

Responding to Troubling Trends in Russia's Nuclear Weapons Program

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KEY TAKEAWAYS

Among all contenders, including China and North Korea, Russia is arguably the country most actively developing new nuclear weapons and delivery systems today.

Today, nuclear weapons play an important role in the evolving great-power competition among the U.S., Russia, and China and in the strategic balance of global power.

The U.S. should continue to make the development of missile defense capabilities and nuclear force modernization a U.S., NATO, and allied defense priority.

Among a number of international contenders, including China and North Korea, Russia is arguably the country that is most actively developing new nuclear weapons and delivery systems.

With at least six strategic projects unveiled in recent years, including a new intercontinental ballistic missile (ICBM), three hypersonic vehicles, a nuclear-powered underwater drone, and a nuclear-powered cruise missile, Russia poses a number of new challenges for the United States, the North Atlantic Treaty Organization (NATO), and international security.

These Russian weapons developments are especially troubling considering Moscow's malign behavior, from its annexation of Crimea and actions in Eastern Ukraine to its involvement in the civil war in Syria and its use of chemical weapons in assassination attempts at home and abroad.

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Indeed, The Heritage Foundation's *2021 Index of U.S. Military Strength* judges that "Russia remains the primary threat to American interests in Europe and is the most pressing threat to the United States," describing Russia as "aggressive in its behavior and formidable in its growing capabilities."¹

Important for American interests, the Russian threat has a strong strategic—or nuclear weapon—component.

Indeed, according to the *2018 Nuclear Posture Review* (NPR):

While Russia initially followed America's lead and made similarly sharp reductions in its strategic nuclear forces, it retained large numbers of non-strategic nuclear weapons. Today, Russia is modernizing these weapons as well as its other strategic systems. Even more troubling has been Russia's adoption of military strategies and capabilities that rely on nuclear escalation for their success. These developments, coupled with Russia's seizure of Crimea and nuclear threats against our allies, mark Moscow's decided return to great power competition.²

Moreover, according to a 2020 assessment by the National Defense University's Institute for National Strategic Studies (INSS):

Russia has nearly completed modernizing its entire strategic nuclear arsenal and has also introduced or stated its intent to develop several nontraditional nuclear systems (so-called exotic weapons) that are important, from Moscow's vantage, to pose a credible retaliatory threat to the United States.³

While some experts understandably question the utility of some of these nontraditional or "exotic" weapons systems, including whether they will ever be successfully fielded, militarily significant, or affect the existing strategic balance, these weapons developments should be taken seriously.

These new nontraditional or exotic weapon systems include the hypersonic vehicle-carrying Sarmat ICBM, the Avangard hypersonic boost-glide vehicle (HGV), the Tsirkon sea-launched hypersonic cruise missile, the Kinzhal air-launched hypersonic ballistic missile, the Burvestnik nuclear-powered cruise missile, and the Poseidon nuclear-powered underwater drone.

Not only are these weapons potential threats, they also are arguably a signal of Russia's continuing commitment to the primacy of its nuclear forces as an element of its defense policy, its ongoing drive for military innovation, as well as an effort at diversifying and deepening its strategic forces and military threat.

It might also be argued that the development of these new strategic systems is an effort to enhance Russia's status as a great power and increase its capability to exert political-military power abroad on competitors and potential foes through deterrence, threats, and coercion.

More broadly, these novel nuclear-capable weapons, as part of great-power competition, could, according to INSS, "have important effects on U.S. extended deterrence relationships, prospects for further nuclear proliferation, and the future of the global nonproliferation regime."⁴

Lastly, these nontraditional strategic systems will also possibly enhance the political power of Russian President Vladimir Putin and the Kremlin by demonstrating to its citizens its continued and growing commitment to the security of the homeland from potential enemies.

Accordingly, in response, the United States should:

- **Continue** to make the development of missile defense capabilities a U.S. and NATO defense priority, including the development and deployment of counter-hypersonic capabilities and space-based sensors;
- **Increase**, alongside U.S. allies and partners, deterrence against Russia's conventional and hybrid threats to NATO and Europe in order to reduce the chances of open conflict and escalation;
- **Fund** U.S. nuclear modernization for the purposes of providing political-military assurance to allies and maintaining U.S. direct and extended strategic deterrence capabilities, thereby reducing the risk of Russian provocations and international adventurism; and
- **Engage** Russia in substantive diplomatic and security dialogues about these new strategic weapon systems as soon as possible for reasons of strategic stability, nuclear risk reduction, and potential arms control.

Russian Nuclear Weapons Developments

Russia has long placed a high priority on its nuclear arsenal, especially since the end of the Cold War, when its conventional forces began to diminish in capability in comparison to NATO's conventional forces.

Today, unconventional weapons, including nuclear forces, play an important role in the evolving great-power competition involving the United States, Russia, and China; potential arms races; and possible shifts in the strategic balance of global power.

Indeed, according to the National Defense University's *Strategic Assessment 2020*:

Weapons of mass destruction (WMD)—nuclear, biological, and chemical weapons and the means to deliver them—are an important feature of the global security environment and a key element of Great Power competition. For Russia and China, WMD contribute to multiple goals: conflict deterrence at the strategic and regional levels; regime survival; coercion of rival states; and, potentially, as an adjunct to conventional forces to support operations. U.S.–Russia competition in nuclear weapons has been constrained in recent decades by various arms control agreements, but the erosion of this regulatory regime in the context of deteriorating bilateral relations could create new competitive pressures.⁵

According to the Pentagon's 2018 NPR, "Most concerning are Russia's national security policies, strategy, and doctrine that include an emphasis on the threat of limited nuclear escalation, and its continuing development and fielding of increasingly diverse and expanding nuclear capabilities."⁶

In addition, the NPR states: "Russia considers the United States and the North Atlantic Treaty Organization (NATO) to be the principal threats to its contemporary geopolitical ambitions. Russian strategy and doctrine emphasize the potential coercive and military uses of nuclear weapons."⁷

To this end, in an early 2018 national address to the Russian Federal Assembly, Putin unveiled five new nuclear weapons delivery systems, admonishing listeners at home and abroad: "Russia still has the greatest nuclear [weapon] potential in the world, but nobody listened to us... Listen [to us] now."⁸

Unquestionably in an act of brazen intimidation toward the United States, one part of a provocative video presented at the address showed a missile conducting a strike on what appears to be Florida, the official state of residence of then-President Donald Trump.⁹

"Any use of nuclear weapons against Russia or its allies, any kind of attack, will be regarded as a nuclear attack against Russia, and in response, we will take action instantaneously no matter what the consequences are," Putin said. "Nobody should have any doubt about that."¹⁰

According to the Director of National Intelligence's (DNI) 2019 annual threat assessment to Congress on this issue:

Russian President Vladimir Putin used his annual address in March 2018 to publicly acknowledge several of these weapons programs, including a new ICBM designed to penetrate US missile defense systems; an intercontinental-range,

TABLE 1

New Russian Nuclear-Capable Weapons

Russian Name	Capability	Warhead
Tsirkon	Sea-launched hypersonic missile	Dual-Capable
Avangard	Hypersonic boost-glide vehicle (HGV)	Dual-Capable
Kinzhal	Air-launched hypersonic missile	Dual-Capable
Sarmat	Heavy ICBM + HGV	Nuclear/HGV
Burvestnik	Nuclear-powered cruise missile	Nuclear
Poseidon	Nuclear-powered underwater drone	Nuclear

SOURCE: Heritage Foundation research.

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hypersonic glide vehicle; a maneuverable, air-launched missile to strike regional targets; a long-range, nuclear-powered cruise missile; and a nuclear-powered, transoceanic underwater vehicle.¹¹

The following year, in another presidential address to the Federal Assembly, Putin announced an additional new nuclear-capable weapons system, a sea-launched hypersonic cruise missile, bringing the total to six new potentially strategic systems available to Russian forces in the coming years.¹²

Indeed, according to Putin in late 2019, Russia has modernized 82 percent of its nuclear air-sea-land triad, noting that “our equipment must be better than the world’s best if we want to come out as the winners.”¹³ In reference to a possible all-out, nuclear conflict, Putin’s use of the word “winners” is noteworthy. He added: “[W]e will continue to create other promising missile systems” to further deter possible enemies.¹⁴ One analysis assesses that the modernization of Russian strategic forces adds to the “uncertainty” about Russia’s intentions and nuclear strategy.¹⁵

Indeed, all of these new weapons seem to indicate a deep and continuing Russian concern about U.S. missile defense and are purposed with overcoming air and missile defenses in an effort to preserve Russia’s strategic deterrence.¹⁶

But these novel weapons, according to one analysis, also indicate that Russian nuclear doctrine goes beyond strategic deterrence and in the direction of regional warfighting with an “escalate to de-escalate” strategy and possibly even having an element of psychological “terror” at the idea of their use (such as the Poseidon).¹⁷

Of course, the production, testing, and deployment of new Russian strategic systems are likely to be affected by the usual challenges of fielding new systems. At the current time, the process is also likely to be influenced by the impact of the coronavirus pandemic on the Russian defense industry.¹⁸

While all of these weapons pose unique challenges, the hypersonic weapons (HSWs) are particularly vexing because of their reported velocity, maneuverability, and expected reduction in reaction time allowed the defending forces.

The New Russian Nuclear-Capable Weapons

Most of the system capabilities described in this section are from Russian open sources, meaning that data, such as velocity or range, could be exaggerated for a number of purposes, including the development of threat perception among potential foes, such as the United States.

The Tsirkon Hypersonic Cruise Missile. The Tsirkon is a sea-launched, hypersonic, dual-capable cruise missile with a reported speed of Mach 9 and a range of more than 1,000 kilometers (km), according to a media source citing a senior Russian officer.¹⁹

The cruise missile reportedly may be launched from submarines and surface ships against land targets and sea targets.²⁰ Its expected mission is to destroy enemy aircraft carriers, missile defense systems, and command-and-control centers.²¹

Flying the low-level, maneuverable flight profile of a cruise missile at many times the speed of sound with either potentially conventional or nuclear warheads makes the Tsirkon a daunting challenge for defending adversary air defenses and missile defenses.

Putin has warned that Russia might deploy such hypersonic nuclear-capable missiles on submarines near U.S. waters.²² The Tsirkon entered testing in 2015 and was test-launched most recently in November 2020.²³

The Avangard Hypersonic Boost-Glide Vehicle. Another newly developed Russian HSW designed to destroy or counter U.S. air and missile defenses—and assure a second-strike capability—is the intercontinental-range, dual-capable, hypersonic, boost-glide vehicle, the Avangard.²⁴ This HGV is reportedly capable of traveling up to Mach 27.²⁵

Proclaimed operational by Russia's Ministry of Defense in December 2019, the Avangard is launched—or boosted—initially aboard an ICBM.²⁶ At the ICBM's flight apogee, the maneuverable HGV is released en route to its target.²⁷

The Avangard is expected to be carried aboard the silo-based SS-19 ICBM initially, and the Russian Ministry of Defense claims that it entered service in December 2019 with a unit in the southern Ural Mountains.²⁸ Eventually, the Avangard will be paired with the Sarmat next-generation heavy ICBM.²⁹

Capable of using a conventional warhead, the Avangard can also reportedly carry a two-megaton nuclear warhead.³⁰ It reportedly can be used as a first-strike or second-strike weapon against a variety of targets, including missile defense sites, missile silos, and high-value command-and-control complexes.³¹

The Kinzhal Hypersonic Ballistic Missile. Similarly, Russia is deploying the Kinzhal, an air-launched, dual-capable hypersonic ballistic missile capable of targeting both land targets and sea targets with either conventional or nuclear warheads.³² The missile can reportedly fly up to Mach 10.³³

The Kinzhal is reportedly based on the land-based Iskander short-range ballistic missile.³⁴ It can be carried aloft aboard the Tu-22 Backfire bomber and the MiG-31 Foxhound fighter.³⁵ The missile is believed to be operational with a number of MiG-31 aircraft specially outfitted to carry the Kinzhal.³⁶

The total range of the system, which includes the range of its launch platform, is expected to be 2,000 km, making the Kinzhal a regional threat to both land targets and maritime targets, including missile and air defense systems and aircraft carriers.³⁷

The Sarmat Heavy ICBM. The Sarmat is a next-generation, silo-based, liquid-fueled heavy ICBM currently in development and intended to replace the aging SS-18 Voevoda ICBM.³⁸ Reportedly capable of carrying 20 warheads, its mission is nuclear strike as well as serving as the boost vehicle for the Avangard.³⁹ With a reported throw weight (potential payload) of 10 tons, its warhead will likely carry multiple independently targetable re-entry vehicles (MIRVs) along with countermeasures to evade potential missile defense intercepts.⁴⁰

With an expected range of 16,000 km, this counterforce weapon will conceivably be able to attack the United States via either the North Pole or South Pole.⁴¹ A southern approach would reportedly allow the ICBM to avoid U.S. early warning radars and missile defense installations in Alaska and California.⁴²

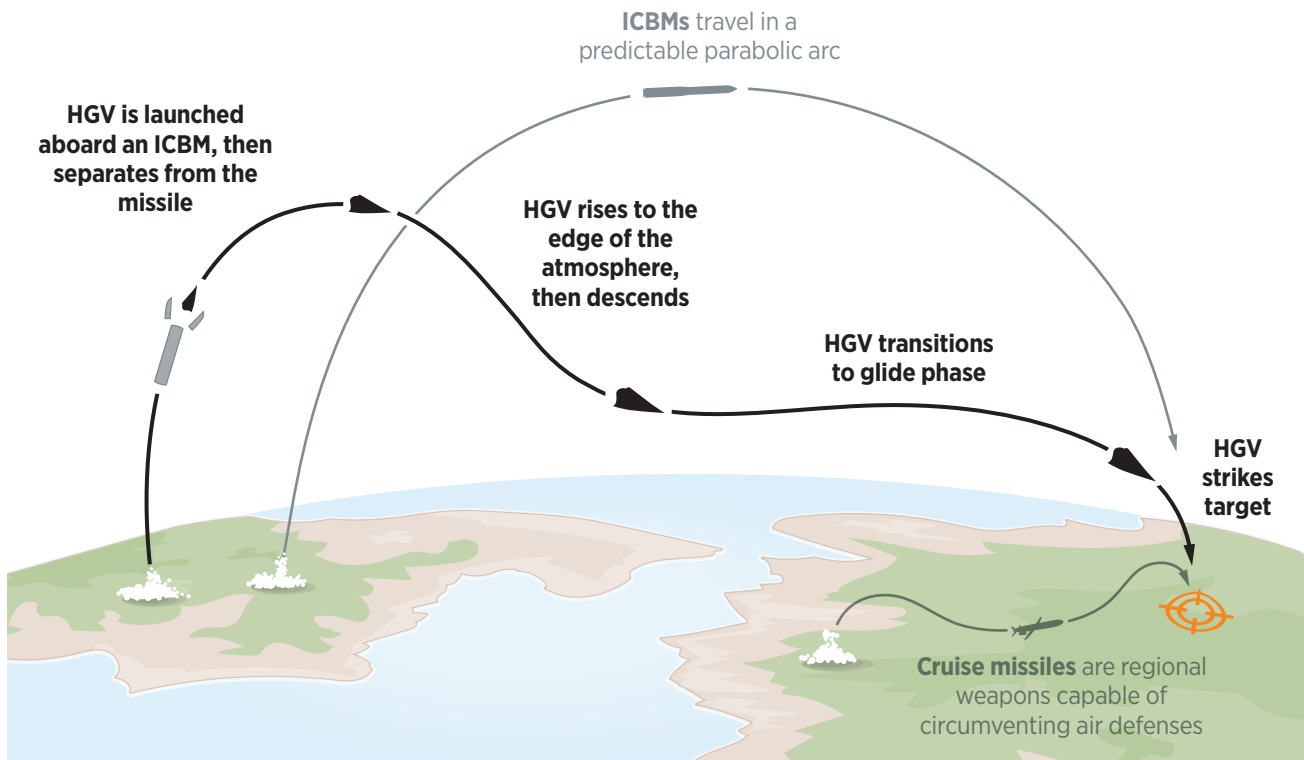
Some portion of the Sarmat arsenal is also expected to be tasked with carrying the Avangard HGV to intercontinental distances. The Sarmat could be capable of carrying three to five hypersonic boost-glide vehicles.⁴³

Though possibly overly optimistic, according to Russian military sources, the Sarmat is expected to conduct flight tests sometime in 2021 and enter service with Russia's Strategic Missile Forces in 2022.⁴⁴

FIGURE 1

Russia's New Hypersonic Boost-Glide Vehicle (HGV)

Russia is developing and deploying a new missile with unique capabilities. The Avangard is a high-velocity glide vehicle that can carry conventional or nuclear warheads. It can maneuver to avoid anti-missile defenses, making it difficult to accurately anticipate where it might strike.



SOURCE: Heritage Foundation research.

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The Burvestnik Cruise Missile. The Burvestnik is a nuclear-powered, nuclear-armed subsonic cruise missile, which, due to its unique propulsion plant, could theoretically have “unlimited range.”⁴⁵ According to one analysis, the “military objective of the Burevestnik is to evade missile defense, follow untraditional flight paths, and be able to strike any target with little warning,” including a retaliatory strike.⁴⁶

The controversial program is not yet operational, and reportedly has suffered a number of setbacks in research and development, including a possible fatal testing explosion in summer 2019 that may have released radioactive fallout into the atmosphere.⁴⁷

The ground-based missile is also controversial in that its nuclear power plant could shed radioactive material en route to its target, possibly

endangering those living below and along its flight path, potentially causing collateral damage for innocents.

The Poseidon Underwater Drone. Russia is also developing the Poseidon, an autonomous, nuclear-powered, nuclear-capable underwater drone that will be carried aboard specially configured submarines currently under development.⁴⁸

Potentially targeting a variety of military and counter-value targets, including large coastal cities, major naval bases, and port facilities, the Poseidon reportedly will use a subsurface nuclear explosion to create a tsunami-like wave to swamp its objectives.⁴⁹

Estimates vary widely among experts, but the drone might carry a nuclear warhead ranging from two megatons to a fantastical 100 megatons.⁵⁰ While unconfirmed, the Poseidon may employ a cobalt bomb that creates long-lived radioactive contamination, leaving its target uninhabitable for a lengthy period.⁵¹

The Poseidon reportedly has a range of 10,000 km, which gives it significant stand-off capability against both American coasts.⁵² Russia will reportedly deploy a total of 32 Poseidon aboard two submarines with the Northern Fleet and two submarines with the Pacific Fleet.⁵³

Expected to be primarily purposed as a retaliatory second-strike—or even third-strike—weapon that would challenge U.S. and allied anti-submarine forces, it is reportedly set to be in service by 2027.⁵⁴

Political–Military Challenges

While some national security and foreign policy experts understandably question the utility and capability of some of these new or exotic Russian weapons systems, the United States and NATO, among others, should take these military developments seriously for a number of reasons.

Broadly speaking, these nontraditional weapons constitute a unique and evolving political–military threat primarily to American, NATO, allied, and others’ national security interests, potentially affecting U.S. direct deterrence in defense of the homeland, as well as some allies’ perceptions of U.S. political–military assurances and extended deterrence.

While unlikely to shift the strategic balance with the United States and NATO, these novel systems diversify the Russian conventional and unconventional threat to American and allied national security interests, especially in regard to the hypersonic threat.

These new weapons also expand Russian nuclear first-strike and second-strike options, strengthening Moscow’s strategic deterrent posture,

potentially providing Russia with greater freedom of action internationally, which would be of significant consequence.

If fielded, these advanced armaments will also likely increase the perception of Russia's military capabilities among competitors, rivals, and neighboring and other states, improving Moscow's ability to deter, dissuade, or deny any attempts at influence, coercion, or aggression.

The U.S. and its allies will also need to pose, and answer, questions about the potential transformational threat from these weapons on transatlantic security and the possible political and military policy responses by the United States, NATO, and other American allies and partners.

For instance, the Russian development and deployment of these new strategic weapons will arguably have a negative psychological and political effect on the NATO alliance and Europe, which are both concerned about the regional security environment, especially as regards nuclear matters.

In addition, even with the extension of the New Strategic Arms Reduction Treaty, these new weapons systems may give Russia added clout in any future arms control negotiations with the United States.

There is a potential domestic angle as well. Being on the cutting edge of new military capabilities, the deployment of novel nuclear-capable systems arguably enhances Russia's political pride and the regime's self-image at home, potentially strengthening the Kremlin's grip on political power.

Operational Risks. Designed to evade or overcome U.S. missile defenses and re-establish Russia's sense of strategic stability, these new nontraditional weapons, especially the HSWs, all pose potential operational risk to U.S. forces and American interests at home and abroad.⁵⁵

Due to a number of reasons, the HSWs are a good example of the concern about the evolving Russian nuclear threat. For example, these weapons fly at tremendous speed within the atmosphere, reducing the potential reaction time of a defending adversary.

As Air Force General John Hyten, then-Commander of Strategic Command, noted in 2019, while the United States might have 30 minutes before an ICBM strikes the United States from Russia, it could be half that time with an HSW.⁵⁶

As a result, these high-speed weapons could complicate and significantly curtail the timeline of the defender's decision-making process, increasing the "the risk of miscalculation or unintended escalation in the event of a conflict."⁵⁷

Besides their high speed, these dual-capable HSWs are also maneuverable, creating trajectory and targeting uncertainties in comparison to ballistic missile systems which follow a predictable path to its target.⁵⁸ According to one analysis: "In contrast to ballistic missiles, which also travel

at hypersonic speeds, hypersonic weapons do not follow a parabolic ballistic trajectory and can maneuver en route to their destination, making defense against them difficult.”⁵⁹

A defense dilemma also arguably exists for the U.S. and its allies with the Poseidon and Burvestnik systems due to their stated long-range ability to launch from inside friendly, protected territory or waters, and potentially unpredictable travel profiles (such as course, altitude, and depth) en route to the target.

As such, there are clearly challenges for U.S. and allied forces defending their homelands and interests against these novel weapons—from detection and tracking to engagement.

While the U.S. is developing theater-range, conventionally armed HSWs for offensive purposes, there is currently no dedicated missile or air systems to counteract HSWs.⁶⁰ The best current option is to strike these weapons or their platforms, using kinetic or non-kinetic options (such as precision strikes or cyber operations) “left of launch” before they are fired at their targets. This requirement, of course, can create significant intelligence and warning challenges.

Fortunately, the U.S. is making additional efforts to address some of these challenges, especially regarding HSWs. For instance, because HSWs have a less distinguishable infrared signature and fly at lower altitudes than ballistic missiles, the Pentagon and U.S. defense industry are developing a low-Earth-orbit satellite constellation capable of detecting and tracking HSWs throughout the entirety of their flight.⁶¹

In addition, since current missile defense systems are purposed with targeting ballistic missiles, some U.S. defense firms were reportedly looking at refining or building on existing missile defense systems to address the hypersonic threat.⁶² The Pentagon’s Defense Advanced Research Projects Agency was also reported to be working on a hypersonic missile defense interceptor as late as 2020.⁶³

Theoretically, HGVs and their launch vehicles may be vulnerable to missile defenses at points along their flight paths, including in the ascent, glide, late-glide, and terminal phases of flight.⁶⁴

Of course, while the Russians are spending time, effort, and financial resources on these new strategic weapons systems, it is possible that some of these systems will never become operational or be produced in significant numbers to be militarily significant, remaining a novelty.

This outcome, not unusual in weapons development, could end up being due to any number of factors, including flawed design or engineering, development or production costs, or mismatched doctrine or operational need, among others.

Lastly, though a system such as the Burvestnik may not be operationally deployed, the research and development phases—even if unsuccessful—can lead to new technologies that may aid other Russian weapons systems that are under development or yet to come.

Recommendations for the U.S.

In response to these developments in Russia’s nuclear arsenal and posture, the United States should:

- **Continue to make the development of missile defense capabilities a U.S., NATO, and allied defense priority, including the development and deployment of counter-hypersonic capabilities and space-based sensors.** In light of the emerging Russian nontraditional conventional and nuclear threats, the Administration, Congress, and allies should work together to advance U.S. and NATO missile defense systems to detect, track, and defeat a variety of missile threats, including the emerging Russian dual-capable hypersonic threat. A failure to do so will provide Russia with an asymmetric hypersonic missile advantage that will give Russia political–military leverage and hold NATO forces at risk. Discussions should also be conducted with other missile defense–capable allies, such as Japan, which might be threatened by Russian HSWs. Since detection and tracking are critical to deterrence and defense against HSWs, appropriate priority must also be given to the development and deployment of U.S. space-based sensors.
- **Increase, with allies and partners, deterrence against Russia’s conventional and hybrid threats, especially to NATO and Europe, in order to reduce the chances of escalation of aggression and open conflict.** Russian ambitions abroad must be deterred across the range of international engagement, including diplomatically, economically, informationally, or militarily—or any combination thereof. While Russia’s seemingly ambitious nuclear policy is related to its concerns about NATO’s conventional superiority, Russia must first be deterred on the ladder of escalation well before open conflict erupts. In addition, burden sharing—whether economic, diplomatic, on defense spending or otherwise—must be distributed equitably among the NATO allies and is critical to this joint deterrence, dissuasion, and denial effort. Moreover, the Pentagon must again emphasize

anti-submarine warfare in order to address threats such as the Poseidon, among other subsurface threats.

- **Fund U.S. nuclear modernization to provide political–military assurance to allies, and to ensure U.S. direct and extended strategic deterrence capabilities, thereby reducing the risk of Russian provocation and international adventurism.** While some progress has been made, U.S. nuclear forces are long overdue for replacement, with many systems dating back to the 1970s. A failure to introduce replacement systems quickly enough could result in gaps in the U.S. strategic deterrent, especially with the introduction of new Russian nuclear-capable weapons. Such a development is unacceptable. As an adjunct to this, in response to increased Russian nuclear challenges, NATO must reaffirm its commitment to remaining a nuclear alliance and maintain U.S. tactical nuclear weapons and capabilities in Europe.
- **Engage Russia in substantive diplomatic and security dialogues about these new strategic weapons systems as soon as possible for reasons of strategic stability, nuclear risk reduction, and potential arms control.** Both sides must pursue political–military efforts aimed at strategic stability and nuclear risk reduction. Russia’s new nuclear-capable weapons must be included in any new talks or negotiations, including arms control discussions. The New START extension covers Sarmat and Avangard, but allows Russia to continue developing its other destabilizing systems unchecked. Washington should also look to other capitals, especially in Europe but also in Asia (such as Tokyo), for consultation and help with influencing and pressuring Russia to come to the table for substantive talks on these new weapons.

Conclusion

It is unclear at this time whether all or some of these new Russian strategic weapons will ultimately be fielded, due to a number of factors—from the challenging development of novel technologies to potential defense budgetary constraints during the COVID-19 pandemic.

The most likely nuclear-capable weapons that Russia will field are the new Sarmat ICBM, due to the need to replace an aging strategic system, and the various HSWs as an emerging key technology among the great powers and their potential impact on future warfare.

Russia is arguably less likely to field the Burvestnik cruise missile and the Poseidon underwater drone—or, if deployed, only in small numbers—due to their likely limited military utility, complex engineering, and expense. Nonetheless, the potential undersea threat of Poseidon warrants U.S. expanded undersea sensors and anti-submarine warfare capacity.

Of course, these new systems demonstrate to the Russian people that under Putin’s leadership Russia is committed to ensuring the country’s national security, and is continuously thinking about how to improve it through defense innovation and modernization.

To foreign observers, the dramatic, public unveiling of these weapons is meant to send an unmistakable message: Putin’s Russia is a dynamic, advanced, global military power that will be able to protect and advance its national interests against any foe, but especially the United States.

The new weapons also signal a significant emphasis on strategic systems as central to Russia’s defense plans, doctrine, and policy, showing little change in Moscow’s questionable confidence that its conventional forces are able to meet its security needs in Europe—or even Asia (for example, in China).

Indeed, according to the DNI’s 2019 annual threat assessment to Congress, “We assess that Russia will remain the most capable WMD adversary through 2019 and beyond, developing new strategic and nonstrategic weapons systems.”⁶⁵ Russia’s nontraditional strategic systems support that assessment.

These novel nuclear-capable weapons complicate U.S. and allied defense planning and policy, and must be addressed in the short term to bolster American and allied security, reducing the chances of misunderstanding, misperceptions, and mistakes that could lead to crisis and conflict.

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