



U.S. Department of Defense

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STRATEGY FOR
COUNTERING WEAPONS
OF MASS DESTRUCTION

2023





2023 Department of Defense
Strategy for Countering Weapons
of Mass Destruction



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TABLE OF CONTENTS

SECRETARY’S FOREWORD	V
EXECUTIVE SUMMARY	VII
I. INTRODUCTION	1
II. SECURITY ENVIRONMENT	3
<i>Key Actors</i>	3
<i>Additional WMD Challenges</i>	5
III. LINKAGE TO THE NATIONAL DEFENSE STRATEGY	7
<i>Strategic Priorities</i>	7
<i>The Role of Countering WMD in Integrated Deterrence</i>	8
IV. STRATEGIC APPROACH (WAYS AND MEANS).....	10
<i>Ways</i>	11
<i>Foundational Means</i>	13
<i>Specific Means</i>	15
CHAPTER V: CONCLUSION.....	18

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SECRETARY OF DEFENSE
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In the 2022 National Defense Strategy (NDS), I laid out a vision for focusing the Department on safeguarding and advancing vital U.S. national interests. Critical to successful implementation of the NDS is understanding how specific security challenges, such as weapons of mass destruction (WMD), impact the security environment.

Some state actors view WMD as tools capable of limiting U.S. strategic choices and disrupting the execution of U.S. operations. As stated in the NDS, the People's Republic of China (PRC) poses the pacing challenge for the Department while the Russian Federation remains an acute threat across the spectrum of WMD. The PRC continues its rapid nuclear weapons modernization and expansion, and Russia has threatened nuclear weapons use and deployed a disinformation campaign on biological weapons use to support its illegal invasion of Ukraine.

Meanwhile, North Korea, Iran, and violent extremist organizations remain persistent threats as they continue to further pursue and develop WMD capabilities. Since the release of the Department's previous Countering Weapons of Mass Destruction (CWMD) Strategy in 2014, collectively, actors are integrating WMD into their military strategies in manners that greatly increase the risk of miscalculation in a crisis or employment in conflict.

The risks to the Department and the nation are real and urgent. Addressing them requires the Defense Department to account for WMD across the spectrum of conflict and in concert with our Allies and partners. This strategy articulates the vision for how Combatant Commanders, the Military Departments and Services, and other DoD Components will, consistent with the NDS, address WMD challenges in their plans, activities, and capabilities. We will sustain and broaden our work, in collaboration with other U.S. departments, agencies, allies, and partners, to deter CBRN use. If deterrence fails, we will field a force that is resilient and prepared to prevail in a CBRN contested environment.

This Strategy lays the foundation for the Department to confront the complex and demanding challenges presented by WMD. It also reinforces, complements, and integrates other guidance provided in the Nuclear Posture Review, the Missile Defense Review, and the Biodefense Posture Review by clarifying the role of the CWMD mission within the Department's overall approach to integrated deterrence and conflict. I am confident that the Department possesses the ingenuity and determination necessary to outpace current and future threats.

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EXECUTIVE SUMMARY

The 2023 Department of Defense (DoD) Countering Weapons of Mass Destruction (CWMD) Strategy outlines the Department's guidance and approach to addressing the pursuit, development, and use of weapons of mass destruction (WMD). The Strategy accounts for the Department's priorities and approach to integrated deterrence set forth in the 2022 National Defense Strategy (NDS) and addresses the current and future security environment, including the pacing challenge posed by the People's Republic of China (PRC) and the acute threat posed by the Russian Federation. The ability of both the PRC and Russia to procure, develop, and deliver WMD has progressed since the release of the previous DoD CWMD Strategy in 2014, which focused on counterterrorism and counterinsurgency operations and managing risks emanating from hostile, fragile, or failed states and safe havens.

The United States faces dynamic and evolving WMD threats. The risk of the United States or its Allies and partners facing a military confrontation that includes chemical, biological, radiological, and/or nuclear (CBRN) weapons has increased since 2014. This security environment, characterized by competitors in possession of current and emerging WMD, requires the Joint Force to increase CWMD deliberate planning and training associated with readiness for potential military confrontation.

A potential adversary may view WMD as tools for coercion, warfighting, and constraining U.S. options across the spectrum of conflict. Potential adversaries may develop and use WMD in a crisis or early in a conflict to influence decisions and defensive activities of the United States and its Allies and partners. The Total Force must carry out CWMD efforts daily to prevent new and manage existing threats and deter WMD-armed competitors.

The Department, along with other U.S. departments, agencies, Allies, and partners, will account for WMD threats holistically to prevent, mitigate, withstand, operate through, and recover from WMD attacks to achieve U.S. and coalition objectives. This Strategy will inform the development and execution of Globally Integrated Frameworks, campaign plans, contingency plans, posture plans, other set-the-theater activities, and CBRN defense requirements. At the same time, the Department will increase barriers to adversary WMD acquisition, capability advancement, and proliferation.

The Strategy expands upon the 2022 National Defense Strategy (NDS) guidance by outlining four CWMD-specific priorities tailored to current and emerging WMD challenges. It also reinforces, complements, and integrates other guidance provided in the Nuclear Posture Review (NPR), the Missile Defense Review (MDR), and the Biodefense Posture Review (BPR) by clarifying the role of the CWMD mission within the Department's overall approach to integrated deterrence and conflict.

First, the Department will defend the homeland from WMD attack.

Second, the Department will deter WMD use against the United States and its Allies and partners.

Third, the Department will enable the Joint Force to prevail in a CBRN-contested environment.

Fourth, the Department will work to prevent new WMD threats.

The Department's methods for implementing the four strategic priorities—referred to in this CWMD Strategy as the “Ways”—explain how the Department will use its collective “Means” to do so. The six “Ways” for DoD implementation are:

- ▶ Develop credible options to deter WMD use and assure Allies and partners;
- ▶ Build a Joint Force that can campaign, fight, and win in a CBRN environment;
- ▶ Enable Allies and partners to counter WMD proliferation and use;
- ▶ Degrade actor capability to develop, acquire, or use WMD;
- ▶ Take action, as part of whole-of-government efforts, to prevent proliferation and respond to use of WMD; and
- ▶ Pursue advanced research and development efforts to counter future chemical and biological threats.

Importantly, different actors and threats pose distinct challenges that require tailored investments and actions. This strategic approach, therefore, envisions providing Combatant Commands, Military Departments and Services, and Defense Agencies with the collective means to implement the Strategy's four priorities and align authorities, operations, activities, and investments based on current and emerging needs.

Lastly, strategies must accept a certain degree of informed risk and attempt to anticipate threats to the United States. The Strategy emphasizes cooperation with U.S. Allies and partners as well as other U.S. departments and agencies to achieve its objectives and mitigate risk. The Strategy also clarifies the role of the Department's CWMD activities.

I. INTRODUCTION

The 2023 DoD CWMD Strategy nests within the priorities of the 2022 NDS and provides tailored direction to advance the Department's CWMD mission. It identifies the need to account for WMD threats holistically to prevent, mitigate, withstand, operate through, and recover from WMD attacks. Recognizing that different actors and WMD capabilities pose distinct challenges, the Strategy outlines a strategic approach that requires tailored means, investments, and actions to address actors and threats of concern. The means underpin the Department's methods for achieving the Strategy's priorities.

The 2022 NDS directs the Department to sustain and strengthen deterrence, with the PRC as its pacing challenge and the Russian Federation as its acute threat. The United States will face two major nuclear powers armed with advanced WMD capabilities, in addition to other state and non-state actors pursuing or developing their own WMD capabilities. As articulated in the 2022 NPR, the current and future security environment will create new stresses on strategic stability and present new challenges for deterrence, arms control, and nonproliferation. Additionally, advances in science and technology exacerbate the WMD challenge and add greater complexity to the WMD threat.

For nearly two decades, the security environment required the Department to focus on counterterrorism and counterinsurgency operations. As such, the 2014 CWMD Strategy directed the Department to prioritize managing WMD risk emanating from hostile, fragile, or failed states and safe havens. The security landscape has since evolved and the CWMD strategy must evolve with it to address the pacing challenge and other acute and persistent threats. In order to address the challenges of the current and future security environment, the Department must now recapitalize, and in some cases reconstitute, its ability to conduct large-scale joint operations within a WMD-contested battlespace. The Department must also account for evolving factors in relevant DoD operations, activities, and investments to prevent potential adversaries from developing and exploiting an area of perceived asymmetric advantage across the spectrum of conflict.

While the PRC and Russia present the principal WMD challenges, the Democratic People’s Republic of Korea (DPRK), the Islamic Republic of Iran, and Violent Extremist Organizations (VEOs) remain persistent regional threats that must also be addressed. The Department will constrain VEO attempts to develop or acquire WMD through robust counterterrorism and crisis response activities. Proliferation concerns that state and non-state actors may develop WMD or improve an established WMD program remain, compounded by rapid advancements in technology, including the life sciences, artificial intelligence, automation, nanotechnology, hypersonic delivery systems, and defensive systems, such as hardened and deeply buried structures.

The CWMD Strategy reinforces, complements, and integrates with guidance provided in other DoD strategic documents by clarifying the role of the CWMD mission and aligning it with the Department’s priorities and Ally- and partner-centric approach to integrated deterrence.

The Strategy establishes four CWMD-specific strategic priorities, updated for the current and future security environment and underpinned by the 2022 NDS priorities:

- ▶ Defend the homeland from WMD attack.
- ▶ Deter WMD use against the United States and its Allies and partners.
- ▶ Enable the Joint Force to prevail in a CBRN environment.
- ▶ Prevent new WMD threats.

Definitions

Weapons of Mass Destruction: Chemical, biological, radiological, or nuclear weapons capable of a high order of destruction or causing mass casualties, excluding the means of transporting or propelling the weapon where such means is a separable and divisible part from the weapon. (JP 3-40)

Countering WMD: Efforts against actors of concern to curtail the conceptualization, development, possession, proliferation, use, and effects of WMD, related expertise, materials, technologies, and means of delivery. (JP 3-40)

Total Force: The organizations, units, and manpower used to meet the requirements associated with the DoD missions. It includes Active Component and Reserve Component military personnel, DoD civilian personnel (including foreign national direct- and indirect-hires), non-appropriated fund employees, host nation support personnel, and contracted services. (DoDD 5124.11)

II. SECURITY ENVIRONMENT

Developments in science and technology exacerbate the WMD challenge and add greater complexity to the WMD threat. Although legacy WMD threats remain, the confluence of emerging technologies enable the development of enhanced and novel threats. The global availability of dual-use technologies, particularly in the biotechnology space, may erode traditional barriers to proliferation and reduce opportunities to deny or disrupt development of offensive WMD programs and delivery systems. Meanwhile, potential adversaries have learned from and are adapting to traditional U.S. counterproliferation tools and approaches, including by indigenizing their supply chains and procurement mechanisms.

The current and future WMD landscape requires renewed attention and activity. Over the next decade, the United States will face two states armed with a suite of nuclear, chemical, and biological capabilities—the PRC and Russia—while the DPRK, Iran, and VEOs remain persistent threats. This, coupled with the changed international security environment, increases the risk that a peer military armed with WMD could confront the United States and its Allies and partners. To varying degrees, potential adversaries view WMD as critical tools for deterrence, coercion, and warfighting. They seek to leverage WMD to influence and constrain the United States across the spectrum of conflict. As competitors build larger and more diverse capabilities, they work to divide the United States, its Allies, and partners through coercive threats and malign activities in the “gray zone.”

The PRC is the overall pacing challenge for the Department across all domains and is making significant investments in its WMD capabilities. The United States must also continue to address the acute and persistent near-term nuclear, chemical, and biological threats posed by Russia and the DPRK, respectively. Iran, VEOs, and potential risks emanating from South Asia, remain

2022 National Defense Strategy

“The most comprehensive and serious challenge to U.S. national security is the PRC’s coercive and increasingly aggressive endeavor to refashion the Indo-Pacific region and the international system to suit its interests and authoritarian preferences...The PRC has expanded and modernized nearly every aspect of the PLA, with a focus on offsetting U.S. military advantages. The PRC is therefore the pacing challenge for the Department.” p. 4

persistent though less dynamic challenges demanding continuous attention. Finally, the PRC and Russia have also proven adept at manipulating the information space to inhibit attribution of its activities, to reduce trust and confidence in the effectiveness of countermeasure, and to potentially slow decision-making following WMD use.

Key Actors

The PRC as the Pacing Challenge. The PRC presents the most comprehensive and urgent challenge to the United States. The PRC has expanded and modernized nearly every aspect of the People’s Liberation Army (PLA), with a focus on offsetting U.S. military advantages. It is

aggressively pursuing a nuclear force expansion and modernization program, including missile delivery systems designed to manage regional escalation. The PRC likely intends to deploy at least 1,000 nuclear warheads by 2030 and 1,500 nuclear warheads by 2035. The PRC has long maintained a “no first use” (NFU) declaratory policy, which the PLA implements through the pursuit of a secure second-strike capability. However, the PRC’s lack of transparency regarding the scope and scale of its nuclear modernization raises questions regarding its future intent as it fields larger, more capable nuclear forces. In particular, there is ambiguity over the conditions under which the PRC would act outside of its NFU pledge.

The PRC has engaged in research and activities with potential dual-use applications, which raise concerns regarding its compliance with the Biological and Toxins Weapons Convention (BWC) and the Chemical Weapons Convention (CWC). The United States has compliance concerns with respect to PRC military medical institutions’ toxin research and development given their potential as a biological threat. Further, the United States cannot certify that the PRC has met its obligations under the CWC regarding the PRC’s research of pharmaceutical-based agents and toxins with potential dual-use utility for chemical weapons applications.

Russia as an Acute Threat. Russia poses the most acute nuclear, biological, and chemical threat in the near-term and will continue to retain WMD capabilities in the medium and long term. Its government is pursuing a political, economic, and military strategy that seeks to undermine NATO unity and to dominate—through force, if necessary—neighbors in its “near-abroad.” Russia is expanding and modernizing its large and diverse arsenal of nonstrategic nuclear weapons to create effects in the air, land, and maritime domains. Russia appears to believe such systems offer options to deter adversaries and control the escalation of potential hostilities with the United States and NATO.

The United States assesses that Russia is in violation of its BWC and CWC obligations. The 2020 and 2018 assassination attempts by Russian operators using *novichok* nerve agent make clear that Russia retains an undeclared chemical weapons program. The United States is concerned that Russia has a pharmaceutical-based agent program intended for purposes inconsistent with the CWC. Furthermore, the United States assesses that Russia retains an offensive biological warfare program. Russia has provided an incomplete acknowledgement of the former Soviet program, has not furnished evidence of the dismantlement or cessation of key activities, and continues secrecy efforts to protect Russia’s potentially dual-use biological research and development efforts.

DPRK as a Persistent Threat. The DPRK has prioritized the country’s nuclear weapons arsenal and ballistic missile force. The DPRK enacted a law in 2022 reaffirming its self-proclaimed status as a nuclear power, establishing conditions for nuclear use, and rejecting denuclearization. The law articulates that the DPRK will use nuclear weapons if it perceives an impending nuclear attack; if the Kim regime, people, or the state’s existence were threatened; or as an offensive war option. Capability developments provide the DPRK with options for nuclear weapons use at any stage of conflict. The DPRK is developing and fielding mobile short-, intermediate-, and intercontinental-range nuclear capabilities that place the U.S. homeland and regional Allies and partners at risk.

The DPRK's longstanding chemical and biological weapons capabilities remain a threat, as the DPRK may use such weapons during a conflict. The DPRK maintains up to several thousand metric tons of chemical warfare agents and the capability to produce nerve, blister, blood, and choking agents. The DPRK chemical employment methods include artillery, ballistic missiles, and unconventional forces. The DPRK has failed to provide a BWC confidence-building measure declaration since 1990.

Iran as a Persistent Threat. It is assessed that Iran is not pursuing a nuclear weapons program at this time, but has the capacity to produce enough fissile material for a nuclear device in less than two weeks. Further, the United States assesses Iran to be noncompliant with its CWC obligations. For example, Iran has not submitted a complete chemical weapons production facility declaration to comply with CWC processes. The United States is also concerned that Iran is pursuing dual-use central nervous system-acting chemicals for offensive purposes.

Additional WMD Challenges

Proliferation and Procurement. Actors of concern continue to leverage supply chains as proliferation pathways to acquire illicit materials while also developing indigenously manufactured components. This is reinforced through espionage and intellectual property theft. Interconnected global supply chains, increased anonymity through use of cryptocurrency and front companies, dual-use materials and knowledge, and challenges to establish universal export controls on critical items all exacerbate the challenges of preventing proliferation.

Emerging and Disruptive Technologies. New technologies, such as big data, artificial intelligence, and genomic modification, have the potential to significantly influence the CBRN environment. Such technologies simultaneously offer the prospect for more effective, resilient, and cost-efficient military and civilian solutions while also representing potential new threats from state and non-state actors. The same biological and chemical science advancements created to develop life-saving medical countermeasures could also be used by potential adversaries to develop new or enhanced agents. Technologies intended to reduce testing and production inefficiencies, such as biofoundaries and additive manufacturing, create opportunities to reduce the development footprint and increase the number of proliferation pathways available to malign actors. In this way, emerging and disruptive technologies present both risks and opportunities to the United States and its Allies and partners.

Arms Control, Nonproliferation, and Disarmament. The United States remains committed to arms control, risk reduction, and nonproliferation efforts as indispensable tools to preserve stability, deter aggression, and avoid nuclear conflict. Although the United States upholds its obligations, other actors have proven either unwilling or uninterested in negotiating or abiding by legally binding agreements. The United States has assessed that Russia is in violation of its BWC and CWC obligations, and the PRC continues to advance programs that raise concerns over compliance with the BWC and the CWC. The DPRK and Iran are pursuing activities that raise U.S. concerns about compliance with relevant multilateral nonproliferation treaty obligations.

Despite these current challenges, the United States remains committed to avoiding costly arms races and continues to pursue new arms control and risk reduction arrangements where possible.

Enabling Across Domains. Competitors seek to achieve multi-domain effects through activities across cyber, space, and terrestrial domains with WMD-related information and advanced systems. Specifically, both the PRC and Russia have obfuscated the truth and reinforced their preferred false narratives through disinformation. Russia has employed disinformation to deny Russian and Syrian chemical weapons use, justify its invasion of Ukraine, and falsely accuse the United States and Ukraine of violating the BWC. The PRC reiterates and reinforces Russian disinformation efforts and uses disinformation to justify territorial claims and to assert that the COVID-19 pandemic originated with the U.S. military. These actions result in a more complex and entangled problem set.

Risks from Bioincidents. The ability to determine a deliberate biological weapons attack is complicated by the potential for an accidental laboratory release and the growing risks from naturally occurring diseases, including from climate change. Additionally, reservoirs of naturally occurring pathogens of high consequence are potential avenues for biological weapons research. Adversaries can also leverage this more complex operating environment to constrain U.S. strategic choices by masking an attack, augmenting other activities, or conducting an opportunistic disinformation campaign. Furthermore, outbreaks are likely to lead to an increase in requests for Defense Support of Civil Authorities, which adds a competing activity to the Joint Force mission of fighting and winning the nation's wars.

III. LINKAGE TO THE NATIONAL DEFENSE STRATEGY

This CWMD Strategy expands upon the NDS to address WMD challenges. This section identifies WMD-specific strategic priorities and describes their linkage to the NDS. It discusses the role of CWMD in integrated deterrence and demonstrates the need to build enduring advantages by operating and prevailing in a CBRN environment.

Strategic Priorities

The NDS outlines four defense priorities for the Department: 1) Defend the homeland, paced to the growing multi-domain threat posed by the PRC; 2) Deter strategic attacks against the United States and its Allies and partners; 3) Deter aggression, while being prepared to prevail in conflict when necessary, prioritizing the PRC challenge in the Indo-Pacific region and then the Russia challenge in Europe; and 4) Build a resilient Joint Force and defense ecosystem.

Informed by these overarching defense priorities, this CWMD Strategy identifies CWMD-specific priorities to guide strategies, policies, plans, and investments. These priorities define the unique contributions DoD CWMD activities and capabilities provide to the Joint Force.

- ▶ **Defend the Homeland from WMD Attack.** Defense of the homeland is the Department's primary and priority objective. Potential adversaries may perceive WMD threats or actual attacks on the homeland as important methods to achieve their objectives. DoD engages in an integrated, layered defense that extends from interdicting, disrupting, securing, and/or eliminating CBRN threats abroad to building a resilient Joint Force so the United States can engage, contain, and respond to threats globally. The Department will continue to emphasize force protection of forward-deployed U.S. forces. The Department also sustains specialized capabilities and capacities that may support other lead federal agencies as part of a whole-of-government WMD prevention and response activities domestically.
- ▶ **Deter WMD Attacks.** The Department seeks to deter all forms of strategic attacks, including chemical, biological, radiological, and nuclear weapons use. As part of the integrated deterrence approach described in the 2022 NDS and NPR, CWMD activities and capabilities work in concert with advanced conventional capabilities, missile defense, missile defeat, and U.S. nuclear forces to deter these high consequence attacks. CWMD activities that strengthen resilience and support force deployment from the homeland are key to reducing risk and provide additional tools, often unique to chemical and biological threats. These activities also help shape an actor's decision calculus at the operational level by diminishing the potential advantage gained from WMD use. Credible options to degrade, defeat, and eliminate critical capabilities and programs further demonstrate the undesirable costs an actor will face should it use WMD. The Department will undertake these activities in an integrated approach along with military, diplomatic, and economic instruments of power, harnessing the comparative advantage of our interagency and Allies and partners to deter all forms of WMD attack.

- ▶ **Prevail in a CBRN Environment.** It is essential that the Total Force, along with Allied and partner forces, can fight, win, and reconstitute in the face of WMD threats or attacks to achieve coalition warfighting aims. If potential adversaries perceive the Joint Force or Allied and partner capabilities to be vulnerable to severe degradation by WMD employment, they will be more confident in escalating with WMD use to gain advantage or prevent defeat. A resilient Total Force is better able to contain and defeat threats away from the homeland, operate through disruption and WMD scenarios in the homeland, strengthen deterrence credibility, and provide options to prevent proliferation.
- ▶ **Prevent New WMD Threats.** Preventing new WMD threats remains an important supporting component to the CWMD mission. Preventative efforts seek to contain the strategic challenge posed by our current competitors and reduce the prospect of new WMD actors. The CWMD enterprise must find opportunities to disrupt and degrade a WMD-armed competitor's efforts to grow and improve their indigenous WMD programs. It remains incumbent upon the Department, as part of a whole-of-government approach, to continue to prevent new actors from acquiring WMD capabilities. A major crisis driven by WMD acquisition could divert attention and limited resources away from the pacing challenge. The Department's CWMD mission helps reduce some of the risk identified in the NDS through prevention, threat reduction, and building partnership capacity.

The Role of Countering WMD in Integrated Deterrence

Integrated deterrence, as introduced in the 2022 NDS, is how we align the Department's policies, investments, and activities to sustain and strengthen deterrence—tailored to specific problems, competitors, and settings. Integrated deterrence is backstopped by a safe, secure, and effective nuclear deterrent and further expounded upon in the 2022 NPR. CWMD plays an important role in advancing integrated deterrence objectives by enabling the Joint Force to plan, campaign, fight, and win in a CBRN environment.

Denial and resilience are the cornerstones of the CWMD mission's contribution to integrated deterrence. A survivable Joint Force that can prevail in a CBRN-contaminated environment diminishes the adversary's military advantage gained from WMD use and undermines adversary confidence in its use. This begins with an integrated, layered CBRN defense to minimize degradation of U.S., Allied, and partner forces. The ability and capacity to restore operations further limits the intended effects. Holistically, U.S. denial and resilience activities domestically and internationally send a distinct message that a strategy reliant on WMD escalation on the battlefield is not a conduit to victory. The inability to achieve desired outcomes may encourage a decision-maker to view off-ramps more favorably.

CWMD activities also impose costs on potential adversaries by maintaining a credible military ability to degrade, defeat, and eliminate an adversary's highly-valued WMD capabilities. As described in the NDS and NPR, the United States will maintain a range of nuclear and non-nuclear capabilities to deter strategic attacks. Cost imposition also entails promoting and enforcing WMD-related international rules and norms, including through diplomatic and

economic means. Raising the cost of acquiring or developing WMD programs can dissuade other actors from acquiring WMD.

As expanded upon in the 2022 NPR, deterrence approaches must be tailored to specific actors and contexts of the security environment at the time to be effective. Thus, the Department's approach to integrated deterrence requires tailoring available tools to a particular threat. Central to tailoring deterrence is the ability to communicate clearly that an explicit WMD threat will not coerce or prevent the United States from protecting its vital national interests. An actor that does not receive and understand U.S. intent is less likely to be deterred. As a result, the Defense Department, in concert with other U.S. departments and agencies, must carefully consider when and how to deliver a message to enable deterrence effectiveness.

IV. STRATEGIC APPROACH (WAYS AND MEANS)

Effective strategies require linking priorities with ways (methods to use the means and implement the priorities) and means (resources and capabilities). As we seek to advance this Strategy's four priorities, the Department will pursue six Ways that seek to deter potential adversaries and increase the resilience of the U.S. Joint Force and the forces of our Allies and partners:

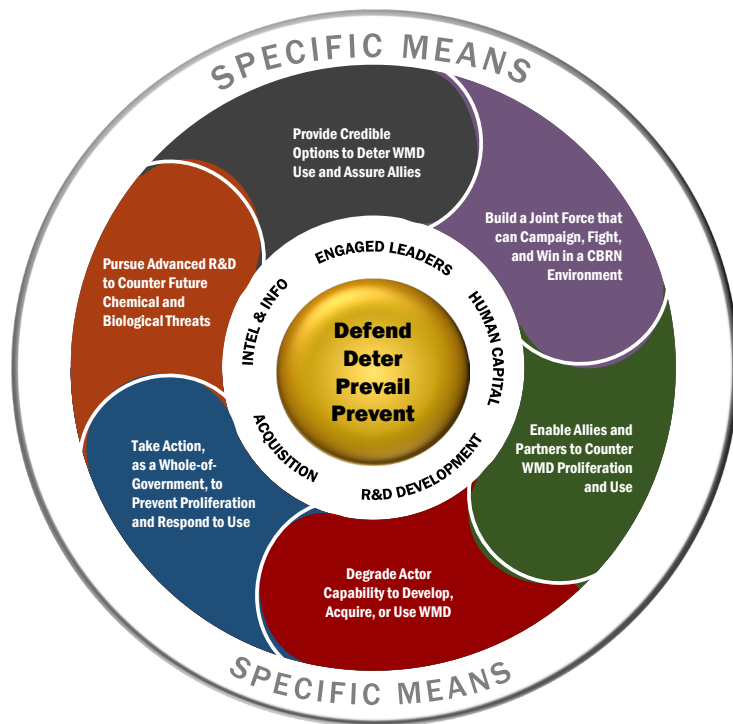
1. Provide credible options to deter WMD use and assure Allies and partners;
2. Build a Joint Force that can campaign, fight, and win in a CBRN environment;
3. Enable Allies and partners to counter WMD proliferation and use;
4. Degrade actor capability to develop, acquire, or use WMD;
5. Take action, as part of whole-of-government efforts, to prevent proliferation and respond to use of WMD; and
6. Pursue advanced research and development efforts to counter future chemical and biological threats.

This CWMD Strategy also identifies five Foundational Means that underpin and support all six of the above Ways. These Means are the collective investments and resources critical for the success of this CWMD Strategy:

1. Intelligence and Information;
2. Engaged Leaders Prior to Crisis and Conflict;
3. Human Capital Investment;
4. Investment in Research and Development; and
5. An Adaptive and Responsive Acquisition System.

Additionally, the Specific Means specify detailed investments, resources, and capabilities directly supporting each of the six Ways (*further detailed in this chapter on pages 15–17*). The Department will implement its approach to countering WMD by providing Combatant Commands, Military Departments and Services, and Defense Agencies the flexibility to tailor activities from the Ways with the Means based on their unique current and emerging needs.

Embedded in this approach are certain core elements. The basis for any tailored approach is a credible Joint Force that campaigns against WMD threats and is prepared to prevail despite the presence of CBRN hazards on future battlefields. This begins with deepening understanding, including through intelligence-based assessments, of the threat posed by WMD in the hands of an adversary to appropriately inform the Department’s campaign and contingency plans, training exercises, and readiness standards across the Joint Force and with Allies and partners. This also relies on leaders’ understanding of the WMD problem prior to crisis so



CWMD Strategic Approach

they can take proactive steps to prevent use and effectively communicate U.S. capabilities in the manner and timing necessary to deter attack. Finally, DoD must maintain and, where necessary, establish scientific and technological advantage to prepare for and respond to ever-evolving threats, particularly in biotechnology and chemistry that could produce new strategic or operational impacts.

Ways

- ▶ **Provide Credible Options to Deter WMD Use and Assure Allies and Partners.** The Department takes action to deter WMD use and assure U.S. Allies and partners. CWMD activities provide tools as part of an integrated approach to help shape an actor’s decision calculus by diminishing the advantage gained from WMD development and undermining an adversary’s confidence in its utility. Deterrence is reinforced through credible options to degrade, disrupt, defeat, and eliminate critical capabilities. CWMD activities also enable U.S. and coalition forces to campaign, fight, and win in a CBRN environment, as well as afford decision-makers flexible options to impose costs and deny benefits. Effective assurance begins with Allied confidence in the credibility of U.S. extended nuclear deterrence and the U.S. ability to prevail in conflict. The Department will strengthen deterrence and assurance by cooperatively advancing combined capabilities, improving shared CBRN defense, and demonstrating collective resolve that denies adversaries the benefit of WMD use and improves Allied resilience. The Department will engage in efforts to share information and build Ally and partner capacity to deny adversaries the operational benefits of WMD while remaining resilient in the face of WMD threats. Such activities will further reinforce Allied and partner beliefs that they can resist threats and remain

secure against the risk they will assume in a crisis or conflict, thereby strengthening assurances to Allies and partners.

- ▶ **Build a Joint Force that can Campaign, Fight, and Win in a CBRN Environment.** CWMD activities exist at all phases of campaigning when the Department faces a WMD-armed potential adversary or competitor. As such, the Department must assume that adversary WMD are a key feature of the operating environment and plan accordingly. As the Department undertakes campaigning activities, it will holistically and broadly be able to withstand, operate through, and recover from a WMD attack across the spectrum of conflict in order to achieve U.S. and coalition objectives.
- ▶ **Enable Allies and Partners to Counter WMD Proliferation and Use.** The Department will cooperate with Allies and partners to increase resilience to coercion and improve interoperability with the Joint Force. This begins with improved intelligence sharing, cooperative planning, and capability development in order to enhance our combined ability to withstand CBRN effects in conflict. The Department will support security cooperation and building partner capacity programs to reduce the shared vulnerability of proliferation across borders and the risk of bioincidents, deliberate CBRN weapons use, and disinformation.
- ▶ **Degrade Actor Capability to Develop, Acquire, or Use WMD.** To limit the growth of existing WMD programs and suppress new programs, the Department must possess the capabilities to directly degrade adversary pathways to developing WMD. Furthermore, it must be able to disable or defeat WMD threats prior to use in conflict. The Department will continue to take actions that reduce access to WMD development pathways across the entire development spectrum. This includes pathway defeat activities with Allies and partners, as well as maintaining the ability to eliminate programs that could lead to proliferation. The Department will maintain the capabilities specifically designed to take action, through all necessary means, to prevent or limit the destructive effects of WMD devices. The Department will act in coordination with partners whenever possible, but will act unilaterally if necessary to degrade others' WMD and related capabilities. Where possible, the Joint Force will be prepared to counter WMD employment through missile defense, missile defeat, and specialized agent defeat capabilities.
- ▶ **Take Action, as a Part of the Whole-of-Government, to Prevent Proliferation and Respond to Use.** The Department reinforces and remains in support of other U.S. Government efforts to reduce incentives for proliferation and halt the spread of WMD. The Department provides tools to U.S. Government departments and agencies to promote common threat awareness through intelligence and threat analysis, participation in national-level exercises, and contributions to unilateral and multilateral export control efforts. This includes supporting future arms control negotiations and developing new technologies for monitoring and verification. The DoD Cooperative Threat Reduction (CTR) Program is a critical component of the overall U.S. Government effort to reduce proliferation and other WMD risks. In accordance with DoD CWMD authorities, the

Department sustains and is prepared to contribute capabilities to whole-of-government WMD prevention and response activities domestically or as part of an international response to the use of WMD outside the United States.

- ▶ **Pursue Advanced Research and Development to Counter Future Chemical and Biological Threats.** While the acute threats the Department faces today require continued research and development across the full CBRN spectrum, the 2035 and beyond threat landscape requires investments over the next five years in basic and applied sciences, as well as advanced technologies, to anticipate and counter future chemical or biological weapon threats. These investments lay the groundwork for medium- and long-term advanced development and acquisition. The Department must leverage public-private partnerships focused on chemical and biological defense to reduce risk to the Joint Force and to prepare to respond to and mitigate future threats. Actions associated with reducing these risks will provide capabilities to improve threat understanding and prediction, individual and collective hazard exposure monitoring, real-time chemical and biological detection and medical diagnostics, broad spectrum prophylaxis and therapeutic medical countermeasures, and improved individual and collective protection.

This tailorable approach maximizes the direct and complementary deterrent effects of CWMD activities and investments and the combat capable forces necessary to underpin deterrence credibility. It further recognizes the need for simultaneous actions against different actors and threat modalities as they pose distinct challenges that a one-size-fits-all approach cannot satisfy.

Foundational Means

Every strategy requires identifying and investing in certain essential elements that underpin all individual activities and tasks, and thereby enable the strategy to succeed. These elements are never one-time investments, but instead are areas that require a campaigning mentality to create continual incremental improvements over time. This CWMD Strategy recognizes five Foundational Means that are crucial to countering WMD: Intelligence and Information; Engaged Leaders Prior to Crisis and Conflict; Human Capital Investment; Investment in Research and Development; and an Adaptive and Responsive Acquisition System. A broad cross-cutting application of these elements provides the basis for the CWMD Strategy's strategic approach.

- ▶ **Intelligence and Information.** The number of potential actors of concern and the highly-guarded nature of WMD programs require that the Department improves its ability to collect, assess, understand, and disseminate vast amounts of information. A key element of this effort is to provide WMD threat intelligence to the Joint Force, Combatant Commands, the Military Departments and Services, the Defense Agencies, and Allies and partners. Building an intelligence and information advantage requires investments in expanding collection capacity and capability, as well as capitalizing on new and innovative approaches to analytical methods to address overarching intelligence and regional crisis response requirements. This includes investing in collaboration between the Defense Intelligence Enterprise and research communities to incorporate new standards and methods for

intelligence analysis on rapidly evolving technological change. The Department will also increase information sharing and, where possible, write for releasability to improve communication and strengthen cooperation.

- ▶ **Engaged Leaders Prior to Crisis and Conflict.** Preventing an adversary’s ability to limit U.S. options either through coercion during a crisis or employment of WMD in a conflict requires that military commanders and senior leaders understand the implications of WMD. Rather than exacerbate risk by isolating and stove-piping CWMD as a separate effort and having sporadic emphasis that occurs only in the midst of immediate hostilities, engaged leaders must integrate CWMD into all phases of efforts and planning. Developing engaged leaders is a necessary step to develop the Total Force awareness and resilience that can help deter WMD use and increase readiness to operate through a WMD incident. Leaders will drive decisions that lead to DoD-wide action that will close gaps, reduce vulnerabilities, and increase resilience and readiness. This will create opportunities for early action to deter use and mitigate effects. Early actions, underpinned by improved understanding, will strengthen the Department’s ability to manage WMD challenges from persistent threats in order to maintain overall strategic focus on the PRC as the pacing challenge.
- ▶ **Human Capital Investment.** People are the Department’s most valuable asset and are indispensable in building enduring advantages to counter current and emerging WMD threats. The Department must recruit, train, retain, and appropriately allocate a highly skilled and diverse workforce to solve the complex and rapidly evolving challenges presented by WMD. Although DoD will deepen specialized expertise within the CWMD enterprise, the WMD problem set is a problem for the entire Department. This will require breaking down barriers between conventional and CWMD communities to understand how CBRN weapons can influence or undermine plans and operations. Only when these barriers have been eliminated can DoD maximize its ability to prevail in CBRN environments. This will include leveraging Joint Professional Military Education (JPME) and Total Force education, continuing education, and enhanced training.
- ▶ **Investment in Research and Development.** The Department must leverage areas such as artificial intelligence, advanced materials, biotechnology, synthetic biology, additive manufacturing, and robotics to modernize defensive capabilities. Continued nuclear and radiological research and development investments are required in the areas of detection, warning, effects analysis, and mitigation. In the long term, the Department must prioritize smart investments that anticipate and respond quickly to changes in the security environment.
- ▶ **Adaptive and Responsive Acquisition System.** The WMD challenge requires interweaving specialized material needs and capabilities designed to meet other defense requirements. As the Department’s research and development investments provide innovative solutions, the acquisition system must be poised to rapidly conduct advanced development and transition these capabilities into the hands of the warfighter. Recognizing that the system is further challenged by the diversity of threats each actor presents globally, and ever-present budgetary constraints, this effort requires hard prioritization decisions for CBRN defense,

counterproliferation, and WMD defeat-related procurements and inventory levels. Determining priority missions and identifying requirements for critical capabilities will enable the Department to acquire capabilities more quickly and responsively based on those needs. Additionally, reinvigorating the requirement to build CBRN resiliency from the start will enable more accurate cost projections for the hardening of new capabilities.

Specific Means

Building enduring advantages also requires specific investments and activities. The specific means discussed here nest under the six Ways and build on the Foundational Means to identify critical capabilities and activities necessary for the success of this CWMD Strategy. Although the following are aligned to the most significantly impacted Way, many have relevance to other Ways as well. For example, improving multilateral training and exercises not only improves the Joint Force, it also enhances interoperability, thereby improving our combined ability to prevail in a CBRN environment. The Department will take specific steps to bolster deterrence. The effectiveness of deterrence and assurance hinges on clear communication. To have a deterrent effect on an actor's decision-making, the Department must communicate the Joint Force's ability to operate effectively in a CBRN environment. This includes the proactive release of information tailored to a specific threat and context to deter potential adversary WMD use. As such, the Department will enhance its ability to provide clear, credible information to our Allies and partners, other U.S. Government departments and agencies, the U.S. population, and potential adversaries. U.S. messages will be deliberate and support the open release of sufficient information to counter an adversary's disinformation campaign. This includes leveraging DoD capabilities to rapidly and accurately assist in whole-of-government efforts to characterize potential WMD attacks and attribute responsibility.

The Department will field forces capable of operating against the full range of current and emerging WMD threats employed on the battlefield, which could occur early in a conflict. To maintain readiness against WMD coercion or use, the Department must actively integrate WMD challenges into service, joint, interagency, and multinational exercises. U.S. force design should assume adversary CBRN use and capabilities consistent with the best and latest intelligence assessments. This includes CBRN requirements for future combat system and prepositioned CBRN defense capabilities. Improvements to threat awareness require a deliberate approach to developing specialized expertise, necessitating a sustained focus on CWMD-specific JPME across all levels of leadership. A similar sustained emphasis is needed in the area of CBRN training. To improve the CBRN operational readiness of the Joint Force, Combatant Commands, Military Departments, and the Services must commit to integrating CBRN considerations into individual and unit level training, readiness standards, and apply these acquired skills in associated unit and theater exercises.

The Department will continue disruption activities to prevent WMD acquisition. Such activities include multilateral export control regimes (e.g., the Australia Group, Missile Technology Control Regime, and the Nuclear Suppliers Group), Proliferation Security Initiative efforts, and the DoD CTR program.

Allied and partner ability to identify and mitigate WMD threats is foundational to advancing CWMD Strategy priorities. These states, particularly those most exposed to coercion, aggression, and proliferation, must have the capacity and capability to respond. The Department works cooperatively with these nations to bolster deterrence, strengthen counterproliferation efforts, and improve denial capabilities, including resilience. This includes tailored threat identification and response and attribution capabilities. The Department will integrate Allied and partner CBRN capabilities in combined planning, especially if U.S. forces are accepting known risk in a potential CBRN contingency. U.S. planning efforts will seek to incorporate potential Allied and partner views, areas for collaboration across the spectrum of conflict, and options to release information at the appropriate level when necessary. DoD campaigning will integrate Allied and partner CBRN capabilities that are unique and complementary to U.S. capabilities, wherever possible and appropriate.

The DoD Cooperative Threat Reduction Program

The DoD CTR Program works with Allies and partners to prevent the proliferation of CBRN weapons; CBRN weapons components; and CBRN weapons-related materials, technology, and expertise to eliminate CBRN weapons wherever possible and to strengthen Allies' and partners' ability to detect, attribute, and respond to WMD-related threats. The Department has completed the "CTR 3.0" strategic review, which will evolve the focus of the DoD CTR Program toward countering WMD threats posed by strategic competitors, while continuing to maintain activities to prevent violent extremist organizations' acquisition or proliferation of WMD and to mitigate the risk of diseases that could cause pandemics. The DoD CTR Program will work with Allies and partners to deter WMD use by reducing the operational and political utility of WMD through an emphasis on attributing CBRN use, as well as constraining and delaying adversaries' WMDs and WMD delivery systems. The DoD CTR Program will also expand global efforts to combat pandemics arising from natural sources or accidental release by building capabilities and capacities for Allies and partners to detect, characterize, respond to, and, if necessary, operate through a biological incident to enhance resilience.

The Department will continue to contribute to whole-of-government actions that delay and prevent the development, acquisition, and employment of WMD. For established WMD programs, disruption efforts will seek to inhibit the advancement of existing or planned capabilities. In addition, multilateral export controls and collective international efforts allow the United States and its Allies and partners to prevent the export of WMD-enabling commodities before their transfer. The Department, in concert with other U.S. Departments and Agencies, must also maintain the specialized units, equipment, and expertise to eliminate limited WMD materials in non-permissive conditions during military operations.

Improved kinetic and non-kinetic options provide additional tools to disrupt WMD capabilities and limit damage to the United States and its Allies and partners.

Finally, the Department must make threat-informed investments today to counter the challenges of tomorrow. The Department will continue to work with Allies and partners on CBRN defense research, development, testing, and evaluation, and materiel and non-materiel solution development and deployment. Deepening shared investments will further reduce capability development and acquisition timelines, as well as the financial burden on the United States, and improve interoperability between the Joint Force and Allied and partner capabilities. To gain a CBRN defense advantage against future threats, the Department will conduct predictive exploratory analysis based on viable and realistic threat expectations, as well as develop capabilities to improve threat early warning and detection.

CHAPTER V: CONCLUSION

The United States faces an increasingly complex, disruptive, and competitive strategic environment. Present in this environment is the enduring threat posed by the acquisition, use, and employment of WMD. As potential adversaries expand and modernize their capabilities, it is critical that the Department strengthen its ability to deter and, should deterrence fail, achieve our objectives in the face of WMD use.

This CWMD Strategy outlines an approach to account for WMD threats holistically. It identifies how CWMD activities fit into the broader campaigns against potential adversaries, while balancing actions to prevent regional actors from diverting the Department from our overall priorities. It explains how CWMD activities integrate into our deterrence approach through denial of benefits and by providing additional options for cost imposition. Finally, the CWMD Strategy directs the Department to invest in our people, reinforce our scientific capabilities, and build enduring advantages against current and future threats.

