

**Statement of Ms. Melissa Dalton**  
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**Before the**  
**House Armed Services Committee Strategic Forces Subcommittee (HASC-SF)**  
**OnFY22 Strategic Forces Posture: Nuclear, Missile Defense, Space, and Hypersonics**  
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**Introduction**

Chairman Cooper, Ranking Member Turner, and distinguished Members of the Committee, thank you for the opportunity to testify before you today on the international security environment and the Department's nuclear, missile defense, space, and hypersonics policy, strategy, and capabilities. It is an honor to appear beside both Admiral Richard and General Dickinson, and I look forward to answering your questions.

Today, the United States faces a complex, global threats environment characterized by militarily capable strategic competitors, increasingly dangerous regional powers, and accelerating technological change with significant strategic effects.

Both Beijing and Moscow have invested heavily in efforts meant to challenge U.S. strengths and prevent us from defending our interests and that of our allies. In particular, China is a pacing challenge as it has rapidly become more capable and assertive. China's military modernization—including nuclear forces, cruise, ballistic, and hypersonic missiles, and its space and counterspace threats—presents an increasingly urgent challenge. Beijing is the only competitor potentially capable of combining its economic, diplomatic, military, and technological power to challenge the long-standing free and open international order. As we address accelerating competition by China, we also must ensure that we continue to be fully ready to respond to and effectively deter threats from Russia, Iran, and North Korea. The world has witnessed destabilizing and aggressive actions by Russia in its attempt to undermine the current international system. Russia remains determined to not only enhance its global influence, but also erode U.S. leadership. In addition, both Iran and North Korea are destabilizing regional stability, pursuing game-changing capabilities and technologies, and threatening U.S. allies and partners.

We are confronted with both unique and overlapping challenges. In a security environment featuring increasingly assertive and dangerous competitors fielding technologically advanced military capabilities able to achieve strategic and potentially escalatory effects, we must be able to maintain and strengthen our corresponding strategic capabilities. Our strategic forces—nuclear, space, missile defense, and hypersonic—offer critical capabilities that are essential to deterring adversaries so that we can protect the American people and our allies and partners.

As the *2021 Interim National Security Strategic Guidance* states, while today is a time of unprecedented challenges, it is also a time of unmatched opportunity. None of these evolving challenges can be effectively addressed by one nation alone. One of the greatest advantages the United States has today and in the future is its alliances and partnerships with those who share common national security interests. Together, we can amplify our collective competitive advantages.

## **The Nuclear Threat, Policy, and Posture**

Nuclear deterrence is the Department's highest priority mission. Our nuclear forces provide the bedrock of our national defense, and remain essential to ensure no adversary believes it can ever employ nuclear weapons for any reason, under any circumstances against the United States or our allies without risking devastating consequences. DoD will maintain safe, secure, survivable, and effective nuclear forces that account for the challenges posed by Russia, China, North Korea, and Iran. Together with our conventional capabilities, our nuclear forces ensure that our extended deterrence commitments remain strong and credible.

### Overview of Adversary Threats

Over the next ten years and in response to perceived threats, including potentially first strike capability from the United States, China plans to at least double the size of its nuclear stockpile and carry out a rapid expansion and diversification of its nuclear arsenal. Its arsenal includes a mix of strategic-range systems capable of striking the United States as well as theater-range forces capable of threatening allies, U.S. bases, and forces in the region. China is developing a new generation of mobile missiles, with multiple independently targetable reentry vehicles (MIRVs) and penetration aids to overcome perceived missile defense capabilities. China has developed a new road-mobile strategic intercontinental ballistic missile (ICBM) and has armed its ballistic missile submarine with new submarine-launched ballistic missiles (SLBMs). Although China maintains its "No First Use" policy, these weapons could provide China with coercive options in a crisis or conflict and are a direct threat to U.S. security.

Russia's comprehensive nuclear modernization program includes replacement of legacy systems and the fielding of novel systems on each leg of its strategic triad. To date, Russia has recapitalized roughly 80 percent of its strategic nuclear forces, including an array of modernization efforts and novel weapons programs designed to ensure a responsive strike capability. Russia also has an arsenal of up to 2,000 non-strategic or non-treaty accountable nuclear weapons of more than a dozen types. Furthermore, the Defense Intelligence Agency estimates the number of Russia's non-strategic nuclear weapons will grow significantly over the next decade. Although Russia may claim these weapons are defensive in nature, to address conventional imbalances with the United States and its allies, this arsenal nevertheless provides Russia with a threatening means of coercion and threaten our allies and partners and forward deployed U.S. assets. Russia has also adopted a military doctrine that includes the possibility of limited nuclear first use in a regional context that threatens Russian sovereignty.

Finally, regional states like North Korea and Iran continue to play a destabilizing role, with North Korea in particular continuing to develop its nuclear weapons and ballistic missile programs.

### Status of Review and Renewed Focus

In keeping with past practice for incoming Administrations, the Department will soon begin a set of strategic reviews that will include U.S. nuclear posture and policy, and will be informed by the current security and fiscal environment. The reviews will align with the U.S. national defense strategy and will account for strategic forces across all war-fighting domains. The

reviews will consider and assess adversary nuclear forces and doctrine, U.S. strategy, posture and policy adjustments, and review program execution risk – all with a goal of maintaining a strong and stable deterrent. The views of allies and partners will inform these reviews. As Secretary Austin has said repeatedly, we perform better when we're operating as part of a team, and the Department is committed to meaningful consultation with allies and partners, accounting for their views before reaching any conclusions.

Importantly, the review will include a renewed focus on the need to maintain strategic stability and reduce the risk of miscalculation in a crisis. Arms control agreements and arrangements and constructive dialogue with our nuclear competitors, as well as preventing nuclear proliferation, are in our mutual interest and should remain important tools to advance U.S. national security and hold our adversaries accountable.

The President has already demonstrated his commitment to re-establishing U.S. credibility and leadership on arms control by extending the New START Treaty for five years, in accordance with the terms of the treaty, just days before New START was to expire. Extending New START ensures legally-binding constraints on Russia's nuclear warheads deployed on treaty-defined strategic delivery vehicles, capping these warheads at 1550, and also limits both its deployed and non-deployed launchers. And it keeps in place the treaty's important verification system, to ensure that Russia remains in compliance with its obligations under the treaty. New START provides stability and predictability in addition to placing limits on Russian systems that pose an existential threat to the United States.

As we mark the 11th anniversary of the signing of New START this month, we must look to build on this foundation. The range of Chinese and Russian nuclear modernization make the task of making progress on further arms control all the more necessary. In addition, the migration of strategic effects (with consequent escalatory risk) into cyber, space, and information domains underscores the importance of meaningful dialogue with Russia and China on a range of emerging military technological developments that threaten strategic and regional stability. Presidents Biden and Putin have already agreed to explore strategic stability discussions on a range of existing and emerging security issues. We expect China to accept its responsibility as a nuclear-armed, technologically advanced power, which includes increased transparency and progress on nuclear security, and to take its seat at the table to discuss matters that impact the security of all nations. The Department will support efforts to negotiate agreements and arrangements that make the United States and its allies and partners more safe and secure.

### Nuclear Modernization

As Secretary Austin testified, we must sustain and modernize the nuclear triad to maintain credible deterrence in the face of today's threats. This committee is well aware of the age of our nuclear systems and DoD's challenge in sustaining them as we proceed with modernizing U.S. nuclear forces after decades of deferred recapitalization. U.S. nuclear weapons have been extended far beyond their original service lives, and the tipping point, where we must confront the fiscal and programmatic challenges of simultaneously modernizing each leg of the triad, is now here. While the Administration is reviewing the U.S. nuclear posture, the President's FY 2022 discretionary request supports ongoing nuclear modernization programs while ensuring that these efforts are sustainable. Moreover, as Deputy Secretary of Defense Hicks has said, our nuclear infrastructure is at the very heart of our nuclear deterrent and must be modernized and

appropriately resourced. To continue to meet military requirements and better mitigate future risks, the United States has a number of on-going programs to replace many of these systems in order to ensure our nuclear weapons remain safe, secure, and effective against current and future threats. This includes the modernization of responsive land-based ICBMs, a nuclear long-range cruise missile, a visible and modern bomber fleet and nuclear-capable F-35s capable of delivering weapons in contested airspace, and production and fielding of the Columbia-class ballistic nuclear submarines (SSBNs) and the associated TRIDENT missiles to ensure the most survivable leg of the triad. Furthermore, the United States requires a robust nuclear command, control and communication (NC3) system that ensures the President has the ability to command and control U.S. nuclear forces at all times, even under the most extenuating circumstances. These systems are also well past their predicted life-span and modernizing them, as well as the development of a future NC3 architecture, is long overdue. The Department has already undertaken an examination of legacy NC3 systems to facilitate a transition to a modern architecture fit for 21st century threats. As this effort moves forward, NC3 will continue to be a top priority along with addressing critical elements of the nuclear modernization program.

### Commitment to Allies and Partners

The U.S. nuclear deterrent and the extended deterrence assurances we provide to our allies are an important element of regional and strategic stability. The United States has long committed to extending nuclear deterrence to a number of treaty allies. U.S. nuclear forces and nuclear-sharing arrangement with our allies in NATO for the last 60 years have been central to the security of the Alliance. In particular, our support to the UK and their Continuous-At-Sea-Deterrent has underwritten our collective peace and security from nuclear threats for more than 60 years since the signing of the Mutual Defense Agreement in 1958. And in Asia, our relationships with important allies such as the Republic of Korea and Japan are critical to regional security and stability and provide a powerful deterrent to North Korean threats. We have long-standing extended deterrence dialogues with Japan, the Republic of Korea and NATO, and we will continue to use these venues to deepen our understanding of allied concerns, and assure them as to the continued importance of U.S. extended deterrence commitments as a crucial part of our national security.

### Conclusion

Nuclear weapons have served a central role in U.S. national security strategy for the past 70 years. Not only are they the foundation of our strategy to preserve peace and stability by deterring aggression against the United States, our allies, and our partners, but our nuclear forces underwrite nearly every U.S. military operation around the world. As long as nuclear threats exist, we must have a modern nuclear deterrent that is safe, secure, and credible to keep America and its allies safe, prosperous, and free.

## **The Missile Defense Threat, Policy, and Posture**

### Threat Environment

As missile technology matures and proliferates, the threat to the U.S. homeland, allies, partners, and our deployed forces is steadily growing. Potential adversaries continue expanding their

inventories and adding new and increasingly sophisticated systems, often for the purpose of creating political instruments of regional or global coercion.

The rogue state threat to the United States has intensified. North Korea continues development and deployment of more capable intercontinental ballistic missiles (ICBMs) and sea-launched ballistic missiles (SLBMs). Iran is extending the range, reliability, and accuracy of its missile forces at a concerning rate.

The regional missile threat is alarming as potential adversaries continue to field more accurate and lethal offensive missile systems capable of threatening the U.S., allies, partners, and deployed forces. Pyongyang is accelerating its efforts to field more advanced and reliable short- and medium-range systems, including an increase in recent testing. Iran's short- and medium-range ballistic missiles comprise the largest missile force in the Middle East, which it wields to threaten regional stability. Russia maintains one of the most numerous and sophisticated missile inventories in the world and is building new, advanced ballistic and cruise missiles. In 2019, China launched more ballistic missiles than the rest of the world combined while also placing a heavy emphasis on testing hypersonic glide vehicles (HGV). Missile systems form the backbone of the PRC's anti-access / area denial (A2/AD) strategy to inhibit U.S. power projection capabilities, coerce our allies, and reshape the balance of power in the Indo-Pacific region.

This evolving missile environment informs our missile defense efforts moving forward, which are part of a larger strategic framework to leverage all elements of national power to prevent and deter conflict.

#### Policy Framework for Upcoming Strategic Review

We will review our missile defense policies, strategies, and capabilities to ensure they align with our broader national security and national defense strategy. This review will be informed by several principles. First, we will work to ensure we have an effective and affordable defense to address the rogue state threat to the United States. Second, we will examine means to enhance our regional posture to support our allies and partners, defend deployed forces abroad, and to address anti-access/area denial strategies that seek to inhibit U.S. freedom of action. Third, missile defense will remain an important component of our strategy to assure U.S. allies and partners that we stand firm in our security commitments. In this context, the Department will examine the appropriate mix of capabilities and tools to protect our forces, deter our adversaries, and address future uncertainty while strengthening strategic stability.

#### Homeland Defense

Let me outline where we are today, recognizing the Administration is just beginning its various strategic reviews. As Secretary Austin stated during his confirmation hearing, protecting the homeland is a key priority for the DoD, and missile defense against rogue state threats is a central component of this mission. The United States is currently defended from rogue state ICBM threats by the Ground-Based Midcourse Defense (GMD) system. But, the threat is not static and neither is our commitment to improving the defense of the nation. To that end, the Department recently initiated the development of the Next Generation Interceptor (NGI) which will augment and potentially replace the current GMD interceptors and improve the overall

reliability of the inventory. As this program moves forward, it will do so in a manner that aligns with the Administration's defense goals and priorities.

OSD Policy will help ensure our missile defense capabilities seek synergies with the cruise missile defense mission, and we will work across the Department to ensure the United States is appropriately postured against these threats.

Another vital component of effective homeland and regional defense, which Secretary Austin has noted, will be to enhance our global network of integrated sensors. Space-based and land-based sensors enable a variety of capabilities such as detection, tracking, and targeting through all phases of flight for an incoming missile. We will continue to explore, in particular, advanced space-based sensing capabilities to assist in homeland and regional operations.

### Regional Defense

Over the past decade, the United States has made significant progress in developing capabilities for protection against regional missile threats. We thank Congress for the continued support of regional missile defense systems to address regional missile threats and the A2/AD strategies of potential adversaries. We also look forward to exploring new regional capabilities, like hypersonic missile defense, directed energy technologies, and upgrades to current regional systems such as Patriot, THAAD, and the SM-3 interceptors to maximize their interoperability and defended battlespace. The Department will continue to ensure that we bring a more integrated approach to air and missile defense (IAMD) that not only assists with defense against multiple types of ballistic missile threats but also enables other regional missions, such as defense against cruise missiles and unmanned aerial systems.

### Cooperation with Allies and Partners

Working closely with key allies and partners in Europe, the Middle East, and the Indo-Pacific region to enhance our collective missile defense efforts will be a core focus area for the Department. From a strategic standpoint, and as Deputy Secretary Hicks testified, cooperation in this area strengthens our common protection, enhances deterrence, and provides assurances essential to the cohesion of our alliances in the face of growing regional missile threats, coercion, and attacks. Operationally, by developing a more coordinated and where possible integrated approach to air and missile defense, we will improve our ability to work with allies and partners to collectively address adversary A2/AD strategies and capabilities.

### Conclusion

As the Department prepares for an in-depth strategic review, I assure members of this committee that it will remain committed to key missile defense missions. It will be critical to invest in the right missile defense technologies in a cost-effective and responsible manner to retain our regional and strategic edge long into the future.

### **Space Threat, Policy, and Posture**

Assured access to space, and freedom to operate in space, are vital to addressing the threats and achieving the strategic priorities identified in President Biden's Interim National Security Strategic Guidance. Space-based capabilities are an inextricable component of the daily

workings of modern life, from global commerce, to civil society, to national security, adding \$366 billion to the global economy in 2019, according to the Satellite Industry Association.

Space-based sensors help us monitor and respond to climate change, track logistics flows around the world, chart the economic impacts of a pandemic, verify compliance with arms control treaties, support our warfighters with critical battlespace awareness, and anticipate and respond to crises. The U.S. Space Force's Global Positioning System, now operated by forces assigned to the U.S. Space Command, supports the positioning, navigation, and timing needs of the U.S. Government, and the American people, and serves as a key U.S. benefit to billions of people in nations across the globe. Satellite communications and space-based data transport networks enable everything from television to internet services to our simultaneous command and control of military forces in multiple theaters around the world.

Space is also an arena of strategic competition. Although the United States remains the world's leader in space, and we cooperate with allies and partners who contribute world class space capabilities of their own, we must recognize the growing role that space plays in enabling China's increasingly assertive challenges to a stable and open international system and in Russia's disruptive role on the world stage. Just as we can leverage the power of space-based systems to advance democracy, human development, and economic well-being, so too can anti-democratic forces use these same capabilities to advance their agenda by spreading disinformation that sows divisions within and among free nations, undermines existing international frameworks, and promotes alternative models of authoritarian governance. Sustaining U.S. leadership in space – including by investing in science, technology, engineering, and mathematics education, by leveraging commercial innovation, and by shaping standards of responsible behavior within the domain – is integral to our ability to meet these competitive challenges today and in the future.

The United States would prefer that space remain free of conflict, but we will be prepared to protect U.S. interests in space, just as we do in other domains. The emergence over the past two decades of potential adversaries with counterspace capabilities – missiles that can shoot down satellites, lasers that can blind satellites, co-orbital satellites that can attack other satellites, cyber threats that can attack satellites and their control systems – has made space mission assurance against malicious acts involving space objects a vital concern for the Department of Defense and for all space operators. Likewise, the growing ability of potential adversaries to utilize space-based systems to enable their militaries and threaten our terrestrial forces and other national security interests has increased the importance of being able to deny hostile uses of space.

There is a longstanding history of bipartisan support for our national security space enterprise. We have seen this in the consistent security themes of national space policies across several administrations and in the reports of multiple congressionally chartered commissions on space security. Most recently, we saw this in the bipartisan legislation passed in 2019 that established the U.S. Space Force and the Assistant Secretary of Defense for Space Policy, and updated the law with respect to the U.S. Space Command.

Collectively, this organizational framework for Department of Defense space activities provides a more orthodox division of labor for the respective roles of organizing, training, and equipping space forces; conducting space domain operations; and ensuring civilian oversight of space warfighting policy. The Department is grateful for this committee's strong bipartisan support for

initiating and sustaining these important organizational reforms and helping ensure we have the necessary means to realize our nation's strategic goals regarding space.

Space is also an important and growing focus area as we reinvigorate and modernize our alliances and partnerships around the world. We continue to grow and leverage the Combined Space Operations (CSpO) Initiative among the U.S., Australia, Canada, France, Germany, New Zealand, and the United Kingdom as a primary venue for sharing perspectives on threats and coordinating defense space policies, capabilities, and operations. Likewise, through CSpO and our bilateral relationships with allies and partners like India, Israel, Italy, Japan, and the Republic of Korea, we are diversifying our space architectures, adding capabilities and mitigating risks in ways that enhance mission assurance, sustain freedom of action in space, and preserve the peaceful use of space.

The Department of Defense is also working with our counterparts in the U.S. Department of State to continue to maintain our nation's position of leadership in international institutions like the United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS). We are supporting State's diplomatic efforts to advance implementation of consensus COPUOS guidelines for space debris mitigation and long-term sustainability of outer space by all spacefaring nations.

Our U.S. space diplomacy efforts are empowered by a strong and credible defense and by the transparency of our own space operations.

Finally, we are continuing important efforts to reform the way the Department acquires space systems to accelerate delivery and build a more resilient architecture that can withstand attacks, whether by kinetic, directed energy, cyber, or other means. In doing so, we will sustain the qualitative advantages that our space architectures provide to the joint force across all mission areas, even as we adopt innovations from the private sector, such as proliferated constellations of lower cost satellites that utilize common systems and enable rapid replenishment and technology refresh.

### **Hypersonic Threat, Policy, and Posture**

For the United States, hypersonic strike systems are an emerging conventional weapon capability that is central to the broader strategic goal of modernizing the Joint Force to ensure it can deter and, if necessary, defeat strategic competitors in a high-end conflict over the mid- to long-term. China and Russia are making concerted efforts to invest heavily in capabilities that are increasingly eroding traditional U.S. warfighting and military technological advantages, driving the strategic and operational value of U.S. hypersonic capability.

Both China and Russia have developed and are fielding or seeking to field large quantities of anti-ship ballistic missiles, advanced cruise missiles, high-end integrated air and missile defense systems, anti-satellite capabilities, ballistic missiles, and hypersonic weapon systems. Hypersonic strike systems, including those that are nuclear-armed, are top national priority efforts for both states. They are aggressively developing and fielding such systems, seeking to utilize the speed, altitude, and maneuverability of hypersonic weapons to further enhance the sophistication and density of their anti-access and area denial networks. Collectively employed, these systems create a highly contested future operating environment. China and Russia are

creating an operating environment designed to deny our forces the freedom to maneuver; holding our forces, ports, and airfields at risk; and challenging our existing weapon capabilities.

In response, over several years and across Administrations, the Department has prioritized the development of specific capabilities to address and mitigate these challenges. The development of U.S. hypersonic strike weapons systems, all of which are strictly non-nuclear, is one of these priorities.

Hypersonic weapon systems offer clear and distinct operational advantages. They travel at speeds near and above Mach 5 (five times faster than the speed of sound), enabling long-range flight at the upper reaches of the atmosphere. The combination of hypersonic systems' speed, maneuverability, and altitude provides us with a rapid, highly survivable, long-range fires capability. Conventional hypersonic weapon systems will enable us to hold high-value, time-sensitive targets at risk. Additionally, they are a conventional strike option against distant and defended threats when our forces are unavailable, denied access, or their employment is not preferred. Simply put, hypersonic weapons allow us the ability to destroy critical enemy infrastructure and anti-access systems anywhere in the world within hours, enhancing the U.S. capability to create strategic effects, without crossing the nuclear threshold. Conventional hypersonic strike is thus a key element of our efforts to modernize the Joint Force, deter adversaries, and restore warfighting advantage in key domains of the future operating environment.

Each Military Department is currently developing hypersonic strike capability. The Army's Long-Range Hypersonic Weapon (LRHW), the Navy's Conventional Prompt Strike (CPS), and the Air Force's Air Launched Rapid Response Weapon (ARRW) are all existing programs scheduled to deliver a family of hypersonic weapons beginning in the early to mid-2020s. The Air Force also has a program underway to develop the Hypersonic Air-launched Cruise Missile (HACM). When fielded and operational, these programs will provide the Department the ability to deliver hypersonic weapon systems by air, ground, or sea platforms, thus both modernizing and enhancing the credibility of the Joint Force's long-range strike portfolio.

Hypersonic weapons systems will enhance the Joint Force's combat-credible deterrent, an imperative of our defense strategy. As such OSD Policy has championed the development of this capability as part of implementing DoD's strategic priorities through the annual defense budget process. Policy has directly supported the issuance of Secretary-level strategy direction, defense planning guidance, analysis, and budget guidance advancing this capability.

OSD Policy, and the Department broadly, is keenly aware of and takes seriously Congressional concerns that hypersonic strike systems may raise significant strategic stability and policy questions -- for example, the possibility that a conventional submarine-launched hypersonic missile might be misinterpreted as a nuclear strike. OSD Policy will be directly involved to ensure the Department is prepared to employ such systems in a manner that addresses and minimizes any such risks. We are ensuring proper civilian and Policy oversight as the Department develops the concept of operations that will guide this capability's use, to include weapons release authority and posture considerations. The Department is committed to continued transparency and dialogue with Congress on this going forward.

## **Conclusion**

Mr. Chairman, let me conclude by reiterating that strategic capabilities—nuclear, missile defense, space, and hypersonic—are essential to our national security. In an increasingly complex and threatening security environment, the United States must continue to credibly and effectively deter our adversaries, support our allies and partners, invest in modern capabilities, and enhance strategic and regional stability.