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High Consequence and Uncertain Threats: Reviewing Department of Defense Strategy, Policy, and Programs for Countering Weapons of Mass Destruction for Fiscal Year 2018

Committee on Armed Services, United States House of Representatives,
One Hundred Fifteenth Congress, First Session

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Statement of Ms. Shari Durand
Acting Director, Defense Threat Reduction Agency

Countering Weapons of Mass Destruction Posture Hearing

Before the

Emerging Threats and Capabilities

Subcommittee

Committee on Armed Services

United States House of Representatives

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Acting Director Shari Durand
Defense Threat Reduction Agency
Testimony to Emerging Threats and Capabilities Subcommittee
House Armed Services Committee
March 23, 2017

Chairwoman Stefanik, Ranking Member Langevin, and Members of the Subcommittee, it is an honor to be here today to share with you the work we do every day to make the United States and its allies safer by countering the threats posed by the proliferation and use of weapons of mass destruction (WMD) and improvised threats.

WMD Threats

Over twenty years ago, a small but dedicated group of radicalized criminals used sarin gas to attack critical transportation corridors in Tokyo. In a matter of minutes, their attack killed over a dozen people and sickened thousands, and images of the incident were splashed across TVs to billions around the globe. The attack clearly demonstrated the potential for terrorists to gain international attention with a relatively small amount of resources. It showed that the battlefield extends beyond declarations of war by nation-states. Further, this attack made it clear that WMD events are not just theoretical and were likely to happen again. It also revealed the challenges facing first responders and medical facilities when responding to even a small-scale attack.

That incident, as well as other events and threats around that time, influenced then-Defense Secretary William Cohen to ask Deputy Secretary of Defense John Hamre to examine all of the Department of Defense (DoD) organizations dealing with threats from WMD. As a result of that study, the Department concluded that our nonproliferation and counterproliferation efforts were not well focused in terms of an “institutional center of gravity within the Department.” The Defense Threat Reduction Agency (DTRA) was created one year later, in 1998, integrating three legacy Countering Weapons of Mass Destruction (CWMD) agencies into one.

In the nearly twenty years since, the barriers between WMD and those with the will to use it continue to fall – with the threat becoming increasingly complex and global in nature. In Iraq and Syria, the Islamic State in Iraq and Syria (ISIS) is using chemical weapons on the battlefield. These attacks demonstrate that ISIS has developed a clear intent to acquire and use WMD, and through trial and error, they may get better at it.

The threat of terrorism is increasingly complex and transregional in nature. Social media is allowing terrorists to recruit more easily and spread their expertise more rapidly, across various nationalities and ideologies. Terrorist groups are no longer required to fund, train, and equip fighters in secret camps; instead, they can inspire unconnected but motivated individuals who will attack and declare their allegiance just prior to, or after an attack. And, along the way, these motivated individuals can receive technical assistance from a distance in their plans, all through today's technology.

Who We Are

For all of these reasons, there is a clear need for on-call, comprehensive CWMD expertise. That's what the Defense Threat Reduction Agency provides. Our expertise spans the full WMD threat spectrum – chemical, biological, radiological, and nuclear weapons, high yield explosives, and improvised threats. While we are not the only players on the CWMD field, we provide critical support to a USG whole-of-government approach to this critical security mission.

As DoD realized in 1998 when it established DTRA, the most effective way to leverage this expertise is to locate it in one place and provide efficient communication channels for collaboration. As a Defense Agency, DTRA operates under the authority, direction, and control of the Under Secretary of Defense for Acquisition, Technology and Logistics, through the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs. In this role, we support and enhance the nuclear enterprise; we support overall USG efforts to prevent the proliferation and use of WMD and improvised threats; and we perform and manage a

research and development portfolio to develop tools and capabilities in WMD and improvised threat environments. In fact, DTRA provides the United States Special Operations Command (USSOCOM) with all of its WMD counterproliferation Science and Technology capabilities. As a Combat Support Agency, DTRA communicates directly with the Offices of the Chairman of the Joint Chiefs, and provides direct support to Combatant Commanders and the Services.

What We Do

Our programs come in many shapes and sizes and we work with both military and civilian personnel. On any given day, tens to hundreds of DTRA experts are dispatched overseas, and in certain cases to some of the most dangerous and sensitive of areas, in order to provide analysis, research, testing, training, and operational expertise.

Within DTRA, we have nuclear physicists, microbiologists, chemists, current and former Special Operations Forces personnel, logisticians, linguists, lawyers, contract specialists, accountants, and many other expert professionals working side by side to eliminate WMD threats. If you observed our biweekly Director's Update Briefings, you would hear about our teams deployed throughout the world on specific missions. You would also hear about the critical science and technology work that feeds into our operational mission and across the DoD and Interagency; research and development testing taking place that week; analysis of WMD threats; key leader engagement and partnership opportunities, and significant events or decision points on the horizon. All of these discussions are shared and coordinated with every DTRA entity so that maximum collaboration and information sharing occurs continuously.

Counter-ISIS

An area of key interest in those biweekly meetings is DTRA's support to Operation Inherent Resolve (OIR). In September 2015, DTRA stood up a Counter ISIS Chemical and Biological Working Group composed of personnel from across the Agency. This Working Group coordinates capabilities for urgent need requirements supporting the Warfighter. DTRA's counter-ISIS activities specifically focus on: chemical agents, potential radiological or

biological threats or threats from small unmanned aerial systems, commercial grade explosives, homemade explosives and their chemical precursors, and improvised explosive devices.

DTRA enables OIR Coalition Forces and partner nations to counter ISIS through seven lines of support:

- 1) **Threat Awareness:** DTRA identifies critical links and nodes in ISIS improvised threats and WMD proliferation networks to inform the coalition's counter-ISIL campaign.
- 2) **Research and Development:** DTRA develops material and non-material solutions against ISIS WMD and improvised threats. In January 2017, DTRA transitioned a novel chemical detection platform to the Warfighter. DTRA continues to support the broader U.S. government effort to provide the coalition with capabilities to detect and defeat ISIS small unmanned aerial systems.
- 3) **Planning:** DTRA analyzes operational courses of action and available countermeasures to inform pre-mission planning for employing coalition forces in unique improvised threat and WMD environments in Iraq and Syria. In October 2016, DTRA provided an analysis of options to store, transport, and dispose of chemical and biological material of concern in the region.
- 4) **Deployable Capabilities:** DTRA maintains deployable teams with specialized equipment and expertise available to assist the coalition in a WMD contingency. DTRA also integrated tactical improvised threat experts into the coalition's component commands. In the summer of 2016 and in February 2017, DTRA advised on the secure and timely movement of suspected chemical samples to labs for characterization.
- 5) **Training and Equipping Coalition Forces:** DTRA leverages the Department's existing authorities, including the Iraq Train and Equip Fund, to provide military and civilian first responders with training and equipment to defend against chemical, biological, radiological, and nuclear threats. DTRA supported a Warfighter request to provide the Government of Iraq handheld chemical detectors to enable Iraqi responders to identify and respond to incidents involving chemical weapons, including the use of toxic industrial chemicals.
- 6) **Building Regional Capacity:** DTRA fosters enduring relations with partner nations' border security organizations to prevent WMD and illicit improvised threat related

materials from crossing borders. DTRA continues to enhance the capabilities of countries like Jordan and Lebanon to detect, identify, track, and interdict potential traffickers of illicit materials on the Syrian border. Along with a network of fixed and mobile sensors along these borders, DTRA also delivers critical WMD detection training and equipment enabling these partner nations to prevent illicit trafficking of WMD. This work is crucial given the possible desire of some terrorist groups to use WMD materials against the United States and our partners. DTRA is training and equipping Turkey's explosive ordnance disposal units along the Turkey-Syria border. DTRA also works collaboratively with partners in the region to prevent non-state actor acquisition of dangerous biological materials while also providing them with the tools to detect a potential bioterrorism attack.

- 7) **Reachback:** DTRA's cadre of chemical, biological, radiological, and nuclear experts continue to provide the coalition decision support products for kinetic and non-kinetic operational planning and post-event analysis, 24 hours a day, 7 days a week. During FY16, DTRA provided 522 technical products to USCENTCOM and OIR; further, we have provided over 60 Requests for Information products so far in FY17 that enabled the Warfighter to target ISIS facilities.

DTRA's future support shifts from building regional capacity to sustaining regional capacity through enduring partnerships; efforts to determine how provided capabilities enable and improve operational results; and, innovating new capabilities to counter ISIS WMD networks globally.

Chemical

In addition, our chemical weapons experts are working to improve the safety and security of toxic industrial chemicals in the Middle East and North Africa to make it more difficult for terrorist groups, such as ISIS, to use them as improvised weapons. We are also developing contingency plans to assist with the destruction of chemical weapons and related materials, both for legacy nation-state programs and for improvised terrorist programs, should a cooperative environment emerge. Our current government partners include the Edgewood Chemical and

Biological Center in Aberdeen, Maryland; the State Department Chemical Security Program; the Pacific Northwest National Laboratory; the Sandia National Laboratory; the Oak Ridge National Laboratory; and the Government of Jordan. We are working to expand these efforts to other partners in the Middle East and North Africa.

Biological

Our biological security experts are consolidating and improving the security of dangerous pathogen collections across the planet, collaborating closely with other like-minded nations to prevent nefarious transfer of biological materials. We are working cooperatively with partner countries and the international community to minimize the threat posed by deliberate, accidental, and natural infectious disease outbreaks of security concern that place at risk U.S. national security and potential intentional attacks involving weaponized pathogens, while developing new means for protecting our military personnel against biological terrorism or threats

As the 2014-2015 Ebola outbreak in West Africa demonstrated, outbreaks do not respect boundaries or borders, and pose a significant threat to the stability of countries and regions. The increased movement of people geographically means that devastating diseases, whether spread naturally, accidentally, or intentionally can be transmitted worldwide. DTRA addresses the outbreak risk of diseases of concern by promoting best practices in biological safety and security, improving partner countries' abilities to rapidly detect and report dangerous infections, and enhancing partnerships that facilitate information sharing.

Radiological/Nuclear

DTRA is involved with efforts to secure weapons-usable nuclear materials worldwide, understanding and predicting nuclear weapons effects, and ensuring the survivability of United States Nuclear Command, Control, and Communications.

DTRA provides nuclear enterprise support to the Department of Defense and Interagency stakeholders that helps to ensure the safety, security, reliability, and effectiveness of the U.S. nuclear deterrent force. Our nuclear experts are supporting sustainment of current and future

nuclear deterrent capabilities; implementation of nuclear enterprise review recommendations; and nuclear enterprise recapitalization efforts. We have systems in place to guarantee that we have complete control and accounting of our nuclear weapons at all times. In response to DoD's 2014 Nuclear Enterprise Review, DTRA's role was modified from conducting Nuclear Surety Inspections at each Air Force and Navy Nuclear Capable Unit to performing Oversight Inspections of all Air Force and Navy Nuclear Surety Inspection Teams.

We make sure the Navy and the Air Force's inspections provide tangible proof that every safety system is in place, maintained and in working order, and put the operations, maintenance, and security forces through drills and exercises to ensure that everyone knows their jobs; they know the proper procedures, and they know how to react when the situation changes. Our collective goal is to protect, control, and serve the nation with 100% assured predictability, reliability, and confidence in our nuclear weapons stewardship.

DTRA is also the home of the Defense Nuclear Weapons School. This illustrious school will celebrate its 70th anniversary in April 2017 and remains a center of excellence in training our next generation of CWMD experts. The school provides hands-on training on the DoD's only live radiological field training site and maintains the Nuclear Weapons Instructional Museum which allows for training related to all weapons that have been or are deployed in the U.S. nuclear stockpile. In fact, nearly 29,000 students attended classes or received distance learning instruction from the school in FY16 – including over 7,000 students attending in-resident, mobile training, and the Nuclear Weapons Instructional Museum. Students included domestic and international personnel – including U.S. Civil Support Teams and our allied partners.

DTRA also provides nuclear forensics and attribution capabilities. For example, DTRA developed the Discreet Oculus Prompt Diagnostics Sensor System as a research and development effort to create a ground-based prompt detection and diagnostics system. The system complements current global- and space-based prompt nuclear effects monitoring systems. It is designed to support the United States Government's efforts to develop timely and accurate technical nuclear forensics conclusions after a nuclear attack on the United States. Discreet Oculus systems are now deployed in three cities with the next deployment scheduled for 2018.

Maintenance of these systems will transition to the United States Air Force Technical Applications Center in 2018.

Information collected by this system after an attack will be used to help national and military leaders identify what was detonated, where the materials came from, and who launched or supported the attack.

High Yield Explosives

DTRA structural dynamics experts are working on solutions to protect military and related government facilities at risk while developing new means for mitigating blast effects resulting from a variety of explosive devices against structures and other infrastructure. Our products are also used internationally and have been critical to our partners' efforts in constructing facilities that require the highest levels of protection for personnel and equipment.

For example, DTRA developed the Vulnerability Assessment and Protection Option (VAPO). VAPO is a software modeling and simulation toolset designed to provide assessment capability in support of vulnerability assessment teams and force protection evaluators and planners. VAPO allows users to evaluate a single or multi-building site to assess its vulnerability to an array of threats, including high explosive, chemical, and biological weapons inside or outside of buildings, nuclear threats, and vehicle barrier ramming. Using physics-based models validated through testing, the tool predicts structural, window, equipment damage; progressive collapse; and human injury. VAPO is currently used by the DoD, USG entities, and international allies to protect structures and infrastructure around the world. DTRA signed an agreement earlier this month with the Department of Homeland Security to make VAPO available to State, Local, Tribal, and Territorial Government agencies.

CWMD Strategy

The Agency's focus is to keep WMD out of the hands of terrorists and other enemies by locking down dangerous materials, destroying legacy weapons, preparing for, and responding to WMD incidents, and developing technologies to prevent, defend against, and counter a WMD attack.

In line with the Department's 2014 Strategy for Countering Weapons of Mass Destruction, DTRA supports the full scope of DoD's efforts to prevent acquisition, contain and reduce threats, and respond to crises.

Prevent Acquisition

The most effective means to reduce WMD threats is at the source. It is common sense to go where the problem begins and attempt to counteract and eliminate these threats as far away from American soil as possible.

One of the core elements of DoD's efforts to prevent the acquisition of WMD was created by your former colleagues Senator Richard Lugar and Senator Sam Nunn. In fact, the Nunn-Lugar Cooperative Threat Reduction (CTR) Program celebrated its 25th anniversary in December 2016.

The evolution of Nunn-Lugar has been remarkable. The Program is responsible for destroying more than 7,000 Soviet-era warheads, 2,500 missiles, and 155 bombers and securing numerous nuclear sites. Following our success in eliminating access to materials in the former Soviet Union, however, the strategic environment has evolved as state and non-state actors seeking WMD have dispersed to other geographic areas and potential WMD sources. This evolution required a shift in our thinking as well and is the reason why we previously requested - and received - Congressional approval to expand Nunn-Lugar authority. Now, in close collaboration with our partners at the State Department and the National Nuclear Security Administration, CTR operates in over 30 countries across Africa, Asia, and the Middle East. The CTR Program's unique combination of technical expertise, strategic relationships, and agile

authorities ensure that the United States and our allies and partners have the tools necessary to counter the full scope of WMD threats facing the world today.

For example, DTRA is focused on helping African nations secure naturally-occurring dangerous pathogens. Deadly agents on the African continent, like Ebola virus, Marburg virus, and anthrax were once used to make biological weapons during the Cold War; these lethal pathogens are now safeguarded, cataloged, and, if needed, destroyed as part of CTR's Cooperative Biological Engagement Program. This program is reducing access to biological materials while expanding international partnerships to better counter natural and man-made biological events. These efforts advance the U.S. commitment under the Global Health Security Agenda to assist 31 countries and 1 region to prevent, detect, and respond to infectious disease threats. As the entire world learned during the 2015-2016 Ebola crises, containment and safeguarding of such dangerous pathogens that could quickly evolve into broad threats, is extremely critical for our Warfighters' and the world's safety.

DTRA, with primary focus on pathogens of security concern, works closely with the Departments of Health and Human Services, the Centers for Disease Control and the United States Department of Agriculture and others to maximize expertise and relationships within the global health community to improve early warning and detection capabilities and to mitigate pandemic disease threats. In close coordination with our research and development arm, we are also creating partnerships with industry for advanced development and manufacturing of medical countermeasures to counter emerging bio threats and infectious diseases. For example, we are leveraging the capabilities of DoD's Advanced Development and Manufacturing (ADM) facility in Alachua, Florida to develop pretreatments that protect the force against Botulinum neurotoxin (toxin threats).

Another critical nonproliferation function of DTRA is our work implementing arms control treaties and confidence building and transparency measures. Through various agreements, the United States seeks to control, safeguard, and eliminate existing weapons and to verify and monitor compliance with agreements intended to prevent the proliferation of nuclear, chemical, biological, and conventional weapons. As the focal point for U.S. treaty implementation,

DTRA's inspectors provide the Secretary of Defense and interagency partners with first-hand evidence that international commitments are fulfilled through the verifiable accounting for and reduction of the world's weapons stockpiles. DTRA inspectors and technicians provide critical subject matter expertise to interagency teams on the front lines of international negotiations and monitoring organizations. In addition to conducting inspections, DTRA researches and develops technologies to enhance the rapid detection and characterization of nuclear events worldwide, and upgrades and operates 31 international monitoring stations for nuclear events. We also provide support to COCOMs that receive foreign inspections and monitoring and provide valuable insights into mitigating techniques for sensitive U.S. facilities and activities.

Contain and Reduce Threats

If our programs and our efforts are unable to stop these WMD threats at the source before they proliferate, we help Combatant Commanders and military Service Components mitigate threats before they reach the U.S. homeland. Detection, interdiction, and if needed, destruction of these weapons and materials are the goal, thus disrupting the supply or smuggling routes and providing our national leadership with knowledge concerning important threat details. Working with our international partners, the Department's goal is to deter, dissuade, and deny those who both produce and attempt to gain access to these materials and drive them out of business.

For example, the Nunn-Lugar CTR Program's Proliferation Prevention Program, or PPP, enhances the capacity of partner countries to deter, detect, interdict, and respond to the attempted proliferation or smuggling of WMD. It provides specialized equipment, training, and facility upgrades for partner nation border security and law enforcement organizations. Training is institutionalized through a train-the-trainer approach and sustained with periodic local and regional WMD Integrated Exercises which enable participants to use program skills and equipment within a realistic training environment. The Proliferation Prevention Program's partners span the Caucasus, Eastern Europe, Central Asia, Southeast Asia, Northern Africa, and the Middle East.

DTRA also supports the Proliferation Security Initiative (PSI) Support Cell, and thus helps facilitate engagements focused on ensuring that PSI endorsers are prepared to uphold their commitment to the Statement of Interdiction Principles to prevent the proliferation of WMD and WMD-related material. There are now 105 PSI endorsees worldwide, and DTRA-facilitated engagements occurred in each AOR last year.

Because of DoD – and the broader U.S. Government’s – success in interdicting and eliminating weapons at the source, in many cases we have literally driven the enemy underground. As a result, our national security leadership and military commanders need non-nuclear capability to strike at Hard and Deeply Buried Targets. DTRA works closely with the Defense Intelligence Agency to find these targets and provide Combatant Commanders and Service Components with effective CWMD contingency responses.

Respond to Crises

Our DTRA workforce performs countering weapons of mass destruction (CWMD) planning and exercise support and provides expertise to the Combatant Commands and other customers.

For example, DTRA leads, supports and participates in numerous joint exercise and training events throughout each calendar year, based on Joint Doctrine, Commanders’ Objectives and mission requirements. The goal of these training events is to ensure the Military Services understand what would be needed in a WMD event and to prepare DTRA to successfully employ joint forces to conduct CWMD operations.

One of the largest of these exercises is the Nuclear Weapon Accident Incident Exercise (NUWAIX). This exercise is a Secretary of Defense directed, United States Northern Command executed and DTRA led field training exercise. This annual event exercises a whole of government response involving custodial nuclear weapons or materials. These efforts allow for the identification of gaps in nuclear weapons accident/incident response capabilities and means and methods to repair those vulnerabilities. NUWAIX involves as many as 1,000 people across

the country and includes participants throughout the interagency and state and local participation, when possible.

Overseas, DTRA's Chemical, Biological, Radiological, Nuclear, high-yield explosive (CBRNE) Preparedness Program (CP2) supports all the Combatant Commands by providing partner nations with skillsets to effectively respond to WMD incidents through increased tactical and operational capabilities. The goal of CP2 is to enhance regional and national CBRNE response planning and capabilities to minimize the impact of WMD events and to decrease reliance on U.S. response assets. CP2 currently uses Section 1204 of the FY14 NDAA and plans to use Section 333 of the FY17 NDAA, both provided by Congress, to train and equip both civil and military first responders within authorized countries to enhance their overall preparedness for CBRNE events.

DTRA Research and Development

Our CWMD research, development, test, and evaluation (RDT&E) program can trace its roots back to the Manhattan Project where we provided expertise in weapons effects – work that we still do today. DTRA does not own or operate any functional laboratory, but we are able to select from the full range of national expertise, wherever that may be. Our performers include the DoD laboratories and Department of Energy/National Nuclear Security Administration (DOE/NNSA) labs, contractors, Federally-Funded Research and Development Centers, University-Associated Research Centers, academia, and of course both large and small innovative companies. We provide and operate unique and essential test and evaluation capabilities at government facilities in New Mexico and Nevada to meet our own mission requirements, and those of our various customers and stakeholders.

DTRA RDT&E programs respond to the most pressing CWMD challenges including stand-off detection that seeks to identify CBRN materials from safe distances, tracking, and interdiction of WMD; modeling and simulation to support weapons effects and hazard predictions; classified support to Special Operations Forces; defeat of WMD agents and underground facilities; and protection of people, systems, and infrastructure against WMD effects.

DTRA RDT&E is unique – it is solely focused on CBRNE; tied closely with the Agency’s Combat Support responsibilities; and is nimble and responsive to urgent needs. DTRA’s test beds provide unmatched threat-representative target structures and threat-characteristic geologies. We support a number of Service, Joint Staff, and Combatant Command priorities, including development of the Large Caliber Penetrator; expanded tactics, techniques, and procedures for use of the Joint Programmable Fuse; and enhanced U.S. missile defeat capabilities.

DTRA has a comprehensive, balanced CBRNE Science and Technology portfolio that supports DoD goals and is well connected with DoD customers, the interagency, and our international partners. Our RDT&E approach balances the need for near-term pay-off with the need for long-term technology and capability development and investment. Our work is centered upon the following programs: Basic Research (6.1), Applied Research (6.2), Advanced Technology Development (6.3), and System Development and Demonstration (6.5).

These programs have resulted in significant capability transfer to the Warfighter. DTRA has transitioned nuclear detection and forensic capabilities to the Air Force Technical Applications Center and the Army’s 20th CBRNE Command. All 57 National Guard Civil Support Teams are fielding the Mobile Field Kit, a hand-held device and application that integrates and coordinates the readings from multiple radiation sensors. Our National CWMD Technical Reachback Support Enterprise provides 24/7 CBRNE decision support capability for planning, operations, and post-event analysis to Combatant Commands, the Office of the Secretary of Defense, the Joint Staff, the Intelligence Community, and other USG agencies. We are developing capabilities for missile defeat, advanced analytics and discovery processes to predict the emergence of future threats, standards and technologies to protect critical systems from electromagnetic pulse, and models to predict the multidimensional effects of nuclear weapons use for the United States Strategic Command.

Authorities

None of the activities or capabilities above would be possible without the unique authorities and funding that Congress provides to DoD each year that allows us to respond to these challenges. When DoD and the Warfighter are presented with a WMD challenge, we carefully review the Department's various authorities and funding, in consultation with our interagency partners who collaborate us in this mission space, and approach problems on a regional, mission-focused basis. We have internally organized ourselves to promote multi-directional communication, rapid innovation, and quick turn decision-making to achieve success. DTRA's ability to rapidly respond to the nation's requirements remains at the fundamental core of the Agency's mission and directly enables accomplishment of real-time U.S. national security objectives.

Changes Impacting DTRA Mission Space

There have been a number of significant changes in the DTRA mission space since we last appeared before the Committee in February 2016.

A key focus of these changes is our power to innovate. I don't just mean this in the technical research and development sense, although that is a part of it; innovation is about new partners and relationships, new forums of collaboration, new ways of doing business and thinking outside of the box. For DTRA, we are well positioned to innovate in ways not previously considered.

Countering Improvised Threats

On October 1, 2016, the Joint Improvised Threat Defeat Organization (JIDO) transitioned under the authority, direction and control of DTRA, thus expanding DTRA's mission space to include countering improvised explosive devices (IEDs) and improvised threats. JIDO was previously known as the Joint Improvised Threat Defeat Agency, or JIDA. The improvised threat defeat mission disrupts the planning and operations of violent extremist organizations and enables our Warfighters to rapidly adapt to and overcome emerging threat tactics, techniques, and procedures. Employment of IEDs and improvised threats against deployed U.S. forces and our

partners presents significant tactical risk to operations and an increased strategic risk to the national goals of overseas conflicts. DTRA is now responsible for enabling DoD actions to counter improvised threats with tactical responsiveness in support of Combatant Commanders' effort to prepare for and to adapt to battlefield surprise.

Just two weeks ago, we briefed the professional staff members on the House and Senate Armed Services Committees on the progress of JIDO's transition under DTRA. The takeaway message shared in that briefing is that there are many opportunities for coordination, collaboration, and integration. Collectively, we provide training, exercise support, threat analysis, forensics, sensor development, defeat tools, testing and evaluation, and more. Further, the threat networks that use or facilitate the use of IEDs or other improvised threats also have an interest in using WMD – and vice versa.

Financial Improvement and Audit Readiness

DTRA continues to conduct financial improvement and audit readiness (FIAR) activities to demonstrate that we are faithful stewards of the taxpayers' dollars. We have successfully undertaken corrective actions to address issues raised by the FIAR. Specifically, we continue to tackle integration of the Joint Improvised Threat Defeat Organization into DTRA; the systemic Departmental challenges including Funds Balance with Treasury reconciliation; unsupported journal vouchers; and property reporting challenges. We will continue to aggressively correct any deficiencies and work with the Defense Finance and Accounting Service in preparation for examination.

Management Headquarters Activities

DTRA is in compliance with the Department-directed 25% reduction in costs associated with Management Headquarters Activities (MHA). This reduction will be fully achieved by FY 2020. The current MHA reduction includes 75 civilian full time equivalents (FTE). We anticipate that 51% of our FTE reductions will be achieved by the end of FY18.

Conclusion

In closing, I would like to thank the Committee for this opportunity to share some of our recent efforts and accomplishments. DTRA's workforce is incredibly capable and extremely proud of its contributions to making the world safer. There are a number of challenges on the horizon, but I am confident that we will find the right techniques and tools to address these threats. I hope that we will continue to maintain the Committee's trust and support in countering WMD and improvised threats and ensuring our security. Thank you, again, for the opportunity to be here today. I would be pleased to respond to your questions.

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Statement of Dr. Arthur T. Hopkins
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Nuclear, Chemical, and Biological
Defense Programs

On
Department of Defense Countering Weapons of Mass Destruction Programs

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INTRODUCTION

Chairwoman Stefanik, Ranking Member Langevin, and distinguished members of the Subcommittee, I appreciate the opportunity to testify on the United States Department of Defense's efforts to counter threats posed by weapons of mass destruction (WMD).

I serve as the Principal Deputy Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, and currently, Acting Assistant Secretary.

Our office focuses on ensuring the safety, security, and reliability of our nuclear deterrent; developing capabilities to prevent the spread of, protect against, and respond to weapons of mass destruction threats; and ensuring DoD compliance with nuclear, chemical, and biological treaties and agreements. Our four organizational elements are Nuclear Matters, Chemical and Biological Defense Programs, Threat Reduction and Arms Control, and the Defense Threat Reduction Agency.

Our Nuclear Matters Office supports the Nuclear Weapons Council and is the focal point for DoD capabilities that sustain a safe, secure, and effective nuclear deterrent and counter threats from nuclear terrorism and nuclear proliferation. The President has directed the Secretary of Defense to conduct a new Nuclear Posture Review, led by OSD Policy and the Joint Staff. My office will be involved in all discussions on our future nuclear posture in view of changes in the global security environment.

We are also responsible for oversight, integration, and coordination of the Department's Chemical and Biological Defense Program. This program develops capabilities to enable the Warfighter to deter, prevent, protect, mitigate, respond to, and recover from traditional and emerging chemical and biological threats. These activities cover the full spectrum of defining requirements, developing science and technology solutions, and acquiring materiel to protect warfighters.

Our Threat Reduction and Arms Control Office oversees the implementation of WMD threat reduction programs and manages the Department's treaty implementation activities to ensure compliance with nuclear nonproliferation agreements, the Chemical Weapons Convention, and the Biological and Toxin Weapons Convention. We also manage the Department's governance process for the U.S. domestic Chemical Demilitarization Programs, as well as efforts to develop Countering Weapons of Mass Destruction Situational Awareness capabilities.

Finally, we oversee the Defense Threat Reduction Agency (DTRA). Their mission is to safeguard the United States and its allies by providing capabilities to counter, reduce, and eliminate WMD and improvised threats and mitigate their effects. As a combat support agency, DTRA provides operational support to Combatant Commands.

While each component has unique responsibilities, we operate as a team, sharing intelligence, technologies and best practices to help ensure efficiency and effectiveness of products and services.

To be successful, we must continue to innovate, not only in the technologies and operational solutions that we provide, but also in how we work together as an enterprise. Today, I would like to highlight some of the enduring and emerging challenges and threats, the ongoing activities we are conducting to address those challenges, as well as our priorities moving forward.

CHEMICAL AND BIOLOGICAL DEFENSE

Assessment of Emerging Threats

The Department continues to focus its chemical and biological defense efforts to protect against both state (e.g., North Korea) and non-state (e.g., ISIS) threats. We have developed and fielded protective equipment, detection systems, and countermeasures to protect against traditional chemical agents (e.g. Mustard and VX nerve agent).

Looking toward the future, advancements in biology and chemistry (e.g., synthetic biology), and contributing technologies, such as improvised delivery systems, additive manufacturing, gene editing, and unmanned aerial systems, present potential new threats that the nation must anticipate and be prepared to counter.

Synthetic biology is revolutionizing many sectors of our economy, from traditional biology and disciplines such as agriculture and medicine, to totally different areas like materials science and data storage. With advances in technology come potential risks, such as the development of new viruses and novel toxins. The Department continues to assess this field to understand the possibilities for potential emerging threats. We engage with the broader stakeholder community to help identify mitigation strategies. We are taking an agile, platform-based, approach to medical countermeasure development in order to rapidly defeat emerging biological threats.

While synthetic biology is important to consider within the threat landscape, we should not constrain the technologies themselves as a means of risk mitigation, or we risk stalling our own research and development programs. Many of our own Chemical and Biological Defense Programs use elements of synthetic biology. Examples include the development of filovirus vaccines and therapeutics, development of the recombinant plague vaccine, novel approaches to overcome antibiotic resistance, and the rapid development of monoclonal antibody therapies.

The proliferation of non-traditional agents such as Pharmaceutical-Based Agents is also of concern. While these are currently law enforcement and public health challenges, the Department is assessing the potential for these agents to impact warfighters. Pharmaceutical-Based Agents, initially developed and intended for legitimate uses, have proliferated and can be highly toxic at very low doses. Knowledge of how to develop these agents has expanded to a point that they could be used for nefarious purposes by both state and non-state actors.

Efforts to Address Current and Emerging Threats

To counter current and emerging threats, the Chemical and Biological Defense Program is developing new strategies to more rapidly respond, especially in the area of medical countermeasures. This new medical strategy encompasses earlier engagement in product development with the Services to ensure that we are responsive to operational priorities. Additionally, we are strengthening our partnership with the Food and Drug Administration and developing new incentives for industry engagement in developing medical countermeasures. From a product development perspective, the Chemical and Biological Defense Program is shifting toward platform capability development, which leverages synthetic biology and other emerging technologies to build medical countermeasures more efficiently and at a lower cost. The intent is to integrate these platform capabilities into a Department of Defense-dedicated production facility.

To support the development and manufacturing of medical countermeasures and effective therapeutics, the Department has invested in a new, agile manufacturing capability through the Advanced Development and Manufacturing facility in Alachua, Florida. This facility provides the capability to rapidly develop and produce medical countermeasures for our unique population, on a smaller scale than those needed for the public health sector. We are pursuing novel manufacturing capabilities, which allow for modular and flexible approaches to meet the Department's needs more rapidly and cost effectively.

The Department continues to engage with our interagency partners in the development of both physical and medical protection. We are a part of a broad interagency effort known as the Public Health Emergency Medical Countermeasures Enterprise, which leverages our capabilities as well as those of the Department of Health and Human Services and the Department of Homeland Security to develop and deliver innovative medical countermeasures and effective therapeutics.

The Department's development of chemical defense capabilities is a key component of an integrated national effort to address both traditional and non-traditional threats. We continue to invest in physical science programs, conduct research, and develop technologies for a range of chemical defense capabilities, including detection, medical countermeasures, decontamination, and protection. We are coordinating with several international partners to leverage their approved medical countermeasures against pharmaceutical-based agents. Enhanced warning, protection, and countermeasures will save lives and enable more effective consequence management.

CHEMICAL DEMILITARIZATION

The Department continues to make significant progress in domestic chemical weapons destruction programs. Our office oversees programs to meet U.S. commitments under the Chemical Weapons Convention and eliminate the remaining U.S. chemical weapons stockpile. In September of last year, the Department initiated agent destruction operations at the Pueblo Chemical Agent-Destruction Pilot Plant located at the Pueblo Chemical Depot in Colorado, using a neutralization destruction technology. More than 18,000 munitions containing approximately 90 tons of chemical agent have already been destroyed. Between March 2015

and February 2016, the Explosive Destruction System, a supplemental destruction system, destroyed 560 munitions at the Pueblo Chemical Depot that were unsuitable for processing in the Pueblo main plant, equating to nearly two tons of chemical agent.

While this is a significant milestone for the program, rapid progress after the completion of the pilot testing is needed to demonstrate the reliability, availability, and maintainability of the many first-of-a-kind systems and equipment at the Pueblo facility early next year. The Pueblo facility will be used to destroy nearly 780,000 mustard agent-filled projectiles and mortars.

With construction of the Blue Grass Chemical Agent-Destruction Pilot Plant substantially complete in Kentucky, the preparation and testing of the people, procedures, equipment, and systems, known as systemization, is about 68 percent complete. The Blue Grass facility is scheduled to begin destruction operations in April 2020 after completing systemization. The facility will destroy nearly 87,000 nerve agent-filled projectiles and rockets. A supplemental technology, called a Static Detonation Chamber, will be used to destroy all 15,492 mustard-filled munitions stored at the Blue Grass Army Depot. Current plans are to begin Static Detonation Chamber operations after completion of destruction operations in the Blue Grass main plant.

COUNTERING WEAPONS OF MASS DESTRUCTION SITUATIONAL AWARENESS

The Countering WMD Systems portfolio provides funding for development of situational awareness capabilities for the Combatant Commands, in response to requirements approved by the Joint Requirements Oversight Council. This year will be a transition year for the Department's approach. We have been engaged closely with USSOCOM to understand their mission needs for countering weapons of mass destruction situational awareness. We are currently working with USSOCOM to develop a countering weapons of mass destruction common intelligence and operating picture, using existing software applications as well as the expertise resident in two small fusion cells at the Defense Threat Reduction Agency and the Defense Intelligence Agency. These fusion cells provide planning and analytical support to USSOCOM and other Combatant Commands.

In accordance with the Fiscal Year 2017 National Defense Authorization Act, we have commissioned a Federally-Funded Research and Development Center to conduct an independent review of countering weapons of mass destruction situational awareness requirements and the prototype information system known as "Constellation." The results of this study will also inform future development of countering weapons of mass destruction situational awareness capabilities. Development and fielding of the Constellation prototype was discontinued in October 2016 due to the limitation in the NDAA and reduced funding in the Defense Appropriations bill. We learned valuable lessons from the development of the Constellation prototype, which will be incorporated into our support to U.S. Special Operations Command.

Our office is also responsible for the report required by Section 1070 of the FY17 NDAA, which requires the Secretary to list and assess the Defense Department's existing and proposed capabilities and technologies that support U.S. nonproliferation and counterproliferation policies. We are collaborating with USSOCOM, the Joint Staff, and other parts of the Defense Department to produce a report that will meet the Congressional requirements, and provide

useful information for the Department's assessments of the countering weapons of mass destruction mission and required capabilities.

WMD THREAT REDUCTION

Globally, WMD threats continue to evolve. Potentially vulnerable stockpiles of nuclear, chemical, and biological materials remain at risk, with trafficking networks that span the globe and an expanding set of state and non-state actors interested in acquiring, developing, or using WMD. The use of chlorine and sulfur mustard as weapons in Iraq and Syria highlights that the knowledge, technologies, and materials are accessible to adversaries.

To address these challenges, DTRA implements a number of WMD threat reduction activities, including the Cooperative Threat Reduction Program; Chemical, Biological, Radiological, and Nuclear (CBRN) Preparedness Program; International Counterproliferation Program; and engagements supporting the Proliferation Security Initiative. Collectively, these programs constitute some of the Department's most effective and flexible tools for addressing WMD threats.

The Department's efforts continue to reduce the threat of WMD around the world, from activities to detect and prevent WMD proliferation in the Middle East, Southeast Asia, and North Africa, to facilitating the transportation and removal of highly enriched uranium in Europe, to consolidating and securing collections of dangerous pathogens in Sub-Saharan Africa, to strengthening partners' capabilities to detect and mitigate biological threats and disease outbreaks in Southeast Asia. These programs help to build partners' capacities to secure WMD materials, detect and interdict proliferation, and respond to CBRN events, helping to strengthen the security of the U.S. and our allies.

Our office provides programmatic guidance and oversight of these activities to accomplish mission objectives, ensure synchronization with other DoD and interagency programs and activities, and optimize the WMD threat reduction value of investments.

CONCLUSION

WMD threats are real and increasing in complexity. The Department's activities address the full spectrum of CWMD threat reduction, from preventing acquisition to containing and reducing threats, to responding to crises. We act in collaboration and coordination with numerous Department, interagency, and international partners to ensure effectiveness and efficiency.

Thank you for this opportunity to testify.

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THE HOUSE ARMED SERVICES COMMITTEE

STATEMENT OF
MR. PETER VERGA
PERFORMING THE DUTIES OF ASSISTANT SECRETARY OF DEFENSE
FOR
HOMELAND DEFENSE AND GLOBAL SECURITY
BEFORE THE HOUSE ARMED SERVICES COMMITTEE
EMERGING THREATS AND CAPABILITIES SUBCOMMITTEE
MARCH 23, 2017

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INTRODUCTION

Chairman Stefanik, Ranking Member Langevin, and Members of the Subcommittee, I am pleased to testify today about the Department of Defense (DoD) efforts to counter chemical, biological, radiological, and nuclear (CBRN) threats. Over the past year, the CBRN threat environment has continued to evolve and increase in complexity in several ways. First, we have observed both State and non-state actors demonstrate interest in developing, acquiring, or using CBRN materials and programs. In Syria, for example, the Organization for the Prohibition of Chemical Weapons-United Nations Joint Investigative Mechanism has found that chemicals have been used as weapons by both the Islamic State of Iraq and Syria (ISIS) and the Syrian regime. The Democratic People's Republic of Korea (DPRK) also has continued its dangerous and provocative activities with both nuclear and missile tests. Second, continued advances in technologies such as synthetic biology, additive manufacturing, and unmanned aerial systems present great promise and opportunity for new defensive capabilities, but may also enable State and non-state actors to develop new CBRN threats at a pace never before seen. We must stay at the cutting edge of these technologies, so as to benefit from and defend against them, while also seeking new and creative approaches to supplement traditional tradecraft and nonproliferation tools to deter and prevent acquisition and use of weapons of mass destruction (WMD). Third, stresses and tensions in the geopolitical security environment are also creating additional pressures on international nonproliferation regimes.

The office of Assistant Secretary of Defense for Homeland Defense and Global Security oversees the DoD's policies and guidance to protect our armed forces and other U.S. interests from a CBRN attack or any type of destabilizing CBRN-related event, such as the spread of a dangerous pathogen including pandemic influenza. We also represent DoD's interests on counterproliferation and non-proliferation policy issues. Our organization contributes as well to international efforts such as the Proliferation Security Initiative (PSI) and the Global Health Security Agenda (GHS). We also support the Department of State (DoS) in implementation of commitments under the 1993 Chemical Weapons Convention (CWC), the 1972 Biological and Toxin Weapons Convention (BWC), and the 1968 Nuclear Non-Proliferation Treaty (NPT). Finally, we provide policy oversight for execution of Homeland Defense and, in close coordination with the Department of Homeland Security (DHS) and other interagency partners, provision of Defense Support to Civil Authorities, particularly ensuring that the CBRN threats that exist outside our borders never threaten the Homeland while simultaneously preparing to provide DoD support to the Federal response to such an attack or incident.

DoD is well postured to confront the myriad of CBRN-related challenges we face. Last year, USSOCOM assumed responsibility for leading the department's synchronization of Countering-WMD (CWMD)-related planning. We are working closely with the Joint Staff and USSOCOM to ensure that USSOCOM has the necessary resources and guidance for this mission. Internationally, the community of nations has demonstrated renewed focus through reaffirmation

of United Nations Security Council Resolution 1540, a vital catalyst to the global effort to prevent WMD or WMD-related materials from falling into the hands of terrorists. Although CBRN threats continue to evolve, we continue to adapt and improve our institutions to ensure that we are prepared for the CBRN challenges of the future.

STRATEGIC APPROACH FOR COUNTERING TODAY’S CBRN CHALLENGES

The DoD Strategy for Countering WMD provides three Lines of Effort to address WMD threats. First, *prevent acquisition* of WMD by adversaries and potential adversaries. Second, *contain and reduce* threats by improving our ability and that of our partners to identify, locate, secure, and mitigate threats from WMD and WMD-related materials. Third, maintain the necessary posture, capabilities, and authorities to *respond* to emergent WMD crises.

PREVENT ACQUISITION

Preventing State and non-state actors from acquiring CBRN materials is a critical component of DoD’s strategy. Due to the diffusion of dual-use WMD-related technology, it has never been more difficult to prevent bad actors from acquiring the materials or knowledge necessary to develop WMD or to use CBRN materials in intentional attacks. However, targeted investments to prevent these materials from falling into the wrong hands are far more cost-effective than potentially responding to the use of WMD.

The DoD Cooperative Threat Reduction (CTR) Program remains one of the most flexible U.S. Government tools for preventing acquisition of WMD and WMD-related materials. Secretary James Mattis has recently described the DoD CTR Program as DoD’s “most comprehensive and effective tool for working cooperatively with international and interagency partners to mitigate WMD-related threats.” For more than 25 years, the DoD CTR Program has worked with foreign partners to destroy existing WMD stockpiles successfully; to make nuclear, chemical, and biological weapons more difficult to acquire; and to detect and interdict dangerous WMD components and materials.

In line with DoD’s strategy, the DoD CTR Program has evolved in recent years in response to the changing threat environment. From an early emphasis on securing sources of WMD material in the former Soviet Union to a focus in more recent years on eliminating State-based chemical weapons (CW) programs outside the former Soviet Union in Syria and Libya, the DoD CTR Program builds the capacity of partners to counter WMD proliferation threats posed by non-state or State actors, and from the potential emergence of diseases of security concern, such as by supporting the DoD response to the Ebola crisis last year.

The use of a nuclear weapon by another State or a non-state actor is one of the most dangerous potential threats to the security of the United States. The DoD CTR Program’s Global Nuclear Security (GNS) program and Proliferation Prevention Program (PPP) focus on keeping nuclear

and related materials out of the hands of malevolent actors, and enable DoD to build capacity to enhance the security and prevent the proliferation of nuclear materials, thereby supporting broader U.S. Government nuclear security objectives. As one example of the PPP's bilateral engagement, the Program continues to secure vulnerable Soviet-era radiological materials at the former Semipalatinsk nuclear test site in Kazakhstan.

Recognizing that biological threats are ubiquitous, often endemic, and that potential adversaries can acquire pathogens of security concern from unsecure laboratory stores required for public health, the DoD CTR Program allocates significant resources to the Cooperative Biological Engagement Program (CBEP) to mitigate these complex and evolving threats. The CBEP continues to stop threats successfully "at the source" by preparing partners to detect and report disease outbreaks of security concern, irrespective of whether those outbreaks were intentionally or naturally occurring. The CBEP supports bilateral, regional, and global U.S. Government efforts to promote biological security. An example of one of the CBEP's bilateral efforts is the ongoing work in Kenya, a key security partner, to upgrade the safety and security of five human and animal laboratories to prevent potential acquisition and use of their stores of highly dangerous pathogens by non-state actors.

Preventing non-state actors in Iraq from acquiring the materials necessary to develop chemical or biological weapons is of the utmost importance to DoD, as such weapons could potentially be used against our Iraqi partners or even against U.S. forces in theater. The DoD CTR Program's Chemical Weapons Destruction (CWD) and CBEP programs continue to explore efforts to improve chemical and biological safety and security in Iraq, in close coordination with U.S. Embassy Baghdad. Through the relationships formed during biorisk management training provided to Iraqi government personnel, the CBEP worked with the Government of Iraq to facilitate the formation of the Iraq National Biorisk Management Committee (NBMC), which works to reduce biological threats in compliance with relevant nonproliferation conventions and treaties through regulatory frameworks in Iraq. We continue to support the NBMC in its efforts to improve the security of pathogens of concern in Iraq.

DoD's efforts to reduce biological threats overseas, including through the CBEP, directly support the goals of the Global Health Security Agenda (GHSA), which includes a commitment to work with at least 30 partner countries to deepen their commitment to health security using a whole-of-government approach. In an increasingly interconnected world, it is imperative to promote cooperation among health, agriculture, security, development, and other sectors to tackle biological threats and ensure that dangerous pathogens are not accessible to terrorists. Strengthening the bridge between the public health and national security communities at home and abroad is essential to reduce the threats posed by the intentional, accidental, or natural spread of pathogens and diseases of security concern, and potential terrorist acquisition and use of biological weapons. DoD remains focused on reducing biological threats to U.S. forces and the U.S. homeland, working closely with the Centers for Disease Control and Prevention (CDC), the U.S. Department of Agriculture (USDA), and the U.S. Agency for International Development

(USAID), along with other domestic and international partners, to ensure assistance is provided in the most holistic, effective, and efficient manner.

DoD also continues to work to raise the barriers to acquiring WMD material through the Proliferation Security Initiative (PSI). Over the 13 years since its inception, the PSI has brought together 105 nations to build political will to stop the trafficking of WMD, delivery systems, and related materials. By supporting and participating in numerous bilateral and multilateral exercises, and through leadership in the PSI's Operational Experts Group, DoD works alongside DoS and experts from other departments and agencies to engage with partners to address all aspects of the proliferation threat from rapid, national-level decision-making, to operational tactics and procedures. Last year, 70 of the 105 PSI-endorsing States met here in Washington, DC, at the PSI's Mid-Level Political Meeting to reaffirm the importance of using the PSI and all other cooperative means to prevent the transfer of WMD technology to State and non-state actors of concern.

DoD also participated in Asia Exercise Deep Sabre 2016, the third in a series of annual Asia-Pacific exercises hosted by a rotating group of critical PSI partners. The 2017 Asia-Pacific exercise will be hosted by Australia, then Japan in 2018, and the Republic of Korea in 2019. To keep pace with proliferators who continually adapt, the PSI itself is evolving, from an activity focused heavily on preparing for at-sea interdictions, to one that highlights the critical role that customs, treasury, and diplomatic tools play in detecting and preventing WMD proliferation. In an era of evolving WMD-related threats, PSI engagements underscore that interdiction is a whole-of-government effort that requires both strong institutional capacity and political will.

International treaties that bring together like-minded nations and promote essential norms are foundational elements of the U.S. Government's efforts to prevent the development and proliferation of WMD. For example, the NPT, the BWC, and the CWC remain essential foundations for the pursuit of nonproliferation and disarmament goals. In close partnership with DOS, we depend on these and related regimes as essential and evolving tools in countering CBRN threats.

CONTAIN AND REDUCE THREATS

The use of chemical weapons by ISIS in Iraq and Syria and by the Syrian regime in Syria over recent years has reinforced the importance of containing and reducing CBRN threats. We work with partners to contain and reduce threats should malevolent actors around the globe obtain CBRN-related materials, and ensure that partners are able to detect, interdict, and mitigate such threats at and within their borders.

In addition to our vital partnership with the Government of Iraq, our bilateral relationships with Jordan, Lebanon, and Tunisia are crucial to containing and reducing CBRN threats in the Middle East and North Africa (MENA) region. In particular, the DoD CTR Program has continued to

advance the capabilities of these partners to detect and interdict WMD material. In Jordan, the centerpiece of this effort is the Jordan Border Security Program (JBSP) – an integrated surveillance, WMD detection, and interdiction system that the PPP has developed in partnership with the Jordanians along Jordan’s borders with Syria and Iraq. In Lebanon, which shares many of the same proliferation threats as Jordan along its border with Syria, the PPP is developing, in close partnership with the Lebanese Armed Forces (LAF), a Lebanon Border Security Program (LBSP) integrated command and control and surveillance system to defend the most vulnerable section of Lebanon’s border with Syria. This effort is being fully coordinated with assistance provided to the LAF by the United Kingdom as well as other DoD assistance along Lebanon’s border, and it will complement CBRN-response assistance provided by the Defense Threat Reduction Agency’s CBRN Preparedness Program (CP2). In early 2016, the DoD CTR Program also initiated a proliferation-prevention cooperation with the Government of Tunisia along parts of its border with Libya in order to counter the proliferation risks resulting from the presence of ISIS affiliates and the potential transfer of knowledge and materials between ISIS affiliates. The PPP continues to work with the Tunisian government to establish a border-surveillance system along the most vulnerable section of that border.

Our organization also plays a leading role for DoD in the development and maintenance of important relationships with international partners and allies to address proliferation and CBRN issues cooperatively. A good example is our relationship with the North Atlantic Treaty Organization (NATO). The Office of the Under Secretary of Defense for Policy serves as the permanent co-chair of NATO’s Committee on Proliferation in Defence Format (CP-D), which is the senior advisory body to the North Atlantic Council (NAC) on countering the proliferation of weapons of mass destruction and CBRN defense. Serving alongside a rotating European co-chair (currently Germany, with Poland assuming the role in June), and working closely with NATO’s WMD Center, we have enhanced NATO’s CBRN preparedness through cooperation with other NATO bodies and coordinated the development, adoption, and implementation of a comprehensive policy for preventing, protecting against, and responding to CBRN threats. These efforts have significantly increased the Alliance capacity to address critical CBRN-related security challenges.

RESPOND TO CRISES

This element of the CWMD Strategy focuses on activities and operations to manage and resolve complex WMD crises. It includes strategic and diplomatic efforts to respond to WMD-related crises, kinetic action against hostile non-state actors who acquire CBRN materials of concern, efforts to train and equip our partners to defend against and respond to the use of CBRN weapons, and efforts to improve DoD capabilities continually to respond to CBRN threats against the Homeland or our interests overseas.

There is no more important partner to support in responding to a CBRN weapons use than the Government of Iraq. Using the Iraq Train and Equip Fund (ITEF) authority, DoD has provided

our Iraqi and Kurdish partners with critical training and equipment to enable them to protect themselves and respond to chemical and biological weapons attacks.

DoD will continue to support interagency diplomatic efforts aimed at WMD crisis management and response in light of the DPRK's efforts to advance its WMD programs significantly. Our approach to the DPRK spans multiple aspects of our strategy, from efforts to "prevent acquisition" of WMD-related materials by supporting interagency efforts to enforce relevant UN Security Council resolutions, to "preparing to respond to crises." The DPRK's recent nuclear and missile tests underscore the importance of a well-coordinated international response. Supported by other departments and agencies, we work closely with U.S. Pacific Command (USPACOM), U.S. Forces Korea (USFK), and our Republic of Korea (ROK) and Japanese counterparts to ensure that our regional alliances remain postured to respond to WMD contingencies on, or emanating from, the Korean Peninsula. This includes the conduct of semi-annual CWMD-focused bilateral engagements, support to regional exercises, and providing policy guidance to enable effective CWMD operations.

The CBRN Preparedness Program, which works with partner nations to respond to and mitigate the effects of a CBRN incident, complements the threat reduction efforts of the DoD CTR Program. The National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2014 authorized DoD, with the concurrence of the Secretary of State, to implement a whole-of-government approach to build partner nation capacity by providing CBRN incident-response training and equipment to assist partner nations in developing the capabilities of its military and civilian first-responder community. Building partner nation response capabilities promotes regional security cooperation and bilateral and multilateral interoperability, and reduces the potential for a large U.S. Government requirement to provide assistance to international CBRN incident-response operations.

DoD first exercised this authority in FY 2014 to provide WMD preparedness and response training to the military and civilian first responders in the Middle East, and in 2015 expanded to other key allies and partners. Although the training focused on CBRN incident preparedness and response, it also emphasized a whole-of-government approach to execute WMD incident operations effectively. In the current fiscal year, DoD will continue to improve the WMD-preparedness and response capability of key partners, identified collaboratively with the Combatant Commanders and DoS.

10 U.S.C 333, as recently provided in the NDAA for Fiscal Year 2017, consolidates the training and equipping of foreign security forces, including activities conducted by the CBRN Preparedness Program, under a single authority. We anticipate that this new authorization will provide DoD with greater flexibility to assist our partner nations in developing their capabilities to respond to incidents involving WMD, which in turn may reduce the need for U.S. emergency assistance during an international CBRN incident.

While enhancing the CBRN-response capabilities of our allies and partners, DoD must also be prepared to respond to a CBRN attack against U.S. personnel or our broader interests overseas. The U.S. Army's 20th Chemical, Biological, Radiological, Nuclear, and Explosive (CBRNE) Command continues to develop and refine the extensive capabilities and technical expertise necessary to deploy rapidly in support of U.S. forces around the world and conducts regular training exercises to operate in highly challenging realistic operational environments. Our organization also provides policy guidance to the Chemical and Biological Defense Program, which develops and acquires capabilities that allow the Joint Force to deter, prevent, protect against, respond to, and recover from CBRN threats and effects within a layered and integrated defense. DoD also continues to work in close coordination with DoS to support allies and partners in the event of a CBRN crisis abroad, if necessary.

Ensuring that DoD is poised to respond and support civil authorities in the event of a CBRN attack against the Homeland is of the utmost importance. The NDAA for FY 2017, Section 1086, requires that DoD, DHS, the Department of Health and Human Services (HHS), and the U.S. Department of Agriculture (USDA) jointly develop a national biodefense strategy and associated implementation plan, which shall include a review and assessment of biodefense policies, practices, programs, and initiatives. This work is underway and DoD is reviewing existing policies to identify relevance and gaps and to determine which updates and additions are required to address current and emerging threats posed by biological agents.

DoD recognizes the need to be prepared to support the Federal response to a domestic CBRN events at home. The DoD CBRN Response Enterprise (CRE) provides both Federal and State controlled capabilities to respond at the lowest level to natural or manmade CBRN events. In addition, we assist with the development of protocols and concepts of operation to enhance the ability of first responders, law enforcement agencies, and emergency services to execute large-scale crisis response operations promptly and effectively. Through the analysis of past CBRN events (whether natural or manmade), the development of wargames and exercises, and the promulgation of guidance and strategic policy, DoD has played a central role in developing the intellectual framework for developing best practices in domestic and international CBRN-response and mitigation operations. Working closely with the Joint Staff, we continue to partner with a wide array of interagency partners, including DHS, the Department of Energy (DoE), the Federal Emergency Management Agency (FEMA), and the Federal Bureau of Investigation (FBI) to address the challenge of a coordinated response to CBRN events in the U.S. homeland.

CONCLUSION

We must anticipate that our adversaries will continue to evolve and develop increasingly sophisticated methods to pursue, develop, or deploy CBRN weapons. These emerging CBRN threats intersect with challenges of political instability, violent extremism, and poor infrastructure in States suffering from natural outbreaks of devastating diseases. The DoD

Strategy to Countering WMD continues to provide a framework for assessing and understanding these real and potential challenges.

We will continue to work with other departments and agencies and international partners to confront the threats posed by WMD at home and abroad. As WMD-related crises continue to emerge, your continued support in the areas described today are critical to our ability to understand, anticipate, and mitigate these threats.