Range Missiles. China might be incentivized to join arms control discussions out of a fear of Russia and the United States fielding intermediate-range missiles on its borders. In the wake of the INF Treaty's demise, both the United States and Russia are slated to expand their intermediate-range arsenals in the Indo-Pacific. Russia's intermediate missiles, capable of both conventional and nuclear payloads, pose a current threat to China. Washington could, therefore, pursue a dual-track approach of developing and deploying intermediate-range missiles in the Indo-Pacific even as it engages with Beijing on possible measures to limit these weapons systems.

Limits on US and Russian Nonnuclear Strategic Systems. China might be motivated to join arms control agreements if they held out the promise of limiting US and Russian nonnuclear strategic systems that pose a threat to China. China is paranoid that US nonstrategic systems, including precision-guided conventional munitions and missile defenses, could pose a serious threat to China's deterrent. China, therefore, may be interested in negotiations that include limits on US missile defenses or conventional strike capabilities. One option for including missile defense limits in an arms control treaty, for example, would be to count kinetic missile defense interceptors as a fraction of an offensive vehicle when establishing weapons ceilings. For instance, for every four ground-based interceptors deployed by the United States, China could be allowed one additional offensive missile.[24]

Acknowledgement of Mutual Vulnerability. If the United States were to acknowledge mutual vulnerability with China, that might create a positive environment for arms control negotiations. China has long sought an acknowledgement from Washington that the two states exist in a situation of mutual nuclear vulnerability, but, so far, the United States has been unwilling to make such a statement. Such a pledge could be made more credible by changes to US capabilities, such as limits on the accuracy of US nuclear weapons or promises to refrain from anti-submarine warfare against China's nuclear-armed submarines.

Perception as a Great Power. China might be incentivized to participate in these negotiations because it sees itself as a great power; negotiating strategic arms control with the United States and Russia would demonstrate that China has arrived as one of the world's leading powers. Entering into such a treaty could be a diplomatic coup for the Chinese. Russia sees nuclear arms control as one of its last domains of superpower equality with the United States that excludes China; as such, prestige motivations might discourage Russia from engaging with China in this effort.

Avoiding an Arms Race. China might negotiate an arms control deal—even on unfavorable terms—if it believes that the alternative would be to lose a strategic arms race with the United States. The United States arguably won the Cold War, in part, by outcompeting the Soviet Union in the development of strategic weapons. China, understanding this, might be reluctant to enter such a competition and might prefer negotiated limits.

IV. Immediate Next Steps

China may decide not to join a nuclear arms control framework, trilateral or otherwise, in the short or even medium term. This section, therefore, articulates some feasible short-term steps to enhance the prospects for a future trilateral accord.

- The United States and Russia could continue bilateral arms control, while stating a clear intention to bring China into future negotiations. Chinese diplomats could be invited to observe as many of the negotiating sessions as practical.

24 Tong Zhao, *Narrowing the U.S.-China Gap on Missile Defense: How to Help Forestall a Nuclear Arms Race*, Carnegie Endowment for International Peace, 2020, *https://carnegieendowment.org/files/Zhao_USChina_MissileDefense.pdf*.

- China might be willing to participate in US-Russian verification visits to nuclear sites. These exchanges would enable the Chinese technical community to become familiar with and gain confidence in verification techniques.

- Trilateral dialogues on strategic stability, including on the impact of emerging technologies (e.g., cyber, counter-space, hypersonic missiles), would be useful. There exists no mutual agreement among the three states about what exactly constitutes strategic stability, or about the possible effects of new technology. These dialogues could take place at the official level or on Track 1.5 or 2.

- Many US allies and partners are deeply concerned about the future of nuclear arms control. These countries should make it a priority in their bilateral relationship with Beijing to urge China to join nuclear arms control efforts.

- There may be other confidence-building measures that can be undertaken on a trilateral basis, including a treaty or political agreement to notify the other parties of ballistic missile launches. Another such commitment could be pledging not to conduct cyberattacks on nuclear command and control. Yet another measure could be an agreement to refrain from interference with nuclear launch-detection satellites, including through rendezvous and proximity operations.

- Finally, while the United States should pursue trilateral arms control negotiations, as long as nuclear weapons exist, it must maintain effective deterrent. To do so, the United States should continue to modernize its nuclear triad, including the Ground Based Strategic Deterrent, B-21 bomber, Long Range Standoff Missile, and *Columbia*-class ballistic missile submarine. In fact, the planned nuclear modernization will allow the United States to negotiate arms control from a position of strength.

V. Conclusion

Nuclear arms control between the United States and the Soviet Union (later Russia) was one of the greatest diplomatic accomplishments of the Cold War and its immediate aftermath. Yet the international security situation, which enabled such successful negotiations, has drastically changed in the past decade. The vast arsenal of nonstrategic nuclear weapons fielded by Russia, as well as its development of novel, exotic nuclear weapons, threaten the US-Russia nuclear balance. As great-power competition heats up, the United States faces plausible conflicts with China that would test the US nuclear deterrent. As China's own nuclear arsenal is slated to double within the decade, failure to include China could spell the end of nuclear arms control and even touch off a three-way nuclear arms race.

To help US negotiators avoid this possibility, the authors of this issue brief and a workshop of experts in nuclear weapons technology and strategy proposed a set of frameworks, incentives, and short-term steps. No one trilateral framework on its own is likely to be simultaneously acceptable to the United States, Russia, and China. Instead, negotiators will need to judiciously build on a framework with side deals and incentives to bridge conflicting interests. Given the downside risks of the alternative, US, Russian, and Chinese diplomats must immediately begin serious negotiations to preserve arms control and to take some of the short-term steps identified in this paper.

Biographies

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Appendix A

This report was informed by a conversation hosted by the Atlantic Council's Scowcroft Center for Strategy and Security and Los Alamos National Laboratory. The Scowcroft Center convened two workshops with leading experts on nuclear technology and policy, arms control, and China; a list of the individuals who participated in one or both of these workshops follows. The conclusions and analysis are the authors' alone, and do not necessarily represent the opinions of the participants. Additionally, participants contributed in their individual, not institutional, capacities. This report does not necessarily represent the views of the Department of Defense or any other agency of the US government.

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