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Senate Armed Services Committee

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Weapons of Mass Destruction

on

Countering Weapons of Mass Destruction  
Programs and Activities

before the  
Senate Armed Services Committee  
Subcommittee on Emerging Threats and Capabilities

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## **Introduction**

Madame Chairwoman, Ranking Member Portman, and Members of the Subcommittee, it is an honor to be here today to address the programs and activities performed by the Defense Threat Reduction Agency (DTRA) and the U.S. Strategic Command Center for Combating Weapons of Mass Destruction (SCC-WMD). I serve as the Director of both DTRA and the SCC-WMD.

The threat posed by Chemical, Biological, Radiological, and Nuclear (CBRN) weapons is one of the greatest security challenges facing our nation and has the potential to undermine peace and stability around the globe. The May 2010 National Security Strategy of the United States of America cites reversing the spread of nuclear and biological weapons and the securing of nuclear materials as one of the nation's six essential tasks to provide enduring security for the American people.

The December 2002 National Strategy for Combating Weapons of Mass Destruction (NSPD-17), and the 13 February 2006 National Military Strategy to Combat Weapons of Mass Destruction further recognize the importance of cooperation with allies and other partners to prevent, deter, defend against, and respond to WMD threats. Most recently, the January 2012 Department of Defense (DoD) strategic guidance, entitled "Sustaining US Global Leadership: Priorities for the 21<sup>st</sup> Century," included countering WMD (CWMD) as one of the ten primary missions of the US Armed Forces. Furthermore, the "Defense Budget Priorities and Choices" document issued that same month stated that "We [OSD] protected investment in this area (CWMD) and expanded its scope in the area of biological weapons."

The mission of DTRA and the SCC-WMD is to safeguard the United States and its allies from global WMD threats by integrating, synchronizing and providing expertise, technologies, and capabilities for reducing and eliminating WMD threats at their sources (Nonproliferation); deterring, interdicting, or defeating them (Counterproliferation); and and mitigating the consequences of their use (Consequence Management). Together we

provide synergy and momentum for more effective and efficient implementation of national and department CWMD strategy and policy. We provide Counter WMD (CWMD) expertise and capabilities to a growing range of partners across DoD, the U.S Government (USG), and the international community. DTRA also combines science and technology with operational needs and requirements, providing capabilities tailored to the DoD operating environment. Additionally, DTRA provides support for the continued safety, security, and effectiveness of our nuclear deterrent, the importance of which was reaffirmed in the Defense Budget Priorities and Choices document.

However, we could not do our job without the strong support of Congress and I thank you and your colleagues for fully approving the DTRA Fiscal Year 2012 budget request. I can assure you that we will be responsible stewards of the resources you have provided and the trust you have placed in us.

### **DoD and the Nation's Expert on WMD Threat Reduction**

DTRA and the SCC-WMD provide the core of the DoD and national expertise on the full scope of the CWMD mission. While many DoD and other USG organizations contribute to WMD threat reduction against a background of a broader mission scope, we focus full time on just CWMD. We are a policy and strategy implementation and execution team. We do not perform all functions in the CWMD mission, nor do we control all the resources or provide all of the capabilities.

However, DTRA is the primary repository for the nation's knowledge on the effects of Chemical, Biological, Radiological, Nuclear, and High-Yield Explosive (CBRNE), and in seamless partnership with the SCC-WMD and in collaboration with others across the USG, performs unique CWMD responsibilities.

Our activities and program span the full spectrum of the national CWMD strategy – from Nonproliferation through Counterproliferation to Consequence Management – and all eight of the military CWMD mission areas: Security Cooperation and Partner Activities,

Threat Reduction Cooperation, Interdiction, Elimination, Offensive Operations, Active Defense, Passive Defense, and Consequence Management.

Our responsibilities also require that we perform CWMD research and development for, and provide CWMD operational support to, the Combatant Commands (COCOMs). DTRA Research, Development, Test and Evaluation (RDT&E) programs combine Science and Technology (S&T) with operational, needs, requirements, and operating concepts, delivering capabilities that better enable the warfighters to counter WMD threats. In so doing, we also help shape concepts of operation, and the tactics, techniques, and procedures that forces in the field employ.

This requires us to have a firm understanding of the environments in which DoD would perform its CWMD responsibilities. Many on our staff have military backgrounds and we also depend heavily on the 37% of our workforce provided by the Armed Forces. Our uniformed personnel keep us current on operational needs and procedures, and their assignments to DTRA and the SCC-WMD also provide a critical way for the Services to maintain their own CWMD expertise.

Because our S&T and operational support responsibilities are intertwined, DTRA has a unique workforce with a wide range of professional disciplines that collaborate on CWMD challenges. DTRA microbiologists, computer scientists, health physicists, structural dynamics experts, and Special Operations Forces personnel work together on a daily basis to solve WMD-related challenges. Our nuclear experts are supporting efforts from global nuclear weapons lockdown, protection of our nuclear deterrent, and the hardening of US Nuclear Command, Control, and Communications against nuclear weapons effects, to nuclear weapons employment plans. Our biologists are consolidating and improving the security of dangerous pathogen collections across the planet, working cooperatively with international partners to counter emerging infectious diseases, and developing new means for protecting our military personnel against biological terrorism and naturally occurring diseases. Our chemical weapons experts are assisting with the elimination of chemical weapons in the US and Russia; developing means for improved

force protection; and are working on policies, actions, and procedures that will ensure decontaminated air transport airframes are in fact safe for continued use. DTRA structural dynamics experts are working on solutions to hold underground WMD facilities at risk while also developing new means for mitigating blast effects resulting from vehicle-borne improvised explosive devices.

Our workforce performs CWMD planning and exercise support, and provides CWMD expertise to the combatant commands and other USG customers. However, our CWMD S&T development is conducted differently. We do not have our own laboratory. Instead, we select from the full range of national expertise, wherever that may be. Our performers include the DoD and Department of Energy/National Nuclear Security Administration (DOE/NNSA) labs, contractors, Federally Funded Research and Development Centers, University-Associated Research Centers, and academia. Our technical and operational experts provide direction and oversight for these performers and we select S&T performers on the basis of “best of breed.”

The contributions of the DTRA/SCC team are made daily at national, theater, and battlefield levels. For example, during the negotiations on the New Strategic Arms Reduction Treaty (New START), DTRA interpreters and on-site verification experts comprised 15 of the 56-members of the US negotiating team in Geneva. In addition, DTRA has conducted vulnerability assessments of the White House, the Capitol, and national-level command and control infrastructure. The Combatant Commanders rely upon us for CWMD planning and exercise support, training, and augmentation of their internal subject matter expertise to assist their CWMD efforts from theater security cooperation through warfighting and WMD elimination. We provide “boots on the ground” in hostile and uncertain environments to conduct vulnerability assessments, assist current military operations, and provide CWMD training. We are simultaneously and continuously addressing strategic, operational, and tactical level CWMD challenges. Our customer base continues to grow, as do the expectations of those we serve and support.

## **Relationships**

DTRA's roots reach to the early days of the Cold War when its predecessor organizations provided planning, technical, and operational nuclear weapons expertise to the Military Services, USSTRATCOM, and that command's predecessors. Over the decades, our understanding of weapons effects has expanded from nuclear/radiological to the full range of WMD effects, adding chemical, biological, and high-yield explosives to our portfolio of WMD effects expertise.

The agency performs its mission in response to direction provided by the Office of the Secretary of Defense (OSD). As the Director of DTRA, I report through Mr. Andrew Weber, the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, to the Under Secretary of Defense for Acquisition, Technology and Logistics. Because DTRA performs S&T, we also work in close partnership with the Assistant Secretary of Defense for Research and Engineering. Since the DTRA/SCC-WMD team implements DoD and national security policy, and often with international partners, we are partnered with the Assistant Secretary of Defense for Global Strategic Affairs in the Office of the Under Secretary for Policy at OSD, and also work in collaboration with the Department of State.

DTRA is also the DoD Combat Support Agency charged with providing CWMD expertise and support to the Joint Chiefs of Staff, the Military Services, and the Combatant Commanders. While we serve all Combatant Commanders, we work most closely with the six Geographic Combatant Commanders (GCCs), USSTRATCOM, and the U.S. Special Operations Command (USSOCOM).

Given the catastrophic nature of the WMD threat, timely and accurate intelligence is fundamental to preventing and attributing WMD attacks. A close relationship between WMD experts and the Intelligence Community is essential.

Because the CWMD mission requires whole-of-government solutions, DTRA works closely with NNSA, the Department of Homeland Security (DHS), and Department of

Health and Human Services (HHS), in particular leveraging our collective S&T investments and ensuring collaboration between our programs and activities. While DTRA, NNSA, DHS, and HHS share an interest in WMD-related science, the DoD application of that science is quite different from that of DHS as DoD forces must deploy and operate in unstable or hostile military environments at great distances from supporting infrastructure and logistical support. The military forces that we support face space, volume, and weight limitations, and must be easily deployable, supportable, reliable, rugged and survivable, yet simple to use.

### **DTRA and USSTRATCOM Partnership**

Since the early days of the Cold War, DTRA's predecessor organizations have had an extremely close and strong partnership with USSTRATCOM's predecessors on the nuclear mission. Seven years ago, that partnership was expanded to include the CWMD mission. In late 2005, the Secretary of Defense assigned the Commander, USSTRATCOM (CDRUSSTRATCOM) responsibility for integrating and synchronizing DoD CWMD efforts in support of USG objectives. The CDRUSSTRATCOM, turned to DTRA for its CWMD expertise and established the SCC-WMD alongside the agency at Fort Belvoir, Virginia, to leverage the agency's expertise and provide a seamless bond between the two organizations. On 31 January 2006, the Secretary of Defense assigned the DTRA Director to serve in the additional capacity as the Director, SCC-WMD, under the authority, direction, and control of the CDRUSSTRATCOM.

The SCC-WMD supports USSTRATCOM's assigned CWMD Unified Command Plan (UCP) responsibilities:

- Synchronizing planning for DoD CWMD efforts;
- Advocating for CWMD capabilities;
- Providing military representation to US national agencies, US commercial entities, and international agencies related to CWMD, as directed;
- Integrating Theater Security Cooperation activities, deployments, and capabilities that support campaigns to combat WMD, as directed by CDRUSSTRATCOM;
- Developing and maintaining a global CWMD concept of operations;

- Coordinating global CWMD operations support;
- Planning against designated CWMD threats; and
- Executing CWMD operations, as directed.

The CDRUSSTRATCOM has delegated Coordinating Authority to the SCC-WMD Director for synchronized planning of DoD-wide CWMD efforts in support of USSTRATCOM UCP missions. The major functions performed by the SCC-WMD are planning synchronization across geographic boundaries; identification and assessment of CWMD capability requirements; and promoting a unified approach across the USG.

On 3 February 2012, at the USSTRATCOM-sponsored biannual CWMD Global Synchronization Conference, a new CWMD mission component, the Standing Joint Force Headquarters for Elimination (SJFHQ-E) was activated to provide a needed enabling capability to eliminate WMD in hostile and uncertain environments. Appreciation for the need for such an organization was an outgrowth of our experiences in Iraq beginning in 2003, and the requirement was established in the 2006 and 2010 DoD Quadrennial Defense Reviews. This new headquarters will be a full-time, fully trained, scalable, deployable, joint command and control element able to quickly integrate into an operational headquarters such as a GCC or Joint Task Force (JTF) headquarters. As the core of a JTF-E HQ, the SJFHQ-E, appropriately augmented, will enable command and control of the fielded WMD elimination forces attached to the JTF. Initial operational capability is planned for January 2013 with full operational capability to be achieved by the end of that year. The SJFHQ-E will be co-located with DTRA and the SCC-WMD at Fort Belvoir, Virginia. The SCC-WMD Deputy Director, Air Force Major General Eric Crabtree, will be dual hatted as the Commander of the SJFHQ-E. Major General Crabtree will report to General Kehler in his role as SFJHQ-E Commander, and he will continue report to me in his role as the SCC-WMD Deputy Director.

Together, DTRA, the SCC-WMD, and the SJFHQ-E will provide a more capable DoD CWMD team that is better integrated within overall USG CWMD community. They will



leverage and maximize skills, expertise, capabilities, and resources across all, and think and act as an integrated CWMD team.

### **Nonproliferation**

DTRA and SCC-WMD perform several major nonproliferation programs and activities.

#### ***Nunn-Lugar Cooperative Threat Reduction Program***

The Nunn-Lugar Cooperative Threat Reduction Program's overarching mission is to partner with willing countries to reduce the threat from WMD and related materials, technologies, and expertise. The program focuses on eliminating, securing, or consolidating WMD, related materials, and associated delivery systems and infrastructure, at their source in partner countries. It also builds partnership capacity to prevent the proliferation of WMD materials across borders.

Since its enactment into law in the Fiscal Year 1993 National Defense Authorization Act, the Nunn-Lugar program has proven highly effective. It enabled the elimination of nuclear weapons from Belarus, Kazakhstan, and Ukraine, ensuring that Russia would be the only nuclear-armed successor state to the Soviet Union. As of 29 February 2012, the assistance provided through this program has deactivated 7,619 nuclear warheads; destroyed 793 ICBMs, 191 ICBM mobile launchers, 906 air-launched cruise missiles, and 33 nuclear-powered submarine-launched ballistic missile (SLBM) submarines (SSBNs); eliminated 498 ICBM silos, 155 bombers, 492 SLBM launchers, and 680 SLBMs; sealed 194 nuclear test tunnels and holes; destroyed 2,803.5 metric tons of declared Chemical Weapon agents; safely and securely transported 562 nuclear weapons train shipments; upgraded 24 nuclear weapons storage sites; and built and equipped 38 Biological Threat Reduction Zonal Diagnostic Laboratories.

Although Nunn-Lugar activities in Russia continue, the program is evolving in accordance with the FY08 National Defense Authorization Act to address emerging security challenges and urgent threats in regions of the world beyond the Former Soviet Union (FSU). Today, the Nunn-Lugar CTR Program supports a layered defense

approach to countering WMD threats, builds strategic relationships with key international partners that enhance threat reduction on a global scale; and support the resilience of the global nonproliferation framework by building partnership capacities to enforce the tenants of that framework. The program is expanding its activities beyond the FSU, and promoting cooperative biological engagement, security, and early warning in East Africa and South Asia, and is currently authorized to operate in Russia, Ukraine, Armenia, Azerbaijan, Georgia, Uzbekistan, Afghanistan, China, India, Pakistan, Iraq, Djibouti, Kenya, Tanzania, Uganda, Burundi, and Rwanda.

*Strategic Offensive Arms Elimination* – Projects in Russia include ICBM (SS-25, SS-18, and SS-19) and SS-N-18 SLBM elimination; SS-18 and SS-19 silo and launch control center elimination; and dismantlement of nuclear reactor core and missile launcher sections of DELTA III-class and TYPHOON-class SSBNs. Additionally, this project assists Ukraine with the storage and elimination of rocket motors from dismantled SS-24 ICBMs.

*Chemical Weapons Destruction* – Russia, as a state party to the Chemical Weapons Convention (CWC), is obligated to eliminate its stockpile of over 40,000 metric tons of chemical weapons (CW). The United States, Russia, and other international partners funded construction of the Shchuch’ye Chemical Weapons Destruction Facility (CWDF). Russia began CW destruction operations at this facility in March 2009. DoD continues to provide technical support to this effort through the Nunn-Lugar Program. As of 31 December 2011, 2,601.8 metric tons of CW agents have been destroyed. Russia also is constructing with its funds a similar CWDF at Kizner, with a completion date in late 2012. The DoD has agreed to provide the Kizner CWDF with technical support similar to that provided at Shchuch’ye.

*Global Nuclear Security* – This project provides assistance for the improved security of Russian nuclear weapons and at-risk material rail shipments and storage. It also helps establish Centers of Excellence with partner countries to enhance training capability, consistent with international best practices, for nuclear security, material control, and

inventory management. This effort is closely coordinated with other related USG activities and international governmental and non-governmental organizations. Through an unprecedented partnership with Russia and Kazakhstan hundreds of kilograms of weapons-usable nuclear material was secured at the former Soviet Semipalatinsk Test Site in Kazakhstan.

*Cooperative Biological Engagement* – This project implements the National Security Staff directed policy priorities for countering biological threats. Cooperative Biological Engagement (CBE) is the largest effort within the Nunn-Lugar CTR program and involves a growing number of international partner states across Europe, Asia, and Africa. It responds to the threat of state and non-state actors acquiring biological materials and expertise that could be used to develop or deploy a biological weapon. The program destroys or secures Especially Dangerous Pathogens (EDPs) at their source, builds partner capacity to sustain a safe, secure, disease surveillance system to detect, diagnose, and report EDP breakouts, and to work collaboratively with partner country scientists in engagements that support the ethical application of biotechnology to a better understanding of endemic EDPs and their control and prevention. The CBE leverages the expertise, capabilities, and international access of other USG departments and agencies, international partners, and the private sector, and provides tailored approaches that recognize, build upon, and enhance regional and partner countries' indigenous capacities. For relatively small investments, this program delivers a high return by improving biological safety and security; improving disease surveillance, detection, diagnosis, reporting, and response capabilities; and increasing cooperative biological research and engagement.

*Proliferation Prevention* – This project enhances the capability of non-Russian FSU states and other partner countries to deter, detect, report, and interdict illicit trafficking of WMD and related materials across international borders. It is coordinated with the DoD International Counterproliferation Program and other USG border security programs, and furthers interagency collaborations that contribute to a holistic approach to export control, border security, and law enforcement-related capacity building efforts.

*Threat Reduction Engagement* – This project funds relationship building engagements intended to advance the Nunn-Lugar CTR mission. Specific activities include non-proliferation and counterproliferation symposia or workshops; bilateral or regional CTR-related symposia; high-level exchanges or planning activities; and tabletop exercises. Although historically focused on engagement with foreign military organizations, engagement is increasing with foreign civilian organizations and entities, primarily for supporting CBE and improving border security.

### ***Arms Control***

DTRA performs several critical arms control mission responsibilities related to on-site inspections and monitoring. On-site inspection is not the sole mechanism for verification, but one part of a system of complementary reinforcing measures that include National Technical Means (NTM) of verification; periodically exchanged data on weapon systems and facilities; regular notifications updating this data; on-site inspections; and a compliance and implementation body.

On-site inspection was a key component of the verification frameworks of the Intermediate-Range Nuclear Forces Treaty (INF), and the Strategic Arms Reduction Treaty (START), and now, remains a key component of the New START Treaty. Such inspections provide eyes-on evaluation of the facilities and systems to confirm that what has been reported in data exchanges are actually what exists at individual sites; access and perspective not achievable through data exchange and NTM alone; and a deterrent to misreporting data or cheating by including a short-notice inspection regime that each side knows provides the other to spot-check declarations and discover discrepancies between what has been reported and facts on the ground. Although DTRA inspectors provide the eyes on site, DTRA does not make verification or compliance judgments. Our inspectors observe, document, and report the factual findings of inspection activities to the USG interagency policy community, who uses that information to determine treaty compliance.

Additionally, DTRA is responsible for coordinating and conducting the escort of foreign inspection teams for inspections or continuous monitoring activities in the US and at US facilities overseas.

Because DTRA has extensive experience with on-site inspections and monitoring under the INF Treaty and the START Treaty, US policy makers and treaty negotiators concerned with the development, implementation, or evaluation of compliance with arms control treaty provisions consistently call on the agency's technical and operational experience. The DTRA team supporting the US delegation at the New START negotiations in Geneva provided years of arms control implementation expertise and negotiating experience, linguistic ability, and administrative support to the delegation as a whole and to the chief negotiator, Ms. Rose Gottemoeller, the Acting Under Secretary of State for Arms Control and International Security, and the Assistant Secretary of State for Arms Control, Verification, and Compliance. DTRA personnel fulfilled key roles in the negotiating working groups on Inspection Activities, Conversion and Elimination, and Treaty Articles and Definitions, and played a critical part in the development of those portions of the new treaty. DTRA military linguists augmented the language support staff at the US Mission, providing much-needed help in translating the large number of negotiating documents, and were frequently called on to interpret for high profile or technically oriented meetings due to their exceptional language abilities and precise knowledge of arms control terms. In addition, DTRA personnel continue to support the Bilateral Consultative Commission in Geneva as discussions are undertaken to fine tune the implementation process.

The agency spent a full year prior to New START entry into force preparing itself, as well as US facilities subject to inspection, for treaty implementation. This effort involved comprehensive internal training sessions which utilized experienced personnel from both the INF and START Treaties to adapt over 20 years of on-site inspection experience into the DTRA implementation plan for New START. DTRA conducted mock inspections or staff assistance visits at each major US facility subject to inspection to ensure a smooth implementation process once New START entered into force.

During the New START Treaty's first year in force, DTRA conducted the full annual quota of 18 inspection missions in the Russian Federation and provided escort functions for 18 Russian inspections conducted in the United States. DTRA inspectors also participated in one exhibition of a Russian ICBM and two exhibitions of US heavy bombers.

In all, DTRA performed 276 arms control treaty and agreement related missions in FY11; is planning to conduct 320 such missions in FY12; and anticipates performing 340 in FY13.

The agency also acquires and fields technology capabilities required to implement, comply with, and allow full exercise of US rights and prerogatives under existing arms control treaties and agreements, and in support of the Administration's arms control goals. Despite the technology available, to date the equipment used for onsite inspections remains low-tech. Current equipment includes tape measures, #2 pencils, small notepads, and reference photos to determine the type of item being inspected. Limited use of radiation detection equipment during the New START Treaty inspections is allowed only to prove that an object is non-nuclear. The counting of deployed warheads is limited to counting covered objects declared to be warheads and placed on a deployed missile or bomber. There are no photographic confirmation, measurement, or radiation detection equipment provisions for the nuclear weapons. Future onsite inspection equipment must be man-portable, robust, and easy to use. Such equipment must be well understood by all parties, but will likely need to be as minimally invasive as possible. This could require joint development or certification and/or use by a neutral international body. Reliable and trusted procedures still will be needed to allow parties to authenticate and functionally check the equipment prior to use.

### ***International Counterproliferation Program***

The DoD is the lead agency for, and partnered with the Federal Bureau of Investigation and DHS, on the International Counterproliferation (ICP) Program, a program that is the

primary tool for the COCOMs to apply in their theater security cooperation strategy to combat trafficking of WMD and related materials. The program provides specialized training designed for foreign officials involved with border security, customs, and law enforcement. Some training courses include critical equipment packages to enhance the capacity of partner countries to deter, detect, investigate, and respond to the attempted proliferation of WMD. Training is sustained with periodic local and regional WMD Integrated Exercises which enable students to use program skills and equipment within a realistic training environment. ICP program partners span the Baltic States, the Caucasus, Eastern Europe, the Balkans, and Central Asia. In September 2011, the Secretary of Defense approved ICP program engagement with new partners in South Asia, Southeast Asia, and Africa (excluding Egypt). Additionally, the ICP is incorporating cost-saving efficiency measures such as shifting from bilateral to regional engagement, combining events into single missions, and reducing the cost of equipment provided by the program.

#### ***Proliferation Security Initiative***

DTRA and the SCC-WMD support GCC and USG participation in international cooperative activities under the Proliferation Security Initiative (PSI), an international effort by 98 countries to stop trafficking of WMD, their delivery systems, and related materials to and from states and non-state actors of proliferation concern. These activities have been centered upon cooperative maritime interdiction of illicit WMD trafficking. The SCC-WMD operates the PSI Support Cell with DTRA assistance to increase COCOM staff and partner nations' understanding of and support for the PSI by providing subject matter expertise during exercise and activity planning and execution.

#### ***Small Arms and Light Weapons***

DTRA supports nonproliferation efforts to assess, reduce, and secure stockpiles of Small Arms and Light Weapons (SALW) worldwide by supporting the DOS Office of Weapons Removal and Abatement. This program helps foreign governments ensure that Man-Portable Air Defense Systems, small arms and light weapons, conventional ammunition, and other ordnance are properly secured, and managed, and that excess stockpiles are

destroyed. DTRA SALW teams perform assessments, provide technical advice, and share US best practices through training and seminars.

### ***Regional Security Engagement Program***

Through the Regional Security Engagement (RSE) Program, DTRA creates regional networks with shared understanding and approaches to countering WMD threats that implement common counterproliferation goals by leveraging existing resources. This program supports the development of a shared regional threat picture; the development and use of common methods for risk analysis and targeting; the development of a common indicator and warning methodology; the identification of regional gaps/overlaps of CWMD capabilities; and the reinforcement of existing information-sharing mechanisms. Additionally, the program integrates partner states into the global counterproliferation community while supporting COCOM CWMD theater campaign plans. Pilot events were held in December 2010 and April 2011. Four events are planned for 2012 and eventually six suited to COCOM needs on an annual basis

### ***Planning and Plans Coordination***

The DTRA/SCC-WMD contribution to nonproliferation includes a wide range of plans and planning development support, coordination, and synchronization across DoD and with other USG organizations. For example, planning synchronization across geographic boundaries is achieved through USSTRATCOM's biannual Global Synchronization Conferences and regional CWMD campaign plans, among other means.

### **Counterproliferation and Consequence Management**

Nonproliferation is only part of the larger DTRA/SCC-WMD effort and we also perform counterproliferation and consequence management activities. Our counterproliferation programs deter and defeat WMD use and we are providing capabilities for some of the most challenging CWMD mission needs including:

- Capabilities to detect, track, and interdict WMD in hostile and uncertain environments at great distances from our homeland;



- Sensors, novel energetic materials and weapon design technologies, and operational concepts to hold at risk WMD and WMD-related facilities, including those deeply underground; and the
- Protection of people, systems, and infrastructure from WMD effects.

Over the past year, we have made significant achievements in the areas of counterproliferation and consequence management:

- Assisted activation of the USSTRATCOM SJFHQ-E to support the elimination of WMD in hostile and uncertain environments.
- Responded to 1,695 requests in FY11 for Reach Back support from a wide-range of DoD and other USG customers with the top five customers being USPACOM, USAFRICOM, USSTRATCOM, the National Guard, and the Navy.
- Conducted 17 surety inspections of nuclear capable units in FY11; a similar number are planned for the current fiscal year; and 18 are planned for FY13.
- Provided continuous high-level nuclear policy support analysis for a wide range of senior-level DoD and other USG organizations and oversight committees in sustaining and modernizing the nuclear deterrent force and countering the nuclear threat.
- Conducted 30 nuclear weapons accident and incident exercises and seminars in FY11; planning to conduct a similar number in FY12; and anticipate performing 29 in FY13.
- Conducted 39 consequence management exercises and seminars in FY11; planning to conduct 40 in FY12; and anticipate performing 40 in FY13.
- Initiated the Consequence Management Assessment Program (CMAP) in FY12 to assist the COCOMs in building consequence management capacity in select partner states by increasing the tactical training and operational capabilities of partner nations to effectively respond to WMD incidents, supporting COCOM requirements to aid partner nations to effectively respond to WMD, and building partnership capacity to prevent WMD proliferation. Under this program, DTRA and USCENTCOM are conducting planning and training events in Bahrain, Jordan, and the United Arab Emirates throughout this fiscal year. Additionally, DTRA is working with

USPACOM to expand CMAP activities into its area of responsibility beginning in FY13. Nine CMAP events will take place in FY12 and 24 are anticipated in FY13.

- Conducted 88 vulnerability, survivability, and Red Team assessments and training events in FY11. This number will grow to 101 in FY12 and 106 in FY13.
- Supported OPERATIONS ODYSSEY DAWN/UNIFIED PROTECTOR and TOMADACHI concurrently in FY11 and will maintain a focus on potential WMD events in the Middle East and Asia.
- Continued to support Air Force testing of the Massive Ordnance Penetrator in support of fielding in FY12.
- Demonstrated optimized dual and multiple delivery of hardened target defeat capabilities.
- Continued to support Bio-Response Testing and Evaluation (BOTE) with DoD, Environmental Protection Agency, DHS, CDC, and FBI partners.

### **Nuclear Support Mission**

DTRA also performs essential support functions for sustaining and safe, secure, and effective US nuclear deterrent. These include providing targeting support to USSTRATCOM; management of the nuclear stockpile accounting and tracking system; independent Nuclear Safety and Security Inspections for the Secretary of Defense and Chairman, Joint Chiefs of Staff; development of technologies and operational concepts for protecting our nuclear weapons and conducting tests of nuclear security policies; nuclear weapons familiarization training; and maintenance and logistical assistance.

### **FY13 DTRA Budget Request Overview**

The DTRA budget request for Fiscal Year 2013 (FY13) is \$1.474 billion as follows: \$443.382 million in Operations and Maintenance (O&M), Defense-wide funding; \$13.146 million in Procurement, Defense-wide funding; \$498.194 million in Research, Development, Test and Evaluation (RDT&E), Defense-wide funding; and \$519.111 million for the Nunn-Lugar CTR program. I also urge your support for the \$511.6 million requested for the DoD Chemical and Biological Defense Science and Technology

(CBDP S&T) Program, which DTRA executes. Details and highlights for these requests follow.

***Operations and Maintenance Funding***

Nearly 60% of DTRA O&M funding directly supports warfighters and national missions as it pays for planning, training, exercises, conferences, and other means for collaboration across DoD and the USG, and with international partners. Consistent with OSD direction, we have taken steps to reduce O&M funding for Temporary Duty (TDY); however, the nature of the CWMD mission necessitates a relatively high level of TDY funding for efficient and effective support to the Combatant Commanders including augmentation of their limited on-site expertise, the conduct of arms control treaty inspection and escort missions, the building of partnership capability with our allies and friends around the globe, the operation of the Defense Nuclear Weapons School that provides CWMD and nuclear mission training, and the performance of safety and security inspections and assessments of our nuclear deterrent. O&M funding is the fuel that enables us to reach out to our components and personnel, the warfighters, and international partners across the globe. Reductions to our O&M request would necessitate cutbacks in essential support that we uniquely provide.

The requested O&M funding would be applied as follows:

\*\* Nonproliferation Activities (\$71.718 million) for arms control activities including the conduct of USG inspections of foreign facilities, territories, or events; coordination and conduct of the escort of inspection teams for inspections or continuous monitoring activities in the US and at US facilities overseas; and the acquisition and fielding of technology capabilities required to implement, comply with, and allow full exercise of US rights and prerogatives under existing and projected arms control treaties and agreements. Treaties, agreements, and other nonproliferation programs to be supported by this funding include: New START, CFE, CWC, OS, ICP, CFE Adapted, Plutonium PPRA, SALW, International Atomic Energy Agency (IAEA) Additional Protocol, DTIRP, and the RSE Program.

\*\* WMD Combat Support and Operations (\$174.332 million) for a wide range of combat and warfighter support to the Joint Chiefs of Staff, the COCOMS, and military forces as they engage the WMD threat and challenges posed to the US, its forces and allies. DTRA supports the essential WMD response capabilities, functions, activities, and tasks necessary to sustain all elements of operating forces within their area of responsibility at all levels of war. DTRA supports OSD oversight of DoD nuclear matters by performing stockpile tracking; conducting nuclear surety inspections; and providing advice and support for maintenance, safety, Joint Nuclear Weapon Publications, logistics, policy, planning, training, and exercises. The agency provides the Combatant Commanders with deployable Technical Support Groups that support and assist COCOM designated search forces. This budget also funds DTRA's 24 hour/7 day Technical Reach Back and Operations Center capability. Technical Reach Back is provided by a core group of specialized CBRNE trained subject matter experts that provide decision-response and support capability for deliberate, crisis, and immediate planning and operations to first responders, National Guard WMD Civil Support Teams, COCOMs, OSD, the Joint Staff, the Intelligence Community, command elements, and federal, state, and local government organizations. Most of these requests require modeling a variety of operational and exercise scenarios related to WMD. Additionally, DTRA serves as the Program Manager for the Foreign Consequence Management (FCM) Exercise program that creates a series of exercises that prepare Geographic Combatant Commanders (GCCs) to respond to foreign WMD attacks or the accidental release of radiological or toxic materials. This request also funds the supporting CMAP. The Balanced Survivability Assessment Program conducts mission vulnerability and continuity assessments of critical and vital US and allied national/theater mission systems, networks, architectures, infrastructure, and assets; our Red Team provides a unique assessment capability simulating an independent, multidisciplinary adversary and performs all assessments from an adversarial perspective emulating threats ranging from well-funded terrorist organizations to foreign intelligence services; and the Joint Staff Integrated Vulnerability Assessments advise the Services, COCOMs, and DoD agencies on facility vulnerability to terrorist operations and the means of reducing mass casualties and damage to mission-essential materials. The Defense Threat Reduction University (DTRU), located on Kirtland Air

Force Base, New Mexico, is composed of the Defense Nuclear Weapons School (DNWS), the Defense Threat Reduction Information Analysis Center (DTRIAC), and the Publications and Strategic Studies Branch. DNWS is the only DoD school for courses that familiarize the US nuclear community with the national nuclear weapons stockpile and the nuclear weapons program and also provides training on nuclear and radiological incident command and control, incident response, and WMD effects modeling for DoD, federal, state, and local agencies. The DTRIAC is the key DoD source of information and analysis on nuclear weapons effects. Its information collection has over three million records; over two million still photos; and over ten million feet of video. If not preserved, these important items will be lost forever due to treaty-based restrictions on nuclear testing. The Publications and Strategic Studies Branch is DTRA's focal point for review and updates to Joint Doctrine, publication of Lessons Learned, and implementation of the Joint Training Systems through the annual publication of the Joint Training Plan.

\*\* US Strategic Command Center for Combating WMD (\$12.389 million) for DTRA direct support to the SCC-WMD including development of tools; providing strategic and contingency planning, policy, and analytical support; developing interagency relationships; and working closely with USSTRATCOM partners to establish the means for assessing and exercising capabilities to combat WMD. DTRA's efforts focus on enhancing global WMD situational awareness and providing for the development and maintenance of a world-wide common operating picture. The agency also provides access and connectivity to CWMD expertise critical for strategic and contingency planning, facilitates the integration of DTRA-unique capabilities, and provides situational awareness for integrating and synchronizing efforts across DoD to support national CWMD objectives. What appears to be a considerable reduction in this year's request from the \$25.253 million authorized and appropriated by Congress for FY12 actually is a realignment of \$9.970 million for Technical Reach Back and Operations Center mission execution to the Combat Support and Operations sub-activity group, and the realignment of \$3.363 million for Agency Strategic Planning activities to the Core Mission

Sustainment sub-activity group. These realignments do not change the level of support DTRA historically has provided to the SCC-WMD.

\*\* Core Mission Sustainment (\$184.943 million) for a wide range of enabling capabilities which provide the necessary resources to support all DTRA mission essential functions. The requested amount provides for the management of a total mission portfolio that exceeds \$3 billion. Activities specifically funded by this account include information management; resource management; security and asset protection; acquisition and logistics management; strategic planning; strategic workforce planning; hiring and retention incentives; leadership and professional development; and providing the safety, security, and efficiency necessary for mission success. In recent years, DTRA has increased investment in its Information Technology systems to provide secure and dependable connectivity for global mission execution.

#### ***Nunn-Lugar Cooperative Threat Reduction***

The request of \$519.111 million for this important program would be used as follows:

\*\* Strategic Offensive Arms Elimination (\$68.271 million) for elimination of Strategic Offensive Arms in Russia and the storage and elimination in Ukraine of rocket motors from dismantled SS-24 ICBMs. Specifically in Russia, the funding would eliminate four SS-18, eleven SS-19, and 24 SS-25 ICBMs; eliminate 15 SS-18 silo launchers and launch control centers; dismantle and eliminate eleven SS-19 silo launchers and launch control centers; eliminate 27 SS-25 road-mobile launchers; eliminate four SS-N-18 SLBMs; dismantle nuclear reactor cores and launcher sections of one DELTA III-class SSBN and eliminate 16 SLBM launchers; and continue dismantlement of nuclear reactor cores and launcher sections of one TYPHOON-class SSBN and eliminate 20 SLBM launchers.

\*\* Chemical Weapons Destruction (\$14.630 million) for technical support to the Russian chemical weapons destruction operations at the Shchuch'ye CWDF and, as recently decided by OSD, the Kizner CWDF.

\*\* Global Nuclear Security (\$99.789 million) for improving Russian capacity to sustain 18 nuclear weapons storage sites, and the sustainment of five rail transfer points and two regional security training centers; transportation of approximately 48 trainloads of deactivated nuclear warheads (1,000 to 1,500) from deployed locations to enhanced security storage sites or dismantlement and from storage to dismantlement facilities; continued support for Nuclear Security Centers of Excellence; and assistance with future shipments of Spent Nuclear Fuel that meet the IAEA criteria.

\*\* Cooperative Biological Engagement (\$276.399 million) to initiate biological engagement in Burundi, Rwanda, and other African regional partners and begin a regional engagement in SE Asia; continue cooperative research efforts in Cooperative Biological Engagement (CBE)-engaged countries; continue to implement the Electronic Integrated Disease Surveillance System in CBE-engaged countries; continue construction and equipment installation of Secured Pathogen Repositories in Kazakhstan and in other partner states; continue Cooperative Biological Research projects in Afghanistan, Africa, Armenia, Azerbaijan, Georgia, Kazakhstan, Pakistan, Ukraine, and other CBE-engaged countries as valuable projects are approved; continue to provide training in laboratory diagnostics techniques, epidemiology, clinical sample collection, outbreak surveillance, laboratory and health system management, and biosafety, biosecurity, and bioethics in CBE-engaged countries; continue the sustainment of 42 diagnostic labs in Azerbaijan, Georgia, Kazakhstan, Ukraine, and Uzbekistan; continue construction for a National Public Health Laboratory in Afghanistan; continue construction of a Veterinary Central Diagnostic Facility in Ukraine; complete construction and equipment installation for Secured Pathogen Repositories in Azerbaijan and Ukraine (Azerbaijan is funding the cost of its construction); complete the Biological Medical Research Center in Pakistan; complete 11 diagnostic labs in Kenya, Uganda, Ukraine, and other countries to fill gaps in analytical bio surveillance capacity; complete biorisk assessments in select areas of Asia and Africa; and continue to provide for bio-related conference support.

\*\* Proliferation Prevention (\$32.402 million) to enhance the capability of non-Russian FSU states and other partner countries to deter, detect, report, and interdict illicit WMD

trafficking across international borders. In Armenia, these funds would continue to increase WMD command and control, communications, surveillance, detection, and interdiction capabilities along the Georgia border; continue project assessments and support efforts to upgrade international and state ports of entry and inland clearing stations. In Moldova, these funds would continue to increase WMD command and control, communications, surveillance, detection, and interdiction capabilities along the Ukraine border; continue project assessments and support efforts to upgrade international and state ports of entry and inland clearing stations. In Southeast Asia, these funds would continue to increase WMD command and control, communications, surveillance, detection, and interdiction capabilities, and sustainment in initial countries, and begin implementation in additional countries along the Strait of Malacca and in other regional waters and on land borders.

\*\* Threat Reduction Engagement (\$2.375 million) to conduct engagements with the FSU states and in new geographic areas to support program expansions.

\*\* Other Assessments/Administrative Support (\$25.245 million) to ensure that DoD-provided equipment, services, and related training are fully accounted for and used effectively and efficiently for their intended purposes; provide for Nunn-Lugar CTR program travel, translator/interpreter support, and other agency support to include support to program personnel assigned to US Embassy offices in partner states.

Reductions to the FY13 request would result in missed opportunities to build international partnerships and partner capabilities, protect extremely dangerous pathogen collections from potential terrorist threats, and eliminate WMD and WMD-related materials that could fall into the hands of terrorists or states potentially hostile to the United States.

### ***Research, Development, Test, and Evaluation***

On 26 January 2012, in his press briefing on the DoD FY13 budget request, Secretary Panetta stated: “And lastly, with regards to key investments in technology and new



capabilities, we have to retain a decisive technological edge. We have to retain the kind of leverage the lessons of recent conflicts have given us. And we need to stay ahead of the most lethal and disruptive threats that we're going to face in the future.” Consistent with this decision, DTRA RDT&E programs respond to the most pressing CWMD challenges including stand-off detection, 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 in being focused solely on CBRNE; tied closely with the agency's Combat Support responsibilities; has a top-notch in-house field test capability; relies upon competitive bids, the national labs, industry, and academia rather than an in-house laboratory infrastructure, allowing for a “best of breed” approach to performer selection; and is nimble and responsive to urgent needs.

The agency has a comprehensive, balanced CBRNE S&T portfolio that supports DoD goals and is well connected with DoD customers, as well as interagency and international partners. Our RDT&E approach balances the need for near-term pay-off with the need for long-term knowledge and expertise. The requested RDT&E funding includes \$45.071 million in Basic Research to provide for the discovery and development of fundamental knowledge and understanding by researchers primarily in academia and world-class research institutes in government and industry. This program leverages DoD's \$2 billion annual investment in basic research by ensuring a motivation within the scientific community to conduct research benefiting WMD-related defense missions and by improving DTRA knowledge of other research efforts of potential benefit.

The DTRA FY13 request also includes \$172.352 million for WMD Defeat Technologies Applied Research, \$275.022 million for Proliferation Prevention and Defeat Advanced Research, and \$5.749 for WMD Defeat Capabilities System Development and Demonstration.

Multiple projects span these program elements:

\*\* The Fundamental Research Project is the “transition enabler” that bridges the gap between basic research and technology development. Examples of work being done under this project include developing nuclear materials detection capabilities with the potential for pre-detonation nuclear weapon detection systems, and a new carbon-based transistor with the potential for becoming the basis for next generation radiation-hardened electronics and for space sensors.

\*\* The Detection Technology Project includes nuclear and radiological detection; post-nuclear detonation forensics; and treaty verification related S&T development. Protective and targeting planning tools, and WMD Intelligence, Surveillance, and Reconnaissance S&T development is conducted under the WMD Battle Management Project.

\*\* The Advanced Energetics and Counter WMD Weapons Project develops novel energetic materials and weapon design technology for rapid, directed, and enhanced (non-nuclear) energy release providing new capability to defeat difficult WMD and hardened and deeply buried targets. It also covers the systematic identification and maturation of advanced technologies for combating WMD with specialized hardened target defeat expertise; developing innovative kinetic and non-kinetic weapon capabilities for the physical or functional defeat of WMD structures; and minimization of collateral effects from incidental release of WMD agents.

\*\* The Systems Engineering and Innovation Project develops improved high performance computing methods and tools for 24/7, near-real time CBRNE decision support; develops and integrates individual-based social networks and realistic behavioral models with infrastructure such as power and transportation grids; and demonstrates capabilities to model selected secondary and tertiary effects and course of action impacts for CWMD scenarios.

\*\* The Nuclear and Radiological Effects Project provides nuclear weapons effects subject matter expertise, model/code development, and analysis. Under this project, DTRA is reversing the decline in nuclear weapons effects and system hardening that occurred in the decades following the end of the Cold War, but with focus on 21<sup>st</sup> century threats. For example, we are supporting the standup of a Nuclear Weapons Effects Network across DoD, NNSA, and the United Kingdom, and are delivering three-dimensional models of nuclear fallout to the U.S. Army Nuclear and Chemical Agency, USSTRATCOM, and DHS for better predictions of fallout from ground or low altitude detonations and improved prediction of nuclear weapon urban environment effects. This project also is integrating conventional, unconventional, and nuclear software planning tools within a net-centric framework that provides simplified near real-time access for customer use of DTRA expert support and CBRNE tools in classified and unclassified environments, and meets user requirements at the state/local, national, and international levels.

\*\* The Target Assessment Project supports targeting and Intelligence Community technology analytical needs. Efforts underway include providing geotechnical, structural and functional analysis in a time-dependent, 3-dimensional model to defeat WMD targets in underground facilities; creating a software tool that integrates buildings, bunkers and tunnels into a common operating picture for functional vulnerability and defeat analysis of WMD targets; and developing modeling and simulation capability for a network of WMD target systems analysis. In collaboration with the Defense Intelligence Agency (DIA) and DOE National Labs, it also provides technology for the DTRA/DIA Counter WMD Analysis Cell, integrating engineering insights and operational expertise for exploitation of vulnerabilities to counter WMD targets and developing capability to perform strategic level technical analysis of adversary WMD programs.

\*\* The Nuclear Survivability Project develops radiation-hardened microelectronics and nanotechnology to keep pace with commercial technology advances; applies trusted US commercial design and foundry capabilities to achieve capability for  $\leq 45$  nanometer radiation hardened microelectronics; develops and demonstrates technology to support

hardening of microelectronics and photonics to meet DoD's missile and space requirements; provides for High Altitude Electromagnetic Pulse (EMP) protection, operational vulnerability assessments, technical assistance to Service Acquisition Special Projects Officers, defense agencies, and COCOMs; and provides expert advice on System EMP Certification for USSTRATCOM and DoD CBRN Survivability Implementation. In addition, this project supports nuclear surety programs through field-able nuclear and non-nuclear physical security equipment for the Services and interagency partners; provides for Force-on-Force tests and evaluation of DoD, Service, and COCOM nuclear weapons security policies and capabilities; evaluates nuclear security policy for waterfront restricted areas; and conducts engineering studies and out-of-cycle tests focused on specific portions of the nuclear environments.

\*\* The Test Infrastructure Project provides a unique national test bed for simulated WMD facility characterization, weapon/target interaction, and WMD facility defeat testing; provides test articles, construction, tunnel operation, data acquisition systems, test optics, and data analysis for the Air Force's Massive Ordnance Penetrator; and provides the test environment for the Treaty Verification Technologies Program and Source Physics Experiments to support Comprehensive Test Ban initiatives.

Reductions to the DTRA RDT&E request would delay or terminate solutions to priorities received from the Combatant Commanders and miss opportunities to take advantage of emerging technologies and operational concepts to counter WMD threats.

### ***Chemical and Biological Defense Program S&T***

The Department's CBDDP S&T programs support DoD-wide efforts to research, develop, and acquire capabilities for a layered, integrated defense against CBRN agents; better understand potential threats; secure and reduce dangerous materials whenever possible; and prevent potential attacks. Although funding for the CBDDP is not part of the DTRA budget request, the agency executes the S&T portion of this program, for which the Department has requested approximately \$511.6 million in FY13. The agency also manages funding execution in support of CBDDP advanced development and procurement.

DTRA is addressing key chemical and biological defense mission areas in multiple ways including: emphasizing innovation and discovery in Basic Research and the Physical Sciences; bio surveillance; biological diagnostics; and medical countermeasures such as advancements in regulatory S&T of agile, flexible manufacturing and rapid enhanced product development and new avenues of treatment against CB threats. DTRA and the CBDP leverage each other's expertise, unique capabilities, resources, and investments – as well as those of the other DoD, USG, and international partners – in a wide range of areas including Basic Research, modeling and simulation, Technical Reach Back support, Consequence Management Assessment Team Support, Cooperative Threat Reduction and Nunn-Lugar Global Cooperation Support.

### ***Procurement Funding***

The DTRA Procurement, Defense-wide request provides for essential vehicle replacement and procures new investment items, including mission-critical information technology, required for the agency's global mission execution. The FY12 request is for \$13.146 million.

### **Impact of Defense-wide Efficiencies**

DTRA has achieved efficiencies in its mission execution, yielding \$52.73 million from all of our appropriation accounts as part of DoD-wide adjustments. This includes savings of \$19.78 million in O&M, \$1.88 million in the Nunn-Lugar CTR program, \$32.59 million in RDT&E, and \$2.24 million in Procurement. We terminated the Innovative Technologies program, the Systems Engineering program, and the University Strategic Partnership Program. Additionally, reductions were made to our travel budget; contract costs related to security support; core operational support; contracts related to the CWC; contract costs related to S&T; ICP; DTRIAC; Basic Research; Advanced Energetics; wargaming; environmental restoration; WMD National Test Bed; Test and Technology Support; strategic research and dialogues; countering WMD terrorism; and nuclear surety. We continue to seek innovative ways to reduce operating costs and find more efficient and effective ways of executing our mission.

## **Conclusion**

Mr. Chairman and other Members, WMD pose a global threat that is growing in scope and evolving in its potential applications. DTRA and the SCC-WMD provide much of the expertise and the daily focus that is applied to countering this threat by the Department and, indeed, by the USG. We also build and harness CWMD partnership capability with our friends and allies around the globe.

The challenge facing us is great. The DTRA FY13 budget request is critical and central to DoD, USG, and international efforts to counter WMD. The relatively small national investment in the DTRA/SCC-WMD/SJFHQ-E team provides a tremendous return to national and global security. I urge your support for the DTRA FY13 budget request and would be pleased to discuss it in greater detail with the subcommittee at your convenience.

I hope that DTRA and the SCC-WMD will continue to earn your support. I would be pleased to respond to your questions.