

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2020

WEDNESDAY, MAY 8, 2019

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 11:41 a.m. in room S-128, The Capitol,
Hon. Richard Shelby (chairman) presiding.

Present: Senators Shelby, Collins, Graham, Blunt, Moran,
Hoeven, Boozman, Durbin, Leahy, Feinstein, Murray, Reed, Udall,
Schatz, and Baldwin.

DEPARTMENT OF DEFENSE

OFFICE OF THE SECRETARY OF DEFENSE

STATEMENT OF PATRICK M. SHANAHAN, ACTING SECRETARY
ACCOMPANIED BY DAVID NORQUIST, UNDER SECRETARY OF
DEFENSE (COMPTROLLER) AND CHIEF FINANCIAL OFFICER

OPENING STATEMENT OF SENATOR RICHARD C. SHELBY

Senator SHELBY. The committee will come to order.

Today we have as panelists, the Honorable Patrick Shanahan,
Acting Secretary of Defense, and General Joseph Dunford Jr., U.S.
Marine Corps, Chairman of the Joint Chiefs of Staff.

I will forego an opening statement. I know we have already held
you up some today, and I will recognize Senator Durbin.

[The statement follows:]

PREPARED STATEMENT OF SENATOR RICHARD C. SHELBY

The Subcommittee will come to order.

I am pleased to welcome to the Committee, Acting Secretary of Defense, Patrick
Shanahan and the Chairman of the Joint Chiefs of Staff, General Joseph Dunford,
to review the budget request for the Department of Defense for fiscal year 2020.

This Committee has already hosted hearings with the individual military services,
and we have heard much about the implementation of the National Defense Strat-
egy.

It has been repeatedly emphasized that the Department is implementing a deliber-
ate plan to address the changing, and in some ways new, threats and challenges
that are posed to our national security, including from near peer adversaries.

However, I remain convinced that we must maintain a rate of progress that will
protect the comparative military advantages that have underpinned our global mili-
tary strategy for years.

The world continues to be a complex and dangerous place, as we are reminded
when we read the news; whether it is the ongoing humanitarian crisis at our South-
west border, short range missile launches from North Korea, or the movement of
the USS *Abraham Lincoln* carrier strike group towards the U.S. Central Command
region in response to recent Iranian actions.

I know that you both understand the magnitude of the challenges and I look forward to your testimony this morning as we as we consider the appropriate funding level for the Department in fiscal year 2020.

I now turn to the Vice Chairman, Senator Durbin, for his opening remarks. Senator Durbin.

STATEMENT OF SENATOR RICHARD J. DURBIN

Senator DURBIN. I will follow the Chairman's example. Proceed, Mr. Chairman.

[The statement follows:]

PREPARED STATEMENT OF SENATOR RICHARD J. DURBIN

Thank you, Mr. Chairman, for your leadership and for convening this hearing today. I welcome our witnesses. And General Dunford, as this is likely your last time testifying before the Committee, I want to say thank you for your dedicated service and congratulations on your upcoming retirement.

There are many issues we can cover—including the need for a confirmed Defense Secretary and Deputy Defense Secretary—but I would like to focus on two: the continued use of DoD funding and personnel at our southern border and the proposal to create Space Force.

DOD PRIORITIES AT RISK DUE TO BORDER WALL AND DEPLOYMENTS

Secretary Shanahan, in testimony last week regarding DoD personnel deploying to the border you said, quote, "We really need to get back to our primary missions and continue to generate readiness." I could not agree more.

However, the Department seems to be accepting more involvement on the southwest border, not less.

It recently granted a request from the Department of Homeland Security to allow its personnel to come into close contact with migrants in order to perform a number of duties normally performed by border agents, including driving vehicles, distributing food, and prosecuting migrants in court.

The Department is also in the process of deciding which military construction projects it should cancel in order to build the President's wall.

It appears that DoD's mission has become taking orders from DHS.

This needs to stop. It risks readiness and jeopardizes other DoD priorities.

Last week before the Subcommittee, we heard the Chief of Naval Operations testify that the Navy has \$800 million in known ship maintenance needs and that the Commandant of the Marine Corps estimates needing \$450 million this year to start work on rebuilding Camp Lejeune.

Congress provides reprogramming authority to take care of new problems confronting our troops in the middle of any year, not to allow the Pentagon to end-run around the funding decisions of Congress.

At a time the Department is asking for more flexibilities, I have serious concerns about abuse of the flexibilities you already enjoy.

SPACE FORCE

My second issue that I'd like to raise is the Space Force. I am very concerned that we are heading toward spending billions of dollars on new bureaucracy that would be better spent on new satellites.

Given all the important work going on right now in space, nobody has yet to explain why spending more to reshuffle organizational boxes makes more sense than spending more on satellites and rockets.

CONCLUSION

Thank you all again for being here today, and I look forward to a thorough discussion of these and other issues.

Senator SHELBY. Mr. Secretary and General Dunford, your written statements will be made part of the record. You proceed as you wish.

SUMMARY STATEMENT OF HON. PATRICK M. SHANAHAN

Secretary SHANAHAN. Sure. Chairman Shelby, Vice Chairman Durbin, distinguished members of the committee, thank you for this opportunity to testify in support of the President's budget request for fiscal year 2020.

I am joined today by Chairman of the Joint Chiefs of Staff, General Joseph Dunford, and the Department's Comptroller and Chief Financial Officer, Mr. David Norquist.

I must begin by recognizing General Dunford for his more than four decades of service. This morning likely marks his last congressional testimony before his retirement.

General Dunford, on behalf of the entire Department of Defense, thank you for your gifted and selfless leadership. Simply put, our Nation is far safer because of your unwavering dedication, and it has been a privilege and an honor to serve alongside you.

It has also been a great privilege and honor to serve alongside all of the men and women of the Department of Defense, and it was a pleasure to work with Secretary Mattis to craft the 2018 National Defense Strategy.

Released in January of 2018, that strategy laid the foundation for restoring military readiness and modernizing our joint force for an era of great power competition.

I now oversee the continued execution of that strategy, which is the undisputed driver of today's budget request.

It was extremely helpful for the Department to receive authorization and appropriation bills on time and at the requested top line last year, which marked the first time in a decade a defense appropriations has been enacted by the beginning of the fiscal year.

The strategy you supposed last year is the same strategy we are asking you to fund this year. The \$750 billion top line for national defense enables DoD (Department of Defense) to maintain irregular warfares at core competency, yet prioritizes modernization and readiness to compete, deter, and win in a high-end fight of the future.

This budget is critical for the continued execution of our strategy, and it reflects difficult but necessary decisions that align finite resources with our strategic priorities.

To highlight some of those decisions, this is the largest research, development, testing, and evaluation budget in 70 years. The budget includes double-digit increases to our investments in both space and cyber, modernization of our nuclear triad and missile defense capabilities, and the largest shipbuilding request in 20 years when adjusted for inflation.

It also increases our total end strength by roughly 7,700 servicemembers and provides a 3.1 percent pay increase to our military, the largest in a decade.

Now to the specifics. The top line slates \$718 billion for the Department of Defense. Of that total, the budget includes \$545 billion for base funding, \$164 billion for overseas contingency operations.

Of the OCO (Overseas Contingency Operations) funds, \$66 billion will go to direct war and enduring requirements and \$98 billion to fund base requirements.

To round out the numbers, \$9.2 billion will fund emergency construction, including support for hurricane recovery and border barriers efforts. Here, I must note the Department appreciates this committee's support for hurricane recovery. Thank you for approving the \$600 million reprogramming which will help start our recovery efforts.

I asked for your support for a hurricane supplemental to address the remaining \$1.8 billion in critical facilities, restoration, modernization, and sustainment; Maintenance and equipment replacement needs for fiscal year 2019, as well as the budget request of \$3 billion in military construction and operation maintenance to continue recovery efforts in fiscal year 2020.

As this committee fully understands, no enemy in the field has done more damage to our military's combat readiness in years past in sequestration and budget instability, and there is no question today our adversaries are not relenting.

In short, we cannot implement the NDS (National Defense Strategy) at sequestration levels. Sequestration will not only halt our progress in rebuilding readiness, growing our force, modernizing for the future, and investing in critical emerging capabilities like AI (artificial intelligence), hypersonics, and directed energy.

It would force us to cut end strength and critical modernization efforts that ensure we outpace our competitors.

A continuing resolution would also hamstring the Department. Under a CR, we cannot start new initiatives, including increased investments in cyber. Nuclear modernization and missile defense, I just mentioned. Second, our funding would be in the wrong accounts; and third, we would lose buying power.

We built this budget to implement our National Defense Strategy, and I look forward to working with you to ensure predictable funding so our military can remain the most lethal, adaptable, and resilient fighting force in the world.

I appreciate the critical role Congress plays to ensure our warfighters can succeed on the battlefields of today and tomorrow, and I thank our servicemembers, their families, and all those in the Department of Defense for maintaining constant vigilance as they stand always ready to protect our freedoms.

Thank you.

[The statement follows:]

PREPARED STATEMENT OF HON. PATRICK M. SHANAHAN

Chairman Shelby, Vice Chairman Durbin, distinguished members of the Committee, I appreciate the opportunity to testify in support of the President's budget request for fiscal year 2020. I am joined today by Chairman of the Joint Chiefs of Staff, General Joseph Dunford, and the Department's Comptroller and Chief Financial Officer, Mr. David Norquist.

The size, scale, and importance of collaboration between Congress and the Department of Defense (DoD) shows we are united in our purpose to protect and defend our Nation. During my time as Deputy Secretary of Defense and now as Acting Secretary of Defense, I have engaged in substantive discussions with many members of this Committee. I look forward to continuing our engagements, in this hearing and beyond, with both long-serving and new members, as the Department drives results along our strategic priorities.

We in DoD appreciate Congress's partnership in repeatedly demonstrating the bipartisan nature of defense. I thank Congress for voting to lift budgetary caps and providing sustained funding increases over the last 2 years, which have helped our military meet today's challenges while preparing for those of tomorrow. Members of

this Committee, the entire Congress, and the American people can rest assured that DoD has efficiently and effectively invested your money. Thank you, in particular, for your support of the fiscal year 2019 2.6 percent pay increase for our military personnel.

Our responsibility is to remain responsible stewards of your trust and the American people's hard-earned tax dollars. DoD has accelerated necessary changes in how we develop, posture, and employ our Joint Force. We are taking a clear-eyed approach to the strategic environment in which we operate and marrying our past experiences to new ideas, driving progress and fostering innovation in the process.

Our fiscal year 2020 budget reflects the President's vision for prioritizing the security, prosperity, and interests of the American people. It also reflects my vision for the future—one marked by a more lethal, results-oriented Department of Defense with the capabilities and capacity to ensure national security and implement our National Defense Strategy (NDS) at the speed of relevance. Today I look forward to discussing that vision and how it is reflected in DoD's posture and resourcing decisions.

THE 2018 NDS: AN ENDURING FRAMEWORK

To provide context for that discussion, I want to take us back in time: 2 years ago, our Department had brand new civilian leadership ready to drive results. With a military enduring the longest continuous duration of combat in American history, we contended with a host of challenges, including an increase in North Korean missile testing; an aggressive Iran; violent extremists in Iraq, Syria, and Afghanistan; and growing strategic competition with China and Russia. In addition, cyber and space emerged as contested, warfighting domains, further complicating an already complex security environment.

Amidst these challenges, the release of our 2018 NDS last January provided the strategic unity DoD needed, with clear direction on restoring military readiness and modernizing the Joint Force to address great power competition.

The 2018 NDS's unified framework enables a potent combination of teamwork, resources, and an unmatched network of allies and partners stepping up to shoulder their share of the burden for international security. The NDS also fosters alignment within the Department, the Interagency, industry, and Congress.

More than 15 months after its release, I say with conviction: the NDS remains the most effective aligning mechanism for the Department. Its implementation is our most critical mission. Yet, strategy cannot be static; it must be constantly re-evaluated. In February, my staff concluded a clear-eyed assessment of our NDS priorities and our progress in meeting them, highlighting our successes and making clear we still have more work to do. Most significantly, it reaffirmed that erosion of our competitive edge against China and Russia continues to be DoD's most pressing "central problem." Our three primary lines of effort—increasing our military's lethality, strengthening our network of alliances and partnerships, and reforming DoD's business practices—remain the most effective avenues for addressing this challenge.

I thank Congress for its own evaluation via the NDS Commission. Having reviewed the findings of both our internal DoD assessment and of the Commission's report, I am confident we are aligned on the most critical matters. The few areas where we did not agree reflect the reality that finite resources require tough choices. DoD stands by these choices as necessary components of our strategic approach.

As our Department has aligned behind our Strategy, our competitors have not been complacent. They have accelerated their own military modernization efforts and vigorously pursued the development and fielding of advanced technologies with a clear intent: create an asymmetric military advantage against us, our allies, and our partners.

PRIORITY THREATS & POLICY OBJECTIVES

THE CHINA THREAT

As this Committee recognizes, the Chinese Communist Party exports coercive influence far beyond its borders while internally wielding authoritarian governance over its own people. To achieve hegemony in the Indo-Pacific in the near term and shape a world consistent with its authoritarian model, China is: (1) aggressively modernizing its military, (2) systematically stealing science and technology and seeking military advantage through a strategy of Military-Civil fusion; (3) undermining the rules-based international order, which has benefited all countries, including China, and (4) building an international network of coercion to further its economic and security objectives.

Military Modernization

The trajectory of China's military spending is clear. In just 20 years, China's official defense budget soared from roughly \$20 billion in 1998 to \$170 billion in 2018, with actual spending even higher. In March, China announced a projected 7.5 percent increase in defense spending in 2019. China devotes these funds to aggressive military modernization and advanced weaponry development, from nuclear and missile capabilities to space and cyber. Accounting for purchasing power and the significant portion of our military budget going to pay and benefits, today, China's defense spending approaches that of the United States.

China has made investments specifically intended to offset U.S. advantages, including robust anti-access/area-denial (A2/AD) networks, more lethal forces, and new strategic capabilities. If deployed to overwhelm U.S. or allied combat power at initial stages of a conflict, these capabilities could seek to achieve a "fait accompli" that would make reversing Chinese gains more difficult, militarily and politically. Implementation of our Strategy ensures we have the capabilities, posture, and employment of forces so this never comes to pass.

On the nuclear front, China is developing long-range bomber capabilities that, if successful, would make it one of only three nations in the world to possess a nuclear triad. In addition, China is building up its inventory of missiles, focusing on those intended to circumvent U.S. and allied defenses and deny the United States critical military access to the Indo-Pacific. Within the past 5 years alone, China has successfully tested hypersonic cruise and boost glide weapons concepts for these purposes.

In 2018, China conducted more space launches than any other nation. In choosing to develop counterspace and dual-use space capabilities and enhance space-based intelligence, surveillance and reconnaissance, China has demonstrated its ability to weaponize space, if desired. We, in turn, cannot ignore China's ability to target U.S. and allied space capabilities. We also cannot ignore China's ambitions in the cyber domain, which it recognizes as the battlefield's "nerve center." With all People's Liberation Army (PLA) cyber operations coordinated under one roof, China can operate in this contested domain without bureaucratic red tape to slow it down.

Technology Theft

The rate at which China is systematically stealing U.S. and allied technology for its own military gain is staggering. Reversing this dangerous trend—one which could impact our troops on the battlefield—means acknowledging reality: every Chinese company is at risk of being either a witting or unwitting accomplice in China's state-sponsored theft of other nations' military and civilian technology. To quote China's own cybersecurity law, private companies are required to "provide technical support and assistance to public security organs and national security organs," whether they want to or not. Any U.S. or allied company that works with Chinese companies, without proper safeguards, thus opens itself to theft as well.

To grasp the pervasiveness of the problem, look to the Federal Bureau of Investigation (FBI). There are open Chinese economic espionage or technology theft cases in nearly all FBI field offices. For years, the U.S. Department of Justice (DoJ) has indicted members of the Chinese state and military for stealing U.S. technology. In January, DoJ recognized China's escalating tactics and took a step further, indicting executives of Chinese telecommunications company Huawei for scheming to steal T-Mobile's trade secrets.

Huawei exemplifies the Chinese Communist Party's systemic, organized, and state-driven approach to achieve global leadership in advanced technology. With initiatives like the Digital Silk Road, Made in China 2025, and Thousand Talents Program in play, which spur companies and individuals to carry out its bidding, China aims to steal its way to a China-controlled global technological infrastructure, including a 5G network. China pursues large-scale acquisition of foreign companies in sensitive sectors and pressures companies into transferring technology. Finally, China's Military-Civil Fusion strategy seeks to translate cutting-edge technology into advanced weapons.

Here I must note: some U.S. companies have voiced ethical qualms about working with DoD to develop advanced technology, in some cases even terminating relationships—often while continuing to work with China. DoD takes ethical considerations extremely seriously when researching and developing emerging technologies, and our efforts improve performance and allow human beings to make better decisions. China, on the other hand, repeatedly demonstrates little regard for international ethical rules and norms.

China's approach to technological advancement matters for our military advantage, and its ambitions threaten the security of critical U.S. capabilities and technological infrastructure, and thus our military operations, safety, and prosperity.

Let me be perfectly clear: the United States does not oppose competition, as long as it takes place on a fair and level playing field. However, we cannot accept the unfair and illegal actions of others who intend to tilt the playing field through predatory economics and underhanded tactics.

Undermining the Rules-based International Order

We all know China's population is comparable to the Americas and Western Europe's combined. But China is also geographically situated within arm's reach of 2.4 billion people, roughly a third of the earth's population, across Southeast Asia, Japan, and India. Make no mistake—China is extending that reach by increasing its overt military and coercive activities vis-à-vis its neighbors.

China's increasingly provocative behavior in the Indo-Pacific, particularly the South China Sea (SCS), should concern us all. Between 2013 and 2018, China increased its air and sea incursions into the SCS twelvefold. Within those 5 years, it also increased deployments of offensive and defensive weapons systems to the SCS by the same order of magnitude.

China's land reclamation and militarization far exceed that of other claimants combined in the South China Sea. Between 2013 and 2015 alone, China created more than 3,200 acres in the SCS, building features within its self-proclaimed 'nine dash line'—a claim the Permanent Court of Arbitration in The Hague ruled in 2016 has no legal basis. These constructed features are almost four times the size of Central Park in New York City and roughly five times the size of this Capitol Hill neighborhood. Imagine walking from this hearing room to the Marine Barracks at 8th and I over what used to be part of the Pacific Ocean.

Now also picture Chinese interference in freedom of navigation. Yet for this, we do not have to use our imaginations. China habitually threatens this freedom, using both conventional military force projection and "gray zone" or irregular warfare activities. For example, in September, Chinese military vessels came dangerously close to the USS Decatur off the coast of the Spratly Islands. China's force projection inside and outside the SCS disrespects and undermines our rules-based international order and threatens regional stability and security.

International Network of Coercion

Lastly, China is diligently building an international network of coercion through predatory economics to expand its sphere of influence. Sovereign nations around the globe are discovering the hard way that China's economic "friendship" via One Belt, One Road can come at a steep cost when promises of investment go unfulfilled and international standards and safeguards are ignored.

Let us look at just a few examples. Saddled with predatory Chinese loans, Sri Lanka granted China a 99-year lease and seventy percent stake in its deep-water port. The Maldives owes China roughly \$1.5 billion in debt—about thirty percent of its GDP—for construction costs. Pakistan will owe China at least \$10 billion in debt for the construction of Gwadar Port and other projects.

In Africa, Djibouti owes China more than eighty percent of its GDP and, in 2017, became host to China's first overseas military base. In Latin America, Ecuador agreed to sell eighty to ninety percent of its exportable crude oil to China through 2024 in exchange for \$6.5 billion in Chinese loans. And after leasing land tax-free to China for 50 years, Argentina is denied access and oversight to a Chinese satellite tracking station on its sovereign territory, unwittingly allowing the facility's use for military purposes.

The list of nations entrapped by China's predatory debt tactics runs long, and some have started to push back. Yet, under the guise of good-intentioned development, Beijing continues to leverage debt for economic or political concessions—a practice we expect will intensify as more nations prove unable to pay China back.

POLICY OBJECTIVES TO MEET THE CHINA THREAT

Left unaddressed, China's success in unfairly tilting the playing field in its favor has serious implications for our own military advantage. While we do not seek to contain China, we expect China to play by the rules, meeting the same standards to which the United States and all other nations are held. We will cooperate with China wherever and whenever possible, but we also stand ready to compete where we must to ensure our military's competitive advantage for decades to come.

As German Minister of Defense Ursula von der Leyen said last month in Munich, "our partnerships are not built on domination. They do not create political and economic dependencies." Our pursuit of many belts and many roads creates alternative options for nations unwilling to succumb to China's increasingly coercive methods.

As such, DoD's priority policy objectives are to outpace Chinese military modernization to deter future conflict, or win decisively should conflict occur; protect

U.S. and partner research and development of advanced technology from rampant Chinese theft, and; maintain a free and open Indo-Pacific built on strong alliances and growing partnerships.

THE RUSSIA THREAT

China is not the only nation attempting to undermine U.S. interests and security to alter the international order in its favor. Despite having an economy smaller than that of the State of Texas, Russia, against the economic odds, seeks a return to great power status. Though it has not reached that goal, Russia is playing a weak strategic hand well by: (1) aggressively modernizing its military; (2) projecting military might beyond its borders; (3) intimidating its neighbors, including exploiting their energy dependence for strategic gain, and; (4) undermining other nations' sovereign democratic processes.

Military Modernization

Russia is aggressively modernizing its military to gain an asymmetric advantage over the United States and NATO. Russia plans to spend \$28 billion to upgrade and modernize each leg of its strategic nuclear triad by 2020, and has already spent more than 10 percent of its total military budget every year since 2011 on nuclear modernization efforts. In March 2018, Russian President Vladimir Putin announced Russia's development of six new strategic weapons systems—five of which are nuclear capable—including hypersonic systems able to maneuver at ten times the speed of sound and intended to circumvent U.S. missile defense capabilities. One of those hypersonic systems is expected to enter service this year.

In addition to modernizing its strategic weapons systems and delivery platforms, including its submarine fleet, Russia is building a large, diverse, and modern set of non-strategic systems, including the dual-capable SSC-8 cruise missile, which clearly violates the Intermediate-Range Nuclear Forces (INF) Treaty. Every NATO Ally agrees on this point and supports our decision to withdraw from the INF Treaty in response to Russia's material breach. A treaty not followed by all parties cannot be an example of effective arms control. For any who doubt U.S. efforts to bring Russia back into compliance with the Treaty, I would emphasize: we held over thirty meetings with the Russians at every level of government for more than 5 years—across two administrations, one Democrat and one Republican.

Moving to space, Russian systems are intended to disrupt, degrade, and damage U.S. satellites in orbit. There is no question: Russia treats space as a warfighting domain to gain military advantage over the United States. Moscow has already fielded ground-based directed energy laser weapons and is developing air-based systems and additional novel counterspace capabilities to target our space-based missile defense sensors. Russia now has the third largest collection of operational satellites in the world, behind only us and China.

Projecting Military Power

On top of modernizing its military capabilities, Russia also projects its military might around the globe. In 2018, Russia conducted its largest strategic military exercise since 1981. Today Moscow deploys a variety of aviation and naval missions to the Pacific, the Arctic, the Mediterranean Sea, the Indian Ocean, and the western hemisphere. In December, Russia sent bombers to Venezuela, conducted several patrols in the Caribbean, and has since deployed military forces to Venezuela to support the failed Maduro regime. And in the Middle East, Russia has continued support for Syria's murderous regime with expeditionary operations and long-range strikes. These examples make clear Russia's ambitions for a more globally dominant military footprint.

Strategy of Intimidation

In addition to projecting military power far beyond its borders, over the last decade Russia has attempted to incrementally push geographic boundaries with its neighbors. From its 2008 invasion and continued occupation of twenty percent of Georgian territory to its 2014 invasion and continued occupation of Crimea, Russia demonstrates blatant disregard for other nations' sovereignty. Lest we forget, Russia still holds twenty-four Ukrainian crewmembers it captured last November, when it attacked three Ukrainian ships near the Sea of Azov in violation of international law.

Russia's escalating intimidation efforts are amplified by irregular warfare and "gray zone" tactics intended to sow confusion, conceal military movement, and limit accountability. By deploying mercenaries—like those of the Wagner Group to places like Crimea, Syria, Libya, and now Venezuela—instead of uniformed soldiers, Russia hopes its use of proxies will further muddy the already murky waters of conflict

and limit international response to its actions. Russia's attempts at deception are not fooling anyone.

Undermining Sovereign Processes

Russia's duplicity also extends to the cyber domain, where it propagates coordinated disinformation campaigns to undermine sovereign democratic processes. In April 2018, Facebook estimated that roughly one million users followed a page operated by Russia's Internet Research Agency (IRA). Last year, Twitter identified more than 3,800 IRA accounts that had generated millions of tweets over a nine-year span. These accounts are intended to foster divisiveness in the West and undermine trust in democratic institutions.

Russian efforts extend beyond their bots and Internet trolls—they conduct deliberate cyber operations against the United States and other sovereign nations. To name a few examples of Russian handiwork: it has targeted U.S. Government and critical systems to allow damage or disruption of U.S. civilian or military infrastructure during a crisis; launched distributed denial of service attacks against NATO, Ukraine, and German government websites, and; released a potent cyber virus that caused billions of dollars in damage around the world.

In response, we are not complacent. DoD is getting after the problem, and we are achieving results, most notably in our recent successful efforts to stymie Russian disruption of our midterm elections. We are determining what other actions DoD and our Interagency partners must take to ensure the continued safety and integrity of our democratic institutions.

POLICY OBJECTIVES TO MEET THE RUSSIA THREAT

As these examples make clear, Russia is intent on undermining U.S. military advantage to alter the existing balance of power in its favor. In order to thwart Russia's efforts to regain peer competitor status, DoD is focused on modernizing our military to enhance deterrence and prevent future conflict, while bolstering burden sharing to ensure the NATO Alliance remains credible and capable against Russian aggression.

We are also working diligently with the Interagency, our allies, and our partners to deter Russia's physical intimidation and contest its cyber aggression, information warfare, and "gray zone" tactics in Syria and beyond. That includes ensuring Russia does not control the international narrative, casting its malign intentions and actions under a cloak of subterfuge, disinformation, and malign propaganda. We are strengthening our ability to counter this deliberate deceit, both on our own and with our allies and partners.

REGIONAL THREATS: NORTH KOREA & IRAN

As DoD modernizes to win competition with China and Russia, we also remain alert to regional threats, like those posed by the Iranian and North Korean regimes.

While President Trump and our diplomats negotiate for the denuclearization of North Korea, its collection of nuclear weapons and ballistic missiles continues to pose a threat to the U.S. Homeland, as well as our allies.

Iran, for its part, relentlessly seeks to expand its malign influence across the Middle East and beyond. By providing advanced conventional weapons and military support to the Syrian regime and Houthi rebels in Yemen, and offering support and financing to terrorist groups like Lebanese Hizballah, Iran is entrenching and proliferating its clout across the region. In addition, Iran demonstrates reckless behavior in the maritime domain. Iranian leaders repeatedly threaten to close the Strait of Hormuz—the gateway for almost a third of all global sea-traded oil—to international shipping and allow Iranian-backed Houthis to conduct attacks on international shipping in the Bab al-Mandab.

Iran has also increased funding for its cyber efforts twelvefold under President Rouhani, as well as increased espionage and targeting of U.S. Government and commercial entities since withdrawing from the Joint Comprehensive Plan of Action. DoD also remains closely attuned to the threat posed by Iran's ballistic missile capabilities and remains vigilant about the potential that Tehran may one day decide to pursue a nuclear weapon.

POLICY OBJECTIVES TO MEET REGIONAL THREATS

In support of the ongoing negotiations for the denuclearization of North Korea, DoD aims to ensure our diplomats continue to speak from a position of strength. Our alliances in the region remain ironclad, including with the Republic of Korea and Japan. Together we deter North Korean aggression and maintain our ability to protect the Homeland and win decisively should conflict ever occur.

To counter Iran’s destabilizing influence across the Middle East, DoD seeks to deepen and expand alliances in the region and strengthen local partners’ capabilities and capacity to manage and counteract threats. We also seek to ensure freedom of navigation for all, bolster resilience against destructive cyber-attacks, and prevent weapons of mass destruction (WMD) from falling into the hands of irresponsible actors.

THE TERRORISM THREAT

Working by, with, and through an expansive network of international partners, we have made meaningful progress in thwarting terrorist designs against the U.S. Homeland and interests. Yet we do not discount the threats that continue to emanate from violent extremist organizations (VEOs), as they seek to conduct and inspire attacks, gain legitimacy by exerting control over territory, enjoy safe haven in under-governed countries, obtain access to WMD material, and proliferate their ideology to others across the globe.

Taking a step back from our hard-won successes against the Islamic State in Iraq and Syria (ISIS), we also recognize the global fight against radical Islamist terrorists is not over. From the 1980s to now, the number of nations, either unwittingly or willingly, providing safe haven to VEOs has increased eleven-fold. Today, radical Islamist terrorist movements are organized in more than two dozen countries, and the globe must contend with more than one hundred VEO-directed, enabled, or inspired attacks every year. VEOs continue to take advantage of instability in places like Yemen, Syria, Libya, Iraq, the Maghreb, Lake Chad, Somalia, and Afghanistan, preying on the conflict-ridden to grow their influence.

POLICY OBJECTIVES TO MEET THE TERRORISM THREAT

Recognizing terrorism as a global threat, we must pursue global solutions that utilize the unique capabilities and capacities of our allies and partners, in addition to our own. Military might alone will not eliminate terrorist ideology or the threat of future terrorist attacks.

However, we can and are reducing the likelihood of an attack on our Homeland, our troops, and our interests by contributing to a whole-of-government and coalition approach. Together, we are removing terrorists’ ability to control and hold territory; bolstering the internal security and stable governance of vulnerable states; ensuring the proper safeguarding of WMD material from terrorist hands; checking their ability to exploit emerging technologies, including unmanned systems; targeting VEO financial networks and countering terrorist ideology online to limit its spread to the greatest extent possible; and sharing intelligence to limit the risk of attack around the world.

WHAT DOD IS DOING ABOUT IT

To meet our policy objectives, DoD cannot simply keep pace with our competitors as they increase their regional and global influence, grow their military capabilities, and develop and field advanced technologies. We must—and will—significantly outpace them.

We have made tough choices that align finite resources with our strategic priorities, reducing some day-to-day operational requirements now so we are prepared to deter, compete, and win against strategic competitors in the future. Our work bringing the NDS to life is far from over, but we are demonstrating clear progress along our three lines of effort.

Increasing Lethality

In order to protect the Homeland and remain the most lethal military in the world, we have begun a paradigm shift towards a more balanced, distributed, survivable, and cost-imposing Joint Force. In 2018, we closely linked our combatant commands’ operations to policy objectives and our Service plans to capability and capacity, with a focus on execution and performance. We are adjusting our posture, increasing lethality, improving operational readiness, and beginning to modernize and innovate at scale. These efforts allow us to better exploit adversary weakness, project power in contested environments, and expand our combat credible forward presence.

We have shifted our posture in key regions, taking initial steps to economize for sustainable missions in the Middle East and South Asia to prepare for the possible high-end fight of the future. In doing so, we maintain strategic predictability and implement operational unpredictability via the Dynamic Force Employment (DFE) model. This approach provides assurance to our allies and partners, while keeping our competitors and adversaries on their toes. We demonstrated DFE in action last

year, when one of our carrier strike groups returned early from deployment unannounced and quickly redeployed to the North Atlantic—the first carrier strike group to conduct operations there since the 1990s.

We encourage and welcome all individuals who can meet our exacting requirements to join our military's ranks. A key element of strengthening our military and increasing lethality is ensuring our warfighters achieve established physical, mental, and security vetting standards. War is unforgiving, and our mission demands we remain a standards-based organization. In upholding systematically applied standards, we ensure the readiness of our Joint Force and cohesion of our units. One of those standards is deployability. Since June, we have lowered the percentage of non-deployable Service Members by one percent—that means roughly 20,000 fewer non-deployable Service Members today than 10 months ago.

DoD has also worked diligently to ensure our personnel have the capacity, training, and capabilities they need to achieve results. Last year, we accelerated delivery of more than 14,000 munitions and precision guidance kits to our warfighters, turned the corner on replenishing critical munitions stockpiles, and made strides to rapidly deploy cutting edge equipment to the warfighter. Our Close Combat Lethality Task Force continues to strengthen our infantry's lethality, survivability, resiliency, and readiness for close combat. Four out of five U.S. combat deaths occur in our infantry. Therefore, it is a strategic imperative to ensure those who confront war's grimmest realities never enter into a fair fight.

This work on personnel and munitions readiness feeds into complementary efforts to increase equipment readiness. In October 2018, we set an eighty percent readiness target for mission critical aviation platforms. In just a few months, almost every type, model, and series of aircraft targeted by that memorandum has demonstrated progress. This year, we will establish similarly ambitious readiness targets across the DoD enterprise. In addition, our Services have made impactful readiness gains. As one example, the Air Force's operational squadrons are 23 percent more ready today than in 2017, and we will have 25 percent more pilots able to carry out missions in fiscal year 2019 than in fiscal year 2016.

On modernization, we remain committed to a safe, secure, and effective nuclear deterrent. Nuclear deterrence has kept the peace over the last seventy years, and its importance has been reaffirmed by every Congress and every president since Harry Truman. Last year, DoD released our Nuclear Posture Review (NPR), which details the need for modern and tailored nuclear capabilities and capacity that meet the realities of our times. We are moving out on those efforts. With fiscal year 2019 funding, we are recapitalizing and modernizing our aging legacy forces, including our nuclear command, control, and communications (NC3), while pursuing prudent, modest adjustments to our arsenal, which will increase the flexibility of our response options.

Here it is worth re-stating—Russia is aggressively developing and modernizing a suite of strategic and non-strategic nuclear weapons. Not only does this add urgency to the modernization of our legacy forces, it underscores the importance of the supplemental capabilities called for in last year's NPR. Both the low-yield submarine-launched ballistic missile (SLBM) and the sea-launched cruise missile (SLCM) close what we believe to be troubling gaps in regional deterrence. These are not redundant capabilities. The low-yield SLBM, deployed in small numbers, will provide a highly tailored response to specific developments in Russia's forces and doctrine that may lead Russia to mistakenly believe it could potentially use a small number of low-yield nuclear weapons without risking a U.S. military response. A nuclear SLCM will provide a similar capability in response to serious developments and trends in Russia's nonstrategic nuclear forces. These supplemental capabilities enhance deterrence and stability.

Turning to emerging technology fields, DoD has identified ten key areas: hypersonics; fully networked C3; directed energy; cyber; space; quantum science; artificial intelligence (AI)/machine learning; microelectronics; autonomy; and biotechnology.

We have invested in basic research, rapid prototyping, and experimentation to mature technology that can be used at scale. We are also updating our warfighting doctrine as the character of warfare changes. Take AI for example—competitors are investing heavily in this field, redefining the future of warfare. Last year, DoD established the Joint AI Center (JAIC), and we released our AI Strategy in February of this year. These efforts accelerate DoD's delivery and adoption of AI at the speed of relevance, while attracting and cultivating the best global talent.

In pursuit of stronger missile defense, DoD released our Missile Defense Review (MDR) in January, which recognizes the accelerating proliferation of advanced offensive missile capabilities around the world. The MDR articulates a comprehensive approach that combines deterrence, active and passive missile defense, and attack

operations. We continue to maintain ground- and sea-based missile defenses while also developing new capabilities to counter new threats.

As the MDR illustrates, our military is not constrained by earth's geography. We are taking steps to secure unfettered access to and freedom to operate in space, in accordance with our international agreements and obligations. Reforming the organization of the military space enterprise is fundamental for protecting our roughly \$20 trillion economy and our position as the world's strongest military. In March, we submitted a legislative proposal to Congress requesting authorization and associated appropriations for a U.S. Space Force. If approved, the Force would transform our approach to space, increasing our responsiveness in this warfighting domain. Establishing a sixth branch with dedicated military leadership will unify, focus, and accelerate the development of space doctrine, capabilities, and expertise to outpace future threats, institutionalize advocacy of space priorities, and further build space warfighting culture. I ask for your support of our proposal, so we can move out in this critical domain.

We recognize restoring military readiness, modernizing our Joint Force, and increasing lethality will not happen overnight, but as the above examples demonstrate, we are making meaningful progress.

Strengthening Alliances and Partnerships

Beyond DoD's efforts to improve readiness and lethality, we are expanding collaboration and cooperation outside the Department. DoD's participation in combined military exercises has increased by seventeen percent in the last 2 years, and our Foreign Military Sales have increased by more than sixty-five percent in the last 3 years. Across the globe, DoD has leveraged opportunities to expand and deepen our already unmatched network of allies and partners, while making real progress on burden sharing for international security.

Starting in the Indo-Pacific, our priority theater, we continue to pursue many belts and many roads by keeping our decades-old alliances strong and fostering growing partnerships. In all our actions, we demonstrate our commitment to a free and open region, marked by respect for the sovereignty and territorial integrity of all nations, big and small.

We are fortifying our bedrock alliances with Australia, Japan, the Republic of Korea, the Philippines, and Thailand while growing key partnerships across the Indo-Pacific. It is worth noting here that four out of the five nations in our Five Eyes intelligence-sharing network are also Pacific nations, further emphasizing the region's importance.

In 2018, the United States took historic strides with two key partners in particular, Vietnam and India. Our Navy conducted the first U.S. aircraft carrier visit to Vietnam since the Vietnam War, and we participated in the inaugural U.S.-India 2+2 Strategic Dialogue in New Delhi, showing growing trust between the world's oldest and largest democracies.

While our diplomats chart a path to the denuclearization of North Korea, DoD continues to enforce United Nations Security Council resolution sanctions against North Korean ship-to-ship transfers, alongside allies and partners. We have also improved integration of our missile defense assets on the Korean Peninsula to better protect U.S. Forces and allies.

In July 2018, we conducted the largest naval exercise in the world, the Rim of the Pacific or RIMPAC, alongside twenty-five other nations. That and our Southeast Asia Maritime Security Initiative have boosted interoperability and increased our allies and partners' ability to conduct maritime security and awareness operations on their own. Our efforts across the region have enabled our allies and partners to take a tougher stand against Chinese aggression in international waters. For example, this past year France, the United Kingdom, Japan, Canada, Australia, and New Zealand all increased their presence in the East and South China Seas, reiterating our collective stance to fly, sail, and operate wherever international law allows.

In Europe, the United States is fortifying relationships, realizing burden sharing gains, and developing a more lethal, combined capability. This year, NATO—the most successful Alliance in history—marks its seventieth anniversary as the bedrock of transatlantic security. NATO is poised to bolster deterrence through larger and more frequent exercises, mobility and infrastructure improvements, a revamped command structure, and increased force presence in territories most vulnerable to Russian aggression. We are rapidly pursuing our “Four Thirties Readiness Initiative” by 2020: thirty mechanized battalions, thirty air squadrons, and thirty combat vessels ready to fight within thirty days or less.

Over the last 2 years, NATO has made significant burden sharing progress, both financially and operationally. Since 2017, our NATO Allies have increased their defense spending by \$41 billion. The 9 percent increase from 2016–2018 represents the

largest in a quarter century. By 2020, NATO projects Allies will increase defense spending by \$100 billion. These are impressive numbers. Yet NATO contributions do not all boil down to simple dollar amounts. The Alliance continues to provide valuable manpower, specialized capabilities, and territory that no other partnership in the world can match.

I now move to the impactful work we are doing by, with, and through our allies and partners across the Middle East and South Asia.

In Syria and Iraq, the United States, as part of the seventy-nine-member Defeat-ISIS Coalition, and our local partners have liberated more than thirty towns and cities from ISIS control since January 2017—that’s all of the territory ISIS once held.

As we look ahead in Syria, we will continue to stand with those who fought and continue to fight alongside our Coalition, address Turkey’s security concerns along Syria’s northeast border, maintain the global Defeat-ISIS Coalition, and set conditions for continuing U.S. counterterrorism operations in the region. We fully support the Government of Iraq in its fight against terrorism and will continue to enable the Iraqi Security Forces’ progress in securing liberated areas and thwarting ISIS attempts to mount a clandestine insurgency.

In Afghanistan, we are executing President Trump’s South Asia Strategy, R4+S (regionalize, realign, reinforce, reconcile, and sustain). In applying military pressure on the Taliban, we support Ambassador Zalmay Khalilzad and Secretary Pompeo’s ongoing negotiations, which are Afghanistan’s first chance for real peace in 40 years. We are also applying maximum pressure on ISIS-Khorasan (ISIS-K) and other terrorist groups in Afghanistan, to stymie any threats to the U.S. Homeland.

Since 2016, our allies and partners have stepped up to create necessary conditions for negotiations. Afghan forces now lead one hundred percent of conventional ground missions. U.S. and coalition personnel perform train, advise, and assist roles, and the United States provides combat enablers to supplement Afghan capability gaps. In addition, U.S. and Afghan special forces regularly partner to conduct strikes against insurgents and terrorists. In 2018, international partners agreed to extend their roughly \$1 billion in annual financial sustainment of Afghan forces through 2024. NATO’s fulfillment of requirements in Afghanistan has increased more than fourteen percent since the introduction of President Trump’s South Asia Strategy, its highest level in the Mission’s history. Since 2016, the number of non-U.S. Coalition troops to NATO’s Resolute Support Mission has increased by more than thirty-five percent, and two new countries, Qatar and the United Arab Emirates, are formalizing their status as operational partners.

Defeating Al Qaeda in the Arabian Peninsula (AQAP) and ISIS remains the United States’ top national security interest in Yemen. At the same time, we fully support UN Special Envoy Martin Griffiths’s efforts to bring all relevant parties of the civil war to the negotiating table. Though not easy, these is the necessary first step on the path to lasting peace.

In Africa, we are helping partners build their security forces’ capacity to counter terrorist and other transnational threats, bolstering relationships to ensure U.S. influence and access against great power competition, enhancing our ability to conduct crisis response, and supporting whole-of-government efforts to advance stability and prosperity.

The last stop in our abbreviated walk around the world is closer to home—to our allies and partners in the western hemisphere and our efforts to protect our southern border. Over the last year, we have fostered strong military-to-military ties with our Canadian and Mexican neighbors, while bolstering relationships with Brazil, Argentina, Colombia, and Chile. We appreciate and applaud these nations’ contributions to international security, demonstrated notably last year when Chile served as the Combined Forces Maritime Component Commander at RIMPAC—the first time in the exercise’s history a non-English speaking nation has done so.

As we continue to monitor the situation in Venezuela, we are working closely with the Department of State, U.S. Agency for International Development, and regional partners to provide humanitarian assistance, while maintaining our posture to protect our national interests and citizens abroad.

On the southern border—in February, I visited the El Paso area to assess the security situation and DoD’s role in supporting our Department of Homeland Security partners.

As these myriad examples illustrate, our thriving, global constellation of alliances and partnerships provides an asymmetric advantage no competitor or adversary can match. We take that advantage seriously, and we continue to foster its growth at every opportunity.

Implementing Reform

Let me now turn inward—to reform of our internal business practices. Over the last year, we have made marked improvements to our fiscal transparency, instituting a wide range of reform initiatives that bolster efficiency, effectiveness, and performance.

We have focused reform in key areas, including healthcare, contract management, information technology (IT), acquisition, civilian resource management, and financial management. Let me provide a brief overview of our progress so far. Over the course of fiscal year 2017 and fiscal year 2018, we have saved \$4.7 billion from reform across our headquarters' activities—a down payment on more to come.

On healthcare, we realized savings of almost \$519 million in TRICARE reform in fiscal year 2018, with \$3.4 billion in savings planned through fiscal year 2021. Our entire Fourth Estate has now participated in contract service requirement reviews to eliminate unnecessary contracts, resulting in \$492 million in programmed savings.

Within the IT field, we modernized our defense travel system, trimming our regulation by almost 1,000 pages. The reform allows for better industry competition and has saved nearly \$160 million to date. Within acquisition reform, our Services saved more than \$550 million in fiscal year 2017 and fiscal year 2018 by selling equipment to foreign partners and negotiating multi-year procurements over single-year contracts.

And within financial management, DoD completed our first-ever consolidated financial statement audit in 2018, covering roughly \$2.7 trillion in assets. DoD has developed corrective action plans to address ninety-one percent of the total audit findings and recommendations, with more corrective actions to come.

In addition to business reform, the Department has also made important structural reforms, including elevating U.S. Cyber Command to full combatant command status; standing up U.S. Army Futures Command; finalizing our split of the Acquisition, Technology, and Logistics office into two separate offices, Acquisition and Sustainment (A&S) and Research and Engineering (R&E); and appointing the Department's first Chief Data Officer.

The Way Ahead

Our Department has been busy, but we are just getting started. I am encouraged by our initial progress. Focus and discipline are vital for our NDS's continued execution.

OUR FISCAL YEAR 2020 REQUEST: A STRATEGY-DRIVEN BUDGET

Our fiscal year 2018 funding stopped the erosion of our competitive edge by beginning to restore military readiness. Our fiscal year 2019 funding continued readiness gains and made key down payments on a more lethal military. Now our Department needs adequate, sustainable, and predictable funding to maintain momentum and expand our modernization and readiness efforts. Every line of our fiscal year 2020 request is designed to implement our Strategy. Therefore, every dollar of it—both in baseline funding and overseas contingency operations—is critical. I ask for Congress's support for on-time funding of our \$750 billion topline for National Defense, so we can continue to breathe life into the NDS.

Our strategy-driven budget drives further progress along our three lines of effort and brings our military modernization efforts to life at the speed of relevance. It enables critical shifts to compete, deter, and win in any high-end fight of the future, while preserving capabilities to support current operations. With this funding, we ensure America maintains our asymmetric military advantage with a more lethal, agile, and innovative Joint Force.

The fiscal year 2020 request includes the largest research, development, test, and evaluation (RDT&E) budget in 70 years, when adjusted for inflation. That is \$104 billion in total requested funds for fiscal year 2020—\$9 billion more than what we will spend this fiscal year. We have made strategic choices to prioritize lethality for the high-end fight.

Across DoD, these choices move our capabilities from cost-accepting to cost-imposing, from the exquisite and purely survivable to the affordable and attritable. Through targeted investment, we will replace a federated approach with an enterprise one, enabling a more distributed, scaled path to innovation and modernization. This path prioritizes unmanned and machine capabilities, as well as the ability to "fight in the dark" without network dependency.

With that broader context in mind, I will now focus on four priority areas: (1) Investing in the contested space and cyber domains; (2) modernizing in traditional air, maritime, and land domains, as well as multi-domain enterprises; (3) innovating in

emerging technology fields to strengthen our competitive edge, and; (4) building on readiness gains to meet requirements for our current operational commitments and future challenges.

Space and Cyber Investments

Our request recognizes the critically important role space will play in maintaining military superiority in the future. The \$14.1 billion dedicated to space will counteract the erosion of our competitive advantage by enhancing our existing space-based capabilities, like GPS, satellite communications, and missile warning, as well as increasing launch capacities. We will also stand up the U.S. Space Force Headquarters, U.S. Space Command, and Space Development Agency to best prepare DoD to assure freedom of operation in space, deter attacks, and when necessary, defeat space and counter space threats to the United States, our allies, and our partners.

We also note the cyber domain's crucial role, both now and in warfare's future. That is why we have requested \$9.6 billion to support offensive and defensive cyber-space operations, shore up network resiliency against adversaries, and improve our cyber posture. These efforts help ensure DoD has the information and communications technology capabilities necessary for implementing our NDS and realizing our mission.

Traditional and Multi-Domain Investments

The fiscal year 2020 budget will ensure the U.S. military maintains long-term competitive advantage on land, in the air, and on the sea. Across these three traditional domains, we are investing a total of \$107 billion for modernization.

In the air domain, this includes \$57.7 billion to increase the procurement and modernization of our fighter force. A balanced mix of fourth and fifth generation aircraft will effectively and affordably meet the entire spectrum of NDS missions, providing the stealth needed to gain air superiority, execute precision strikes, and conduct stand-in electronic attack against peer competitors in highly-contested environments, while also providing counter-air and strike in more permissive environments. We will also purchase additional tankers, Advanced Medium-Range Air-to-Air missiles, and Joint Air-Surface extended range missiles.

On land, we will invest \$14.6 billion to fund roughly 6,400 combat and tactical vehicles, including M-1 Abrams upgrades and Amphibious Combat Vehicles, as well as multiple combat systems that provide overmatch on the last two hundred meters of the battlefield.

In the maritime domain, we will increase and diversify our strike options, including offensive-armed unmanned surface and underwater vessels and advanced long-range missiles. Fiscal year 2020 funds will also accelerate fleet growth, delivering more ships faster, including cutting edge unmanned variants.

The fiscal year 2020 request also invests \$14 billion in modernizing and recapitalizing all three legs of our nuclear capabilities, to include the Ground-Based Strategic Deterrent system, Columbia-class ballistic missile submarine, Long-Range Standoff Weapon, B-21 bomber, life-extended Trident SLBM, and the F-35 dual-capable fighter aircraft; while also enhancing our missile warning and NC3 capabilities.

We also slate \$13.6 billion for missile defeat and defense modernization, increasing the capability and capacity of our ground-based defenses, Terminal High Altitude Area Defense, and Aegis Ballistic Missile Defense systems; enhancing our space-based missile warning and other capabilities to address hypersonic threats; and developing boost-phase missile defense systems, including directed energy and air-launched kinetic interceptors.

Also on the multi-domain front, we will invest \$3.4 billion for our Special Operations Forces. The fiscal year 2020 request refocuses on strategic competition by increasing funding for research and development, modernization, and expanded capabilities for the high-end fight, while maintaining irregular warfare as a core competency.

Innovation and Advanced Technology Investments

With more than \$7.4 billion directed toward DoD's development and fielding of technologies focused on the high-end fight, the fiscal year 2020 budget prioritizes funding across four key emerging areas: autonomy, AI/machine learning, hypersonics, and directed energy.

Let me expand on hypersonics for a moment as one example. Without the long-range, survivable, and fast strike capability of hypersonic weapons, it will be difficult for our military to maintain access to key regions or come to the defense of allies and partners in a crisis or war. Yet, with the \$2.6 billion requested in fiscal year 2020, projected doubling of funding requests in coming years, and close inter-service cooperation, we are accelerating pursuit of options deliverable from land,

sea, and air, with some capabilities expected to deploy to the warfighter 3 years earlier than previously planned.

Sustainment and Readiness Investments

This budget sustains our Joint Force and builds on critical readiness gains. We will invest almost \$125 billion in operational readiness and sustainment, including \$1.5 billion for advanced training facilities and ranges, \$2.6 billion for improving and expanding cyber operations training, and \$41.2 billion for further improving tactical aviation readiness.

In addition, the fiscal year 2020 budget will allow an increase to our total end-strength by roughly 7,700 Service Members over the projected fiscal year 2019 level, as well as give our men and women in uniform a much-deserved 3.1 percent pay raise, the largest in a decade.

In concert with the funding priorities I have just outlined, we will continue to pursue opportunities that balance capacity and capability by realizing economies of scale in large equipment acquisitions, like aircraft carriers and the F-35 Joint Strike Fighter. As we do so, we will continue to assess the utility of our investments through a lifecycle lens.

CONCLUSION

With Congress's support and delivery of on-time funding at our requested topline, this budget ensures our military maintains the lethality, adaptability, and resiliency necessary to compete, deter, and win against any adversary in an increasingly dangerous world.

It is a privilege and honor to lead the most lethal military in the world. I thank those in uniform and their families for all they do, today and every day, to keep us safe, and I appreciate the critical role Congress plays to ensure our warfighters are ready to succeed on the battlefields of today and tomorrow.

The men and women of the Department of Defense stand ready, as always, to protect liberty and freedom.

Thank you.

Senator SHELBY. General Dunford.

STATEMENT OF GENERAL JOSEPH F. DUNFORD JR., USMC, CHAIRMAN, JOINT CHIEFS OF STAFF

General DUNFORD. Chairman Shelby, Vice Chairman Durbin, distinguished members of the Committee, thank you for the opportunity to join Secretary Shanahan and Secretary Norquist. I remain honored to represent your soldiers, sailors, airmen, and marines.

While much of the discussion is going to focus on the challenges we face, I want to begin by assuring you that your armed forces can today deter nuclear attack, defend the homeland, meet our alliance commitments, and effectively respond should deterrence fail.

I believe we have a competitive advantage against any potential adversary defined as ability to project power and win at the time and place of our choosing, but as members of this committee know, 17 years of continuous combat and fiscal instability have affected our readiness and eroded our competitive advantage.

Chairman, Secretary Shanahan went through the details of the budget, so I will forego that and let the rest of my remarks be covered in the statement I have submitted for the record, and I look forwards to your questions.

[The statement follows:]

PREPARED STATEMENT OF GENERAL JOSEPH F. DUNFORD, JR.

Chairman Shelby, Ranking Member Durbin, distinguished members of this committee, it is an honor to join Acting Secretary Shanahan and the Honorable David Norquist in testifying before you today. It remains my distinct privilege to represent the Soldiers, Sailors, Airmen, and Marines of the United States Armed Forces.

Today, I can assure the committee that the United States military can defend the Homeland, meet our Alliance commitments, deter nuclear attack from any state actor, and effectively respond should deterrence fail. We have a competitive advantage against any adversary across all domains—air, sea, land, space, and cyber—and we can project power to advance the interests of the United States anywhere around the globe.

But that competitive advantage has eroded. This is the result of 17 years of continuous combat against transregional violent extremism and the damaging effects of funding instability. China and Russia have capitalized on our distraction and our constraints. They have invested in capabilities specifically designed to challenge our traditional sources of strength and have sought to undermine the rules-based international order that brought prosperity and relative peace for the last seven decades.

With your help, starting in 2017, we arrested the erosion of our competitive advantage. Appropriations in fiscal years 2017–2019 allowed us to restore readiness and invest in new capabilities while meeting our ongoing commitments across the globe. However, we cannot undo decades of degradation in just a few years. This year's budget allows us to continue to restore our competitive advantage by enhancing our readiness and lethality.

STRATEGIC ENVIRONMENT

Today's strategic environment is extraordinarily complex and volatile. The National Defense Strategy (NDS) characterizes and prioritizes our strategic challenges with a "2+3" framework that names China and Russia as the primary challenges with which we must contend, along with North Korea, Iran, and violent extremism. This framework provides a benchmark against which we can measure our capabilities. It is not intended to be predictive of future crises or armed conflicts; rather, it is an important tool for planning, managing risk, and developing capabilities. Our assumption is that if we build a Joint Force with the capabilities and capacities to meet these challenges, either individually or in some combination, we will be well-positioned to respond to whatever threats the future holds.

China. China has paired its rapid economic growth with substantial military investment as it strives for regional hegemony and global influence. By investing heavily in the space and cyber domains while expanding air and maritime capacity and militarizing disputed land formations, they are developing the ability to deny us access to the East and South China Seas. The intended effect is to weaken our alliance structure in the Pacific and allow Beijing to rewrite the norms, standards, and laws in the region. They are also advancing their interests globally through the One Belt One Road Initiative, creating exploitive economic relationships across Asia, Africa, and Latin America. These relationships can be leveraged to reduce our influence and the access we need to project military power.

Russia. Similarly, Russia has invested in asymmetrical capabilities where they perceive they have a competitive advantage. They are using information, cyber, and unconventional operations combined with economic and political influence to advance their interests while seeking to undermine the credibility of NATO. We have seen examples of their revanchist behavior in the invasion of Georgia and Crimea, their ongoing activity in the Donbas, and the recent seizure of Ukrainian vessels near the Sea of Azov. We also saw their efforts to undermine democracy in 2016, both in Europe and the United States.

North Korea. While we remain hopeful for a peaceful denuclearization of the Korean Peninsula, after two summits between President Trump and Kim Jong-Un, it is clear that we must remain ready for multiple contingencies. We are still dealing with a country that has nuclear weapons and ballistic missiles that threaten our Allies in the region and our Homeland. Regardless of the expressed intent of the North Korean leader, that capability exists and we must retain the force posture to deter and defend against the threat.

Iran. Iran continues to project malign influence and present challenges with missile, cyber, proxy, and maritime capabilities. We also continue to monitor Iran's nuclear capability. The regime aims to establish itself as the dominant regional power; their military development is designed to restrict our access to their sphere of influence while their activities threaten freedom of navigation along important commercial routes, destabilize the government of Iraq, exacerbate civil wars in Yemen and Syria, and support proxies inside of Lebanon and Syria.

Violent Extremist Organizations. While we have made significant progress against ISIS, Al Qaeda, and affiliated groups, the threats to the United States and our Allies and partners remain. Violent extremism is a global, generational, society-level problem of which military operations can only manage the symptoms. In the mean-

time, we have implemented a fiscally, politically, and militarily sustainable counter-terrorism campaign.

Our security, our prosperity, and the international system that makes them possible are threatened today by actors ranging from advanced and ascending militaries backed by nuclear arsenals to lone fighters inspired by radical ideologies. The Joint Force must respond by balancing the capabilities we need for today's operations with the depth, flexibility, and advanced technologies required to respond to the challenges of the future. If approved, the President's Budget 2020 (PB20) request will enable the Department to adapt the force we have today, while we design the force needed for tomorrow's challenges.

THE FORCE WE NEED TODAY

The Joint Military Net Assessment—a rigorous tool we use to evaluate the Joint Force's ability to meet its strategic objectives—identified challenges across all domains in the context of our near-peer competitors. Other assessments and strategic reviews have also highlighted the sustained investment we need to improve readiness, capabilities, and capacities in the Joint Force. The fiscal year 20 budget provides funding for current operations and, building on budgets of recent years, continues to build readiness and improve lethality by modernizing existing capabilities and expanding capacity.

Readiness

We have realized readiness improvements through fundamental changes in our global force management processes. As directed in the NDS—and in support of its 2+3 strategy—we have implemented Dynamic Force Employment (DFE). This is a top-down process of prioritizing and allocating resources against our strategic priorities with bottom-up refinement from the Geographic Combatant Commanders.

DFE allows us to position resources globally to mitigate strategic risk and be operationally unpredictable while remaining strategically predictable. This improves our ability to respond to unforeseen crises—as well as opportunities—and provide strategic flexibility for senior decision makers while maintaining readiness across the Joint Force.

Within this new framework for global force management, your men and women in uniform are operating across the globe every day to assure Allies and partners, deter adversaries, and assist local forces in combatting violent extremism at its sources. PB20 provides them the resources they need to accomplish their missions and return home safely.

Current Operations

China. U.S. forces conduct freedom of navigation operations globally to challenge excessive maritime claims—including those made by China—and demonstrate our determination to operate wherever international law allows. In the South China Sea and elsewhere in the region, we also fly bomber missions, demonstrating a resilient global strike capability that checks Chinese ambition and assures our regional Allies and partners. Throughout the Pacific, our troops exercise and engage with partners to signal our commitment and counterbalance China's challenges to the rules-based order.

Russia. In Europe, the European Defense Initiative and associated posture adjustments and combined exercise programs represent the largest reinforcement of NATO's collective defense posture—and the largest demonstration of its interoperability—since the Cold War. U.S. personnel also contribute to NATO's integrated ballistic missile air defense in Europe. In both the Atlantic and Pacific, we conduct sustained air and sea operations to monitor Russian activities and deter any aggression.

North Korea. U.S. troops on the Korean Peninsula are postured and trained to deter North Korean aggression, provocation, and coercion. Their current priority is supporting the State Department-led maximum pressure campaign to achieve the full, final, and verifiable denuclearization of the Peninsula. In concert with like-minded nations, we have expanded our sea and air operations to deter and disrupt illicit ship-to-ship transfers of refined petroleum and other materials restricted by UN Security Council Resolutions.

Iran. U.S. forces conduct freedom of navigation operations in the Strait of Hormuz. We continue our commitment to the stability of the government of Iraq, and our efforts to build the capacity of our regional partners. In these and other ways, the Joint Force complements U.S. diplomatic and economic efforts to counter Iranian malign influence in the Middle East.

VEOs. The United States has assembled a global coalition to counter violent extremist organizations—leveraging a relatively small footprint of U.S. forces to en-

able local partners throughout the world. The immediate priority is achieving the enduring defeat of ISIS in Iraq and Syria through Operation INHERENT RESOLVE. We are also working by, with, and through partners in every region to cut the “connective tissue” of foreign fighters, resources, and the ideological narrative that enable violent extremists to operate transregionally.

Iraq and Syria. U.S. troops remain engaged in the D-ISIS campaign. As the campaign transitions from clearing ISIS-held territory to a focus on stabilizing the region, activities such as training local security forces, enabling local governance, and conducting counterterrorism operations will help prevent a power vacuum in Northeast Syria and a resurgence of ISIS. We are working with our Coalition partners to ensure we meet Turkish security concerns as well as protect those that fought with us against ISIS.

Afghanistan. Along with our Allies and coalition partners, we are setting the military conditions to fully support an Afghan-led, Afghan-owned peace process. Coalition forces train, advise, and assist Afghanistan National Security Forces, as well as provide critical aviation support, intelligence, and other capabilities to make them a more effective fighting force.

In addition to readiness gains from improved force management, DoD budgets in recent years helped arrest the decline of unit readiness across the Joint Force. In fiscal year 2018 and fiscal year 2019, we increased the quality and quantity of unit training, improved personnel deployment availability, increased stocks of key munitions, streamlined aviation depot processes, and added capacity to address shortfalls in maintenance and sustainment functions. PB20 enables us to continue on this path, but a decade of neglect will require years to correct. A full restoration of our readiness will require sustained, sufficient, and predictable funding into the future.

A MODERN AND MORE LETHAL FORCE FOR TOMORROW

The NDS calls for a more lethal force that expands the competitive space to meet critical challenges and key operational problems. The PB20 request invests in a more lethal force by funding efforts to modernize current capabilities and expand warfighting capacity.

A primary modernization priority is our aging nuclear enterprise. A large-scale nuclear attack poses an existential threat to the United States. U.S. nuclear forces are the indispensable means of addressing this threat, making nuclear deterrence the highest priority mission of the Joint Force. The 2018 Nuclear Posture Review established the elements of the nuclear modernization program—a program that is necessary, prudent, and affordable given the nature and evolution of the threats we face. PB20 fully funds that program.

PB20 also enhances joint warfighting capacity by fielding the capabilities we need to project power. In the air, continued procurement of 5th generation fighter aircraft allows us greater flexibility to respond globally today and in the future. At sea, recapitalizing the naval fleet with modern and lethal platforms sustains undersea, surface, naval aviation, and fleet logistic advantages while increasing investments in unmanned, autonomous maritime capabilities. And on the ground, enhancement of long-range precision fires, development of the next generation combat vehicle, and investments in close combat systems ensure our Soldiers and Marines’ overmatch on the battlefield.

Space continues to be a priority area for modernization and innovation. In response to the evolution of threats to U.S. assets in space, we will establish the U.S. Space Force Headquarters, U.S. Space Command, and Space Development Agency. To deter our adversaries, we are pursuing organizational constructs, systems, and capabilities that will produce a more lethal, resilient, and agile Joint Force. Additionally, this budget request includes substantial investments in Missile Warning, launch platforms, Space Situational Awareness, Space Control, and enhancements to Position, Navigation, and Timing.

In the cyber domain, PB20 allows the Joint Force to further develop and employ the necessary tools to defend DoD infrastructure, compete below the level of armed conflict, and operate as part of broader joint operations. This budget request increases our investments in required capabilities to operate effectively in cyberspace and maintain our competitive advantage against near-peer adversaries.

While improving lethality in the near term, we will continue to develop and design a future Joint Force that can fight and win against any adversary on any battlefield of tomorrow. A joint concept-driven, threat-informed approach to capability development—leveraging wargames, exercises, and experimentation—allows us to more deliberately evaluate needs of the current force and prioritize future requirements. Our refined approach to Force Development and Design allows senior leaders

to pair emerging technologies with optimal organizational constructs and innovative operating concepts to plan and execute joint operations now and in the future.

No investment is more important to the effectiveness of our future force than the development and education of our future leaders. The Nation's ability to compete, deter, and win requires leaders who have the vision, intellect, and critical thinking skills to employ, develop, and design the future Joint Force. With a special emphasis on revitalization of the War Colleges, our leader development program is designed to fully support the development of these strategic thinkers and future senior leaders of the U.S. Armed Forces.

CONCLUSION

This is my fourth and final appearance before this committee in support of the Department's annual budget request. I thank you for the great honor of representing your Soldiers, Sailors, Airmen, and Marines.

More importantly, I would like to thank the committee for all you have done to support our troops, as well as their families. In visits to the Joint Force at bases and posts, stateside and around the world, I continue to be amazed by their spirit and dedication to the mission. Through the support of the Congress and the people you represent, our service members in uniform will prevail in our current conflicts and be prepared to confront the threats the United States will surely face in the future.

Together, we have honored our solemn obligation to never send our sons and daughters into a fair fight. With your continued support for sustained, sufficient, and predictable funding, we never will.

Senator SHELBY. Without objection, it is so ordered.

Thank you very much.

I will have several questions, and others I will ask to be put in the record, for the record, and ask you to answer them for the committee.

It has been about a year since the Department of Defense received its first request from the Department of Homeland Security. As the border and humanitarian conditions have evolved over the past several months, you have received multiple additional requests, to include support for construction of a physical barrier and additional support from the National Guard.

It is my understanding that there have been seven requests at least so far.

Secretary Shanahan, could you tell us here, give us an update on the status of DoD's operations at the border as well as provide your best judgment of how much support you could provide without negatively affecting other DoD missions?

Secretary SHANAHAN. Chairman, let me start with characterizing our support to the border in maybe three areas: the first being building of the barrier, the second being the request for assistance that you described, and then the capabilities that we intend to enable within the Department of Homeland Security.

So in terms of the border barrier itself, the Army Corps of Engineers has responsibility to build the barrier. We now have on contract, sufficient funds to build about 256 miles of barrier.

Over the course, just to give you a sense of—

Senator SHELBY. 256 miles?

Secretary SHANAHAN. 256 miles. And that represents DHS (Department of Homeland Security) funds from 2017 and 2018 as well as Treasury forfeiture funds as well as reprogramming.

How you will see this materialize in the next 6 months, about 63 additional new miles of wall will come online, so about a half a mile a day will be produced.

The RFAs (Request for Assistance), as you described about, a year ago, we received our first request, and I think as of this morning, we have 4,364 troops on the border. It is a mixture of guard and active. The primary role is doing monitor and detection of which we have approximately 1,167 performing that mission, but we have a broader set of missions, which range from logistical support to aviation support, food service, the whole host of those.

To more broadly answer your question in terms of readiness, we have seen no degradation to readiness. In fact, in some cases, it has enhanced our readiness because the troops get to perform certain functions.

And then the Chairman and I—and I will maybe ask the Chairman to describe how we are supporting DHS. We have a history in the Department of doing border control, and we have supplemented DHS with leadership so that we can address how to more effectively control the southwest border.

Chairman, maybe you could provide a little commentary.

General DUNFORD. Chairman, what we did was we have a position on the Joint Staff, Assistant to the Chairman, and that individual typically supports the Secretary of State. We have offered him up to the Secretary of Homeland Security to put together an interagency planning team.

As the Secretary said, although the commitment to the border has not impacted our preparedness for other missions, at this point, what we want to do is get into a more predictable mode of the requirements the Department of Homeland Security has and do better at integrating across the Government.

So we provided a two-star plus a number of planners to the Department of Homeland Security, so that we can lay out the next couple years based on the assumptions of the numbers of migrants that we will find at our border based on the capacity of homeland security and the growth over time and then obviously based on the report that they will need from the rest of the Government.

So what we are hopeful to do is to have, in fairly short order for the Secretary of Homeland Security, a much more predictable comprehensive plan for the next couple years.

Senator SHELBY. Not reached any agreement on a budget for fiscal year 2020 that would include funding, of course, for the Department of Defense, which is our priority here. We do not know what the outcome is going to be. We are working at it. Senator Durbin and I will be on top of it, but it could be a long, long haul this year, as you well know.

I have a number of questions I am going to submit for the record, where we can move on, dealing with China advanced information networks, dealing with hypersonic missile investments—you are very familiar with all of this—concerning the technological edge that we cannot cede to China or Russia or anybody. If we do, we do it at our own peril. Do you agree with that? And Space Development Agency on this, we will get into this too in some questions.

Other than that, I want to recognize Senator Durbin.

Senator DURBIN. Thanks, Mr. Chairman, and, Secretary Shanahan, thank you for being here. And let me join in the chorus of praise for General Dunford. General, thank you for your many years of service to our Country. I mean it from my heart.

SOUTHWEST BORDER

Secretary, we just received last week a supplemental funding request of \$377 million to pay for the last year's involvement of the Department of Defense and the Southwest Border mission. It is very clear this mission is going to continue into the next fiscal year.

So why is there nothing in the President's budget request to continue funding this mission?

Secretary SHANAHAN. This was the essence of the comment General Dunford was making. We really need a more formalized plan, and I will be working with Acting Secretary McAleenan to ensure we identify the appropriate resources so that we can sustain the appropriate level of effort.

Senator DURBIN. There was a statement that has been made publicly by Department of Defense and others about a clear line of demarcation between the mission of the Department of Homeland Security and the mission of the Department of Defense.

The longer this Southwest Border mission continues, the line of demarcation starts to blur in terms of where we are drawing a line saying this is not a military responsibility. This is law enforcement, immigration, internal security responsibility.

DEMARCATATION

What assurance can you give us that this age-old line of demarcation will be respected?

Secretary SHANAHAN. There will never be a blurring of the line in terms of law enforcement. We do not provide law enforcement, never have. We never will. Our role is to support DHS.

Senator DURBIN. I know it is, but let me ask you specifically. I understand that HHS (Department of Health and Human Services) has visited eight Department of Defense installations looking for sites to house unaccompanied children. They include Great Lakes Naval Station in my home State of Illinois.

UNACCOMPANIED CHILDREN IN MILITARY HOUSING

So in this relationship between HHS and the Department of Defense, where do things stand with their request for military housing?

Secretary SHANAHAN. They have made requests to us to provide housing. Our role in providing housing to them would be turnkey. So if there is something that is identified that we agree to support, we would prepare and then hand the keys over to HHS.

Senator DURBIN. When will the decision be made as to whether military housing will be provided?

Secretary SHANAHAN. I am going to ask David Norquist to answer that question.

David.

Mr. NORQUIST. Let me take it for the record in terms of when we have that.

Senator DURBIN. For the record. Okay.

SPACE FORCE

Secretary Shanahan, last week many of us participated in a classified briefing on threats in space. We certainly have incredible capabilities in space, and there is no doubt that we need to protect them.

However, it is not clear how the proposal for a Space Force would improve the effectiveness of 15,000 space professionals who are currently on the job. Why does it make more sense to establish a \$2 billion Space Force bureaucracy within the Air Force or separate from it? Would it be a better use of taxpayer dollars to invest that funding into new satellites, new rockets, and new approaches?

Secretary SHANAHAN. Thank you for that question.

The \$2 billion, in my view, was overstated. I think that detracts from the real value of the Space Force.

The fundamental proposition of the Space Force, given the change in the environment that space is now contested, is the status quo sufficient? It is not. The Space Force represents two significant changes. One is provide the command authority when it comes to protecting our economy and our defense assets as a fundamental change in mission, that we resource that; and then, secondarily, how do we deploy new capability that is not burdened by red tape and leverages so much of the commercial innovation that has occurred in space:

Maybe I would ask Chairman Dunford for his comments from the perspective of he has seen the Pentagon face problems before, and our approach generally is we react after something negative has occurred. I really think we are on the front end of helping to ensure that we sustain our competitive advantage.

Chairman.

General DUNFORD. Vice Chairman Durbin, what I would say is that an organization that is singly focused on recruiting people, training people, the path of capability development, the doctrine in space, has a better chance of giving us the kind of focus that I believe we need.

I have watched this now over the last couple years. I have been on my own personal journey from the Space Force to make a recommendation.

In 2017, I was not convinced that we needed a Space Force. Over time, I had been convinced based on the eroding competitive advantage we have vis-a-vis China and Russia in particular and what I see to be the future, the interdependencies that we have that an organization again that has that singular focus would posture the Department to better deal with only one of five domains that we have in our warfighting doctrine.

ACTIVE DUTY PERSONNEL

Senator DURBIN. I am going to close with one questions, and at the risk of spoiling your plans to publish a book, I am going to ask you, after 40 years of service in our military at the highest levels of leadership, what is it, as you depart, that you would point to as the most significant development or significant challenge that we face?

General DUNFORD. You know, Vice Chairman, first, there is no danger of spoiling the book that will not be written. I can assure you of that.

But the one thing, I came in—my date is 1975. So I was around as a platoon commander during the Vietnam days, and so when people talk about a hollow force, I was actually on active duty in 1980 when it was a hollow force. What we had was an imbalance between our people, our training, and our equipment.

And I have lived through now the development of the force that we have today, and I would give our Vietnam veterans a lot of credit for rebuilding the force after Vietnam in the force we have today.

I would just tell you that the single biggest change I saw was a qualitative change in the people that we have on active duty from the 1980s, 1990s, and through today. And I think the men and women that we have today in terms of their intellect, in terms of their fitness, in terms of their commitment is really the most important thing we have, and I think we all know that. But I walk away having that lesson reaffirmed to me over the last couple years.

Senator SHELBY. Senator Moran.

CYBER THREATS

Senator MORAN. Mr. Chairman, thank you.

General Dunford and Secretary Shanahan, thank you for being here.

General Dunford, thank you for your service to our Nation. My understanding is this is your 26th budget hearing. My condolences for that aspect of your career, but I do want to pay tribute to you and express gratitude on behalf of all Kansans and Americans for your lifelong service to our country.

You and I met for the very first time in the Oval Office, but it was the Oval Office at the Reagan Defense Forum. I remember it well and pleased to be there and to get acquainted with you.

I wanted to ask my question, if I have time for more than one. I wanted to ask at least my first question to the Secretary.

Mr. Secretary, according to an October 2018 GAO (Government Accountability Office) report, the Department of Defense—I am quoting—“The Department of Defense faces mounting challenges in protecting its weapon systems from increasingly sophisticated cyber threats.”

We met almost a year ago to discuss this topic, cyber vulnerabilities in weapon systems, and relying on—the fact is that we rely on less than a dozen red teams across the services that are NSA-certified to conduct threat analysis and assessments of DoD systems.

You and I had a productive conversation, and Director for Operational Test and Evaluation formally documented in their annual report much of what we discussed, recommending red team capacity and retention options must be increased to meet the demands of testing, training, and other assessment activities.

However, these red teams, in my view—and I would think in yours—lack programmatic funding to adequately staff, train, and equip them and emulate advanced cyber threats, and as you know,

DOT&E (Director, Operational Test and Evaluation) has seen increases in red team capacity in the past, but the construct does not exist to appropriately program those resources.

So, Mr. Secretary, would you support investing in red team integrated capabilities to ensure programmatic funding for personnel training and cyber ranges and tools for the red cyber team community? And in addition, would you support a scholarship for service program like the National Science Foundation to create a cyber warrior pipeline through universities to direct and employ scholarship to this service?

Secretary SHANAHAN. Senator, I would support all of those efforts.

The comment that I would provide along with this is our biggest challenge with the red teams is keeping the people. They are so talented and it is such high demand that we really get out-recruited. So anything we can do to generate capacities is extremely critical.

As you know, these red teams parachute, if you will, into different installations and conduct these attacks. So we can assess the vulnerabilities. So we have red teams, but in addition to that, at a Department level, we have taken a risk-based approach to identify what are the most critical risks and then how do we deliberately mitigate those as a complement to those red teams.

NATIONAL GUARD

Senator MORAN. Well, Mr. Secretary, your comments or your return comment to me allows me to highlight the National Guard's role.

I would indicate in Wichita, Kansas, our Air Force National Guard unit is a red cyber team as certified, and it is an aspect that I think sometimes is forgotten, which you have men and women serving in careers outside the guard who then devote their time and energy inside the guard. And it allows them to have experiences both places and income from the private sector that augments the opportunity for the active military to attract and retain those individuals.

Secretary SHANAHAN. We have found particularly in the area of cyber in the guard a tremendous number of people that are working in the industry, and it is also a real source of innovation for the active.

Senator MORAN. I also want to raise one more topic. I do not have a clock in front of me, but I assume I am still within my 5 minutes.

CYBER VULNERABILITY

A concern worth examining is that when a cyber vulnerability is found, who is responsible for the fix and mitigation? What entity then comes and says, "This is what we are going to do," and is responsible for the outcome?

Secretary SHANAHAN. As you can imagine, in the Department, we have, just to put it in perspective, 3 million endpoints. So when we talk about vulnerabilities, the network is extremely large and complex. So there is a variety of responsibilities across the organization for identifying those and retiring those risks. So it is not a singular organization that has responsibility.

I think our focus has been to elevate the responsibility of everyone and then change our policies to be that the network now is going to become zero trust. So we assume that it is always under attack, and we are changing our procedure so that we can authenticate anyone who is on the network and authenticate all of those devices because I think just relying on someone to police it, that does not give us the comprehensive coverage that we need.

Senator MORAN. Mr. Secretary, thank you.

General Dunford, thank you.

Senator MORAN [presiding]. Senator Leahy.

NATIONAL EMERGENCY DECLARATION

Senator LEAHY. Mr. Chairman, thank you very much, Senator Durban and Chairman Shelby.

Thank you, Acting Secretary Shanahan.

Of course, General Dunford, I know this is your last appearance here, and I thank you formally on the record for that. I intend to be speaking at greater length on the floor of the Senate praising you. I will not do that here because I do not want to embarrass the heck out of you in front of everybody, but I think you have been an example of what our military should be and our people in uniform should be. I am proud that my youngest son wore the same uniform—but he did not have all these stars on the shoulder.

Acting Secretary Shanahan, I have serious concern with the President's proposed border wall as use of a national emergency declaration of fund it. I think it is an end-run around this committee and the Constitution because the power of the purse is in the Congress.

It is especially offensive that the President wants to raid funds that this committee and Congress has voted for to other projects that would support our servicemembers and their families, their military missions around the world. We thought that through, had a bipartisan vote to support military around the world. I do not think that DoD should be canceling important support facilities such as schools and medical clinics, important to military spouses and children, to fund his pet project.

If the Department decides to cancel projects that we have given funding for so they can go to the wall, I supported those projects already. Do not expect me to support them a second time around. We have to make choices here all the time, and if I voted for a project and then it turns out the Department of Defense is not going to spend it, even though they requested it, if it is going to go to the wall, then as one Senator, I am not going to vote for additional funds to replace those projects, needy as they are.

So when will Congress be informed which projects, if any, will be deferred or canceled in order to fund the wall?

Mr. NORQUIST. Well, in terms of when the Congress would be informed, the process right now is the—we have two steps. We have the authority under 284, and then we have the one you are referencing which is the military construction under 2808.

The Secretary put out direction about a month ago asking the Chairman of the Joint Chiefs of Staff to look at the requirements for that and make sure it met the legal requirements. To answer your question, that report is due to him I think in the next few

days this week, and that will give him the basis of the information that the Secretary would need to make a decision.

Senator LEAHY. I asked this question. We asked, for example, the folks from Camp Lejeune which had enormous hurricane damage. We voted for money to repair it. Is that money going to be taken? I just use that as one example.

I have been to Camp Lejeune. My son trained there at Camp Lejeune, and I assume that the devastation is there. Is there going to be money there?

HOUSING PROJECTS

Can you tell us that our men and women in uniform and their families are not going to be adversely affected by these canceled projects?

Mr. NORQUIST. So for the projects that——

Senator LEAHY. You know, there has been a lot on TV, for example, housing that has got mold and vermin and so on.

Mr. NORQUIST. So the issues that relate to housing, those are not funded through the military construction account. Those would not be affected. Those are ones where there are contractors responsible for meeting those standards, and the services have processes in place to hold them to those standards.

READINESS PROJECTS

Senator LEAHY. What about readiness? Will anything be detracting from our readiness?

Mr. NORQUIST. So with regard to readiness, the focus of the process is to ensure that if we have to identify projects to become sources, we look at ones that do not start until later.

As you pointed out, there is a request pending for the additional funding to backfill it, and that will become the——

Senator LEAHY. Yes, but that is where you may have some problem.

Mr. NORQUIST. Understood.

Senator LEAHY. We funded it once, and you take the money away. It is going to be hard to see them compete with other projects. Later on, the money way well not be there.

INDO-PACIFIC

General Dunford, Acting Secretary Shanahan, in my office yesterday, we talked about my trip to Vietnam, which I think was successful. We had eight Republican and Democratic Senators to join. I saw firsthand security cooperation at Da Nang and Bien Hoa Air Base, the remediation projects which I have discussed with you and I have discussed with, Mr. Shanahan, your predecessor.

I realize we are in open hearing, but can you discuss the strategic value of increased security cooperation with the government of Vietnam, General?

General DUNFORD. Senator Leahy, thanks.

I would start by telling you that in our National Military Strategy, when we looked at our source of strength, we said it was a network of allies and partners that we have since World War II.

So when we look at the Pacific and we talk about a free and open Indo-Pacific, our strategy there, you would have to consider Vietnam as a critical partner in ensuring a free and open Indo-Pacific, and what we seek in the Pacific, of course, is a group of like-minded nations that will collectively act to ensure that we maintain our national law, open access to the global commons, and in a legal way of addressing territorial disputes.

So I think Vietnam in those areas has indicated a shared interest in a free and open Indo-Pacific, and so I think Vietnam is very important in that regard.

Senator LEAHY. Sending our aircraft carrier there must have sent quite a signal throughout that part of the world.

General DUNFORD. Senator, I think what it sent was a signal of the relationship between the United States and Vietnam, but more importantly, again, it was a physical manifestation of Vietnam's agreement with us on how we ought to address that free and open Indo-Pacific.

Senator LEAHY. We went to Bien Hoa, and of course, the U.S. is helping clean that up. It was a strong feeling from the Vietnamese that that is a strong indication from us.

Thank you, Mr. Chairman.

Senator SHELBY [presiding]. Thank you.

Senator Blunt.

NATIONAL RECONNAISSANCE ORGANIZATION

Senator BLUNT. Thank you, Chairman.

Back to another Space Force question—and it may not be in this budget yet, but on the National Reconnaissance Organization, a sort of shared entity between intel and defense, that largely has been run, I think as an intel entity but with full defense access.

I would have some concern about the unique character of that organization changing and wonder from either General Dunford or the Secretary of what is the thought process on the National Reconnaissance Organization.

Secretary SHANAHAN. Senator, the integration in terms of the information and the data that we would share is to me the most vital piece that we have to protect. So as we continue to invest in new capability, assume for today that the organizations remain separate, the ability to share and pass information timely and effectively is what the Space Force really works to address.

So when Betty Sapp was there and now with Sue Gordon, whether we want to call it formally or informally, on a technical basis, we have remained aligned. We do not know how organizationally things will evolve in the future, but it is so important that we build the pipes, if you will, so that there is no latency and delay in how we share information because in the future, where artificial intelligence is so critical, it is getting the data to the algorithms. And so building that network is where I think the Space Force and staying aligned is so important.

Senator BLUNT. Well, I think those are obviously the right goals. I just think there is a uniqueness here.

I do not know, General Dunford, if there are any Title 10 and Title 50 issues that get more confused if it goes under a new entity,

either the Space Force or any of the defense unique components, but that would be one of the concerns I have as well.

General DUNFORD. Senator, I think one of the reasons why we left this to a later discussion is for the very reason you talk about.

First of all, if you just start here with Congress, the oversight committees are different and the funding streams are different when you talk about Title 50 money and really the funding streams that go to NRO (National Reconnaissance Office).

But I would emphasize to the Secretary that is the way I think about it, and we have over the last few years built an integrated operations center. So we have shared situational awareness. We have shared operations in support, and I think I share the view with the Secretary that whatever we do, we just need to achieve that end state. That is what is most important.

Senator BLUNT. And I believe what you are both saying is that is the way it is working now. So thinking carefully about this, if the goal we want to achieve is to be sure we continue to have ongoing forward movement than what we have now would be important.

CYBER OFFENSE

I left vote just as Senator Moran was asking his questions about cyber, and I do not want to be too redundant here. But I have two questions about cyber. One is the authorization for cyber offense relatively new, about maybe a year ago, maybe a little more, maybe almost two, but relatively new. And anything you would want to say about that? And anything that this budget does that impacts your ability to recruit our cyber personnel would be interesting to me.

Secretary SHANAHAN. Maybe the first question you had, the authorities are extremely important because we need a deterrence. Building thicker castle walls and higher castle walls is not the way to survive with this new cyber threat, and the threat continues to grow, so having a deterrent effect is very important. That is why the offensive authorities are critical.

Senator BLUNT. And you now have those?

Secretary SHANAHAN. We do.

Senator BLUNT. And cyber warriors, how hard are they to find, and what are we doing to find them?

Secretary SHANAHAN. Well, I was going to say this budget has a double-digit increase in terms of resources to Cybercom, and I have spent a considerable amount of time with General Nakasone, not just simply on how do we generate more cyber warriors. I mean, that really is a jewel that is being created there in NSA (National Security Agency) and Cybercom.

Retention there really comes from how you treat your people, and he is really a supreme leader in that regard.

The budget, I think reflects a prudent investment in the capabilities that we are going to need in the future in terms of encryption and quantum. As this threat continues to evolve, it is just like space, an area where we need to make the right investments for the technologies that will not mature for another 5 or 7 years.

Senator BLUNT. Thank you.

Thank you, Chairman.

Senator SHELBY. Senator Reed.

IRAN

Senator REED. Thank you very much, Mr. Chairman.

Mr. Secretary, on Sunday evening, the National Security Advisor announced that the U.S. is deploying a carrier strike group and a bomber task force to CENTCOM in response to a number of troubling and escalatory indications and warnings involving Iran. The threats were apparently significant enough not only to surge additional military capabilities in the region, but for Secretary Pompeo to cancel a meeting with Prime Minister Merkel and go to Iraq.

But it took the Department more than 2 days to share any information with the congressional defense committees, and I sit on both. Frankly, I think that is unacceptable. If this is a serious situation requiring a response of this nature, we should be informed.

So why were we not informed in a detailed and timely manner, and when will we receive a detailed, presumably classified briefing on what is happening?

Secretary SHANAHAN. Maybe I can give you just an evolution of the course of events. We always give timely information. So, I mean, I think that is the response we have here, and I believe Chairman Dunford has some time with you this afternoon. I would imagine he can give you a detailed update.

But let me give you a characterization of the events. Thursday morning, we were working in Venezuela with a whole-of-government. We received indications, this very, very incredible intelligence. On Friday afternoon, we went to work, understanding the sources and to get the teams turning on what does it mean and how might we respond.

I went for a run, and then Chairman Dunford called me up and said North Korea was now shooting rockets and missiles.

Saturday, the Chairman and I went through the intelligence with General McKenzie from CENTCOM, and it was really Sunday afternoon that you came back and said, "Here is what we are recommending. I need authority to proceed."

I then coordinated with State Department and NSC (National Security Council). So it was really Sunday night before any real information was put together.

In an ideal situation, we would give you an update on Monday. I guess this is Wednesday. We should be more timely.

Chairman, any—

General DUNFORD. Senator Reed, the reporting notwithstanding, I just want you to know our focus over the weekend was to deter. We saw the intelligence, and so we sent some messages on Friday to make sure that it was clear to Iran that we recognized the threat and we were postured to respond to the threat.

And then what I asked the Secretary for on Sunday—eventually, the Lincoln would have made its way to the Gulf. What I asked really was to accelerate the movement of the Lincoln and the bomber task force so that there would be no ambiguity about our preparedness to respond to any threat against our people or our partners in the region, and that is why we worked pretty hard to do that because what we did not want to do is be in a position to respond. We wanted to make sure that we took as much action as

we could over the weekend to actually deter that, but I understand your point on the reporting piece.

Senator REED. Let me, Mr. Secretary, follow up with another question.

ISLAMIC REVOLUTIONARY GUARD CORPS

Before Easter, I traveled to Iraq and Afghanistan. I had the opportunity to meet with the president of Afghanistan, the chief executive of Afghanistan. In Iraq, I saw several local leaders, the prime minister and the president. All of them suggested that the designation of the IRGC (Islamic Revolutionary Guard Corps) as a terrorist group was provocative and destabilizing. So that is for the record.

But let me ask you. Are you aware of any evidence that the IRGC or any other Iranian group is an associated force of al-Qaeda, associated force being a key provision of the AUMF (Authorization for Use of Military Force)? Do you have any evidence of that?

If you do not want to answer in open session, that is quite all right.

Secretary SHANAHAN. Yes, I think if we could do it in a closed environment—

Senator REED. I understand that. Thank you.

Senator SHELBY. Senator Boozman.

HURRICANE RECOVERY

Senator BOOZMAN. Thank you, Mr. Chairman, and thank you all for being here.

It is great to see Secretary Shanahan. We appreciate your leadership, and, General Dunford, it is always good to hear you come and talk about how we can be a more lethal, effective fighting machine.

Over the past 6 months, our services have dedicated a significant amount of resources to hurricane recovery on our military installations. President Trump, I believe, is at Tyndall today, touring that facility.

I am going to be traveling to Camp Lejeune in North Carolina to inspect the damage there.

Our military bases are still waiting on disaster relief from Congress, as our servicemembers continue to operate in poor conditions.

Can you give us an update on the impact of the aid you all have received so far, if any, and what more is still needed?

Then following up on that, if Congress does not pass a disaster aid package soon, how will that affect our ratings, which again is the name of the game?

Mr. NORQUIST. Sir, as the services respond to a hurricane, they have the immediate evacuation. Then they have got to go through and assess the property, trying to do the repairs that they can do. They want to take care of all the folks who have been displaced. All of these consume resources that were not originally programmed for that purpose.

So when Congress provided the support, when this committee in particular provided support for that reprogramming, for both the Air Force and the Marine Corps, that allowed them to continue those operations because there is only a limited amount they can take from others, from the other accounts.

The supplemental that the Congress is considering would be another very significant step forward in allowing them, particularly as we are dealing with facilities sustainment, repair, and maintenance, which is this year's biggest requirement—as you look out over the next few years, they are going to have to start doing rebuilding. So there is about \$2 billion in our request in 2020 for the military construction to support that, and there will be some that follows. But that additional support prevents them from basically disrupting training, delaying the repair and maintenance of the existing facilities, which they would have to do in terms of realigning the funds.

Senator BOOZMAN. Right.

Mr. NORQUIST. So we greatly appreciate that support.

Senator BOOZMAN. But, generally, supplementals come through in a short period of time. This is not coming through. What is happening now? What is going to be the effect if we do not get this done soon?

Mr. NORQUIST. So what they end up doing is stopping repair and maintenance of other facilities across the country, and they start looking at potential training that would have to be effected at year-end.

Senator BOOZMAN. So are we at that point now?

Mr. NORQUIST. I believe we are. I believe the Air Force has started to implement some of those controls even now.

Senator BOOZMAN. Very good.

SUICIDE

Like many States, Arkansas is being hit hard by suicide. Servicemembers, veterans, military families have all been victim. It is a top priority certainly of all of us at the committee. I assume it is a top priority at DoD.

As Acting Secretary of Defense, how are you working together with Secretary Wilkie to spearhead the Veteran Wellness, Empowerment, and Suicide Prevention Task Force, and do you have any updates for us?

Secretary SHANAHAN. As for the task force, I do not have any specific updates on the task force itself.

The integration of the Department, we transition people between DoD and the VA (Department of Veterans Affairs). That is critical. That is a high-priority area for Secretary Wilkie and ourselves.

The collaboration is vital, but also the work that we do in the Department.

I will ask Chairman Dunford just to provide a perspective on what has changed over his career because I think he has got some unique insights.

But in the Department, we have fundamentally deployed forward more mental health professionals.

We also know that these issues are not just about mental health. It is about being able to get support for people who have relationship problems or financial issues. So we have really expanded how we address suicide more broadly than just simply mental health.

Chairman.

General DUNFORD. Senator, when I first really worked on this issue institutionally, I was Assistant Commandant in the Marine

Corps back in 2010, and at the time, we had a very stovepiped approach to delivering mental healthcare. And so I think there are probably two things that I think are promising, promising developments.

The first is the multidisciplinary approach to healthcare. Now when an individual seeks help, it is not a point-to-point. They see the psychiatrist; that does not work. They see the psychologist; that does not work. They see a social worker; that does not work. There is a multidisciplinary approach where an individual is managed by a team that has the appropriate skills to deal with that individual's problem.

The other challenge that we had was I think a misinterpretation in some cases of privacy associated with medical care in a sense that we did not have the kind of sharing of information across command teams, chaplains, medical professionals, so that when we had an individual who needed help, we could identify that individual and take proactive action.

And I think those two things are among the promising initiatives, but I do not think any of us would say we are complacent with where we are, either with mental health as a whole or specifically with the scourge of suicide.

Senator BOOZMAN. Thank you, Mr. Chairman.

Senator SHELBY. Senator Schatz.

GUAM

Senator SCHATZ. Thank you, Mr. Chairman.

I will start with General Dunford, and I want to talk about Guam. General Neller and I had a good exchange in the subcommittee, and we have talked about this on and off for many, many years.

The basic question is some of the assumptions that went into the Guam realignment were based on lift and the availability of training areas, and that is not currently in evidence. And I am wondering whether the Department is considering reevaluating the plan, understanding that we have an ironclad commitment to the government of Japan to follow through on our promise, but we do not have an ironclad commitment to do it stupidly.

If the purpose of having marines forward is to have them ready to fight tonight, but they got to wait for a lift from San Diego or Honolulu, then it really defeats the purpose and starts to look like an illogical plan. I would like you to comment on that.

General DUNFORD. Senator, I would. In fact, probably just by coincidence, the Secretary and I are meeting today at 1600 on this issue, and I think there are really three main areas. And I think General Neller has probably talked to you about it. We have the aviation laydown. We have the infantry laydown. We have the artillery laydown.

There are challenges with the training in all three of those areas, and so we do have some things to discuss with the Secretary today.

So, as we move forward, as you say, the posture that we have, I make one key assumption. That it will be decades as we implement the DPRI (Defense Policy Review Initiative), and we want to make sure we are going to do it right. So we will talk to the Secretary about those two issues today.

But I think your characterization for the members is fair. Two key assumptions, these go back to 2008, 2009. One was that we would have, when we moved, significant forces down to Guam; that we would have training areas down there for the infantry forces that would be there. We have not developed the access to those training areas as fast as we want, and of course, given the challenges we have in the Pacific, mobility remains a challenge. And we have got to look at increasing the capacity of mobility in the area.

But I can assure you it has the attention of the Secretary and I, and Secretary Spencer, Secretary of Navy, has had, I know, a number of conversations with the Secretary as well.

Secretary SHANAHAN. Can I just make one comment on this?

Senator SCHATZ. Sure. Go ahead, Mr. Secretary.

Secretary SHANAHAN. This has really evolved out of the National Defense Strategy, with a focus on China, and we are very cognizant of the decisions we are making in terms of construction because the last 30 to 50 years. So the timing is not coincidental. We just recognize now before we go make these investments in construction—let us finalize on what is the most effective use of these resources.

Senator SCHATZ. Absolutely.

Let us stay in the Pacific. Admiral Davidson's plans for the Indo-Pacific rely, at least in part, on maintaining access to the compact states: Micronesia, the Marshalls, and Palau. What are we doing to help State and Interior extend the agreements, which expire in 2023?

Secretary SHANAHAN. I am not current. I will take for the record in terms of what we are doing there.

The value of—you know, at the Marshall Islands and Kwajalein are immensely important as we develop our missile defense capabilities, working with Admiral Davidson to—just like the previous question you had, what is our thinking around where we want to put sensors?

As you know, the importance of these contributions to their GDP (gross domestic product) is very significant.

Senator SCHATZ. Right. But State has to get on this because 2023 is coming up, and obviously, the Chinese are doing their influence campaign, which has to do as much with sort of geopolitics and an investment strategy as anything else. So I will take that for the record.

Secretary SHANAHAN. Sure. Yes.

TYNDALL F-35

Senator SCHATZ. But next question, back to Tyndall, the Air Force goes through a strategic basing process, and what we are hearing—and I do not know that it is true, but what we are hearing is that there is a plan afoot to change Tyndall from an F-22 base to an F-35 base. And my question is, (A) is that true? (B) if so, is this going through the regular order within the Department of Defense and within the Department of the Air Force? Is this sort of flowing through the regular strategic basing process?

Just to be totally blunt, what we are hearing is that this is more of a political process that is being fed from the White House down

through the Department, and that makes it more difficult for us to find our enthusiasm to fund this.

And I will add one last thing. The base was flattened. There is another base 50 miles away. This is, according to the Department, the ninth most vulnerable base or installation in the United States to severe weather, and now, at least apparently because of a political commitment, we are looking at spending billions of dollars to rebuild an Air Force base 50 miles away from another Air Force base, both of which are vulnerable to severe weather.

So can you reassure us that this is being done on a level?

Secretary SHANAHAN. I will reassure you on the level in terms of rebuilding Tyndall. I mean—

Senator SCHATZ. What does that mean? I am asking whether this is going—

Secretary SHANAHAN. This—yes.

Senator SCHATZ. Hold on. I am asking whether this is going through the strategic basing process in the regular order or is this coming from the White House.

Secretary SHANAHAN. On the F-35, I will have to go back and look. This is a new development to me in terms of a basing decision on the F-22 versus the F-35.

I do know that we want to preserve our presence in Florida because of the value of the test range where we conduct all these flying missions.

Senator SCHATZ. And you do not think you could fly from the base 50 miles away to use that test range?

Secretary SHANAHAN. I will get with Dr. Wilson and understand how she made that basing decision.

Senator SCHATZ. Okay. I will take that for the record.

Secretary SHANAHAN. Okay. Sure.

Senator SCHATZ. And I will take that as you are not sure whether this is being done through the regular order or not.

Secretary SHANAHAN. Well, I just want to validate how Dr. Wilson made that decision.

Senator SCHATZ. Thank you.

Secretary SHANAHAN. Yes.

Senator SHELBY. Senator Collins.

SOUTH KOREA EXERCISES

Senator COLLINS. Thank you, Mr. Chairman.

General, let me first begin by thanking you for your many decades of dedicated service to our Country.

General, despite the administration's diplomatic efforts with North Korea, we still appear to be far apart in reaching an agreement on denuclearization.

In March, it was announced that the Pentagon was canceling two additional large-scale military exercises with South Korea that were expected to be held this spring. I know that there are smaller-scale exercises that are continuing to take place, but this cancelation concerns me.

Do you believe that these smaller training exercises are adequate to maintain the readiness of our troops and allies, especially as tensions remain with North Korea's recent short-range missile test this past weekend?

General DUNFORD. Senator, I will start by saying I am absolutely confident that the training program we have in place right now will allow us to do what we talk about in when United States Forces Korea, which is “Fight Tonight.” And I speak for General Abrams on the peninsula and Admiral Davidson.

We did revise the training program on the peninsula. We used to conduct large-scale exercises for two reasons, one, very high profile to deter North Korea, and the other is to maintain proficiency and conduct training.

We have found other ways to do the training, and we have gone through each and every mission-essential task of U.S. Forces Korea and Combined Forces Korea and put together a new program that is focused on the mission-essential task and with admittedly a smaller profile in terms of deterrence to support the diplomatic track.

But I would tell you I am completely confident right now that the program that we have in place between exercise and training will allow us to maintain proficiency at the right levels.

F-15EXS

Senator COLLINS. Let me turn to a different issue. Many of us, in light of the Air Force’s testimony last year, were surprised to see funding for F-15EXs in the budget. That seems contradictory to what the Air Force said that it needs. Are you concerned that allocating funds to fourth-generation fighters, the F-15EXs, will prevent the Air Force from buying a sufficient number of F-35As needed to get to a 50 percent fifth-generation fleet in time to meet the threats from Russia and China?

General DUNFORD. Senator that is a great question, and this is an issue I looked at pretty hard.

There were a number of variables that went into that decision. If I could, I would just walk you through those and then answer the question about the F-35 ramp specifically.

First, how much money we were going to spend overall in tactical aviation; second, how many platforms we needed to have, capacity of the total fleet. Third was how much ordinance, of what type we had to carry; and then the F-15C, which was not going to make it past the mid-2020s.

In our competitive area of study—so this was a joint study. This was not a programmatic decision. This supported the Air Force’s decision. We looked at a mix of fourth- and fifth-generation aircraft during that period of 2025 to 2035 to be the right mix of aircraft because of the way the F-15EX could complement the fifth-generation fighter. So we felt like a fifth-generation, fourth-generation mix would allow us to meet the war plan requirements. And by the way, we will still be plying F-35s as fast as we can.

Senator COLLINS. Thank you.

ISRAEL AND MISSILE DEFENSE

Secretary Shanahan, last weekend, nearly 700 rockets were fired by militant groups in Gaza into Israel, which demonstrates the continued importance of the United States in Israel working together to deploy a multi-tiered missile defense system.

We have put, year after year after year with the support of virtually all of this committee under the leadership of our chairman, significant resources behind programs such as Iron Dome, Arrow, and David's Sling. Do you see opportunities to increase our missile defense cooperation with Israel?

Secretary SHANAHAN. I do, and those investments, Arrow in particular—the Iron Dome, I think we are going to buy two batteries of Iron Dome. So when you think about this is tactical missile defense, a capability that they have been able to deploy and mature has broader use than just in Israel.

I think the collaborative work between Missile Defense Agency and the Israeli Defense Forces has enormous benefit in the future, and I would continue to invest in that capability.

Senator COLLINS. Benefits both countries.

Secretary SHANAHAN. Yes, absolutely.

Senator COLLINS. Thank you.

Thank you, Mr. Chairman. I have additional questions, which I would like to submit for the record.

Senator SHELBY. Thank you, Senator.

Senator Feinstein.

NUCLEAR MODERNIZATION

Senator FEINSTEIN. Thanks very much, Mr. Chairman.

Gentlemen, I would like to talk a little bit about the nuclear provisions in the budget. As you know, the New START Treaty limits both Russia and the United States to 1,550 deployed warheads atop 700 deployed launchers. It is my understanding that both nations have met the treaty's limits in February of 2018, as required by the agreement.

A CBO (Congressional Budget Office) report in February estimates that the United States will spend \$494 billion on nuclear weapons from fiscal year 2019 through fiscal year 2028. That is an increase of \$94 billion, or 23 percent from the CBO's previous 10-year estimate of \$400 billion, which was published in January of 2017.

Now, the President's budget contains \$10 million to finish production of a low-yield variant of a submarine-launched ballistic missile, and in 2019, we appropriated \$65 million for the program. The budget also includes \$5 million to study the development of a new sea-launched cruise missile.

The nuclear modernization continues. The request includes \$2.2 billion for the Navy program to build 12 *Columbia*-class ballistic missile submarines, and the Air Force is seeking \$3 billion to continue development of the B-21 Raider and \$713 million for the long-range LRSO (Long Range Standoff Weapon) program. And it goes on and on.

We are at our limit under the treaty, and my understanding is that the President has an interest of beginning some negotiations with both China and Russia. And my question is, Where are we going with the nuclear program? The monies are so increased now that what they project to me is that there is a new interest in going beyond the New START Treaty level, and I would like to ask if you would be willing to engage in some conversation on that subject.

I am from the generation of the Daisy, if you remember, and at the very end of World War II, when all that happened and all the fears, and have some concern that we go back to the kind of nuclear development that becomes easier and easier to use.

Secretary SHANAHAN. Senator, Chairman and I will tag team this, but maybe I can answer your question in three segments.

Senator FEINSTEIN. All right.

ARMS CONTROL

Secretary SHANAHAN. Arms control is vital. I mean, the New START Treaty expires in February of—

Senator FEINSTEIN. 2021.

Secretary SHANAHAN. Of 2021. And we need to continue to make progress on that. The provisions of the treaty allow for an extension up to 5 years. So there is a backstop, if you will, if we do not make the progress to that February 2021 timeline.

The New START Treaty does not address new capabilities. So when we look at the weapons, some of the new weapons Russia is developing in their modernization program, we still have to address those.

More broadly, though, we do need to deal with arms control, and when we put those original treaties in place, there was not a China who was making a significant investment in nuclear weapons.

The unfortunate situation is that the life of our existing nuclear triad is becoming obsolete. We are the end of life, and without the certainty of some of these treaties, now is the time we have to be making investments to do the modernization.

So when you look at nuclear capabilities as being the number one modernization effort of Russia and what the Chinese are doing, now is not the time to unilaterally disarm. So—

Senator FEINSTEIN. But both we and Russia—I do not mean to interrupt you.

Secretary SHANAHAN. Yes. Right, no.

Senator FEINSTEIN. But we are constrained at that number of 1,550—

Secretary SHANAHAN. Yes. That is my understanding.

Senator FEINSTEIN [continuing]. And applying it.

Secretary SHANAHAN. Right.

Senator FEINSTEIN. And that will be the case, then, of 2021, if I understand that.

Secretary SHANAHAN. Right.

Chairman.

NUCLEAR POSTURE REVIEWS

General DUNFORD. Senator, this is really an important point.

First, I understand your concerns, and I would just say that, number one, the capabilities that we are fielding in the doctrine that we have is to reduce the probability for the use of nuclear weapons, and we do that informed by Russia.

As you know, we now have had three Nuclear Posture Reviews across two administrations that have had very consistent findings in those recommendations, and by and large, with the exception of the low-yield missile that you mentioned, there has been consistency across all three.

You mentioned the 1,550, but there is also 2,500 nonstrategic weapons that the Russians maintain as well, and when we look at Russian doctrine and look at capability, we do—and I will not take too much time now, but we do see scenarios where the Russians believe that they may potentially be able to use those nonstrategic nuclear weapons in Europe and then put the United States in a position where we only have an opportunity to respond with either strategic nuclear weapons or not respond at all.

So the low-yield nuclear weapon is actually designed to make sure that the Russians are convinced that there is absolutely no circumstances under which the use of nuclear weapons could result in a strategic advantage for them.

Senator FEINSTEIN. So how does that justify this increase in spending, the \$2.2 billion for the Navy program of the Columbia-class ballistic missile submarines and the Air Force \$3 billion and \$713 million for the long-range LRSO and the Minuteman III?

General DUNFORD. Senator, first—

Senator FEINSTEIN. So what you are doing is developing more low-class options?

General DUNFORD. We are developing a low-yield option to ensure that we have deterrence across the spectrum.

But I would—just to put the cost in some context, again, we are implementing the results of our Nuclear Posture Review at the peak for the most important mission in the Department, which is to deter a nuclear war. At the peak, it will be about 6 percent. So that is the peak of procurement. It will be about 6 percent of the Department's total obligation authority.

And, Senator, no question, we should seek to drive the cost down as low as we possibly can, but in context, for the most important mission the Department has, having a safe, reliable, and credible nuclear deterrent is really what we seek to do.

Senator FEINSTEIN. Just so I understand this, you are in essence saying that you are going for this large expenditure. It is an increase of \$94 billion over the CBO's prior 10-year estimate of \$400 billion, and those are the numbers that you are going to follow? It is going to be that kind of an increase?

General DUNFORD. Senator, I am not able to talk to the CBO's numbers there.

The percentage that I just gave you of our total obligation authority is an accurate number, and I would be happy to take for the record the baseline that CBO is using and what they are basing their projections on.

But what I can assure you is that this program is the one that has been supported again by three Nuclear Posture Reviews in a row, and by delays in modernization of the nuclear enterprise, that we should have started this decades ago. And we now find ourselves with literally the description of the biowave of modernization where all three legs of the triad and the nuclear command and control capability all have to be modernized at the same time.

Senator FEINSTEIN. Thank you. Thank you.

Senator SHELBY. Senator Hoeven.

NUCLEAR TRIAD

Senator HOEVEN. Thank you, Mr. Chairman.

Secretary and General, is not it vital that we continue to invest in our nuclear mission in order to continue to make sure that we modernize it and in fact deter Russia and China as they continue to invest in their nuclear capabilities?

Secretary SHANAHAN. The modernization is vital, as you see Russia modernizing and China. Now is not the time to disarm.

Senator HOEVEN. General.

General DUNFORD. Senator, I could not agree more. That is the effort that the Department has under way right now is to make sure that we have a safe, reliable, and a credible nuclear deterrent well into the future.

Senator HOEVEN. And that means the nuclear triad, all three?

General DUNFORD. That means the nuclear triad, and an important element to that is the nuclear command and control capability as well.

Senator HOEVEN. And do you feel that we are undertaking that nuclear modernization plan adequately to deter major adversaries like China and Russia that are making big investments in their nuclear capability?

General DUNFORD. Our initiatives are completely informed by the Nuclear Posture Review that told us what it would take to deter the use of nuclear weapons by an adversary, and obviously, Russia and China, as you highlight, are the two most significant nuclear adversaries we face, but not the only.

Senator HOEVEN. Mr. Secretary.

Secretary SHANAHAN. I fully agree with that. The nuclear triad has proven effective over seven decades. This is really about modernization more than it is about delivering new capability or changing our doctrine.

Senator HOEVEN. So the reality is we become less secure if we do not make these investments to upgrade and modernize our nuclear systems?

Secretary SHANAHAN. Yes, Senator.

RESERVE AND GUARD EDUCATIONAL PARITY

Senator HOEVEN. Along with Senator Leahy and Senator Boozman, I have introduced the Montgomery GI Bill Parity Act, which would allow members of the Reserve and Guard to utilize both the educational benefits under the GI Bill as well as the tuition assistance program, which active-duty members can now do.

And I would ask for your support for that legislation, both Mr. Secretary and General Dunford.

Secretary SHANAHAN. Yes, sir.

Senator HOEVEN. Okay. Both are committed to supporting that?

Secretary SHANAHAN. We will review the language, and I am happy to—

Senator HOEVEN. Yes. And I've found particularly for Guard members, that educational benefit is a huge factor in recruiting them, particularly a lot of these really high-tech people we need in some of these missions and retaining them. It's incredibly important.

INTELLIGENCE, SURVEILLANCE AND RECONNAISSANCE

General Dunford, in regard to the Arctic, Secretary of State Pompeo, as you know, was in Finland. He talked about the very aggressive posture of Russia and Chinese activities in the Arctic. Clearly, we need to do more.

Do we have sufficient ISR (Intelligence, Surveillance and Reconnaissance) capability in the Arctic? And I am specifically talking about things like Global Hawk. Grand Forks Air Force Base, North Dakota, has a Global Hawk mission, has incredible reach, incredible potential to cover in the Arctic. Are we making the investment we need to, and is that the right kind of investment to make sure we are covering the Arctic?

General DUNFORD. Senator, first, we are making the right kind of investment.

But, in candor, I have to tell you that I do not think any combatant commander would tell you today that they have sufficient intelligence, surveillance, and reconnaissance.

We are probably meeting on a day-to-day basis. The recommendations that I make to the Secretary probably meet somewhere between 30 and 40 percent of what the combatant commanders need. So there is a strong demand signal for additional ISR, and what we do for the Secretary is make recommendations of how to best allocate the ISR that we have today. And then, as you will see, we make continued investments in the future.

And one of the reasons why we have invested more in space is that will be a significant enhancement to our overall intelligence, surveillance, reconnaissance capability.

Senator HOEVEN. Mr. Secretary, do you have anything to add on that?

Secretary SHANAHAN. Two things. We will never have enough ISR. I mean, I think just given the current capabilities that we have.

Senator HOEVEN. Incredible demand for it.

COUNTER UNMANNED AIRCRAFT SYSTEMS

Secretary SHANAHAN. The Chairman made mention of this, but I will just maybe even make it more broadly. Space will enable unbelievable amount of Earth observation. So by 2025—I mean, these are estimates—commercially—and this is where we need to really tap into commercial innovation—there will be persistent surveillance of the globe by 2025. And so how we do ISR will completely change as we leverage space and its capabilities.

Senator HOEVEN. Final question, then, is for counter UAS (unmanned aircraft systems) capability. Again, being on the border, we have 900 miles of border responsibility out of Grand Forks. We have not only Grand Forks Air Force Base with ISR, RQ-4, but we also have Customs and Border Protection there flying both manned and unmanned aircraft. What about countering the anti-UAS effort?

We just passed legislation, Preventing Emergency Threats legislation for DHS. Where are we in terms of your effort to counter some of the drone activity?

Secretary SHANAHAN. Yes. I have spent considerable time with General O'Shaughnessy in Northern Command because when we think about this emerging threat—and I really do think of these UAVs as something that is low cost; it is easy to manipulate—we need to develop the capabilities and the rules because, quite frankly, this airspace is shared by so many different authorities. So it is as much about rules to operate in space as it is the technologies to defeat them. It is a high priority for the Department.

We have deployed a lot of capabilities OCONUS (Outside the Continental United States). So in terms of evolving the ability to detect and defeat, we are progressing as a Department. Now I think it becomes how do we work with the FAA (Federal Aviation Administration), how do we share the airspace so we can defeat this emerging threat.

Senator HOEVEN. Right. And DHS because—well, battlefield and homeland.

Secretary SHANAHAN. Absolutely.

Senator HOEVEN. Thank you.

Secretary SHANAHAN. Thank you.

Senator SHELBY. Senator Baldwin.

INDUSTRIAL BASE

Senator BALDWIN. Thank you, Mr. Chairman.

Secretary Shanahan, President Trump stated in the National Security Strategy that a healthy defense industrial base is a critical element of national security, and that the industrial base is dependent on the ability of the Nation's workforce and industries to surge at a time of need.

Additionally, the Department of Defense issued an industrial base report last fall, which expressed some concerns, and I quote, "Currently, the industrial base faces an unprecedented set of challenges . . . decline of critical markets and suppliers, unintended consequences of U.S. Government acquisition behavior, aggressive industrial policies of competitor nations, and the loss of vital skills in the domestic workforce."

Do you agree with these statements and concerns?

Secretary SHANAHAN. I do.

Senator BALDWIN. I too believe that a solid industrial defense base should be a national priority, and from both an economic and security perspective, I think we can no longer afford to be dependent upon foreign suppliers for critical defense components.

However, as we have been having our subcommittee hearings, the services have testified in support of budgets and acquisition plans that perhaps give short shrift to this national priority and the administration's focus on supporting a healthy U.S. workforce as a national security priority.

I know from my own Wisconsin experience that these workers are patriotic Americans who believe that their work in the industrial base is a service to their country.

So, Mr. Secretary, can you commit to working with me to support policies, strategies, and solutions that both strengthen the industrial base and national security and particularly those that support American workers?

Secretary SHANAHAN. Senator, happy to do that.

Maybe I can just comment on the report that you referred to. There was a classified annex to the report that we put forth, and in that classified annex, we identified the risks. As you highlighted, some of them are capacity that is overseas that we need to move onshore. Some of it identified where we have only a single source of supply, where we have to find another source, and we also found companies that were underinvested and did not have the investment capital to replace old infrastructure.

That classified annex, we identified the most significant risk, and then we have put money against those items so that we can actually address some of those shortfalls.

I recognize the importance of our workforce. I would be happy to work with you.

Senator BALDWIN. Great.

And thank you for pointing out the annex. I will look forward to an opportunity to review that in more detail and continue to work together.

IRAN

General Dunford, is it accurate to say that the mission of the 5,200 servicemembers in Iraq is to train and work with Iraqi forces in the counter-ISIS mission?

General DUNFORD. That is partially accurate, Senator. The most important thing that we are doing in the region is conducting counterterrorism to protect the homeland and protect the American people, but part of our mission in doing that is to enhance the capability of the Iraqis to consolidate the gains that were made as we cleared ISIS over the past 2½ years.

Senator BALDWIN. Yes. So not Iran, in other words.

Are you aware of any evidence that would make Iran or the IRGC an associated force of al-Qaeda?

General DUNFORD. Senator, we probably could not talk about that in this venue.

Senator BALDWIN. Okay. I will try another question.

Secretary Pompeo went to Iraq to discuss a new threat stream from Iran. It seems to me, at least at first glance, to be a completely separate bucket of threats from the ISIS threat and counterterrorism threat that our current military mission is addressing under the 2001 AUMF. Can you say anything about this new threat stream from Iran and whether you would view it in the same bucket, if you will, that the 2001 AUMF would cover?

General DUNFORD. Sure, Senator. One, I do not view that threat stream as being the same as ISIS, but our posture in the region has been deter, to deter Iran, really going back to 1979.

And so when Secretary Pompeo raised the visibility of the threat streams that we had seen, really intensify late last week, what we were attempting to do, both with the movement of force elements that the Secretary approve and the public messaging, was to deter any potential action by the IRGC or Iran as a whole.

Senator BALDWIN. While on Iran and this topic and the IRGC, General Dunford, were you consulted prior to the administration designating the IRGC as a terrorist organization?

General DUNFORD. Senator, I had an opportunity to provide military advice.

Senator BALDWIN. And did you agree with this designation?

General DUNFORD. Senator, if I could, because it is military advice that I provided, if I could provide that—I would be happy to provide that to you but maybe not in an open venue.

Senator BALDWIN. What risk do you see the reciprocal response by Iran posing to U.S. servicemembers?

General DUNFORD. We are watching that very closely, and that is what was related to the threat streams that we started to see last week. And, again, what we are trying to do is mitigate that risk with a very effective deterrent posture as well as messaging.

Senator BALDWIN. Thank you.

Senator SHELBY. Senator Graham.

EFFECTS OF SEQUESTRATION

Senator GRAHAM. Thank you, Mr. Chairman.

What would the effect be on the military if we went back into sequestration?

Secretary SHANAHAN. I think it would be devastating.

Senator GRAHAM. Do you agree with that, General Dunford?

General DUNFORD. I do, Senator.

Senator GRAHAM. Based on this conversation, it seems like the world is still a pretty dangerous place, right?

General DUNFORD. It is certainly my judgment that it is, Senator.

SYRIA

Senator GRAHAM. Okay. Let us talk about Syria. The Syrian stabilization force, how is that coming, General Dunford?

General DUNFORD. Senator, it is coming along well in terms of the tasks we are trying to provide. As you know well—and we appreciate your help in this regard—we are training the Syrian Democratic Forces. We have sufficient U.S. and coalition forces right now to perform that mission, and the State Department has taken the lead on developing governance in those areas that have been clear devices as well.

Senator GRAHAM. Well, I think you have got a great plan, and to our allies, if General Dunford or others ask you to help, please say yes because Europe was ravaged by ISIS attacks emanating from Raqqa, Syria. So it is your fight too.

So I am hoping that our European allies will invest in the stabilization force not only for Syria's protection, but for their own protection and ours.

Idlib. President Trump said in September 2018, a tweet: President Bashar al-Assad of Syria must not recklessly attack Idlib Province. The Russians and Iranians would be making a grave humanitarian mistake to take part in this potential human tragedy. Hundreds of thousands of people could be killed. Do not let that happen.

Do you agree that should still be our policy?

General DUNFORD. It is. It is still our policy, Senator, and I think you probably know Secretary Pompeo is meeting with Foreign Minister Lavrov twice in a period of 7 days, and I know that will be part of his message.

Senator GRAHAM. So are you concerned about increased military activity by Assad against the people of Idlib?

General DUNFORD. We have in recent weeks seen increased activity around Idlib.

Senator GRAHAM. Okay. Well, I hope the President will actually retreat, and I appreciate what Secretary Pompeo is doing.

AFGHANISTAN

Afghanistan. Secretary Shanahan, do you agree that the reason we have troops in Iraq is to protect the American homeland from a rise of radical Islam?

Secretary SHANAHAN. I agree with that.

Senator GRAHAM. Okay. Do you agree that ISIS-K is getting larger and not smaller in Afghanistan?

Secretary SHANAHAN. I do.

COUNTERTERRORISM PLATFORM

Senator GRAHAM. Do you agree that a counterterrorism platform is needed for a while to come in Afghanistan?

Secretary SHANAHAN. Until the reduction of violence in Afghanistan is no longer a situation.

Senator GRAHAM. Do you agree?

Secretary SHANAHAN. Yes.

Senator GRAHAM. Right. It is in our national security interest—

Secretary SHANAHAN. It is.

Senator GRAHAM [continuing]. To have a counterterrorism platform.

Do you agree that we will never get a peaceful resolution until Pakistan denies the Taliban safe haven?

Secretary SHANAHAN. I believe Pakistan plays an important role.

Senator GRAHAM. Do you agree with that, General Dunford?

General DUNFORD. I do, Senator.

Senator GRAHAM. Okay. Libya. Is it the policy of the United States in Libya to support a peaceful resolution of the dispute, not a military solution?

Secretary SHANAHAN. Correct. That is the policy.

Senator GRAHAM. Is that true, General Dunford?

General DUNFORD. It is, Senator.

Senator GRAHAM. Are we picking one side over the other?

Secretary SHANAHAN. No.

Senator GRAHAM. Do we still support the UN-recognized government?

Secretary SHANAHAN. We support a diplomatic solution to Libya.

Senator GRAHAM. I would recommend that you have the President or someone call the prime minister of Libya to let him know that the Haftar phone call was not picking sides. Do you agree that would be smart? There has been confusion?

Secretary SHANAHAN. Yes. Communication is vital.

Senator GRAHAM. Okay, good.

Do you agree with that, General Dunford?

General DUNFORD. Yes, Senator.

Senator GRAHAM. Okay. We are almost done.

[Laughter.]

IRAN NUCLEAR PROGRAM

Senator GRAHAM. Iran. If they restart their nuclear program, re-processing, would you consider that a threat to the United States, of nuclear fuel?

General DUNFORD. Senator, when we look at Iran, we see four threats that exist and one potential threat. So, certainly, a nuclear-armed Iran would be a threat to the United States along with the use of proxies, the maritime threat, the cyber threat, and—and maritime threat.

Senator GRAHAM. Do you agree with that, Secretary Shanahan?

Secretary SHANAHAN. I do.

Senator GRAHAM. So I think if Iran restarts their nuclear program, we should consider that a hostile act and put all options on the table.

Finally, about Iran, when we sent American troops to Iraq and Afghanistan to protect our Country and our allies from the rise of ISIS, do we owe it to them to protect them from all threats?

Secretary SHANAHAN. We do.

Senator GRAHAM. Under the law of war, is it appropriate for a lawful force to defend itself against all threats, General Dunford?

General DUNFORD. That is consistent with LOAC (Law of War Manual).

Senator GRAHAM. So if the Iranians have designs on attacking our troops in Syria and Iraq, they are there to protect American homeland against the rise of radical Islam like ISIS. We would have the ability to defend ourselves, if necessary; is that correct?

General DUNFORD. Our forces deployed, make no mistake about it, Senator, have the ability to defend themselves and everyone else on——

Senator GRAHAM. In case the Iranians are listening, they attack American forces in Iraq and Syria or any other place at their own peril?

General DUNFORD. Our forces have the ability to respond immediately, and they do not need to come back to Washington to ask permission.

Senator GRAHAM. And you will make sure they are defended?

General DUNFORD. We will make sure they are defended, Senator.

Senator GRAHAM. Thank you. Thank you both.

Senator SHELBY. Senator Murray, you are just in time.

SEXUAL ASSAULT

Senator MURRAY. Thank you. Apologize, Mr. Chairman, and I know you all have been here for a while.

I just wanted a chance to ask you a couple of questions.

Mr. Secretary, thank you for meeting with me yesterday.

I wanted to ask you about the military sexual assault issue. We chatted a little bit yesterday about that, but the results of the new report really is disturbing to me. And the Department's survey found that more than 6 percent of women servicemembers have been sexually assaulted. When you include the men, that translates to about 20,500 servicemembers who have been assaulted, and I have long pushed, as you know, the Department to do more

and have advocated for additional funding, new programs, including legislation to create the Special Victims Counsel program.

For years, we have heard from the Department that the services have this under control; everybody is going the right thing. But I just cannot sit here today and continue to read these reports and say that I have confidence in the Department's ability to put an end to this abhorrent behavior.

So I wanted to ask you how are going to address this problem and what the military is going to do. I mean, we keep hearing from everyone—you said it to me yesterday—leadership and all this, but it is not working.

Secretary SHANAHAN. Senator, first of all, thank you for the time yesterday because I did a little homework between our meeting, and I want to talk about that, that homework, just so I can put some context or to dimensionalize the situation and then talk about the actions that we are taking.

Also, thank you for asking the question because I think it is really important that we talk about what is working because there are many things that are working, and I think if we look back over time—and this was the implementation of recommendations from Congress—there are things that have improved, and then there are things that are not working. So maybe I can talk about what is not working and what we are focused on to address that.

There is kind of two aspects to our focus. One is on the largest population, the problem, and then also the system itself. Maybe I can just talk about the report.

So when we talk about the 20,000, I think you said—

Senator MURRAY. 20,500.

Secretary SHANAHAN. Assaults. That is an estimate. So that is not what is reported.

In 2018, what was reported is the number of sexual assault cases that were dispositioned, there were 4,002 of those.

What the Department does is a survey, and that survey is to really get after the hidden side of this. The actual number of cases do not capture everything that is happening. So there is a survey that goes out to all the members, and then they evaluate. It is not all the members, but a very, very significant population of the 2.1 million people.

In that, they develop what is called a "prevalence rate," and that is a factor, then, they apply to the number of cases that are reported. So they took that factor and applied it to the 4,002. That is how they derive the 20,000.

And in that 20,000, the biggest population that has experienced the growth is women between 17 and 24, and that is where if we said we want to really drive the numbers that is what we would focus on.

And what we know about that population and these incidents is that it is peer on peer. That 85 percent of the victims knew the accuser, and nearly two-thirds involved alcohol. So for us as a Department, the climate and the environment, that is where we need to be concentrated.

When we look at the system, if you evaluate the report, of the 4,002 cases, about 29 percent of those were not within our jurisdiction. So if we look at how many cases we did and disposed of in

2018, there was something on the order of a little bit more than 2,800.

Where there was sufficient evidence, we took action 100 percent of the time against the accused. Over half of those were court-martials, and the other half were other types of judicial action.

We know we need to continue to improve the system itself, so that whether it is our ability to collect evidence, whether it is resources, accountability of commanders, or potential retaliation, that is also part of our focus.

Senator MURRAY. Okay. Well, I am not here to parse numbers, and I hope nobody is. But I would just say these reports are relevant over years, and there is an increase in numbers rather than a decrease, when the military has been focusing on this for a long time. So whatever has been happening is not working, and I am beginning to think that, although I have not supported it before, we need to put controls on oversight out of the Department because we just cannot accept this.

As I said to you yesterday, you do not want your daughter going into the military if a high percent of women are victims of sexual assault, and something is not working. So I am deeply concerned, and I will continue to follow this, as I know a number of members will.

Secretary SHANAHAN. And we will work with you, and we do not accept the results. And we know we have to do better.

Senator MURRAY. Okay. Thank you.

Thank you, Mr. Chairman.

Senator SHELBY. Senator Udall.

NEAR-PEER COMPETITORS

Senator UDALL. Thank you, Mr. Chairman, and thank you both for your service to the country.

The most recent Quadrennial Defense Review finds that the near-peer competitor nations like China and Russia are the top national security priority. This committee will need to find a way to pay for a huge increase in spending coming in the '20s to replacing aging legacy equipment across the branches, including our strategic forces.

And since 2001, we have spent trillions on wars in Iraq and Afghanistan. One analysis found that it cost over \$5 trillion, more than \$23,000 for every American taxpayer. Those forever wars have helped put us in a huge budget hole.

During this time, China and Russia have been watching our capabilities and working to meet or exceed our comparative advantage.

Do you still agree that those near-peer competitors are our biggest national security threat? It is a simple kind of yes or no answer.

Secretary SHANAHAN. Yes.

Senator UDALL. General Dunford.

General DUNFORD. Yes, Senator.

Senator UDALL. And while some in the administration are talking about inserting the U.S. military into at least two new additional conflicts, referring to Iran and Venezuela, the U.S. is still involved in Afghanistan, 17 years later. The President has said that

“Great nations do not fight endless wars.” That is his quote: “Great nations do not fight endless wars.”

Senator Paul and I have introduced legislation to honor those who fought and to bring our troops home. Do you anticipate U.S. forces coming home from Afghanistan anytime soon, or are we looking at an indefinite garrison-type situation? How would you explain our current policy and the conditions for U.S. withdrawal to the American people in a clear and simple way?

Secretary SHANAHAN. Our current policy remains the South Asia Strategy. Our best chance for peace—and this is probably the best in 40 years—is taking place right now. I would say our policy is to fight and talk. We are fighting the Taliban to pressure them into a reduction in violence.

Senator UDALL. Which we have been doing for a long, long time.

Secretary SHANAHAN. We have been. I think we are making progress.

Senator UDALL. I think the numbers are that they control half the country right now.

Secretary SHANAHAN. The critical population areas, they do not control. I would not change territory with them. I think the areas where we have presence is of greater value and importance to the Afghan people.

General DUNFORD. Senator, if I could address this. I do not think anybody would want to withdraw our forces from Afghanistan or the broader Middle East more than me, but I will share with you the advice that I have provided now to two Presidents.

We had significantly reduced our commitments in Afghanistan. When I commanded in Afghanistan, we had over 100,000 Americans. We had another 30,000 NATO (North Atlantic Treaty Organization) forces. We are down to about 15,000 Americans and 7,000 NATO forces.

It is my judgment today, based on the threat from South Asia, that we need to continue to put pressure on those terrorist groups or they will pose a threat to the United States.

I know it is frustrating to you and the American people for us to be there for such a long period of time. It is just my judgment right now that the conditions for a complete withdrawal are not there.

The conditions for continuing to decrease our presence in the region, as we have, and increase the responsibility of, in this case, the Afghan forces to provide security for themselves, I think we can expect that to happen.

And I would echo the Secretary. While I am not anything other than realistic about the current negotiations we have in the peace process, it is the first time in many, many years where we have had some opportunity now to pursue a peaceful resolution to the war in Afghanistan, and at the end of the day, I do not believe there is a military solution. And I think we will need to maintain a counterterrorism presence as long as an insurgency continues in Afghanistan.

BORDER

Senator UDALL. Mr. Shanahan, you recently said, and I quote here, Mr. Secretary, “We really need to get back to our primary

missions and continue to generate readiness.” Your statement echoes General Robert Neller of the Marine Corps when he warned that a series of, “unplanned and unbudgeted tasks” that included deployment to the border where there is no emergency constituted a, “unacceptable risk to Marine Corps combat readiness and solvency.”

Would you both agree that it would be better for military readiness and defense budgeting to keep our troops and DoD funds out of the highly charged political controversy about border security and immigration policy?

Secretary SHANAHAN. Let me just address my quote. My quote was working with Chairman Dunford, we want to enable DHS to be able to manage their situations so that we do not need to provide continuing support.

General Neller wrote a memo that said unless certain funds are provided to him, he will have to backfill them himself. His message there was really around hurricanes, not around deployment to the border. It was not having any impact on him.

We do need to solve the situation at the border. I mean, it is a humanitarian issue, and it is also a security issue. The sooner we address that, I think the better off we will all be.

Senator UDALL. General Dunford, do you have a comment on that?

General DUNFORD. Senator, the politically charged environment that you speak about Assad, I will just speak about it from an apolitical military perspective.

We have had an historic role in supporting civil authorities—and the Department of Homeland Security specifically. It goes back many years. Certainly, we would want that capacity that we backfill to be smaller than it is right now. DHS has some legitimate shortfalls.

The Secretary and I have both visited the border. It is very clear to me that right now the Department of Homeland Security does not have the capacity to do their job.

What I can assure you is four things. One, everything that our men and women are doing on the border is legal. Number two, they have the proper training. They have the proper equipment, and they have very clear instructions about what they are doing. And I will continue to make sure that is the case.

Senator UDALL. From a border perspective and being a border Senator, I mean, I do not feel that Mexico is our enemy. I think these asylum-seeking migrants largely from Central American countries pose—I do not think they pose a serious national security threat.

I think we do have a humanitarian threat. We should be focusing on that and really come to the table and talk about that, but I really think you all should be focused on our national security threats, which we have many, and there are some out there that are talking—at least you are not doing that here today—about getting us into other wars.

So that is where I am coming from. I really appreciate your testimony today, and thank you very much for your service.

AFGHANISTAN WITHDRAWAL

Senator SHELBY. General, just for the record here, tell us again, in your judgment, what would happen in Afghanistan if we made a precipitous withdrawal.

General DUNFORD. Senator, there is about 20 groups in the region that I would describe as violence extremist groups. A handful of those groups have clearly demonstrated the intent to attack the homeland and to attack American citizens.

I firmly believe that the pressure that our counterterrorism efforts have put on those groups over the last years have prevented another 9/11. Difficult to prove, but from the time I have spent in Afghanistan, I have been a commander there, and I am confident. And if you want to think about this in terms of term insurance, once you stop paying the premium, you no longer have insurance, and what we are doing in Afghanistan today, in my judgment, is a commensurate level of effort to the threat.

ADDITIONAL COMMITTEE QUESTIONS

Senator SHELBY. Thank you for your appearance, Mr. Secretary and General Dunford.

We also know that I along with others are going to submit additional written questions for you, and we hope you respond to them within 30 days.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED TO HON. PATRICK M. SHANAHAN

QUESTIONS SUBMITTED BY SENATOR RICHARD C. SHELBY

SPACE DEVELOPMENT AGENCY

Question. Secretary Shanahan, the unclassified report on China's military power that you sent to Congress last week states that "the PLA continues to develop capabilities to conduct space (and) counterspace . . . operations." In this unclassified setting, please describe what you are seeing, and what the United States is doing in response, including the organizational changes the Department is making.

Answer. Chinese military writings indicate the People's Liberation Army views space superiority as key to fighting and winning modern wars. China has enacted military reforms to better integrate cyberspace, space, and electronic warfare into joint military operations and continues to improve its counterspace arsenal. Specific counterspace capabilities assessed to be under development in China include satellite communications jammers, synthetic aperture radar jammers, high-powered lasers, offensive cyber tools, co-orbital systems, and ground-based antisatellite missiles. With the support of Congress, the Air Force has significantly increased investment in the space budget for three consecutive years and is proposing additional investment in fiscal year 2020 to further accelerate our ability to protect and defend our operations in space. Additionally, the Department is pursuing legislation to establish the United States Space Force as a sixth branch of the Armed Forces within the Air Force, and is taking steps to establish United States Space Command as a unified combatant command. The new Unified Command will focus on planning and executing space warfighting operations to secure our vital National interests. The Air Force stood up the Congressionally directed Space Rapid Capabilities Office and assigned its first three classified programs. The Air Force also re-organized the Space and Missile Systems Center by removing three layers of bureaucracy and empowering new Program Executive Officers to speed the delivery of space programs. Finally, the Department created a Space Development Agency to leverage commercial infrastructure to augment existing capabilities and rapidly prototype new capabilities. The Space Development Agency will transfer to the Space Force, once the Space Force is established.

HYPERSONIC MISSILE INVESTMENTS

Question. Offensive hypersonic weapons are important to U.S. future capabilities because they provide options against advanced air and missile defenses that could block U.S. airpower and cruise missile strikes. Last year the Department of Defense took steps to reorganize its hypersonic weapons investments to ensure collaboration among the Services and assigned an important role for the Army.

Secretary Shanahan, as much as you can get into in an open setting, please provide this committee with an update on our hypersonic missile investments and the way ahead. Is the United States on the cutting edge in this area?

Answer. The U.S. has historically been the world leader in hypersonics R&D, however, until now we had decided not to weaponize this technology. Both China and Russia have, over the past decade, significantly energized their work on hypersonic systems with a goal of weaponization, and they have made major progress. In response, we have significantly increased our hypersonics investments in the Department with hypersonics being one of our top modernization priorities. This will allow us to remain on the cutting edge. We are actively working to accelerate the development, transition and fielding of hypersonic strike missiles launched from air, land and sea platforms. These systems will provide a transformational capability for time-critical strike from outside an adversary's defensive envelope. The portfolio of programs is being integrated across the Department, Services, and Agencies with a high degree of leverage. As an example, the Army, Navy, and Air Force are developing a family of weapon systems all using a Common-Hypersonics Glide Body.

CHINA/ADVANCED INFORMATION NETWORKS

Question. The most recent National Defense Strategy describes how the department is prioritizing investments in resilient communications networks. As we increase the number of sensors and other devices that share information on the battlefield, the potential threats will rise along with the gains in capabilities. We are also paying close attention to the commercial companies, including the Chinese company Huawei (pronounced—WAW—way) that are providing the enabling technology and hardware advancements.

Mr. Shanahan CIO, is the Department taking advantage of emerging 5-G technologies and otherwise accelerating deployment of commercial products with dual use technology?

General Dunford Joint Staff, from your perspective, what are the risks to our information security in light of current and future threats. Can the department do more to address or better prepare for these threats?

Answer. Emerging 5G technologies will transform not only the telecommunications sector, but entire industries, including manufacturing, medicine, agriculture, and transportation. We must move quickly to ensure US technological dominance in 5G; the pace of advancement is such that we cannot wait to act. DoD needs capabilities to effectively operate anywhere and anytime and we must begin now to address the security challenges that 5G presents. DoD developed a plan that addresses both the opportunities and the challenges of 5G. This plan will enable collaborative experimentation with industry and academia to (1) accelerate the development and deployment of 5G capabilities that have both military and commercial relevance, and (2) develop the capability to dynamically share spectrum (frequencies) in congested and contested environments.

TECHNOLOGICAL EDGE

Question. Commercial companies in China have made determined efforts to obtain American technology by partnering with U.S. companies or purchasing them outright. While the PLA has also sought to obtain or otherwise benefit from the transition of American technology to foreign companies. The threats to our national security are obvious.

General Dunford Joint Staff, You have suggested in public remarks that the distinctions between the Communist Party of China, the government of China and their military are often without a difference. Does this budget do enough in your opinion to maintain our technological military edge in spite of all that?

Secretary Shanahan A&S, you have expressed concerns about the Pentagon's defense slow acquisition process and delays to fielding new technology. Will you describe your efforts to speed things up, in particular in hypersonic weapons, space and cyber? Do you have the resources to stay ahead of near peer nations?

Answer. In hypersonics, the President's Budget request for fiscal year 2020 dramatically accelerates the development and transition of hypersonic strike missile capabilities. I would estimate that, with this investment, we will field a weapon at

least 5 years earlier than would have otherwise been possible. Across our hypersonics portfolio we have made major use of our Section 804 authorities to significantly accelerate our ability to develop and test prototype systems for rapid transition to the warfighter. In space, we have also utilized Section 804 authorities to accelerate acquisitions. Most importantly, we have stood up the Space Development Agency. The mission of the SDA is to develop and deploy distributed space capabilities in a timescale several times faster than typical acquisition. SDA is planning on achieving this goal by teaming with commercial developments, and utilizing as much readily available technology as possible. Beyond SDA, we are utilizing Other Transaction Agreements through industry consortia to rapidly procure capabilities; sensing solutions for the missile defense mission is one example. In cyber, DoD is aggressively pursuing several initiatives that should dramatically accelerate the research, development, and acquisition of software and cyber capabilities. Two of the most important programs undertaken to achieve that end are the DoD DevSecOps Initiative and the Reducing Procurement Administrative Lead Time (PALT) program. Both of these USD(A&S)-led programs embrace evolving best practices and should streamline and accelerate the acquisition of more secure, more resilient, and more survivable software systems. Demonstrating a strong commitment to agile methodologies, the department recently gained approval for reprogramming \$4.5 million of fiscal year 2019 funds to support the DoD DevSecOps Initiative. Under the PALT program, the 13 pilot programs have already experienced a 50 percent reduction in development time and a 10 percent cost avoidance.

QUESTIONS SUBMITTED BY SENATOR MITCH MCCONNELL

FORT CAMPBELL

Question. Support for Fort Campbell Servicemembers and Families. As you know, servicemembers at Fort Campbell have been on a near-constant cycle of deployment in support of the Global War on Terror, and many servicemembers at Fort Campbell have been deployed multiple times. It is critical that in these circumstances DoD provide adequate support for spouses and families of servicemembers. What resources, specifically, does DoD provide to support spouses and families of servicemembers at Fort Campbell, as well as other military installations, while servicemembers are deployed and when they return home?

Additionally, what programs are in place within DoD to help servicemembers successfully transition back into civilian life?

Answer. The U.S. Army recognizes the unique nature of military life, especially the challenges associated with deployment. U.S. Army garrisons offer a wide variety of programs and services designed to support Soldier and Family well-being, resilience, and self-reliance. Programs and services are available through all phases of the deployment cycle: pre-deployment (information, individual and unit training, education, and preparation); deployment (assistance, support, and child care); and, post-deployment (assistance, Soldier and Family reintegration, and counseling). These programs and services are tailorable based on installation/community requirements. The below listed programs, while not inclusive of all programs, are available to support Soldiers and Families during deployment and redeployment at Fort Campbell, and most Army installations. They are provided by the garrison Army Community Service Center, Child and Youth Services, and Soldier and Community Recreation. Notable programs include:

- The Mobilization and Deployment Readiness Program.* This program provides deployment training and information/referral services to support servicemembers and their Families. The program promotes positive adjustment to deployment, to family separation, and then to family reunion. Training includes pre/post deployment and Soldier and Family Readiness Group (SFRG; formerly known as FRG). Sessions can be provided to either an individual augmentee or a unit. Services can be tailored based on needs, leveraging available resources within the ACS and the community. This may include, but is not limited to, participation in Soldier Readiness Processing (SRP), SFRG meetings, deployment fairs, and reunion/reintegration events.
- Operation Military Child Care (OMCC):* Supports the child care needs of Active Duty, National Guard, and Reserve Soldier parents who are mobilized or deployed. OMCC helps eligible Families find child care options at reduced rates in local communities. It also reduces child care fees of Families already using licensed community child care programs and providers.
- Respite Child Care:* Offers respite child care for parents to give them temporary relief from child rearing duties and allows them time to take care of personal

business. Families are offered 16 hours per child, per month, of no cost care beginning 30 days before a Soldier is deployed and ending 90 days after the Soldier returns.

- “We’ve Got You Covered”*: Offers extended hours in designated Child and Youth Service (CYS) operations to ensure child care is available for enrolled full day children at no additional cost to Soldiers who have mission requirements beyond normal duty hours.
- Child Behavior Consultants*: Provides on-site counselors in child and youth programs to offer non-medical, short term, situational, and problem-solving counseling services to staff, parents, and children within CYS facilities, garrison schools, and summer camps.

The Army’s Soldier for Life—Transition Assistance Program (SFL–TAP) assists Soldiers with transitioning into civilian life. This assistance program includes classes for career readiness, entrepreneurship, college education, or vocational training per the Soldier’s goals; a financial planning workshop; information regarding VA benefits; one-on-one counseling; and more to prepare Soldiers for transition. SFL–TAP connects Soldiers to opportunities through hiring events and the Career Skills Program (CSP). The CSP prepares Soldiers for civilian employment through first-class apprenticeships, on-the-job training, job shadowing, internships, and employment skills training. The CSP has over a 90 percent placement rate. Additionally, the Army has a 24/7 Virtual Center, available online and over the phone, to provide support to Soldiers around the world who have limited access to a brick-and-mortar location. According to client satisfaction questionnaires, the personal assistance provided by SFL–TAP staff has a 98 percent satisfaction rate. These efforts, to support transitioning Soldiers, coincide with an 82.2 percent decrease in the Army’s total unemployment compensation for ex-servicemembers over the course of 7 years.

MILITARY SPOUSE EMPLOYMENT

Question. According to the Military Spouse Employment Partnership (MSEP), military spouses face a 26 percent unemployment rate despite being well educated, highly qualified and willing to work. MSEP identified spouse employment challenges as a threat to military readiness and quality of life for military families. Will you please provide an update on what programs and resources DoD provides military spouses to help them find and retain meaningful, gainful employment?

As you know, a particular barrier for military spouses is the patchwork of State occupational licensing laws that apply to a variety of jobs such as teaching and healthcare. Recently, Kentucky has taken steps to ease these requirements for military spouses by allowing them to use licenses issued by other states. Will you please provide an update on DoD’s efforts to decrease occupational licensing barriers for military spouses throughout the country?

Are there any tools that Congress could provide that would help DoD’s efforts to support military spouse employment?

Answer. The Military Spouse Employment Partnership (MSEP) is part of the Department’s Spouse Education and Career Opportunities (SECO) program that provides military spouses with expert education and career guidance and offers comprehensive information, tools, and resources to support career exploration, education, training, licensing, employment readiness, and career connections. There are four main components of the program, all of which help spouses find and retain meaningful employment. They are:

- The My SECO website is a one-stop online career and education toolbox that provides information, resources, and interactive features designed to assist military spouses who are pursuing educational and career goals. (<https://myseco.militaryonesource.mil/Portal>)
- The SECO Career Center hosts master’s level degree holding career coaches who provide comprehensive counseling services at no cost to military spouses. In fiscal year 2018, the counseling center conducted 164,000 career and educational counseling sessions and maintained a 98 percent satisfaction rate with customers.
- The MSEP is an employment and career partnership connecting military spouses with more than 390 partner employers who have committed to recruit, hire, promote, and retain military spouses in portable careers. Since the program began in 2011, partner employers have hired more than 134,000 military spouses at all levels and across multiple employment sectors. This partnership continues to grow, with 19 partners added so far this year to the list of employers.
- The My Career Advancement Account (MyCAA) scholarship program is a component of SECO. RAND published an early evaluation of the MyCAA scholar-

ship program in November 2018 that found scholarship use positively impacted both spouse earnings and Service member retention. The MyCAA scholarship provides eligible spouses with up to \$4,000 for the pursuit of licenses, certifications, or associate's degrees in portable career fields to assist our junior military spouses in attaining the education, certifications, or licenses they need to find employment. The Department of Defense is interested in studying whether an expansion of the MyCAA scholarship is feasible and advantageous to military spouse employment. Another resource of note that is provided through the SECO program, in partnership with LinkedIn's Military and Veterans Program for military spouses with a MySECO account, is access to a 1 year upgrade to LinkedIn Premium, at no cost. This access provides military spouses with maximum outreach to recruiters and employment opportunities, regardless of geographic location.

The Department has worked with State officials since 2011 on improving the portability of occupational licenses for military spouses. Forty-eight states have enacted specific laws to assist military spouses through endorsement of existing licenses, temporary licenses to assist in accommodating State requirements, and/or expedited application processes. States are continuing to update and improve on these initial efforts, as Kentucky has done in 2019. Many of these improvements, however, still do not provide reciprocity and require a full application from the military spouse, along with supporting documentation from the originating States. These requirements can be extremely time-consuming and expensive to fulfill. Furthermore, many occupational boards have been slow in implementing the changes prescribed by State law. The U.S. Department of Labor and the U.S. Department of Defense are working with States to improve implementation of these changes. Additionally, the Department of Defense has found that interstate compacts for occupational licensure provide the most seamless approach for military spouses (as well as other licensees), while maintaining public safety requirements inherent in licensing. These compacts take time to develop and to obtain approval of States, so the Department continues to work with States on interim improvements that can expedite and limit requirements for licensing, until such time that occupation-specific interstate compacts can eliminate the need for State-by-State licensing.

The Department has the authority and funding to continue to offer education and career opportunity programs for military spouses, to include support for spouses as they transition with their military sponsor to civilian life. Improvements to licensure, as noted above, are being accomplished by States and by individual occupations through the development of interstate compacts. While the Department is aware of many occupations for which developing compacts for licensure should be considered, many of the national associations representing these occupations do not have sufficient seed-money to gather advisors and drafters to develop the compacts, or funding to establish a database to administer a national approach to State licensing and portability without relicensing requirements. The Department believes that a small amount of initial support would eliminate barriers to providing the seamless licensure environment military spouses have requested.

MILITARY SEXUAL ASSAULT

Question. As DoD acknowledged in its most recent report on sexual assault within the Armed Forces, this issue remains a "persistent problem" and requires urgent action. Will you please provide an update on what actions DoD is taking to prevent sexual assault and misconduct in the military?

Answer. On May 1st, I directed the Department to take the following actions:

- Implement the recommendations of the Sexual Assault Accountability and Investigation Task Force report, including taking steps to seek a stand-alone military crime of sexual harassment.
- Develop new command climate assessment tools focused on providing leaders information on the extent of their unit's climate challenges, assistance with developing an appropriate course of action to address climate issues, and assessment and feedback on their efforts.
- Launch the Catch a Serial Offender ('CATCH') Program to improve the identification of repeat offenders.
- Enhance efforts to select recruits of the highest character to ensure the men and women recruited into our Armed Forces are compatible with our military's core values.
- Prepare new leaders and first-line supervisors for applied leadership challenges, so that our newest officer and enlisted leaders are prepared to fulfill their supervisory roles to prevent and properly respond to sexual assault and sexual harassment.

—Execute the DoD Sexual Assault Prevention Plan of Action.

FORT KNOX IRELAND ARMY HEALTH CLINIC

Question. Will you please provide an update on the new Ireland Army Health Clinic, which will replace the Ireland Army Community Hospital at Fort Knox?

As this new facility proceeds, what actions does DoD intend to take to keep its commitment to serving the health needs of our servicemembers, their families, and military retirees of the Fort Knox community?

Does DoD anticipate that these retirees will continue to have access to ancillary services at the new Ireland facility?

Answer. The Fort Knox Ambulatory Care Center (FKACC) project will replace the 61-year old Ireland Army Community Hospital and was awarded as a Design/Build construction contract in March 2017 at a cost of \$54,767,000 to M.A. Mortenson Company. The U.S. Army Corps of Engineers, Louisville District, is managing the construction contract. The construction of the clinic is scheduled for fall 2019 completion with patients transitioning in January 2020. The FKACC is projected to open for patient care in early 2020 and will provide a high quality healthcare environment to the Fort Knox community. The FKACC is one-quarter the size of the previous hospital, reflecting changes to Fort Knox's mission resulting from the adoption of the 2005 Base Closure and Realignment Commission's recommendations.

Ireland Army Health Clinic (IRAHC) will ensure all Fort Knox beneficiaries have continued access to medical care as we transition to the new Fort Knox Ambulatory Care Center in January 2020. Enrolled active duty service members and their dependents will continue to receive medical care from their IRAHC primary care manager while we are in the legacy facility and this will continue when we move in to the new health clinic. Retired beneficiaries and their family members will receive medical care from their local network primary care manager.

Retired beneficiaries and their family members will have continued access to pharmacy services. They will also have access to laboratory, radiology, and optometry services on a space available basis in the new Fort Knox Ambulatory Care Center.

FORT KNOX ENERGY SAVINGS PROGRAM

Question. As you know, Fort Knox maintains a highly-recognized energy security program that allows the post to manage energy expenditures and be energy self-sufficient for up to 90 days. The fiscal year 2019 NDAA codified this program and provided authority for Fort Knox to continue to extract natural gas from the 26 wells on base—something they had been doing for nearly a decade. Will you please provide an update on Fort Knox's extraction, use and storage of natural gas and the potential for expansion of this successful program?

Answer. Fort Knox currently extracts sufficient natural gas to power its critical facilities and infrastructure, thereby reducing energy costs and providing installation resilience. Per Section 320 of the fiscal year 2019 NDAA, the Bureau of Land Management (BLM) visited Fort Knox in March 2019 to inspect the wells and complete reviews of installation and operation records and reports. Based on the initial inspection, the BLM raised no major issues but cited concerns regarding well labeling, placards, metering, and other items. BLM and Fort Knox are developing a common set of standards to measure, report, and monitor natural gas well activity, and to recognize that this gas will be used for internal agency purposes and not resold to an outside party. There are several other Army installations and bases with deposits of oil and/or natural gas. The Army would like to extract and utilize these energy resources to provide resilience for critical facilities and infrastructure, but cannot do so without additional statutory authority.

FORT CAMPBELL AVIATION ASSETS

Question. I understand that Fort Campbell currently houses a third of the aviation assets that it had 10 years ago. What plans does DoD have to help restore aviation capability to the 101st Airborne Division—particularly its ability to execute air assault of a brigade combat team during one period of darkness?

Answer. The 101st Airborne Division has approximately 50 percent of the aviation assets it had 10 years ago. The Army is currently re-evaluating the lift capacity within the 101st Airborne Division to rebuild their ability to conduct a Brigade Combat Team level Air Assault in one period of darkness. As the Army's preeminent Air Assault Division, this capacity is vital for the 101st to contribute to the National Defense Strategy and meet Combatant Commander requirements. The Army will add heavy lift aircraft to the 101st Airborne Division, although the assessment is currently ongoing and the additional force structure requirements have not been fi-

nalized. The Army has aligned a Reserve Component aviation unit with the 101st to provide additional lift capacity. If required in the near-term to conduct a Brigade Combat Team level Air Assault, the Army will task organize the required aviation resources to accomplish the mission.”

FORT CAMPBELL FACILITY UPDATES

Question. It is important that military installation facilities are modern, safe, and efficient. While funding for important projects at Fort Campbell—such as the Fort Campbell Middle School, Vehicle Maintenance Shop and Special Operations Forces facilities— was appropriated in fiscal year 2019, additional facility upgrades are needed. What plans does DoD have to update Fort Campbell facilities, including, but not limited to, the Sabre Army Airfield access control point, maintenance facilities and the Korean War-era barracks?

Answer. The Army’s fiscal year 2020 Military Construction request includes \$61 million at Fort Campbell to construct a maintenance shop and a training range to enhance the equipment and training readiness of Fort Campbell Soldiers. The request includes purchasing airfield easements to safeguard Fort Campbell’s ability to project combat power. In future budget cycles, the Army will continue to assess its critical facility requirements across its entire footprint and prioritize funding accordingly.

BLUE GRASS ARMY DEPOT (BGAD)

Question. How will the decision to convert BGAD to a Strategic Reserve site impact employment at the facility and funding for BGAD’s continuing missions?

What are DoD’s long-term plans for the conventional operations of BGAD, and does DoD have any plans to expand existing missions or bring new operations to the facility?

Will you please provide an update on any potential public private partnerships that the installation is seeking?

Answer. We do not see a reduction in the current workforce due to the change of designation. The permanent workforce will remain stable; Blue Grass Army Depot will manage its workforce through normal attrition or hiring processes, as needed, in response to workload fluctuations. Term and temp employees will continue to serve their contract times based on current and projected workloads.

DoD’s long-term plans are for the conventional operations at BGAD to continue, as it remains an important and viable member of the organic industrial base. DoD currently does not have specific plans to expand existing missions.

DoD is committed to optimizing workload opportunities at its industrial base facilities that support the priorities of the Chief of Staff of the Army through the use of public private partnerships. The Joint Munitions Command’s public private partnership office continues to support Blue Grass Army Depot’s efforts and will provide support and guidance on future efforts. Blue Grass Army Depot currently has two contracts, one with Day and Zimmerman and one with Northrup Grumman/Alliant Tech Systems for a total value of \$37,000. There are two pending contract awards with two companies for a total of \$10–15K. There is one potential contract, value still to be determined.

CHEMICAL AGENT AND MUNITIONS DESTRUCTION AT THE BLUE GRASS ARMY DEPOT (BGAD)

Question. What steps are being taken by DoD to ensure the safety of facility personnel and Madison County residents during testing and operation of the facilities?

Answer. There is very little danger to the surrounding population due to the storage or demilitarization of the chemical munitions located at Blue Grass Army Depot. The munitions are stored in closed earth covered magazines. The Blue Grass Chemical Agent-Destruction Pilot Plant is a closed design with supplemental technologies. If a munition does leak, safety controls are in place to contain any threat. Further, the U.S. Army Chemical Materials Activity has coordinated with the Federal Emergency Management Agency and surrounding community officials/responders to maintain emergency preparedness and readiness in the unlikely event of a chemical agent release. The storage site and surrounding community emergency response capabilities have been supplemented with coordinated plans, communications, personnel, emergency operations centers, automation, alert and notification, protective actions, medical support, training, public information, and education. Each of these capabilities is evaluated bimonthly and during an annual joint exercise.

QUESTION SUBMITTED BY SENATOR SUSAN M. COLLINS

IRAN INFLUENCE IN SYRIA

Question. Iran has worked to establish bases, factories, and weapons storage facilities throughout Syria, and are supplying significant support to its terrorist proxies in the region. What is our current strategy to limit Tehran's influence in Syria, including its formidable proxy forces, given the U.S. troop drawdown?

Answer. The U.S. military in Syria focuses on the Defeat-ISIS campaign, as stated in our notification to the UN Security Council and per current AUMF authorities. This presence and these operations permit the U.S. to provide an ancillary effect to counter Iran throughout the region, indirectly monitor Iranian activity within Syria, and deter the Iranian objective of exacerbating the civil war in Syria.

QUESTION SUBMITTED BY SENATOR ROY BLUNT

HEARING PROTECTION

Question. The ability to hear and communicate is critical to soldier and unit safety, central to effective command and control, and integral to mission accomplishment, especially during combat where a soldier's hearing is constantly assaulted. Despite military services stressing the importance of using hearing protection and the establishment of conservation programs, military hearing loss and auditory injuries are still on the rise. In fact, hearing loss and tinnitus are the top two service-connected disabilities for our Nation's veterans. With our soldiers sacrificing so much in the line of duty, we should actively be pursuing solutions to ensure this is not they come home to. What specific programs is the Department advancing to ensure our service members' hearing is protected, particularly those most frequently exposed to harmful decibel levels?

Answer. DoD, through the Hearing Center of Excellence (HCE) and its instrumental collaborations with the Military Services and the VA, has worked diligently to prevent, diagnose, and rehabilitate hearing among Service members and veterans. Listed below are current examples of relevant DoD and Service-level programs:

- Development, along with the VA, of the Joint Hearing Loss and Auditory System Injury Registry, with an estimated system launch in Fall 2019.
- The Comprehensive Hearing Health Program, a best practice approach, is being launched across the DoD and VA to reduce the incidence of hearing injury through education, protection, and monitoring. The program's aim is to standardize and optimize hearing conservation services and education. In addition, Service providers periodically monitor Service members' hearing to keep them on track with their hearing health as a military readiness requirement.
- The four-module Hearing Education and Readiness (HEAR) course, available on-line and via a HEAR app, informs Service members about exposure risks to hazardous noise, negative impacts of noise-induced hearing loss, and effective strategies to help reduce risk.
- An evaluated products list (EPL) and guidebook to solve the dual need of delivering hearing protection, while maintaining Service members' necessary situational awareness. The EPL resource will ensure devices are assessed according to standardized methods for steady-state noise, impulse noise, and localization. The HCE and the Services continue to build upon this system to evaluate hearing protection products based on operational significance and situational awareness factors, such as signal quality, sound localization, and protection from blast and impulse noise. Evaluating these performance factors will allow Service members and leaders to identify products that meet their protection and operational needs.
- All of the Services have hearing conservation programs, to include collaboration through the DoD Hearing Conservation Readiness Working Group. Additionally, the Army and Marine Corps implemented Hearing Readiness programs, which demonstrated effectiveness in decreasing hearing injury rates and increasing hearing health awareness among Soldiers, Marines, and leadership.
- To increase oversight and rigor in its hearing conservation and noise reduction efforts, the Navy formalized and expanded its Regional Hearing Conservation test and evaluation team at its Naval Submarine Medical Research Laboratory, in conjunction with the Office of Naval Research's programs. The Navy research programs pursue solutions to a range of challenges, to include evaluating the effects of hearing protection devices on speech communications, sound localization, situational awareness, and comfort.

—Existing efforts to improve hearing protection performance, as well as identify and overcome barriers to their use, include an award of a small business technology transfer contract for the development of hearing protection that addresses existing limitations. The use of individual fit-check systems is being advanced as a quantitative means to verify issued hearing protection, and ensure that Service members properly wear and use their issued hearing protection.

QUESTION SUBMITTED BY SENATOR JERRY MORAN

SOLAR SYSTEM AND BEYOND WITH THE BEST TALENT AND TECHNOLOGY AVAILABLE

Question. As Chairman of the Commerce, Justice and Sciences Appropriations Subcommittee with oversight and responsibility to fund NASA, I am focused on our Nation's ability to explore our solar system and beyond with the best talent and technology available, which includes critical aeronautics materials research by the National Institute for Aviation Research in Wichita, Kansas, the Air Capital of the World.

Mr. Secretary, last month you stated, "Space is under threat, but we are ready today and we will remain ready as these threats expand. To those who want to partner with us: Buckle up. We are seizing on a once-in-a-lifetime opportunity." How are you reaching out to industry and academia to seize this "once-in-a-lifetime opportunity" to protect and defend the United States from threats in space?

Answer. The Air Force supports multiple initiatives to engage both industry and academia in defending against threats in the space domain, such as leveraging the Space Enterprise Consortium (SpEC), holding industry "Pitch Days," and operating space technology accelerator programs. In 2017, the Space and Missile Systems Center (SMC) established the SpEC specifically to facilitate better engagement with industry and academia. The SpEC is a contract vehicle that allows the Air Force to be more agile in its contracting, minimizing the barriers to entry for small businesses and non-traditional vendors. This in turn gives the Air Force greater access to innovative solutions and reduces prototyping development costs. The Consortium allows the Air Force to foster collaboration and prototype development to reduce risk and improve technology on-orbit. To date, the SpEC has 295 members and has awarded 37 efforts worth over \$228 million. The Air Force also plans to hold a Space Pitch Day in Fall 2019, building off the successes of the first Air Force Pitch Day held earlier this year. The Air Force modelled its Pitch Day after commercial investment pitch competitions to make it easier for smaller companies, startups, and non-traditional vendors to work with the Air Force, awarding contracts to 51 companies of the 59 invited to pitch, totaling \$8.75 million. This space-specific Pitch Day will provide additional opportunities for industry to quickly and effectively present ideas to the Air Force to help defend against emerging threats. Finally, the Air Force is operating three technology accelerator efforts between Albuquerque, NM, Colorado Springs, CO, and, starting this summer, Los Angeles, CA to encourage space-industry collaborations under the Air Force Space Accelerator Program run by the Space Vehicles Directorate of the Air Force Research Lab (AFRL). Technology accelerators support early-stage companies through education, mentorship, and financing for a fixed period of time, helping to accelerate their development. Each Air Force space accelerator effort works with experience companies that specialize in mentoring and accelerating start-up companies. The accelerators focus on adopting emerging commercial technologies to fill capability gaps faced by the warfighter.

QUESTIONS SUBMITTED BY SENATOR PATRICK J. LEAHY

REAL-WORLD TRAINING RELATED TO DISASTER RESPONSE

Question. The Senate Appropriations Committee provides funding for training of the Army and Air National Guards under Title 32 with the expectation that Guard units will receive real-world training related to disaster response under pre-set guidelines issued by the respective Service Secretaries. This provides benefits to the Joint Force through experience gained from collective response in a crisis situation, and benefits to our constituents who expect their friends and neighbors in the Guard to respond on their worst days, as they always have.

Will you commit to not making major changes to the way the National Guard is funded and managed for disaster response ahead of the increased domestic operational tempo that comes from summertime, including hurricane season and wildfires?

Do you have concerns with the existing disaster response paradigm for the National Guard, and, if so, will you describe them?

Answer. Yes. The Department of Defense (DoD) is not changing the way DoD funds and manages National Guard for disaster responses in the United States. Unlike the Federal Emergency Management Agency (FEMA) and other Federal departments and agencies, DoD is not authorized, nor does Congress appropriate funds to the Department, for the explicit purpose of domestic disaster response. Instead, DoD provides domestic disaster support, on a reimbursable basis, as requested by FEMA or other Federal departments and agencies, in accordance with the Stafford Act or the Economy Act. This DoD support can be provided by National Guard personnel, consistent with the law and DoD policies and the concurrence of the Governor concerned. Because States rely on their National Guard as a critical State resource in disaster responses, a State's Governor or Adjutant General is able to direct the use of the Army National Guard and the Air National Guard for disaster response in their States, or in support of other States pursuant to an interagency mutual aid and assistance agreement, such as the Emergency Management Assistance Compact, in a State active duty status. Some National Guard personnel, under certain circumstances, also may respond when already in Title 32 status under a separate authority.

DoD has no concerns with the existing disaster response paradigm and the critical role of the National Guard in State disaster response activities. This paradigm was described in the National Response Framework, and established in the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act). In enacting the Stafford Act, Congress noted that the intent of the Stafford act is to provide an orderly and continuing means of assistance by the Federal Government to State and local governments in carrying out their responsibilities to alleviate the suffering and damage that result from disasters. DoD will continue to participate in this orderly and continuing means of assistance in support of the Federal Emergency Management Agency's efforts to support the affected States.

BURN PITS

Question. Concern of veterans about lingering effects from exposure to airborne hazards from open air burn pits has led to a growing awareness of their danger. The Department has taken steps to reduce and document exposure for service members, as well as work with the Department of Veterans Affairs' to support their response to veterans.

Who is or are the individuals or office within the Department for documenting service member exposure to burn pit usage by the Department of Defense, allies, or third parties in theater?

Who is or are the individuals or office within the Department that coordinate with the Department of Veterans Affairs to share information on service members exposed to open air burn pits?

Does the Department have or what would it cost the Department to complete a comprehensive list of open air burn pit sites dating back to 2001 operated in proximity to United States service members?

Answer. The Undersecretary of Defense for Personnel and Readiness establishes Department of Defense (DoD)-level policy (for example, DoD Instructions) for monitoring, assessing and documenting exposures to occupational and environmental hazards in garrison and during deployments. The Military Departments, Joint Staff and Combatant Commands issue instructions and procedures to implement this policy within their respective organizations (Military Departments) and areas of operations (Joint Staff/Combatant Commands). Regarding execution of exposure monitoring, deployed Service Preventive Medicine Teams conduct Occupational and Environmental Health Site Assessments (OEHSAs) for forward operating bases, including assessment of airborne hazards (e.g., ambient dust, industrial, burn pits). Military Service Public Health organizations use the OEHSAs and other exposure assessment information to formulate Periodic Occupational and Environmental Monitoring Summaries (POEMS) for the deployed environment. The POEMS also include an assessment of airborne hazards, to include burn pits. The DoD and Veterans Affairs (VA) are fielding the joint Individual Longitudinal Exposure Record (ILER) that links individual deployment location(s) with these environmental health assessments, thus documenting that a Service member was located at bases with documented environmental exposures. The ILER will be available to DoD and VA healthcare providers beginning in October, 2019, and eventually integrated with the new Electronic Health Record (EHR) to be used by the DoD and VA. Additionally, environmental exposure concerns (such as burn pit exposures) are addressed during the annual Periodic Health Assessment and Post-Deployment Health Assessments

conducted by healthcare providers for Service members. Appropriate referrals to specialty care providers are made based on the results of these assessments, with the medical encounters annotated in the EHR.

As the functional proponent for the ILER, the primary office within the Department that coordinates with the VA is the Office of the Deputy Assistant Secretary of Defense for Health Readiness Policy and Oversight (OSD Health Affairs). Additionally, the long-standing DoD–VA Deployment Health Working Group, comprised of several offices and medical representatives within DoD and VA, is a primary coordinating group for sharing of information on service members and veterans exposed to open-air burn pits and other exposures during deployments.

The Department will evaluate available environmental health and exposure assessment data stored in existing systems (such as the Defense Occupational and Environmental Health Readiness System) to compile a list of locations with documented open-air burn pits. Separate of the list developed from existing data systems, the Department does not have an estimate of the cost to develop a list using other methods and data sources.

PRESS BRIEFING

Question. As of the date of your public testimony before the Committee, the Department was approaching a year without holding an on-camera press briefing.

Will you commit to restoring transparency at the Department by restoring briefings?

Answer. I am committed to transparency, and transparency at the Department has increased under my leadership. In fact, the Department has hosted numerous on the record press briefings since I became the acting secretary. From Jan. 1, the day I became acting secretary, to May 8, the day this question was asked, the Office of the Secretary of Defense has hosted 183 open press engagements, an average of 1.42 engagements per day. This tally does not include on-camera congressional hearings, combatant command- and service-led engagements, press statements, social media posts, defense.gov videos, and the myriad of other ways the Department communicates. Furthermore, the assistant to the secretary of defense for public affairs and his team of public affairs professionals, who are subject matter experts on their portfolios, engage with members of the press daily in both formal and informal settings to provide them information. The media have direct access to this team, and they are available to the media on a daily basis, including nights, weekends, and holidays. Increasingly, I address the media with timely information, and I frequently engage with the press during my regular activities as well as on official trips. In the last month, I conducted more than 10 on-camera engagements. The bottom line is that the way the public consumes information, and the way public officials share information, has changed. While on-camera press briefings are important, solely measuring the Department's engagement with the American people on one statistic is a misrepresentation of all the Department does to tell its story.

QUESTIONS SUBMITTED BY SENATOR TOM UDALL

HYPERSONICS

Question. To develop hypersonic technology and possible counters, inland tests will need to be conducted. Is DoD coordinating with White Sands Missile Range to conduct the needed testing?

Can you update my office on Air Mobility Command's efforts to utilize hypersonic point to point travel? What are the plans to make this a reality? And have the Air Force and DoD begun the interagency efforts to conduct overland hypersonic tests?

Answer. The Test Resource Management Center (TRMC) in OUSD (R&E) has the responsibility to capture future flight test range requirements and coordinate interagency efforts to support the test and evaluation of advanced weapon systems, including hypersonic systems. The TRMC is currently updating previous hypersonic flight test requirements analyses and forecasting offensive and defensive hypersonics weapon programs' flight test demands on our existing open air range flight test infrastructure. Preliminary analysis indicates demand for hypersonic flight test exceeds the capacity of existing trans-Pacific open air range flight test corridors. Additional CONUS, to include White Sands Missile Range, and OCONUS open air range flight test corridors are under consideration to identify the most effective approach to increase flight test capacity to meet DoD hypersonic systems' flight test demands. One element of our integrated hypersonics strategy is the development of global reach reusable systems, however, realizing capability based on those systems will not happen until well into the future. As such, there is no signifi-

cant discussion in Air Mobility Command about hypersonic point-to-point travel in the near term.

QUESTIONS SUBMITTED TO GENERAL JOSEPH F. DUNFORD, JR.

QUESTIONS SUBMITTED BY SENATOR RICHARD C. SHELBY

FISCAL UNPREDICTABILITY

Question. As you are aware, congress has not yet reached a final agreement on a budget for fiscal year 2020 that includes the funding level for the Department of Defense. While I am pleased that we were able to provide the Department with fiscal year 2019 funding prior to the start of the fiscal year, we are not yet certain of that outcome for the next year.

Secretary Shanahan or General Dunford Joint Staff, With regard to areas of emerging technology in particular, how important is regular and sufficient funding to the Department of Defense?

Answer. The Joint Force requires sustained, predictable, and adequate levels of funding to build the capacity and develop the capability to compete with near-peer adversaries. The Joint Military Net Assessment—a rigorous tool we use to evaluate the Joint Force’s ability to meet its strategic objectives—identified challenges across all domains in the context of our near-peer competitors. Compared to the trajectory of capability development of near-peer competitors, the Department’s investments in advanced technologies should focus on closing any gaps.

CHINA/ADVANCED INFORMATION NETWORKS

Question. The most recent National Defense Strategy describes how the department is prioritizing investments in resilient communications networks. As we increase the number of sensors and other devices that share information on the battlefield, the potential threats will rise along with the gains in capabilities. We are also paying close attention to the commercial companies, including the Chinese company Huawei (pronounced—WAW—way) that are providing the enabling technology and hardware advancements.

Mr. Shanahan CIO, is the Department taking advantage of emerging 5-G technologies and otherwise accelerating deployment of commercial products with dual use technology?

General Dunford Joint Staff, from your perspective, what are the risks to our information security in light of current and future threats. Can the department do more to address or better prepare for these threats?

Answer. From my perspective, the risk to information technology and frankly, any technology originating from peer competitor nations is operating on a network whose confidentiality, integrity, and availability may be controlled by the adversary. Evidence of backdoors or security vulnerabilities have been discovered in a variety of telecommunications devices globally. When such devices are incorporated into the U.S. systems and networks, those security vulnerabilities remain, and can be used to exfiltrate information, aid in denial of service attacks, or monitor communications. There must be standards that mandate Chinese and other competitor nation companies comply with international cyber security practices. If China leads the field in 5G infrastructure and systems, the future 5G ecosystem will likely have Chinese components embedded throughout. The growth in the number of devices connected to 5G networks will increase the potential “attack surface” for adversaries to target DoD networks. Another area of concern is the Defense Industrial Base (DIB), where we continue to lose significant data to malicious cyber actors. We have established the Protecting Critical Technology Task Force, continued to collaboratively share cyber threat information with industry, and have begun to incentivize DIB companies to deliver secure capabilities in keeping with fiscal year 2016 NDAA 1647 weapon systems resiliency requirements. Nested with the intent of the President’s recent Executive Order, the Department has taken steps to inspect the DoDIN for presence of Huawei equipment, and to mitigate or remove such equipment where found. Additionally, we have taken measures to ensure Huawei is prohibited in the Defense Federal Acquisition Regulations Supplement. To answer the second part of your question Senator, yes, there is more the Department can do. What remains is to look out past the DoDIN—both domestically at our Nation’s Critical Infrastructure supporting the Department and to our Allies and Partners. To this end, the SECDEF and Secretary of Homeland Defense agreed in late 2018 to establish a Cyber Protection and Defense Steering Group. This group has initi-

ated a set of pathfinders with the U.S. financial sector and the electricity sub-sector to address mutual DoD and DHS concerns.

TECHNOLOGICAL EDGE

Question. Commercial companies in China have made determined efforts to obtain American technology by partnering with U.S. companies or purchasing them outright. While the PLA has also sought to obtain or otherwise benefit from the transition of American technology to foreign companies. The threats to our national security are obvious.

General Dunford Joint Staff, You have suggested in public remarks that the distinctions between the Communist Party of China, the government of China and their military are often without a difference. Does this budget do enough in your opinion to maintain our technological military edge in spite of all that?

Secretary Shanahan A&S, you have expressed concerns about the Pentagon's defense slow acquisition process and delays to fielding new technology. Will you describe your efforts to speed things up, in particular in hypersonic weapons, space and cyber? Do you have the resources to stay ahead of near peer nations?

Answer. The DoD is using an adaptive acquisition framework to tailor the acquisition process to the capability or service we're procuring. We are revising the 5000.02 to reflect the Department's priority to accelerate acquisition timelines to deliver capability at the speed of relevance while increasing use of middle tier of acquisition authorities, and innovating our contracting approaches to accelerate how we develop and deliver critical space capabilities. We have the resources to stay ahead of peer nations. Several space system acquisitions are leveraging the Middle Tier of Acquisition for rapid prototyping and rapid fielding authorities granted in the fiscal year 2016 NDAA, Section 804. They are on track to accelerate the delivery of critical capabilities one to 3 years ahead of the traditional acquisition path through streamlined processes and leveraging rapid prototyping for terminals. To accelerate cyber and software-related capability development, the Department is reducing software delivery timelines and implementing strategies consistent with reform directed by Congress (fiscal year 2018 NDAA Sec 873/874) by establishing Agile Software Pilot Programs and by partnering with industry to evaluate non-traditional cyber hardening technologies to address legacy system vulnerabilities. To protect our warfighting advantage, we need to ensure that the technologies and capabilities the Department develops and acquires are not compromised by adversaries conducting large scale cyber espionage against the Defense Industrial Base (DIB). The Services, Agencies, and Combatant Commands are working together to implement enhanced DIB cyber security standards and initiatives to secure Intellectual Property essential to national security. As space capabilities are software intensive, we are using lessons learned from our Agile Software Pilot Programs, along with recommendations from the 2019 DIB Software Acquisition and Practices Report, to update our processes and guidance on how to develop and contract for software intensive systems. We're additionally balancing on-orbit/vehicle embedded software capability to ground-based application software capabilities in architecture design. Finally, we're using automation in the software development lifecycle. In addition, to accelerate cybersecurity for the DIB we are working with Johns Hopkins Applied Physics Lab (APL) and Carnegie Mellon Software Engineering Institute (SEI) along with Industry Partners such as the Defense Industrial Base (DIB) Sector Coordinating Council (DIB SCC) and others to combine various cybersecurity standards (such as National Institute of Science and Technology (NIST) Standard 800.171 & 800.53, International Standards Organization (ISO) 27001 & 32, Aeronautic Industry Association(AIA) NAS9933) into one unified standard for cybersecurity for the DIB Supply Chain. The comprehensive cybersecurity standard will be known as the Cybersecurity Maturity Model Certification (CMMC). The CMMC will create requirements for security and allow third-party audits and certifications of the security of contractor networks and processes. The Department is rapidly increasing its investment in hypersonic missiles, with emphasis on accelerating transition of proven Conventional Prompt Strike (CPS) boost-glide technology with the Navy & Army, as well as, a more advanced boost-glide vehicle being developed cooperatively by DARPA and the Air Force. The President's fiscal year 2020 budget requests \$2.6 billion in hypersonic related activities, including, weapon prototype demonstrations of the Navy's Intermediate Range Conventional Prompt Strike (IRCPS) weapon, the Army's Long Range Hypersonic Weapon (LRHW), and the Air Force's Hypersonic Conventional Strike Weapon (HCSW) and Air-launched Rapid Response Weapon (ARRW). Each of these programs is taking advantage of the middle tier of acquisition authorities that Congress has granted the Department to rapidly develop and field an early operational capability based on prototypes. The Navy and Air Force

already have contracts in place for hypersonic weapon systems and the Army will before the end of the fiscal year. The Services are working well together and making rapid progress towards the fielding hypersonic warfighting capability. One example of collaboration is the development of a common missile by the Army and the Navy for the LRHW and IRCPS weapon system demonstration programs, and the Air Force's is leveraging much of the glide body design to develop an air-launched capability for HCSW.

QUESTION SUBMITTED BY SENATOR SUSAN M. COLLINS

IRAN INFLUENCE IN SYRIA

Question. Iran has worked to establish bases, factories, and weapons storage facilities throughout Syria, and are supplying significant support to its terrorist proxies in the region. What is our current strategy to limit Tehran's influence in Syria, including its formidable proxy forces, given the U.S. troop drawdown?

Answer. The U.S. military in Syria focuses on the Defeat-ISIS campaign, as stated in our notification to the UN Security Council and per current AUMF authorities. This presence and these operations permit the U.S. to provide an ancillary effect to counter Iran throughout the region, indirectly monitor Iranian activity within Syria, and deter the Iranian objective of exacerbating the civil war in Syria.

QUESTIONS SUBMITTED BY SENATOR TOM UDALL

IRAN AND VENEZUELA

Question. Has the Department of Defense completed any estimates regarding how much a war with Iran or Venezuela would cost in terms of dollars, equipment, and lives? If so, please provide that information to the committee.

Has the Department of Defense completed an analysis of how military involvement in Iran or Venezuela would impact our force's readiness as it attempts to modernize and replace legacy equipment in the overall force into the 2020's? If so, please provide that information to the committee.

How do you anticipate our near peer competitors would react to another open ended war with Iran or Venezuela? Based on DoD's analysis, would they benefit from the United States' spending more money and lives to fight another war in either country?

Has the Department of Defense spoken with NATO and other allies about the possibility of a war with Iran or Venezuela? Would they support such an effort or do they oppose military involvement?

Do either of you believe that the 2001 Authorization for use of military force gives the Department of Defense legal authority to engage in hostilities with Iran or Venezuela? Please provide any applicable legal advice on which you are basing your answer.

Answer. The Department is postured to offer the President a broad range of military options to support policy end states in Venezuela and Iran. For Iran, we have initial estimates for the cost of deploying additional forces and equipment to the USCENTCOM AOR to support the Administration's Maximum Pressure Campaign.

All contingency or crisis response operations have an impact on readiness. Very few missions allow force elements to maintain proficiency on all the mission essential tasks a unit is required to conduct. To date, the additional force posture in USCENTCOM and humanitarian support to USSOUTHCOM have not affected DoD's modernization efforts.

I would defer to the Intelligence Community to characterize near-peer reactions to a notional large-scale U.S. military intervention in Venezuela.

The U.S. has consulted and coordinated with allies on current defensive measures taken in response to recent Iranian aggression.

To date, the 2001 AUMF has not been interpreted to authorize the use of force against the governments of Iran or Venezuela.

HYPERSONICS

Question. To develop hypersonic technology and possible counters, inland tests will need to be conducted. Is DoD coordinating with White Sands Missile Range to conduct the needed testing? Can you update my office on Air Mobility Command's efforts to utilize hypersonic point to point travel? What are the plans to make this a reality? And have the Air Force and DoD begun the interagency efforts to conduct overland hypersonic tests?

Answer. Currently there are no planned overland hypersonic weapons system tests. To accommodate future capacity demands and enable the potential for future tests to occur over land, the Department is considering additional flight test range options. As part of these options we are looking at overland corridors to include the potential for WSMR involvement. Furthermore, discussions between OSD and WSMR have happened to evaluate the potential for long range, over land flight testing of future hypersonic systems. With respect to Air Mobility Command's efforts to utilize hypersonic point-to-point travel the Joint Staff knows of no such effort.

SUBCOMMITTEE RECESS

Senator SHELBY. Subject to that, the Defense Subcommittee will reconvene in a closed session next Wednesday, May 15 at 10 a.m., to receive testimony from the U.S. intelligence community.

This committee is recessed. Thank you.

[Whereupon, at 1:23 p.m., Wednesday, May 8, the hearings were concluded, and the subcommittee was recessed, to reconvene subject to the call of the Chair.]