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The New Nuclear Arms Race

What Is the Problem?

The result of decisions during the Trump administration increased global security threats in the Middle East, Asia, and Europe. In addition to promoting a new arms race, the former president fractured the U.S. relationship with NATO, withdrew from the Iran nuclear deal, failed at attempted nuclear talks with North Korea, and pulled out of the INF treaty to eliminate intermediate-range nuclear forces, after Russia deployed the banned missile systems.

Since President Biden took office, he reversed security policies of the previous White House:

- Reinstating the United States' commitment to NATO
- Restarting negotiations with Iran to return to the Joint Comprehensive Plan of Action
- Extending the New START agreement (Strategic Arms Reduction Treaty) to 2026
- Signing a joint statement with leaders of nuclear weapons states--the U.K., France, China, and Russia—affirming that nuclear war cannot be won and must never be fought

Flying in the face of the Jan. 3, 2022 agreement, Russia illegally invaded the sovereign nation of Ukraine on Feb. 24. President Putin disregarded diplomatic attempts, despite the statement: “Nuclear states bear a special responsibility to pursue diplomatic solutions.” He put his nuclear forces on high alert, warning that interfering countries “will face consequences greater than any you have faced in history,” which breaks a 76-year taboo against nuclear use.

The Kremlin defied the vow to deter aggression and prevent war and its far-reaching consequences. The attack on Ukraine also violates the 1994 Budapest Memorandum when Russia, the U.S. and UK pledged “to respect the independence and sovereignty and the existing borders of Ukraine,” in exchange for Ukraine relinquishing its nuclear weapons. A war waged by a nuclear state, increases the potential risks for escalation, mistakes, accidents and misunderstandings, adding tensions to bordering nations, already flooded with refugees.

With more than 10,000 nuclear warheads on Earth, sufficient to destroy civilization, the prevalence of cyberattacks to infrastructure and disinformation campaigns spreading virally raise the stakes further. The disruption from the COVID pandemic over the last two years and the threat of climate change have changed the landscape, further heightening the vulnerability of the planet's populations.

The U.S. is at a significant turning point for nuclear policy with any potential arms talks in a state of suspension. The Kremlin's position of using force to determine borders and reclaim Soviet Union territory, marks a return to a pre-Cold War order. The danger is complicated by stronger ties forged between Russia and China. China's growing nuclear arsenal places the fate of Taiwan in question. What happens next will affect global safety and security for generations to come.

A New Nuclear Weapons Arsenal

A new generation of nuclear weapons being built by the United States, Russia and China are eerily reviving the Cold War-era arms race, revisiting this risky relationship among nuclear armed nations in a world where technologies and sophisticated non-state actors both exist. Instead of decreasing nuclear arsenals, costly modernization plans make tensions riskier.

Today, the U.S. has roughly 4,000 to 5,000 nuclear warheads. Under the New Strategic Arms Reduction Treaty (New START), it can deploy 1,550 "strategic" warheads. About 900 of these can be fired within minutes of a presidential decision. If we were to use every weapon in our military stockpile, either the U.S. or Russia could drop a bomb on every city of the world with populations over 100,000 to essentially end all human and animal life on earth.

2021 ESTIMATED GLOBAL NUCLEAR WARHEAD INVENTORIES

The world's nuclear-armed states possess a combined total of nearly 13,080 nuclear warheads; more than 90% belong to Russia and the United States. Approximately 9,600 warheads are in military service, with the rest awaiting dismantlement.



The Nuclear Non-Proliferation Treaty (NPT) of 1970 was a multilateral agreement between non-nuclear nations and nuclear-armed nations with the objective to limit nuclear weapons through non-proliferation, disarmament, and peaceful use of nuclear energy. The NPT was accepted by 191 countries, including the U.S., the U.K. and Russia (though not India, Israel, Pakistan, and North Korea). The last conference on the treaty in 2015 ended without movement on reducing arsenals.

This impasse over the NPT, resulted in The Treaty on the Prohibition of Nuclear Weapons, adopted in 2017 by 122 member states of the UN and signed by the Secretary-General. It is the first legally binding international agreement to comprehensively prohibit nuclear weapons with the goal of total elimination. However, sixty-nine nations didn't vote, including the nuclear weapons states and NATO members (except The Netherlands, which voted 'no'). The treaty prohibits the development, testing, production, stockpiling, stationing, transfer, use and threat of use of nuclear weapons.

The United States and Russia

- Nine countries in the world possess a total of about 14,900 nuclear weapons.
- The U.S. and Russia account for 93 percent of them.

Since the mid-1980s, global arsenals have shrunk by over two-thirds. More countries have given up weapons and programs in the past 30 years than have tried to acquire them. However, after more a couple decades of talks between the U.S. and Russia on nuclear arms control, the relationship has deteriorated. After conflicts including the Syrian War, disputes about the NATO missile defense systems, Putin's annexation of Crimea in 2014, and now the invasion of Ukraine, concerns have reached a critical point.

Every nuclear missile that Russia could deploy is potentially capable of defeating America's missile defense systems. Russia is working on the deployment of its own anti-missile shield designed to diminish the effectiveness of U.S. nuclear weapons, with hypersonic missiles. Though these defense systems are unproven, the race to build them increases the threat.

Any potential deal to be made with the Kremlin on nuclear weapons, including a new ABM treaty and disarmament agreement that reduces the numbers of weapons and eliminates multiple warheads (on land-based missiles and missiles launched from submarines), seems impossible currently. Yet an agreement is all the more important.

Other Countries with Nuclear Weapons

At the dawn of the nuclear age, the U.S. hoped to maintain a monopoly on its new weapon, but the secrets and the technology soon spread. The U.S. conducted its first nuclear test explosion in July 1945 and dropped two atomic bombs on Hiroshima and Nagasaki, Japan. Just four years later, the Soviet Union conducted its first nuclear test explosion. Great Britain, France and China followed. In 1968, seeking to prevent nuclear weapons from expanding further, the Non-Proliferation Treaty (NPT) went into effect, followed by the Comprehensive Nuclear Test Ban Treaty (CTBT), negotiated in 1996, which the U.S. did not vote to ratify.

The proliferation of nuclear weapons among more countries remains a constant danger with more nations able to produce bombs. India, Israel and Pakistan never signed the NPT and possess nuclear arsenals. North Korea withdrew from the NPT in January 2003 and continues to test nuclear devices. Iran and Libya have pursued secret nuclear activities, Syria may have too. And Belarus just renounced its non-nuclear status.

China, India and Pakistan are pursuing new ballistic missile, cruise missile and sea-based nuclear delivery systems. In addition, Pakistan has developed tactical nuclear weapons to counter what it sees as conventional military threats from India. After Trump withdrew from the JCPOA, Iran dramatically accelerated its nuclear program. Talks to restore the 2015 deal are close. They put caps on stockpiles of enriched uranium and renew inspections in exchange for sanctions relief.

What Are Possible Solutions?

Effective arms control negotiations must include an appreciation of history, a realistic assessment of the present and the ability to project into the future. The solutions are not politically easy but are somewhat straightforward: do not expand nuclear arsenals. Instead, reduce weapons stockpiles, ideally until they are all gone.

The U.S. can't ignore threats from Vladimir Putin to modernize and expand his country's nuclear arsenal. Nor should we accept that North Korea continues to develop its nuclear weapons systems, including an ICBM capable of reaching the U.S., or Pakistan developing tactical weapons and endeavoring to give commanders the authority to use them on the battlefield.

The tools available to limit nuclear risks—diplomacy, sanctions, embargoes, international agreements, and treaties—may not be completely effective, but they have prevented countries from obtaining nuclear weapons and helped reduce weapons stockpiles by more than a factor of 10.

Citizens need to engage in discussions with family, friends and elected officials about the reality of nuclear weapons, the reduction of their numbers globally, the risks, costs and threat to the future of humanity. Every antiquated weapon dismantled and new program scraped takes us one step away from the worst kind of catastrophe imaginable.

Biden's National Security Council plans to convene a meeting on the administration's Nuclear Posture Review in 2022. Elements within the Pentagon may see China's nuclear expansion and Russia's weapons modernization as a threat and will try to influence the president. Other experts recommend additional steps to mitigate the dangers of nuclear arms:

- Adopt a "no first use" (pre-emptive strike) policy to prevent an accidental launch
- Limit sole presidential authority and increase decision time (from 10 minutes)
- Take 400 ICBMs off high alert to avoid false alarms; once launched they can't be recalled; each have warheads 20 times more powerful than the Hiroshima bomb

Nuclear weapons should only serve defensively to deter aggression and prevent war. But this assumption is now in question and the Kremlin's nuclear saber-rattling is more of a shield preventing interference in their aggression—not a means to ensure world peace and stability. The danger of unpredictable world leaders of nuclear states underscores the importance of rallying the political will to change nuclear policies.

References

- Joint Statement of the Leaders of the Five Nuclear-Weapon States on Preventing Nuclear War and Avoiding Arms Races: <https://www.whitehouse.gov/briefing-room/statements-releases/2022/01/03/p5-statement-on-preventing-nuclear-war-and-avoiding-arms-races/>
- The Outlook for Avoiding Catastrophe: https://www.ploughshares.org/sites/default/files/Hale-Report-2020_v7.pdf
- The Bulletin of Atomic Scientists' Doomsday Clock: <https://thebulletin.org/doomsday-clock/current-time/>
- Arms Control Association: fact sheets, country profiles <https://www.armscontrol.org/factsheets>
- Book: [The Button: The New Nuclear Arms Race and Presidential Power from Truman to Trump](#) Tom Collina and former U.S. Secretary of Defense William Perry
- FAQ: "About a Nuclear Blast" from the CDC: <https://www.cdc.gov/nceh/radiation/emergencies/nuclearfaq.htm>
- NTI Statement on Invasion of Ukraine: <https://www.nti.org/news/statement-from-ernest-j-moniz-sam-nunn-and-joan-rohlfing-on-ceasing-russias-invasion-of-ukraine/>