

U.S Government
Accountability Office

Hybrid Warfare



United States Government Accountability Office Washington, DC 20548

September 10, 2010

The Honorable Loretta Sanchez
Chairwoman

The Honorable Jeff Miller
Ranking Member

Subcommittee on Terrorism, Unconventional Threats and Capabilities Committee on Armed Services
House of Representatives

The Honorable Adam Smith House of Representatives

Subject: *Hybrid Warfare*

Senior military officials recently testified¹ before Congress that current and future adversaries are likely to use “hybrid warfare” tactics, a blending of conventional and irregular approaches across the full spectrum of conflict. In addition, several academic and professional trade publications have commented that future conflict will likely be characterized by a fusion of different forms of warfare rather than a singular approach. The overarching implication of hybrid warfare is that U.S. forces must become more adaptable and flexible in order to defeat adversaries that employ an array of lethal technologies to protracted, population-centric conflicts such as those in Iraq and Afghanistan. Department of Defense (DOD) officials have discussed the need to counter the continuum of threats that U.S. forces could face from nonstate- and state-sponsored adversaries, including computer network and satellite attacks; portable surface-to-air missiles; improvised explosive devices; information and media manipulation; and chemical, biological, radiological, nuclear, and highyield explosive devices.

¹ *Hearing on U.S. Southern Command, Northern Command, Africa Command, and Joint Forces Command Before the House Armed Services Committee*, 111th Cong. (2009) (statement of General James N. Mattis, USMC Commander, United States Joint Forces Command); *Hearing on the Fiscal Year 2011 National Defense Authorization Budget Request for Department of Defense’s Science and Technology Programs Before the Subcommittee on Terrorism, Unconventional Threats and Capabilities of the House Armed Services Committee*, 111th Cong. (2010) (statement of Rear Admiral Nevin P. Carr, Jr., United States Navy Chief of Naval Research); and *Hearing on U.S. Marine Corps Readiness Before the Subcommittee on Defense of the House Committee on Appropriations*, 110th Cong. 132-133 (2008) (testimony of Lieutenant General James F. Amos, Deputy Commandant of the Marine Corps for Combat Development and Integration).

GAO-10-1036R Hybrid Warfare In light of references to “hybrid warfare” by senior military officials and possible implications it could have for DOD’s strategic planning, you requested we examine: (1) whether DOD has defined hybrid warfare and how hybrid warfare differs from other types of warfare and (2) the extent to which DOD is considering the implications of hybrid warfare in its overarching strategic planning documents. On June 16, 2010, we met with your staff to discuss the preliminary results of our work. This report formally transmits our final response to your request.

Scope and Methodology

To determine how DOD defines hybrid warfare, how hybrid warfare differs from other types of warfare, and how DOD uses the concept in its strategic planning documents, we reviewed and analyzed DOD doctrine, guidance, policy, and strategic planning documents, and interviewed Office of the Secretary of Defense (OSD), Joint Staff, service headquarters, Defense Intelligence Agency, and combatant command officials. More specifically, our review and analysis included the most recent *National Defense Strategy*; the 2010 *Quadrennial Defense Review Report*; and the 2010 *Joint Operating Environment*.

We conducted this performance audit from January 2010 to September 2010 in accordance with generally accepted government auditing standards. These standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Summary

Senior military officials in recent public testimony asserted the increased likelihood of U.S. forces encountering an adversary that uses hybrid warfare tactics, techniques, and procedures. However, DOD has not officially defined hybrid warfare at this time and has no plans to do so because DOD does not consider it a new form of warfare. Rather, officials from OSD, the Joint Staff, the four military services, and U.S. Joint Forces Command told us that their use of the term hybrid warfare describes the increasing complexity of future conflicts as well as the nature of the threat. Moreover, the DOD organizations we met with differed on their descriptions of hybrid warfare. For example, according to Air Force officials, hybrid warfare is a potent, complex variation of irregular warfare. U.S. Special Operations Command officials, though, do not use the term hybrid warfare, stating that current doctrine on traditional and irregular warfare is sufficient to describe the current and future operational environment.

Report to draw attention to the increasing complexity of future conflicts and the need for adaptable, resilient U.S. forces, and not to introduce a new form of warfare. The military services and U.S. Joint Forces Command also use the term “hybrid” in some of their strategic planning documents to articulate how each is addressing current and future threats, such as the cyber threat; however, the term full spectrum often is used in addition to or in lieu of hybrid.

Although hybrid warfare is not an official term, we found references to “hybrid” and hybrid-related concepts in some DOD strategic planning documents; however, “hybrid warfare” has not been incorporated into DOD doctrine. For example, according to OSD officials, hybrid was used in the 2010 *Quadrennial Defense Review*

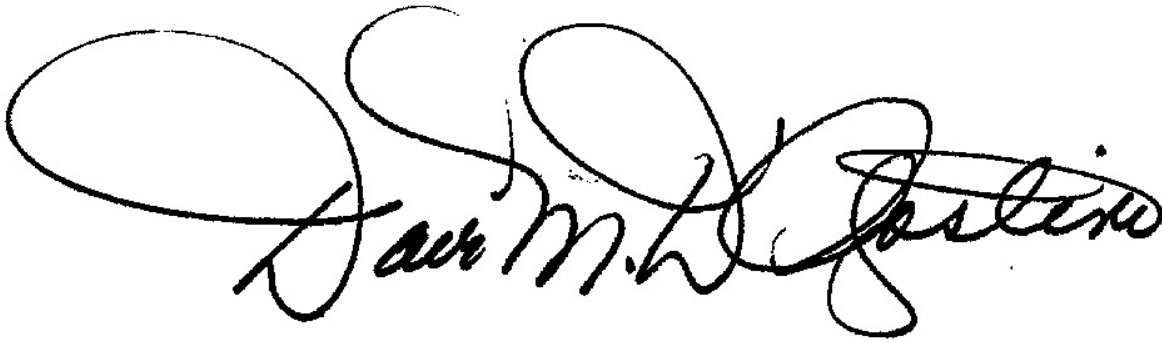
Agency Comments

We provided a draft of this report to DOD. DOD reviewed the draft report and concurred with the information presented in the report. DOD’s comments are reprinted in their entirety in enclosure II.

We are sending copies of this report to the appropriate congressional committees. We are also sending a copy to the Secretary of Defense. In addition, this report will be available at no charge on our Web site at <http://www.gao.gov/>. Should you or your staff have any questions concerning this report, please contact me at (202) 512-5431 or dagostinod@gao.gov or Marc Schwartz at (202) 512-8598 or schwartzm@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may

be found on the last page of this report.

Key contributors to this report include Marc Schwartz, Assistant Director; Jennifer Andreone; Steve Boyles; Richard Powelson; Kimberly Seay; and Amie Steele.

A large, stylized handwritten signature in black ink, reading "David M. D'Agostino". The signature is fluid and cursive, with the first name "David" being the most prominent part.

Davi M. D'Agostino
Director
Defense Capabilities and Management

Enclosures



Hybrid Warfare

Briefing to the
Subcommittee on Terrorism, Unconventional Threats and Capabilities,
Committee on Armed Services, House of Representatives
September 10, 2010



- Introduction
- Key Questions
- Scope and Methodology
- Summary
- Background
- Observations
- Agency Comments
- Enclosure I: DOD Definitions of Warfare
- Enclosure II: Comments from the Department of Defense



- Senior military officials used the term “hybrid warfare” during testimony before Congress between 2008-2010 to describe the methods used by U.S. adversaries in Iraq and Afghanistan, and what U.S. forces are likely to encounter in future conflicts.
- Moreover, many academic and professional trade publications have commented that future conflict will likely be characterized by a fusion of

different forms of warfare rather than a singular approach.

- Hybrid warfare tactics consist of the blending of conventional, unconventional, and irregular approaches to warfare across the full spectrum of conflict.



Key Questions

In response to your request, our objectives in this review were to determine:

1. Whether DOD has defined hybrid warfare and how hybrid warfare differs from other types of warfare.
2. The extent to which DOD is considering the implications of hybrid warfare in its overarching strategic planning documents.

We conducted this review from January 2010 to September 2010 in accordance with generally accepted government auditing standards.



Scope and Methodology

- To determine whether DOD has defined or intends to define hybrid warfare and how hybrid warfare is different from other types of warfare, we examined DOD-approved definitions of warfare—such as irregular and unconventional warfare—and compared them with the concept of hybrid warfare. We also met with Office of the Secretary of Defense (OSD), Joint Staff, service headquarters, Defense Intelligence Agency, and combatant command officials to obtain their perspectives on the term and determine whether they have formally defined it (see pages 6-7).
- To determine the extent to which DOD is considering the implications of hybrid warfare in its overarching strategic planning documents, we reviewed and analyzed DOD strategies, doctrine, guidance, and policies, including the 2008 *National Defense Strategy*,¹ the 2010 *Quadrennial Defense Review Report*,² the 2010 *Joint Operating Environment*,³ and the 2009 *Capstone*

Concept for Joint Operations.⁴ We also discussed this matter with DOD officials from the organizations listed on pages 6-7.

¹ United States Department of Defense, *National Defense Strategy* (Washington, D.C., June 2008).

² United States Department of Defense, *Quadrennial Defense Review Report* (Washington, D.C., February 2010).

³ United States Joint Forces Command, *The Joint Operating Environment* (Suffolk, Va., February 2010).

⁴ United States Department of Defense, *Capstone Concept for Joint Operations, Version 3.0* (Washington, D.C., January 2009).

We met with officials from the following DOD organizations:

- The Joint Staff, Joint Force Development and Integration Division
- Office of the Assistant Secretary of Defense, Special Operations/Low Intensity Conflict &

Interdependent Capabilities, Office of Special Operations & Combating Terrorism

- Office of the Under Secretary of Defense for Policy, Force Development
- Office of the Under Secretary of Defense, Comptroller
- Office of the Secretary of Defense, Cost Assessment and Program Evaluation
- Defense Intelligence Agency
- U.S. Joint Forces Command

o Joint Irregular Warfare Center

o Joint Futures Group

o Joint Center for Operational Analysis

o Joint Training and Joint Warfighting Center Directorate

o Joint Concept Development and Experimentation Directorate

• U.S. Special Operations Command

o Operational Plans and Joint Force Development Directorate o Joint Capability Development Directorate

o Joint Concept Development and Experimentation Directorate o Strategic Plans and Policy Directorate

• U.S. Army Headquarters

o Office of the Deputy Chief of Staff for Operations and Plans o Office of the

Deputy Chief of Staff for Intelligence

- U.S. Army Training and Doctrine Command
- U.S. Air Force Headquarters

o Irregular Warfare Requirements Directorate

- U.S. Navy Headquarters

o Navy Irregular Warfare Office

- U.S. Marine Corps Headquarters

o Marine Corps Combat Development Command, Concepts and Plans



Summary

- DOD has not officially defined “hybrid warfare” at this time and has no plans to do so because DOD does not consider it a new form of warfare.
- DOD officials from the majority of organizations we visited agreed that “hybrid warfare” encompasses all elements of warfare across the spectrum. Therefore, to define hybrid warfare risks omitting key and unforeseen elements.
- DOD officials use the term “hybrid” to describe the increasing complexity of conflict that will require a highly adaptable and resilient response from U.S. forces, and not to articulate a new form of warfare.
- The term “hybrid” and hybrid-related concepts appear in DOD overarching strategic planning documents (e.g., 2010 *Quadrennial Defense Review Report*); however, “hybrid warfare” has not been incorporated into DOD doctrine.



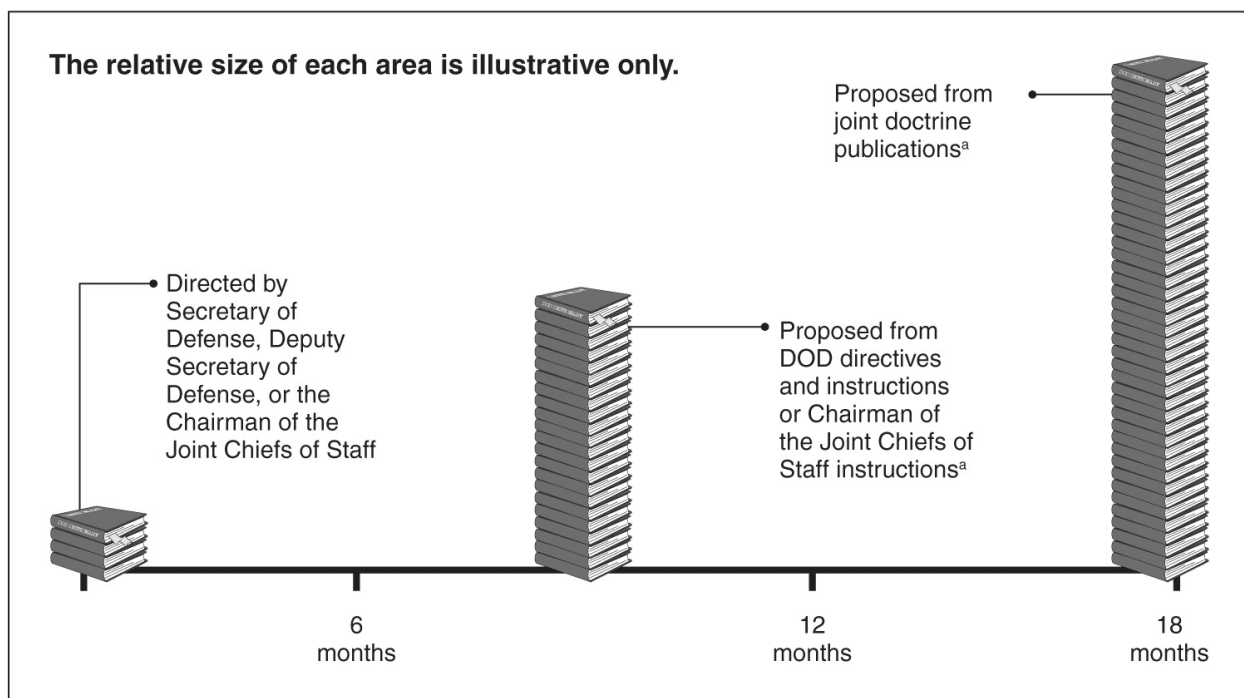
Background

- *Department of Defense Dictionary of Military and Associated Terms* (Joint Publication 1-02), sets forth standard U.S. military and associated terminology that, together with their definitions, constitutes approved DOD terminology. There are approximately 6,000 terms in Joint Publication 1-02.
- Chairman of the Joint Chiefs of Staff Instruction 5705.01C, *Standardization of Military and Associated Terminology*, stipulates four methods to add, modify, or delete DOD terminology in Joint Publication 1-02.
- As shown in figure 1, according to Joint Staff officials, the approval process to incorporate a new term in Joint Publication 1-02 can take place immediately to approximately 18 months. The majority of approved terms are proposed due to their inclusion in existing joint doctrine publications.



Background (continued)

Figure 1: Methods to Incorporate New DOD Terminology into Joint Publication 1-02
 Illustration sizing approximated based on agency descriptions.



Source: GAO analysis of DOD's terminology approval process.

^a The fourth method to incorporate a new term into Joint Publication 1-02 is through terminology proposed from the *NATO Glossary of Terms and Definitions (English and French)*, which may be proposed for adoption and inclusion by the Department of Defense in the appropriate Joint Publication, Chairman of the Joint Chiefs of Staff Instruction, or DOD document.



Observations Objective 1: Definition

- DOD has not formally defined hybrid warfare at this time and does not plan to do so because DOD does not consider it a new form of warfare.
- DOD officials indicated that the term “hybrid” is more relevant to describe the increasing complexity of conflict that will require a highly adaptable and resilient response from U.S. forces rather than a new form of warfare.
- DOD officials have different characterizations of recent conflicts. For example:
 - o Air Force officials stated that the conflicts in Iraq and Afghanistan are irregular warfare and hybrid, while Army and Navy officials both considered

Afghanistan irregular warfare and Iraq initially conventional warfare and then later, irregular warfare.

o U.S. Special Operations Command and Army officials characterized the RussiaGeorgia conflict as conventional warfare, while Air Force officials considered it a hybrid conflict.



Observations (continued) Objective

1: Definition

- Discussions about hybrid *threats*, as opposed to hybrid warfare, are ongoing within DOD; however, most of the DOD officials whom we spoke with stated that it was premature to incorporate hybrid threats into doctrine.
- The North Atlantic Treaty Organization (NATO) has defined hybrid threat as follows, and is developing doctrine on countering the hybrid threat.
 - o “A hybrid threat is one posed by any current or potential adversary, including state, non-state and terrorists, with the ability, whether demonstrated or likely, to simultaneously employ conventional and non conventional means adaptively, in pursuit of their objectives.”⁵

⁵This definition was approved by the NATO Military Working Group (Strategic Planning & Concepts),

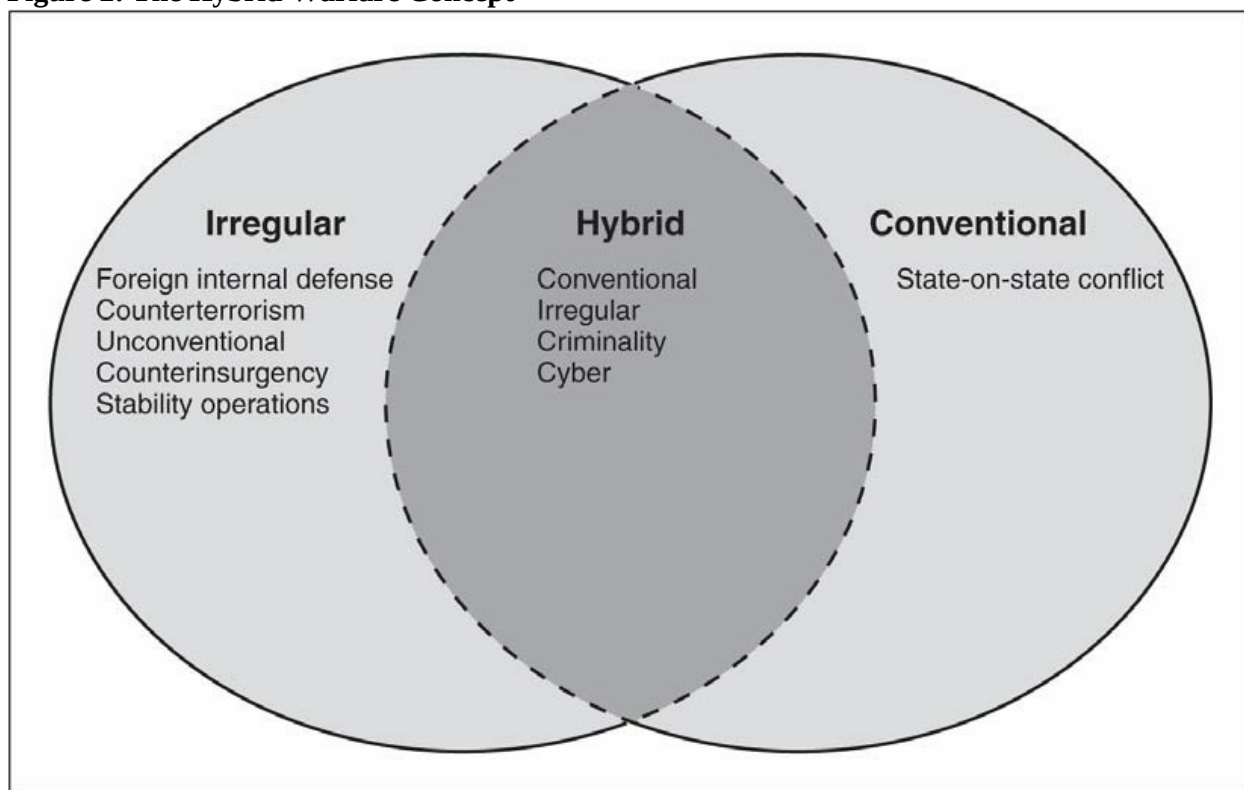


February 2010.

Observations (continued) Objective 1: The Hybrid Warfare Concept

According to our analysis of DOD and academic documents, hybrid warfare *blends* conventional⁶ and irregular warfare⁷ approaches across the full spectrum of conflict. Figure 2 displays a sample of approaches that could be included in hybrid warfare.

Figure 2: The Hybrid Warfare Concept



Source: GAO analysis of DOD military concept and briefing documents and academic writings.

⁶ The *Irregular Warfare Joint Operating Concept*, v. 1.0, defines conventional warfare as a form of warfare between states that employs direct military confrontation to defeat an adversary's armed forces, destroy an adversary's war-making capacity, or seize or retain territory in order to force a change in an adversary's government or policies. Conventional warfare may also be called "traditional" warfare. Conventional warfare is not defined in Joint Publication 1-02.

⁷ Joint Publication 1-02 defines irregular warfare as a violent struggle among state and non-state actors for legitimacy and influence over the relevant population(s). Irregular warfare favors indirect and asymmetric approaches, though it may employ the full range of military and other capacities, in order to erode an adversary's power, influence, and will.



Observations (continued) Objective

1: Definition Comparison

- DOD officials have differing views on whether or how hybrid warfare differs from other types of warfare.⁸

- o According to Air Force officials, hybrid warfare is more potent and

complex than irregular warfare due to increased tempo, complexity, diversity, and wider orchestration across national borders, which are all exacerbated by the ease with which adversaries can communicate, access international resources and funding, and acquire more lethal and sophisticated weaponry.

o Special Operations Command officials stated that hybrid warfare is no different from current doctrinal forms of warfare employed across the spectrum of conflict. o Navy officials stated that hybrid is synonymous with full spectrum and encompasses both conventional warfare and unconventional warfare.

o Marine Corps officials use the term “hybrid” to describe the potential threat posed by both state and non-state actors and believe that hybrid warfare is not a new form of warfare; rather it is synonymous with full spectrum conflict and is already adequately covered in current doctrine.

⁸The Joint Publication 1-02 definitions of types of warfare are listed in enclosure I.



Observations (continued) Objective

1: Unofficial Definitions

The following are examples of unofficial definitions of hybrid warfare/threat that we found in military concept and briefing documents and in academic writings (emphases added):

Hybrid Warfare —Conflict executed by either state and/or non-state threats that employs **multiple modes of warfare** to include conventional capabilities, irregular tactics, and criminal disorder. (U.S. Joint Forces Command, Joint Center for Operational Analysis briefing on “Joint Adaptation to Hybrid War”)

Hybrid Threat —An adversary that simultaneously and adaptively employs some **fused combination** of (1) political, military, economic, social and information means and (2) conventional, irregular, terrorism and disruptive/criminal conflict methods. It may include a combination of state and non-state actors. (Working definition derived by U.S. Joint Forces

Command, Joint Irregular Warfare Center, 2008-2009)

Hybrid Threat —A threat that simultaneously employs regular and irregular forces, including terrorist and criminal elements to achieve their objectives using an **ever-changing variety of conventional and unconventional tactics** to create multiple dilemmas. (U.S. Army Training and Doctrine Command's Operational Environment, 2009-2025)

Hybrid Threats —Threats that incorporate **a full range of different modes of warfare** including conventional capabilities, irregular tactics and formations, terrorist acts including indiscriminate violence and coercion, and criminal disorder, conducted by both states and a variety of non-state actors.⁹

⁹Lt. Col. Frank G. Hoffman, U.S. Marine Corps Reserve (Ret.), *Conflict in the 21st Century: The Rise of Hybrid Wars* (Arlington, Va.: Potomac Institute for Policy Studies, 2007), p.8.

Observations (continued)

- DOD uses the term “hybrid” in select strategic planning documents to articulate how it is addressing current and future threats. For example:
 - o The term “hybrid” is mentioned twice in the 2010 *Quadrennial Defense Review Report* to describe the approaches and capabilities that potential adversaries may use against U.S. forces and counteractions DOD can take.
 - o The term “hybrid” is used in the 2010 *Joint Operating Environment* to describe the combination of lethal technology and the protracted, population-centric nature of contemporary and future conflicts.
 - o The 2009 *Capstone Concept for Joint Operations* states that future conflicts will appear as hybrids comprising diverse, dynamic, and simultaneous combinations of organizations, technologies, and techniques that defy categorization.
 - o The 2010 *Army Modernization Strategy*¹⁰ states that the Army must continue to upgrade its capabilities to remain a dominant force and successful against hybrid threats, global terrorists, and followers of extremist ideologies.

¹⁰United States Department of the Army, *Army Modernization Strategy* (April 2010).

Observations (continued)

- Some DOD organizations have adopted the term “full spectrum operations” in addition to or in lieu of the term “hybrid.”

- o The 2010 *Army Posture Statement*¹¹ uses the term “full spectrum operations”¹² in addition to hybrid threats to describe current and future military operations.

- o According to Army officials, full spectrum operations underpin both conventional and irregular warfare.

- o The *Air Force Global Partnership Strategy*¹³ states that as the United States fights insurgencies and terrorism, the U.S. Air Force must maintain its capacity to conduct full spectrum operations to defeat U.S. enemies in operations of traditional and irregular character.

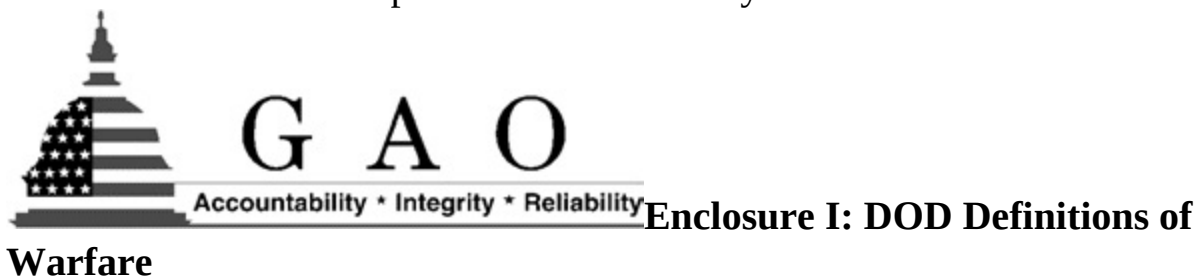
¹¹ United States Department of the Army, *Army Posture Statement*, “America’s Army: The Strength of the Nation” (February 2010).

¹² Army Field Manual No. 3-0, *Operations*, defines full spectrum operations as an operational concept in which Army forces combine offensive, defensive, and stability or civil support operations simultaneously as part of an interdependent joint force to seize, retain, and exploit the initiative, accepting prudent risk to create opportunities to achieve decisive results.

¹³ United States Air Force, *Air Force Global Partnership Strategy: Building Partnerships for the 21st Century* (December 2008).



- We provided a draft of this report to DOD.
- DOD reviewed the draft report and concurred with the information presented in the report.
- DOD comments are reprinted in their entirety in enclosure II.



Department of Defense Dictionary of Military and Associated Terms (Joint

Publication 1-02), includes the following definitions of warfare:¹⁴

Acoustic Warfare (DOD, NATO) Action involving the use of underwater acoustic energy to determine, exploit, reduce, or prevent hostile use of the underwater acoustic spectrum and actions which retain friendly use of the underwater acoustic spectrum.

Antisubmarine Warfare (DOD, NATO) Operations conducted with the intention of denying the enemy the effective use of submarines.

Atomic Warfare (DOD, NATO) See nuclear warfare.

Biological Warfare (DOD, NATO) Employment of biological agents to produce casualties in personnel or animals, or damage to plants or materiel; or defense against such employment.

Chemical Warfare (DOD) All aspects of military operations involving the employment of lethal and incapacitating munitions/agents and the warning and protective measures associated with such offensive operations. Since riot control agents and herbicides are not considered to be chemical warfare agents, those two items will be referred to separately or under the broader term "chemical," which will be used to include all types of chemical munitions/agents collectively.

Directed-Energy Warfare (DOD) Military action involving the use of directed-energy weapons, devices, and countermeasures to either cause direct damage or destruction of enemy equipment, facilities, and personnel, or to determine, exploit, reduce, or prevent hostile use of the electromagnetic spectrum through damage, destruction, and disruption. It also includes actions taken to protect friendly equipment, facilities, and personnel and retain friendly use of the electromagnetic spectrum.

¹⁴These definitions were listed in Joint Publication 1-02 as amended through April 2010.

Electronic Warfare (DOD) Military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy. Electronic warfare consists of three divisions: electronic attack, electronic protection, and electronic warfare support.

Guerrilla Warfare (DOD, NATO) Military and paramilitary operations conducted in enemy-held or hostile territory by irregular, predominantly indigenous forces.

Irregular Warfare (DOD) A violent struggle among state and non-state actors for legitimacy and influence over the relevant population(s). Irregular warfare favors indirect and asymmetric approaches, though it may employ the full range of military and other capacities, in order to erode an adversary's power, influence, and will.

Land Mine Warfare (DOD, NATO) See mine warfare.

Mine Warfare (DOD) The strategic, operational, and tactical use of mines and mine countermeasures. Mine warfare is divided into two basic subdivisions: the laying of mines to degrade the enemy's capabilities to wage land, air, and maritime warfare; and the countering of enemy-laid mines to permit friendly maneuver or use of selected land or sea areas.

Multinational Warfare (DOD) Warfare conducted by forces of two or more nations, usually undertaken within the structure of a coalition or alliance.

Naval Coastal Warfare (DOD) Coastal sea control, harbor defense, and port security, executed both in coastal areas outside the United States in support of national policy and in the United States as part of this Nation's defense.

Naval Expeditionary Warfare (DOD) Military operations mounted from the sea, usually on short notice, consisting of forward deployed, or rapidly deployable, self-sustaining naval forces tailored to achieve a clearly stated objective.

Naval Special Warfare (DOD) A designated naval warfare specialty that conducts operations in the coastal, riverine, and maritime environments. Naval special warfare emphasizes small, flexible, mobile units operating under, on, and from the sea. These operations are characterized by stealth, speed, and precise, violent application of force.

Nuclear Warfare (DOD, NATO) Warfare involving the employment of nuclear weapons.

Partisan Warfare (DOD, NATO) Not to be used. See guerrilla warfare.

Surface Warfare (DOD) That portion of maritime warfare in which operations are conducted to destroy or neutralize enemy naval surface forces and merchant vessels.

Unconventional Warfare (DOD) A broad spectrum of military and paramilitary operations, normally of long duration, predominantly conducted through, with, or by indigenous or surrogate forces who are organized, trained, equipped, supported, and directed in varying degrees by an external source. It includes, but is not limited to, guerrilla warfare, subversion, sabotage, intelligence activities, and unconventional assisted recovery.

Under Sea Warfare (DOD) Operations conducted to establish and maintain control of the underwater environment by denying an opposing force the effective use of underwater systems and weapons. It includes offensive and defensive submarine, antisubmarine, and mine warfare operations.

Enclosure II: Comments from the Department of Defense



OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
2500 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-2500

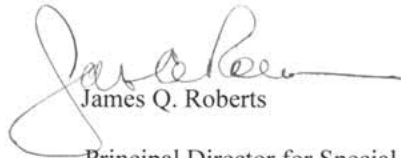
SPECIAL OPERATIONS/
LOW-INTENSITY CONFLICT
& INTERDEPENDENT CAPABILITIES

September 1, 2010

FOR: DIRECTOR, DEFENSE CAPABILITIES AND MANAGEMENT, US GOVERNMENT
ACCOUNTABILITY OFFICE

SUBJECT: Hybrid Warfare (GAO Engagement 351444)

This is the Department of Defense (DoD) response to the GAO draft report, GAO-10-1036R, 'Hybrid Warfare,' dated August 24, 2010 (GAO Code 351444). As the primary action office, OASD SO/LIC & IC (SOCT) has reviewed GAO's findings and conclusions. Following consultation with the appropriate DoD equities, we concur with the information presented in the report. My point of contact is Ms. Elizabeth Nathan at 703-697-2945.


James Q. Roberts

Principal Director for Special
Operations & Combating Terrorism

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.

GAO's Mission

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

Obtaining Copies of GAO Reports and Testimony

Order by Phone

To Report Fraud, Waste, and Abuse in Federal Programs

Congressional Relations Public Affairs

The fastest and easiest way to obtain copies of GAO documents at no cost is through GAO's Web site (www.gao.gov). Each weekday afternoon, GAO posts on its Web site newly released reports, testimony, and correspondence. To have GAO e-mail you a list of newly posted products, go to www.gao.gov and select "E-mail Updates."

The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's Web site, <http://www.gao.gov/ordering.htm>.

Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537. Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information. Contact:

Web site: www.gao.gov/fraudnet/fraudnet.htm

E-mail: fraudnet@gao.gov

Automated answering system: (800) 424-5454 or (202) 512-7470

Ralph Dawn, Managing Director, dawnr@gao.gov, (202) 512-4400 U.S. Government Accountability Office, 441 G Street NW, Room 7125 Washington, DC 20548

Chuck Young, Managing Director, youngc1@gao.gov, (202) 512-4800 U.S. Government Accountability Office, 441 G Street NW, Room 7149 Washington, DC 20548

Please Print on Recycled Paper