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HOUSE ARMED SERVICES COMMITTEE

STATEMENT OF

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BEFORE THE

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SUBCOMMITTEE ON INTELLIGENCE AND SPECIAL OPERATIONS

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1 **Introduction**

2 Chairman Gallego, Ranking Member Kelly, and distinguished members of the subcommittee,  
3 thank you for the invitation to testify today. This Committee and its members have long  
4 provided outstanding support to the Defense Threat Reduction Agency (DTRA), and I look  
5 forward to offering you an update on our vital work in countering and deterring Weapons of  
6 Mass Destruction (WMD) and emerging threats.

7 On behalf of over 2,200 military and civilians, I am proud to appear today alongside  
8 Ms. Deborah Rosenblum, Assistant Secretary of Defense for Nuclear, Chemical, and Biological  
9 Defense Programs; Dr. John Plumb, Assistant Secretary of Defense for Space Policy; and Vice  
10 Admiral Collin Green, Deputy Commander, U.S. Special Operations Command.

11 As both a Defense Agency and Combat Support Agency and the principle counter-WMD  
12 organization in the Department of Defense – DTRA serves as the linchpin between the  
13 Department’s counter-WMD strategies and its practitioners. Through Ms. Rosenblum, Dr.  
14 Plumb, and their subordinate components, the Agency receive guidance, priorities, and oversight  
15 in the areas of nuclear matters, chemical and biological defense, threat reduction, and arms  
16 control. At the same time, we support U.S. Special Operations Command’s role as the  
17 Coordinating Authority for counter-WMD, and work closely with Vice Admiral Green’s staff –  
18 as well as those of the other Combatant Commands – providing strategic, operational, and  
19 tactical planning and expertise, as well as embedded support and material and non-material  
20 counter-WMD solutions. These dual roles provide a synergy that is key to the successful  
21 execution of our counter-WMD mission, and support the Department’s strategy of integrated  
22 deterrence.

23 DTRA maintains a global presence necessary to sustain and grow partnerships, provide real-time  
24 understanding of the WMD landscape, and to ensure timely and accessible capabilities are  
25 available to policymakers, the Services, and the Combatant Commands and our international and  
26 interagency partners. Our footprint includes expertise embedded at the Combatant Command  
27 headquarters, in Regional Cooperation Engagement Offices at key embassies, and multinational  
28 bodies such as the North Atlantic Treaty Organization. It also includes support to our closest  
29 allies, with DTRA liaison officers embedded with partners in the United Kingdom and Australia,

30 and reciprocal liaisons from these countries and Canada on our own staff. We also maintain a  
31 presence on the Joint Staff and in offices across the Department and U.S. interagency, in order to  
32 ensure strong connections within the counter-WMD enterprise. Through these partnerships, we  
33 provide exquisite technical, analytic, and operational expertise and capabilities to enable the  
34 Department of Defense (DoD), U.S. Government, and international partners to counter and deter  
35 WMD and emerging threats.

### 36 **A Successful Year**

37 Despite the dynamics of operating in a COVID-19 environment, DTRA remained highly  
38 productive in 2021. The Agency aligned to the Department's guidance prioritizing China and  
39 Russia, bringing to bear significant capabilities in service to international partnerships, integrated  
40 deterrence, and strategic competition.

41 DTRA's premier technical and analytic capabilities provide Combatant Commands, the  
42 interagency, and international partners with world-class WMD expertise to inform planning and  
43 operational decision-making. For example, DTRA's 24/7 reachback team completed and  
44 delivered responses to over 1,000 requests for support in 2021 for real-time modeling for  
45 chemical, biological, radiological, and nuclear consequence management. The Agency sent  
46 teams of subject matter experts forward to support U.S. Special Operations Command and U.S.  
47 Indo-Pacific Command, as well as to support exercises such as the North Atlantic Treaty  
48 Organization's *Steadfast Jupiter 21*, where we provided chemical, biological, radiological,  
49 nuclear, and high-yield explosives modeling support. Additionally, the Agency produced nearly  
50 100 options for the Combatant Commands, to ensure their operational plans have the highest  
51 probability of success and flexibility for combat operations against adversary WMD targets.

52 DTRA, on behalf of the Department, also commemorated the 30th anniversary of the highly  
53 successful Cooperative Threat Reduction Program (CTR). Since its inception in 1991, CTR has  
54 productively engaged with foreign partners to eliminate and prevent the proliferation of WMD  
55 threats, tackling 70 projects in 36 countries in the last year alone. To cap off the program's 30th  
56 year, teams built nuclear security training centers and enhanced nuclear material inventory  
57 management systems in Kazakhstan. CTR programs trained and equipped Iraqi border guards to  
58 detect and track anomalies along the Syrian border. Under CTR's Biological Threat Reduction

59 Program, we assisted partner countries to mitigate threats posed by COVID-19 and other highly  
60 transmissible diseases. These efforts build enduring capacity for foreign partners to address the  
61 WMD threats globally and have the benefit of building U.S. rapport as a trusted partner,  
62 mitigating malign Russian and Chinese influence.

63 In cooperation with the Federal Bureau of Investigation and Departments of Energy, State, and  
64 Homeland Security, we continue to implement the International Counterproliferation Program,  
65 which builds the capacity of international partners to prevent proliferation attempts and disrupt  
66 proliferation networks by applying U.S. interagency expertise to improve training, equipment,  
67 and doctrine. The program held successful engagements across multiple Combatant Commands  
68 throughout the year. DTRA continued progress on significant program efforts in U.S. European  
69 Command through engagements with Romania, Croatia, and Bulgaria and renewed our focus on  
70 priority partners in U.S. Indo-Pacific Command with countries such as Brunei and Vietnam.  
71 These multifaceted counterproliferation engagements build measurable and sustained partner  
72 capacity to counter WMD proliferation threat networks.

73 This past year also served as a capstone for building partner capacity efforts on the African  
74 continent. U.S. Africa Command's *African Lion 21* – the premier Northern African security  
75 cooperation exercise in – served as the stage for Senegalese and Moroccan forces to demonstrate  
76 their readiness to counter WMD on a large scale. Leveraging the National Guard Bureau's State  
77 Partnership Program, DTRA is able to extend its investments and ensure a sustained system of  
78 training and support that will directly improve regional stability – a key component of countering  
79 WMD. These continued engagements bolster relationships among African nations and posture  
80 the United States as the strategic partner of choice in the region.

81 DTRA physical security modeling and simulation capabilities were brought to bear in the  
82 development and execution of a large DoD force-on-force exercise, which provided a  
83 comprehensive picture of current physical security posture and an efficient estimation of  
84 effectiveness for proposed future upgrades. This newly employed capability narrowed down the  
85 best technologies, tactics, techniques, and procedures to test in a force-on-force environment and  
86 allowed for the efficient prioritization of mitigating solutions for our C2 infrastructure.

87

88 **Our Mission**

89 Since my last testimony, and in response to changing Administration priorities, DTRA focused  
90 our Strategy on a renewed balance between our dual-chartered roles of Defense and Combat  
91 Support Agency. This Strategy clearly links the President’s Interim National Security Strategic  
92 Guidance, the Secretary of Defense’s priorities, and DTRA opportunities, activities, and  
93 investments. Our strategic goals are straightforward: (1) ensure a safe, secure, reliable, and  
94 effective nuclear deterrent; (2) counter WMD and emerging threats; (3) enable the Joint Force  
95 and our allies and partners to compete and win against adversaries; and (4) build an adaptive and  
96 resilient Agency. These goals set the foundation for the work DTRA will plan, program, and  
97 execute on behalf of its stakeholders not just in the coming year, but across the Future Years  
98 Defense Program and beyond.

99 *Ensure a Safe, Secure, Reliable, and Effective Nuclear Deterrent*

100 Admiral Charles Richard, Commander of U.S. Strategic Command, noted in his recent testimony  
101 that “strategic deterrence relies on credible capabilities backed by a safe, secure, reliable, and  
102 effective nuclear enterprise.” With roots that reach back to the Manhattan Project, DTRA and its  
103 forebears have been a part of the U.S. nuclear enterprise for nearly 80 years. To ensure the  
104 deterrent remains credible today, DTRA supports the Department, the Services, and U.S. Strategic  
105 Command through a portfolio that includes the modernization of strategic concepts; system surety  
106 and readiness; site security and mission assurance; stockpile accountability and logistics; Joint  
107 and international partner training and force preparedness; advanced research and development for  
108 nuclear effects and survivability; and treaty verification.

109 At a tactical level, DTRA’s Defense Integration and Management of Nuclear Data Services,  
110 known as the DIAMONDS program, is the DoD’s sole tracking and reporting system for all  
111 critical nuclear weapon components. As such, DIAMONDS received system upgrades in 2021.  
112 Bringing the upgraded Next Generation system online achieved a major milestone in  
113 modernizing the DoD’s constant ability to monitor, track, and sustain its nuclear stockpile  
114 through leading edge cybersecurity and seamless exchange of nuclear stockpile data with the  
115 Department of Energy.

116 As the DoD's Mission Assurance Center of Excellence, DTRA also helps mission owners secure  
117 the Department's most critical strategic assets. By identifying physical and cyber vulnerabilities  
118 in DoD's critical infrastructure, our teams of multi-discipline experts oversee weeks-long,  
119 intrusive inspections at sites worldwide that help commanders defend against hazardous events  
120 and site exploitation, and deliberately plan for risk management and surety. Over the past year,  
121 in concert with the Intelligence Community, DTRA has improved the fidelity of these  
122 assessments by incorporating timely, adversary-specific threat data to ensure these inspections  
123 capture anticipated national security threats.

124 DTRA also responded to a Chairman of the Joint Chiefs of Staff directive to improve Joint Force  
125 survivability – a key element in adversaries' decision calculus. The Agency planned, designed,  
126 and completed – using state-of-the-art surrogate capabilities – a full-scale High-Altitude  
127 Electromagnetic Pulse test of U.S. Strategic Command's Global Operations Center. In doing so,  
128 the Agency validated the survivability of U.S. nuclear command and control.

129 The Agency also conducts research and development to ensure the Department has the ability to  
130 detect the entire spectrum of nuclear coercion and aggression. Through extensive analyses of  
131 nuclear testing seismic data, we work to calibrate U.S. seismic stations and improve diagnostic  
132 tools for detonation monitoring. The Agency also completed upgrades and transitioned several  
133 diagnostic and monitoring tools to improve U.S. and DoD detection capability of evasive nuclear  
134 tests. These efforts ensure that U.S. nuclear forces remain ready and able signal U.S. resolve and  
135 provide extended assurance and deterrence.

136 The Department's forthcoming Nuclear Posture Review will certainly shape and inform our future  
137 efforts. Nevertheless, DTRA's long-standing expertise ensuring U.S. nuclear forces remain  
138 mission-capable and resilient against potential adversaries in an era marked by proliferation  
139 pressures, evolving norms, and technological change will be a component of the U.S. nuclear  
140 deterrent.

#### 141 *Counter WMD and Emerging Threats*

142 Our competitors and adversaries believe that WMD are critical to shape the battlespace, and  
143 achieve advantage across the spectrum of competition and conflict. Competitors and adversaries  
144 seek to leverage WMD to amplify their coercive influence and dissuade retaliation. In the era of

145 eroding norms, WMD-armed competitors and adversaries continue to tear down the traditional  
146 barriers between conventional and non-traditional forces, creating a multi-layered challenge for  
147 the United States and its allies. DTRA enables the Department to strategically shape the  
148 operating environment to reduce risk for our combatant commanders and international partners,  
149 providing technologies and integrated deterrence solutions for the most intractable WMD  
150 problems.

151 DTRA turns WMD intelligence into actionable assessments of threat and risk. Using DTRA-  
152 developed artificial intelligence and machine learning tools, our teams have built algorithms that  
153 can pick up the subtle indicators that can signal proliferation, particularly on dual-use materials.  
154 Harnessing the power of existing information databases, we quickly synthesize data to respond to  
155 real-time operational inquiries. This capability has proven its worth by illuminating WMD  
156 procurement networks and providing Combatant Commands, the interagency, and international  
157 law enforcement with the information necessary to disrupt trafficking of WMD, its delivery  
158 systems, and related materials.

159 Agency experts also closely monitor a myriad of scientific disciplines, technologies, and  
160 materials to identify emerging threats in the WMD space and to ensure the Department has the  
161 ability to address operational vulnerabilities. Understanding the threat – how WMD elements  
162 work, how they can be employed, how to detect them and protect against them – focuses the  
163 Agency’s capabilities for developing and adapting solutions for the Joint Force in a WMD  
164 environment. Some of our recent successes include producing 12 unique, target-specific test  
165 articles for experimentation, allowing the Agency to leverage our exceptional test and evaluation  
166 capabilities in New Mexico to conduct laboratory and operational validation of WMD defeat  
167 concepts. DTRA’s ability to rapidly identify, develop, test, evaluate, and field capabilities in  
168 response to WMD threat trends is one of the hallmarks of our support to the Joint Force.

169 The Agency also provides policymakers, planners, and partners with unique insight into  
170 competitor and adversary WMD force posture, doctrine, and systems – examining how our  
171 competitors might employ and integrate WMD during conflict, better preparing U.S., allied, and  
172 partner forces for overmatch within a WMD battlespace.

173 Through innovative and agile actions DTRA works with our partners across the spectrum of  
174 WMD threats, preventing not only the acquisition, proliferation, and use of WMD and associated  
175 materials, but bring our capabilities to bear to frustrate the decision calculus of competitors and  
176 adversaries in order to mitigate the threat of global aggression and minimize risk of escalation.

177 *Enable the Joint Force and Our Allies/Partners to Compete and Win against Adversaries*

178 Increasing partner nations' counter-WMD capabilities serves to compound our own ability to  
179 reduce the WMD threat. DTRA's efforts span from security cooperation and building partner  
180 capacity to information sharing agreements, shared science and technology or research and  
181 development investments, and collaboration on plans, exercises, and operational readiness.  
182 Through exchange and liaison officers, strategic dialogues, training, workshops, conferences,  
183 exercises, and various other cooperation and partner capacity-building activities, DTRA ensures  
184 the Department is inextricably linked with individual countries as well as multi-national alliances  
185 and partnerships such as the North Atlantic Treaty Organization and Five Eyes. Our reach  
186 provides threat-specific support across multiple policy initiatives and in every Combatant  
187 Command. We continue to strengthen and sustain existing partnerships and develop new  
188 relationships, as directed by policy, cementing a global counter-WMD readiness to prevail  
189 against our adversaries.

190 DTRA's deep ties to key U.S. allies and partner's enables strategic deterrence and reduction of  
191 global threats. DTRA-sponsored strategic dialogues, training, facilities and equipment in  
192 Southeast Asia has strengthened maritime and border security operations, including in the  
193 Philippines, where national forces have gone on to identify and interdict dual-use materials as  
194 they passed through the region – helping reinforce a strong deterrent against proliferation of  
195 these technologies by our adversaries. Additionally, the Biological Threat Reduction Program's  
196 focus on improving foreign partners' biosafety, biosecurity, and biosurveillance capabilities has  
197 been successful in early identification and containment of infectious disease outbreaks at their  
198 source, aiming to contain outbreaks before they become destabilizing regional events or pose a  
199 threat to the Joint Force, U.S. Homeland, or U.S. interests. Our Nation's experience dealing with  
200 the COVID-19 pandemic illustrates how important it is to build an indigenous capability in this  
201 area.



202 By combining cutting-edge research and development with expanding non-proliferation,  
203 counterproliferation, and security cooperation initiatives, DTRA continues to identify and secure  
204 vulnerable WMD materials, and ensure U.S. and partner readiness to understand, protect, and  
205 mitigate against the effects of adversary use.

206 *Build an Adaptive and Resilient Agency*

207 When we updated our Agency Strategy this year, we deliberately included the health and  
208 resilience of our workforce as a primary strategic objective because we recognize its criticality to  
209 DTRA's unique mission. DTRA's workforce is its single greatest strength; the Agency benefits  
210 from a highly skilled technical and operational workforce, committed to the counter-WMD  
211 mission. As we face a future marked by rapid change and technological advancement, our  
212 workforce must match and exceed the agility of the threat.

213 We must build and retain human capital that understands the past, and applies those lessons to an  
214 evolving threat environment. As such, we are building a comprehensive Human Capital  
215 Roadmap to recruit, retain, and continue to enable a workforce that is not only effective, but also  
216 passionate about our mission to counter and deter WMD and emerging threats.

217 I am proud to note that late last year, DTRA reached its first-year milestone of an internal  
218 Diversity and Inclusion Council. Led by two of our senior executives, this Council formed seven  
219 volunteer-led Employee Resource Groups. The Employee Resource Groups developed Action  
220 Plans that set the framework for special observances within DTRA, provided mentorship  
221 opportunities, and highlighted diverse perspectives. They also elevated an important policy  
222 change within DTRA: their input shaped new Agency guidance that aims to reduce bias in  
223 DTRA's civilian hiring processes. As the Employee Resource Groups enter their second year,  
224 we anticipate more ideas and innovation to continue to make progress towards the  
225 Administration's diversity and inclusion objectives.

226 Our work to build an adaptive and resilient agency nests with our commitment to develop  
227 innovative capabilities. I am pleased to report that this year's R&D 100 Awards – the "Oscars of  
228 Innovation" – honored DTRA for three projects. The awards are an indication of DTRA's

229 commitment to develop an innovative workforce that prioritizes groundbreaking technologies  
230 that counter the WMD threats of today and tomorrow.

231 **Conclusion**

232 There are few greater challenges to U.S. national interests than those posed by WMD and  
233 emerging threats. DTRA takes pride in providing the technological, operational, and intellectual  
234 capacity within the Department needed to meet these challenges. Our world-class workforce,  
235 and unparalleled professional network, access, and credibility give us an unmatched advantage in  
236 enabling the DoD, U.S. Government, and international partners to detect, deter, and defeat WMD  
237 and emerging threats in every theater.

238 We continue to create synergy between our Defense and Combat Support Agency roles, align  
239 resources to requirements to ensure the best use of our resources, and work toward measurable  
240 outcomes and tangible impact.

241 On behalf of DTRA's dedicated workforce, I thank you for your continued support of our critical  
242 work in safeguarding the lives and interests of the U.S. and our allies and partners abroad.  
243 Thank you for your time and invitation to participate today, and I look forward to your questions.