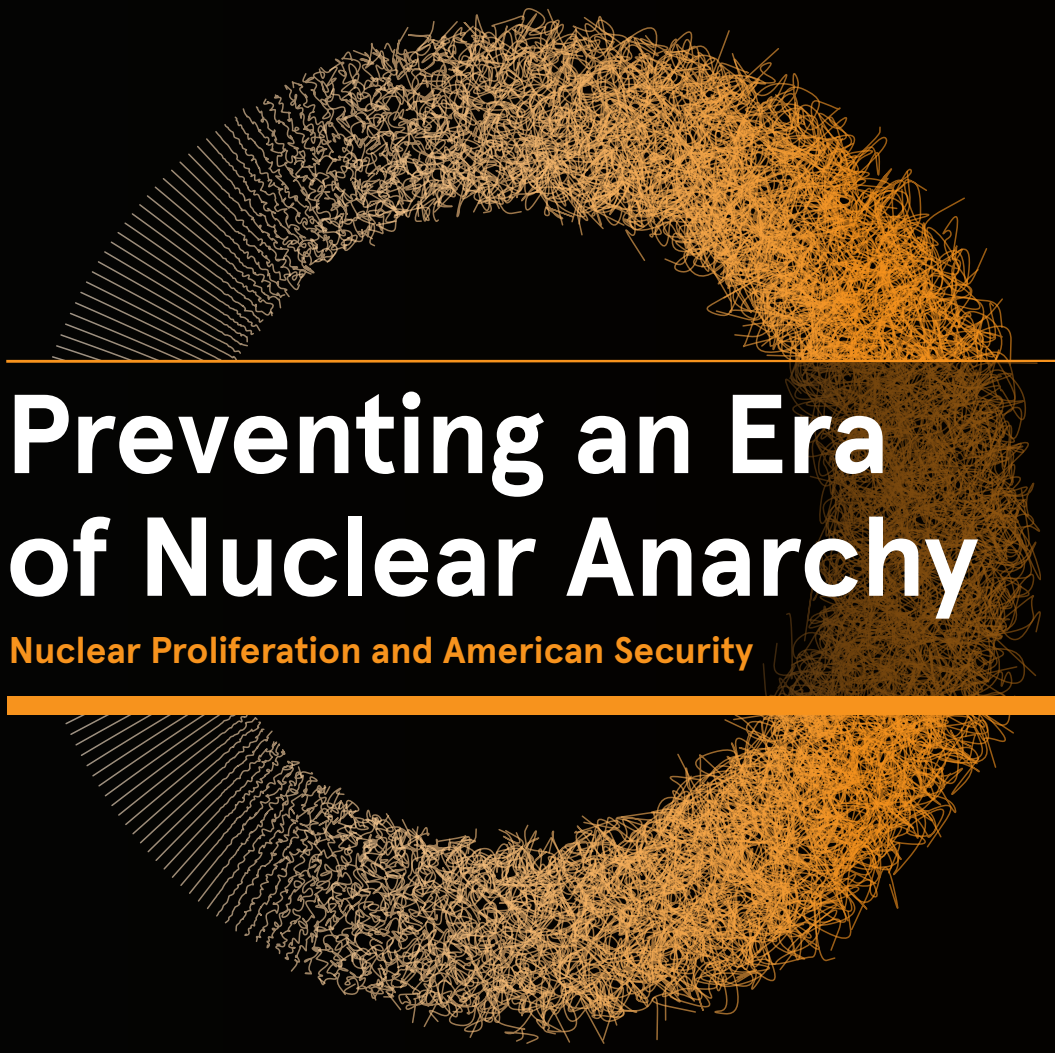

Preventing an Era of Nuclear Anarchy

Nuclear Proliferation and American Security

Report of the Task Force on
Nuclear Proliferation and U.S. National Security

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Preventing an Era of Nuclear Anarchy: Nuclear Proliferation and American Security

Report of the Task Force on Nuclear Proliferation and U.S. National Security

September 2025

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This report summarizes the deliberations of the Task Force on Nuclear Proliferation and U.S. National Security, convened by Harvard's Belfer Center for Science and International Affairs, the Carnegie Endowment for International Peace, and the Nuclear Threat Initiative. Task Force members endorse the general policy thrust and judgements reached by the group, though not necessarily every finding and recommendation. Task Force members participated in their individual, not institutional, capacities.

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The Task Force co-chairs, members, and the three convening organizations are responsible for the contents of this report, but a number of individuals helped shape the work of the Task Force and improved the contents of this report along the way. Eric Brewer, Toby Dalton, Francesca Giovannini, and Jane Darby Menton drafted the majority of the report, with additional contributions by Patricia Jaworek and Mark Melamed. Lisa Michelini, Francisco Alvarado-Quiroz, and Shahneela Tariq provided valuable research and writing support during early meetings of the Task Force. Sharmeen Aly, Mary Fulham, and Shannon Felton Spence reviewed and gave helpful edits on the draft. Jocelyn Soly provided graphic design, while Abigail Koch and Helena Jordheim did fact checking. Emily Sorkin, Chloe Holt, and Manya Panchyshyn helped organize the work of the Task Force. Helena proofread the final text, Alana Brase managed the publication process, and Jessica Katz created the webpage. The co-chairs and staff thank the six outside expert reviewers who provided important feedback and suggestions on the draft report.

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Foreword

Following decades of mostly successful efforts to combat the spread of nuclear weapons, multiple global trends are reviving the possibility of a world with more nuclear-armed states. These developments raise fundamental questions about whether the United States can and should prioritize efforts to stymie further acquisition of nuclear weapons in the twenty-first century.

Iran's nuclear program is top of mind for many people as we write this foreword. In June 2025, Israel and the United States acted on long-standing threats to use military force to prevent Iran from crossing the nuclear weapons threshold. Yet as policymakers grapple with questions about Iran's ability and desire to reconstitute a damaged nuclear program, major shifts across multiple domains are reshaping the broader nuclear threat landscape, with serious implications for U.S. strategy and security. Relations among the major nuclear powers are becoming more hostile. An increasingly assertive China is expanding its nuclear arsenal. Russia has backstopped its war in Ukraine with nuclear threats, and the last U.S.-Russia strategic arms control agreement is about to expire. Meanwhile, North Korea's nuclear arsenal is still growing, and its threats to preemptively use nuclear weapons are unabated. These developments are adding strain to an already stressed Nuclear Non-Proliferation Treaty, which has served as the foundation of international governance of nuclear technology. At the same time, Washington must contend with the accelerating pace of technological development, alliance partners facing mounting regional security threats and uncertainty in the United States' security commitments, and resurgent global interest in nuclear energy.

In short, the risks of more states acquiring, or at least pursuing, nuclear weapons are rising. The tools to manage these risks are weakening. And the long-standing consensus on where proliferation fits into U.S. national security strategy appears to be fraying.

We created this bipartisan Task Force because these trends and their impact on American security call for sustained attention and action. We approached the contemporary proliferation landscape with an analytic eye and thought strategically about how these threats intersect with U.S. interests and broader policy concerns, including managing geopolitical rivalries, maintaining international alliances, modernizing the U.S. nuclear arsenal, and ensuring energy security. We solicited participation from across the political spectrum, and members came into these debates with divergent views.

Recognizing that changes in geopolitics, technology, and politics warrant a reevaluation of the status quo, our discussions spanned a range of policy options, including significant breaks from the traditional U.S. approach to these issues. The tenor of our conversations also evolved with global events during the Task Force's deliberations, including the strikes on Iran's nuclear program and shifts in the American political context.

We take note of President Donald Trump's concerns about the risks of nuclear proliferation. We support the Trump administration's goals of seeking negotiations on nuclear arms control and risk reduction with Russia and China, achieving a new nuclear deal with Iran even in the wake of U.S. and Israeli strikes, and advancing the U.S. nuclear energy industry. We appreciate and strongly share the sentiment expressed by Vice President JD Vance in May 2025 that, "The president hates nuclear proliferation. I hate nuclear proliferation."[1] And we acknowledge that concern about potential nuclear escalation has been a driving force in some of the Trump administration's diplomacy, including efforts to end the war in Ukraine and to broker a ceasefire between India and Pakistan in May 2025.

At the same time, we recognize that certain actions by the administration complicate these objectives. Commitments to the security of U.S. allies have historically played a vital role in curbing the spread of nuclear weapons. Raising questions about these relationships can spur allies to reconsider their rejection of the atomic bomb. Reductions in budgets and personnel in many of the federal agencies responsible for managing proliferation risks diminishing U.S. capacity to lead the world in this vital task. The report makes a number of observations about why these relationships and investments are necessary pillars of U.S. strategy and explains how the government can advance its security goals responsibly in the immediate future and for decades to come.

Against this backdrop, the Task Force unanimously concluded that the United States retains a vital interest in thwarting the spread of nuclear weapons, and that Washington must work to strengthen the principles and adapt the tools that bolster this objective. Nuclear weapons continue to pose unique and inherent risks. If more actors acquire them—whether friendly or unfriendly nations or subnational groups—the world will be a more dangerous place, for the United States and for everyone else.

To be effective, however, Washington's strategies targeting proliferation must evolve. The Task Force's findings and recommendations aim to inform a strategy to meet this moment, while also serving as a long-term guide for U.S. policy. This is a call to action, both to address growing proliferation risks and to redress the erosion of a system that has long helped the United States manage them.

Without U.S. leadership on a global level, we see no realistic path to a safer future that avoids the enormous dangers of continued nuclear proliferation. Accordingly, Washington must invest in the capacity to deliver on its promises and adopt a strategy that will advance American interests, and avert global nuclear disasters, for decades to come.

We thank the Task Force members for their time, thoughtful engagement, and the spirit with which they approached this endeavor, and we hope our work will help current and future policymakers make this vision a reality.

We also are deeply grateful for the extraordinary work of the Task Force staff who were integral to this effort. Eric Brewer, Toby Dalton, Francesca Giovannini, and Jane Darby Menton, in particular, brought much-valued expertise and worked diligently to reflect the views of Task Force members in this report.

—Tino Cuéllar, Ernest Moniz, and Meghan O'Sullivan

Executive Summary

Emerging threats and changing technologies are increasing the risks that more countries will seek nuclear weapons or the means to produce them in the near future. And in a moment of renewed proliferation potential, many of the tools and mechanisms the United States has traditionally relied upon to combat the spread of nuclear weapons are becoming less effective. These developments, and the attendant security risks they produce, warrant revisions to U.S. anti-proliferation strategy.

Task Force Findings and Recommendations

- Nuclear acquisition by any state, friend or foe, would diminish U.S. power and influence and inject additional uncertainty into an already fraught geopolitical landscape. More states with nuclear weapons means higher risk of nuclear use.

- Preventing the further spread of nuclear weapons is central to U.S. national security and should remain a top priority; the United States should consistently and vigorously oppose proliferation to any state.

- U.S. strategy should not be oriented only toward preventing adversaries from acquiring nuclear weapons, but should also be equipped to address the potential nuclear weapons ambitions of U.S. allies and partners.

- Efforts to prevent proliferation in specific cases are more likely to succeed if anchored in internationally recognized principles, practices, and institutions and backed by a coherent U.S. strategy.

- The existing architecture for preventing proliferation remains integral to U.S. strategy, but Washington must spearhead efforts to modernize and strengthen institutions and tools to anticipate future needs. Such efforts will be more effective, and will come at a lower cost (financially and politically), if the United States works with other countries.

With these principles as a guide, the Task Force urges the United States to pursue a revitalized strategy for combating proliferation based on five pillars. These are not listed in order of importance and aspects of each will be critical for success going forward.

1. **Crafting a new extended deterrence compact with allies:** Robust partnerships remain critical to dissuading allies from seeking nuclear weapons, as well as other U.S. national security priorities. But to remain viable, extended deterrence must evolve beyond its Cold War foundations. The United States should bolster alliance assurances and better augment and integrate allied conventional military and missile defense capabilities as part of a more equitable and effective division of responsibilities. Washington should also remind its allies of the risks inherent in proliferation.

2. **Pursuing pragmatic diplomacy with China and Russia:** Cooperation between the United States and Russia on nuclear issues has come to nearly a complete halt, and tensions between the United States and China remain significant amidst the latter's nuclear build up. Recognizing the real contemporary limits to improved relations, there may still be openings to leverage shared concerns about the spread of nuclear weapons and avert further harm to nonproliferation tools and institutions. Policymakers should also be prepared to capitalize on geopolitical shifts that may open new opportunities, particularly with China—a major power with growing global interests.

3. **Upholding the nonproliferation "grand bargains":** Most states do not desire nuclear weapons, and their compliance remains central to a durable Nuclear Non-Proliferation Treaty and an effective nonproliferation system. To sustain international buy-in to the numerous international regimes, institutions, and tools the United States relies on to combat nuclear proliferation, Washington should bolster its own efforts to negotiate reductions in nuclear weapons and nuclear risks. It also should uphold the nuclear testing moratorium, engage states in the Global South on nuclear energy and disarmament issues, and lead a coalition to increase support for the International Atomic Energy Agency.

4. **Revitalizing U.S. nuclear exports to enhance nonproliferation:** Demand for electricity is surging. Regaining a U.S. leadership position in the global nuclear energy market can deliver benefits for nonproliferation compliance, bolster American competitiveness vis-à-vis Russia and China, and facilitate long-term partnerships across the globe. This will require more coherent whole-of-government support to overcome significant obstacles to domestic nuclear energy renewal, including by providing financing and technical backing for strategic energy partnerships, a stronger base of domestic U.S. nuclear power projects, and credible alternatives to enrichment and reprocessing activities by partner countries.

5. **Strengthening the foundations for U.S. leadership:** U.S. interests in combating proliferation must be matched by robust governmental investment in the diplomatic, economic, military, and technological tools that underpin the U.S. ability to prevent the spread of nuclear weapons and bolster the nonproliferation architecture. This will require more focused investment in emerging technologies and applications to enhance detection and monitoring, recruitment and retention of the next generation of nuclear weapons experts throughout the U.S. government, updated sanctions authorities, and strong U.S. nuclear and conventional military capabilities.

The Task Force report provides a bipartisan blueprint for how the United States can navigate nuclear proliferation dangers amid uncertainty and change over decades to come. Our work has left us with no illusions about the difficulty of the task. The United States can rise to the challenge.

Introduction

On October 16, 1964, China conducted its first nuclear explosive test at Lop Nur, a remote desert facility in Xinjiang Province. China's test jolted U.S. leaders, who believed they faced a potential nuclear tipping point. The number of nuclear-armed states had already increased from one to five, and more, perhaps many more, were poised to follow suit. At the same time, the arsenals of states with nuclear weapons were growing almost exponentially, reaching some 36,000 globally that year.[2] While the United States still possessed the vast majority of these weapons, the Soviet Union was beginning to close the gap. Policymakers were not sanguine about these developments. Harrowing experiences like the 1962 Cuban Missile Crisis had underscored the perils nuclear weapons could inject into geopolitics, but at the time, there was no consensus on how—or even whether—to prevent more states from acquiring them.

As Washington processed the news from Beijing, then president Lyndon Johnson tasked a team of national security leaders to advise him on America's strategy to address the spread of nuclear weapons. This committee, under the direction of former deputy secretary of defense Roswell Gilpatric, explored questions that cut to the core of contemporary security debates: Was proliferation always bad, or could it be tolerable, even desirable, in certain cases? What assurances and incentives could the United States realistically offer non-nuclear powers? Should Washington try to find common ground with Moscow?

After extensive, sometimes contentious deliberations, this committee reached a unanimous conclusion: the further spread of nuclear weapons, even among friendly states, would harm U.S. and global interests and Washington should actively try to prevent it. Rather than accepting the inevitability of a highly proliferated world, successive U.S. administrations have made averting this outcome a national security priority.

Rather than accepting the inevitability of a highly proliferated world, successive U.S. administrations have made averting this outcome a national security priority.

Today's global nuclear landscape still bears the imprint of the Gilpatric Committee's findings, which subsequent American leaders translated into bold but pragmatic action. From the mid-1960s, U.S. policymakers, often in collaboration with their counterparts in the Soviet Union, built a global architecture to prevent the spread of nuclear weapons. The centerpiece is the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), a nearly universal treaty with over 190 states parties. Washington also developed and wielded both persuasive and coercive tools to counter the weapons aspirations of other states, including its own allies. Despite a few conspicuous failures, this approach has largely contained global proliferation risks and served U.S. interests for decades. Only nine states possess nuclear weapons today, and only one (North Korea) has crossed that threshold in the last twenty-five years.

Sixty years after the Gilpatric Committee concluded its work, the United States once again approaches a major inflection point on proliferation. Risks that nuclear weapons will spread are growing because of simultaneous shifts in geopolitics and technology, as well as fundamental questions about Washington's orientation to long-standing security alliances and international institutions. Apart from Iran, the most plausible states that might seek the bomb in the near future are U.S. allies or security partners, which makes the potential tradeoffs between nonproliferation and alliance management more acute. At the same time, many of the existing tools and approaches to prevent proliferation are losing potency. In the aggregate, these changes mean the system in place to limit the spread of nuclear weapons is eroding. This raises critical questions for U.S. strategy, including whether Washington can and should prioritize efforts to prevent proliferation going forward.

The Belfer Center for Science and International Affairs at Harvard Kennedy School, the Carnegie Endowment for International Peace, and the Nuclear Threat Initiative convened a bipartisan Task Force on Nuclear Proliferation and U.S. National Security to assess this inflection point, interrogate U.S. security interests, and debate how best to pursue them in a rapidly changing world. This report records the Task Force's analysis, findings, and recommendations, which aim to provide a strategic blueprint for the United States and inform other key domestic and foreign audiences on the underlying rationale for U.S. policies.

The report proceeds in two parts. Part I analyzes U.S. national security interests vis-à-vis the further spread of nuclear weapons and elaborates the principles that should guide U.S. policy as it navigates these challenges. Part II focuses on the five pillars of a U.S. strategy to prevent future proliferation and recommends both near-term actions and longer-term priorities for implementation.

BOX 1

Task Force Scope and Approach

The Belfer Center for Science and International Affairs, the Carnegie Endowment for International Peace, and the Nuclear Threat Initiative formed the Task Force on Nuclear Proliferation and U.S. National Security to identify and explore emerging nuclear proliferation challenges; assess the relative importance of preventing the spread of nuclear weapons as a strategic objective in U.S. national security policy; evaluate various policy options and their implications; and make consensus recommendations to guide future U.S. policy. The Task Force focused principally on a strategy for the next ten years.

Nuclear proliferation is the process by which state or nonstate actors without nuclear weapons acquire the technologies and materials needed to build and deliver them. The Task Force concentrated primarily on proliferation by state actors but recognized the importance of sustaining efforts to deny nonstate actors access to nuclear weapons and materials needed to make them. Though the report endeavors to be as specific as possible when discussing U.S. policy, it uses the term nonproliferation broadly to comprise the full range of tools aimed at preventing the spread of nuclear weapons, including, but not limited to international treaties and regimes, security commitments, civil nuclear energy cooperation, diplomacy, sanctions, export controls, and military and intelligence tools. These instruments comprise the global nonproliferation architecture or system. (For more on these tools, see “The Nonproliferation Toolkit” on page 16.)

The Task Force limited its discussion of issues adjacent to nuclear proliferation (for example, the growth of existing state nuclear arsenals and U.S. nuclear weapons policy and posture) to whether they impact the risks of new actors seeking or acquiring nuclear weapons and related technologies, or how they affect U.S. policy options vis-à-vis proliferation.

The Task Force convened four times as a group over ten months from October 2024 through July 2025. In addition, Task Force members had a series of individual meetings with staff from the convening institutions to discuss issues in greater depth. Task Force members also received briefings from outside experts. In parallel, staff met with a number of experts and government officials to gather additional perspectives on nuclear proliferation and U.S. policy.

The Task Force took a bottom-up approach to fulfilling its mandate. It began with an examination of the factors that are shaping the current nuclear proliferation landscape and emerging risks, followed by an interrogation of how proliferation developments affect U.S. national security

interests. With those interests in mind, the Task Force then evaluated four potential policy approaches and the attendant risks, benefits, trade-offs, and implications of each, as well as the enabling conditions and tools that would be necessary for their success. These approaches—designed as heuristics—ranged from more permissive orientations to nuclear proliferation, to stricter and more comprehensive efforts to prevent it. The Task Force then examined several key issues and areas of potential tension within its preferred policy framework, and discussed various options to manage them. Finally, the Task Force discussed what would be required to implement the proposed consensus strategy, seeking to develop more concrete policy recommendations.

This inverted pyramid approach was intentional and inspired by the work of the Gilpatric Committee. It was also born out of a recognition that U.S. policy and geopolitics are at an inflection point. As a result, the Task Force sought to build consensus around broad principles and frameworks that advance U.S. security interests and to ensure that policy recommendations flowed from those frameworks. The Task Force chose this method, as opposed to one that focused on how to solve specific proliferation crises, to allow for rigorous interrogation of how potential approaches to proliferation affect other U.S. interests, and to minimize bias and the influence of preconceived notions about nuclear proliferation and related U.S. policy.

Part I: Nuclear Proliferation and U.S. National Security

Building the Nonproliferation System

When the Johnson administration decided to adopt a more assertive approach to reducing global proliferation risks in the mid-1960s, success was by no means guaranteed. At the time, there was little scaffolding to guide U.S. policy on these issues, especially at the international level. Former president Dwight Eisenhower's 1953 Atoms for Peace initiative and the creation of the International Atomic Energy Agency (IAEA) in 1957 provided a basis for broadening access to peaceful nuclear technologies, and eventually the need to safeguard against the use of civilian nuclear facilities for proliferation. Yet in practice, guardrails against misuse were weak. Policymakers essentially started from scratch in an unregulated environment that seemed poised for rampant proliferation. With time, however, the United States, working with friendly nations and, remarkably, the Soviet Union, built new tools and adapted existing ones to counter these trends.

The nuclear present is shaped by a vast ecosystem of treaties, multilateral regimes, sanctions laws, export controls, and other tools to dissuade and prevent more states from crossing the nuclear weapons threshold. While these mechanisms have not eliminated contemporary proliferation risks, the fact that most states choose not to pursue nuclear weapons is a testament to the enduring successes of this approach.

When it comes to nuclear proliferation, U.S. strategy has traditionally consisted of several distinct but mutually reinforcing elements that draw on both unilateral American power and multilateral cooperation. Overall, Washington has endeavored to restrict the spread of

the most sensitive nuclear technologies and monitor for misuse, while incentivizing states not to pursue the bomb. A few key throughlines—detailed below—have contributed to the system's resilience over the last sixty years, although the usefulness of particular tools and approaches has varied in different moments and against various threats.

First, the U.S. provision of contingent **security benefits to allies and partners** has been an essential means of reducing potential demand for the bomb. The United States "extends" deterrence, backstopped by its own nuclear arsenal, to bolster the security of allies and dampen their interest in indigenous nuclear weapons capabilities. The U.S. approach is not altruistic; it reflects the conclusion that adversary proliferation would be harder to control, crises would be harder to manage, and the risks of nuclear use would go up if more allies acquired nuclear weapons of their own. The U.S. ability to withdraw these security benefits has also been an important means of dissuasion. U.S. policymakers have periodically wielded the threat of economic pain, curtailed support, and even outright abandonment to inhibit aspiring allied proliferators. This combination of persuasion and dissuasion has been remarkably successful in influencing U.S. partners that once contemplated acquiring their own nuclear arms. The extensive defense and security network maintained by the United States in key regions, including the forward deployment of U.S. nuclear weapons in Europe, has been integral to alliance management, even as it comes at significant financial cost.

The second element of the U.S. approach has been **great power cooperation**. Notwithstanding deep Cold War antipathies, starting in the late 1950s and increasingly in the 1960s, the United States and the Soviet Union worked together to construct, maintain, and enforce multilateral rules and institutions designed to curb the spread of nuclear weapons technologies and materials. The basis of this cooperation derived from the two countries' geographically expansive interests, footprints, and ambitions, which meant that they would have more to lose if others acquired nuclear weapons. Washington and Moscow effectively colluded to prevent their respective friends and partners from developing the bomb. This partnership generally endured in the two decades after the fall of the Berlin Wall, but it has been unraveling in recent years.

Third, the United States has sought to support and uphold a set of **global grand bargains** for managing the dual-use nature of nuclear technology, which can be harnessed for peaceful applications or military purposes. This idea originated in Eisenhower's 1953 Atoms for Peace plan and was later enshrined in the NPT. Under the NPT, states without nuclear weapons agree to renounce them in exchange for guaranteed access to the benefits of peaceful nuclear applications and a commitment by nuclear-weapon states to work toward disarmament, a goal that is intrinsically linked to success in averting onward proliferation. The overwhelming majority of states have no interest in or perceived need for nuclear weapons, yet understandably believe they are owed something in return for giving up this option while granting

the five nuclear-weapon states recognized under the NPT (China, France, Russia, the United Kingdom, and the United States) a temporary "right" under international law to retain their arsenals.

Washington has endeavored to restrict the spread of the most sensitive nuclear technologies and monitor for misuse, while incentivizing states not to pursue the bomb.

Many of the institutions and policy tools that are critical in preventing proliferation are rooted in the dual-use nuclear technology bargain, including IAEA safeguards and inspections, multilateral export control regimes, and various other conditions various other conditions imposed by states that export nuclear technology on recipient states. In aggregate, these mechanisms try to manage the spread of sensitive technologies and deter states that acquire capabilities germane to a weapons program from applying them to nefarious ends. These institutions also provide the foundation for more effective use of economic sanctions and other forms of pressure to slow proliferation and punish states that violate the rules.

Fourth, **supplying nuclear technology** for peaceful purposes is another way the United States has tried to fulfill the nonproliferation grand bargains, bolster international partnerships, and thwart weapons ambitions. Nuclear Suppliers Group (NSG) guidelines as well as U.S. export laws impose safeguards requirements on recipients that limit proliferation and nuclear security risks. (Other major nuclear suppliers follow the same basic principles as the United States.) Occasionally, Washington has wielded its role as a supplier more assertively to dissuade its nuclear energy partners from pursuing nuclear weapons. It has also pressured non-American suppliers to withhold transfers of sensitive technologies to states of acute proliferation concern.

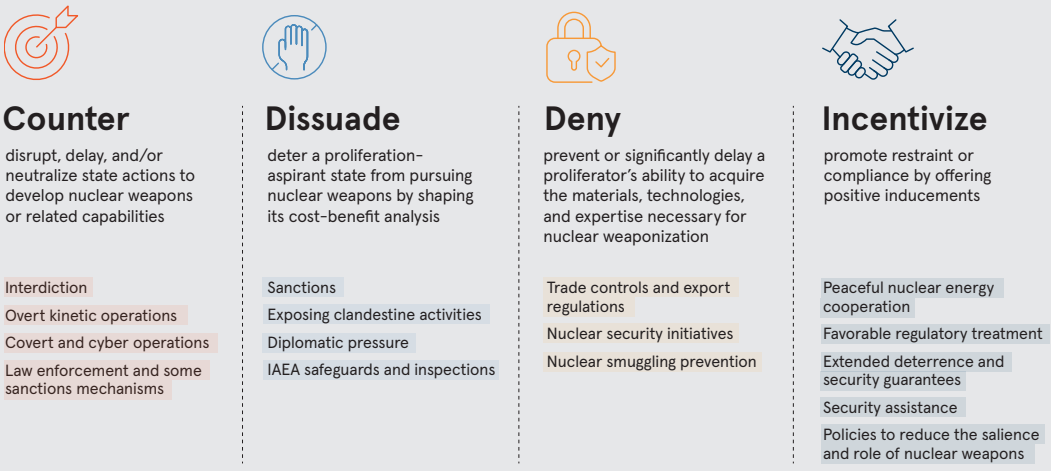
Rising electricity demand, economic development objectives, and concerns about climate change and air pollution are making nuclear energy systems salient and desirable again, potentially increasing the relative value of this element of the nonproliferation system. However, declining domestic demand, limited governmental support for exports by privately-owned U.S. nuclear firms, and the rise of other foreign state-backed exporters have eroded U.S. leadership in the nuclear export market. Russia is currently the largest supplier by far, aided by its offer to take back irradiated nuclear power plant fuel, while others, including China and South Korea, have taken on a significant role. If U.S. nuclear exports capture only a small part of the international market, U.S. policymakers will have fewer tools available to influence states' proliferation decisions.

BOX 2

The Nonproliferation Toolkit

Over the past eighty years, the United States—sometimes unilaterally, though often in cooperation with other countries—has employed a variety of tools and approaches to delay, rein in, and dissuade prospective nuclear proliferators around the world. These tools have grown in number over time and have often been tailored to specific geopolitical contexts and used simultaneously or sequentially. The United States has had greatest success when it uses these tools as part of a coherent strategy with support from and participation by the international community.

FIGURE 1



1. **Counter:** To disrupt, delay, and/or neutralize state actions to develop nuclear weapons or related capabilities.

   Interdiction: Intercepting shipments of nuclear-related items or technologies by air, sea, or land to prevent their transfer.

   Overt kinetic operations: Physically attacking nuclear facilities and related capabilities to delay or disable a weapons program.

   Covert and cyber operations: Using intelligence assets or cyber capabilities to disrupt, damage, and destroy nuclear development activities.

Law enforcement and some sanctions mechanisms: Disrupting certain trades and transactions with arrests, seizures, travel bans, sanctions, and blocking orders; dismantling procurement networks and enforcing anti-proliferation laws through international legal cooperation.

2. **Dissuade:** To deter a state that aspires to proliferate from pursuing nuclear weapons by shaping its cost-benefit analysis and significantly increasing the perceived risks, costs, and long-term consequences of continuing to seek nuclear weapons.

   Sanctions: Raising the cost of nuclear development and isolating the country from international markets through trade, financial, military, or technological restrictions.

   Exposing clandestine activities: Sharing or releasing intelligence to expose or preempt proliferation-related activities and signal persistent surveillance and vulnerability to countermeasures.

   Diplomatic pressure: Signaling strong political opposition, threatening consequences, raising reputational costs, and encouraging compliance with global nonproliferation rules through bilateral and multilateral efforts, such as UN or IAEA resolutions.

   IAEA safeguards and inspections: Using verification tools to monitor state compliance with nonproliferation commitments, deter cheating, and detect undeclared nuclear activities.

3. **Deny:** To prevent or significantly delay a proliferator's ability to acquire the materials, technologies, and expertise necessary for nuclear weaponization, which creates technical, logistical, and procedural barriers to acquisition and makes the path to a nuclear weapon slower and more costly.

   Trade controls and export regulations: Monitoring and restricting the transfer of dual-use technologies and sensitive components, including national legislation and multilateral frameworks such as the Nuclear Suppliers Group.

   Nuclear security initiatives: Securing nuclear materials and infrastructure from theft, sabotage, or diversion, usually through collaborative programs.

   Nuclear smuggling prevention: Countering illicit trafficking of nuclear materials through cross-border intelligence sharing, detection systems, and joint enforcement actions.

4. **Incentivize:** To promote restraint or compliance by offering positive inducements that shift the cost-benefit calculus in favor of nonproliferation, making the peaceful path more attractive than the pursuit of nuclear weapons, while also demonstrating support for the nonproliferation grand bargains.

   Peaceful nuclear energy cooperation: Facilitating access to nuclear technologies (for energy, research, or other applications) and providing training and other support in exchange for adherence to nonproliferation standards.

   Favorable regulatory treatment: Tying economic or diplomatic benefits to compliance with nonproliferation goals.

   Extended deterrence and security guarantees: Making security commitments to allies and partners to reduce the perceived need for independent nuclear arsenals.

   Security assistance: Providing military equipment, aid, training, and capacity building support to strengthen conventional deterrence and alliance cohesion, and to address broader security concerns.

   Policies to reduce the salience and role of nuclear weapons: Demonstrating commitment to the NPT obligation to work toward disarmament—and thus keeping the nonproliferation bargains intact—by seeking and implementing arms control agreements, making declaratory commitments to reduce the role of nuclear weapons, and taking other transparency measures.

Finally, consistent **U.S. leadership and support** for this nonproliferation system has been integral to its longevity and success. Not only did Washington play a primary role in building this system, but in many respects it has also been the glue holding it together. This support comes in many forms and reinforces the elements above. For example, the United States' nuclear force posture and conventional military capabilities contribute to the credibility of its extended deterrence commitments. Financial, technological, and intelligence functions within the U.S. government and U.S. personnel and programs that support international institutions backstop the system. The United States has served an important role in convincing other states to sanction proliferating governments, control the spread of highly sensitive technologies, commit to new actions to prevent nuclear terrorism, and join and update international treaties.

The global nonproliferation architecture is under growing strain, both from long-standing tensions and contemporary challenges.

Today, pursuing nuclear weapons is broadly perceived as a violation of international norms that merits significant consequences. Decades of U.S. leadership have been essential to this outcome, and Washington has helped influence dozens of states to give up the pursuit of nuclear weapons over the last sixty years.

A System Under Strain

After decades of relative success, however, the global nonproliferation architecture is under growing strain, both from long-standing tensions and contemporary challenges. Countries including China, North Korea, and Russia, which already pose a threat to the United States and its allies, are modernizing and expanding their nuclear arsenals and behaving more aggressively. In particular, Russia's invasion of Ukraine and its repeated nuclear saber-rattling may have increased the perceived value of nuclear weapons, including as a backstop to acts of territorial aggression, an example that U.S. allies fear North Korea or China might emulate. This lesson will likely be amplified if Russia is seen as prevailing in the war. The violent overthrow of regimes that had been seeking but later abandoned nuclear weapons programs—in Libya and Iraq, in particular—may reinforce the view in some capitals that nuclear weapons are necessary for survival.

At the same time, U.S. allies are losing confidence in Washington's guarantees of protection. Mounting questions about whether American foreign policy remains aligned with their values and interests are prompting discussions in places like Warsaw, Berlin, and Seoul about reducing their dependence on Washington and potentially seeking alternative nuclear

arrangements, including acquiring nuclear weapons of their own. (There is no publicly available evidence, however, that any of these countries have made the decision to develop nuclear weapons.) Meanwhile, criticism of the traditional U.S. alliance system is becoming more common in American politics, driven by a belief that such commitments have overextended the United States and encouraged inadequate military spending among its allies. These sentiments have resurfaced older arguments about whether there are circumstances in which selective proliferation might even benefit U.S. security.

Intensifying geopolitical competition has frustrated traditional methods of grappling with both emerging and persistent threats.

Washington also cannot afford to ignore the Iranian proliferation challenge, which remains significant even after Israeli and U.S. military strikes in June 2025. As of this writing, there is uncertainty around the impact of those strikes on Iran's nuclear capabilities and motivations. Military action certainly set the program back, although it may also have increased the Iranian government's belief that it needs nuclear weapons to deter further attacks. Tehran reportedly retains some of the key capabilities and knowledge for a bomb—including 60 percent enriched uranium that could be directly used in a crude nuclear weapon, or further enriched to weapons-grade and used to make more nuclear weapons that are more easily deliverable.[3] Iran likely also retained a cache of advanced centrifuges, which it could use to rebuild an enrichment program, overtly or covertly. Iran's expulsion of IAEA inspectors following the strikes inhibits the international community's ability to detect attempts to reconstitute various capabilities and potentially even build nuclear weapons. The consequences of Iranian proliferation would extend well beyond the Middle East.

As policymakers grapple with both emerging and persistent threats, intensifying geopolitical competition has frustrated traditional methods of addressing them. Historically, great powers have worked together to prevent proliferation. For example, Russia and China participated in the negotiation and implementation of the Joint Comprehensive Plan of Action (JCPOA) with Iran and supported sanctions resolutions against Iran and North Korea at the UN Security Council. Yet Washington, Moscow, and Beijing have all been drifting toward a more ad hoc and potentially zero-sum approach as hostilities among them grow, including by making exceptions to purportedly universal rules for their friends, or failing to enforce the penalties for states that violate their nonproliferation commitments.

Heightened competition has also impacted broader nuclear dynamics. China's growing geopolitical and military power and expanding nuclear arsenal have transformed the bipolar nuclear order into a tripolar one, complicating cooperative approaches. Meanwhile, U.S.-Russia arms control agreements are crumbling. These trends, combined with arsenal expansion and modernization by the nuclear-weapon states, have also fueled frustrations

among non–nuclear-weapon states that those with the bomb are not living up to their NPT commitments. Although most countries still do not desire nuclear weapons, many non–nuclear-weapon states, especially those in regions covered by nuclear-weapon-free zones, are discontented with the unwillingness of nuclear-armed states to work toward disarmament and with perceived barriers by suppliers that inhibit access to nuclear energy.

Concurrently, technologies continue to evolve in ways that may alter known proliferation pathways and could affect how states assess the costs of pursuing a weapons program, the risks of detection, and their vulnerability to counterproliferation actions. The slow spread of established technologies that are required for nuclear weapons programs, plus the emergence of new capabilities, such as computer assisted design and testing tools, artificial intelligence (AI), additive manufacturing (often called 3D printing), and specialized machine tools, have reduced some of the technical and knowledge chokepoints to acquisition. As a result, developing nuclear weapons could become easier, faster, and cheaper.

The implications of emerging technologies are not unequivocally negative. There have been significant improvements in sensor and detection platforms, large language models, and open-source information collection that could enable intelligence communities, the IAEA, and civil society organizations to better detect and track some proliferation indicators. Other technologies, such as long-range drones, hypersonic missiles, or regional missile defense systems could also affect a state's calculus to the extent that they are perceived as providing asymmetric strategic opportunities without some of the downsides of nuclear weapons.

Still, the risks involving disruptive technologies are real, including the ramifications for the already challenging problem of technology control. With several nuclear-armed or nuclear-capable states (especially North Korea and Iran) outside export control regimes, there is a greater likelihood of technology or material transfers—whether by states or individuals operating without government support—that could aid other states or groups interested in nuclear weapons. This includes terrorists or other sub-national actors, who could also steal nuclear material from less secure facilities or attack them, precipitating a dangerous radioactive release.

This constellation of developments has revived long-standing fears of proliferation "cascades" in Europe, East Asia, and the Middle East, whereby one state acquires nuclear weapons and spurs others to do the same. The chances and plausible scale of such cascades are likely overstated, given prevalent countervailing factors that temper domestic demand for the bomb in most states. Such factors include the costs and time required to obtain nuclear weapons, the likelihood of detection, the risks of sanctions or military preemption, and possible reputational and relational damage. Nevertheless, given current trendlines, it is plausible that an additional three to five states seek nuclear weapons in the next decade. For example, Saudi leaders have said they would pursue nuclear weapons if Iran acquires them.

BOX 3

Disruptive Technologies and Proliferation

Emerging fields such as AI, quantum computing, additive manufacturing (3D printing), space-based sensors, and environmental monitoring are altering how states develop, detect, and deter nuclear weapons capabilities. While these innovations present new challenges, they also offer unprecedented opportunities for strengthening nonproliferation efforts.

One of the greatest risks posed by disruptive technologies is the potential erosion of traditional barriers to proliferation. For example, 3D printing can facilitate the illicit production of sensitive nuclear components, bypassing traditional supply chain controls. AI-powered algorithms can enhance nuclear weapons design processes by facilitating complex computation and modeling and reducing the technical expertise needed for proliferation.

Conversely, these same technologies also offer powerful tools for strengthening proliferation detection, monitoring, and analysis. AI-driven data assessment and integration of all-source information can improve nuclear tracking and forensics, allowing for more rapid and precise attribution of illicit nuclear activities. Quantum encryption could eventually enhance the security of sensitive diplomatic exchanges and intelligence sharing among partners. Advances in environmental monitoring and space-based sensors could improve global verification mechanisms, making it harder for states to develop nuclear weapons in secret.

The challenge for policymakers is to adapt anti-proliferation strategies to this evolving technological landscape. Traditional arms control agreements must integrate new verification tools, while export control regimes need to account for decentralized and rapidly advancing production methods. Collaboration between governments, the private sector, and the scientific community is essential to ensure that these technologies reinforce, rather than undermine, global efforts to avert the further spread of nuclear weapons.

As disruptive technologies accelerate, the international community must proactively shape their trajectory and practical applications. The success of nonproliferation efforts in the twenty-first century will depend not only on political will, but also on the ability to harness technological innovation in service of global security.

Alternatively, more states might decide to hedge their bets, seeking a nuclear weapons "threshold" capability by acquiring the various inputs needed to rapidly stand up a nuclear weapons program. These states could then try to leverage the threat of future weaponization to deter adversaries, or even to pursue coercive ends. Indeed, the resurgent global demand for nuclear energy could result in a much wider distribution of technologies that could be directed toward nuclear weapons. While nuclear threshold states are not a wholly new phenomenon, existing institutions such as the IAEA safeguards system are not equipped to handle either a rapid uptick in the number of such states or the broader security implications. Heightened ambiguity about the intentions underpinning multiple nuclear programs could also exacerbate the risks of miscalculation and militarized crises.

The nonproliferation system has proved surprisingly resilient for over sixty years, despite challenges from dozens of states that have actively explored nuclear weapons.

Iran's nuclear program showcases how a country might attempt to reach the nuclear weapons threshold. Tehran's ability to amass significant nuclear weapons capability and expertise—including weapons-usable 60 percent enriched uranium and skills related to building a nuclear device—without being perceived as clearly crossing any NPT redlines is deeply problematic. It is also indicative of how more threshold states could complicate efforts to stem proliferation.

It is worth reiterating that the nonproliferation system has proved surprisingly resilient for over sixty years, despite challenges from dozens of states that have actively explored nuclear weapons, and the much smaller number that have actually acquired them. The system has also withstood significant geopolitical upheavals, not least the collapse of the Soviet Union. Persistent U.S. efforts to adapt both domestic and international policies to reflect new threats and opportunities have contributed significantly to this resilience, and to American national security. Such efforts are again needed to advance U.S. interests in a dangerous new era.

BOX 4

The Continued Risks of Nuclear Terrorism

Beyond the threat posed by state development of nuclear weapons, the world also faces a serious threat from the possibility that terrorists will acquire nuclear materials.

Multiple governmental studies have concluded that if a capable group got hold of the necessary quantity of highly enriched uranium (HEU) or plutonium, it might be able to make a crude nuclear bomb. Such a device could kill tens or hundreds of thousands of people and provoke widespread panic. Sabotage of a nuclear plant or spread of radioactive materials in a so-called dirty bomb are also worrisome possibilities, which would be easier for terrorists to accomplish.

Previous Republican and Democratic presidents have identified nuclear terrorism as a significant threat to U.S. and global security. The United States has led a wide range of efforts to cope with the threat, from helping states eliminate vulnerable nuclear material stockpiles and secure what remains, to countering the highest-capability terrorist groups. States around the world have joined in these efforts, including in the head-of-state level Nuclear Security Summits held from 2010–2016.

These initiatives have accomplished a great deal. Weapons-usable nuclear material around the world is far more secure than it was thirty-five years ago. More than half of all the countries that once had separated plutonium or HEU on their soil have gotten rid of it. Many ports, airports, and border crossings now have equipment to detect nuclear smuggling.

However, the threat of nuclear terrorism remains significant, and less attention is being paid to addressing it. Although the most egregious security weaknesses have been fixed, there are still gaps that sophisticated nuclear theft conspiracies could exploit. With the Nuclear Security Summits in the rear-view mirror, these issues receive little high-level political attention and nuclear security progress has slowed or even reversed, as documented by the Nuclear Threat Initiative's Nuclear Security Index.[i]

Complacency—the belief that there is little threat and existing security arrangements are sufficient to cope with any plausible possibility—is widespread. This comes against the backdrop of a potential global expansion of nuclear energy, which will result in more reactors that might be exposed to armed conflict or to terrorist sabotage efforts, and more nuclear materials in use and

i See "The 2023 NTI Nuclear Security Index," Nuclear Threat Initiative, July 2023, https://www.ntiindex.org/.

in transit, including some that could potentially be used in improvised nuclear devices. A strong emphasis on limiting use of weapons-usable material, security by design, and planning for effective security from the outset will be necessary to reduce the likelihood of a disaster.

Meanwhile, terrorists are regrouping or forming anew, and some groups have thousands of fighters that control large territories. At the same time, most advanced democracies are facing increasing challenges from domestic extremists, who often have a fascination with nuclear violence: from the Atomwaffen Division in the United States, a neo-Nazi terrorist organization that allegedly planned to target nuclear facilities, to the Norwegian terrorist Anders Breivik, whose manifesto detailed plans for nuclear sabotage. The terrorist threat is inherently difficult to predict. In January 2014, for example, the U.S. intelligence community's worldwide threat assessment did not mention a group calling itself the Islamic State.[4] By June of that year, the Islamic State had seized much of Iraq and Syria and declared a global caliphate. The blurring lines between state and nonstate actors (for example, the Houthis in Yemen) further complicate the situation.

Basic instructions for building a crude nuclear bomb are widespread already and it is impossible to know who might be interested in using them or what capabilities they might have. That makes it all the more essential to keep the fundamental ingredients of such a recipe out of terrorist hands.

The U.S. government should reinvigorate programs to ensure the highest standards of security for nuclear weapons and weapons-usable nuclear material around the world. This includes enhancing cooperation with states that possess weapons-usable nuclear material to update and affirm best practices, ensure that security systems are designed to cope with the full range of plausible insider and outsider threats, and strengthen nuclear security culture. Programs to eliminate weapons-usable nuclear material from as many locations as possible should be continued and new incentives considered, as should programs to uncover nuclear smuggling.

The U.S. government also should put together assessments of the nuclear terrorism threat that it can share with other governments and help countries carry out realistic tests that gauge security performance against intelligent and determined theft efforts. To the extent possible, the United States should expand its cooperation with other nuclear-armed countries, as well as U.S. allies with weapons-usable nuclear material. Russia had been a critical partner in preventing nuclear terrorism in the past and Washington should prioritize resuming cooperation with Moscow when the opportunity arises.

An act of nuclear terrorism would have profound consequences around the globe. All countries—allies and adversaries alike—have a common interest in preventing it.

Task Force Findings

The world that produced and sustained the array of treaties, institutions, and practices to prevent the spread of nuclear weapons has fundamentally changed, and some of these changes are creating tensions in U.S. policy priorities that arguably did not exist during the Cold War and post-Cold War period.

Developing a strategy that is capable of addressing the proliferation challenges of today and tomorrow requires asking tough questions about the assumptions that have underpinned U.S. policy for decades: Should preventing proliferation still be a top U.S. national security priority? Do long-held conclusions about the nature of this threat still apply in a changing geopolitical and technological ecosystem? Are existing tools and policies sufficient to reduce these threats and keep nuclear materials out of the wrong hands in the twenty-first century? (For more on the deliberative approach taken by the Task Force, see "Task Force Scope and Approach" on page 11.)

After extensive debate on these questions, the Task Force unanimously reached a series of findings, framed as principles to guide U.S. strategy over the next decade as it works to advance its interests in a new era of proliferation risks.

The Task Force concluded that although the world has changed, the U.S. interest in trying to curb the spread of nuclear weapons has not: **Nuclear weapons acquisition by any state, friend or foe, would diminish U.S. power and influence and inject additional uncertainty into an already fraught geopolitical landscape.** More countries with nuclear weapons would limit U.S. freedom of action, increase the chances of follow-on nuclear proliferation, and raise the odds that nuclear weapons or material would fall into the hands of a nonstate actor.

Perhaps most importantly, **more states with nuclear weapons would mean higher risk of nuclear use**. Even a small nuclear arsenal can hold millions of lives at risk; the consequences of nuclear use would be devastating—and potentially catastrophic. Especially in regions characterized by frequent disputes and simmering tensions, any proliferation would render nuclear escalation more likely. The May 2025 conflict between India and Pakistan is a stark reminder of the hazards of navigating conventional military crises in the nuclear shadow.

This is why U.S. leaders and their counterparts in the other major nuclear powers have long embraced the idea of nuclear exceptionalism: that these weapons are distinct from all others and those who possess them carry special responsibilities. The United States, and indeed the world, is safer when nuclear weapons are in few hands and their numbers are limited to what is required for deterring critical threats.

Because of the unique and inherent threat that nuclear weapons pose to national and global interests, **the United States should consistently and vigorously oppose proliferation by any state**. For evidence of the consequences of proliferation, or even the prospect of nuclear breakout, one need look no further than North Korea and Iran. As these cases clearly show, proliferation crises can complicate regional security and deterrence dynamics, deflect resources and attention from other priorities, spur nuclear ambitions in other countries, and potentially draw the United States into an unwanted military conflict. In the North Korean case, there is also now the risk that a regional conflict on the Korean Peninsula could result in nuclear strikes on the U.S. homeland.

If additional states obtained nuclear weapons, the risks of other nefarious actors acquiring sensitive knowledge, technologies, or materials would also increase (for example, North Korea allegedly supported Syria's nuclear ambitions, while Pakistan's nuclear technology ended up aiding the Iranian, Libyan, and North Korean programs). Nor should policymakers discount what might happen if a proliferating or nuclear-armed state collapses: securing Soviet nuclear weapons and materials after the dissolution of the Soviet Union was an expensive, risky, and highly complex multilateral undertaking.

While hostile states with nuclear weapons programs have been a defining challenge for U.S. security since the Cold War ended, at present the only adversary at significant risk of acquiring the bomb is Iran. This does not make dealing with Tehran easier. Indeed, hardliners and nuclear weapons advocates within Iran likely have leveraged the Israeli and U.S. strikes to press their case that only nuclear weapons can protect the regime from future attacks.

Addressing this evolving threat remains imperative: a nuclear-armed Iran would pose a serious challenge to U.S. interests, regional stability, and efforts to prevent subsequent proliferation. If Tehran acquires nuclear weapons, deterring it, and reassuring U.S. partners in the region, might require the United States to dedicate additional military resources to the Middle East, detracting from its ability to focus on higher priority regions, including the Indo-Pacific. A nuclear-armed Iran could also speed the erosion of the regimes designed to prevent proliferation. All of these difficulties would be compounded if other states in the region decided to also seek nuclear weapons, as at least one (Saudi Arabia) has said it would do if Iran possesses nuclear weapons.

Managing Iran's nuclear ambitions remains a proximate challenge, but **any future-oriented strategy to prevent the spread of nuclear weapons must also be equipped to address the potential aspirations of U.S. allies and partners, not just American adversaries**. Although similar concerns apply to any state considering nuclear weapons, some of the tensions and tradeoffs inherent in U.S. strategy are different when it comes to friendly states. These dilemmas are not new. Allied proliferation was a live issue during the early Cold War, when many of America's European and Asian allies and partners at least explored nuclear acquisition.

BOX 5

Stopping Proliferation Through the Use of Military Force

Proliferation crises are idiosyncratic, and the track record of decisions to use—and to not use—force to prevent states from acquiring the bomb is mixed when it comes to long-term outcomes. Israeli strikes on a suspected clandestine reactor in Syria in 2007 seemingly curtailed Damascus's nuclear ambitions; whereas the United States and others managed to delay, but not to stop, North Korea's nuclear program through negotiations. In contrast, Israel's decision to attack Iraqi nuclear infrastructure during the 1980s encouraged Saddam Hussein to double down on his nuclear ambitions and pursue pathways that would be harder to detect.

The successes and failures of military strikes on proliferating states are often only apparent in retrospect. Even within the targeted country, key constituencies might react differently, and tensions among emboldened hardliners, proliferation skeptics, and scientists tasked with delivering a bomb could play out over years, or even decades.

In extremis, counterproliferation may necessitate force, but force will rarely if ever translate short-term counterproliferation wins into sustainable nonproliferation successes. For instance, the June 2025 Israeli and U.S. attacks on Iran's nuclear facilities following years of provocative Iranian nuclear activities and a finding of non-compliance by the IAEA's Board of Governors demonstrated a willingness to impose costs on states that defy their nonproliferation commitments, and that military strikes are capable of inflicting significant damage. The strikes also resulted in uncertainty about Iran's residual capabilities and future intentions (exacerbated by Tehran's decision to rescind cooperation with the IAEA) and showcased some possible technical limits to purely air-based U.S. military operations. Continuous and indeterminate military strikes would be financially and politically costly, and military tools can be ill-suited to building confidence and achieving durable outcomes, including keeping the target state inside the NPT and its nuclear activities under IAEA safeguards. Policymakers should therefore consider military action within the context of a broader nonproliferation strategy.

Through a combination of security assurances and pressure and the establishment of global anti-proliferation norms, the number of allies seriously considering independent nuclear capabilities declined over the decades.

Today, given mounting aggression from Russia, North Korea, and China, and the increasing centrality of strategic competition to U.S. strategy, some U.S. analysts and former officials have re-opened the question of whether so-called friendly proliferation could reduce U.S. defense and assurance burdens and put allies in a position to play a more central role in deterring threats from mutual adversaries. The Task Force explicitly considered these arguments during its deliberations. However, it ultimately concluded that the myriad dangers to U.S. security and economic interests that would be exacerbated by a more proliferated world outweigh these considerations. A nuclear armed ally may not always act in accordance with U.S. interests, or even be an ally in perpetuity. Governments can and do change, whether through elections or revolutions.

Even one proliferating partner could also irrevocably erode both the unilateral measures and international mechanisms the United States relies on to prevent undesirable proliferation. It would become harder to prevent additional states, including adversaries, from following a similar path and increase the chances of the United States being pulled into a war with nuclear implications. The act of proliferation could even provoke the very thing it would be meant to deter. For example, if South Korea decided to sprint for the bomb, North Korea and China could respond with coercive measures, including military strikes or sabotage.

In sum, the logic that has long motivated U.S. efforts to prevent states from acquiring the bomb still resonates: a more proliferated world would be a more perilous one. Given the consequences to U.S. interests, **policymakers should make opposing the spread of nuclear weapons to any new state a top priority in U.S. national security deliberations**. They should also recognize that nuclear proliferation is largely a threat that cannot be solved but must be continuously and intentionally managed. While the United States has many priorities, from defending the homeland to bolstering technological competitiveness and economic prosperity, failing to prevent proliferation would make it harder to achieve other goals.

Nuclear proliferation is largely a threat that cannot be solved but must be continuously and intentionally managed.

Of course, there are difficult issues to navigate in implementing such a strategy today. Policymakers will sometimes need to confront tensions with other interests. Rising concerns about territorial aggression, worsening relations among the major nuclear powers, and waning certainty about the traditional U.S. alliance system could sharpen some of these tradeoffs. For example, augmenting existing

U.S. security guarantees, let alone extending new ones, to mitigate potential nuclear acquisition by U.S. allies is a costly commitment of resources at a time when many policymakers believe that the United States should actively reduce such commitments. There are also situations in which officials might prefer greater latitude to accommodate partners, compete with strategic rivals, or avert conflict, though making exceptions to policies could undermine broader anti-proliferation strategy.

The nonproliferation regime is not an end in itself but a cost-effective means to achieve both U.S. and global security interests.

Still, **U.S. efforts to resolve particular proliferation crises or concerns are more likely to succeed if they are backed by a coherent strategy and anchored in principles, practices, and institutions that many countries, not just the United States, recognize, embrace, and enforce**. Adjudicating serious questions about proliferation on a case-by-case basis without guiding principles would prove insufficient to stymie the spread of nuclear weapons in the long run. Moreover, such an approach would blunt the efficacy of tools that the United States needs to counter future threats and undermine international buy-in to the nonproliferation system writ large.

Evan as many of the tools and institutions the United States has historically relied upon are under increasing strain, **the existing architecture for preventing proliferation remains integral to U.S. strategy**. The United States expended considerable bipartisan effort over the last six decades to anchor American interests in international practice, through tools and institutions such as the NPT, IAEA, NSG, Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), and a moratorium on explosive nuclear testing adhered to by all nuclear-armed states apart from North Korea. These intersecting mechanisms and their analogues in U.S. laws and policies instantiate a strong normative basis for opposing proliferation. As a result, any single actor would need to exert considerable effort and incur high costs to cross the nuclear threshold.

The nonproliferation regime is not an end in itself but a cost-effective means to achieve both U.S. and global security interests. It distributes the responsibilities and burdens of enforcing global rules and binds states to common standards, not only related to proliferation but also to issues such as nuclear safety and protection of nuclear materials. Limiting the number of nuclear-armed states also creates more predictability for the U.S. nuclear weapons enterprise.

At minimum, the United States should adopt a "do no harm" approach to the rules and associated enforcement mechanisms that are central to stymying proliferation globally. These bodies were purpose-built to serve American and global interests, and they could not be constructed from scratch today. The United States should continue to call out and impose

appropriate costs on countries that violate anti-proliferation laws and norms. At the same time, Washington should take care to avoid actions that would further damage an increasingly fragile system. This includes extending preferential treatment to allies and partners when it comes to international rules and standards pertaining to nuclear proliferation or working around existing institutions rather than through them to achieve U.S. objectives. Special treatment for one partner likely would drive others to seek similar favors, and it would become far more difficult to uphold the rules for all others, including U.S. adversaries.

Yet if Washington's interests in curbing proliferation risks remain constant, it needs to adapt its strategy to reflect a considerably changed environment. For example, innovative thinking will be needed to upgrade current proliferation monitoring systems as more states develop and expand nuclear energy programs, deploy new reactor designs and fuel types, site reactors in remote locations or on mobile platforms, and explore other potentially controversial applications of nuclear technologies, such as nuclear-powered submarines. Looking ahead, mere preservation of existing mechanisms will not be enough.

For these reasons, **the United States should spearhead efforts to modernize and strengthen core institutions and tools to anticipate future needs**. While the political conditions may not be ripe for building genuinely new global regimes, Washington can start laying the groundwork now, including in its relations with Russia and China. The idea in the mid-1960s that the United States and Soviet Union could cooperate on these issues was not intuitive or risk free. The possibility of more extensive collaboration in the future should not be dismissed, even if the immediate prospects do not appear propitious.

Indeed, **while the United States should take a consistent leadership role in preventing proliferation, success requires partnerships**. Stopping proliferation involves making weapons harder to acquire and militarily, politically, and economically costly to pursue. American leadership has been, and will remain, instrumental in shaping both supply and demand impulses. Yet, the United States cannot succeed alone. Collaborative approaches will better distribute the costs of enforcement, mitigate the likelihood of proliferation crises, and make policies that are enacted more durable. In a more competitive geopolitical environment, the United States will need to develop new ways of working with allies and partners and engaging other non–nuclear-weapons states on these issues.

If current trends continue, the various institutions, rules, and policies that Washington helped build, which have been remarkably successful at containing proliferation and advancing U.S. interests for almost sixty years, could crumble—and there is nothing in the wings to replace them. Although the window for action is narrowing, policymakers still have an opportunity to leverage past successes in service of a strategy that is more aligned with contemporary U.S. security interests and a shifting proliferation landscape. Thus, a

principal task for the United States today is to work with as many partners as possible to halt, or at least limit, the erosion of this system, while encouraging fresh thinking across multiple domains of U.S. foreign and domestic policy in service of reducing global nuclear risks in the twenty-first century. If the United States is to avoid an era of nuclear anarchy, it must act with purpose. The stakes could not be higher.

Part II: Preventing the Spread of Nuclear Weapons

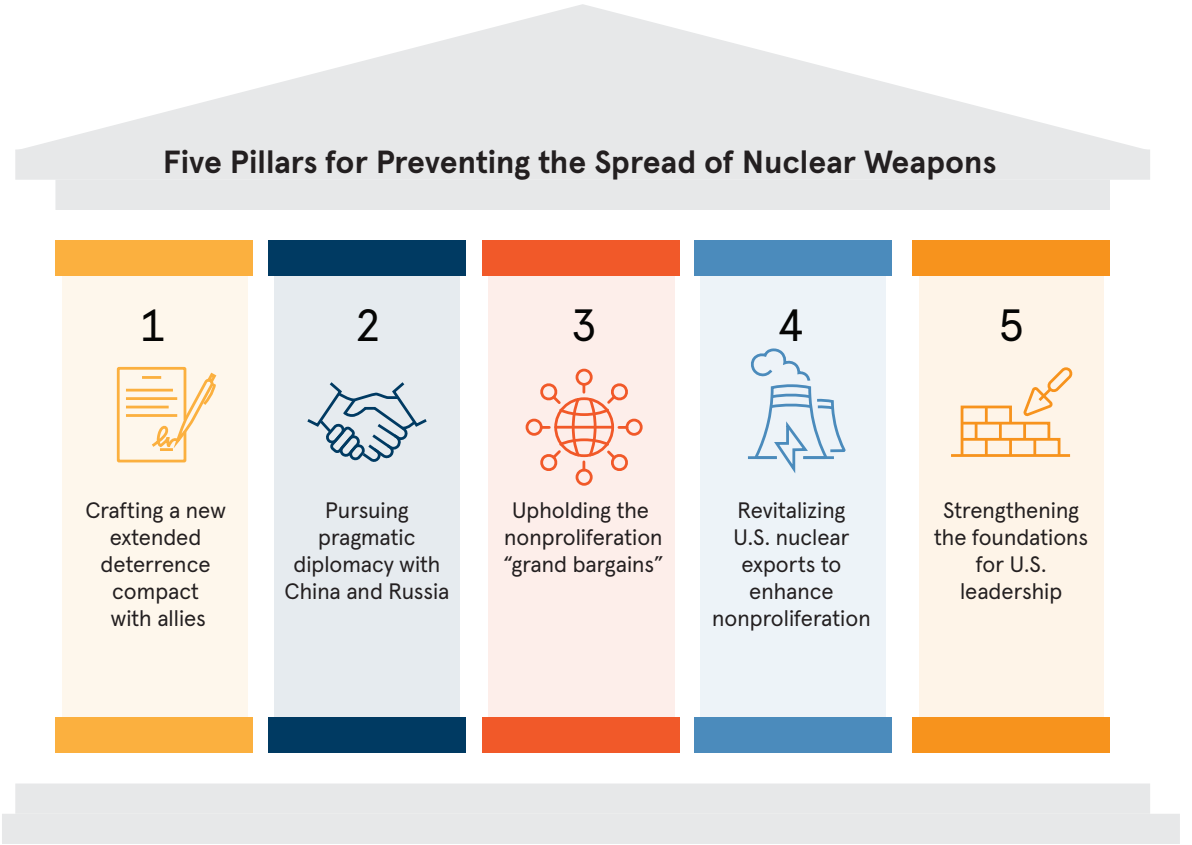
Guided by the findings and principles identified in Part I, a revitalized American strategy to prevent the spread of nuclear weapons should be premised on five pillars that—consistent with the logic of the Task Force's findings—can best advance and protect American security at a moment in which the risk of nuclear anarchy is rising sharply. These are not listed in order of importance, and elements of each will be integral to success going forward.

1. Crafting a new extended deterrence compact with allies
2. Pursuing pragmatic diplomacy with China and Russia
3. Upholding the nonproliferation "grand bargains"
4. Revitalizing U.S. nuclear exports to enhance nonproliferation
5. Strengthening the foundations for U.S. leadership

Through the strategy embodied in these five pillars, the Task Force sought to balance principle and pragmatism. Conceptually, these pillars build on elements of the U.S. strategic approach to preventing nuclear proliferation that has generally worked well over the past six decades (see discussion on pages 14–19). But they are also adapted to buttress American security in a changed world. It is not sufficient to pursue U.S. objectives in the same way. Washington needs to adjust tools and tactics within each pillar to reflect what is required and feasible, both now and going forward.

The following sections enumerate the logic and strategic rationales that underpin each pillar, accompanied by recommendations for near-term actions to help center them in American policymaking. There will sometimes be tension among these pillars. For example, Russia and

FIGURE 2



China object to the way the United States extends deterrence to its allies; conversely allies might oppose certain U.S. overtures to Moscow and Beijing. For U.S. leaders, therefore, the art is to seek balance such that the United States can draw on all five pillars to deal with acute proliferation crises and enhance the effectiveness of the overall system. If implemented, this strategy can help the United States and the world navigate an unusually fraught moment in our nuclear history.

Pillar 1: Crafting A New Extended Deterrence Compact with Allies

Since the early years of the Cold War, U.S. offers to provide for the security and defense of its allies have become wedded to allies' willingness to eschew nuclear weapons of their own. To fulfill its extended deterrence commitments, the United States maintains military readiness and reiterates political and legal commitments to defend its partners. While these commitments come at a cost for the United States, in return they have afforded Washington great influence in managing security in East Asia and Europe, and resulted in durable economic,

political, and military ties with important countries. These alliances also played a crucial role in preventing the wave of proliferation feared by officials in the 1960s and 1970s.

While few allies question the considerable extent of U.S. military capabilities, many have long harbored doubts about U.S. willingness to employ those capabilities for an ally's defense. Those fears have deepened and now there is a growing view among some partner states that the United States does not share their threat perceptions or priorities. In recent years, leaders of Poland, Germany, South Korea, Saudi Arabia, Japan, and Türkiye have openly discussed the potential need for independent nuclear arsenals or alternative security arrangements to bolster their future security. Some U.S. allies may begin to take concrete steps to expand or create nuclear options, both as a hedge against uncertainty and also to establish bargaining leverage with Washington over the scope of U.S. security commitments.

The possibility of allied proliferation, or more aggressive allied hedging (short of actual weaponization), poses numerous difficult dilemmas. These include the potential to provoke arms racing and dangerous (including kinetic) reactions from U.S. adversaries, and increased likelihood of conflicts in key regions that could escalate in ways that implicate the United States. It could also make it more difficult for the United States to influence allied behavior. Attempts by allies to pursue nuclear weapons would also force Washington to decide whether to enforce sanctions required under U.S. law or to seek bipartisan assent in Congress to change sanctions legislation, potentially undermining its broader commitment to preventing the spread of nuclear weapons. Tolerating or even enabling allied proliferation might seem a simple way to reduce U.S. defense commitments, but the harms would outweigh whatever modest budgetary savings could be achieved.

Robust extended deterrence relationships are key to avoiding these dilemmas. U.S. nonproliferation policy is much less likely to be effective if allies harbor severe doubts about U.S. extended deterrence. Durable partnerships are not just a tool for dampening nuclear weapons impulses and maintaining U.S. leverage, however. Alliances continue to serve broader U.S. interests in many ways, including by helping to stabilize regions critical to U.S. geopolitical, economic, and energy interests, and sharing the burden through collective responses to a range of global contingencies, from conflicts to humanitarian disasters. Alliances are especially important in an increasingly competitive world, where coordination on everything from defense to trade and technology control is more urgent. But to remain viable well into the twenty-first century, both as a means for enhancing U.S. security and avoiding proliferation, extended deterrence must evolve beyond its Cold War foundations.

Washington needs a new compact for allied security that better addresses the evolving nuclear landscape and takes account of the broader security environment in which it operates. This new approach should be premised on augmented conventional capabilities (especially

Washington needs a new compact for allied security that better addresses the evolving nuclear landscape and takes account of the broader security environment in which it operates.

allied capabilities) and improved integration within alliance military structures, while also making clear to allies the costs and risks of going nuclear.

The role that nuclear weapons play in this new compact, whether U.S. weapons or those in allied arsenals (in the case of France and the United Kingdom) must be assessed in the context of not just the evolution of adversary nuclear forces, but also contemporary conventional military capabilities, which are more robust and have greater reach today than they did when extended deterrence arrangements were solidified in the 1960s and 1970s. Effective security partnerships that are responsive to the changing threat landscape require a multilayered deterrence strategy, of which U.S. nuclear weapons are just one component.

As detailed below, there are a number of ways the United States can work toward this goal, leveraging the recognition in many allied capitals of the need to do more for their own defense. Washington can also build upon recent investments and policies that are conducive to improved burden-sharing and integration.

That said, a strategy that primarily revolves around military capabilities and tactical coordination cannot paper over deep and enduring concerns about U.S. reliability that emanate from shifts in American domestic politics and foreign policy. The U.S. government should endeavor to align its political approach to alliances with its national security interests and work to bolster predictability and trust in these critical relationships. Otherwise, its ability to influence allies' behavior, including their interest in nuclear weapons, will atrophy over time to the detriment of U.S. security.

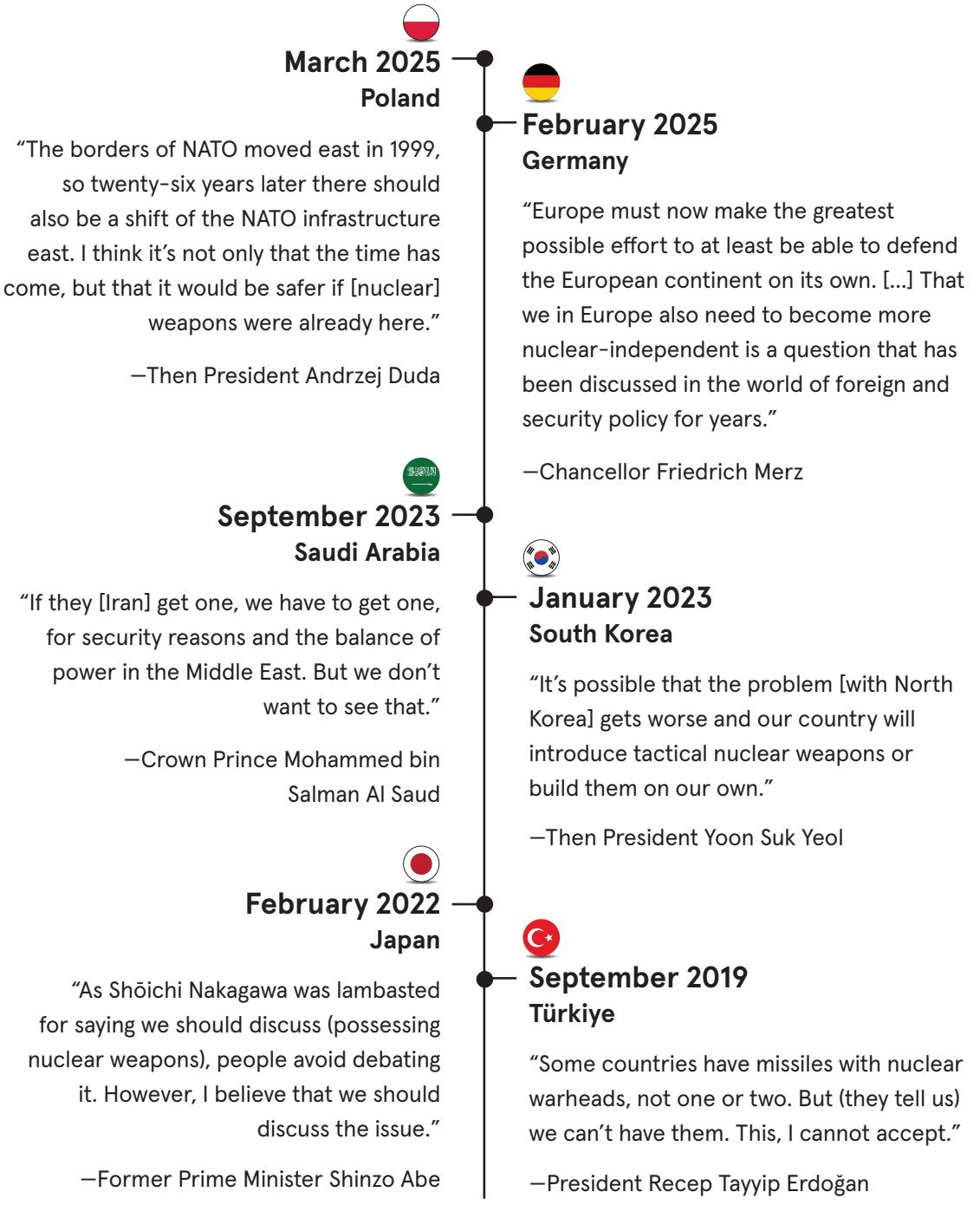
Recommendations

Augment Alliance Assurance

U.S. policymakers should take measures to bolster allied confidence in extended deterrence. Clear and unequivocal support for U.S. extended nuclear deterrence commitments should be articulated regularly by the president and senior civilian and military officials and reiterated at multiple levels of government. In addition, the U.S. government should stress its long-term commitment to extended deterrence through the nuclear weapons modernization program under way.

FIGURE 3

U.S. Allies and Partners On Nuclear Acquisition



Note: Shōichi Nakagawa is a conservative Japanese politician.
Source: For complete sources, please view this timeline at https://carnegieendowment.org/research/2025/09/preventing-nuclear-anarchy-nuclear-proliferation-and-american-security

Strengthening and better integrating U.S. and allied conventional capabilities along with improving joint coordination, communication, and planning are vital. Indeed, while the "hardware" of extended deterrence is important, the "software"—that is, the political and military coordination mechanisms that facilitate alliance cohesion—is also critical given the increasing complexity of alliance military operations and array of threats. The April 2023 Washington Declaration between the United States and South Korea is a useful model for managing contemporary assurance challenges by encompassing military capabilities, coordination mechanisms, and diplomatic initiatives. It also reaffirmed the clear relationship between U.S. provision of extended deterrence and South Korea abstaining from nuclear weapons.

Both the 2018 and 2022 U.S. Nuclear Posture Reviews, as well as the 2023 Congressional Commission on the Strategic Posture of the United States, explicitly call for enhanced participation by allies in deterrence missions, and the United States has taken steps in recent years to put this into practice. Japan's and Australia's roles in tracking missiles and conducting anti-submarine warfare missions are examples of allies taking a tangible stake in shared defense architecture.

In Europe, NATO's Nuclear Planning Group has long served as the alliance's senior body for coordinating nuclear policy, including the provision by allies of dual-capable aircraft (DCA) and conventional support for NATO's nuclear mission. NATO is also unique in that the strategic nuclear arsenals of France and the United Kingdom, while independent, contribute to deterrence and alliance security, a fact emphasized in NATO statements over the years.

Existing alliance missile defense architectures in Europe (including NATO's Active Layered Theatre Ballistic Missile Defense and Aegis Ashore sites) and Asia (U.S.-Japan and U.S.-ROK cooperative missile defenses) remain crucial, both for deterring threats and giving allies greater confidence in U.S. extended deterrence. Yet the U.S. government can do more on this front, including by augmenting space-based capabilities, ramping up interceptor production, and developing improved cost effective defenses against lower-end threats such as drone swarms. U.S. allies and partners should be integrated into these defense development and production efforts.

Broaden the Aperture of Extended Deterrence

While providing consistent reassurances that the U.S. extended deterrent, to include the U.S. nuclear umbrella, remains iron clad, Washington should reinforce to allies that the U.S. commitment to their security does not rest solely on the American threat of nuclear use. Effective extended deterrence must rely on a full spectrum of military, diplomatic, and economic capabilities. Indeed, in the vast majority of cases, non-nuclear forces will be the preferred response to aggression. Specifically, U.S. and allied non-nuclear military assets—defensive and offensive systems, including conventionally-armed missiles and autonomous

vehicles—make up a critical element of that deterrent and should be strengthened. Both the Russia-Ukraine war and the escalation of the Israel-Iran conflict starting in 2023 showcased the value of precision conventional strike weapons and missile defense capabilities. NATO allies in particular now recognize and agree on the necessity of building up European non-nuclear military capability.

Negotiate a More Equitable Division of Responsibilities with Allies

A more balanced burden-sharing mechanism is a critical component of a renewed extended deterrence compact that would be more politically sustainable in the United States. Polish Prime Minister Donald Tusk captured the unsustainability of the current situation in March 2025 when he lamented, "Right now, 500 million Europeans are begging 300 million Americans for protection from 140 million Russians who have been unable to overcome 50 million Ukrainians for three years."[5] Allies must contribute robustly to their own defense through greater investment in conventional forces and, for relevant NATO partners, DCA that can deliver U.S. forward-deployed nuclear weapons.

Washington should have frank discussions with its allies over how best to achieve shared deterrence objectives, which conventional capabilities allies should develop and field (such as air and missile defenses, anti-submarine forces, or cyber defenses), and which conventional and nuclear deterrence functions the United States will provide. Some of the initiatives described earlier have started to move the needle in this direction, and the United States should maintain and expand them. Clarity is not only important for ensuring a robust deterrent, but also to signal that the United States supports allies investing in conventional capabilities and contributing those capabilities to the extended deterrence mission, but not pursuing their own nuclear weapons.

Balance Assurance with Dissuasion

Washington must not only address the security concerns that might drive allies to consider acquiring nuclear weapons, but also highlight and increase the perceived costs for any ally that breaks its commitment not to seek them. Even as the United States takes demonstrable political and military steps to assure its allies of enduring U.S. security commitments, behind closed doors officials should explicitly discuss the potential consequences of proliferation and emphasize the negatives for allies' security and economies. Allies considering nuclearization should understand that acquiring such capabilities could make them more—not less—vulnerable by inviting preventative or coercive action from adversaries before they are able to build credible deterrent forces, and that they cannot count on the United States' ability to protect them against punitive actions by others in response to their attempted proliferation.

Pillar 2: Pursuing Pragmatic Diplomacy With China and Russia

The United States, Russia, and China possess the world's largest nuclear arsenals and exert enormous influence on global affairs. At a time of deepening tensions among them, one key proposition to test is whether there is sufficient shared interest to craft a new understanding on the necessary steps to prevent future proliferation.

Despite the deeply adversarial nature of the Cold War, the United States and Soviet Union cooperated extensively on measures to prevent additional states from obtaining nuclear weapons. For Moscow, fears of a West German bomb in particular underscored the value of finding common cause with Washington on these issues. American and Soviet officials assiduously sustained nonproliferation cooperation across periods of deep tension and significant shifts in bilateral relations, from the détente that emerged in the mid-1960s to the sharply escalating tensions and arms racing of the early 1980s. Following the collapse of the Soviet Union, the U.S. government worked closely with Russia and the other Soviet successor states to secure nuclear materials, destroy old weapons systems, and limit technology flows to proliferating states.

However, a gradual rupturing of U.S.-Russia relations, beginning in the 2000s and accelerating in the 2010s with Russian aggression against Ukraine, has essentially brought cooperation on nuclear issues to a complete halt. Subsequently, Russia appears to have subjugated nonproliferation (as well as the broader nuclear relationship with the United States) to its geopolitical objectives in Ukraine, limiting prospects for cooperation to prevent the spread of nuclear weapons and related technologies. Indeed, Russia's exchanges of arms and technology with North Korea and Iran—both of whom provide essential support to Russia's war effort—and its willingness to use its veto on the UN Security Council to prevent additional sanctions on them, raise fundamental questions about whether and under what conditions Moscow might again be willing to use its capabilities and influence to prevent proliferation. Beyond nonproliferation, Russia has suspended or obstructed key arms control mechanisms, including the New Strategic Arms Reduction Treaty (START), the last remaining U.S.-Russian agreement limiting strategic nuclear arsenals. Russia's assault against Ukraine's nuclear power plants, threats to use nuclear weapons during that conflict, and development of new nuclear weapons, including a satellite intended to carry a nuclear weapon, further illustrate its dangerous shift.

The U.S.-China relationship has a fundamentally different starting point. Washington and Beijing are more economically entwined than the United States and Russia ever were, but have never shared the consistent patterns of cooperation that characterized past endeavors by Moscow and Washington to restrain nuclear proliferation. In fact, China only joined global nonproliferation regimes in the 1990s. For decades, China maintained a small nuclear arsenal relative to the United States and Russia, and though it now broadly supports

BOX 6

Should the United States Forward Deploy Nuclear Weapons on the Territory of Additional Allies?

One step the United States could take to further address allied security concerns would be to forward deploy U.S.-controlled nuclear weapons on an ally's territory. Today, the United States stores air-delivered nuclear bombs in select European countries as part of NATO's nuclear sharing arrangement. The practice of forward deployment could be expanded to other allies who face dire security threats. Some South Korean politicians, for example, have called for the return of U.S. nuclear weapons to the Korean peninsula as an alternative to developing their own nuclear weapons.

Task Force members do not believe the United States needs to take such steps now or in the immediate future as a tool of assurance to South Korea or other countries that do not currently host U.S. nuclear weapons. Further, they noted that the bar for any such deployments should be high, and any decision to proceed would need to be context specific and based on careful evaluation of the risks and benefits to U.S. security, including potential reactions from adversaries. In most cases, it would be better to pursue assurance through other types of actions or deployments, including through sea-based nuclear capabilities.

Task Force members acknowledged that forward deployment might yield some deterrence benefits by complicating an adversary's military planning. Nevertheless, the shared sense of the group was that such deployments could undermine stability and assurance efforts in several ways. Nuclear weapon storage facilities would be a potential preemptive target in a conflict. Such deployment could also cause an adversary to deploy its own weapons in more provocative ways that shorten launch and warning times. It could also lead other allies to request similar measures or provide a pretext for adversaries to adopt similar arrangements. Other great powers might withhold cooperation on critical issues in opposition to U.S. deployments. For those concerned about allies "free-riding" on U.S. security, further extending U.S. nuclear weapons deployments might undercut the sense of urgency among allies to invest in other non-nuclear capabilities to augment deterrence. Finally, it would weaken U.S. standing to criticize similar deployments by other countries (such as Russian stationing of nuclear weapons in Belarus). The political dimensions of any forward deployment consideration are paramount.

the nonproliferation regime, Beijing has not felt compelled to adopt a leadership role. Yet China's rise as a global power—economically, technologically, and militarily—is reshaping the strategic landscape. Beijing is undertaking a sweeping expansion and modernization of its nuclear capabilities that could give it an arsenal of upwards of 1,000 operational nuclear warheads by 2030. At the same time, China has dramatically strengthened its non-nuclear forces and is taking increasingly assertive actions in Asia.

These actions are fueling U.S. and allied concerns about threats to their security and amplifying the risk of arms races and regional confrontations. Fears of China's evolving capabilities and intentions, as well as North Korea's, have led U.S. allies in the region to search for ways to enhance their own security, including augmented extended deterrence measures (such as more frequent, higher-level dialogues; increased nuclear-armed submarine patrols; and/or renewed interest in U.S. nuclear weapons stationed in the region or on allied territory), investments in their own conventional strike capabilities, and, particularly in the case of South Korea, debates about whether to develop their own nuclear weapons.

Security developments in key regions, as well as broader tensions and competing worldviews between Washington and Moscow and Washington and Beijing, are making it harder to tame proliferation challenges. Bilateral channels of communication have withered and each country's broader strategic priorities sometimes are in tension with nonproliferation goals. There appears to be a growing tendency in Beijing and Moscow, perhaps also in Washington, to view proliferation issues through the lens of geopolitical rivalries and to subordinate nonproliferation to other strategic objectives.

Convincing Russia and China to drastically alter their approach will be a tough task, as evidenced by the minimal progress from repeated U.S. efforts to engage in recent years. Still, the Russian and Chinese governments continue to proclaim their support for nonproliferation, and the fact that both have good reasons to oppose more states acquiring the bomb provides the United States with some leverage and opportunity. Washington should at least test whether Moscow and Beijing may be willing to cooperate.

U.S. strategy to combat the spread of nuclear weapons cannot hinge on partnership with Russia or China, but it cannot abandon attempts to find common ground entirely, either. Unlike during the Cold War, the United States does not need to build a new architecture to prevent proliferation, but rather to preserve and where possible strengthen the existing one. Washington should look for opportunities to cooperate where interests may align, while being realistic about what can be achieved in the short term. The United States should also be prepared to capitalize on geopolitical shifts that may open new avenues for pragmatic diplomacy.

Some of the approaches the United States can use to implement that strategy apply to both countries, but others must be calibrated to each. Although Russia and China both oppose various U.S. policies and strategies, they are not a monolith; they have distinct histories, objectives, methods, and outlooks, and different factions within each government push in different directions.

U.S. strategy to combat the spread of nuclear weapons cannot hinge on partnership with Russia or China, but it cannot abandon attempts to find common ground entirely, either.

Russia is a long-established nuclear superpower whose behavior—including a war of aggression against Ukraine shielded by nuclear threats—suggests a growing willingness to use military force to assert its interests and revise the status quo. Forging common cause with Russia on stemming proliferation is likely to be exceedingly difficult as long as its war in Ukraine continues and Moscow prioritizes other strategic and security objectives above arms control and nonproliferation. When the timing is right, Washington should seek to engage Moscow on specific nuclear challenges that threaten both nations, while keeping expectations modest.

China, by contrast, is a rising great power that has generally preferred stability as it ascends, maintaining access to the global economy while seeking to reshape the international order to its advantage. China and the United States are also currently intertwined—via trade, economics, and technology—in ways that the United States and Soviet Union were not. Beijing's track record in adhering to global nonproliferation standards and rules has been spotty. For example, it participated in and supported the Six-Party Talks with North Korea, but now ignores UN sanctions against the country. The United States and China also have important and likely irreconcilable positions on a number of other strategic priorities, which must be accounted for in any effort to cooperate on nuclear issues. Still, finding ways to work with China, a relative latecomer to the nonproliferation system that was initially excluded from and skeptical of many of these institutions and practices, will be one of the key tasks facing policymakers in the coming years. Given China's rise, Beijing may see value in doing more to curb nuclear proliferation risks not out of any altruistic desire to defend the current U.S.-led order, but because more nuclear-armed states (or perhaps even nuclear-capable "threshold" states) would threaten its interests.

Recommendations on China and Russia

Leverage Chinese and Russian Concerns About Proliferation Risks in Asia, the Middle East, and Europe

Similar to the Soviet Union in the 1960s, China's leaders have strong reason to oppose the spread of nuclear weapons. In East Asia, the most likely countries to develop those weapons would be U.S. allies, who would pose a direct challenge to China's position and greatly increase the risks of conflict. South Korean and Japanese concerns about China's nuclear and conventional build up and North Korea's nuclear expansion provide a pressure point the United States could carefully use behind closed doors.

By highlighting how Chinese failure to rein in North Korea or increase transparency or restraint in its own nuclear posture could push U.S. allies in the Indo-Pacific to consider nuclear options, Washington can impress upon Beijing that it shares an interest in preventing proliferation close to home. Those same dynamics could prompt India to increase its nuclear arsenal, which would have spillover effects on Pakistan's nuclear decisionmaking. Further nuclear proliferation and conflict in Asia could disrupt China's economic and prosperity goals. Indeed, China has invested significant financial and political capital in regional integration.

Separately, the Middle East is a critical hub for Chinese energy and trade interests. If Iran crossed the nuclear threshold, the possible fall-out, including additional conventional military strikes on Iran, or follow-on nuclear proliferation among other Middle East states could destabilize the region, harming Chinese interests and disrupting crucial supply chains. In recent years, China has aspired to become a regional power broker, not only with Iran but with Saudi Arabia; it is possible that this emerging diplomatic posture could make Beijing more willing and capable of productive intervention. Washington should highlight how Iranian proliferation, which might also trigger Saudi nuclear weapons acquisition, could undermine China's energy and trade strategy in the region. If successful, engagement could encourage constructive Chinese actions, such as tighter coordination on sanctions or convening multilateral talks, under the banner of preventing regional proliferation.

Although Russia's nuclear arsenal is far larger than China's and Moscow has long contended with nuclear-armed neighbors, Russia also has cause to worry about additional U.S. allies in Europe acquiring nuclear weapons. For example, Germany or Poland armed with an independent nuclear arsenal would complicate Russian strategic planning. U.S. officials should regularly highlight to Moscow how its continuing war in Ukraine and nuclear threats are fueling nuclear weapons debates in some European capitals, messaging that might help drive renewed understandings about the value of cooperating to prevent proliferation given evolving strategic dynamics.

Leveraging Chinese and Russian proliferation concerns requires delicacy, however. The United States should not threaten China or Russia with Japanese, South Korean, or Polish nuclear proliferation. Doing so could inadvertently stoke such desires and ignite a process Washington would find difficult to rein in, not to mention setting a dangerous negotiating precedent. Rather, the United States should invite China and Russia to cooperate in averting outcomes none of them want, including for North Korea, Iran, or other states to illicitly supply nuclear weapons technologies or materials to countries that don't already have them.

Seek P5 Cooperation on Proliferation Risks

Despite increasing acrimony, the P5 dialogue among the five permanent members of the UN Security Council (China, France, Russia, the United Kingdom, and the United States, who are also the NPT-designated nuclear-weapon states), has occasionally yielded common positions on nuclear issues. For instance, in January 2022, just weeks before Russia invaded Ukraine, the leaders of all five states issued a rare joint statement declaring that "a nuclear war cannot be won and must never be fought" and affirming that nuclear weapons should be used for deterrence, not aggression.[6] This statement shows that common ground exists, at least rhetorically, at the level of fundamental principles, even if Russia's subsequent actions also underscore the limits of verbal commitments. Still, such statements reaffirm P5 support for the NPT and provide a means to hold China and Russia to account when their actions deviate from these commitments. (China reportedly warned Russia not to use nuclear weapons in Ukraine).

The United States should propose to Russia and China an effort to shore up P5 commitments to nonproliferation. For example, Washington could introduce a new P5 pledge opposing the spread of nuclear weapons and expressing support for IAEA safeguards, NSG policies, and other relevant instruments. The United States could also propose, in close coordination with its allies, that the P5 collectively agree not to use or threaten to use nuclear weapons against states that do not possess nuclear weapons, which would dampen incentives to proliferate. Each of the P5 has issued some version of such a "negative security assurance" over the years, albeit with caveats or exceptions (apart from China, which maintains a "no first use" policy). Proposing a declaration along these lines could spur constructive dialogue on minimizing nuclear signaling and potentially be used as a jumping off point for broader discussions with Russia and China on nuclear risk reduction.

FIGURE 4

Great Power Cooperation to Prevent Proliferation

Starting in the 1950s, the United States and Soviet Union cooperated in negotiating and creating many of the foundational treaties and institutions that comprise the nonproliferation system. Often they were joined by the UK and other major countries in these efforts. After choosing initially not to sign the NPT, China began to cooperate in the early 1990s, which enabled the P5 to work together on managing proliferation crises (such as Iran, Iraq, and North Korea) and addressing evolving threats (such as nuclear terrorism). Today, however, such cooperation is fraying.

1957 U.S.-Soviet cooperation helps to establish the International Atomic Energy Agency.

1963 The United States, the Soviet Union, and the United Kingdom sign the Limited Test Ban Treaty.

1968 The NPT opens for signature, backed by the United States, the Soviet Union, the United Kingdom, and influential non-nuclear weapons states like Mexico and Ireland. China and France do not join. Under U.S. and Soviet pressure, West Germany signed in 1969.

> "Our aim is to unite all forces that stand for nuclear non-proliferation. This has great significance for the future of the entire humankind."
>
> – Leonid Brezhnev, 1968

1974 Following India's "Peaceful Nuclear Explosion," the United States, the Soviet Union, Canada, West Germany, France, Japan, and the United Kingdom found the Nuclear Suppliers Group.

1984 China joins the IAEA.

1991 The Nunn-Lugar Act establishes the Cooperative Threat Reduction Program to support Russia in securing and dismantling WMD infrastructure in former Soviet Union states.

1991 P5 members support UN Security Council Resolution 687, establishing the UN Special Commission to investigate Iraq's nuclear and other WMD programs.

1995 After China and France accede to the NPT in 1992, unanimous P5 support helps secure permanent NPT extension.

1996 The UN General Assembly adopts the Comprehensive Nuclear-Test-Ban Treaty with P5 support.

1998 India and Pakistan test nuclear weapons; the P5 express unanimous support for UN Security Council Resolution 1172, condemning the tests.

2003 China chairs the first round of the six-party talks on North Korea's nuclear program, joined by the United States, Russia, South Korea, North Korea, and Japan.

2004 UN Security Council Resolution 1540 passes with P5 support; requires all states to "criminalize proliferation, enact strict export controls and secure all sensitive materials within their borders."

2006 The United States and Russia announce the Global Initiative to Combat Nuclear Terrorism (GICNT).

2010 China, Russia, and 45 other countries join the United States to convene Nuclear Security Summits aimed at strengthening protections on nuclear material.

2015 After several years of negotiations, the United States, Russia, China, the United Kingdom, France, and Germany conclude the Joint Comprehensive Plan of Action with Iran.

Recommendations on China

Build International Coalitions to Reinforce Messaging to Beijing on Nuclear Risks

The United States can and should continue to press China directly on preventing the further spread of nuclear weapons. This includes reiterating to Beijing how North Korea's nuclear activities could drive further proliferation in Asia and the need to keep Pyongyang from exporting sensitive nuclear technologies to other states with nuclear weapon ambitions. Where possible, it should also work with other countries, particularly in the Global South, to tackle proliferation risks and ask these countries to weigh in with Beijing in bilateral and multilateral settings. Doing so would leverage Chinese concerns about being sidelined from major international initiatives. Other voices echoing U.S. nuclear positions and concerns can help encourage Chinese cooperation. As part of this, the United States should also reinvigorate efforts to respond to Chinese statements that cast various U.S. security activities, such as the AUKUS partnership on nuclear-powered submarines with Australia and the UK, as illegal under the NPT.

Create New Pathways for Substantive Communication and Cooperation on Nuclear Energy Safety, Security, and Nonproliferation

The United States and China have previously collaborated on measures to secure nuclear materials. In 2016, they jointly announced the opening of a Nuclear Security Center of Excellence in Beijing, a training and research facility to share best practices for safeguarding nuclear facilities and preventing nuclear terrorism. Additionally, the United States and China established a regular Nuclear Security Dialogue that met annually at least through 2018 to coordinate efforts against nuclear smuggling and improve radiological source security. Chinese regulators and the U.S. Nuclear Regulatory Commission worked closely together on effective regulation of the AP-1000, a reactor type operating in both countries. These efforts demonstrate that practical cooperation between American and Chinese nuclear experts can yield real results.

Going forward, even as the United States seeks to resolve trade and technology control differences with China (including concerns about U.S. technology being misused to advance Chinese military capabilities), Washington should seek to resume, expand, and elevate these technical dialogues. For instance, restoring an official U.S.-China nuclear energy cooperation commission or working group could facilitate discussion on nuclear safety, safeguards, export controls, and security standards for advanced reactors (an area of interest as China builds and eventually exports new reactor designs). Such forums could test whether progress is possible; if successful, alignment could help establish stronger standards and practices around nuclear exports.

Recommendations on Russia

Elevate the Need to Restrain Iran's Nuclear Program in U.S. Engagement with Russia

Russia has long stated that it opposes an Iranian nuclear weapon and Moscow was an important contributor to past diplomatic efforts to contain Iran's nuclear program, including during negotiations leading to the 2015 JCPOA. As the key supplier to Iran's civilian nuclear power program, Russia's role is unique. Since invading Ukraine, Moscow's alignment with Tehran has deepened and its relations with Washington and European states have deteriorated, creating fresh obstacles to cooperation, but also providing Russia with leverage. Should Russian reliance on Iran lessen (for example, as a result of an end to Russia's war in Ukraine), or if Moscow otherwise determines that Iranian threats to acquire the bomb damage Russian interests, Russia could again play a key role in diplomacy to restrain Iran's nuclear program. The United States should press Russia to, at a minimum, encourage Iran to fully implement its IAEA safeguards agreement and avoid major actions that could precipitate a renewed and perhaps larger military conflict, such as withdrawing from the NPT. Washington should also urge Moscow to suspend its civil nuclear cooperation with Iran until Tehran resumes full-scope safeguards, as Russia is bound to do under the NPT and NSG. Russia could also play a significant role in implementing any future deal with Iran. To increase the chances of success, the United States should, at the appropriate time, elevate the Iran issue in its overall relationship with Russia.

Encourage a More Constructive Russian Role with North Korea

Russia has also grown closer to North Korea, due to Pyongyang's support for the war in Ukraine. These linkages have resulted in greater Russian diplomatic and military support for North Korea, demonstrated by Russia's clear violations of UN sanctions against North Korea and alleged support for Pyongyang's missile, space, and perhaps even nuclear programs in contravention of Moscow's nonproliferation commitments. As part of a post-conflict settlement of issues resulting from Russia's invasion of Ukraine, Washington should prioritize curtailing Russian support for the North Korean nuclear and missile programs, while urging Russia to help facilitate restraint negotiations with Pyongyang. Absent a resolution to the war in Ukraine, the United States should still urge Russia to play a constructive role in addressing North Korea's most provocative activities, even if the chances of Russia agreeing are low. For example, Moscow could prevent illicit North Korean nuclear or missile experts from transiting Russian territory, encourage North Korea to refrain from additional nuclear or long-range missile tests, or facilitate multiparty negotiations with Pyongyang on reductions in its nuclear activity.

Improve Coordination on Nuclear Safeguards and Security

Prior to the war in Ukraine, Russia and the United States collaborated to upgrade IAEA safeguards and enhance the security of nuclear material, aiming to prevent nuclear theft or proliferation. Mutual interest in these domains presumably remains. Neither nation wants to see a nuclear reactor meltdown, a radiological disaster, or bomb-grade material fall into terrorist hands. At the appropriate time, the United States should propose reviving practical cooperation on, for example, updating nuclear security and safety guidelines for the expected expansion of nuclear energy around the world, especially for new applications involving floating or mobile power plants. Similarly, the United States should propose the resumption of information-sharing on best practices for reactor safety and emergency response, possibly under the auspices of the IAEA or the G20.

Pillar 3: Upholding the Nonproliferation "Grand Bargains"

The global consensus against the further spread of nuclear weapons is anchored in several grand bargains: countries that do not have nuclear weapons pledge not to acquire them, and those that have them pledge to work toward reducing and eventually eliminating them, not to transfer them to non-weapon states, and to help non-weapon states realize the benefits of peaceful nuclear technologies. This arrangement is embedded in and embodied by numerous international regimes and tools, including the NPT, the IAEA, technology control regimes, voluntary groupings like the Proliferation Security Initiative, UN Security Council resolutions, and bilateral and multilateral arms control agreements. Over the last sixty years, successive U.S. administrations worked assiduously to ground enduring U.S. interests in these international legal and policy structures; their importance for enabling peaceful nuclear technology cooperation and preventing weapons proliferation should not be discounted.

Compliance with the NPT and IAEA safeguards are international legal requirements. States that attempt to cheat can be reported to the UN Security Council, whose members can levy punishing multilateral economic sanctions and impose other restrictions (although contemporary geopolitics makes the consensus needed for effective sanctions extremely difficult to achieve). The Nuclear Suppliers Group helps ensure that all suppliers and recipients of nuclear technology and material abide by the same basic rules. And the CTBTO monitors for illicit nuclear weapons testing, a key trigger in U.S. sanctions law. These institutions and related treaties, regimes, and international standards create a legal basis for U.S. actions, facilitate coalition building, and distribute the costs of monitoring and enforcement. Although the United States is capable of performing many of these functions in isolation, multilateral buy-in makes U.S. strategy more effective and significantly reduces threats to both American and global interests.

Since the end of the Cold War, however, various factors have attenuated these bargains, including: proliferation crises (Iran, Iraq, Libya, North Korea, and Syria); global conflicts, such as Russia's invasion of Ukraine (a state that had returned Soviet nuclear weapons to Russia in exchange for security assurances); and dissatisfaction among the Global South with the lack of progress toward disarmament by the nuclear-weapon states.

Amid the reversal of the decades-long trend of declining nuclear weapons arsenal size, the modernization of nuclear arsenals across nearly all nuclear-armed states, and renewed debates over nuclear deterrence in Europe and Asia, many states without nuclear weapons increasingly see the NPT as an artifact of the deteriorating status quo, rather than a vehicle for progress. Growing discontent helped drive the negotiation and entry-into-force of the Treaty on the Prohibition of Nuclear Weapons (TPNW), which many view as a response to the perceived failures of the NPT framework to yield progress on disarmament.

The decay has been exacerbated by decisions among the major powers to violate, work around, or exploit gaps in the regime, renege on previous commitments, or change the rules in service of their perceived interests. These include, but are by no means limited to, China's long-standing nuclear and missile cooperation with Pakistan, Russia's violation of UN Security Council Resolutions to purchase military equipment from Iran and North Korea, and the U.S. civil nuclear cooperation agreement with India, withdrawal from the Joint Comprehensive Plan of Action with Iran, and with Iran, and AUKUS nuclear-powered submarine agreement. (This is not to assert equivalence among these acts, rather to acknowledge that the major powers made decisions that contribute to the weaknesses, or the perception of them, in the system.)

The withering of international political will to uphold these grand bargains creates several plausible risks. Getting global support for steps to strengthen the regime will be harder if non-nuclear-weapon states believe the nuclear-weapon states are unwilling to accept any constraints of their own. Effective tools to combat proliferation, such as export controls, multilateral sanctions, and IAEA inspections, may become harder to apply. Additionally, the generally accepted norm against proliferation could decay further, as evidenced by the normalization of advocacy for nuclear acquisition among a few states already. The collective effect of this corrosion could lead to a world in which there may be general consensus on the inherent dangers of nuclear proliferation, but it is harder to enforce rules, policies, and standards at the

The United States is not in a position to achieve better outcomes without the existing compacts, and the costs for maintaining the current nonproliferation architecture are low compared to any potential alternatives.

international level. Ad hoc arrangements and deviations from prior best practices might become the rule rather than the exception.

The United States and other great powers must recognize that the NPT's viability will require a continued and reinvigorated commitment to the fundamental bargains of the Treaty, including working toward disarmament, and the importance of assisting states in benefitting from the peaceful applications of nuclear technologies. International regimes and institutions like the NPT—and the resulting architecture of legal obligations, norms, and fora for consultation and cooperation—would be impossible to build from scratch today. Put another way, the United States is not in a position to achieve better outcomes without the existing compacts, and the costs for maintaining the current nonproliferation architecture are low compared to any potential alternatives.

Recommendations

Pursue Talks with Nuclear-Armed States on Arms Control and Nuclear Risk Reduction

Arms control treaties and their implied commitment to progress toward disarmament have been critical to sustaining global support for the NPT and for nonproliferation more broadly. To address the concerns of the vast majority of non–nuclear-weapon states in this regard, the United States and other nuclear-armed states (especially Russia and eventually China) will need to recommit to reducing and ultimately eliminating nuclear weapons. Although U.S. efforts to pursue such talks with Russia and China have been largely unsuccessful in recent years, Washington should pursue all avenues to reinvigorate dialogue on steps to reduce the risk of nuclear use and mitigate incentives for a nuclear arms build-up. In addition to contributing directly to U.S. national security by reducing the risk of nuclear conflict and alleviating fiscal pressures associated with arms racing, such steps would also demonstrate that the United States and other nuclear-armed states understand and are committed to their end of the grand bargains.

It is therefore critical that Washington and Moscow agree on a successor—be it a treaty or other arrangement—to New START when it expires in early 2026, and that China eventually participates in nuclear restraint as well. That successor to New START should aim to, at a minimum, preserve current limits on the number of deployed forces and maintain associated inspections. If a new agreement proves too challenging to negotiate in the current environment, the presidents of the United States and Russia could agree to continue implementing key elements of the treaty in anticipation of renewed negotiations, including maintaining limits on deployed nuclear forces, exchanging data on force posture and other information, not interfering with national technical means of verification, and keeping open channels like the treaty's Bilateral Consultative Commission.

Policymakers should also preserve key norms against explosive nuclear testing, production of fissile material for use in nuclear weapons, and placement of nuclear weapons in outer space. Where feasible, the United States should pressure China to observe the same restraints while also seeking Beijing's full participation in future arms negotiations. Washington should also engage other nuclear-armed states in broader discussions aimed at reducing nuclear risks and achieving transparency, predictability, and restraint with nuclear arsenals. In the absence of Russian and Chinese engagement, the United States should continue to unilaterally release information about the size and composition of its own nuclear forces (as was required under New START) and, to the extent possible, declassify information about actions that Russia and China are taking, including those that contradict their stated commitments (for example, Russian development of systems to deploy nuclear weapons in space).

Engage States in the Global South

The United States should engage states in the Global South to uphold the grand bargains and build broader cooperation on nuclear energy, nonproliferation, and disarmament. This should include countries that have abandoned nuclear weapons programs (Brazil), countries that have given up nuclear weapons themselves (South Africa, Ukraine, Kazakhstan), advanced nuclear energy states (Japan), and at least some of the ninety-eight NPT member states that are also parties or signatories to the TPNW. The purpose would be to find ways of addressing the interests of these states in making progress toward disarmament and preparing to successfully expand or deploy nuclear energy in fulfillment of their national objectives, while minimizing nuclear proliferation dangers and safety and security risks. The U.S. government has pursued some creative ideas on this front over the years, including the Creating the Environment for Nuclear Disarmament discussion forum, the International Partnership for Nuclear Disarmament Verification, and the "Quad" partnership (with Norway, Sweden, the United Kingdom, and the United States) on disarmament verification.

Preserve Moratoria on Explosive Nuclear Testing

No state other than North Korea has conducted an explosive nuclear test during this century. The advanced scientific and modeling capabilities of the U.S. Stockpile Stewardship program verifies the safety, security, and reliability of the U.S. nuclear arsenal, informed by an unmatched volume of testing data. Against this backdrop, the global norm against explosive nuclear testing enhances U.S. national security; any move by the United States to resume explosive nuclear testing would likely prompt Russia, China, and maybe other states to follow suit, opening the door to a renewed era of arms racing and proliferation. Maintaining the moratorium on nuclear testing provides myriad benefits to U.S. security that clearly outweigh marginal knowledge gains that could result from resuming tests.

Lead a Coalition of Countries to Support Increased Funding for the IAEA

The IAEA is essential both as an enabler of peaceful nuclear technology programs (ranging from electricity generation to cancer therapy and food irradiation) and as a monitor to verify that such programs are not used for illicit military ends. The IAEA's training and technology programs are also key to enhancing the safety and security of nuclear power and research facilities and preventing the theft or smuggling of nuclear materials. Its role as an apolitical, technically-focused organization is equally critical. If more states acquire nuclear energy programs in the coming years, as many intend to do, the demands on the agency will expand as well.

All countries have an interest in helping the IAEA fulfill its mission. Yet the IAEA's top budget line has been frozen for over a decade and is shrinking in real terms due to inflation. The United States should work with like-minded countries to increase the IAEA's regular budget, which would create more resources for its work to promote nuclear energy and non-energy peaceful applications, and carry out safeguards inspections. In addition to providing consistent and full funding to the agency through its own extra-budgetary contributions, the United States should work with partners to expand their support for programs to provide the expertise and tools the agency needs to succeed, including technologies that might enhance its ability to deter potential proliferators through accurate and timely detection. For example, Washington should encourage more states to establish Member State Support Programs to bolster the Agency's nuclear verification capabilities through financial contributions and in-kind support, including access to laboratories, scientific equipment, and relevant expertise. These same coalitions should also continue to speak out in support of the IAEA's irreplaceable role as an independent organization with a critical mission.

Pillar 4: Revitalizing U.S. Nuclear Exports to Enhance Nonproliferation

One of the key bargains underpinning efforts to prevent the spread of nuclear weapons is that states without nuclear weapons agree to forego them in return for support in accessing peaceful nuclear technologies. For decades, Washington leveraged its ability to export civil nuclear technology as a way to fulfill this bargain: promoting safe and secure nuclear energy programs, while also preventing proliferation. But challenges facing the American nuclear industry, along with the decline in foreign reactor sales, have decreased Washington's ability to do so. These trends coincided with waning global interest in nuclear energy following the Chernobyl nuclear accident. Over time, other countries (Russia, in particular) strengthened their share of the remaining international nuclear marketplace.

Today, however, rapidly growing electricity demand and climate change are driving renewed global interest in nuclear energy, including in countries that have little to no experience with it. Burgeoning desire for nuclear energy potentially gives new impetus to U.S. export policy as an important tool for averting proliferation.

If the expansion of nuclear energy also leads to a spread of proliferation-sensitive technologies, in particular uranium enrichment and/or plutonium reprocessing, more countries would possess some of the key capabilities and materials to produce the fuel for nuclear weapons. A country could do this as part of a deliberate strategy to acquire a nuclear weapons option—known as hedging (such as with Iran)—or as the result of accumulating sufficient nuclear material and technology without a clear and consistent intent to create a weapons option—known as nuclear latency (as with Japan). There are no prohibitions within the NPT on acquiring sensitive nuclear technologies and materials for peaceful purposes, provided they are placed under IAEA safeguards.

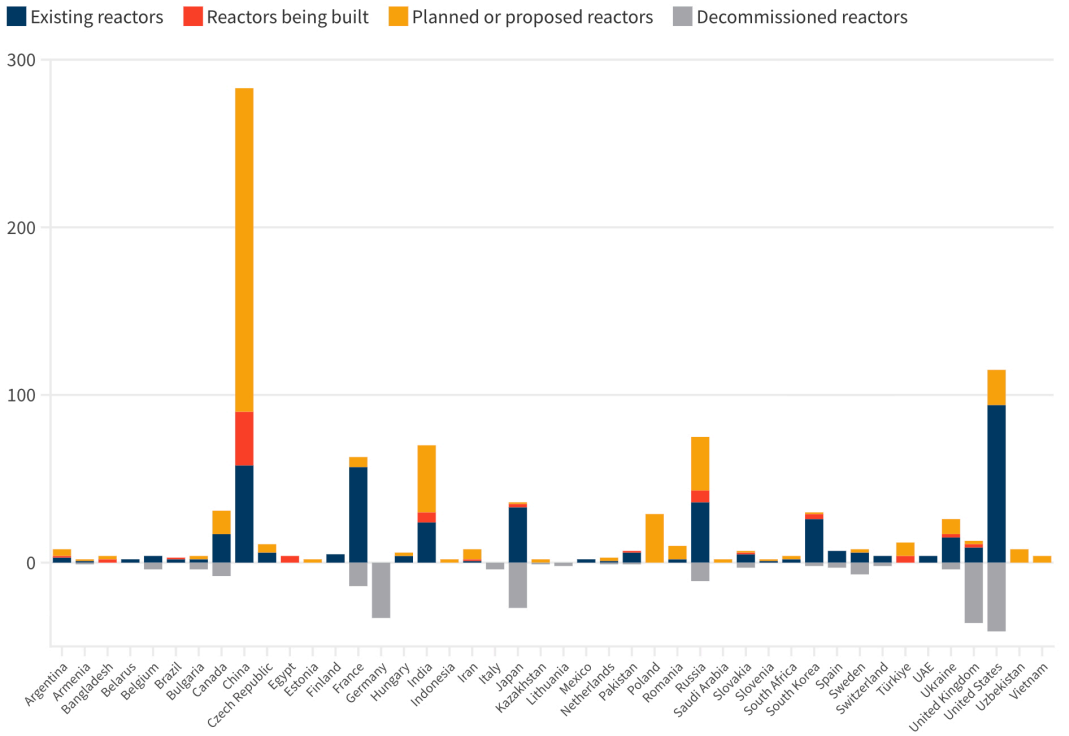
A major increase in the number of states that possess sensitive fuel cycle capabilities would strain existing safeguards and monitoring and verification practices that provide confidence that peaceful programs are not misused for nuclear weapons. Further, some countries are currently exploring new reactor designs, including ones that use weapons-grade material for fuel and incorporate reprocessing technologies, even as global stocks of separated plutonium continue to increase. In addition to proliferation dangers, these developments pose challenges to decades of U.S. and international initiatives to secure, reduce, and concentrate global fissile material stockpiles to mitigate nuclear terrorism risks.

On the other hand, global nuclear energy expansion also provides an important opportunity for the United States to shape this new environment in ways that meet clean energy and energy security and resilience goals and simultaneously strengthen nonproliferation. The United States could once again use its supplier status to secure commitments from recipients to limit proliferation risks, an approach that was critical to helping convince some partners, such as Taiwan and South Korea, to abandon nuclear weapons programs in the 1970s and 1980s. Revamping its own offerings (large plants as well as small modular and microreactors, both light water and advanced reactor designs) could also help the United States influence the overall pool of nuclear technologies available in the marketplace, with the goal of encouraging those that pose the fewest proliferation risks. Finally, commercial nuclear deals are long-term partnerships (often up to 100 years when considering reactor commitments, design, certification, construction, operation, and decommissioning) and can be a springboard to stronger relationships with critical countries on a range of other interests.

To be able to use exports as a nonproliferation tool, Washington would need to recoup its leadership position in the global nuclear marketplace. Historically, however, a strong U.S. export position has been built on a strong domestic market. Creating one will require

FIGURE 5

Planned Nuclear Power Reactor Deployment



Sources: World Nuclear Association, accessed on Statista July 07, 2025, https://www.statista.com/statistics/267158/number-of-nuclear-reactors-in-operation-by-country/; IAEA, accessed on July 07, 2025, https://www.statista.com/statistics/513639/number-of-permanent-nuclear-reactor-shutdowns-worldwide/; World Nuclear Association, accessed on July 7, 2025, https://world-nuclear.org/information-library/current-and-future-generation/plans-for-new-reactors-worldwide.

overcoming major obstacles that have stymied a domestic nuclear energy renewal. U.S. nuclear firms are not currently building reactors domestically or abroad and, although there are many construction agreements in place, these projects are still years from completion and, to a large extent, are not based on clear contractual commitments. As of early 2025, approximately eighty-four percent of new reactor construction projects globally were led by China and Russia (almost half of which is China's build out of its domestic nuclear energy capacity).[7] Although U.S. technology remains desirable, it is frequently seen as too expensive, too unpredictable in terms of delivery time and cost, too burdensome in its requirements, and too complex compared with offers from competitors. In contrast, Russia's business model has many attractive features from the buyers' standpoint, providing generous financing and a one-stop-shop for reactor construction, operation, fresh fuel supply, and used fuel removal, offered without additional nonproliferation requirements beyond those stipulated by the NSG and the IAEA.

For the last two decades, the U.S. government has offered various incentives to spur nuclear energy development, yet further significant investment from financial institutions and difficult political decisions will be required to succeed. For example, complex politics have stood in the way of the United States implementing a strategy for long-term storage or disposal of irradiated civilian reactor fuel and high-level waste. Without that infrastructure, there is no current disposition pathway for U.S. fuel, let alone a realistic option for the United States to match Russian offers of full fuel services. It is neither feasible nor desirable to turn U.S. nuclear companies into state-owned enterprises, as in Russia and China. American taxpayers also cannot write a blank check to industry, and policy and investment decisions must be judicious and reflect proliferation considerations. But the government could do more to help the United States regain international market share through public-private partnerships, thereby strengthening the U.S. nonproliferation toolkit.

Ultimately, to be in a position to influence the rules of the road for the new era of nuclear energy and avoid the spread of nuclear weapons, Washington must overcome obstacles to building reactors at home while also developing a suite of policy tools to make it attractive for countries to choose the United States as a nuclear partner.

Recommendations

Create a Whole-of-Government Initiative to Lower the Barriers to Nuclear Energy Partnership with the United States

Currently, the various responsibilities for nuclear energy cooperation are spread across multiple U.S. agencies, making it challenging for potential partners to work with the United States on civil nuclear purchases. Washington can help address this by forming a new, high-level nuclear coordination body—including the Departments of Energy, State, Defense, and Commerce; the Nuclear Regulatory Commission; the Export-Import Bank, Development Finance Corporation (DFC), and the Trade and Development Agency—to be housed within the National Security Council, the National Energy Dominance Council, or the State Department. The mission of this group would be to make the United States a valued nuclear supplier and vigorously engage with existing and prospective partners. In addition, with support from Congress, the U.S. government should work to firm up strong funding commitments through the DFC, the Export-Import Bank, and other organizations. In parallel, the United States should provide more resources for multilateral banks, including the World Bank, to finance nuclear energy projects in developing economies. Collectively, these measures can enable partnerships that would help Washington deliver on the broader nuclear energy bargain inherent in the NPT, increase U.S. international competitiveness, and bolster nonproliferation standards.

Approach Nuclear Deals as Strategic Partnerships

Sometimes nuclear energy deals can benefit from non-nuclear trade, technology, or policy initiatives. Leaders should approach these situations with suitable awareness of those tools—which may not be needed or appropriate in all situations. This approach could help the United States implement its stated goal of dramatically expanding the number of civil nuclear energy cooperation partnerships (known as 123 Agreements in reference to the relevant section of the Atomic Energy Act). Prioritizing these arrangements at the presidential level and via the aforementioned whole-of-government approach would give them added significance.

Incorporate Proliferation Criteria When Deciding Which Emerging Nuclear Energy Technologies to Support

Not all emerging reactor and fuel technologies are created equal: some pose greater proliferation risks than others. For example, designs that require separated plutonium, which is directly usable in nuclear weapons, should be treated as carrying greater risk of contributing to nuclear proliferation than those that use low-enriched uranium (LEU), which is not directly weapons usable. Beyond the basic requirement of avoiding use of weapons-usable fuel (separated plutonium and highly enriched uranium), the United States should incorporate proliferation risks when deciding which designs merit U.S. financial assistance or policy priority, including the extent to which vendors have incorporated safeguards and security features in the reactor design. This would help shape the pool of technologies available for sale abroad and incentivize industry to consider proliferation risk factors in their designs.

Kick-Start Nuclear Energy by Supporting Construction of New Reactors in the United States and Bolstering Enrichment Capacity

Ordering and successfully building a substantial number of nuclear reactors in this country, with sufficient commitment to each design to merit investment in the related supply chain, would demonstrate that the United States could once again build reactors on time and on budget, thereby making U.S. suppliers more competitive in the international nuclear marketplace. Such a domestic orderbook would also help provide certainty about future demand, promote cumulative learning and investment, and reduce costs and risks over time. Accordingly, the U.S. government should offer incentives, such as some form of limited cost-overrun insurance, to help build confidence and reduce the risks of providing the necessary private capital for project completion.

Simultaneously, the U.S. government should invest the funds Congress appropriated to establish a U.S.-origin uranium enrichment facility by 2028, when U.S. law mandates the elimination of enriched uranium imports from Russia. This would advance efforts to rectify the imbalance in the uranium supply market, in which Russia accounts for over 40 percent of the overall global enriched uranium supply and over 25 percent of U.S. LEU reactor fuel.[8] Expanded U.S. fuel supplies would also strengthen market-based competition and enable

the United States to extend nuclear fuel assurances (discussed further below), enhancing its ability to offer competitive reactor deals coupled with strong nonproliferation conditions. Finally, it would address the long-term need to fuel U.S. naval reactors and provide additional tritium supply for the U.S. nuclear arsenal.

Bolster U.S. Capacity to Provide Fuel Cycle Solutions for Nuclear Energy Partners

A few elements of the nuclear fuel cycle involve substantial proliferation risks, namely enriching uranium for reactor fuel and reprocessing used fuel to separate plutonium. These enrichment and reprocessing (ENR) activities can be used for nuclear energy-purposes but also to produce fissile materials for nuclear weapons. For that reason, Washington has historically worked to minimize the spread of ENR technologies—and it should continue to do so. Most states have also concluded that pursuing these activities on a commercial scale is cost-prohibitive, though they do no wish to forego the right to do so in the future. As more countries build out nuclear energy programs, the United States should provide attractive alternatives to the development of enrichment and reprocessing capabilities internationally. Accordingly, Washington should prioritize policies and investments that would help governments address civilian fuel cycle needs through arrangements that are less amenable to misuse for nuclear weapons purposes. Options include:

- **Encouraging regional and international approaches to the fuel cycle over domestic enrichment programs.** These approaches could both address the interests of states and strengthen barriers to proliferation. For example, countries within a region could divide the various steps of the nuclear fuel supply chain. Multinational monitoring mechanisms to supplement IAEA safeguards could provide further assurances. Other examples include the development of multinational fuel cycle facilities (similar to Urenco, which is jointly owned by the United Kingdom, the Netherlands, and two German utilities). The IAEA-owned fuel bank in Kazakhstan, which provides a guaranteed source of LEU that countries can draw from should existing supplies be disrupted, offers another model for assured fuel supply that countries can rely on. Regardless of approach, any multinational effort would require rigorous adherence to safeguards and information protection provisions.

- **Working with allied nuclear supplier states to establish a cradle-to-grave fuel services consortium that can supply fresh fuel and take back used fuel.** If the United States were able to offer a "front-end" and "back-end" fuel solution to prospective nuclear partners, it could begin to level the lopsided playing field that has challenged U.S. nuclear exporters for many years. Similar to what Russia currently provides, such a consortium would offer an assured supply of reactor fuel and take-back of irradiated fuel, which could reduce the burdens of managing used fuel for the partner country. Finding a country willing to accept such used fuel would be a major challenge. The United States does not currently have an interim or final storage solution for its own nuclear waste and

used fuel management is politically controversial. That said, the United States has accepted the return of U.S.-supplied fuel for research reactors, and such an approach might serve as a model for small nuclear power programs using U.S. technology and fuel.

- **Cooperating with like-minded suppliers to promote responsible nuclear energy growth with strong nonproliferation standards.** Allied cooperation can be beneficial, even short of comprehensive fuel supply and removal services like those described above. The United States should continue to support and invest in groups such as the Sapporo 5, a partnership formed in 2023 between Canada, France, Japan, the United Kingdom, and the United States to build out a global nuclear supply chain separate from Russia. The United States should also pursue deeper U.S.-South Korea nuclear energy partnership, perhaps including the United Arab Emirates and Japan as well.

Work with Nuclear Energy Partners and the IAEA to Develop New Approaches to Strengthen Nonproliferation

The United States government should continue to promote strong safeguards and adherence to NSG guidelines, especially (but not exclusively) by states that opt to engage in enrichment and/or reprocessing. For example, Washington should coordinate with other suppliers to encourage states that acquire ENR capabilities to implement monitoring and verification provisions beyond the IAEA's Additional Protocol to provide assurances that such activities remain peaceful. This might include around-the-clock monitoring of enrichment and centrifuge production facilities, reprocessing facilities, and separated plutonium streams and stocks. It could also entail additional restraints on activities that could be applicable to developing nuclear weapons, especially those that can be interpreted as advancing a weaponization capability.

Pillar 5: Strengthening the Foundations for U.S. Leadership

Washington's ability to combat proliferation flows from multiple elements of U.S. power: military, economic, diplomatic, and technological. However, a U.S. will to lead is insufficient without a robust capacity to lead.

Key international institutions that mitigate nuclear risks cannot function without sufficient resources and expert staff. The United States pays a large share of these costs and contributes expert technical, legal, and policy professionals to support programs that deliver the nonproliferation grand bargains described above. Yet the United States also accrues a commensurate share of the benefits. These institutions, although independent and not beholden to Washington, continue to protect enduring U.S. interests, act as force multipliers for best practices in nuclear safety, security, and safeguards, and distribute the burdens of monitoring

and enforcing compliance in ways that far exceed what would be achievable, let alone cost effective, through unilateral measures.

A U.S. will to lead is insufficient without a robust capacity to lead.

Anti-proliferation programs and offices spread across U.S. government agencies enable the execution of nonproliferation policy. These programs (at the Departments of Commerce, Defense, Energy, State, and Treasury, the U.S. national laboratories, and in the Intelligence Community, among others) are an essential complement to international institutions. In the absence of U.S. support and expertise, controls on sensitive technologies would fail to the detriment of U.S. commercial competitiveness and security interests. International sanctions to prevent nuclear proliferation would be less effective. Efforts to assure allies would flounder. Nuclear safety and security forces and safeguards inspectors in other countries would not be as well trained or equipped, increasing nuclear material smuggling risks. And the IAEA would have access to fewer technologies and equipment essential to sustain the requisite levels of monitoring of nuclear programs. U.S. personnel and funding are also critical to the CTBTO's ability to sustain the International Monitoring System and International Data Center, which underpin its ability to detect a nuclear explosive test anywhere in the world. These are just a few examples of how these people and programs are integral to containing the risks of more states standing up nuclear weapons programs.

Other domestic capabilities are also critical to implementing U.S. strategy. Notably, revitalizing the U.S. nuclear industry will require not only U.S. government funding, but also trained personnel to facilitate exports to partner countries and work with them to meet safety, security, and safeguards requirements. This includes regulatory experts who can license new designs. Additionally, U.S. intelligence capabilities inform the use of many nonproliferation policy tools, ranging from interdiction to smuggling prevention, while also continuing to provide a critical early warning function for illicit activities.

As discussed, the perceived efficacy of U.S. extended deterrence depends on both capability and political commitments. Given the evolving threat environment, the ongoing modernization of the U.S. nuclear arsenal and upgrades to missile defense systems are important demonstrations not only of the U.S. capability to deter adversary threats, but also the U.S. intent to sustain its ability to extend nuclear deterrence to allies. As detailed in numerous studies, notably the 2023 Congressional Commission on the Strategic Posture of the United States, it is vital that the U.S. government devote the resources needed to complete the program of record on time and adapt U.S. nuclear posture as necessary to address growing adversary strategic capabilities. Meeting the schedule requirements for modernizing all U.S. nuclear delivery platforms and associated warheads will likely require additional investments in the necessary strategic infrastructure.

In sum, capable people, programs, and military platforms are necessary conditions for U.S. success in averting proliferation. When present, they act as an essential glue that solidifies and enables the preceding four pillars of U.S. strategy. Yet, these attributes of U.S. leadership are not a given. They require careful stewardship and consistent support.

The following recommendations describe actions across multiple domains that policymakers could take to bolster the United States' ability to implement and enforce anti-proliferation policies. They are informed by the preceding analysis and the work of the Task Force, and not intended to be exhaustive. .

Recommendations

Launch a Targeted Initiative to Address Proliferation Risks in an Era of Accelerating Technological Transformation

Disruptive technologies are poised to alter nuclear proliferation dynamics, creating new risks but also opportunities to improve monitoring and detection. In particular, new technologies could change assumed proliferation timelines and alleviate certain acquisition chokepoints. Yet many of the same technologies could also augment existing tools to better detect key proliferation indicators. It is imperative that U.S. agencies maintain broad-spectrum capabilities to scan the horizon to understand the implications of disruptive technologies for proliferation.

Given the pace of technology change, especially with AI platforms, the United States should launch an initiative to accelerate its acquisition of tools and applications that can improve the effectiveness and efficiency of proliferation detection and monitoring, including national capabilities used by the U.S. intelligence community. Existing research, development, and deployment programs operated by the Department of Energy's National Nuclear Security Administration should be maintained and even expanded so that key technologies mature and are turned into usable tools. This includes efforts to build next generation AI-enabled detection platforms, unattended monitoring systems, and effective training tools to facilitate nuclear energy partnerships. Although the volume of work may warrant a doubling of current funding, capacity constraints at the national laboratories and universities will present significant challenges to scaling up execution. Funding should accordingly be targeted initially at building up technical capacity in these institutions.

These capabilities will be critical complements to a major global expansion of nuclear energy, which will also result in significant increases in nuclear material. It will be essential that the U.S. government and the IAEA adapt and maintain sufficient monitoring of this material while taking advantage of new tools that could handle burgeoning streams of data from remote monitoring systems. According to the Government Accountability Office, the

amount of data the IAEA received from these sources tripled between 2016 and 2022[9]; additional increases are a near certainty as more nuclear infrastructure comes online. Allied governments must also invest in relevant technology areas, and the United States should lead collaborations to fully address IAEA toolkit needs.

Recruit and Retain Nuclear Expertise

Efforts to prevent proliferation, facilitate U.S. nuclear energy competitiveness, and modernize the U.S. nuclear arsenal all require expertise in scientific research, engineering, manufacturing, and legal, regional, policy, and regulatory issues. Such expertise is difficult to accrue and easy to lose. Building talent pipelines and cultivating the depth of knowledge needed to operate these programs and institutions takes decades. Sustaining a competent federal, academic, and private sector workforce requires both effective recruitment and retention.

University and private sector partnerships broaden the talent pipeline into government agencies, the national labs, research institutions, and universities, especially in newer technology areas. The United States should fully fund programs in key agencies in line with growing technical and operational needs. This includes sustaining and expanding fellowship programs to help the government adapt to the evolving nuclear and technology landscape, and restoring the capacity of its atrophied nuclear industrial base.

Strengthen Proliferation Intelligence Collection and Analysis

In order to successfully wield an array of policy tools and stem the spread of nuclear weapons, U.S. policymakers will need to understand the capabilities other countries are seeking, as well as the mindsets of foreign leaders on proliferation issues. That will not happen unless U.S. intelligence agencies have collection assets in the right places, analysts with critical technical and regional expertise who can integrate and put that intelligence in context, and robust relationships with foreign intelligence services on proliferation issues. The United States Intelligence Community should examine, for example, the implications of an expanded global nuclear energy footprint for its collection and analysis practices. A strengthened intelligence capability will be essential to informing policy options, including those aimed at altering the threat perceptions of leaders in states at risk of developing nuclear weapons.

Update Domestic Laws that Impose Sanctions on Countries for Proliferation Activities

Although U.S. law imposes automatic penalties on states that cross certain proliferation milestones, these authorities reflect the manner in which they were built: piecemeal, over time, and in response to specific situations. Accordingly, some of these laws are based on outdated assumptions, creating gaps that weaken their potential dissuasive effect. For instance, the harshest U.S. economic penalties would be triggered by a nuclear explosive test, yet it is plausible a future proliferator might decide not to test, or carry out a "cold test" that

demonstrated their capability without a nuclear explosion. Similarly, some stipulated penalties may no longer be impactful. Given technological changes that could lower some of the barriers to nuclear weapons acquisition, the U.S. government should assess how to modernize these laws to ensure they can be a relevant part of the dissuasion toolkit.

Maintain Robust Military Options as a Dissuasion Tool, a Complement to Diplomacy, and an Alternative if Other Courses Fail"

Multiple countries have likely refrained from pursuing nuclear weapons due to the possibility that their attempts would be detected and destroyed before they succeeded. The threat of military action can be a potent source of leverage in persuading states that are going down that path to reverse course and encouraging them to seek a diplomatic solution. At the same time, actually using force can be a double-edged sword: strikes might temper weapons ambitions and disrupt or degrade nuclear weapons programs, but they could also harden resolve to succeed at any cost.

There are circumstances in which military action may be both justifiable and strategically advantageous. In such cases, policymakers should weigh factors including the quality of their intelligence, the ease with which the state in question could reconstitute a nuclear weapons program, the prospects of detecting and thwarting future attempts, and whether there are other viable means to advance the same objective. Other considerations include how the target state—and other governments—might respond, and the downstream ramifications for the broader nonproliferation regime. This includes the potential harm to the nonproliferation regime if any state, and especially an NPT member state, successfully crossed the weapons threshold.

The paucity of significant strikes on states pursuing nuclear weapons over the last sixty years indicates that the threshold for more drastic measures is likely high, although lower-level counterproliferation activities, ranging from interdiction to sabotage operations, are more common. Indeed, reserving direct attacks as an option of last resort may open more space for less forceful but still effective counterproliferation options.

The United States must keep its counterproliferation tools sharp and adapt them to emerging threats. If countries believe that nuclear weapons will assure their security, and that they can pursue them with relative impunity, it will be much harder to curb proliferation. That said, military options are most likely to succeed—and translate into durable nonproliferation achievements—when deployed judiciously and paired with other tools, including diplomatic ones.

Conclusion

There are more states that started nuclear weapons programs and gave them up than there are states with nuclear weapons in the world today. In other words, U.S. and global efforts to stop these programs have, historically, succeeded far more often than they've failed. But policymakers are facing an era of increased nuclear risk. Additional states could seek nuclear weapons, or at least the means to produce them, and technological advancements might make it easier, faster, and cheaper for future proliferators to succeed. Fortunately, the United States can take effective measures to manage and ultimately reduce nuclear proliferation risks. The tools and mechanisms that have worked in concert to forestall proliferation over the last several decades are increasingly imperiled, but as this report has identified, new and improved approaches are available. Nuclear weapons proliferation and related dangers such as nuclear terrorism are not problems that can be solved, but threats that require constant vigilance and careful management. Accordingly, the United States must adapt its strategic orientation to carry this work forward in an increasingly uncertain and threatening environment.

Some of the Task Force's recommendations reaffirm long-standing U.S. policies and aim to arrest further decay. Others, such as a significant and forward-looking revitalization of the U.S. civilian nuclear industry, require departures from past practices that will demand creativity, deft diplomacy, and clear American leadership to succeed. All five pillars are necessary for an effective strategy. Focusing on just one to the exclusion of others is unlikely to work, at least for long.

Like the Gilpatric Committee sixty years ago, the Task Force provides a bipartisan blueprint for how the United States can navigate nuclear proliferation dangers amid uncertainty and change over decades to come. The Task Force has no illusions about the difficulty of the task, but remains confident that, as before, the United States can rise to the challenge.

Annex 1: The Gilpatric Committee

Prompted by the 1964 Chinese nuclear test, then U.S. president Lyndon Johnson convened a Task Force on Nuclear Proliferation, comprised of former government officials and experts, to advise him on a strategy to address the potential spread of nuclear weapons. The group was led by Roswell Gilpatric, who had just departed his position as deputy secretary of defense and who had been a trusted adviser to former president John F. Kennedy during the Cuban Missile Crisis. The Gilpatric Committee explored questions that cut to the core debates of the time: Could proliferation in some cases be desirable if it helped balance the power of China and the Soviet Union? Was the United States wise in undertaking new security commitments to allies if they could hamper proliferation? What assurances to non-nuclear powers could Washington offer as incentives not to acquire nuclear capabilities? Ultimately, Gilpatric asked committee members to consider whether the United States should strive for a world in which there would be no additional nuclear weapons states, or whether Washington should accept a world in which there would be at least a limited amount of further proliferation.

The committee's unanimous, top-line conclusion was unequivocal: "preventing the further spread of nuclear weapons is clearly in the national interest despite the difficult decisions that will be required" to achieve it. Committee members declared that all new nuclear proliferation, whether by allies or adversaries, would constitute a "grave threat to the security of the United States."[10] They asserted that the possibility of nuclear competition between great powers, declining American influence, and potentially dozens of nuclear-armed countries required that preventative actions be treated as a national security imperative.

Accordingly, the committee proposed that the United States pursue a "concerted and intensified effort" to prevent further proliferation spanning multiple vectors of influence, including

security alliances contingent on nonproliferation assurances and expansive nuclear energy cooperation. It also recommended that the United States intensify efforts to negotiate multilateral agreements pertaining to nuclear issues, apply pressure on potential proliferators, and lead by example in its own nuclear policy.

While the committee recognized the need to tailor approaches to specific contexts, it also concluded that policies vis-à-vis particular states should be linked to overarching international norms and standards. The committee's recommendations would establish what we know today as U.S. policy to prevent proliferation, implemented through an array of institutions, regimes, export controls, sanctions, laws, and other policy tools.

Annex 2: How Should the United States Respond to an Ally That Acquires Nuclear Weapons?

This Task Force concluded that preventing all proliferation should be a high priority for the United States, given the detrimental implications for U.S. interests. It also recommended that the United States be prepared to carry out a range of persuasive and dissuasive measures to prevent allied proliferation. However, if a U.S. ally chooses to develop nuclear weapons despite attempts by Washington to prevent it from doing so, the United States will face critical decisions. How should Washington respond? The Task Force did not present a detailed resolution of this question but believes the United States would have to weigh the need to promote strong and equally-applied nonproliferation standards against the interest of maintaining robust alliances.

History is not an especially useful guide for informing potential responses. The two U.S. allies that have nuclear weapons—the United Kingdom and France—produced them before the United States adopted its nonproliferation policy and before the formation of the current nonproliferation architecture. Israel, though not a formal security ally, likely did so as well. U.S. threats to end civil nuclear assistance, arms sales, and their respective security relationships as a whole were key to curtailing Taiwan and South Korea's weapons ambitions in the 1970s and 1980s, but because of that success the United States never had to make good on those threats. Successive U.S. administrations tried to stymie Pakistan's nuclear program, while simultaneously maintaining productive relations, an approach that ultimately failed.

A perception that the United States was accepting or acquiescing to allied nuclear weapons ambitions would undermine U.S. leadership on nonproliferation, and the Task Force's conclusion that Washington should oppose proliferation by allies and adversaries alike. Acquiescence to allied proliferation would make it much harder for Washington to oppose

adversary proliferation. The United States would justifiably be accused of applying a double standard. This could potentially lead Russia, China, or others to take an even laxer approach to cases like Iran. Failing to follow through with threatened punitive measures, such as ending civil nuclear assistance or rescinding security commitments, may lead other allies to conclude that they too could develop nuclear weapons with impunity.

On the other hand, enforcing legally mandated penalties on proliferating partners, to say nothing about additional sanctions or broader condemnation, would strain the alliance militarily and politically. Reducing or ending U.S. security commitments could irrevocably alter, and perhaps end, the defense relationship. The Task Force sees maintaining and strengthening robust alliances as a critical component of U.S. national security. Thus, damage to or fundamental breaks with those alliances would harm U.S. interests.

Among America's key decisions would be how to handle U.S. sanctions laws that require certain penalties for countries that develop nuclear weapons. Enforcing rules that are already on the books could damage the economy and security of an ally and the alliance. Some of these laws allow for presidential waivers, but others do not, and would require Congress to pass a new law that provides such waivers. For example, the Arms Export Control Act, which has no waiver provision, requires the U.S. to ban sales of defense equipment to any country that has violated its commitments under international agreements pertaining to the nonproliferation of nuclear explosive devices and unsafeguarded special nuclear material.

In addition, other countries, including Russia and China, would likely seek further penalties and censure against a U.S. ally in the process of acquiring nuclear weapons in venues such as the IAEA, UN Security Council, and other fora. The United States would have to decide whether to support those efforts or defend its ally from global pressure. Further, even if an ally successfully crossed the nuclear threshold and built a few rudimentary nuclear devices, acquiring a sufficiently credible deterrent takes time and states would remain vulnerable to external intervention in the interim. Allied proliferation might even sharpen the immediate burden of extended deterrence. Would Washington be willing to supply additional protection while an ally shored up the survivability of its nascent arsenal? How would it respond if another state, such as China or North Korea, for instance, attacked or engaged in other counterproliferation operations?

The United States would also face practical questions about what allied proliferation would mean for U.S. extended deterrence and U.S. troops and bases on allied territory. Would allied nuclear weapons be a replacement for, or a supplement to, U.S. security guarantees and extended deterrence?

Given that the United States has a strong interest in avoiding accidental nuclear use, Washington would also have to weigh whether it should quietly offer assistance to its ally to strengthen command and control and facilitate safe handling of nuclear weapons and materials. The NPT prohibits any assistance to a nuclear weapons program beyond the five nuclear-weapon states, but the United States nevertheless succeeded in finding legal ways to help Pakistan ensure security of its nuclear weapons program.

Given the stakes for U.S. security interests, the United States would need to weigh these and other issues carefully when formulating a response to a case of successful allied proliferation.

Notes

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