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STATEMENT OF

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INTRODUCTION

Chairman Wilson, Ranking Member Langevin, and Members of the Subcommittee, I am pleased to testify today about the Department of Defense (DoD) Countering Weapons of Mass Destruction (C-WMD) policy portfolio that I supervise, and the Fiscal Year (FY) 2017 budget request. Today's complex security environment has made countering WMD threats ever more challenging and multi-dimensional. Three competing trends highlight the challenges we face in countering WMD. First, despite persistent efforts by the international community, some state actors continue to demonstrate interest in developing, acquiring, or advancing WMD materials and programs. Recent provocative and dangerous activities by the Democratic People's Republic of Korea (DPRK) highlight the continued challenges posed by state-based threats, and our need to remain vigilant. Second, non-state actors are concurrently demonstrating an increasing interest in acquiring or developing WMD capabilities, and have signaled their intent to use WMD if acquired. For these actors, traditional statecraft and nonproliferation tools may not be effective, requiring that we identify new and creative approaches to deter and prevent nonstate acquisition and use of WMD. Third, our increasingly interconnected world enables the diffusion of WMD-related knowledge, materials, and technology to those seeking to harm the United States at home or our interests abroad. We believe it is critical to prepare for these emerging challenges, including the WMD-related threats evolving from the application of advanced technologies such as with additive manufacturing, unmanned systems, and cyber tools. We must continually exercise flexibility and creativity in countering emerging WMD challenges.

In 2014, then-Secretary Hagel issued a Strategy for Countering Weapons of Mass Destruction (CWMD) that updated DoD's approach to this challenge and directed DoD components to focus on particular lines of effort, objectives, and supporting activities. My testimony today will: outline how, almost two years following its release, we are applying this strategy to reduce the threat to the United States from chemical, biological, radiological, or nuclear (CBRN) weapons or materials, and preview how these efforts relate to the FY 2017 budget request.

As the Deputy Assistant Secretary of Defense for CWMD, I am responsible for establishing policies and guidance to protect our armed forces and other U.S. interests from a CBRN attack; and for representing DoD's interests on counterproliferation and non-proliferation policy issues. My office contributes to international efforts such as the Proliferation Security Initiative (PSI), the Nuclear Security Summit (NSS), and the Global Health Security Agenda (GHSA). We also support the Department of State (DOS) in implementation of treaty commitments under the 1993 Chemical Weapons Convention (CWC), the 1972 Biological and Toxin Weapons Convention (BWC), and the 1968 Nuclear Non-Proliferation Treaty (NPT). My office's portfolio of activities requires robust coordination with a wide range of interagency players, including the DOS, the U.S. Agency for International Development (USAID), the Department of Energy's National Nuclear Security Administration (NNSA), the Department of Justice's Federal Bureau of Investigations, the Department of Homeland Security, and the Centers for Disease Prevention and Control and Prevention (CDC) in the U.S. Department of Health and Human Services.

The CWMD office also develops policy and guidance for the programs and activities of the DoD Cooperative Threat Reduction (CTR) Program, which is among the activities implemented by the Defense Threat Reduction Agency (DTRA). Under the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, the Office of the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs serves as the DoD's treaty manager, and provides authority, direction and control for DTRA's work. I am pleased to be here today with colleagues representing each of these organizations, both of which are integral to seamlessly countering the WMD threats that I will be addressing.

STRATEGIC APPROACH FOR COUNTERING TODAY'S WMD CHALLENGES

The DoD Strategy for Countering WMD articulates a comprehensive approach to addressing WMD threats. First, DoD takes proactive steps to *prevent acquisition* of WMD by adversaries and potential adversaries. Second, we *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, DoD seeks to maintain the necessary posture, capabilities, and authorities to *respond* to emergent WMD crises. Underpinning all three efforts is a constant cycle of preparation – the strategic enabler to ensure our policies, capabilities, and forces are positioned to respond.

PREVENT ACQUISITION

Ensuring that those who do not currently possess WMD do not obtain them is a critical component of our countering-WMD effort. This has become an extraordinarily complex undertaking given the diffusion of WMD-related knowledge, materials, and technological advances referenced above. For example, Additive Manufacturing (AM) processes harness the technology of 3-D printing, robotics, and the proliferation of design information to empower individuals to manufacture an unprecedented array of materials and components – many of which carry WMD-related applications. The emergence of "do-it yourself" biology communities, combined with low-cost DNA synthesis and the emergence of online access to genomic data for pathogenic organisms, makes synthetic biology increasingly feasible for those operating outside traditional research laboratories - including, potentially, those with harmful intent. Further, emerging "gain of function" biotechnologies can be used to make influenza viruses and mild infectious agents more dangerous through characteristics that increase spread in mammals, increase virulence in humans, evade existing host immunity, or become resistant to antibiotics or antivirals. In addition, encrypted-communication technologies increasingly enable nefarious individuals to develop and exploit illicit networks, potentially communicating and sharing WMD-related information with a reduced risk of detection. These emerging threats are just a few examples of those that intersect with cross-domain challenges of political instability, violent extremism, and poor infrastructure in states suffering from natural outbreaks of devastating diseases.

These trends could potentially be exploited by highly motivated non-state actors determined to obtain and employ WMD, particularly when such actors have effective control over territory,

knowledge, and finances with which to accomplish their objectives. It is therefore essential to deny terrorists and other non-state actors with malevolent intent access to WMD-related materials. The use of chemical weapons in Syria by state and nonstate actors demonstrates that the threat of WMD is real and may reflect an intent by these actors to use CW to terrorize populations, gain battlefield advantage, or advance other goals. Military operations against adversaries, coupled with cooperative efforts to secure or eliminate vulnerable material and to build the physical and human-capacity infrastructure necessary to prevent WMD proliferation, are critical tools to counter these threats. Continuing to deter and mitigate the threat of non-state actors acquiring and using WMD remains a top priority – and one that requires nimble and flexible approaches.

The DoD CTR Program remains one of the most flexible tools of the U.S. Government for preventing acquisition of WMD and WMD-related materials. The DoD CTR Program has a decades-long track record of working with foreign partners to successfully destroy existing WMD stockpiles; 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 recent years on eliminating state-based CW programs outside the former Soviet Union (for example, in Syria and Libya), the Program builds the capacity of partners to counter WMD proliferation posed by non-state or State actors, and from the potential emergence of diseases of security concern. The FY 2017 budget request for the DoD CTR Program is \$325.6 million, which meets our current requirements. Further description of some of the accomplishments of the DoD CTR Program that demonstrate the return on this investment are described below.

The use of nuclear weapons and materials by states or terrorists poses one of the greatest dangers to our security. DoD's CTR Global Nuclear Security (GNS) Program is the primary mechanism for DoD's contributions to build partner capacity to enhance the security and prevent the proliferation of nuclear materials, and supports broader U.S. Government nuclear security objectives in bilateral, regional and global constructs.

As one example of the GNS Program's bilateral engagement, in Kazakhstan the Program is improving Kazakhstan's nuclear-security capabilities, and installing a computer-based inventorymanagement system to track and control nuclear materials. DoD also used the DoD CTR Program's Transportation Authority, obtained by the Department in 2013, to transport highthreat radiological material from Mexico for disposition in the United States. These efforts were carried out in close partnership with the Department of Energy, reflecting our commitment to integrate DoD threat-reduction activities with the complementary programs of other U.S. Government departments and agencies. On a regional level, DoD continues to work alongside its interagency and international partners to advance progress on the establishment of the Nuclear Security Center of Excellence in Beijing, one of a few nuclear security centers with whom the DoD CTR Program engages. At the global level, the GNS program directly supports the President's Nuclear Security Summit process, which brings together a community of more than 50 world leaders and international organizations to attract high-level attention to the global threat posed by nuclear terrorism, and to advance a common approach to strengthening nuclear security.

Recognizing that biological threats are ubiquitous and often endemic, and that potential adversaries can acquire dangerous pathogens from naturally occurring outbreaks or non-secured laboratories, the DoD CTR Program allocates significant resources to the Cooperative Biological Engagement Program (CBEP). The CBEP continues to stop threats successfully "at the source" by securing vulnerable laboratories housing pathogens of security concern, reducing the number of such laboratories, and preparing partners to detect and report disease outbreaks of security concern. As with the GNS Program, the CBEP supports bilateral, regional, and global U.S. Government efforts to promote biological security.

As an example of CBEP's bilateral engagement, in Iraq the CBEP worked to establish a National Biorisk Management Committee (NBMC), an inter-ministerial body authorized by the Prime Minister and chaired by the Director General for Public Health at the Ministry of Health in Baghdad. The Committee establishes and implements safe and secure biorisk-management protocols at the national level within Iraq, and includes representatives from national ministries as well as the Kurdistan Regional Government (KRG). Additionally, to enhance the speed and accuracy of disease detection and reporting, regardless of the source of the outbreak, the CBEP deployed or is in the process of deploying the Electronic Integrated Disease Surveillance system (EIDSS) at 49 sites in Baghdad, southern Iraq, and the KRG-controlled area. Finally, the CBEP continues to connect Iraqi biological scientists to international subject matter experts and U.S. and global research institutions through scientific fellowships, which play an important role in developing relationships and advancing the state of ethical science in Iraq.

A distinguishing feature of the CBEP's regional engagement is the success of the program in Southeast Asia in leveraging strong existing regional networks, including the Association of Southeast Asian Nations (ASEAN), the Asia-Pacific Biosafety Association (APBA), WHO Western Pacific Regional Office (WPRO), and the WHO Southeast Asia Regional Office (SEARO), to reach a broad audience of stakeholders and standardize best practices and encourage information sharing. Through these multi-lateral networks, the CBEP is able to enhance the region's biosecurity and biosafety capabilities and reduce the risk of accidental or intentional release of pathogens of security concern. Across the region, the CBEP's efforts are coordinated with and complemented by efforts of the Proliferation Preventing Program (PPP), whose efforts improve WMD-detection capabilities. In the Philippines, the PPP completed construction of the National Coastal Watch Center (NCWC), an interagency center to promote a whole-of-government approach to the Philippines' maritime WMD proliferation-prevention mission that is well integrated with its national maritime security architecture.

DoD's efforts to reduce biological threats overseas, including through the CBEP, directly support the goals of President Obama's Global Health Security Agenda (GHSA), which includes a commitment to work with at least 30 partner countries to deepen their commitment to health security. The CBEP aims to improve partners' biosafety and biosecurity practices and capabilities, along with their ability to detect and report outbreaks of diseases of security concern rapidly, irrespective of whether those outbreaks are natural or malevolent. In an increasingly interconnected world, cooperation among health, agriculture, security, development, and other sectors to tackle biological threats and ensure that dangerous pathogens are not accessible to terrorists is paramount. 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 to U.S. forces and the U.S. homeland, working closely with the CDC and 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, PSI has brought together 105 nations to build political will to stop the trafficking of WMD, delivery systems, and related materials. Through supporting and participating in numerous exercises and leadership in PSI's Operational Experts Group, DoD works with partners to address all aspects of the proliferation threat from rapid, national-level decision-making to operational tactics and procedures. This past year, I had the opportunity to attend Leading Edge 15, our regional PSI exercise held in the U.S. Central Command Area of Operations (AOR). OSD Policy also participated in Exercise MARU 15, the second in a series of annual Asia-Pacific PSI exercises hosted by a rotating group of critical PSI partners. The 2016 Asia-Pacific exercise will be hosted by Singapore, then Australia in 2017, Japan in 2018, and the Republic of Korea in 2019. To keep pace with proliferators who continually adapt, 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 regimes that bring together like-minded nations are also critical elements of the U.S. Government's efforts to prevent the development and proliferation of WMD materials. 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 WMD.

Finally, DoD plays an important role in U.S. policy toward Iran, including supporting U.S. efforts to implement the Joint Comprehensive Plan of Action (JCPOA). This agreement demonstrates the value of diplomacy, underwritten by military power, in devising solutions to some of the world's most challenging nonproliferation concerns. My office will remain vigilant in supporting interagency and international efforts to monitor and prevent Iran from acquiring WMD-related material.

CONTAIN AND REDUCE THREATS

Despite our best efforts to prevent malevolent actors from acquiring WMD, we must nevertheless contend with threats posed by the acquisition of WMD-related material. In addition to ensuring appropriate U.S. capabilities, we must also ensure that we have partners around the world capable of mitigating such threats at and within their borders. DoD has key partnerships with NATO, the Republic of Korea, and other allies and partners to ensure we maintain an understanding of emerging threats and interoperable capabilities to meet them.

The DoD CTR Program is DoD's preeminent program for building partner capacity to counter WMD threats. Over the past year, the DoD CTR Program has advanced the capabilities of a number of key partners to detect and interdict WMD material – in particular Ukraine, Jordan, and Lebanon.

Although the level of fighting in eastern Ukraine has lessened, Russia has not stopped its destabilizing actions in eastern Ukraine and continues to occupy Crimea illegally, challenging Ukraine's ability to prevent WMD proliferation across its borders. In 2015, the DoD CTR Program completed equipping and training the Ukrainian State Border Guard Service (SBGS) to reconstitute counter WMD capabilities that had deteriorated following Russia's invasion of Ukraine and to establish control over the new administrative boundaries. We will continue to work with our partners in the SBGS and the Ministry of Interior to ensure that they are able to detect proliferation threats; prevent WMD attacks or attacks against nuclear, chemical, and biological facilities; and respond to WMD incidents.

Jordan continues to face proliferation threats from dangerous non-state actors on two borders – Syria on its north, and Iraq to its east. The DoD CTR Program has worked since 2013 to provide comprehensive training and equipment to the Jordanians to enable their military and civilian first responders to mitigate WMD-proliferation threats. The Jordan Border Security Program (JBSP) – an integrated surveillance, WMD detection, and interdiction system that runs along a 293-mile stretch of Jordan's borders with Syria and Iraq – is the centerpiece of this support. The JBSP made significant headway in 2015, with the two longest stretches reaching completion. The JBSP was extended in FY 2015 to the Wadi Glades area, a 30-kilometer section of the Jordan-Syria border near the Golan Heights. Complementing the JBSP is a nuclear-security effort that the DoD CTR Program started with the Jordanian Armed Forces in 2014 to develop the capability to store and transport interdicted WMD material safely. The DoD CTR Program is working in close coordination with the U.S. Department of Energy to help Jordan establish a self-sustaining nuclear-security culture in the current and planned civil nuclear facilities.

Lebanon shares many of the same proliferation threats as Jordan along its border with Syria. In 2015, the CTR Proliferation Prevention Program (PPP) awarded a contract for a Lebanon Border Security Program that will provide the Lebanese Armed Forces (LAF) with an 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, and it will complement other assistance provided by the DTRA CBRN Preparedness Program (CP2).

Consistent with the DoD Strategy for Countering WMD, the DoD CTR Program is seeking to assist partners proactively to confront emerging WMD-proliferation risks, such as in North Africa. In December 2015, Deputy Secretary of Defense Bob Work, with the concurrence of Secretary of State John Kerry, made a determination that an emerging WMD-proliferation risk exists in North Africa due to the use of dangerous chemicals as weapons in Iraq and Syria coupled with the growing encroachment of extremist groups. As a result, early in Fiscal Year 2016 the DoD CTR Program initiated proliferation-prevention cooperation with the Government of Tunisia along the Tunisia-Libya border, and in FY 2017 the Program intends to complete a border-surveillance system along the most vulnerable section of that border.

RESPOND TO CRISES

This element of the CWMD Strategy focuses on activities and operations to manage and resolve complex WMD crises, and thus incorporates diplomatic efforts to respond to WMD-related crises, kinetic action against hostile non-state actors who acquire WMD or materials of concern – and who we must assume would be prepared to use them, and ensuring that we and our partners are prepared to mitigate the effects of WMD use.

DoD will continue to support interagency diplomatic efforts aimed at WMD crisis management and response. While the Iranian government has decided to pursue diplomacy to resolve the international community's concerns over its nuclear program, the Democratic People's Republic of Korea (DPRK) continues to pursue its WMD programs. Its recent nuclear test underscores the importance of a well-coordinated international response. The DPRK is the only country in the world that has tested a nuclear device in the 21st century, and is a country that routinely threatens other nations with nuclear attack. The DPRK should not underestimate our resolve – we, along with many partners in the region and internationally, are fully committed to the peaceful denuclearization of the Korean peninsula. DoD will continue to make the necessary preparations to protect our security, defend our allies, and promote regional stability. We do not accept the DPRK as a nuclear armed state, and this latest test has only served to reaffirm this position.

The Ebola crisis, which ravaged West Africa beginning in March 2014, presented a biological threat of global significance. Although Liberia, Sierra Leone, and Guinea were by far the most acutely affected countries, the threat spread to Senegal, Nigeria, Europe, and the United States. As of January 2016, Ebola had taken more than 11,000 lives, with more than 28,000 suspected, probable, or confirmed cases. Although these numbers are devastating, they are, by orders of magnitude, less than what the World Health Organization (WHO) and CDC warned could have been reached if the international community had not mounted a serious and sustained response effort.

This was not just a public-health crisis; the outbreak posed a clear threat to stability and security in West Africa. The infrastructure strain caused by the prolonged and far-reaching outbreak

posed a significant risk to the stability of civil society and governance in West Africa. The intense focus on reducing Ebola's spread also detracted from the region's efforts to counter violent extremism. In addition, the large collection of Ebola samples from the outbreak and potential vulnerable storage of other pathogens presented a significant biological-security threat.

In cooperation with other interagency partners, particularly USAID and the CDC, the DoD CTR Program was able to respond quickly and effectively in support of broader U.S. and international efforts. Consistent with our statutory authorities, the DoD CTR Program procured and staffed transportable diagnostic laboratories and supported the staffing of existing laboratories to diagnose Ebola quickly and accurately in Liberia, Sierra Leone, and Guinea; supplied personal protective equipment, associated consumables, and laboratory equipment to the affected countries to prevent transmission to workers, including those returning to the United States; and provided support to the WHO to train workers, protect from infection, and prevent its spread.

As the Ebola epidemic recedes from the front pages and international support efforts diminish, we remain committed to ensuring that laboratory capabilities are transitioned to our host government partners in a sustainable manner. We are also working to ensure that Ebola samples are not vulnerable to theft or diversion. The DoD CTR Program will provide training to transition sustainable biosurveillance and diagnostic capabilities to the governments of Ebola-affected countries, will bolster preparedness levels of countries at risk for Ebola transmission, and will work to develop regional biosurveillance networks by leveraging the capacities of regional leaders. The overarching goal will be to ensure that these partners can detect, report, and manage outbreaks on their own.

Complementing the DoD CTR Program is the CP2, which works with partner nations to respond to and mitigate the effects of a CBRN incident. Section 1204 of the National Defense Authorization Act for Fiscal Year 2014 authorizes DoD, with the concurrence of the Secretary of State, to enhance the capability of military and civilian first-responder organizations to respond to WMD incidents. Section 1204 provides the authority for DTRA to use its Operation and Maintenance funds to assist partner nations to develop whole-of-government WMD defense preparedness and response capability.

DoD first exercised its Section 1204 authority in FY 2014 to provide WMD preparedness and response training to the military and civilian first responders of Jordan, Lebanon, and Turkey. In FY 2015, DoD expanded its use of Section 1204 authority to provide CBRN-response training and equipment to military and civilian first responder communities in Albania, Brazil, the Dominican Republic, Jordan, Kenya, Lebanon, Morocco, Philippines, Turkey, and Ukraine. 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 this fiscal year, DoD will continue to improve the WMD-preparedness and response capability of key partners, identified collaboratively with the Combatant Commanders and DOS.

CONCLUSION

Despite the accomplishments I have described above, which build upon numerous CWMDrelated successes of the past, we must remain prepared against static *and* emerging WMD threats. We must anticipate that state and non-state actors will develop increasingly sophisticated methods to pursue, develop, or deploy WMD – in pursuit of an array of objectives. We will continue to work with and through our interagency and international partners to confront the threats posed by WMD at home and abroad. As WMD-related crises continue to emerge, your continued support for and funding in the areas described today are critical to our ability to understand, anticipate, and mitigate these threats.