CHAPTER 2

The Role of Special Operations Forces in Countering Weapons of Mass Destruction

Brendan G. Melley

The use of nuclear, chemical, and/or biological weapons against the United States and our allies and partners continues to be perceived as a low-probability event in the national security community. Yet, at a time when international norms and other constraints on the use of these weapons have grown weaker, they are becoming more accessible and attractive to adversaries because of their potential utility against a range of vulnerable targets. Major US strategy documents—including the 2017 National Security Strategy (NSS), 2018 National Defense Strategy (NDS), 2018 Nuclear Posture Review (NPR), 2018 National Military Strategy (NMS), and 2018 National Strategy for Countering Weapons of Mass Destruction Terrorism—identify countering the threat or use of weapons of mass destruction (WMD) as a critical priority for the United States.[i]

Emerging technology with WMD applications will further complicate the ability of the United States to prevent the acquisition of WMD capabilities by state and nonstate actors, contain and reduce WMD threats, and respond to crises, which are the core objectives of the 2014 Department of Defense (DOD) Strategy for Countering Weapons of Mass Destruction (CWMD).[1] WMD threats will become more challenging to counter as technologies develop—from capabilities that enable rapid analysis of massive amounts of data, to advances in the life sciences and new delivery methods, to cite a few important areas of innovation. Technology development cuts both ways, however, as US efforts to keep pace or gain advantage over adversaries' capabilities can assist with detecting and responding to WMD threats that may arise.

The WMD-related objectives identified in the national and DOD strategies rely implicitly on the roles of US special operations forces (SOF), whose capabilities are critical for competing and winning in this WMD-infected security environment. Core SOF capabilities work to shape the operating environment in the current "steady-state" landscape in a manner that serves to deter, dissuade, and frustrate adversaries from pursuing or aquiring WMD. US SOF's close relationships with foreign forces enable stronger partnerships to complement broad DOD or US government efforts against adversaries who possess or seek WMD capabilities. Below the level of armed conflict, SOF can disrupt the efforts of state and nonstate actors, including terrorists, who pose a threat of acquiring, developing, and employing WMD capabilities. In a crisis, SOF can counter imminent WMD threats through direct action,

i The views expressed in this paper are those of the author and are not an official policy or position of the National Defense University, the Department of Defense, or the US government. The author is grateful for the advice of Mr. Paul Bernstein, Mr. John Caves, Dr. Diane DiEuliis, Senior Chief Petty Officer, USN (Ret.) Michael Greene, and Mr. Dain Hancock in crafting this paper.

sabotage, unconventional warfare, or counterterrorism operations. With their global presence and reach, SOF remain a critical capability for meeting the United States' priorities for countering WMD.

The Emerging Strategic Environment and WMD

As we enter the third decade of the twenty-first century, US national security is being challenged as never before. The federal government's "fundamental responsibility is to protect the Amercian people, the homeland, and the American way of life."[2] The 2018 NDS summary presents a significant change in focus from that of the post-Cold War period, stating that the "central challenge to US prosperity and security is the reemergence of long-term, strategic competition" with China and Russia, shifting from the emphasis on counterterrorism following 9/11.[3] Not only are competitors seeking to compete with the United States militarily, they and some other state actors seek to undermine what we take for granted—rule of law, freedom of speech, a robust economic foundation, domestic stability, accurate information, and fact-based reason.

WMD threats are transregional and global, without regard to borders, designated areas of responsibility, or bureaucratic authorities, and the global community cannot wish away or uninvent these weapons. Nuclear, chemical, and biological weapons often are attractive to actors who seek advantage over their rivals or protection from outside intervention. With few exceptions, history has shown that states in possession of WMD will not give them up unilaterally.[ii] The perceived and real advantages to a state's security often outweigh external sanctions and pressure because possession of WMD are believed to create demonstrable deterrence or other leverage against foreign influence or attack. Analysts have long argued that North Korea uses its nuclear program to advance its political, diplomatic, and security interests.[4]

The continued threat from terrorist or other violent extremist organizations (VEOs) obtaining WMD remains a significant concern. The 2018 National Strategy for Countering WMD Terrorism, complementing the 2018 National Strategy for Counterterrorism, emphasizes "the need for continuous pressure against WMD-capable terrorist groups."[5] The strategy includes reducing and securing the agents, precursors, and materials needed by terrorists to acquire WMD, deterring states from providing support to terrorists with WMD ambitions, and detecting and defeating terrorist WMD networks.[6]

Moreover, the proliferation behavior of bad actors is increasingly putting pressure on the international nonproliferation regimes. Syrian and Russian use of chemical weapons show a flagrant disregard for their commitments under the Chemical Weapons Convention (CWC). Since the 1990s, the testing and deployment of nuclear weapons in South Asia, and North Korea's aggressive nuclear weapons program, have

ii For example, Belarus, Ukraine, and Kazakhstan removed or dismantled Soviet nuclear weapons on their territory after the fall of the Soviet Union, and South Africa's President De Klerk ordered the dismantling of its nuclear weapons in 1990.

demonstrated that states can successfully develop these capabilities outside of the constraints of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT).

The increasing pace of technological developments across all sectors of society, from the information sphere to public health, creates a significant potential for surprise to US security interests.[7] The United States will face challenges identifying and countering the rapid development of new and innovative technology with WMD applications. States will continue to accord the highest security protection to prevent discovery and disruption of their most sensitive programs; advances in computing power, encryption, and manufacturing capabilities can serve to hide secret programs, leading to fewer detectable signatures. Even as the United States harnesses these advancements for its own security needs, federally funded technology developments to detect and counter adversary WMD programs may not be sufficient. Close and continuous collaboration with innovators in the private sector will be essential, as markets likely will drive the commercial breakthroughs that provide the possessor with a competitive edge.

Since the early 1990s, several US initiatives, programs, and strategies have been created, to include more explicit guidance to SOF and joint forces to address emerging WMD threats in a post–Cold War environment.[iii] Concerns ranged from the security of WMD, associated materials, and expertise in the former Soviet Union, to the rise of "rogue" states who already possessed or were seeking nuclear, chemical, or biological weapons programs that would present a threat to US forces. Although the risk of an existential nuclear war may have declined, the likelihood of the use of WMD, especially chemical and biological weapons, by rogue states in regional conflicts had increased.

United States' WMD-Related Priorities

The United States' priority efforts, as stated in the 2017 NSS, include detecting and disrupting WMD, enhancing counterproliferation measures, and targeting WMD terrorists.[8] The NDS includes as a DOD objective, "dissuading, preventing, or deterring state adversaries and nonstate actors from acquiring, proliferating, or using weapons of mass destruction."[9] DOD cannot meet this objective on its own, as other federal agencies and departments have specific authorities for their nonproliferation and counterproliferation responsibilities.

By integrating and coordinating with the range of national security organizations across the US government, DOD must prepare to counter WMD threats before they materialize, while also preparing to "fight and win"[10] conflicts with WMD-armed adversaries and develop response capabilities needed to mitigate and recover from WMD use.[11]

Because the five prioritized challengers identified in the NDS—China, Russia, North Korea, Iran, and VEOs—already possess or are seeking nuclear, chemical, or biological weapons capabilities, joint force strategies and plans must recognize the range of WMD-use challenges across all levels of competition and conflict.

iii See, for example, the Defense Counterproliferation Initiative of 1993, the 2002 National Strategy to Combat Weapons of Mass Destruction, and the 2010 Quadrennial Defense Review.

Nuclear Threats

Competition among nuclear-armed states can negatively affect important US security interests, including relations with allies receiving assurance of US extended deterrence. Without a common view on geopolitical stability, there is potential for lasting damage to the global nonproliferation regime as more states consider nuclear weapons programs to defend their interests or pursue their goals.

- The actions of China and Russia to erode US reach, influence, and alliances simultaneously occur as they increase resources to develop and deploy advanced nuclear weapons and delivery systems, as a means to both coerce at the political level and to counter US and coalition advantages at the military level.
- North Korea is already a nuclear-armed state (though not a "nuclear-weapon state" as defined in the NPT). North Korea has successfully weathered decades of international pressure to develop nuclear weapons that can hold the United States and its allies at risk and protect the Kim Jong-un regime. Pyongyang also is suspected of supporting the nuclear program of Syria (set back by Israel in 2007) and Iran.[12]
- Iran may still aspire to possess nuclear weapons.[13] Preventing Iran from developing such weapons and delivery means has been a leading preoccupation of international diplomacy and US alliance relationships for over two decades.
- The dangerous potential of VEOs developing or acquiring WMD capabilities will not diminish, and preventing this will remain one of the nation's highest priorities. As stated in the National Strategy for Countering WMD Terrorism, "The growth in terrorists' capabilities and aspirations and the spread of dual-use technology have made the threat of weapons of mass destruction (WMD) terrorism progressively more acute."[14]
- Allies under the US nuclear umbrella have raised questions about the credibility of US extended deterrence commitments. Some have mused openly about their potential need to acquire their own nuclear weapons, as have some other states who do not enjoy formal US security guarantees.[15]

The potential need for joint forces to operate in a nuclear environment should not be discounted. Adversaries may choose to employ nuclear weapons in a limited way to disrupt or defeat conventional military operations. The 2018 Nuclear Posture Review (NPR) directs that the joint force "will plan, train, and exercise to integrate US nuclear and nonnuclear forces and operate in the face of adversary nuclear threats and attacks."[16]

Biological Threats

The ability to understand, manipulate, and utilize living organisms is ever increasing in capacity, worldwide dissemination, and economic penetration.[17] The application of advances in biology are driven largely by commercial interests, rather than government investments or policy, and science will continue to provide regular surprises. Technologies than can enable an adversary's biological weapons program are more widely available and less expensive, can reduce technical hurdles, and are increasingly accessible to small states and nonstate actors.[18] For example, improved aerosolization techniques for medical purposes has direct application to weaponizing and delivering biological agents.

Detecting and attributing biological attacks will become even more difficult as novel or a combination of agents can be developed and employed with few signatures. The ability to develop medical countermeasures rapidly will be challenged. In the early phases of a new infectious disease, governments may not be able to distinguish between a natural outbreak, accidental release, or deliberate attack. While the COVID-19 pandemic is the result of a naturally occuring disease, it is easy to see how a biological attack could overwhelm the joint force's ability to protect itself and accomplish assigned missions.

Chemical Threats

The bold and deadly use of chemical weapons in the last decade—by Syria and the Islamic State (ISIS) against foes and innocent civilians and by North Korea and Russia for assassination—demonstrate blatant contempt for international prohibitions on chemical-weapon employment. Russia's use of the lethal, nontraditional chemical agent Novichok in the United Kingdom in 2018 was another indication of Moscow's belligerent and brazen willingness to ignore the CWC.[19] Moreover, the Kim regime is responsible for the use of the lethal nerve agent VX to assassinate Kim's half-brother in Malaysia in 2017.[20] Diplomatic pressure, sanctions, and other legal action, have been the primary responses, though the United States twice struck Syrian military targets in response to highly lethal sarin attacks by the Bashar al-Assad regime.

In 2002, Russia used aerosolized chemicals with apparent incapacitating intent but deadly results to end a hostage siege (approximately 130 hostages died from exposure). While Moscow has never confirmed the agent that was used, analysis of survivors points to a mixture of fentanyl analogs.[21] Although "law enforcement including domestic riot control purposes" is not a purpose prohibited by the CWC,[22] the Scientific Advisory Board to the Organization for the Prohibition of Chemical Weapons (OPCW) has found the aerosolized use of central nervous-system acting chemicals (CNSAC), like fentanyl and its analogs, cannot be done safely, with the clear implication they are inappropriate for law enforcement use.[23] CNSAC, a subset of pharmaceutical-based agents, fuel concern that the CWC's law enforcement exemption could be exploited in ways unforeseen when it was negotiated. (The United States, Australia, and Switzerland are leading a diplomatic effort to preclude this.[24])

These actors, and others carefully watching, may have concluded impactful responses to chemical and perhaps biological weapons use are unlikely without clearly attributable violations of the treaties leading to punitive United Nations Security Council Resolutions. They may come to judge the advantages of the use of such weapons outweigh international consequences.

In this WMD security environment, the United States cannot discount that state actors that do not possess WMD may seek to acquire them, and states already in possession could seek more advanced capabilities. It is conceivable that new chemical and biological threats could emerge rapidly and be used in ambiguous or nonattributable ways across the spectrum of competition and conflict. Advances in chemical technology, including nanotechnology and microreactors, could yield new and superior forms of chemical weapons that are more capable against existing defenses, more discriminate, and/or harder to attribute. Nonstate actors, adversary SOF, or pseudoprivate specialized units may also use chemical and biological weapons clandestinely to avoid direct engagement with US joint or partner forces.

The United States should not assume that great-power competitors and rogue states will wait until armed conflict has begun to employ chemical or biological weapons. Given that adversaries have seen the United States overwhelm opponents in regional conflicts, they may choose, in a crisis or prior to the onset of armed hostilities, early use of WMD to disrupt joint and partner forces. Limited, plausibly deniable asymmetric attacks have the potential to prevent the United States from gaining air supremacy, denying territory, assembling offensive capabilities, supplying forces, or maintaining freedom of maneuver.[25] Chemical or biological attacks on partner soil could induce panic, impede movement, and destabilize friendly populations.

How SOF Can Contribute

The 2014 DOD Strategy for Countering Weapons of Mass Destruction identifies pathway defeat, a concept that originated in the 1990s, as an important task for the department. It defines pathway defeat as "deliberate actions against actors of concern and their networks to delay, disrupt, destroy, or otherwise complicate the conceptualization, development, possession, and proliferation of WMD, related expertise, materials, technologies, and means of delivery." Pathway defeat activities are intended to "create layers of complex barriers to impose recurring, collectively reinforcing, and enduring costs and setbacks on those seeking to acquire or proliferate WMD or related capabilities."[26]

Several core SOF activities can contribute to WMD pathway defeat objectives. The analysis and appreciation of the operational environment assists the joint force in planning and executing a range of military operations within a joint or multinational task force.

Their ability to understand regional dynamics through foreign internal defense and civil affairs activities, such as understanding the language and culture of

friendly nations, enable long-term relationships that engender trust in US forces. These efforts not only can prepare partners to counter insurgencies, defend against external attacks, and engage in coalition operations, but also provide the tools to help identify and respond to regional WMD risks before they materialize into threats. Additionally, it has been recognized that SOF missions are "almost always coalition in nature," which points to the strength that SOF bring to combined operations.[27]

Maintaining local and regional relationships enables SOF to influence adversary perceptions and behavior regarding WMD through activities such as military information support operations (MISO). These tactical and operational capabilities support overall strategic efforts to dissuade and deter competitors and adversaries' "conceptualization" of WMD intent,[28] and from developing, acquiring, or attacking with WMD. Influencing an adversary's cognitive end-state—that is, the perception of the costs and benefits of a WMD capability—is intended to reduce an adversaries' incentives to pursue, possess, and employ these weapons.

These global capabilities can quickly lead to the effective employment of military resources to "delay, disrupt, destroy, or otherwise complicate" WMD threats. When directed, SOF can respond rapidly around the globe to disrupt the early development and acquisition of WMD capabilities, and deliver kinetic and nonkinetic (e.g., cyber) effects on the WMD programs of hostile actors. SOF can employ long-range reconnaissance assets, conduct direct action and sabotage against WMD delivery and supporting systems (including command and control and logistics nodes), and disrupt adversary maneuver and logistics—all of which could be critical capabilities early in a crisis or prior to an imminent attack.

Moreover, US SOF are uniquely postured to counter adversary SOF activities, including the staging and use of WMD against targeted populations or joint and partner forces. SOF's rapid response to imminent WMD threats could reduce incentives for actors to employ WMD against US forces and interests. Adversaries also may hesitate to escalate with WMD if they understand that their weapons and delivery systems may be held at continuous risk of disruption or destruction. SOF's relationships with allies and partners built and maintained throughout its historic counterterrorism responsibilities are key to understanding and responding to today's VEO efforts to acquire WMD. As the commander of US Specical Operations Command (USSOCOM), General Richard D. Clarke, USA, stated, severing the "financial, messaging, and foreign terrorist fighter networks that enable and sustain VEOs" will "degrade and disrupt VEO attacks,"[29] including those with WMD. Importantly, continuous and aggressive US-led counterterrorist actions deny VEOs the time, space, and resources to develop or plan effective use of WMD.

In 2016, President Barack Obama authorized the transfer of responsibility for coordinating countering WMD activities in DOD from US Strategic Command (STRATCOM)to USSOCOM. According to the Joint Staff, a coordinating authority is the "designated lead for representing a problem set including topics such as planning, risk, prioritization, resourcing, synchronization of activities in plans, and

transition to contingencies."[30] In this capacity, SOCOM produced the DOD Functional Campaign Plan to Counter Weapons of Mass Destruction in 2018, which "nests under, cross-cuts, and complements the NDS, the NMS, and global and other functional campaigns."[31] This responsibility, along with the SOCOM commander's other coordinating authority roles for countering violent extremist organizations and MISO/WebOps, provide SOF the ability to understand and influence the planning for a range of DOD activities for addressing WMD threats.

In his April 2019 congressional testimony, General Clarke stated:

> *Our worldwide access and placement, our networks and partnerships, and our flexible global posture enable the department to understand adversary actions and intent and to respond across the spectrum of competition, especially below the threshold of armed conflict.*[32]

Since the end of the Cold War, SOF have maintained a high degree of focus on WMD contingencies and circumstances where their unique strengths can be applied. Alongside joint and partner forces, and other federal organizations, SOF provide robust, mature, and adaptive capabilities against WMD threats.

DOD's efforts to prevent and respond to WMD threats can take advantage of unique SOF capabilities to assist the joint force in planning and executing a range of military operations. Specific notional SOF roles,[iv] if directed, can consist of:

- Foreign internal defense and civil affairs activities, to include understanding the language and culture of friendly nations, enable long-term relationships that engender trust in US forces and provide the tools to help identify and respond to regional WMD risks before they materialize into threats.
- Cyber and military information support operations (MISO) that support overall strategic efforts to dissuade and deter adversaries' intentions for a WMD capability, shape the perspectives of leadership and the population on WMD activities, and reduce the incentives to pursue or employ these weapons.[33]
- Rapid responses to imminent WMD threats, including direct action and sabotage, can influence adversary perceptions of the costs and benefits of a WMD capability, demonstrating that their systems may be held at continuous risk from disruption or destruction.
- Countering adversary SOF activities can disrupt operational plans to stage or use WMD against targeted populations or US joint and partner forces.
- Continuous and aggressive counterterrorist actions can deny VEOs the time, space, and resources to develop or plan effective use of WMD.

iv Author's notional application of USSOCOM "Core Activities" (USSOCOM, https://www.socom.mil/about/core-activities) to NDS priorities.

SOF, Great Power Competition, and WMD

SOF's role in countering WMD threats from great powers likely will be more evident during an emerging crisis or actual conflict than in peacetime. While SOF can support US efforts to influence Russian and Chinese perceptions of the utility of developing, proliferating, or using WMD, direct action against the internal WMD activities of Russia or China may be limited because of the risk of escalation, absent a significant crisis leading to a presidential directive. Under precrisis conditions, diplomatic and economic activities likely would remain the preferred courses of action. A caveat to this judgment is warranted if chemical or biological attacks, traced to great powers, occur against allies or partners in situations short of armed conflict. Evidence of responsibility may negate efforts at deniability, and the president may desire SOF options for a response, which could involve asymmetric or direct actions.

Moreover, Russia and China play an important role with regard to achieving the US goals of denying North Korea and Iran's WMD ambitions. As permanent members of the United Nations Security Council, their veto power—and growing regional influence—complicates efforts to dissuade Iran from restarting its nuclear program, and to achieve the denuclearization of North Korea.[34]

There is unfortunately a wide generational gap between today's military professionals and those who experienced the Cold War standoff between the United States and Soviet Union. During the Cold War, US and NATO forces prepared for operations involving tactical nuclear, biological, and chemical weapons in an effort to disrupt and destroy a rapid advance of Warsaw Pact forces in a crisis.[35] Today, as joint force leaders with active service prior to the dissolution of the Soviet Union retire, DOD is undertaking the process of refining, adapting, and planning for both SOF options and DOD efforts against WMD capabilities during a crisis, a skillset new to many active-duty service members.

Conclusion

In the evolving security landscape, global tensions can increase as a result of miscommunication, mistrust, miscalculation, and the weakening of the rules-based international order. The breadth of SOF capabilities must be coordinated and integrated with all instruments of state power, and with allies and partners, to counter WMD threats effectively. Adversaries are not likely to risk major, force-on-force confrontation with the United States, in the near future, moving them to pursue asymmetric actions in the "gray zone."[36] In this environment, SOF likely will play a larger role for DOD. As potential adversaries sidestep US military superiority by competing below the level of high intensity armed conflict, and potentially employ ambiguous and targeted chemical and biological attacks to disrupt US military operations and weaken US resolve, SOF will be necessary to support early warning through partner relationships, and conduct SOF-unique asymmetric actions.

As Clint Eastwood's character famously said in the 1986 movie *Heartbreak Ridge*, "You improvise. You adapt. You overcome."[37] Reportedly an unofficial US Marine Corps

slogan, Eastwood's famous quote also aptly describes the capabilities SOF bring to deter and counter adversary WMD use. As the 2018 NDS reminds us, the security environment demands adaptation to "develop a lethal, agile, and resilient force posture and employment."[38]

Uncertainty demands being agile and flexible, and, as the NDS states, "strategically predictable but operationally unpredictable," and to "out-think . . . out-innovate" potential adversaries.[39] Confronting WMD threats before they fully materialize always will be preferable to responding to actual use. Once again, SOF activities make an important contribution to this task.

Although adversary use of nuclear, chemical, and/or biological weapons is often perceived as a low-probability event, there is a need for increased attention to the dramatic, potentially massively disruptive or even existential consequences of such use. Normative reluctance to use these weapons is eroding, and technological developments with WMD applications are advancing at breathtaking speeds.

The global COVID-19 pandemic, marked by surprise, speed, and mass disruption, demonstrates that both individual and unit preparedness for biological threats—whether naturally occuring or weaponized agents—requires the ability to rapidly detect, mitigate, and attribute biological agents. A reduction in force readiness caused by any biological release will negatively affect SOF and other forces deployed globally. This is perhaps a requirement that has not received necessary attention among junior and senior leaders, but the need is urgent—especially if SOF is to maintain its effectiveness against WMD threats in all levels of competition and conflict described above.

This outbreak highlights that education and leader development on WMD issues must keep pace with the demands of this new security environment. The NDS states unequivocally that professional military education (PME) has "stagnated, focused more on the accomplishment of mandatory credit at the expense of lethality and ingenuity."[40] Military officers (commissioned, noncommissioned, and warrant) and DOD civilians require a broad understanding of deterrence and countering WMD concepts, techniques, and strategies throughout their careers. Without this, the nation's leaders may not receive the best risk-informed military advice, and strategic and operational risk will be higher.

Because the United States may not be able to predict how the convergence of scientific and technological innovations may produce dangerous new WMD applications that terrorists may choose, "we must remain vigilant in identifying and responding to technological trends with nefarious applications."[41] SOF must pursue relentless innovation to prevent and disrupt proliferation and prepare for offensive actions to defeat WMD threats.

SOF has long recognized that "humans are more important than hardware,"[42] which naturally extends to the development of trained professionals who are prepared to develop and execute operations to counter adversaries' WMD capabilities. With its increased attention on the demands of the new security environment, SOF will remain one of the most effective weapons in the US arsenal to counter WMD threats.

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