Joint Publication 3-40

Countering Weapons of Mass Destruction

31 October 2014

PREFACE

1. Scope

This publication provides guidance and the basis for the planning and execution of military activities to counter weapons of mass destruction.

2. Purpose

This publication has been prepared under the direction of the Chairman of the Joint Chiefs of Staff (CJCS). It sets forth countering weapons of mass destruction doctrine to govern the activities and performance of the Armed Forces of the US in joint operations and provides the doctrinal basis for US military coordination with other US Government departments and agencies and for US military involvement in multinational operations. It provides military guidance for the exercise of authority by combatant commanders and other joint force commanders (JFCs) and prescribes joint doctrine for operations. It provides military guidance for use by the Armed Forces in preparing their appropriate plans. It is not the intent of this publication to restrict the authority of the JFC from task organizing the force and executing the mission in a manner the JFC deems most appropriate to ensure unity of effort in the accomplishment of the overall objective.

3. Application

a. Joint doctrine established in this publication applies to the Joint Staff, commanders of combatant commands, subunified commands, joint task forces, subordinate components of these commands, the Services, and combat support agencies.

b. The guidance in this publication is authoritative; as such, this doctrine will be followed except when, in the judgment of the commander, exceptional circumstances dictate otherwise. If conflicts arise between the contents of this publication and the contents of Service publications, this publication will take precedence unless the CJCS, normally in coordination with the other members of the Joint Chiefs of Staff, has provided more current and specific guidance. Commanders of forces operating as part of a multinational (alliance or coalition) military command should follow multinational doctrine and procedures ratified by the US. For doctrine and procedures not ratified by the US, commanders should evaluate and follow the multinational command's doctrine and procedures, where applicable and consistent with US law, regulations, and doctrine.

For the Chairman of the Joint Chiefs of Staff:

DAVID L. GOLDFEIN, Lt Gen, USAF
Director, Joint Staff

Intentionally Blank

SUMMARY OF CHANGES
REVISION OF JOINT PUBLICATION 3-40
DATED 10 JUNE 2009

- **Highlights the *Department of Defense Strategy for Countering Weapons of Mass Destruction* as the foundational concept for countering weapons of mass destruction (CWMD) guidance.**
- **Defines CWMD, replacing the term "combating weapons of mass destruction."**
- **Introduces a CWMD construct with three lines of effort (LOEs): prevent acquisition, contain and reduce threats, and respond to crises. These LOEs are supported by one strategic enabler, prepare.**
- **Discontinues the use of the three pillars of combating weapons of mass destruction: nonproliferation, counterproliferation, and consequence management; and the eight associated CWMD military mission areas.**
- **Expands the discussion of proliferation to include the proliferation continuum and proliferation networks.**
- **Describes the relationship between military organizations and functions to other US Government departments and agencies, and international partners.**
- **Introduces a chapter on chemical, biological, radiological, and nuclear weapons and associated concerns.**
- **Expands the discussion on the relationship between functional campaign plans, functional and geographic combatant command campaign plans, other regional campaign plans, and contingency plans.**
- **Describes the integration of CWMD activities and tasks within plans and synchronization during execution.**
- **Introduces appendices for: "Weapons of Mass Destruction Background, Materials, and Technologies" and "Treaties, Resolutions, Activities, and Legal Considerations."**
- **Deletes the annexes for weapons of mass destruction elimination and interdiction operations and incorporates the discussion into the main body of the publication.**
- **Adds, modifies, or deletes numerous definitions.**

Intentionally Blank

TABLE OF CONTENTS

APPENDIX

GLOSSARY

FIGURE

EXECUTIVE SUMMARY
COMMANDER'S OVERVIEW

- **Provides a Countering Weapons of Mass Destruction (CWMD) Overview**
- **Describes Weapons of Mass Destruction and Associated Concerns**
- **Discusses Organizational and Command Relationships**
- **Presents CWMD Planning and Planning Considerations**
- **Explains Execution Using a CWMD Activities Construct**

Introduction

Countering weapons of mass destruction (CWMD) entails activities across the United States Government to ensure the US, its Armed Forces, allies, partners, and interests are not attacked or coerced by actors of concern possessing weapons of mass destruction (WMD).

The existence of chemical, biological, radiological, and nuclear (CBRN) materials and the potential for use by actors of concern precipitates the need to plan, prepare for, and counter their use. Weapons of mass destruction (WMD) are chemical, biological, radiological, or nuclear weapons or devices capable of a high order of destruction and/or causing mass casualties. **Countering weapons of mass destruction (CWMD) is a continuous campaign that requires a coordinated, whole-of-government effort to curtail the conceptualization, development, possession, proliferation, use, and effects of WMD-related expertise, materials, and technologies.**

National Strategy and Guidance

National guidance provides the foundation for the development of Department of Defense (DOD) CWMD strategy and guidance documents. Top-level strategy and general guidance for CWMD is derived from the *National Security Strategy* and WMD-specific Presidential decision directives.

Department of Defense Strategy for Countering Weapons of Mass Destruction

The objectives, approach, activities, and supporting tasks described by the *Department of Defense Strategy for Countering Weapons of Mass Destruction* provide the strategic construct for the development of the DOD Global Campaign Plan for Combating Weapons of Mass Destruction (GCP-CWMD) and geographic combatant commanders' (GCCs') supporting CWMD campaign plans.

Coordinating Countering Weapons of Mass Destruction with Other Efforts

Other efforts that CWMD should be coordinated with include: counterterrorism, global campaign for pandemic influenza and infectious disease, homeland defense, defense support of civil authorities, CBRN consequence management, strategic deterrence, and counter threat finance.

Weapons and Associated Concerns

Nuclear and Radiological Weapons

Nuclear weapons derive their explosive power from the energy released during either fission or a combination of fission and fusion nuclear reactions. When detonated, a nuclear weapon will release its energy as blast, thermal radiation, and nuclear radiation (alpha and beta particles, gamma rays, and neutrons). Radiological weapons include radiological dispersal devices (RDDs) and radiological exposure devices (REDs). An RDD, other than a nuclear explosive device, is designed to disseminate radioactive material in order to cause panic, chaos, and fear. A RED is a highly radioactive source which is placed in a location where people could be exposed.

Biological Weapons

A biological agent, either natural or man-made, is a microorganism that causes disease in personnel, plants, or animals or causes the deterioration of material. Biological weapons differ from chemical, nuclear, and radiological threats in that small amounts of infectious agents are self-replicating and capable of spreading from person to person.

Chemical Weapons

A chemical agent is a chemical substance that is intended for use in military operations to kill, seriously injure, or incapacitate mainly through its physiological effects. The term excludes riot control agents when used for law enforcement purposes, herbicides, smoke, and flames.

Cruise and Ballistic Missiles

The mating of chemical, biological, or nuclear weapons with long-range cruise or ballistic missiles is a critical aspect of WMD risk. Cruise and ballistic missile defense interceptors largely use “hit-to-kill” technology, which relies on the kinetic energy of physical impact to destroy the ballistic missile warhead.

Improvised Weapons

Improvised weapons include modified weapons and munitions, improvised explosive devises, and improvised CBRN, and are typically employed by non-state actors, and can include chemical, biological, or radiological enhancements.

Actors

Actors of concern may have the intent to use or proliferate WMD capabilities against US interests. These actors may also perceive WMD destructive capabilities as a highly desirable means to counter more technologically advantaged nations and alliances. States may view WMD possession as a source of strategic leverage, international prestige, regional dominance, deterrence, or as a means to counter US and Western powers. This may be accomplished through the threat or actual use of a weapon. Non-state actors may seek to acquire or use WMD in order to increase their influence or impose their will. If acquired, use of WMD by non-state actors is more likely than an established state and thus requires due diligence to prevent access and acquisition to WMD and related components.

Weapons of Mass Destruction Pathways

WMD pathways consist of networks or links among individuals, groups, organizations, governmental entities, etc., that promote or enable the development, possession, and/or proliferation of WMD and related capabilities. Monitoring and controlling WMD pathways is essential in denying actors of concern access to WMD technology, knowledge, materials, expertise, and weapons.

Organizational and Command Relationships

Success in CWMD requires a coordinated, whole-of-government effort.

Using the National Security System coordination process, Office of the Secretary of Defense (OSD) facilitates interaction among combatant commands (CCMDs) and interagency partners. Combatant commanders (CCDRs) use established relationships to coordinate with interagency partners to increase their success in CWMD. When planning or executing CWMD operations and activities, joint force commanders (JFCs) coordinate and cooperate with not only other United States Government (USG) departments and agencies but also local, tribal, and state organizations, in addition to multinational partners.

Department of Defense Countering Weapons of Mass Destruction-Related Organizations, Responsibilities, and Relationships

OSD develops, coordinates, and oversees implementation and integration of DOD CWMD policy. Subject to the **Chairman of the Joint Chiefs of Staff's** authority, direction, and control, the Joint Staff coordinates with CCMDs and Services to ensure CWMD operations are executed in compliance with domestic, international, and foreign laws, policies, treaties, and agreements. They assist with interagency support for CWMD operations and

assist in planning and exercising CWMD activities within the interagency process. **GCCs** develop regional CWMD strategy, policies, and campaign and contingency plans for their areas of responsibility, determine CWMD mission shortfalls, identify CWMD mission resourcing requirements, and incorporate CWMD activities into their operational plans. **United States Northern Command** is the global synchronizer for planning for DOD efforts in support of the USG response to pandemic influenza and infectious disease. **United States Strategic Command (USSTRATCOM)** is the global synchronizer for DOD global CWMD planning. The **Services** organize, train, equip, and otherwise prepare military forces to conduct missions to counter WMD and their means of delivery in support of the JFC. **Defense Threat Reduction Agency** provides integrated technical and operational solutions to the CWMD mission, as well as intellectual capital, to inform and support national-level and DOD policies and strategies that address WMD threats to the homeland and the warfighter.

United States Government Countering Weapons of Mass Destruction-Related Organizations, Responsibilities, and Relationships

The **National Security Council Staff** oversees lines of communications between USG departments and agencies involved in CWMD activities to facilitate unity of effort. The **Office of the Director of National Intelligence** oversees the National Counterterrorism Center and National Counterproliferation Center. **Department of State** CWMD responsibilities are primarily planned and executed via: the Bureau of Arms Control, Verification, and Compliance; the Bureau of International Security and Nonproliferation; and the Bureau of Political-Military Affairs; all of which report to the Under Secretary for Arms Control and International Security. Agencies within the **Department of Homeland Security** that contribute to the CWMD mission include: United States Coast Guard, Customs and Border Protection, Federal Emergency Management Agency, Domestic Nuclear Detection Office, and Immigration and Customs Enforcement.

Command Relationships and Interorganizational Coordination

The size and scope, as well as preplanned integration, of CWMD operations determine the requirements for specific CWMD command and control (C2) functions. Small-scale or less complex CWMD operations may not require formation of a separate C2 structure. For a large-scale or more complex effort, CWMD operations may

require formation of a functional joint task force for CWMD operations. In the case of a domestic CBRN incident, DOD should determine what specialized national, international, or local assets are responding to the incident. The Chief, National Guard Bureau facilitates and resources Air National Guard and Army National Guard forces and assets through the state adjutants general to conduct CBRN response operations to assist federal, state, local, and tribal authorities in responding to a domestic CBRN event.

Multinational Cooperation and Coordination

US military operations are routinely conducted with forces of other countries within the structure of an alliance or coalition. For CCDR theater campaign and contingency plans, host nation considerations, including CBRN defense, are the subject of significant peacetime planning in which operational, legal, contractual, and personnel issues are addressed. CCDRs integrate strategic direction into their CWMD plans. The *Guidance for Employment of the Force* and the *Joint Strategic Capabilities Plan* translate strategic guidance into CWMD-specific end states and mandate the integration of CWMD-related planning tasks into CCMD planning. Finally, USSTRATCOM, as the global synchronizer for DOD CWMD planning, conducts comprehensive campaign planning that puts into effect a global strategy and provides directive guidance for CWMD planning to align global and regional CWMD objectives with strategic guidance.

Planning

General CWMD Planning Considerations

CWMD planning includes the development of global and regional campaign plans to shape the environment to prevent the US and multinational partners from being attacked or coerced by actors possessing WMD. JFCs need to integrate their CWMD planning with their respective theater campaign plans (TCPs).

Deliberate and Crisis Action Planning

As the DOD global synchronizer for CWMD, USSTRATCOM develops and maintains the global CWMD plan for DOD. GCCs align regional CWMD efforts with the global CWMD plan either by developing regional CWMD plans, or incorporating their directed CWMD efforts into their TCPs. The DOD GCP-CWMD provides directive guidance for CWMD planning and

prioritization, which informs the development and execution of operations and activities through theater campaign and contingency plans. GCCs develop regional CWMD campaign plans that nest under their TCPs as subordinate campaign plans, or incorporate directed CWMD planning directly into the TCPs.

Additional Planning Considerations

Additional planning considerations include: legal guidance, international law and agreements, CWMD force planning, and the Cooperative Threat Reduction (CTR) Program. In coordination with appropriate military organizations, other USG departments and agencies, and global partners, the CTR Program works cooperatively with partner governments to reduce the threat to the US and its allies from WMD, and related materials, technologies, and expertise, including associated delivery systems and infrastructure.

Execution

CWMD Activities Construct

The CWMD activities construct serves as a method for logically grouping tasks to counter specific WMD threats. Typically, tasks are categorized within activities: understand the operational environment (OE), threats, and vulnerabilities; cooperate with and support partners; control, defeat, disable, and/or dispose of WMD threats; and safeguard the force and manage consequences.

CWMD Activity 1: Understand the Environment, Threats, and Vulnerabilities

This activity aids the JFC in developing and maintaining a more comprehensive understanding of both the actors and materials that affect the OE. To accomplish this, the JFC needs to locate, identify, characterize, assess, and predict threats against US and partner vulnerabilities. The JFC may use a combination of assets and resources such as surveillance, reconnaissance, intelligence specialists, interorganizational experts, conventional forces, and special operations forces in support of this activity.

CWMD Activity 2: Cooperate with and Support Partners

This activity promotes common threat awareness, builds CWMD self-sufficiency, improves military interoperability, enhances military and civilian preparedness, deterrence, and in some cases facilitates security of dual-use and CBRN materials. The JFC will coordinate with state and local authorities, interagency partners, multinational partners, and nongovernmental organizations to ensure the partner and coordinate tasks

associated with this activity are successfully conducted, to various degrees, within military engagement, security cooperation, CTR, and deterrence operations and activities during all military operational phases.

CWMD Activity 3: Control, Defeat, Disable, and/or Dispose of WMD Threats

The purpose of the control, defeat, disable, and/or dispose of WMD threats activity is to reduce WMD-related threats. The JFC should focus on controlling an actor of concern's program elements and then transitioning control to a competent authority for final disposition as the situation/mission dictates.

CWMD Activity 4: Safeguard the Force and Manage Consequences

The purpose of this activity is to allow the joint force and other mission-critical personnel to sustain effective operations and support US and foreign civil authorities and their populations by responding to a CBRN incident and mitigating the hazards and the effects of their use. Within the construct of such operations, the joint force needs to be prepared for a variety of WMD situations, such as an inadvertent release, release due to joint force action, or actor of concern's employment of CBRN materials.

CONCLUSION

This publication provides guidance and the basis for the planning and execution of military activities to counter WMD.

Intentionally Blank

CHAPTER I
INTRODUCTION

"The gravest danger to the American people and global security continues to come from weapons of mass destruction, particularly nuclear weapons."

National Security Strategy
May 2010

1. General

a. Weapons of mass destruction (WMD) are chemical, biological, radiological, or nuclear weapons or devices capable of a high order of destruction and/or causing mass casualties. This does not include the means of transporting or propelling the weapon where such means is a separable and divisible part of the weapon. WMD does not include high-yield explosives. The existence of chemical, biological, radiological, and nuclear (CBRN) materials and the potential for use by actors of concern precipitates the need to plan, prepare for, and counter their use. Countering weapons of mass destruction (CWMD) entails activities across the United States Government (USG) to ensure the US, its Armed Forces, allies, partners, and interests are not attacked or coerced by actors of concern possessing WMD.

actors of concern. State or non-state actors that carry out activities that, left unaddressed, pose a clear potential threat to the strategic objectives of the United States Government. In the WMD [weapons of mass destruction] context, an actor of concern poses a threat of developing, acquiring, proliferating, or employing WMD, related expertise, materials, technologies, and means of delivery.

Department of Defense Strategy for Countering Weapons of Mass Destruction, June 2014

b. CWMD is a national security priority. Actor of concern's possession of WMD, proliferation of WMD, and the pursuit of WMD by extremists present grave threats to the American people. Actors of concern with WMD possess an asymmetric advantage capable of significantly neutralizing the superior technology, military, and economic strength of the US and its allies. CWMD is a continuous campaign that requires a coordinated, whole-of-government effort to curtail the conceptualization, development, possession, proliferation, use, and effects of WMD-related expertise, materials, and technologies. The Department of Defense (DOD) contributes to this whole-of-government effort by providing joint forces that plan and execute tasks to ensure that the US, its forces, allies, partners, and interests are neither coerced nor attacked with WMD. These joint forces also prepare for the execution of contingency responses to WMD-related crises. As used in this joint publication (JP), actors of concern are those state or non-state actors that carry out activities that, left unaddressed, pose a clear threat to the strategic objectives of the USG.

c. The world events that define the WMD problem have evolved over time. With the advent of US conventional military preeminence and continued improvements in US missile defenses and capabilities to counter and mitigate the effects of WMD, the role of US nuclear weapons in deterring nonnuclear attacks—conventional, biological, or chemical—has declined. To that end, US declaratory policy is not to use or threaten to use nuclear weapons against nonnuclear weapons states that are party to the Treaty on the Nonproliferation of Nuclear Weapons (NPT) and in compliance with their nuclear nonproliferation obligations. In making this declaration, the US affirms that any state eligible for the assurance that uses chemical or biological weapons against the US or its allies and partners would face a devastating conventional military response. Given the catastrophic potential of biological weapons and the rapid pace of biotechnology development, the US reserves the right to make any adjustment in the assurance that may be warranted by the evolution and proliferation of the biological weapons threat and US capacities to counter that threat. In the case of states that possess nuclear weapons and states not in compliance with nuclear nonproliferation obligations there remains a narrow range of contingencies in which US nuclear weapons may be employed in deterring a conventional or WMD attack.

2. National Strategy and Guidance

a. National guidance provides the foundation for the development of DOD CWMD strategy and guidance documents. Top-level strategy and general guidance for CWMD is derived from the National Security Strategy (NSS) and WMD-specific Presidential decision directives (e.g., national security Presidential directives [NSPDs] and Presidential policy directives [PPDs]).

b. **Unified Command Plan (UCP).** The UCP is Presidential-level guidance establishing responsibilities of both geographic and functional combatant commanders (CCDRs), to include specific responsibilities for CWMD as well as other mission areas such as counterterrorism (CT), pandemic influenza and infectious disease (PI&ID), and homeland defense (HD). Various aspects of these responsibilities complement and overlap with the CWMD mission set.

3. Department of Defense Strategy and Guidance

a. **Defense Strategic Guidance.** In January 2012, the Secretary of Defense (SecDef) released strategic guidance for DOD. *Sustaining US Global Leadership: Priorities for 21st Century Defense* reflects the President's strategic direction and recognizes that CWMD is one of ten primary missions of the US Armed Forces. This guidance emphasizes the threat posed by the proliferation of CBRN weapons technology to additional state actors and non-state actors access to WMD. The guidance also recognizes that military forces conduct a range of activities to prevent the proliferation and use of WMD and states that, "in partnership with other elements of the USG, DOD will continue to invest in capabilities to detect, protect against, and respond to WMD use, should preventive measures fail."

b. **Nuclear Posture Review.** In April 2010, SecDef released the Nuclear Posture Review report, which described five objectives of nuclear weapons policies and posture: preventing nuclear proliferation and nuclear terrorism; reducing the role of US nuclear weapons in US NSS; maintaining strategic deterrence and stability at reduced nuclear force levels; strengthening regional deterrence and reassuring US allies and partners; and sustaining a safe, secure, and effective nuclear arsenal.

c. **Department of Defense Strategy for Countering Weapons of Mass Destruction (DODS-CWMD).** The DODS-CWMD seeks to ensure that the US and its allies and partners are neither attacked nor coerced by actors with WMD. It outlines three departmental CWMD end states, establishes priority objectives, defines a strategic approach, and identifies essential activities and tasks.

(1) **End States.** The DODS-CWMD identifies three overarching end states that all departmental CWMD efforts should pursue:

(a) No new WMD possession;

(b) No WMD use; and

(c) Minimization of WMD effects.

(2) **DODS-CWMD Priority Objectives.** Priority objectives are derived from the end states and take into account general trends in the strategic environment. Strategic priorities will typically shift with changes in national and defense leadership. Planning priorities are also dynamic, and reflect the nature of the WMD challenge across the strategic environment. Planning priorities may be revised more frequently than JPs. CWMD priority objectives identified in the DODS-CWMD are:

(a) Reduce incentives to pursue, possess, and employ WMD;

(b) Increase barriers to the acquisition, proliferation, and use of WMD;

(c) Manage WMD risks emanating from hostile, fragile, or failed states and safe havens; and

(d) Deny the effects of current and emerging WMD threats through layered, integrated defenses.

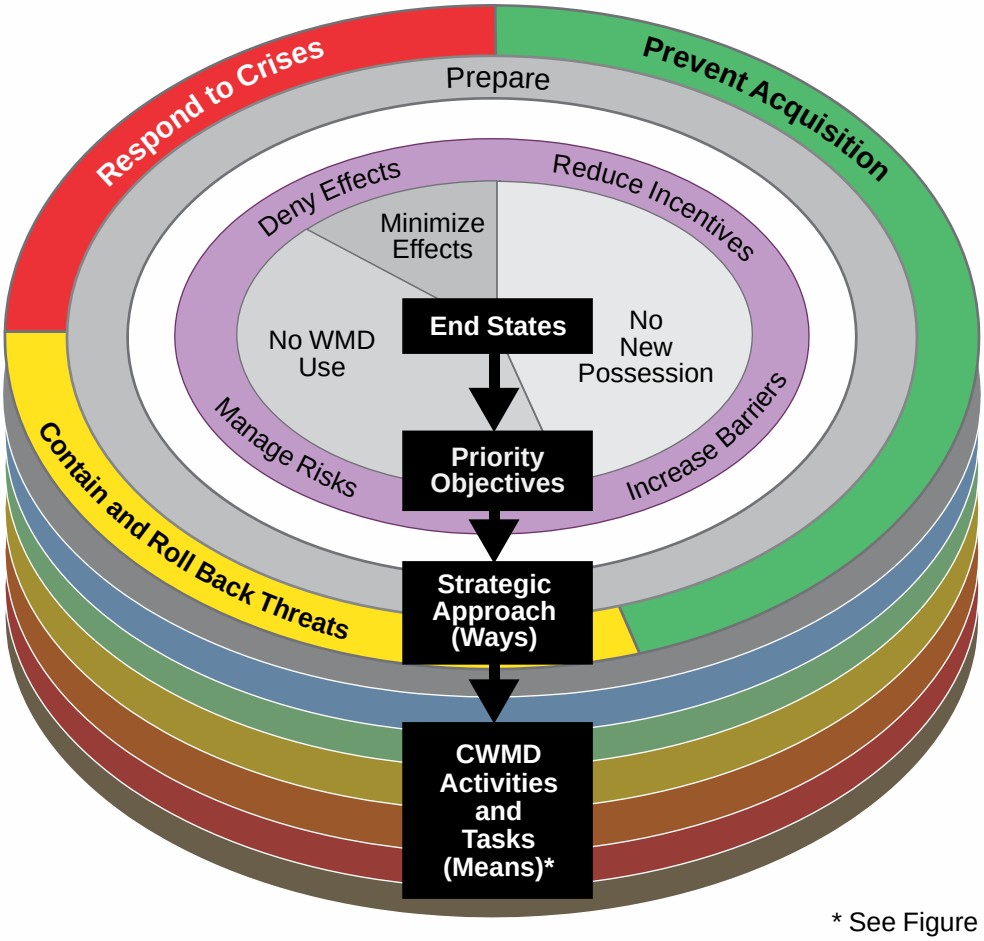
(3) **Strategic Approach.** The objectives outlined in the DODS-CWMD are advanced through three CWMD lines of effort (LOEs): prevent acquisition, contain and reduce threats, and respond to crises (see Figure I-1). These three LOEs are supported by one strategic enabler; prepare. Together, the three LOEs and this strategic enabler comprise DOD's revised strategic approach for CWMD:

(a) **Prepare** is the continuous cycle that ensures DOD's set of enabling, foundational, and specialized activities, tasks, and capabilities support the CWMD LOEs.

(b) **Prevent acquisition** focuses on actions to ensure that those not possessing WMD do not obtain them.

(c) **Contain and reduce threats** focuses on actions to reduce risks posed by extant WMD.

Department of Defense Strategy for Countering Weapons of Mass Destruction Strategic Approach



Legend

CWMD countering weapons of mass destruction WMD weapons of mass destruction

Figure I-1. Department of Defense Strategy for Countering Weapons of Mass Destruction Strategic Approach

(d) **Respond to crises** focuses on activities and operations to manage and resolve complex WMD crises.

For further guidance on the DOD-CWMD strategic approach to CWMD, refer to the Department of Defense Strategy for Countering Weapons of Mass Destruction.

(4) **CWMD Activities and Tasks.** The means to counter WMD include the forces, equipment, training, and systems employed to address DOD's strategic priorities. The DODS-CWMD organizes capabilities in three categories based upon the CWMD activities and tasks with which they are associated: synchronizing, foundational, or specialized activities and tasks (see Figure I-2).

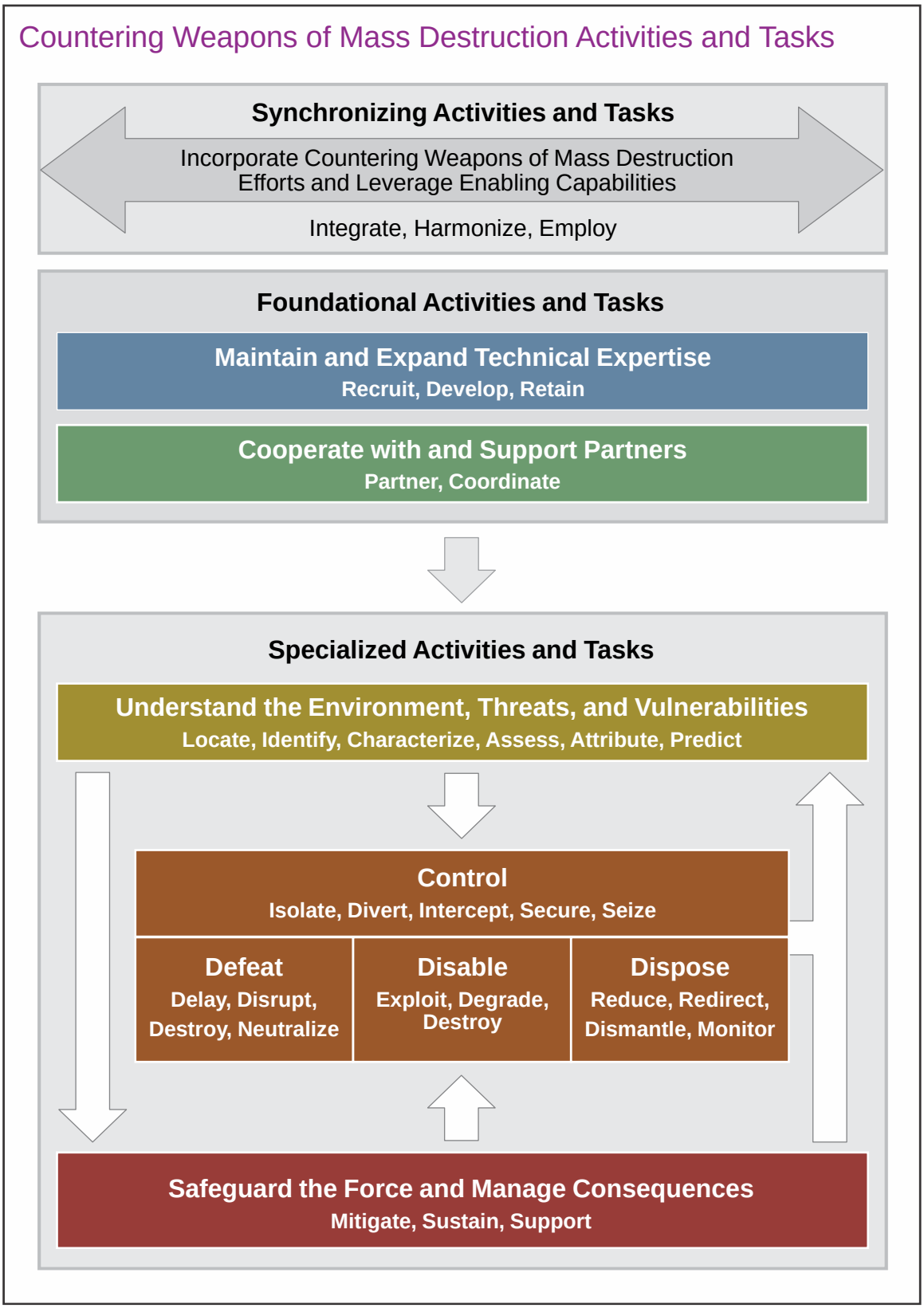


Figure I-2. Countering Weapons of Mass Destruction Activities and Tasks

(5) The objectives, approach, activities, and supporting tasks described by the DODS-CWMD provide the strategic construct for the development of the DOD Global Campaign Plan for Combating Weapons of Mass Destruction (GCP-CWMD) and geographic combatant commanders' (GCCs') supporting CWMD campaign plans. The construct of the GCP-CWMD promotes unified action by providing a strategy and approach for joint force commanders (JFCs) to organize their CWMD effort that is scalable and tailorable.

For further guidance on the GCP-CWMD, refer to Chapter IV, "Planning," paragraph 2d(1), "GCP-CWMD."

d. **DOD Planning Guidance.** *The Guidance for Employment of the Force (GEF)* and *the Joint Strategic Capabilities Plan (JSCP)* provide primary guidance for joint planning at the strategic and operational levels:

(1) **GEF.** The GEF provides two-year direction to combatant commands (CCMDs) for operational planning, force management, security cooperation (SC), and posture planning. The GEF is the method through which the Office of the Secretary of Defense (OSD) translates strategic priorities set in the NSS and *National Defense Strategy* into implementable direction for operational activities. The GEF identifies specific CWMD planning requirements and establishes the priority of CWMD planning within DOD.

(2) **JSCP.** The JSCP refines the guidance in the GEF and assigns specific responsibilities for planning to individual CCMDs. Additionally, the JSCP describes the relationship between the various global planning efforts and between them and theater planning and contingency plans. The JSCP assigns CWMD planning requirements to specific CCMDs based on functional and regional responsibilities. United States Strategic Command (USSTRATCOM) is designated the DOD synchronizer for CWMD planning and leads the effort for the DOD CWMD campaign plan. All geographic CCMDs regional CWMD planning is guided by and synchronized with DOD global CWMD planning and nested under their theater campaign plans (TCPs). The JSCP also reinforces that CWMD planning should be coordinated with interagency partners for unity of effort.

e. DOD policy and planning guidance influences CWMD doctrine. CWMD doctrine provides the scope and context in which these responsibilities, objectives, and planning requirements can be addressed and executed.

4. Coordinating Countering Weapons of Mass Destruction with Other Efforts

a. **CT.** The global campaign to counter WMD and the goals outlined in the National Strategy for CT are separate, yet mutually supportive efforts; both address keeping dangerous weapons out of the hands of dangerous actors. To prevent terrorists from acquiring WMD, the global campaign to counter WMD includes efforts to identify and monitor state weapons programs and program elements; improve site and stockpile security; and encourage states to be responsible stewards of their WMD in order to prevent proliferation of weapons, technology, materials, and expertise to non-state actors of concern. The global CT strategy contributes to the CWMD effort by addressing overall national CT goals in general and addressing the non-state actor component of the WMD problem

specifically by stating that the US will actively seek to deny acquisition and/or use of WMD by actors of concern. Coordination of these two efforts also includes sharing intelligence, integrating plans, and synchronizing operations.

For further guidance on CT, refer to JP 3-26, Counterterrorism.

b. **Global Campaign for PI&ID.** The global campaign to counter WMD is mutually supportive of the global campaign for PI&ID. Both campaigns conduct bio-surveillance and enable DOD's response to the initial stages of a potential outbreak or incident. Regardless of whether the event is naturally occurring or the result of an accident or deliberate attack, numerous response activities concern both global efforts. CWMD activities include understanding the operational environment (OE), threats, and vulnerabilities associated with all biological weapons programs and civilian biological laboratories. Additional CWMD tasks relevant to PI&ID are to mitigate the effects of a biological incident and support the civilian response. Coordination of these two efforts also includes the analysis of threat and medical intelligence, forensics, and hazard modeling.

For further guidance on PI&ID, see the National Strategy for Pandemic Influenza.

c. **HD.** HD is the protection of US sovereignty, territory, domestic population, and critical infrastructure against external threats and aggression, or other threats, as directed by the President. These include transnational threats—defined in Title 50, United States Code (USC), Section 3021, as "any transnational activity (including international terrorism, narcotics trafficking, the proliferation of WMD and the delivery systems for such weapons, and organized crime) that threatens the national security of the US." United States Northern Command (USNORTHCOM) and United States Pacific Command (USPACOM) have been assigned the responsibility to plan, organize, and, as directed, execute HD operations within their respective areas of responsibility (AORs). CWMD as a part of HD is a global mission that crosses AOR boundaries and requires an integrated and synchronized effort among interagency and multinational partners for mission accomplishment. USNORTHCOM and USPACOM integrate the CWMD related aspects of their HD plans and synchronize related operations and activities in collaboration with USSTRATCOM, the other CCMDs, and the Services. Additionally, HD operations require pre-event and ongoing coordination with interagency and multinational partners to integrate capabilities and facilitate unified action. CWMD contributes to HD by protecting the US through an active, layered defense in depth. DOD plays an essential role in HD by providing a full range of operational capabilities to protect against the threat of, or the actual use of WMD. DOD, as directed by the President, may conduct preemptive HD actions in support of CWMD operations and activities in accordance with international and domestic law, national policy, and directives.

For further guidance on HD, refer to JP 3-27, Homeland Defense.

d. **Defense Support of Civil Authorities (DSCA).** DOD provides support to civil authorities for domestic emergencies and for designated law enforcement and other activities. Joint forces supporting civil authorities in response to a domestic CBRN incident also contribute to the overall CWMD effort through preparations to respond and mitigate damage or effects of the damage. These forces are incorporated into the domestic incident

management effort and operate in accordance with the National Response Framework (NRF). The National Incident Management System forms the foundation for conducting domestic response operations. The NRF is the USG's comprehensive approach to domestic incident management built on the template of the National Incident Management System. As part of a comprehensive national response, DOD supports a primary federal agency to prevent or to respond to an emergency, to include a CBRN incident or WMD attack. The NRF provides the structure and mechanisms for national-level policy and operational direction for managing this national response.

For further guidance on DSCA, refer to JP 3-28, Defense Support of Civil Authorities. *For additional DSCA guidance documents, refer to the Federal Emergency Management Agency's* National Response Framework and the National Incident Management System.

e. **Chemical, Biological, Radiological, and Nuclear Consequence Management (CBRN CM).** DOD's role in CBRN CM is described in multiple DOD policy documents. CBRN CM is the overarching USG capability and the strategic national direction taken to plan, prepare, respond to, and recover from CBRN incidents at home or abroad, whether or not they are attributed to an attack using WMD. The CBRN CM mission highlights the complexity of the various laws, agreements, and differing lexicons to describe and conduct CBRN CM with interagency, multinational, intergovernmental organization (IGO), and nongovernmental organization (NGO) partners. DOD CBRN CM operations include actions to respond to the effects of a WMD attack or inadvertent release of CBRN materials in order to maintain or restore essential services and manage and mitigate problems. CBRN CM operations allow the JFC to plan and execute incident management, sustainment, and the support that may be required to be given to outside agencies or nations. There are three types of CBRN CM the JFC should consider dependent on incident location and authorities; domestic, foreign, and DOD-led.

For further guidance on CBRN CM, refer to JP 3-41, Chemical, Biological, Radiological, and Nuclear Consequence Management.

(1) **Domestic CBRN CM.** The Department of Homeland Security (DHS) is the USG lead for domestic CBRN incident management. DHS coordination is outlined in the NRF, unless the incident occurs on a DOD installation. DHS will establish a national operations center as the primary, multiagency, national hub for situational awareness, operations, and resource coordination. When civil authorities, up to, and including the federal level, lack necessary capabilities to mitigate the effects of a CBRN incident, or they anticipate being overwhelmed, they typically request military support.

For further guidance on domestic CBRN CM, refer to Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3125.01C, Defense Response to Chemical, Biological, Radiological, and Nuclear (CBRN) Incidents in the Homeland.

(2) **Foreign Consequence Management (FCM).** The Department of State (DOS) is the USG lead for FCM. FCM is a USG activity that assists foreign governments in responding to the effects from an intentional or accidental chemical, biological, radiological, or nuclear incident on foreign territory in order to maximize preservation of life.

For further guidance on FCM operations, refer to Department of Defense Instruction (DODI) 2000.21, Foreign Consequence Management (FCM); *CJCSI 3214.01D,* Defense Support for Chemical, Biological, Radiological, and Nuclear Incidents on Foreign Territory; *and JP 3-11,* Operations in Chemical, Biological, Radiological, and Nuclear Environments.

(3) **DOD-Led CBRN CM.** In most domestic and foreign environments, CBRN CM actions conducted by DOD are in support of the lead federal agency, DHS for domestic and DOS for foreign CBRN CM actions. If directed by the President or SecDef, DOD forces may be directed to lead CBRN CM operations as a direct result of US military operations in a foreign country, where DOS does not have an established diplomatic presence, or on a DOD installation.

For further guidance on DOD-led CBRN CM operations, refer to JP 3-41, Chemical, Biological, Radiological, and Nuclear Consequence Management, *and CJCSI 3214.01D,* Defense Support for Chemical, Biological, Radiological, and Nuclear Incidents on Foreign Territory.

For guidance on CBRN CM operations on DOD installations, refer to DODI 3020.52, DOD Installation Chemical, Biological, Radiological, Nuclear, and High-Yield Explosive (CBRNE) Preparedness Standards, *DODI 6055.17,* DOD Installation Emergency Management (IEM) Program, *and DODI 6200.03,* Public Health Emergency Management Within the Department of Defense.

f. **Strategic Deterrence.** Strategic deterrence figures prominently in the attainment of the CWMD end states of "no new WMD possession" and "no WMD use." A structured method to conduct deterrence operations begins with clear and concise deterrence objective(s). Deterrence objectives should specify who is being deterred from doing what, and under what conditions. Tailored deterrence objectives allow analysts to assess key decision factors that motivate an actor of concern. These objectives provide the JFC with a framework to develop activities and operations that increase an actor of concern's perception of the costs of action and benefits of restraint.

For further guidance on deterrence, refer to JP 3-0, Joint Operations.

(1) An effective WMD deterrence strategy rests on a credible declaratory deterrence policy, possessing credible capabilities to hold at risk an actor of concern strategic centers of gravity, political will to face down the actor of concern, and effective means to defend against the use and effects of WMD. A demonstrated collective military capability may contribute to the success of all three criteria for WMD deterrence. JFC deterrence efforts should involve SC plans that emphasize the willingness of the US and its partners to employ forces for collective interests. Various bilateral and multilateral exercises and operations support deterrence by demonstrating collective willingness and capability to use force when necessary. Overall USG deterrence goals are supported by a credible capability to intercept WMD in transit; destroy critical nodes, links, and sources; defend against WMD attack; attribute WMD attacks; and dismantle WMD programs.

(2) JFC deterrence efforts should be part of a long-term sustained effort with potential application across all operational phases and should include synchronized communications for maximum effectiveness. Deterrence activities should be integrated into campaign plans in order to enhance strategic stability and prevent future threats. This methodology remains valid and assures deterrence objectives are supported in crisis or conflict.

g. **Counter Threat Finance (CTF).** CTF is the means to detect, counter, contain, disrupt, deter, or dismantle the transnational financing of state and non-state actors of concern threatening US national security. Actions to monitor, assess, analyze, and exploit financial information are key support functions of CTF activities. CTF is not operational area specific, it is a whole-of-government and international effort that applies to stemming the flow of funds involving multiple operational areas. DOD works with other USG departments and agencies and with partner nations (PNs) to deny, disrupt, degrade, or defeat actor of concern's ability to use global licit and illicit financial networks to negatively affect US interests.

For further guidance on CTF, refer to Department of Defense Directive (DODD) 5205.14, Department of Defense Counter Threat Finance (CTF) Policy; the Commander's Handbook for Counter Threat Finance; *and JP 1-06,* Financial Management Support in Joint Operations.

CHAPTER II
WEAPONS AND ASSOCIATED CONCERNS

"Actors of concern pose a threat of developing, acquiring, proliferating, or employing weapons of mass destruction (WMD) and related capabilities–expertise, materials, technologies, and means of delivery. These activities present a clear potential threat to the strategic objectives of the United States."

Department of Defense Strategy for Countering Weapons of Mass Destruction, June 2014

1. General

a. Actors of concern that seek or possess WMD to enhance their influence and achieve greater strategic leverage against US advantages pose an enduring challenge to peace and stability worldwide. Increased access to technology, materials, and expertise heightens the risk that actors of concern will develop, proliferate, and use WMD to achieve their goals. The evolution of the WMD threat has created new challenges for JFCs beyond dealing with actors of concern WMD use, including the following challenges:

(1) The varied nature of WMD, including the emergence of nontraditional threats;

(2) The dual-use applicability of related facilities, technology, and expertise;

(3) The diversity of threats and actors;

(4) The complex and dynamic WMD proliferation continuum;

(5) The increasing complexity and number of WMD proliferation networks; and

(6) The psychological impact of WMD use.

b. This chapter provides a general overview of the CBRN threat. Actors of concern may use these weapons to conduct an attack on US citizens, infrastructure, or vital interests; to exploit US power projection, sustainment, and force protection vulnerabilities; to deny access to an area, limiting the ability of the US to respond to urgent threats; or to undermine support by key regional partners for US vital interests through intimidation. The topics covered in this chapter include nuclear and radiological weapons, biological weapons, chemical weapons, delivery systems, WMD actors of concern, WMD pathways, and the issue of dual-use technologies.

2. Nuclear and Radiological Weapons

a. Nuclear Weapons

(1) **Understanding the Nuclear Threat.** Nuclear weapons derive their explosive power from the energy released during either fission or a combination of fission and fusion

nuclear reactions. Fission is a process in which the nucleus of an atom splits into two or more nuclei and releases energy, fission products, and neutrons. The neutrons released by fission can, in turn, cause the fission of other fissile isotopes. Fissile material is composed of nuclides for which fission is possible with neutrons of any energy level. Fissile materials in a nuclear weapon—highly enriched uranium or plutonium—must achieve a supercritical state for a nuclear detonation to occur. Fusion is a process in which nuclei (generally light nuclei such as tritium and deuterium), combine and release energy, helium nuclei, and neutrons.

(2) **Single Stage Fission Weapons**

(a) **Gun-assembled.** A gun-assembled device contains two or more pieces of fissile material, each a subcritical mass, brought together very rapidly to form a supercritical mass. A nuclear detonation results from a self-sustaining chain reaction of exponentially increasing numbers of fission events within that mass.

(b) **Implosion-assembled.** A spherical device in which a quantity of fission material normally at a density constituting a subcritical mass at ordinary pressure, can have its volume reduced suddenly by compression (a step typically accomplished by the use of chemical explosives) to form a supercritical mass at a much higher density. A nuclear detonation results from a supercritical chain reaction of exponentially increasing numbers of fission events within that mass.

(c) **Boosted Weapons.** A boosted weapon is an implosion-assembled weapon whose fission output is increased by thermonuclear neutrons from the fusion of deuterium and tritium gas introduced into the pit. This increases its explosive yield through fusion reactions that serve to increase the efficiency of the fission bomb.

(3) **Thermonuclear Weapons.** A thermonuclear weapon is a device where radiation from a fission primary is used to transfer energy to compress and ignite a physically separate component containing thermonuclear fuel referred to as the secondary, resulting in nuclear fusion.

(4) **Improvised Nuclear Device.** A device intended to produce a nuclear yield using fissile or fissionable material that is not developed and produced by a nation for military purposes. An improvised nuclear device may be fabricated from components developed by a state program or may be an improvised modification to a US or foreign weapon design.

(5) **Delivery Options.** Nuclear weapons have been adapted for delivery by mortar, artillery shell, land mine, depth charge, torpedo, and missile. However, significant weapon design understanding is needed to produce a nuclear device that is both small enough and light enough to be delivered by such systems with reduced payload capacity. Given their significant destructive power, nuclear weapons need not be optimally employed to cause a mass casualty event. While nuclear weapons have been designed for stand-off delivery at specific altitudes and other conditions, they could simply be loaded onto a ship or truck, transported to the target, and detonated.

(6) **Nuclear Weapons Development.** Developing special nuclear material for nuclear weapons may occur in two pathways. However, in both pathways, the process begins in the same manner, the mining of uranium ore, and ends with the conversion of it into weapons grade fissile material, either highly enriched uranium or plutonium, to a form useful in weapons production. Nuclear weapons will likely originate from a state program. Non-state actors do not currently have the capability to independently develop a nuclear weapon. Non-state actor attempts to develop a nuclear weapon will rely heavily on leveraging the efforts of a state nuclear program, whether wittingly or unwittingly. Additional details on nuclear weapons development can be found in Appendix A, "Weapons of Mass Destruction Background, Materials, and Technologies."

(7) **Nuclear Weapons Effects.** When detonated, a nuclear weapon will release its energy as blast, thermal radiation, and nuclear radiation (alpha and beta particles, gamma rays, and neutrons). The interaction of the X-rays with surrounding air molecules can produce a secondary effect known as electromagnetic pulse (EMP). EMP is the electromagnetic radiation from a strong electronic pulse produced by a nuclear explosion. The pulse can couple with electrical or electronic systems to produce damaging current and voltage surges. The EMP fields are dependent upon the yield of the weapon and the height of burst. Nuclear generated EMP is a potential threat to unshielded electronics and electrical systems. High-altitude EMP, in particular, can briefly cover many thousands of square kilometers of the earth's surface with a potentially damaging electromagnetic field. The primary hazards for unshielded personnel are prompt radiation and thermal radiation, which are dependent on the size of the weapon, the proportion of energy released due to fission instead of fusion, the height of the detonation, and atmospheric conditions. When the detonation occurs as an air burst high enough that the fireball does not touch the ground, the fission products are scattered widely from the point of detonation. When the detonation occurs under, at, or near the surface, the fission products mix with surface materials, such as dirt and soil, and settle in a pattern commonly known as fallout around the area of detonation in the direction of the prevailing winds. This produces the preponderance of the radiation hazard and casualties beyond the immediate point of detonation. The effects from a nuclear weapon will extend hundreds of meters to hundreds of kilometers depending on the weapon characteristics and method of delivery.

For further information on EMP, see JP 3-13.1, Electronic Warfare; *and JP 3-11,* Operations in Chemical, Biological, Radiological, and Nuclear Environments.

b. **Radiological Weapons**

(1) **Understanding the Radiological Threat and Effects.** Radiological weapons include radiological dispersal devices (RDDs) and radiological exposure devices (REDs). An RDD, other than a nuclear explosive device, is designed to disseminate radioactive material in order to cause panic, chaos, and fear. A RED is a highly radioactive source which is placed in a location where people could be exposed. Radiological weapons are not considered to be militarily useful for a state-sponsored military, but may be desirable for non-state actors and terrorist organizations wishing to inflict psychological and economic damage. Radiological weapons are considered a serious threat due to the availability of radiological sources. These sources are used throughout the medical, research and industrial communities with minimal security precautions.

(a) **RDD.** RDDs contaminate the environment with radioactive materials and threaten populations with exposure. Their use may also result in area denial and costly cleanup or decontamination. An RDD is a possible terrorist weapon given the prevalent commercial use of radioactive source material and the relatively easy way this material could be dispersed through conventional explosives.

(b) **RED.** REDs are radioactive sources that may produce adverse physiological effects to those within a given proximity of the source, which could be hidden in lobbies, arenas or stadiums, elevators, public transit, or other areas where people congregate.

(2) **Delivery.** Several options exist for the delivery of radiological weapons. A conventional high-explosive bomb placed near a radioactive source, sometimes called a dirty bomb, could be used to disperse radioactive particles. A commercial mobile sprayer such as crop-dusting aircraft could be used to spread radioactive particles. Radioactive contamination could also be spread via a food chain, water sources, or ventilation systems, relying on a vector (an insect, animal, etc., that carries germs that cause disease) rather than a weapons system. A RED might simply consist of a radioactive source placed in a public area to expose people passing by it and could be placed in any area where a target population is present. Due to the nature of such weapons, radiological material would not necessarily have to be effectively disseminated to cause significant casualties and panic.

For further guidance on improvised explosive devices, refer to JP 3-15.1, Counter-Improvised Explosive Device Operations.

3. Biological Weapons

a. **Understanding the Biological Threat.** A biological agent, either natural or man-made, is a microorganism that causes disease in personnel, plants, or animals or causes the deterioration of material. The knowledge to develop a biological capability has become increasingly widespread with the evolution of biotechnology and has become readily obtainable by both state and non-state actors. In the wrong hands, this knowledge can lead to the development of biological weapons. Biological weapons differ from chemical, nuclear, and radiological threats in that small amounts of infectious agents are self-replicating and capable of spreading from person to person. Deliberately or accidentally released biological weapons against an unprotected population without biosurveillance or efficient epidemiologic investigative capability can have as much effect as weapons designed to create mass casualties.

b. **Categories.** Biological agents are categorized as pathogens or toxins. A thorough discussion of the effects of these agents, as well as transmissibility, viability, lethality, and dissemination methods is contained in JP 3-11, *Operations in Chemical, Biological, Radiological, and Nuclear Environments*.

(1) **Pathogens.** Pathogens are disease producing microorganisms (e.g., bacteria, viruses, prions, and fungi) that directly attack human tissue and biological processes. Pathogens are further divided into noncontagious and contagious. When biological threats

are contagious, planning needs to account for possible restrictions of movement to include quarantine and isolation. In addition to known threats, the JFC should be alert for emerging or novel threats.

(2) **Toxins.** Toxins are nonliving poisonous substances that are produced naturally by living organisms (e.g., plants, animals, insects, bacteria, fungi) but may also be synthetically manufactured.

(3) **Novel or Emerging Threats.** Current changes in science and technology may contribute to actors of concern finding ways to employ irregular, disruptive, and potentially catastrophic agents as threats in the future. The exploitation of bioregulators and modulators (peptides), which can potentially cause physiological effects (disrupt or damage nervous system, alter moods), represents a potential vector for development of novel threats. Emerging disease outbreaks such as severe acute respiratory syndrome and hantavirus pulmonary syndrome may be difficult to distinguish from the intentional introduction of infectious diseases by terrorist groups. Other pathogens such as prions that can cause fatal diseases in humans and animals could be used to create panic within the civilian populace.

For more information on biological agents, refer to JP 3-11, Operations in Chemical, Biological, Radiological, and Nuclear Environments.

c. **Employment**

(1) Because the primary route of infection for most biological warfare agents is inhalation, various systems and techniques have been developed to disseminate solid or liquid biological agents as an aerosol. Such systems have included spray tanks attached to aircraft or cruise missiles and bombs with bomblets that can explosively disseminate biological warfare agents. Ventilation systems could be contaminated and mass gathering locations could be targeted for an aerosol attack.

(2) Due to their nature as living organisms, biological agents, other than those in spore form, need to be employed shortly after production in order to be a viable weapon. *Bacillus anthracis*, the causative agent of anthrax, is unique in producing spores that can be desiccated, milled to a roughly five micrometer diameter particulate powder, and then loaded in weapons for dispersal. Once desiccated, anthrax spores remain viable for years under the right conditions. Loss of accountability of frozen aliquots of an amount of bacterial or viral agents can pose significant hazards as small samples can be cultured to produce amounts large enough to cause mass casualties.

(3) There are numerous unconventional means of disseminating biological warfare agents—from human vectors to remotely piloted aircraft. In 2001, anthrax deliberately mailed to media offices and the US Congress killed five people and infected 22. Other means of dispersing biological agents include contamination of food or water supplies, contaminated object (e.g., dish or clothing), injection of animals, or through vectors.

d. **Biological Agent Effects.** The effects of biological weapons on an operation will depend on the type of operation; the number of casualties; the severity of incapacitation of individual military personnel (i.e., are soldiers merely inconvenienced or completely

removed from the fight); the demand for medical personnel; the amount and type of medical supplies required; equipment (from antibiotics to beds and ventilators) and facilities to treat casualties; quarantine or monitoring of exposed but asymptomatic personnel; the need for medical evacuation assets (e.g., vehicles, planes, escorting medical attendants); and the infectiousness of the agent between humans. A biological attack can range in operational decrement from that of a severe nuisance (e.g., norovirus outbreak) to catastrophic for affected units (e.g., pneumonic plague). Depending on the agent, effects can be temporary or permanent for those affected.

e. **Determining Deliberate Use.** Disease outbreaks must be aggressively addressed to save lives, but it is also imperative to discern whether an outbreak is deliberate, accidental, or naturally occurring. Forensics provides attribution, to identify those responsible. Following a disease outbreak, a case definition needs to be constructed to determine the number of cases and the attack rate. If the attack rate deviates from the norm, an outbreak is more likely. Potential epidemiological clues to a biological attack include highly unusual events with large numbers of casualties; higher morbidity or mortality than expected for a given disease; unprecedented antibiotic resistance for a given pathogen; uncommon disease in a geographical area; point-source outbreak with shorter incubation time than usual (due to an increased amount of inoculum); multiple disease outbreaks; lower attack rates in protected individuals; dead animals; reverse spread (i.e., from humans to animals or disease observation in animals and people concurrently); unusual disease manifestation (e.g., inhalation and cutaneous anthrax in multiple regions concurrently); downwind plume pattern; and direct evidence. Information critical for intelligent decisions concerning prevention and response is listed in Figure II-1.

4. Chemical Weapons

a. **Understanding the Chemical Threat.** A chemical agent is a chemical substance that is intended for use in military operations to kill, seriously injure, or incapacitate mainly through its physiological effects. The term excludes riot control agents when used for law enforcement purposes, herbicides, smoke, and flames. The knowledge required to develop a chemical weapons capability is obtainable by both state and non-state actors. When the intent and capability to develop chemical weapons are combined they become a threat. The acquisition and development of chemical weapons encapsulates several activities that would culminate in an ability to use or proliferate. Due to the ubiquitous and dual-use nature of chemical production capabilities, the expertise, materials, technology, infrastructure, facilities, and means of delivery may be difficult to attribute to actors of concern or link to an intent to develop chemical weapons.

b. **Categories of Chemicals**

(1) **Traditional Agents.** These chemical weapons include blister (H and L series), nerve (G and V series), blood, and choking agents. Many traditional blood and choking agents (e.g., hydrogen cyanide and phosgene) have common industrial uses and are not defined as chemical weapons by the Chemical Weapons Convention (CWC) when used for those purposes.

Biological Weapons Critical Information

- Ability to detect the agent (sensitivity)
- Distinction of the agent from similar species (specificity)
- Diagnosis from clinical samples
- Identification of the animal reservoir, when applicable
- Knowledge of the collection, packaging, storage, and transport of specimens
- Vaccines to prevent the disease caused by the pathogen
- Post-exposure prophylaxis before development of clinical signs
- Treatment of disease
- Control of disease spread
- Triage and quarantine of suspected exposed individuals
- Knowledge of appropriate personal protective equipment for that agent and when to use it
- Transmission of the agent (aerosol, contaminated food, water, insect vectors)
- Routes of exposure (inhalation, ingestion, percutaneous routes [absorption or injection] personal contact, infected fluids, inanimate objects like bedding [fomites])
- Survival of the agent on fomites and in the environment
- Disinfection, sterilization requirements

Figure II-1. Biological Weapons Critical Information

(2) **Nontraditional Agents (NTAs).** NTAs are chemicals and biochemicals researched or developed with potential application or intent as chemical warfare agents, but which do not fall in the category of traditional chemical agents per the CWC. NTAs differ from traditional blister and nerve agents on which the US previously focused its defensive efforts. NTAs exist in four primary forms: solid, dusty, liquid, and aerosol. Each class of NTA has its own set of distinguishing characteristics. While NTAs possess some of the same properties as traditional chemical agents (i.e., nerve agents), typically these properties are enhanced when compared to traditional chemical agents; increased toxicity, garment penetration, and extremely low volatility.

For more information on NTAs, refer to Chairman of the Joint Chiefs of Staff (CJCS) Guide 3215, CJCS Guide to Non-traditional Agents.

(3) **Toxic Industrial Chemicals (TICs).** TICs are toxic substances typically found in solid, liquid, or gaseous form that are manufactured, used, transported, or stored for industrial, medical, or commercial purposes. Some TICs, such as particular pesticides, are highly toxic. Others are routinely transported and stored in very large quantities (e.g.,

anhydrous ammonia and chlorine), making them a pervasive threat in theaters of operation. Potential releases can occur through industrial or transportation accidents and can have significant impacts on joint operations. Additionally, releases can occur collaterally or result from a malevolent act. Some TICs can be turned into improvised weapons. For example, in Iraq between October 2006 and June 2007, there were several recorded attacks combining explosives and chlorine gas. Within a theater of operations, identifying major TIC industrial operations, storage sites, transportation routes, and host-nation security measures is necessary to manage this threat.

(4) **Riot Control Agents and Incapacitants.** A riot control agent is any chemical that can produce sensory irritation or disabling physical effects rapidly in humans which disappear within a short time following termination of exposure. Riot control agents are normally extremely irritating and in wide use by law enforcement. Incapacitants are substances that affect the higher regulatory functions of the central nervous system and are often abused drugs. The effects of these substances may be quite severe depending on the amount of exposure an individual receives. Certain riot control agents are lethal when used at higher concentration. These riot control agents fit into a special class of NTA.

For more information concerning employment of riot control agents, refer to CJCSI 3110.07, Guidance Concerning Employment of Riot Control Agents and Herbicides*, as well as standing and supplemental rules of engagement.*

c. **Employment.** Chemical agents are traditionally employed in artillery shells, rockets, missiles, bombs, mines, and spray tanks to produce vapors and aerosols or spread toxic liquids. Chemical agents can be incorporated into improvised explosive devices or other improvised dispersing devices. Because many chemical agents pose both an inhalational hazard and a percutaneous hazard (they can be absorbed through the skin), they do not need to be aerosolized to inflict casualties and contaminate areas. Targeting to produce wide-spread immediate lethal effects requires a high concentration and desired rate of action of agent in the target area. Targeting of this nature is enhanced by favorable weather factors (wind, air stability, temperature, humidity, and precipitation) and confined spaces (e.g., transportation terminals and building interiors). Persistent chemical weapons can be employed for denial of terrain, facilities, material, and logistics to reduce operations tempo and degrade the mission. Nontraditional employment (e.g., contamination of food or water supplies or aerosol generation at a mass gathering location) is possible and could be used to target particular populations.

d. **Chemical Agent Effects.** Most chemical agents are extremely lethal and rapidly produce mass causalities among unprotected personnel. The burden posed by implementing protective measures and measures to mitigate the spread of contamination will likely negatively affect operations tempo. Mass causalities could overwhelm medical facilities or spread contamination denying continued use of those facilities. Command and control (C2) assets can become overwhelmed with managing effects of the chemical weapon attack, which would adversely impact awareness of other activities. Additionally, contaminated ports and airfields could hamper the flow of logistics and reduce sortie generation.

For further information on chemical weapons, see JP 3-11, Operations in Chemical, Biological, Radiological, and Nuclear Environments.

5. Cruise and Ballistic Missiles

a. The mating of chemical, biological, or nuclear weapons with long-range cruise or ballistic missiles is a critical aspect of WMD risk. Cruise missiles are capable of delivering large payloads long distances. Cruise missiles present a significant challenge to early warning and air defense systems because they are self-navigating and can fly at low altitude.

b. Ballistic missiles are capable of carrying large payloads even greater distances and are likewise difficult to defeat. During their boost phase, ballistic missiles present large radar and infrared signatures. Ballistic missiles typically become smaller (as stages separate) and unpowered as they enter free fall. When cruise or ballistic missiles are launched from a mobile platform—such as an aircraft or submarine—their range and ability to evade detection and interception are further magnified.

c. Cruise and ballistic missile defense interceptors largely use "hit-to-kill" technology, which relies on the kinetic energy of physical impact to destroy the ballistic missile warhead. Planning teams rely on analysis from locally deployed technical support teams or technical reachback to model the potential consequence of intercept effects. Subcritical nuclear detonations, radiological dispersion, survival of persistent chemical and biological agents, and missile debris, may present hazards to infrastructure, populations, lines of communications, or other strategically vital areas. Missile defense interceptors which use close proximity blast fragmentary warheads to intercept cruise and ballistic missiles face a higher risk of residual effects from intercept.

For further information on cruise and ballistic missiles, see JP 3-01, Countering Air and Missile Threats.

6. Improvised Weapons

Improvised weapons include modified weapons and munitions, IEDs, and improvised CBRN, and are typically employed by non-state actors, and can include chemical, biological, or radiological enhancements. These weapons incorporate destructive payloads and fillers designed to kill, destroy, incapacitate, harass, or distract. Improvised weapons can incorporate military ordnance, but are normally made from a combination of military ordnance and nonmilitary components.

For further information on improvised weapons, refer to JP 3-15.1, Counter-Improvised Explosive Device Operations, *and* the Weapons Technical Intelligence Handbook.

7. Actors

a. **Actors of Concern.** Actors of concern may have the intent to use or proliferate WMD capabilities against US interests. These actors may also perceive WMD destructive capabilities as a highly desirable means to counter more technologically advantaged nations and alliances. State or non-state actors that carry out activities that, left unaddressed, pose a

clear potential threat to the strategic objectives of the USG. In the WMD context, an actor of concern poses a threat of developing, acquiring, proliferating, or employing WMD, related expertise, materials, technologies, and means of delivery. These actors also have the intent to use or proliferate this capability against US interests. They may perceive WMD destructive capabilities as highly desirable means to counter military and technologically advantaged adversaries and to threaten US and PNs interests.

b. **State Actors**

(1) **State Actors and WMD.** States may view WMD possession as a source of strategic leverage, international prestige, regional dominance, deterrence, or as a means to counter US and Western powers. This may be accomplished through the threat or actual use of a weapon. For a state to employ WMD, it must possess one or more weapons, a delivery capability to put a weapon on target, and the infrastructure necessary for command and control of the weapon system. Those states lacking a conventional delivery capability or seeking to avoid attribution may use asymmetric means or proxies (state or non-state) to deliver weapons. JFCs use joint intelligence preparation of the operational environment (JIPOE) to assess an actor of concern's capability to employ CBRN weapons. The capacity to employ WMD is further explained by the questions in Figure II-2.

(2) **Control of State Programs.** If state and regional instability increases in or around WMD possessor states, full control of weapons or critical weapons components may be jeopardized. JFCs should partner with other USG and multinational partners to advocate for responsible stewardship.

c. **Non-State Actors**

(1) **Non-State Actors and WMD.** Non-state actors may seek to acquire or use WMD in order to increase their influence or impose their will. JFCs should include CWMD considerations as part of the JIPOE, coordinate plans, and synchronize operations with USG and international partners to deter or prevent non-state actors from acquiring WMD. If acquired, use of WMD by non-state actors is more likely than an established state and thus requires due diligence to prevent access and acquisition to WMD and related components.

(2) **Acquisition and Development Efforts.** The WMD acquisition and development efforts of non-state actors differ from traditional state programs in their organization, scale, and resourcing. Many chemical and biological production facilities used by a non-state actor, such as clandestine laboratories, can operate within a limited space (e.g., one-car garage), using common dual-use or improvised equipment. Detecting and disrupting non-state actor networks and small-scale production facilities is a significant challenge for the JFC. In an operational context, irregular or asymmetric actors of concern can be countered by attacking the network, supported by capabilities, such as weapons technical intelligence, that facilitate understanding and subsequent defeat of threat networks.

For further information on acquisition and development efforts, see JP 3-15.1, Counter-Improvised Explosive Device Operations, *and JP 3-26,* Counterterrorism.

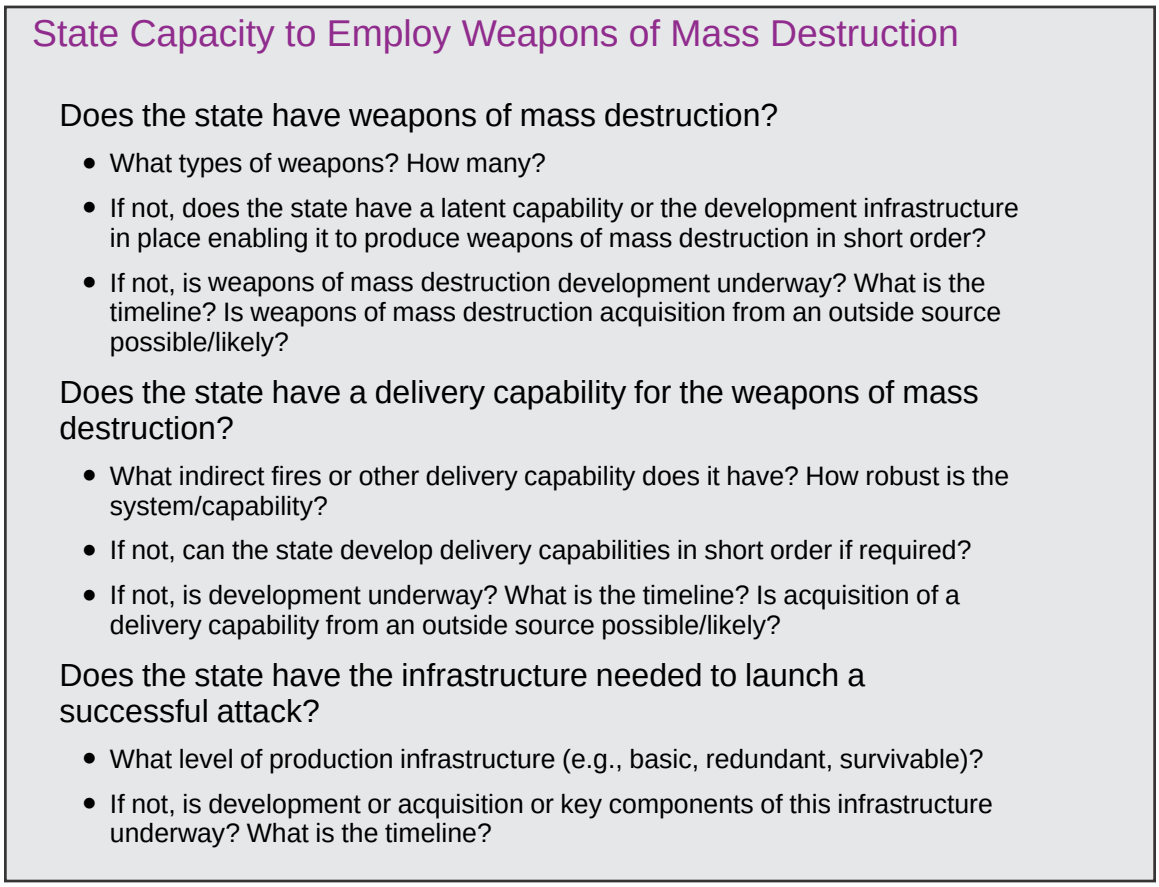


Figure II-2. State Capacity to Employ Weapons of Mass Destruction

8. Weapons of Mass Destruction Pathways

a. **Overview.** Globalization has enabled the creation of new, innovative and sophisticated pathways that enable both development and proliferation efforts. WMD pathways consist of networks or links among individuals, groups, organizations, governmental entities, etc., that promote or enable the development, possession, and/or proliferation of WMD and related capabilities. These pathways encompass ideas, materials, technologies, facilities, processes, products, and events. The evolution of weapons, materials, and technology, combined with the spread of knowledge and access to critical components, makes both detection and dissuasion more difficult. Also of significant concern are the dangers that arise from the potential convergence of violent extremism, political instability, and inadequate WMD security. Monitoring and controlling WMD pathways is essential in denying actors of concern access to WMD technology, knowledge, materials, expertise, and weapons. DOD will continue to enhance its capabilities, acting with an array of interagency and international partners, to conduct effective operations to counter the proliferation of WMD.

b. **WMD Activity Continuum.** The WMD activity continuum is a complex but identifiable process with several generic activities that together constitute the progression from conceptualization to use (Figure II-3). This continuum represents key decision points by an actor to acquire, develop, proliferate, or use WMD. Generic WMD continuum

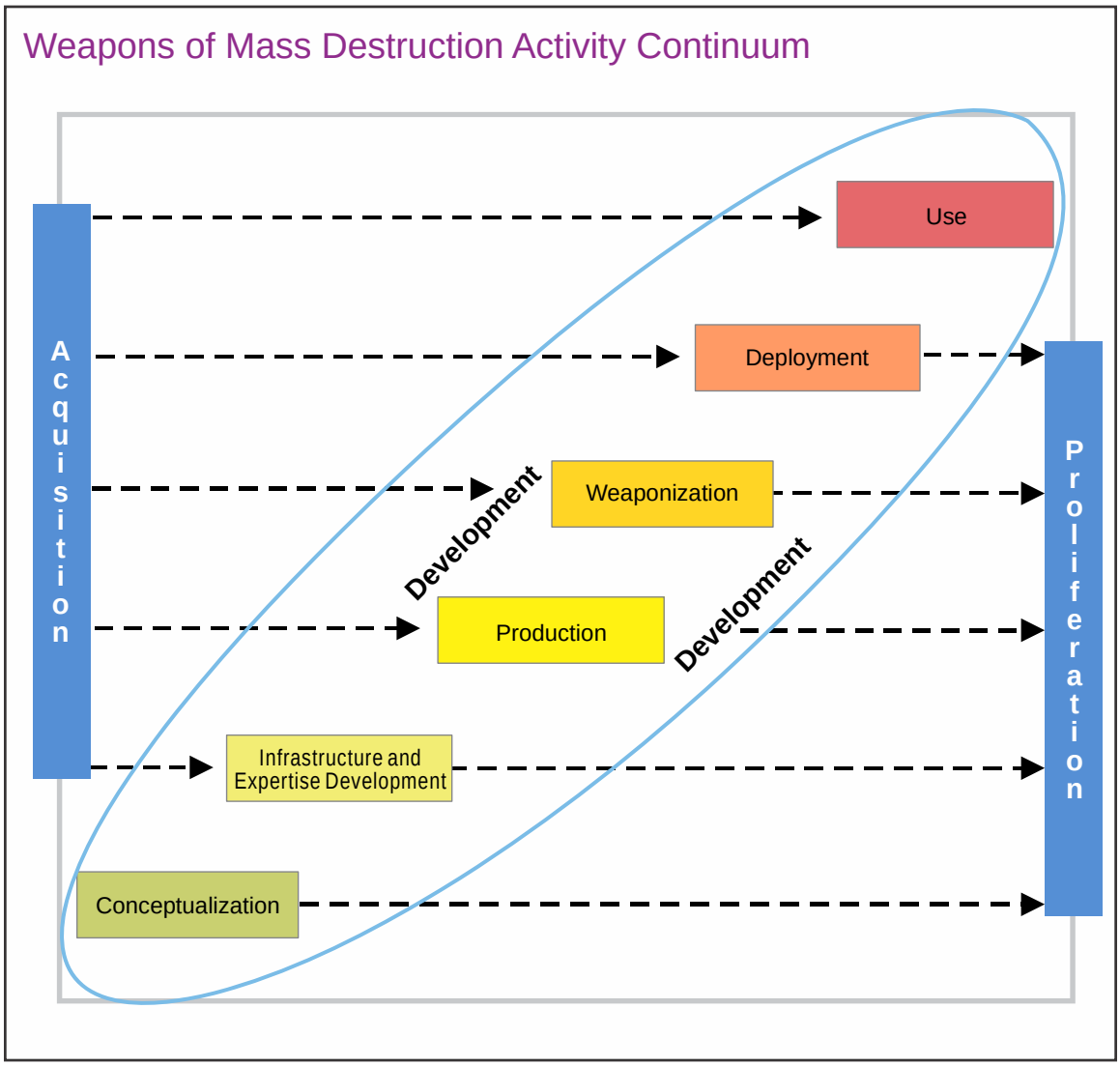


Figure II-3. Weapons of Mass Destruction Activity Continuum

activities include: conceptualization; infrastructure and expertise development; production; weaponization; deployment; and use. In some cases, infrastructure and expertise development, facility preparation, and production may be concealed within industrial or agricultural production (dual-use facilities, equipment, expertise, technologies, and materials), academic institutions, or within concealed facilities, making intelligence collection efforts more difficult. Furthermore, JFCs should bear in mind that Article IV of the NPT guarantees its signatories the right to develop nuclear energy for peaceful purposes, which may also mask the development of fissile material for weapons. WMD actors may, at any point along the proliferation continuum, effectively bypass one of the steps by acquiring (by theft, barter, or purchase) the capability, thereby accelerating the WMD development process. A JFC should be prepared to counter these activities at every stage of the continuum to minimize WMD risk.

c. **Acquisition.** WMD technologies and capabilities may be acquired by state or non-state actors through systematic development, theft, barter, or purchase to accelerate the

WMD development process. Due to geopolitical instability (e.g., states with WMD capabilities that are in civil war or susceptible to potential collapse), WMD technologies, materials, and expertise may be vulnerable. This increases the risk of proliferation through loss of control, security, and accountability. Actors of concern may seek to capitalize on geopolitical instability to circumvent the development process by directly acquiring WMD technologies, capabilities, and expertise. Individuals with key WMD technical or network knowledge may seek sanctuary from the dangers of geo-political instability through other state or non-state actors in exchange for their cooperation.

d. **Development.** WMD development involves a range of processes that lead to weapons possession and includes critical human resources, logistics, C2, research efforts, production infrastructure, equipment, materials, financial networks, and other supporting networks.

e. **Proliferation.** WMD proliferation is the transfer of WMD or related materials, technologies, and expertise from suppliers to state or non-state actors.

(1) **Transfer Between States.** States that were once recipients of WMD related technologies and materials may begin to indigenously produce and export these same technologies to other countries of proliferation concern. The ability and willingness of these states to export WMD-related expertise, technologies, and materials to other states outside of, or in noncompliance with, international nonproliferation rules are a serious threat.

(2) **Non-State Actors.** Non-state actors (e.g., terrorists, criminals, scientists, businesses, facilitators) and their networks may be involved in the intentional or unintentional proliferation of WMD-related technologies and materials. This compounds the risks of acquisition of WMD by actors of concern. Non-state actors who operate outside of international and state controls, while difficult to detect, should remain a JFC concern.

f. **Proliferation Networks.** Proliferation networks are the supporting infrastructure that a state or non-state actor uses to gain or transfer access to weapons, material, technology, and expertise. A proliferation network is one form of WMD pathway. It is important to note that many of these networks are not organized specifically for the proliferation of WMD. In fact, many existing networks may be utilized out of convenience. Examples of existing networks include human trafficking, counterfeiting, and drug trafficking. As an additional consideration, some nodes within these networks may be unwitting partners. The threat is further complicated by the operations of multinational networks, potentially with the support of state resources. These global proliferation activities employ a combination of secrecy, dispersion, and fiscal resources that must be located, monitored, and ultimately targeted. The JFC should use a systems perspective to better understand the complexity of the OE and associated networks. This perspective looks across the political, military, economic, social, information, and infrastructure environments to identify the nodes, links, centers of gravity, and potential vulnerabilities within the network. The JFC understands that as these networks expand in scope and area, the actions needed to adequately identify and affect them may reside outside DOD influence and may require interagency or IGO efforts. Depending on joint force organization, the JFC may lack a full range of capabilities that can support unity of effort to proactively and comprehensively dissuade, deter, defeat, or deny these networks.

For further guidance on systems analysis, refer to JP 2-01.3, Joint Intelligence Preparation of the Operational Environment*, and JP 3-0,* Joint Operations.

g. **Proliferation Network Common Functions.** Proliferation networks are multifunctional and multidimensional; consist of state and, increasingly, independent non-state actors with differing motivations and desired end states; are dynamic, adaptive, and can be transnational; and operate in secrecy to avoid detection and counteraction. They respond to changes in their environment, learn, and acquire new knowledge through study. Many networks are selectively active. They lie dormant when support is not required and become active when the WMD development process requires (e.g., executing financial activities when buying expertise or knowledge or executing logistic activities when moving or deploying a weapon). Networks may be limited in their duration and may be dissolved once their purposes are achieved. Many of these networks, whether focused solely on WMD proliferation or not, are comprised of several common functions. Key nodes in these networks can include:

(1) **Leadership.** Leadership activities provide motivation and the means to control activities of the WMD program. This includes actions to provide strategic direction, coordinate the activities of other networks, facilitate the flow of information and resources throughout the networks, and provide the motivation to acquire WMD. This function may be state-directed or may reflect ideological, financial, business, or other concerns that motivate WMD proliferation.

(2) **Finance.** Finance activities to secure and transfer the funding for all aspects of a WMD program. These activities may include brokers, intermediaries, financial institutions, banking systems, and charities.

(3) **Scientific and Technical Expertise.** Scientific and technical expertise provides the knowledge and expertise necessary to produce WMD and related infrastructure (e.g., designing, producing, machining, testing, storing). This function harnesses information and expertise from scientists, researchers, engineers, and technicians necessary to support capability development.

(4) **Communications.** Communication activities provide the necessary information throughout the network. These activities link automated systems to delivery capabilities; establish rapid and reliable channels between WMD resources, expertise, and leadership; and bring required components together for coordination. Because of the importance of these programs, great effort will be taken to protect communication channels.

(5) **Logistics.** Logistics activities acquire, produce, and transport the raw material, people, production materiel, and finished products. This function acquires missing components or technology; trains and recruits needed expertise, as required; and may support the theft of WMD technology, components, or functional weapons. This facet includes a significant portion of the network, such as shipping companies, producers, import/export companies, and other means of conveyance.

(6) **Intelligence, Surveillance, and Reconnaissance.** Intelligence, surveillance and reconnaissance activities acquire detailed target data and determine potential sources of WMD components, technology, and expertise.

(7) **Weapon Delivery.** Weapon delivery activities deliver the WMD to the target and initiate its firing. These activities can be both conventional weapons systems and unconventional delivery methods, such as a backpack sprayer or crop duster.

(8) **Security.** Security activities protect all common functions. This action allows the organization the ability to operate undetected while preparing for future operations.

9. Dual-Use Challenges

JFCs should understand the implications associated with dual-use technologies, materials, equipment, and expertise, which can provide the capability to develop WMD. Many CBRN-associated resources have a range of legitimate applications in industry, the public health sector, academia, and research. Even though they are normally used for civilian purposes, they may be exploited for military or nefarious applications. These dual-use items present state and non-state actors of concern a means to covertly acquire or develop CBRN weapon capabilities. The legitimate appearance of these activities and facilities complicates the JFC's ability to detect, track, and target these capabilities.

A.Q. KHAN PROLIFERATION NETWORK

A.Q. Khan created an elaborate and highly successful illicit procurement network in the 1970s to supply Pakistan's gas centrifuge program. The developing program aimed to make highly enriched uranium for nuclear weapons. Khan built his centrifuge procurement network on an extensive collection of sensitive information that he stole or otherwise acquired while working at a Dutch uranium enrichment company in the middle and late 1970s. In addition, he was involved in acquiring overseas nuclear weapon technology for Pakistan and procuring equipment and materials for this endeavor.

Because of Pakistan's weak industrial infrastructure, it was unable to develop gas centrifuges or nuclear weapons without extensive foreign assistance. Khan relied on the support of many foreign businessmen and experts for the acquisition of goods and technologies. Pakistan's nuclear weapons program is still dependent on the foreign supply of spare parts, special materials, and instruments.

Khan and his associates slowly expanded their import operation into an illegal transnational network that exported whole gas centrifuges and production capabilities, as well as designs for nuclear weapons, mostly to countries in the Middle East and Asia. By the late 1990s, the Khan network had evolved into an organization that could provide "one-stop shopping," both for the wherewithal to produce weapons-grade uranium and for nuclear

weapons designs and instructions. The motive was to turn a profit while providing additional business for their international collaborators. In addition to money, Khan was also motivated by pan-Islamism and its hostility to Western controls on nuclear technology.

Khan has admitted that his main customers were Iran, Libya, and North Korea. Reports indicate that other countries, including Egypt, Iraq, and Syria, were offered assistance, but they purportedly turned down the offers. However, investigators are still trying to verify these claims and determine exactly what assistance each country accepted or refused. Questions also remain as to whether members of the Khan network, including Khan himself, offered nuclear weapon assistance to terrorists in Afghanistan prior to the fall of the Taliban.

SOURCE: The A.Q. Khan Illicit Nuclear Trade Network and Implications for Nonproliferation Efforts, Strategic Insights, Volume V, Issue 6 (July 2006) by David Albright and Corey Hinderstein

CHAPTER III
ORGANIZATIONAL AND COMMAND RELATIONSHIPS

"The proliferation of nuclear, biological, and chemical weapons technology has the potential to magnify the threats posed by regional state actors, giving them more freedom of action to challenge US interests. Terrorist access to even simple nuclear devices poses the prospect of devastating consequences for the United States. Accordingly, the Department of Defense will continue to enhance its capabilities, acting with an array of domestic and foreign partners, to conduct effective operations to counter the proliferation of WMD [weapons of mass destruction]."

Sustaining US Global Leadership: Priorities for 21st Century Defense
January 2012

1. General

a. This chapter identifies the numerous USG organizations that have a role in CWMD and highlights their various responsibilities, functions, and capabilities. While this list is extensive, it is not all inclusive. Conventional and special operations forces (SOF) regularly conduct operations and activities that contribute to CWMD efforts, either directly or indirectly. Additionally, specially trained or designated forces used to conduct strategic deterrence, intelligence, surveillance, and reconnaissance or CT missions also contribute to CWMD mission success. This chapter highlights organizations with specific CWMD authorities, responsibilities, or missions. However, when planning or executing a CWMD operation, a JFC should leverage all of DOD's CWMD capabilities.

b. Success in CWMD requires a coordinated, whole-of-government effort. DOD recognizes that DOS is normally the USG lead agency during steady-state operations and DOD is prepared to play a supporting role. To formally coordinate with interagency partners, CCMDs identify programs and activities of concern to the Joint Staff (JS) and OSD. Using the National Security System coordination process, OSD facilitates interaction among CCMDs and interagency partners. CCDRs use established relationships to coordinate with interagency partners to increase their success in CWMD.

c. When planning or executing CWMD operations and activities, JFCs coordinate and cooperate with not only other USG departments and agencies but also local, tribal, and state organizations, in addition to multinational partners. With numerous stakeholders in the CWMD mission area, it is critical that unity of effort is achieved and that the roles, responsibilities, and authorities of the numerous organizations are understood by the JFC. JFCs should consider the capabilities and responsibilities of the organizations in this chapter when defining command relationships and coordinating interorganizational activities.

2. Department of Defense Countering Weapons of Mass Destruction-Related Organizations, Responsibilities, and Relationships

a. **OSD.** OSD develops, coordinates, and oversees implementation and integration of DOD CWMD policy. OSD coordinates with interagency partners for the transition or transfer of responsibility of CWMD operations from the Armed Forces of the United States to and from other USG departments and agencies, international agencies, or other countries, as appropriate. OSD coordinates with both DOS and the JS to obtain international CWMD legal authorities, protocols, standards, and agreements; multinational support for CWMD operations; and, when required, host nation (HN) support. They coordinate with DOS to notify the Organization for the Prohibition of Chemical Weapons of discoveries or destruction of chemical weapons materials and former production facilities. They coordinate with the National Counterproliferation Center (NCPC) to enhance intelligence support regarding WMD capabilities of all state and non-state actors. They coordinate with partner agencies and organizations of the USG in support to the homeland in the conduct of DSCA operations, such as domestic CBRN CM or nuclear forensics. They also will coordinate DOD processes and procedures within the USG National Technical Nuclear Forensics interagency community.

For further information on the OSD roles and responsibilities for CWMD, refer to DODD 2060.02, Department of Defense Combating Weapons of Mass Destruction Policy.

b. **CJCS.** The CJCS serves as the principal military advisor to the President, National Security Council, and SecDef regarding CWMD activities and apportions, assigns, or allocates CWMD capabilities to plan and execute the mission. Subject to the CJCS's authority, direction, and control, the JS coordinates with CCMDs and Services to ensure CWMD operations are executed in compliance with domestic, international, and foreign laws, policies, treaties, and agreements. They assist with interagency support for CWMD operations and assist in planning and exercising CWMD activities within the interagency process. They also coordinate and provide intelligence support to the CCDRs for target identification and prioritization. When required after SecDef approval, CJCS will publish appropriate execute orders for CWMD activities.

For more information on the JS roles and responsibilities for CWMD, refer to DODD 2060.02, Department of Defense Combating Weapons of Mass Destruction Policy.

c. **Geographic Combatant Commands.** GCCs plan and execute CWMD missions within their AORs. They develop regional CWMD strategy, policies, and campaign and contingency plans for their AORs, determine CWMD mission shortfalls, identify CWMD mission resourcing requirements, and incorporate CWMD activities into their operational plans. USNORTHCOM and USPACOM have specific responsibilities related to DSCA that may include CBRN response operations in order to save lives and minimize suffering.

d. **Global Synchronizers.** The UCP assigns planning synchronization to select CCMDs. Each global synchronizer is responsible for coordinating the alignment of specified planning of CCMDs, Services, DOD agencies, and, as directed, appropriate USG departments and agencies. Planning synchronization occurs within an established, common framework to facilitate coordinated and decentralized execution across geographic or other

boundaries. The global synchronizers also coordinate with each other to ensure coverage in areas where mission responsibilities overlap. Synchronizing planning pertains specifically to planning efforts only, and does not, by itself, convey authority to execute operations or direct execution of operations.

(1) **USNORTHCOM.** USNORTHCOM is the global synchronizer for planning for DOD efforts in support of the USG response to PI&ID.

(2) **United States Special Operations Command (USSOCOM).** USSOCOM is the global synchronizer for DOD CT planning. The seven theater special operations command headquarters (HQ) are under Commander, USSOCOM command authority but are under the operational control of the six GCCs. Special Operations Command Korea is also under Commander, USPACOM operational control. USSOCOM serves as the DOD CTF activities, but does not synchronize CTF activities that are under the operational control of GCCs unless directed by SecDef.

(3) **USSTRATCOM.** USSTRATCOM is the global synchronizer for DOD global CWMD planning. USSTRATCOM Center for Combating WMD advises CCMDs on WMD-related matters and provides critical planning and operational expertise. Additionally, USSTRATCOM CWMD subject matter experts help plan, conduct, and participate in joint training and exercises. USSTRATCOM also chairs a CWMD Request Board and conducts a CWMD Intelligence Production Prioritization Working Group to prioritize CWMD intelligence production requirements across multiple CCMDs.

(4) **United States Transportation Command (USTRANSCOM).** USTRANSCOM is the synchronizer for global distribution operations and is responsible for the related global campaign plan. USTRANSCOM provides common-user and commercial air, land, and sea transportation, terminal management, aerial refueling, and aero medical evacuation of patients, as required to support the global deployment, employment, sustainment, and redeployment of US forces in support of CWMD missions. When requested by a federal agency and approved by SecDef, USTRANSCOM provides transportation support to non-DOD organizations, such as movement of critical capabilities or commodities, or evacuation of personnel. The command identifies policy and doctrine, organization, training, materiel, leadership and education, personnel, and facilities requirements for returning CBRN-contaminated airlift platforms to general use. In coordination with the geographic CCMDs, USTRANSCOM ensures contingency plans address CBRN vulnerabilities of the entire supply chain.

e. **Military Departments.** The Services serve in the following roles in CWMD:

(1) Organize, train, equip, and otherwise prepare military forces to conduct missions to counter WMD and their means of delivery in support of the JFC.

(2) Contribute to shaping an international environment hostile to proliferation and strengthening deterrence through building partners' CWMD-related capabilities and capacities.

(3) Coordinate CWMD capability needs with the CJCS and advocate for military capabilities to counter WMD.

(4) Maintain and expand CWMD technical expertise.

(5) Provide subject matter expertise to support CCMD requirements in the CWMD mission area, as directed.

f. **Chief, National Guard Bureau (CNGB).** CNGB formulates, develops, and coordinates all policies, programs, and plans affecting CWMD assets within the National Guard (NG). CNGB synchronizes the alert and deployment of the NG CBRN Response Enterprise with the state adjutant general via their National Guard joint force headquarters-state (NG JFHQ-State) and Commander, USNORTHCOM for major or catastrophic CBRN incidents within the US and its territories to support civil authorities in response to CBRN incidents in order to save lives and minimize human suffering. NG CBRN enterprise assets consist of military first responders comprised of WMD-civil support teams, chemical, biological, radiological, nuclear, and high-yield explosives enhanced response force packages, and homeland response forces.

For more information on DOD CBRN response enterprise assets, see JP 3-41, Chemical, Biological, Radiological, and Nuclear Consequence Management.

g. **Combat Support Agencies (CSAs)**

(1) **Defense Intelligence Agency (DIA).** DIA advises SecDef, CJCS, and CCDRs on WMD intelligence and provides military intelligence support for CWMD planning. DIA supports CCDR preparation of strategic estimates, priorities, and joint operation plans for CWMD operations. Additionally, DIA performs the following functions:

(a) Serves as the DOD intelligence focal point for the unifying intelligence strategy for counterproliferation.

(b) Oversees development of an automated intelligence planning tool that will allow DOD-wide visibility in the execution of all intelligence planning efforts and integration with other intelligence requirements systems of record and planning direction suites.

(c) Provides standing, foundational level, tailored WMD intelligence products.

(d) Manages CWMD counterintelligence operations through the Office of Counterintelligence within the Directorate of Operations.

(e) Validates and distributes counterintelligence and human intelligence requirements that support CWMD objectives, intelligence requirement sets, and engagement strategies.

(f) Provides annual assessment/posture statement of capability gaps, shortfalls, and mitigation strategies to support DOD CWMD planning.

(g) Provides defense intelligence support (including CBRN, weapons technical intelligence, and forensics-enabled and biometrics-enabled intelligence) to disrupt WMD proliferation networks.

(h) Provides computational hazard area modeling and associated predictive analysis of chemical and radiological events.

(i) Provides intelligence warning of biological events, as well as early qualitative assessments of the likelihood a biological event may be of man-made origin, particularly in the earliest phases of an event where on-site forensic analysis is not likely to be available.

(2) **Defense Threat Reduction Agency (DTRA).** DTRA's mission is to safeguard the US and its allies from WMD threats globally. DTRA provides integrated technical and operational solutions to the CWMD mission, as well as intellectual capital, to inform and support national-level and DOD policies and strategies that address WMD threats to the homeland and the warfighter. Specific DTRA capabilities supporting the JFC include the following functions:

(a) Provide planning support, real-time technical reachback for the geographic CCMDs, technical development, and capabilities analysis.

(b) Provide operational and technical expertise in modeling and attribution.

(c) In coordination with CCMDs, JS, and the Services, identify and focus research and development efforts to address identified CWMD capability gaps.

(d) Manage and oversee research, development, test, and evaluation to counter the threat and use of WMD; support CCDR CWMD planning; and assist in the development and integration of capabilities to support DOD CWMD efforts and activities.

(e) Implement the cooperative threat reduction (CTR) program.

(f) Provide CBRN subject matter expertise through CBRN consequence management advisory teams and the CBRN Preparedness Program.

(g) Build partnership capacity in CBRN CM by providing training and resources to international partners through the CBRN CM assistance program.

For more information on the mission, organization and management, responsibilities, and functions, relationships, authorities, and administration of DTRA, refer to DODD 5105.62, Defense Threat Reduction Agency (DTRA).

(3) **Other Support Agencies.** The Missile Defense Agency, National Geospatial-Intelligence Agency, National Reconnaissance Office, National Security Agency, and the Joint Improvised Explosive Device Defeat Organization support CCMDs to enable CWMD operations.

3. United States Government Countering Weapons of Mass Destruction-Related Organizations, Responsibilities, and Relationships

a. CWMD requires a coordinated response—a unity of effort—of combined capabilities of the USG. Coordination between DOD and other USG departments and agencies is critical to the success of CWMD operations against the global WMD threat. During shaping, these CWMD efforts are normally led by a department or agency other than DOD. In many cases, the JFC will be supporting another USG department or agency and that organization may be supporting a PN or IGO.

b. SecDef is a statutory attendee of the National Security Council, while the CJCS serves in the role of principal military advisor. The National Security Council Staff oversees lines of communications between USG departments and agencies involved in CWMD activities to facilitate unity of effort. This is intended to leverage all instruments of national power. The Under Secretary of Defense for Policy and JS facilitates coordination between CCMDs and interagency partners in order to meet GEF-directed planning requirements. Additionally, where appropriate, coordination with interagency partners also occurs through a combination of military representatives to country teams, geographic CCMDs' joint interagency coordination groups or similar elements, and established joint interagency task forces.

c. The majority of interagency CWMD programs and contributions occur as day-to-day activities in what DOD identifies as phase 0 activities, which include ongoing operations and activities such as SC. Since there are a number of different organizations within the USG that contribute to CWMD, it is important to develop some level of mutual awareness of their roles and capabilities to identify potential areas for cooperation. USG departments and agencies, and their CWMD-related functions, are summarized in the following paragraphs.

(1) Office of the Director of National Intelligence (ODNI)

(a) **National Counterterrorism Center (NCTC).** The NCTC is the primary organization in the USG that integrates and analyzes intelligence pertaining to terrorism and CT, including all intelligence related to terrorist use of WMD. The CT community lead for identifying critical intelligence problems, key knowledge gaps, and major resource constraints is the NCTC. NCTC collocates intelligence, military, law enforcement, and homeland security networks to facilitate information sharing across USG departments and agencies. In addition to its information sharing role, the NCTC provides a strategic-level operational planning function for CT activities and is responsible for integrating all elements of national power toward successful implementation of the national CT strategy.

(b) **NCPC.** The NCPC helps the US counter the threats caused by the development and spread of WMD. NCPC works with the intelligence community to identify critical gaps in WMD knowledge resulting from shortfalls in collection, analysis, or exploitation and then develop solutions to reduce or close these gaps. The NCPC does this by analyzing, integrating, and disseminating comprehensive all-source WMD proliferation intelligence; providing all-source intelligence support needed for the execution of counterproliferation plans or activities; and performing independent WMD proliferation

analyses. It may also play a role in the nuclear attribution process by fusing law enforcement and intelligence information with nuclear forensics conclusions provided by national technical nuclear forensics center. The NCPC also provides WMD briefs and analyses to the President, Congress, and the appropriate USG departments and agencies, as required. The majority of the NCPC staff are detailees from the intelligence community, as well as DOD and the Department of Energy (DOE) national laboratories.

(2) **DOS.** DOS plays a crucial role in the overall USG effort to counter WMD. Central to DOS's responsibility for diplomatic engagement on international security, DOS aims to build international consensus on arms control and nonproliferation based on common concern and shared responsibility. The Under Secretary for Arms Control and International Security leads interagency policy development on nonproliferation and manages global US security policy, principally in the areas of nonproliferation, arms control, regional security and defense relations, and arms transfers and security assistance. This entails overseeing the negotiation, implementation, and verification of international agreements in arms control and international security. Other specific responsibilities include directing and coordinating export control policies and policies to prevent missile, nuclear, chemical, biological, and conventional weapons proliferation. All of these contribute to the DOS's strategic goal of countering threats to the US and the international order. DOS CWMD responsibilities are primarily planned and executed via: the Bureau of Arms Control, Verification, and Compliance (AVC); the Bureau of International Security and Nonproliferation (ISN); and the Bureau of Political-Military Affairs (PM); all of which report to the Under Secretary for Arms Control and International Security.

(a) **AVC.** The AVC core missions concern arms control, verification, and compliance with international arms control, nonproliferation, and disarmament agreements or commitments. AVC advances national and international security through the negotiation and implementation of arms control and disarmament agreements involving WMD and their means of delivery. As the principal policy community representative to the intelligence community, AVC ensures that US intelligence capabilities are effectively acquired, maintained, and enhanced to collect, analyze, and disseminate precise and timely information bearing upon matters of verification and compliance. These verification and compliance reviews concern the nature and status of foreign governments' WMD and delivery system programs. The AVC also provides, through its Nuclear Risk Reduction Center, information technology support and secure government-to-government communications linkages with treaty partners.

(b) **ISN.** The ISN is responsible for managing a broad range of US nonproliferation policies, programs, agreements, and initiatives. Countering the threat of WMD proliferation through bilateral and multilateral diplomacy is one of the highest priorities of the DOS. ISN leads DOS's efforts to prevent the spread of WMD—whether nuclear, biological, chemical, or radiological—and their delivery systems.

(c) **PM.** The PM is DOS's principal link to DOD. PM provides policy direction in the areas of international security, security assistance, military operations, defense strategy and plans, and defense trade. PM also facilitates coordination of CWMD efforts between DOS and DOD.

(d) **International Security Advisory Board.** The International Security Advisory Board provides DOS with independent insight and advice on all aspects of arms control, disarmament, international security, CWMD and related aspects of public diplomacy. Board members are national security experts with scientific, military, diplomatic, and political backgrounds.

(3) **DHS.** DHS protects the US against threats to the homeland, secures and manages the nation's borders, protects critical infrastructure, and ensures the nation's resilience to disasters. The NRF, prepared by DHS, provides information on how USG departments and agencies should work together to prepare for and respond to WMD events. DHS agencies, along with the Federal Bureau of Investigation (FBI), DOE, the Department of the Treasury (TREAS), the Department of Commerce (DOC), and the intelligence community, play a vital role in supporting national CWMD efforts. Agencies within the DHS that contribute to the CWMD mission include:

(a) **United States Coast Guard (USCG).** The USCG may play an integral role in WMD interdiction operations by protecting US economic and security interests in maritime regions, including international waters, US coastal regions, ports, and waterways. Additionally, the USCG's jurisdiction and law enforcement authorities allow them to perform operations that DOD is not permitted to perform under USC. USCG personnel can be used to enforce US laws anywhere in the world, with certain restrictions, and can participate in regular DOD-led interdiction operations retaining their Title 14, USC authorities, even if assigned as additional Title 10, USC forces. Roles and responsibilities for USCG personnel must be clearly laid out by area commanders prior to interdiction operations.

(b) **Customs and Border Protection (CBP).** To prevent WMD smuggling, the CBP works through existing partnerships with customs and law enforcement agencies in PNs to protect US borders, ports of entry, and screen admissibility of persons, cargo, and vessels arriving into US ports. CBP also supports a National Targeting Center and operates the Container Security Initiative with the DOE.

(c) **Federal Emergency Management Agency.** The Federal Emergency Management Agency provides support to our nation's critical infrastructure in response to CBRN hazards through comprehensive emergency management programs including risk reduction, preparedness, response, and recovery.

(d) **Domestic Nuclear Detection Office (DNDO).** DNDO improves the Nation's ability to detect and report transportation of nuclear or radiological material. Additionally, DNDO operates the National Technical Nuclear Forensics Center, which has two primary missions. The first provides centralized planning, integration, assessment, and stewardship of the nation's nuclear forensics capabilities to ensure a ready, robust, and enduring capability in coordination with other USG departments and agencies who have assigned responsibilities for national technical nuclear forensics. These include the Department of Justice (DOJ)/FBI, who is the lead federal agency responsible for the criminal investigation of terrorist events and the nuclear forensic investigation of planned or actual attack; DOD, DOE, DOS, ODNI, and DHS. The second mission is to advance the capability to perform nuclear forensics on nuclear and radiological materials in a pre-detonation (intact) state.

(e) **Immigration and Customs Enforcement (ICE).** ICE enforces US immigration and customs regulations. One of its highest priorities is to prevent illicit procurement networks, terrorist groups, and hostile nations from illegally obtaining US military products, sensitive dual-use technology, WMD, or CBRN materials. The ICE homeland security investigation's counterproliferation investigations program oversees a broad range of investigative activities related to such violations. The counterproliferation investigations program enforces US laws involving the export of military items, controlled dual-use goods, firearms, and ammunition, as well as exports to sanctioned or embargoed countries.

(4) **DOJ.** The Attorney General has lead authority to investigate and prosecute federal crimes, which includes the use or attempted use of WMD and the export of strategic commodities and technology. Much of this investigation authority has been delegated to the FBI and the Drug Enforcement Administration (DEA).

(a) **FBI.** The FBI is the lead federal agency for investigating WMD crimes. It focuses its WMD-related activities to prevent the illicit acquisition of WMD and identify and disrupt their attempted use. The preemptive focus of these efforts requires the FBI to use its investigative and analytical capabilities to identify potential WMD suspects, targets, and threats before an attack occurs. The FBI WMD investigation and prevention efforts are performed by the WMD Directorate within its National Security Branch. Comprised primarily of special agents, intelligence analysts, program managers, and policy specialists, the WMD Directorate designs training for employees of the FBI; interagency partners; state and local law enforcement organizations; and public health, industry, and academia partners. The WMD Directorate also provides national-level WMD intelligence support to FBI field divisions and to the larger intelligence community. At the local level, the FBI primarily relies on a designated special agent in each field division, referred to as the WMD coordinator, to implement a significant portion of the FBI's WMD-related activities.

(b) **DEA.** The DEA utilizes unique capabilities with counterparts in the international law enforcement community and PNs to locate, track, apprehend and seize personnel, assets, and resources used to smuggle WMD.

(5) **United States Agency for International Development (USAID).** USAID manages developmental, humanitarian, and civic assistance activities; plans and implements programs to improve economic and social conditions overseas; and supports a USG response to many types of foreign disasters. USAID may support a USG response to a CBRN incident in a foreign country.

(6) **TREAS.** TREAS is the primary USG department responsible for economic and financial security of the US. TREAS works with USG departments and agencies, foreign governments, and international financial institutions in support of national strategies to counter WMD proliferation. TREAS safeguards US financial systems and supports DOS programs to train and equip PNs customs agents.

(7) **DOC.** DOC develops and administers federal policy and programs affecting the industrial and commercial segments of the national economy. DOC formulates US export control policy to prevent WMD proliferation and control sensitive dual-use technology transfers.

(8) **Department of Health and Human Services (DHHS).** DHHS protects the health and safety of all Americans and provides essential human services. The key CWMD-related organizations within DHHS are: the Centers for Disease Control and Prevention (CDC), the Agency for Toxic Substances and Disease Registry (ATSDR); and the National Institutes of Health (NIH).

(a) **CDC.** The CDC provides a system of health surveillance to monitor and prevent disease outbreaks (including bioterrorism), implements disease prevention strategies, prevents and controls infectious and chronic diseases, and maintains national health statistics. The CDC also provides for immunization services, environmental disease prevention, and essential human services, including medical preparedness. The CDC exists to fight disease, whether naturally occurring or due to accidental release or deliberate attack.

(b) **ATSDR.** The ATSDR saves lives and protects people from environmental hazards by responding to natural and man-made disasters, working with communities in crisis from environmental threats, supporting state and city public health programs to reduce or eliminate hazardous substances in communities, and to reduce exposure to hazardous substances. The ATSDR conducts epidemiological health studies in communities across the country, maintains nationwide exposure and disease registries, and collects data from chemical release incidents in order to support emergency response and prevention decisions.

(c) **NIH.** The NIH's primary contribution to USG CWMD efforts is to assist with the development of policies and regulations concerning dual-use research and facilities. This is primarily done by the NIH's Office of Biotechnology Activities (OBA) and the National Science Advisory Board for Biosecurity (NSABB). The NIH/OBA promotes science, safety, and ethics in biotechnology through the Dual-Use Research Program, development of public policies, and the convening of the NSABB. The NSABB is a federal advisory committee chartered to provide advice, guidance, and leadership regarding biosecurity oversight of dual-use research, defined as biological research with legitimate scientific purpose that may be misused to pose a biological threat to public health and/or national security.

(9) **Department of Transportation.** The Department of Transportation establishes national transportation policy. Its federal administration includes highways, urban mass transit, railroads, aviation, and the safety of waterways, ports, highways, and oil and gas pipelines.

(10) **DOE.** DOE contributes to the future of the nation by ensuring energy security, producing and maintaining the nation's nuclear stockpile, promoting nuclear nonproliferation, providing specialized nuclear and radiological emergency response, assisting nuclear and radiological CT and counterproliferation efforts, and fostering fundamental science, advanced computing, and technological innovation.

(a) **DOE Watch.** The Forrestal Watch Office provides the 24-hour single point-of-contact for collecting, processing, and disseminating time-sensitive emergency notifications. It performs initial notifications and coordinates management, logistics, and mobilization actions during periods of national emergencies, natural and man-made disasters, acts of terrorism, or other extraordinary situations requiring centralized management notification and response.

(b) **The Office of Intelligence and Counterintelligence.** The Office of Intelligence and Counterintelligence provides policy makers and the intelligence community with scientifically based and technically sound intelligence analysis in the areas of foreign nuclear programs, proliferation of nuclear materials to state and non-state actors, nuclear and energy security, and emerging science and technology.

(c) **The National Nuclear Security Administration (NNSA).** The NNSA is a semi-autonomous agency within DOE responsible for the management and security of the nation's nuclear weapons, nuclear nonproliferation, and naval reactor programs. It also responds to nuclear and radiological emergencies in the US and abroad. NNSA's program support is divided into several key program areas including defense, nuclear nonproliferation, naval reactors, emergency operations, infrastructure and environment, nuclear security, management and administration, and the Office of the Administrator. Each program area is focused on specific challenges:

1. **Defense Programs.** One of the primary missions of NNSA is to maintain and enhance the safety, security, and reliability of the US nuclear weapons stockpile. NNSA, through its Office of Defense Programs, ensures that the US nuclear arsenal meets national security requirements and continues to serve as a deterrent. In partnership with DOD, NNSA's defense programs provides the research, development, secure transportation, and production activities necessary to support the US nuclear weapons stockpile.

2. **Nonproliferation.** The Office of Defense Nuclear Nonproliferation works closely with a wide range of international partners, key USG departments and agencies, the US national laboratories, and the private sector to detect, secure, and dispose of dangerous nuclear and radiological material, and related WMD technology and expertise.

3. **Emergency Response.** The Office of Emergency Operations is the USG's primary capability for radiological and nuclear emergency response and for providing security to the nation from the threat of nuclear terrorism. The Office of Emergency Operations maintains a high level of readiness for protecting and serving the US and its allies through the development, implementation, and coordination of programs and systems designed to serve as a last line of defense in the event of a nuclear terrorist incident or other types of radiological accident. This readiness level provides the USG with quickly deployable, dedicated resources capable of responding rapidly and comprehensively to nuclear or radiological incidents worldwide.

4. **Nuclear Security.** The Office of Defense Nuclear Security is responsible for the development and implementation of security programs for NNSA. In this capacity, Defense Nuclear Security is the NNSA line management organization responsible for security direction and program management with respect to prioritization of resources, program evaluation, and funding allocation. Key management areas include security operations, resources, engineering, and technical support to NNSA field elements and facilities.

5. **CT and Counterproliferation.** The Office of Counterterrorism and Counterproliferation is charged with providing expertise, practical tools, and technically informed policy recommendations required to advance US nuclear CT and counterproliferation objectives. The office executes a unique program of work focused solely on these missions, synchronizing their support activities across the NNSA, coordinating DOE/NNSA related policies, and building partnerships with US government departments and agencies and key foreign governments on these issues.

(11) **Nuclear Regulatory Commission.** The Nuclear Regulatory Commission regulates all US use of byproduct, source, and special nuclear materials to ensure adequate protection of public health and safety, to promote the common defense and security, and to protect the environment.

4. Command Relationships and Interorganizational Coordination

a. **General.** CWMD operations can be global, transregional, or regional in scope. The environment in which actors of concern and associated proliferation networks operate, rather than geographic boundaries, defines the operational area. Operations against the same actor may occur in several geographic AORs simultaneously. CWMD operations that occur in more than one AOR will be coordinated between responsible CCDRs with specific command relationships established by SecDef tasking orders or CCMD plans and operation orders.

b. **C2**

(1) **Day-to-Day Operations.** Many critical CWMD operations and activities are conducted in phase 0 (Shape). These CWMD operations and activities should be included in regional plans and supporting plans, and integrated into TCPs for execution. The day-to-day integration of these activities across the three CWMD LOEs is an important part of the CWMD campaign. These efforts help shape an environment that prevents an actor from obtaining or successfully employing WMD and may prevent the necessity of responding to a WMD attack. Command and control of day-to-day operations is per existing CCMD C2 relationships established by the CCDR and commanders of subordinate commands and forces.

(2) **Contingency Operations.** C2 arrangements for CWMD operations are tailored for the requirements of each contingency and are determined by the supported commander. The size and scope, as well as preplanned integration, of CWMD operations determine the requirements for specific CWMD C2 functions. Small-scale or less complex CWMD operations may not require formation of a separate C2 structure. A CCMD's preexisting command structure, with limited staff and technical augmentation, may suffice. Increasing CWMD expertise within an existing standing joint force or component HQ increases the unit's capacity to address WMD aspects of the mission. For a large-scale or more complex effort, CWMD operations may require formation of a functional JTF for CWMD operations. The following discussion applies to situations requiring additional CWMD emphasis, such as staff augmentation or formation of a functional joint task force (JTF).

(a) **Functional JTF Considerations.** SecDef, a CCDR, a subordinate unified command commander, or an existing JTF commander can serve as the establishing authority for a JTF to execute a specific CWMD mission or when CWMD operations require joint resources on a significant scale.

1. **Subordinate Commands and Forces.** Forces conducting CWMD operations may be a combination of conventional and SOF, support organizations from the Services or CSAs, augmented by other USG or non-US personnel.

2. **C2 Relationships.** The JTF establishing authority also establishes the command relationships between the JTF and other subordinate commands. Other specific C2 relationships within the JTF are determined by the supported commander based on mission requirements. Notional C2 relationships for a functional CWMD JTF include: establishing a separate JTF at the CCMD level, with the JTF commander reporting directly to the CCDR; establishing the CWMD JTF under an existing JTF; or establishing a CWMD task force under a component commander.

3. **Composition.** A CWMD JTF HQ will generally combine DOD functional and technical experts; be augmented by non-DOD personnel, as required; and have real-time reachback capability to national-level technical experts. When formed, a CWMD JTF HQ may draw personnel from portions of an existing standing joint force or subordinate component; CWMD subject matter experts from other CCMDs; and/or the Services and specialized joint activities, including a CSA such as DTRA.

(b) **JTF HQ.** At a minimum, and as required by the supported commander to conduct a specific CWMD operation, the functional JTF HQ should possess the capabilities to:

1. Conduct the assigned CWMD mission, C2, and coordinate operations of assigned forces.

2. Coordinate with US forces, other USG departments and agencies, foreign governments, IGOs, and HNs.

3. Provide overall assessment, analysis, and planning for CWMD operations.

4. Coordinate CWMD planning activities with other commands.

5. Plan for JTF deployment, employment, and redeployment.

6. Plan for transfer of responsibility of CWMD operations to or from the CCDR and from or to other USG departments and agencies, IGOs, and HNs, as appropriate.

7. Plan to minimize or mitigate potential CWMD collateral effects.

8. Maintain situational awareness of CWMD activities and operations, both friendly and actors of concern.

9. Recommend prioritization of CWMD resources and forces.

10. Integrate into the supported CCMD's C2 and coordination processes (e.g., joint targeting coordination board).

(c) **JTF Staff Organization.** When providing C2 directly for a small-scale CWMD operation or overseeing a functional JTF for a large-scale CWMD operation, JFCs should consider augmenting their staffs with CWMD expertise. This augmentation may be from a Service component, a standing joint force HQ, subject matter experts resident at the CCMD, CSA, or individual augmentation. JFCs may require the following cross-functional staff organizations to manage CWMD processes and tasks:

1. **CWMD Cell.** A CWMD cell is formed to manage CWMD processes, capabilities, and activities within a JFC's HQ. The CWMD cell provides the JFC with specialized, technical, subject matter expertise to support CWMD operations. The CWMD cell collaborates with interagency and multinational partners as required, to develop CWMD situational awareness and support the planning, coordination, and synchronization of operations.

2. **CWMD Working Group.** A CWMD working group is an enduring or ad hoc organization within a CCMD HQ or JFC's HQ focused on CWMD activities to provide analysis to the commander. The working group consists of a core functional group, such as CWMD cell members and other staff and component representatives, as required.

(3) **Domestic Operations.** Domestic CWMD operations involve complex command relationships; in most cases, DOD will act in a supporting role to another USG department or agency. In conducting DSCA to include CBRN response, a distinction is made between the different chains of command for active DOD, Title 10, USC, federal forces providing support to civil authorities and for NG forces commanded by the state governor under Title 32, USC, and state active duty. State and local governments are closest to those affected by incidents, and have a lead role in response and recovery. For a federal response to a CBRN incident, DOD support is tailored to the scope and magnitude of the incident. DOD assets are employed with a focus on response requirements beyond the resources of state and federal civil authorities. A dual-status commander may be appointed to C2 both federal military and state NG forces. The dual-status commander is supported by separate federal and state NG chains of command and can be employed for DSCA events, including CBRN CM. USNORTHCOM and USPACOM are the DOD designated planning agent and the supported commander for DSCA missions in their respective AORs.

(a) DOD protects the homeland through two distinct but interrelated missions: HD and DSCA. While these missions are separate, there are areas where roles and responsibilities may overlap or lead and supporting roles may transition between organizations. DOD serves as the lead for HD, which may be executed by DOD alone or include support by other USG departments and agencies. DSCA is the overarching term for DOD support to civil authorities for domestic emergencies, and for designated law enforcement and other activities. HD and DSCA operations may occur in parallel and

require extensive integration and coordination. In addition, operations may transition from HD to DSCA and vice versa with the lead agency changing based on the situation.

(b) When emergency conditions dictate, and time does not permit approval from higher authority, federal military commanders, heads of DOD components, and responsible DOD civilian officials are authorized to respond to requests for assistance from local authorities. This immediate response authority permits these officials to employ the resources under their control to save lives, prevent human suffering, or mitigate great property damage within the US.

For more information on immediate response authority, see DODD 3025.18, Defense Support of Civil Authorities.

For further guidance on C2 relationships, refer to JP 3-33, Joint Task Force Headquarters. *For further guidance on domestic operations, refer to JP 3-27,* Homeland Defense, *and JP 3-28,* Defense Support of Civil Authorities.

c. **Coordination Across the US Government and with State and Local Authorities**

(1) **Interorganizational Coordination.** DOD will liaise and coordinate with other agencies and civilian authorities. Interorganizational coordination is a continuous process that should be established and emphasized during planning, prior to the execution of CWMD operations and activities. Coordination takes place at the strategic, operational, and tactical levels. Whether coordination is conducted through the CCDR's joint interagency coordination group or other means such as an interagency planning cell or group at the CCMD or JTF levels, the importance of interorganizational coordination in the planning process cannot be overstated.

(2) **State and Local Coordination.** In the case of a domestic CBRN incident, DOD should determine what specialized national, international, or local assets are responding to the incident. The CNGB facilitates and resources Air NG and Army NG forces and assets through the state adjutants general to conduct CBRN response operations to assist federal, state, local, and tribal authorities in responding to a domestic CBRN event. When directed by SecDef, the CNGB supports transition of state active duty or Title 32, USC, NG forces to federalized Title 10, USC, status for DSCA in coordination with individual states, and the Air NG and Army NG. At the state level, the NG JFHQ-State will coordinate with state and local authorities to ensure that the NG efforts are synchronized with civil authorities. Once deployed to a supported state, the NG CBRN response enterprise, (WMD-civil support team, chemical, biological, radiological, nuclear, and high-yield explosives enhanced response force packages and homeland response forces) will be controlled through the NG JFHQ-State, or, if designated, a dual-status commander. After the state has requested federal assistance, the defense coordination officer will coordinate for the use of all Title 10, USC, portions of the CBRN response enterprise and conventional forces after a validated request for assistance is approved by DOD. These processes should be practiced during training events and exercises.

For further guidance on interorganizational coordination, refer to JP 3-08, Interorganizational Coordination During Joint Operations. *For further guidance on CBRN consequence management, refer to JP 3-41,* Chemical, Biological, Radiological, and Nuclear Consequence Management. *For further guidance on dual-status command, see JP 3-28,* Defense Support of Civil Authorities.

5. Multinational Cooperation and Coordination

a. Participation by multinational partners is critical to the successful prosecution of CWMD efforts. The DOD, in cooperation with multinational partners, plays a critical role in building new coalitions, mechanisms, and international norms to counter actors of concern that pose a threat of developing, acquiring, proliferating, or employing WMD, related expertise, technologies, and materials. CCMDs are encouraged to conduct military-to-military exchanges in areas such as tactics, techniques, and procedures, intelligence, and technology.

b. US military operations are routinely conducted with forces of other countries within the structure of an alliance or coalition. An adversary may employ CBRN weapons against non-US forces, especially those with little or no defense against these weapons, in an effort to weaken, divide, or destroy the multinational effort. When conducting combat operations, the JFC should consider the capabilities and limitations of all available forces to maximize their contributions and minimize their vulnerabilities. Peacetime activities with multinational partners, particularly multinational and interagency training and planning exercises focused on building their CWMD capabilities, provide means of preparing for multinational combat operations in CBRN environments.

c. With very few exceptions, multinational operations will involve the use of HN sovereign airspace and territory, bases or civilian airports, facilities, and personnel (including non-USG and contracted civilian workers supporting US and multinational forces). For CCDR theater campaign and contingency plans, HN considerations, including CBRN defense, are the subject of significant peacetime planning in which operational, legal, contractual, and personnel issues are addressed. CCDR coordination of HN support activities will involve a number of interagency partners as well as the US country team. Particular emphasis is placed on early warning and detection; actions to prepare US and indigenous military forces; and protection of threatened civilian populations, essential infrastructures, and facilities. The CCDR should coordinate the development and implementation of plans and exercises that are aligned with HN agreements for providing assistance in the event of a CBRN incident, especially where those agreements may affect US military response.

For further guidance on multinational cooperation and coordination, refer to JP 3-16, Multinational Operations.

CHAPTER IV
PLANNING

"Countering WMD [weapons of mass destruction] efforts often occur as part of larger US Government activities or military operations. Consequently, they must be fully integrated into other plans and activities rather than isolated as separate efforts."

Department of Defense Strategy for Countering Weapons of Mass Destruction
June 2014

1. General

a. **Introduction.** This chapter provides JFCs with planning constructs and considerations to assist them in translating strategic CWMD guidance into an operational approach and supporting plans. This chapter discusses CWMD integration into joint campaign and operation planning, the integration of military CWMD planning with the other instruments of national power in the accomplishment of USG strategic objectives, and general CWMD planning considerations. **CWMD planning is not conducted in isolation nor as a separate process; it is the integration of WMD-specific knowledge, experience, and capabilities into the JFC's joint planning efforts.**

b. **General CWMD Planning Considerations.** CWMD planning includes the development of global and regional campaign plans to shape the environment to prevent the US and multinational partners from being attacked or coerced by actors possessing WMD. Campaign plans focus on ongoing operations, military engagement, SC, deterrence, and other shaping or preventive activities. Regional CWMD planning can either be written into stand-alone plans or incorporated into a command's TCP. Although a key aspect of campaign plans is shaping to prevent conflict and preparation of the environment in support of CWMD, they also set the conditions for potential contingency operations. Contingency plans are conceptually considered branches of campaign plans. Activities to respond to WMD aggression, instability or failure of a possessor state, and other WMD-related threats are typically contained in contingency plans.

(1) **CWMD Planning Characteristics.** While conducting their regional campaign and contingency planning, GCCs should integrate their plans within the global DOD CWMD approach. JFCs need to integrate their CWMD planning with their respective TCP. All plans should be coordinated with relevant USG and multinational partners to the extent circumstances allow.

(2) **Strategic Approach.** All CWMD plans should support achievement of DOD's strategic CWMD objectives, namely reducing incentives to pursuing, possessing, and employing WMD; increasing barriers to acquisition, proliferation, and use of WMD; managing WMD risks and denying the effects of WMD threats through layered, integrated defenses. GCC planning also needs to account for the regional, as well as the transregional and global, implications of their CWMD-related efforts. CWMD planning should be

coordinated with bordering and functional CCMDs to support achievement of common regional and global objectives. GCCs should maintain awareness of CWMD operations and activities occurring outside their AOR to avoid negatively impacting or being impacted by other GCC decisions and/or activities. Additionally, Services and CSAs resource the majority of strategic CWMD programs and activities. GCCs should therefore coordinate their plans with these organizations to ensure alignment with current resources and capability development.

(3) **Strategic Implications.** Commanders at every level need to be aware of the strategic implications associated with any WMD threat and adapt their CWMD planning efforts accordingly. The three levels of warfare–strategic, operational, and tactical–are all applicable to CWMD efforts and help clarify the links between national strategic objectives and tactical actions. In a world of constant, immediate communications, any single action may have consequences at all levels. Nowhere is this more evident than in joint operations involving WMD, where action or inaction at the tactical level can have profound strategic repercussions.

(4) **Interagency Coordination.** USG departments and agencies planning and acting together can generate effects that cannot be created by DOD alone due to differing authorities, responsibilities, and capabilities. The nature and complexity of a CWMD mission often places DOD in a supporting role to another USG department or agency. GCCs should consider command relationships, integration of resources, and synchronization of activity as they develop any CWMD-related plans.

(5) **Domestic and International Partnerships.** DOD CWMD efforts have a greater likelihood of success if planned in cooperation with domestic and international security partners. CWMD shaping activities planned and executed in cooperation with partners may prevent or disrupt actor of concern acquisition, development, or employment of WMD, and alleviate the need for more aggressive and costly action later. In addition, collaborative action is effective at building partner capabilities and creating stronger security relationships with international partners, which enhance the GCC's ability to respond to all types of crises.

c. **Review of Strategic Guidance.** CCDRs integrate strategic direction into their CWMD plans. As discussed in Chapter I, "Introduction," the three strategic CWMD end states are: no new WMD possession; no WMD use; and minimization of WMD effects. The GEF and the JSCP translate strategic guidance into CWMD-specific end states and mandate the integration of CWMD-related planning tasks into CCMD planning. Finally, USSTRATCOM, as the global synchronizer for DOD CWMD planning, conducts comprehensive campaign planning that puts into effect a global strategy and provides directive guidance for CWMD planning to align global and regional CWMD objectives with strategic guidance.

d. **Understanding the OE.** Progress in the effort to counter WMD depends on understanding the environment as it is, recognizing the change desired, identifying activities to bring about that change, assessing whether that change has occurred, and determining whether the change is a result of those activities or some external factor. Assessing the conditions in the OE will determine where DOD resources and efforts can be focused to achieve a more acceptable set of conditions (i.e., responsible state behavior). This

understanding provides planners and operators a better perspective of the actor of concern by accounting for issues such as aggressive state behavior, lack of WMD program transparency, and poor stockpile security. The JFC is then enabled with this understanding to support preparation of the environment activities for any possible CWMD operation.

(1) **JIPOE.** JIPOE supports characterization of networks enabling WMD proliferation and use, and assessment of network vulnerabilities to facilitate development of the operational design elements and effective targeting. Identity intelligence products support an in-depth understanding of WMD threats and their potential effect on the OE. JIPOE supports the JFC by characterizing the WMD OE as a system of networks, actors, resources, and capabilities. This approach is holistic in its methodology–identifying state and non-state actors (individuals, extremist organizations, and nongovernmental entities) in a comprehensive fashion, not as singular entities operating independent from one another. Additionally, analysis of potential transformational events, such as the rise of new actors of concern and the impact of technology breakthroughs, facilitates national-level determination of end states, objectives, and priorities.

For further guidance on JIPOE, refer to JP 2-01.3, Joint Intelligence Preparation of the Operational Environment.

(2) **Understanding Baseline Conditions.** As part of the JIPOE process, the GCCs develop an understanding of baseline conditions within the AORs. Establishing baseline conditions is essential to generating effects, achieving objectives, and measuring progress toward attaining end states. Analysis of baseline conditions enables the JFC to identify where desired change is possible and to assess whether change has occurred. Baseline conditions are critical to identifying anomalies that may indicate the presence of a WMD threat. Many potential WMD threats may not be readily apparent without an understanding of historical conditions. For instance, identifying biological anomalies that are potential indicators of WMD usage requires an understanding of current and historical disease patterns, since many potential biological weapons are the intentional use of naturally occurring pathogens. Another consideration is the toxic industrial materials that may be manufactured, stored, and/or transported within the AOR which may cause WMD-like effects.

(3) **Systems Perspective.** A JFC's ability to characterize and monitor proliferation networks and state WMD programs as holistic systems is essential to affecting that system. As identified in Chapter II, "Weapons and Associated Concerns," one of the primary challenges facing the JFC is the proliferation of WMD technology and products. This proliferation takes place through systems. The JFC strives to understand the continuous and complex interaction of friendly, enemy, adversary, and neutral systems.

For further guidance on intelligence support to joint operations, refer to the JP 2-0 series. For further guidance on JIPOE, refer to JP 2-01.3, Joint Intelligence Preparation of the Operational Environment.

e. **Defining the Problem and Developing an Operational Approach.** Once the GCC and staff have reviewed and analyzed the strategic guidance for CWMD together with the

OE in their AOR, they should be able to articulate current and desired conditions relevant to countering WMD proliferation. Understanding the underlying factors associated with existing conditions enables planners to clearly define the WMD proliferation problem. Once the problem has been defined, the GCC and staff develop their operational approach to describe the commander's vision of where and how resources and effort can be applied to create effects to achieve objectives. The GCC's operational approach for CWMD should be consistent with the strategic approach. However, it needs to be specific to the GCC's understanding of the OE and definition of the problem. It should not be a simple repetition of the DODS-CWMD strategic approach. The CWMD operational approach reflects the JFC's visualization for attaining desired conditions and provides the necessary foundation for detailed planning, including both deliberate and crisis action planning. During development of the operational approach, the GCC and staff use the CWMD considerations outlined in the following sections.

For further guidance on framing the problem and operational approach development, refer to JP 5-0, Joint Operation Planning.

(1) **End State and Objectives.** Although WMD may be one of many threats addressed in most plans, JFCs need to consider whether each situation warrants inclusion of CWMD considerations as part of the end state or the supporting objectives of their plan. Based on the type of planning, the process for developing end states and objectives will vary.

(a) The GEF prescribes broad global, theater, and functional end states. Based on the OE, CCDRs develop concrete and achievable military objectives to support progress towards designated end states. Based on strategic guidance and the OE, development of CWMD-specific military objectives may be appropriate.

(b) For deliberate planning, the GEF prescribes end states for which JFCs develop supporting strategic and operational objectives. Based on the strategic guidance and the OE, inclusion of CWMD-specific strategic and/or operational level objectives may be appropriate.

(c) For crisis action planning, JFCs develop the military end states based on termination criteria, likely to be provided by the President or SecDef. Following Presidential or SecDef approval of the military end state, JFCs develop supporting strategic and operational objectives. Based on the strategic guidance and the OE, inclusion of CWMD-specific criteria in the military end state or inclusion of CWMD-specific strategic and/or operational level objectives may be appropriate.

For further guidance on end states and objectives, refer to JP 5-0, Joint Operation Planning.

(2) **Effects.** An effect is a physical and/or behavioral state of a system that results from an action, a set of actions, or another effect. A desired effect can also be thought of as a condition that can support achieving an associated objective, while an undesired effect is a condition that can inhibit progress toward an objective. When campaigns or operations include CWMD activities, the JFC and staff identify CWMD-related desired and undesired effects that either support or inhibit achievement of the commander's objectives.

For further guidance on effects, refer to JP 5-0, Joint Operation Planning.

(3) **LOE.** The range of tasks and missions required to achieve CWMD objectives and attain end states, along with the number of nonmilitary factors, make LOEs a valuable construct for focusing efforts and achieving unity of effort. For a campaign or operation encompassing efforts beyond CWMD, it may be appropriate to consolidate CWMD activities and tasks into a single LOE as part of a larger operational approach. Use of well-designed LOEs can provide a clear and logical explanation of the JFC's concept and how it will result in achievement of objectives.

For further guidance on LOEs, refer to JP 5-0, Joint Operation Planning.

2. Deliberate and Crisis Action Planning

a. **Introduction.** CWMD planning encompasses the full range of plans and orders, including global campaign plans, TCPs, contingency plans, and operation orders. While some of these plans are CWMD specific, a CWMD planning effort is more commonly part of a larger planning effort and must be integrated with other strategies, plans, and operations at the global, theater, and JTF levels. CWMD planning supports and informs overarching global, theater, and JTF strategies and plans.

b. **Adaptive Planning and Execution (APEX) and Joint Operation Planning Process (JOPP).** Planning for joint operations uses two closely related, integrated, collaborative, and adaptive processes–APEX and JOPP. The majority of APEX activities and products occur prior to SecDef approval and the CJCS transmittal of an execute order. While there is a distinct location for CWMD considerations within the structure of a plan–appendix 2 (Combating Weapons of Mass Destruction [WMD]) to annex C (Operations), planners must fully integrate CWMD tasks and required resources throughout all pertinent annexes of a plan or order. In addition, planning for CWMD operations must be integrated in JOPP. Including WMD considerations throughout the seven steps of JOPP–the most crucial of which is mission analysis–is critical for a successful operation or campaign.

For further guidance on APEX and JOPP, refer to JP 5-0, Joint Operation Planning, *and Chairman of the Joint Chiefs of Staff Manual (CJCSM) 3130.03,* Adaptive Planning and Execution (APEX) Planning Formats and Guidance.

c. **CWMD Plans Integration.** Integrating DOD CWMD planning efforts is intended to achieve the integrated, yet decentralized, execution of global activities and operations. As the DOD global synchronizer for CWMD, USSTRATCOM develops and maintains the global CWMD plan for DOD. GCCs align regional CWMD efforts with the global CWMD plan either by developing regional CWMD plans, or incorporating their directed CWMD efforts into their TCPs. The UCP task to synchronize planning pertains specifically to planning efforts only and does not, by itself, convey authority to execute operations or direct execution of operations. The DOD GCP-CWMD provides directive guidance for CWMD planning and prioritization, which informs the development and execution of operations and activities through theater campaign and contingency plans. GCCs develop regional CWMD campaign plans that nest under their TCPs as subordinate campaign plans, or incorporate

directed CWMD planning directly into the TCPs. Contingency plans are considered branches to an overarching campaign plan. Contingency plans may be developed for specific WMD scenarios; however, many contingency plans with a broader focus often contain significant CWMD activities and tasks.

For further guidance on the role of global synchronizers and branches, refer to JP 5-0, Joint Operation Planning.

(1) **GCP-CWMD.** The GCP-CWMD operationalizes the CWMD strategy and is maintained in accordance with strategic planning guidance in the GEF, the JSCP, and other directives. The GCP-CWMD provides the CCMDs, the Services, and CSAs with a common strategy and framework to synchronize planning on a regional, transregional, and global basis. The GCP-CWMD is a comprehensive campaign plan focused on steady-state activities to prevent WMD crises and is an executable plan within this context. The GCP-CWMD integrates DOD CWMD planning by linking CWMD end states to military objectives and campaign tasks through the three CWMD LOEs. The GCP-CWMD delineates responsibilities and specified campaign tasks to guide the GCCs' efforts in their respective AORs.

(a) **Prioritized Risks.** The GCP-CWMD identifies and prioritizes global strategic WMD risks. GCCs prioritize the risks differently based on their assessment of the OE and theater strategies. GCCs should coordinate with adjacent commanders to mitigate prioritized risks that span the operational gaps and seams between AORs.

(b) **Military Objectives.** The GCP-CWMD military objectives are intended to be achievable and measurable within a specific time-frame, provide linkages between global- and theater-level campaigns, allow for plan synchronization and GCC development of subordinate tasks, and inform the assessment process. GCCs consider the GCP-CWMD military objectives while developing theater objectives to maintain the relationship between theater-level and global objectives.

(c) **LOE.** The GCP-CWMD LOEs provide the foundation of the objective to task linkage required to operationalize CWMD efforts and accommodate the range of activities required to counter WMD globally.

(2) **Relationship between Global Campaign Plans.** As discussed in Chapter I, "Introduction," the GCP-CWMD is only one of DOD's global campaign plans. The GCP-CWMD is coordinated with the global campaign plans for PI&ID, CT, and global distribution to address activity along mission seams and eliminate potential gaps. The coordination among global campaign plans is carried into GCC's theater and subordinate campaign plans.

(3) **TCPs and Subordinate Campaign Plans.** TCPs are the centerpiece of the GCC's family of plans. Each GCC's regional CWMD campaign planning is synchronized with the DOD CWMD campaign plan and is nested under their TCP as a subordinate campaign plan or fully incorporated into the TCP. Regional CWMD planning contains the GCC's strategy and overall approach for achieving CWMD objectives within their AOR.

CWMD planning, whether written into regional stand-alone plans or integrated into their TCP, becomes part of the command's day-to-day operational approach to shape the environment to prevent crises or prepare for contingencies. Within their TCPs, GCCs integrate and prioritize operations and activities associated with each of their subordinate campaign plans. Collectively, TCPs and subordinate campaign plans contain the day-to-day activities executed by a GCC.

(4) **Deliberate and Crisis Action Planning.** Products from both deliberate and crisis action planning are typically thought of as branch plans to an overarching campaign plan. Contingencies and crises represent a departure from the shaping activities, which are the primary focus of the DOD CWMD campaign plan and TCPs. Although the GCP-CWMD and TCPs encompass certain phase 0 activities associated with a GCC's contingency plans, developing additional plans and orders extends beyond phase 0 and includes the other phases of the phasing model. JFCs will often need to incorporate CWMD considerations into termination criteria, and end states and subsequently throughout their planning processes.

d. **Plan Levels and Phases**

(1) **Plan Levels.** In accordance with the GEF, contingency plans are developed to one of four levels of planning detail: level 1 (Commander's Estimate), level 2 (Base Plan), level 3 (Concept Plan), and level 4 (Operation Plan). While crisis action planning does not formally use these four levels, planning begins at the conceptual level with a commander's estimate and additional levels of detail are added until an operations order is completed. There is a risk that significant CWMD tasks and activities will not be adequately addressed in less detailed contingency plans and in the earlier stages of crisis action planning. To mitigate this concern, JFCs and staffs are advised to evaluate CWMD objectives during mission analysis and integrate critical CWMD elements into level 2 base planning products, rather than waiting for annex development. CWMD planning should not be executed in isolation.

For further guidance on contingency plan levels of detail and crisis action planning, refer to JP 5-0, Joint Operation Planning.

(a) **CWMD Objectives.** Global objectives should be integrated into the objectives contained in theater plans. The objectives within the DOD CWMD campaign plan are incorporated into regional CWMD campaign plans or TCPs and adjusted in accordance with prioritized theater WMD risks. The regional CWMD objectives are integrated into TCPs, reflected in the CCDR's operational approach, and support attainment of GEF-directed theater strategic end states. Additionally, CWMD objectives should be coordinated across geographic and functional boundaries to ensure they are mutually supportive and aligned with the broader DOD strategic CWMD end states. The following sections outline CWMD planning considerations that have application across all phases.

1. **Cooperate with and Support Partners.** These activities include DOD interaction with partners to build relationships that promote specific US security interests, develop allied and friendly capabilities for self-defense and multinational operations, and

provide US forces with access to HNs. The importance of effectively planning CWMD activities with partners and allies cannot be emphasized enough, as they are a critical means for furthering progress towards CWMD strategic end states and encouraging future cooperation in case of a crisis or WMD event. CWMD planning conducted in cooperation with allied and PNs reduces WMD risks by improving or promoting defense relationships and capacity of allied and PNs to conduct CWMD operations. Mutually beneficial improved CWMD capabilities are achieved through SC arrangements, military-to-military contact, burden-sharing agreements, combined military activities, and support to international institutions. These activities also support cooperation with NGOs and diplomatic efforts such as treaties, agreements, and control regimes.

For further guidance on cooperation and support activities, refer to JP 3-22, Foreign Internal Defense.

2. **Dissuasion, Deterrence, and Assurance.** Campaign and contingency plans provide granularity on options and specific activities, before, during and after conflict, to dissuade or deter potential state and non-state adversaries and to assure friends and allies. Preventing instability or conflict is a combination of assuring partners through cooperative security agreements, dissuading potential actors of concern from making adverse geopolitical choices, and deterring known actors of concern from challenging global norms. CCMDs may use dissuasion, deterrence, and assurance to prevent those not possessing WMD from obtaining them or to contain and reduce existing threats. These activities, including demonstrating US resolve and increased capabilities to respond to, recover from, mitigate the effects of, and attribute the source of WMD may preclude the need to directly employ offensive capabilities against actors of concern.

3. **Shaping the Theater.** JFCs should consider CWMD-related activities necessary to shape the theater for potential contingencies. TCPs should include objectives and activities to posture and prepare US forces for designated contingencies. Potential activities may include enhancing physical security of existing WMD programs, stockpiles, or capabilities; adapting force footprints and supporting agreements; or collecting WMD-related information requirements.

(b) **Resources.** While strategic CWMD objectives (ends) are clear, the JFC should apply creativity in determining how (ways) and with what resources (means) these objectives will be accomplished. The USG effort to counter WMD involves execution of a broad global strategy where DOD is often not the lead agency. CCMDs should coordinate resource requirements with interagency partners to accurately determine what DOD resources must be requested. In addition to DOD resources, the JFC may find that interagency and international partner resources are available or already being applied to achieve common CWMD objectives. Therefore, CWMD planning should be informed by an understanding of the resources that support the execution of operations. Planning should identify the resources required for implementation with an emphasis on prioritization of activities should resources be limited. It is incumbent upon the CCDR to confirm that the TCP not only identifies the resources required to achieve CWMD objectives, but also the partners that the CCMD will be working with to achieve those objectives. CCDRs will

identify the WMD risks associated with the mission, based upon various levels of resource availability.

1. **DOD Resources.** DOD resources generally fall into the categories of capabilities, authorities, funding, and posture. CCMDs request CWMD capabilities through the global force management processes. Some authorities and funding are typically associated with SC programs. To fully leverage these programs, CCMDs need to coordinate with SC program managers located in OSD, JS, DOD agencies and CSAs, and the Services. CCMDs address phase 0 posture requirements within their TCP. Additional resourcing during phases I-V can be obtained via a request for forces. CCDRs may also advocate for Services and/or OSD to pursue CWMD capabilities and resources that are lacking but necessary for their mission via joint urgent operational needs and joint emerging operational needs requests.

2. **Interagency Resources.** Other USG departments and agencies provide crucial, but usually limited resources. At the country level, these resources are typically coordinated by the country team and documented in the mission strategic resource plan (MSRP) or integrated country strategy (ICS). CCMDs develop and submit recommendations for DOS foreign military financing and international military education and training funding to OSD, including the Defense Security Cooperation Agency, and to the JS for submission to DOS. To best leverage interagency resources, CCMDs need to emphasize development of country plans in parallel with respective DOS MSRPs or ICSs and their own TCP development. Since most interagency partners allocate resources at the country level, CCMD country plans should be consistent with the objectives and priorities of DOS as reflected in the MSRP or ICS.

3. **Supporting Partners.** Countries and international organizations that support US CWMD efforts may provide access to valuable resources to achieve CWMD objectives. CCMDs should plan to establish relationships with partners who are competent, capable, or bring a level of CWMD expertise that complements or supplements US capabilities. CCMD plans should consider how best to integrate key partners' resources and synchronize activities to achieve US CWMD objectives.

For further guidance on theater campaign planning, refer to JP 5-0, Joint Operation Planning, *and CJCSM 3130.01,* Theater Campaign Planning Policies and Procedures.

(2) **Plan Phases**

(a) **Phase 0 (Shape).** The intent of this phase is to shape the OE to dissuade or deter potential actors of concern from developing, acquiring, proliferating, or using WMD; assure international partners; and increase partner CWMD capability and capacity. CWMD-related phase 0 operations and activities typically occur in the context of day-to-day military engagement and SC programs. Such CWMD activity would identify persons of interest and map actors of concern activities and networks; through information sharing, develop working relationships through cooperative defense initiatives; and conduct bilateral and multilateral exercises containing CWMD activity to build partnership capacity and support for global initiatives like the Proliferation Security Initiative (PSI). Within their TCPs, CCMDs

integrate and prioritize phase 0 activities associated with their contingency plans and day-to-day activities associated with their CWMD mission set to shape the environment to influence and to respond to WMD crises.

For information, see Appendix B, "Treaties, Resolutions, Activities, and Legal Considerations."

(b) **Phase I (Deter).** The intent of this phase is to deter undesirable actions of actors of concern by demonstrating capabilities and resolve. JFCs plan carefully tailored flexible deterrent options (FDOs) to bring an issue to early resolution without armed conflict. FDOs can be used individually, in packages, sequentially, or concurrently. FDOs are developed for each instrument of national power—diplomatic, informational, military, and economic—but they are most effective when used in combination to increase the influence on an actor of concern. Examples of CWMD-focused FDOs include: demonstrating international resolve to stand against WMD threats; publicizing violations of international law by actors of concern; forward basing assets capable of striking or interdicting WMD capabilities; and enacting restrictions on WMD-related technology transfers. The GCP-CWMD contains some objectives and tasks that apply to this phase, and it may provide a starting point for deliberate and crisis action planning.

For further guidance on FDOs, refer to JP 5-0, Joint Operation Planning.

(c) **Phase II (Seize the Initiative).** JFCs seize the initiative through the application of appropriate joint force capabilities to force actors of concern action and to set the conditions for decisive operations. Actor of concern's use of WMD can quickly change an operation or campaign, as the use or threat of use of these weapons can cause an immediate shift in initiative and reprioritization of strategic and operational objectives. Multinational operations also become more complicated with the threat of WMD employment. An actor of concern may use WMD against partners, especially those with little or no defense against these weapons, to defeat an alliance or coalition. Accordingly, planning for this phase should include CBRN defensive and offensive actions employing lethal or nonlethal means to prevent an actor of concern from attaining its desired goal. The employment of forensics to characterize and contribute to the attribution of WMD materials and precursors is particularly useful in supporting both defensive and potential offensive operations. JFCs need to consider national and strategic objectives before conducting such operations against WMD-related targets, as there are intelligence exploitation and collateral damage considerations.

For further guidance on CBRN defense, refer to JP 3-11, Operations in Chemical, Biological, Radiological, and Nuclear Environments. *For further guidance on active defense measures against WMD, refer to JP 3-01,* Countering Air and Missile Threats. *For further guidance on offensive actions against WMD-related targets, refer to JP 3-05,* Special Operations, *JP 3-09,* Joint Fire Support, *JP 3-60,* Joint Targeting, *and DODD S-2060.04,* DOD Support to the National Technical Nuclear Forensics (NTNF) Program.

(d) **Phase III (Dominate).** The dominate phase focuses on breaking the enemy's will for organized resistance or, in noncombat situations, control of the OE. During this phase, JFCs will continue to plan a combination of defensive and offensive CWMD

activities. As friendly control in the operational area increases, JFCs may also need to plan for control, defeat, disable, and dispose activities to prevent future use or transfer of WMD. Dependent on the scale and scope of the WMD threat, this may require significant combat power and specialized expertise and equipment.

(e) **Phase IV (Stabilize).** The stabilize phase is typically characterized by a shift in focus from sustained combat operations to stability operations. During this phase, JFC plans should include activities to conduct or set conditions for long-term systematic disposition of a WMD program, the transition of responsibility from DOD, facilitation of interagency or international WMD verification activities, and/or FCM.

For further guidance on FCM operations, refer to JP 3-41, Chemical, Biological, Radiological, and Nuclear Consequence Management, *DODI 2000.21,* Foreign Consequence Management (FCM), *or CJCSI 3214.01,* Defense Support for Chemical, Biological, Radiological, and Nuclear Incidents on Foreign Territory.

(f) **Phase V (Enable Civil Authority).** This phase is predominately characterized by joint force support to legitimate civil governance in theater. During this phase, the JFC may need to support the transition of WMD disposition operations to defense agency, international, or HN forces, transition FCM activities to international or HN forces, or engage in SC activities to build the HN's CWMD capabilities.

For further guidance on plan phasing, refer to JP 5-0, Joint Operation Planning.

3. Additional Planning Considerations

a. **Introduction.** This section describes additional CWMD planning considerations for JFCs and operational planners that augment the specific global campaign, theater campaign, deliberate and crisis action planning considerations outlined in the previous section and provided in the GEF's chapter on general planning guidance. JFCs should factor these strategic and operational planning considerations into their deliberate and crisis action planning as appropriate. Considerations specific to operational-level CWMD activities are further discussed in Chapter V, "Execution."

b. **Legal Guidance.** The complexity of CWMD and associated laws, policies, treaties, and agreements requires continuous involvement of the staff judge advocate (SJA) or appropriate legal advisor with the planning, oversight, and assessment of operations.

(1) The SJA should be involved throughout the planning process, including mission analysis and course of action development, to make the JFC aware of potential CWMD-related legal issues. For instance, multinational partners, allies, and HNs will have their own treaty obligations and laws that may significantly differ from our own and restrict or prohibit their participation in CWMD operations or the transit of CBRN materials through an AOR. SJA involvement in WMD targeting and rules for the use of force or rules of engagement development is essential. The SJA can advise the JFC and the staff of potential associated issues, such as consequences of execution and harmful environmental impacts, collateral damage, or other WMD-related legal issues that should be considered in the targeting process.

(2) The SJA should develop a legal staff estimate during mission analysis that accounts for WMD-related legal issues associated with joint operations. The legal staff estimate should reflect the description of legal support required for the mission as developed during the planning process.

For further guidance on legal support, refer to JP 1-04, Legal Support to Military Operations.

c. **International Law and Agreements.** International law, policies, treaties, and agreements to which the US is a signatory identify certain rights and obligations that impact joint operations. These legal requirements may pose constraints and restraints. Treaties and control regimes establish global norms against the proliferation of WMD precursors, weapons, their means of delivery, dual-use goods, and weapons manufacturing equipment. The US and its partners and allies also participate in a variety of nonbinding working groups and activities to counter the threat of WMD, particularly the proliferation of CBRN materials. JFCs should account for these agreements and activities that seek to strengthen international norms and common values and serve as capacity building activities through information-sharing and exercises.

For further guidance on CWMD-related law and agreements, refer to Appendix B, "Treaties, Resolutions, Activities, and Legal Considerations."

d. **CWMD Force Planning.** Force planning for CWMD identifies and addresses all those activities performed by the supported CCDR and subordinate component commanders to select (source and tailor), prepare, integrate, and deploy the forces and capabilities required to accomplish CWMD activities for all six phases of an operation. The forces and capabilities required might involve conventional forces to include CBRN-specific units and SOF.

(1) **Conventional Forces.** Many of the military tasks necessary for CWMD can be accomplished by conventional forces, including unique CBRN-specific units that should be integrated into the joint force. Since the quantities of CBRN-specific forces are limited, the JFC faces the challenge of balancing the use of high-demand CBRN-specific units with assigned forces that can accomplish many of the CWMD-related tasks. Shortfalls in CWMD capabilities should be identified and additional CWMD-specific capabilities should be requested as early as possible via the request for forces process.

(2) **SOF.** The JFC, using SOF independently or integrated with conventional forces, gains an additional and specialized capability to achieve CWMD objectives. The integration of these forces and specialized capabilities enables the JFC to take full advantage of conventional forces and SOF core CWMD competencies.

For further guidance on integration of SOF and conventional forces, refer to Field Manual (FM) 6-05/Marine Corps Warfighting Publication (MCWP)3-36.1/Navy Tactics, Techniques, and Procedures (NTTP) 3-05.19/Air Force Tactics, Techniques, and Procedures (AFTTP) 3-2.73/USSOCOM Publication 3-33, Multiservice Tactics, Techniques, and Procedures for

Conventional Forces and Special Operations Forces Integration Interoperability, and Interdependence.

For further guidance on force planning, refer to JP 5-0, Joint Operation Planning.

e. **CTR Program.** In coordination with appropriate military organizations, other USG departments and agencies, and global partners, the CTR Program works cooperatively with partner governments to reduce the threat to the US and its allies from WMD, and related materials, technologies, and expertise, including associated delivery systems and infrastructure. The objectives of the CTR Program are: dismantle and destroy stockpiles of nuclear, chemical, or biological weapons, equipment, or means of delivery that partner countries own, possess, or that is in their control; account for, safeguard, and secure nuclear, chemical, and biological materials, equipment, or expertise which, if vulnerable to theft or diversion, could result in WMD threats; and prevent and detect acquisition, proliferation, and use of nuclear, chemical, or biological weapons, weapons-usable and related materials, equipment, or means of delivery and knowledge. The CTR Program was originally established and authorized to conduct threat reduction activities in the countries of the former Soviet Union. In 2010, in accordance with the authorities of the National Defense Authorization Act for 2008, the CTR Program began expanding to address emerging security challenges and urgent threats in regions of the world beyond the former Soviet Union. The CTR Program is currently authorized to operate in Asia, Africa, and the Middle East on an array of activities to include chemical weapons destruction, bio-engagement, nuclear security projects, and proliferation prevention.

(1) The Assistant Secretary of Defense for Global Strategic Affairs provides DOD policy and guidance for the programs and activities of the DOD CTR Program. The CTR Program is implemented by the Director, DTRA, serving under the authority, direction, and control of the Under Secretary of Defense for Acquisition, Technology, and Logistics through the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, in accordance with DODD 5134.08, *Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs (ASD[NCB]),* CTR programs and activities are coordinated among USG departments and agencies, including DOD, DOE, DHS, DHHS, the Department of Agriculture, and the Environmental Protection Agency. DOS's Bureau of International Security and Nonproliferation, Office of Cooperative Threat Reduction, International Security for Nonproliferation/Cooperative Threat Reduction, focuses on reducing the threat posed by terrorist organizations or proliferating states seeking to acquire WMD expertise, material, and equipment. They work closely with the Coordinator for Threat Reduction Programs in the Group of Seven, Global Partnership Against the Spread of WMD, and facilitate coordination of other USG initiatives seeking increased contributions for nonproliferation assistance from other governments. DOS global threat reduction programs include the Biosecurity Engagement Program, the Chemical Security Engagement Program, and the Partnership for Nuclear Security.

(2) Dismantlement activities may also be undertaken outside of the CTR Program with the consent and cooperation of the HN to reduce the size and threat of a WMD program and/or secure existing stockpiles or facilities to limit access and reduce the potential for proliferation. GCC planning should include activities to support threat reduction activities in

their AOR. These activities may be directed at an entire program or specific aspects such as weapons systems, stockpiles, or research facilities and laboratories. Threat reduction cooperation operations are typically phase 0 activities but can also occur as follow-on activities to control, defeat, disable, and/or dispose of WMD threats in the operating area should the environment become permissible and other USG entities and/or the HN assume the lead. As such, the GCC should plan for the eventual transition of these supporting tasks to another lead federal agency or the HN.

CHAPTER V
EXECUTION

"US forces conduct a range of activities aimed at preventing the proliferation and use of nuclear, biological, and chemical weapons."

Sustaining US Global Leadership:
Priorities for 21st Century Defense
January 2012

1. General

a. **Introduction.** This chapter provides details on the recommended specific activities and associated tasks that will need to be employed to achieve DOD's priority objectives associated with its strategy for CWMD.

b. **CWMD Activities Construct.** The CWMD activities construct serves as a method for logically grouping tasks to counter specific WMD threats. Typically, tasks are categorized within activities: understand the OE, threats, and vulnerabilities; cooperate with and support partners; control, defeat, disable, and/or dispose of WMD threats; and safeguard the force and manage consequences. While CWMD tasks within these activities may be conducted individually or concurrently during an operation, collectively they support JFC operations.

(1) **CWMD Activities and Phasing.** CWMD activities can be accomplished during any phase (0-V) of an operation. However, the level of effort in each of these activities varies depending on the phase. The level of effort required for the "understand the environment, threats, and vulnerabilities" and "cooperate with and support partners" activities will likely remain constant throughout each phase of an operation. While the control, defeat, disable, and dispose of WMD threats, safeguard the force, and manage consequences activities occur in all phases of an operation, efforts activities will likely peak during higher intensity phases (III and IV). (See Figure V-1.)

(2) **Tasks and Enabling Capabilities.** The CWMD activity and task construct leverages specialized and non-CWMD specific activities. The tasks and associated capabilities discussed in this document support the end states and objectives, and are employed across all LOEs. When performing CWMD tasks the JFC will employ DOD and interorganizational capabilities to respond to a range of other threats, meet other requirements, and are the responsibility of organizations with missions that extend beyond CWMD. These capabilities include DOD-specific capabilities, such as ballistic missile defense, materials analysis conducted by national laboratories, and port security conducted by PNs. These tasks and capabilities promote common threat awareness, CWMD self-sufficiency, military and civilian preparedness, and CBRN risk reduction. The JFC and staff need to understand that CWMD tasks and activities are not linear, nor strictly confined to a single LOE, and may span all operational phases. (See Figure V-2).

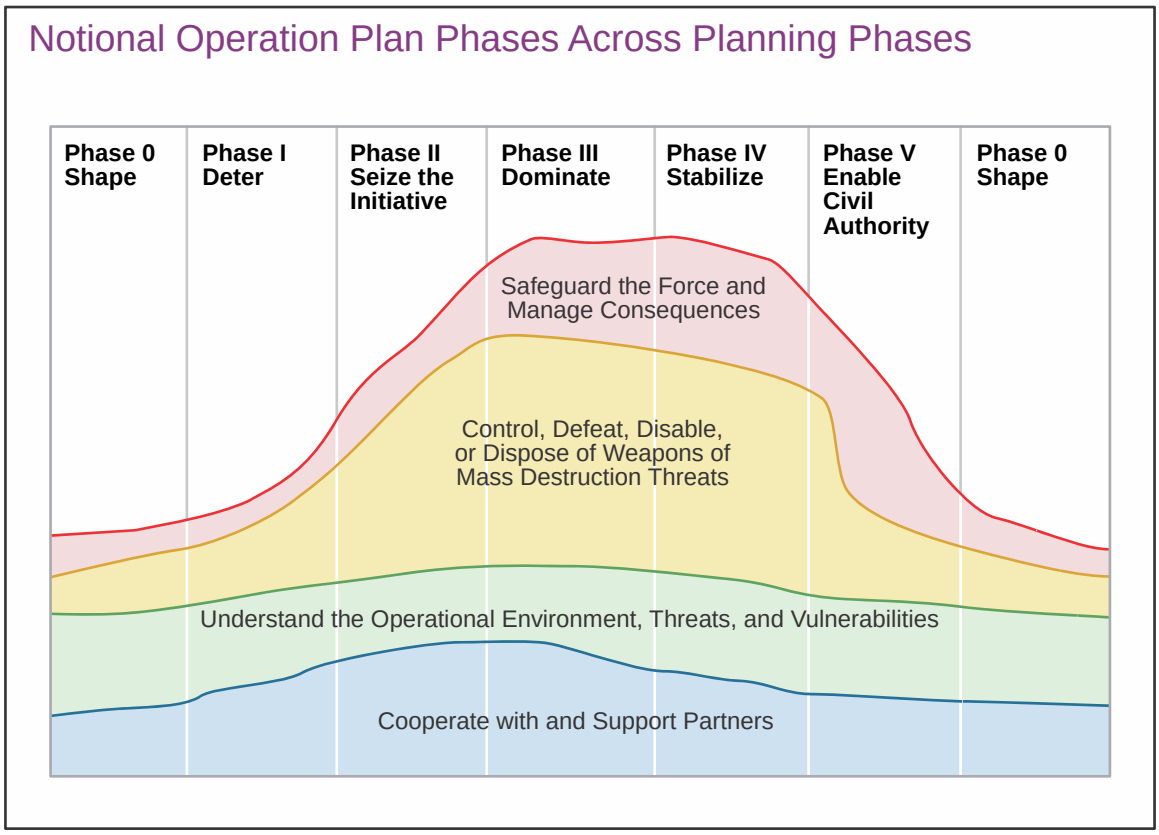


Figure V-1. Notional Operation Plan Phases Across Planning Phases

NOTIONAL COUNTERING WEAPONS OF MASS DESTRUCTION APPROACH

Scenario. The following scenario is a notional example of how a single escalating weapons of mass destruction (WMD) crisis can progress through all countering weapons of mass destruction (CWMD) lines of effort (LOEs) and maybe addressed through the CWMD activity categories. This scenario is intended to emphasize the nonlinear nature of CWMD operations and illustrate how a joint force commander (JFC) might support the US Government effort.

Prevent Acquisition LOE. The US intelligence community assesses that Country X intends to obtain WMD. Joint Task Force (JTF) Y is directed to support efforts to prevent Country X from acquiring materials of concern.

Components of Notional JFC Response. Develop and maintain situational awareness of actors of concern intentions, potential proliferation pathways and supporting networks. Develop an understanding of the potential threats associated with actors of concern WMD capabilities and US and friendly vulnerabilities to this capability. Establish defense relationships and enhance regional capability for collective defense.

Employ collective capability to track, intercept, and secure material of concern. Coordinate and synchronize operations and activities with partners. Train and position forces to intercept materials of concern. Coordinate with interorganizational partners to coordinate operations and transition points.

Contain and Reduce Threats LOE. Despite JTF Y and larger international efforts, Country X has succeeded in developing WMD. JTF Y is directed to support efforts to counter an increasingly belligerent and WMD-equipped Country X.

Components of Notional JFC Response. Locate and identify key facilities and personnel. Characterize and assess actors of concern WMD capability and predict possible means and consequences of employment. Continue to improve collective capability to defeat and manage the consequences of an attack; and demonstrate resolve through sanctions enforcement and multilateral exercises. Develop (and execute) targeting options to degrade or destroy an actor of concern's ability to assemble, field, or employ WMD. Prepare protective equipment and decontamination systems to respond to a chemical, biological, radiological, or nuclear attack.

Respond to WMD Crises LOE. Increasing international pressure combined with domestic unrest has destabilized Country X's ruling regime. As the situation develops, the US intelligence community gains definitive evidence that Country X's ruling regime intends to use WMD. JTF Y is directed to prepare for and respond to the threat of imminent WMD use.

Components of notional JFC response: Prepare to employ chemical, biological, radiological, and nuclear detection, hazards modeling. Coordinate plans with partners to defeat and mitigate the effects of an attack. Target weapons, delivery systems, stockpiles, and facilities. Options include tailored lethal and non-lethal means to delay, disrupt, destroy, or neutralize the actor of concern's ability to employ WMD. Be prepared to continue combat operations and conduct defense support of civil authority operations.

Scenario Ending: JTF Y is successful in deterring Country X from using WMD. Following negotiations, Country X agrees to allow dismantlement of its WMD program. JTF Y initially disables key aspects of the WMD program and transitions to a supporting role for the broader US Government disposition activities.

Various Sources

Application of the Countering Weapons of Mass Destruction Activity Construct

Countering Weapons of Mass Destruction Lines of Effort		Notional Tasks Performed in Typical Operations and Missions	Countering Weapons of Mass Destruction Activity Categories			
			Understand the Environment	Cooperate with and Support Partners	Control, Defeat, Disable or Dispose of Weapons of Mass Destruction Threats	Safeguard the Force and Manage Consequences
	Prevent Acquisition		Locate, Identify, Characterize, Assess, Predict *Intelligence, surveillance, and reconnaissance; medical planning and logistics*	Partner, Coordinate *Security cooperation; unified action; communication synchronization; interdiction; target planning; civil-military cooperation; border security*	Divert and Intercept, Seize, Delay or Disrupt, Neutralize, and Destroy *Targeting; interdiction; information operations; ntelligence, surveillance, and reconnaissance; communication synchronization*	Mitigate and Sustain *Force protection*
	Contain, Reduce Threats		Locate, Identify, Characterize, Assess, Predict *Intelligence, surveillance, and reconnaissance; weapons technical intelligence; medical planning and logistics; meteorological and oceanographic operations*	Partner, Coordinate *Security cooperation; unified action; bio-surveillance; strategic communications; targeting; information operations*	Divert and Intercept, Isolate, Secure, Seize, Delay or Disrupt, Neutralize, Destroy, Exploit, Degrade, Reduce, Dismantle, Redirect, and Monitor *Targeting; interdiction; site security; site exploitation; special forces and unified action; cooperative threat reduction; cooperation; civil-military cooperation; sanctions enforcement*	Mitigate, Sustain, Support *Force protection; health services; route reconnaissance*
	Respond to Crises		Locate, Identify, Characterize, Assess, Attribute, and Predict *Intelligence, surveillance, and reconnaissance; force posturing; bio-surveillance; forensics and evidence collection; hazard modeling*	Partner, Coordinate *Security cooperation; unified action; civil-military cooperation; communication synchronization; force protection; logistics*	Divert and Intercept, Isolate, Secure, Seize, Delay or Disrupt, Neutralize, Destroy, Exploit, Degrade, Mitigate, Sustain, Support *Targeting; interdiction; site security; information operations; special forces and unified action; force protection*	Mitigate, Sustain, Support *Force protection; health services; decontamination operations; contamination avoidance*

Legend

italic font: typical operations and missions normal font: tasks

Figure V-2. Application of the Countering of Weapons of Mass Destruction Activity Construct

2. Specialized Countering Weapons of Mass Destruction Activities and Tasks

a. **Introduction.** Effective execution of CWMD operations requires a deep understanding of CWMD activities and their supporting tasks. The following sections discuss the purpose and a general approach for joint force execution of CWMD activities during any military operation. Depending on the mission and OE, joint forces may also need to execute actions beyond those discussed in this chapter.

b. **CWMD Activity 1: Understand the Environment, Threats, and Vulnerabilities.** This activity aids the JFC in developing and maintaining a more comprehensive understanding of both the actors and materials that affect the OE. To accomplish this, the JFC needs to locate, identify, characterize, assess, and predict threats against US and partner vulnerabilities. Attribution is a task that provides a dissuade and deterrence value if properly signaled to actors of concern, but as a capability is focused on response activities. Capabilities that support these tasks include detection, modeling, identity intelligence, detailed operational planning, and analysis of materials, precursors, and agents related to WMD proliferation, development, or use. The JFC may use a combination of assets and resources such as surveillance, reconnaissance, intelligence specialists, interorganizational experts, conventional forces, and SOF in support of this activity. This activity is an iterative process undertaken continually throughout the planning process and during execution of operations and activities. As a result, it is an essential enabler to planning, preparing, and executing the other three CWMD activities.

(1) **Locate Task.** The JFC uses SOF, and intelligence collection assets to locate WMD-associated system nodes and program elements, to include production facilities, storage/stockpile sites, and key program personnel. Developing robust information sharing relationships with interorganizational partners, particularly related to identity data, is an essential component to this task.

(2) **Identify Task.** Once a WMD-related element and capability is located, the JFC's intelligence staff, in coordination with interorganizational experts, scope, categorize, and prioritize the posed threat. Confirmation of a threat will lead to further analysis to characterize and then assess specific elements of the program more effectively. During conflict, initial identification of CBRN materials will most likely be performed by conventional forces. Prior to execution, conventional forces should be made aware of the types of facilities, material, and munitions they may encounter so that personnel protective equipment, security, and reporting are properly addressed.

(3) **Characterize Task.** Prior to conflict, the JFC gains understanding of an actor of concern's WMD program by mapping its individual components, its internal linkages, and its external associations through a variety of intelligence collection and analysis capabilities. This includes the types of weapons and the related materials, technology, and expertise associated with each WMD capability. The JFC staff uses characterization to inform assessment, attribution, and predictive analysis. During and after conflict, characterization occurs when the joint force has access to and can fully examine WMD facilities, stockpiles, weapons, and/or personnel. Understanding gained

through this process conducted by specifically trained and designated forces, combined with subsequent definitive analyses at internationally recognized laboratories, allows for overall characterization of a WMD program size, scope, and type.

(4) **Assess Task.** Analysis conducted in conjunction with larger DOD, civilian, USG, and international partners interorganizational effort helps the JFC determine the threat posed by an actor of concern's WMD program. This includes an assessment by the JFC staff of US and PN vulnerabilities in relation to a specific actor's WMD capability. The JFC may use hazard estimation, measurement, and modeling systems, as well as multinational exercises to assess the level of threat that an actor of concern's WMD poses to US and friendly forces.

(5) **Attribute Task.** Attribution is an effort to determine the origin of the material or weapon as well as those responsible for a CBRN event. The process derives forensics conclusions from the definitive analysis of samples collected, law enforcement, and intelligence information. Forensic-enabled intelligence collection, processing, exploitation, and analysis capabilities support the identification of CBRN sourcing and attribution. Joint forces directly support the attribution process through intelligence (e.g., site exploitation), sample collection and transfer, and technical analysis. These forces require training, certification, and specialized equipment and expertise, and in some cases, unique authorities that must be requested by the JFC prior to execution. These forces must be identified early in the planning process.

(6) **Predict Task.** Specialized, technical capabilities are used to construct a common operational picture presenting current and forecasted information on the actors of concern, friendly forces, neutral elements, the environment, and geospatial information. JFCs use modeling, diagnostics, intelligence, and analysis capabilities to understand the current environment, detecting anomalies, and continually assessing the WMD threat and related networks to extrapolate possible future threats.

EXAMPLES OF TYPICAL OPERATIONS IN SUPPORT OF COUNTERING WEAPONS OF MASS DESTRUCTION ACTIVITY 1

Intelligence, Surveillance, and Reconnaissance (ISR). ISR is an integrated intelligence and operations function that synchronizes and integrates the planning and operation of sensors, assets, processing, exploitation, and dissemination systems in direct support of current and future operations. ISR capabilities support countering weapons of mass destruction (CWMD) by enabling the commander to locate, identify, characterize and assess proliferation networks and weapons of mass destruction (WMD) activities, capabilities, and program elements of actors of concern. Additionally, joint force commanders (JFCs) can crosswalk ISR with emerging intelligence techniques to better identify, characterize, and monitor WMD actions.

Detecting WMD Materials or CBRN Release. Joint forces use active and passive detection technologies to initially identify and characterize WMD material or a chemical, biological, radiological, and nuclear (CBRN) release. Detection may be accomplished via ISR assets, specialized ground reconnaissance units, visually confirmed, and/or medically confirmed.

Forensics and Evidence Collection. Forensics and evidence collection employs highly technical expertise and equipment activities to assist the JFC and the interagency team to attribute an attack. The lead federal agency determines the forensic evidentiary requirements; JFC considerations should include the sample management process (collection, packaging, chain of custody, and hazardous material transportation).

Weapons Technical Intelligence. The weapons technical intelligence capability is a framework of technical and forensic capabilities and processes that systematically collect, exploit, characterize, and assess improvised weapons related information, and material associated with a threat. This enables the JFC to link technical and forensic information and material recovered from a sensitive incident site, with existing information and intelligence previously obtained to then better characterize and predict future threats. (For further guidance refer to the *Weapons Technical Intelligence Handbook.)*

Hazard Modeling. Hazard modeling and simulation capabilities assist the JFC to assess threats and vulnerabilities, and predict possible consequences of WMD use or an accidental CBRN release.

Meteorological and Oceanographic Operations (METOC). METOC products and information are key components of modeling and simulation analysis used to accurately predict WMD effects. METOC products are integral to target planning, the prediction of hazard areas, and the estimation of casualties during a response to a CBRN crisis.

Medical Planning and Logistics. Medical planning is predicated on the assessment and characterization of an actor of concern's WMD program.

The predicted impact of WMD use informs logistical planning to ensure adequate personnel and equipment, facilities, preventive medicine, bio-surveillance, and decontamination assets are available to safeguard the force and manage consequences.

c. **CWMD Activity 2: Cooperate with and Support Partners.** This activity promotes common threat awareness, builds CWMD self-sufficiency, improves military interoperability, enhances military and civilian preparedness, deterrence, and in some cases facilitates security of dual-use and CBRN materials. JFCs should plan to perform tasks associated with this activity in full cooperation with state and local authorities, USG interagency partners in a variety of departments and agencies, multinational partners, and NGOs. The JFC will coordinate with state and local authorities, interagency partners, multinational partners, and NGOs to ensure the partner and coordinate tasks associated with this activity are successfully conducted, to various degrees, within military engagement, SC, CTR, and deterrence operations and activities during all military operational phases. The JFC should seek to strengthen existing partner relationships and support programs to build the foundation for future partnering opportunities. Whenever conducting this activity, CCMDs coordinate with DOS to make contact with international counterparts in PNs. JFCs need to include partners in planning and execution processes as early as possible. GCCs can then leverage existing activities, such as interorganizational and multinational training and exercises to strengthen relationships and improve regional capabilities and capacity to achieve CWMD objectives. As part of this activity, CCMDs should coordinate with DOS to make contact with international counterparts.

(1) **Partner Task.** Domestic and foreign security partnerships support the collective capability to respond to and defeat WMD threats and manage the consequences of an attack. Existing partnerships must be maintained and new relationships sought out, building partner capacity in key areas that support deterrence and all operational phases.

(2) **Coordinate Task.** Promote and improve common threat awareness, interoperability, response preparedness, and WMD risk reduction. Actions that support this task include operational planning with partners and SC efforts that synchronize counterproliferation activities such as interception.

EXAMPLES OF TYPICAL OPERATIONS IN SUPPORT OF COUNTERING WEAPONS OF MASS DESTRUCTION ACTIVITY 2

Security Cooperation. Security cooperation programs and initiatives are intended to improve defense relationships and increase regional capability for collective weapons of mass destruction (WMD) defense. This includes efforts to cooperate and partner with actors that have mutual interests to support international norms related to WMD possession, proliferation, or use. Joint force participation in combined exercises and training; and nation assistance (to include security assistance and foreign internal defense) efforts improve partnering and cooperation on treaty monitoring; collective enforcement of sanctions; and arms control and disarmament activities.

Unified Action. The presence of international members increases the legitimacy of countering weapons of mass destruction efforts and fosters greater cooperation in areas such as site and team security, site assessment, detection, decontamination, transportation, medical and veterinary/animal support, laboratory support, language support, and intelligence.

Civil-Military Operations. Joint force commander should, where possible and appropriate, cooperate with the local population. The local populace can assist in determining the location and function of WMD facilities; identification and location of key personnel employed at WMD or dual-use sites; identification of local environmental hazards; identification and location of individuals that are not part of the populace; and assistance in identifying potential WMD sites.

Communications Synchronization. Establishing productive relationships with partners, particularly media organizations, is an inherent element of JFC communication efforts. JFCs should cooperate with relevant counterparts to synchronize and communicate themes, messages, images, and actions. JFCs use their public affairs staff to work with partners to quickly and effectively communicate risk and response information to the public in order to create a favorable operational environment, and avoid confusion and hysteria.

d. **CWMD Activity 3: Control, Defeat, Disable, and/or Dispose of WMD Threats.** The purpose of the control, defeat, disable, and/or dispose of WMD threats activity is to reduce WMD-related threats. DOD has developed specialized capabilities and units to address the tasks associated with this CWMD activity. When conducted on a small scale, this activity may constitute part or all of a crisis response or limited contingency operation. For major operations and campaigns, which balance offensive, defensive, and stability operations, this activity supports the joint force's offensive actions. Typically, JFCs control, defeat, disable, or dispose of individual WMD threats, as appropriate. These tasks may be conducted utilizing lethal and/or nonlethal capabilities that require specialized equipment and expertise. The JFC should focus on controlling an actor of concern's program elements and then transitioning control to a competent authority for final disposition as the situation/mission dictates.

(1) **Control Supporting Tasks.** Control supporting tasks are accomplished with capabilities to divert, intercept, isolate, seize, and secure WMD, including related technology, materials, expertise, and means of delivery.

(a) **Divert Task.** This task involves efforts and resources to change the intended course or destination of shipments of WMD, related technologies, materials, expertise, and/or means of delivery either willingly or by force. The JFC may use a combination of operations to accomplish this task. In some cases this may not require direct action, rather a show of force, the demonstration of a US presence, or a formal communication of US Government concern will render the desired effect. For example, diversion may result from activities such as a focused cyberspace attack, maritime interception operations (visit, board, search, and seizure), or formal diplomatic actions (demarche).

(b) **Intercept Task.** Conventional forces and SOF capabilities may be necessary to stop the movement of CBRN materials, WMD components, means of delivery, WMD-related personnel, or functional weapons into or out of specified areas or nations. Such actions may require boardings and search and detection capabilities to secure and seize

shipments. Intercept operations will likely involve interagency or multinational partners. This task may involve a combination of activities such as port inspections and checkpoints that would allow for USG or international partner inspections.

(c) **Isolate Task.** This task includes conducting critical factors analyses of WMD programs to identify capabilities, requirements, and vulnerabilities that can be acted upon. Isolating and denying access to critical WMD program components is intended to prevent actors of concern from furthering WMD acquisition, development, proliferation, or utilization. Isolation operations may require the coordination of conventional forces and interagency and international partners, to include law enforcement and specialized technical capabilities. Isolation of WMD critical components may be necessary for follow-on CWMD activities and tasks.

(d) **Seize Task.** This task involves taking possession of WMD capabilities (e.g., a designated area, building, transport, materials, or personnel) to deny an actor of concern's access to WMD capabilities. Seizing differs from securing because it requires offensive action to obtain control of the designated area or objective. Once a force seizes a WMD-related objective, it secures the objective and prepares it for potential follow-on actions such as exploitation and destruction.

(e) **Secure Task.** Preventing unauthorized access to sites or the removal of WMD-related technologies, materials, or personnel may be necessary to prevent use, proliferation, looting, or compromising integrity of physical evidence. The secure task may allow characterization and exploitation operations to begin. The requirement to secure sites is a crucial mission analysis consideration due to the potentially large force requirements and the balance of competing JFC priorities. WMD master site lists prioritize WMD-related sites that must be deconflicted and integrated with other objectives.

(2) **Defeat Supporting Tasks.** Pathway and WMD defeat activities cover the spectrum of offensive activity, from conventional to cyberspace and special operations, that addresses an actor of concern's development and use of WMD. Pathway defeat activities focus on actions to delay, disrupt, destroy, or otherwise complicate conceptualization, development, possession, and proliferation of WMD. After an actor of concern has obtained WMD critical requirements (e.g., expertise, technology, components, materials, delivery systems, facilities), WMD defeat efforts target critical vulnerabilities (e.g., the ability to assemble, stockpile, deliver, transfer, or employ WMD) and seek to neutralize or destroy them. This involves the JFC employing tailored lethal and nonlethal capabilities to neutralize or destroy weapons and agents; delivery systems; and materials, facilities, and processes, including the functional or structural defeat of hardened targets.

(a) **Delay Task.** JFC efforts to hinder an actor of concern's development, acquisition, proliferation, or use of WMD include lethal and nonlethal capabilities employed directly against the actor of concern or in support of another lead agency. This can include direct action against specific nodes in a WMD network or program such as production facilities, computer networks, and transportation or financial nodes. Efforts to delay key actors may include financial sanctions, legal actions, or restriction of travel (e.g., national watch list).

(b) **Disrupt Task.** The JFC may choose to disrupt an actor of concern's development, acquisition, or proliferation of WMD. This may be done with direct action interdicting material en route. Disruption is particularly well suited to targeting key nodes in an actor of concern's network, such as transportation, leadership, logistics, or financial nodes.

(c) **Neutralize Task.** Neutralization includes efforts to render WMD capabilities ineffective or unusable. Examples include making CBRN agents and materials harmless or making delivery systems unusable. When assigning tasks to neutralize WMD, commanders specify the actor of concern's capability or material and the duration it should be rendered ineffective or unusable. The commander may use a combination of lethal and nonlethal capabilities to neutralize actor of concern's WMD capabilities. Assets (including specialized units and equipment) required to neutralize a target vary according to the type and size of the target and desired effects.

(d) **Destroy Task.** This task involved destroying WMD capabilities so they cannot perform their intended function without being entirely rebuilt. Such actions require a significant amount of pre-strike planning and authorization prior to execution. Typically the capability cannot be reconstituted. Proper weaponeering and hazard modeling help the JFC employ the proper resources, understand the potential consequences of execution, and minimize collateral damage. The JFC needs to consider national and strategic objectives of such an operation or campaign, before deciding to destroy a WMD-related target. This task is also applicable to the disable activity.

(3) **Disable Supporting Tasks.** Disablement includes efforts to exploit and degrade or destroy critical and at-risk components of a WMD program. Critical components are those that pose a threat to friendly forces, while at-risk components are those components of a WMD program that are at risk of loss or proliferation. Disable tasks seek to ensure that these items are not used, lost, or proliferated. They also seek to reduce the risk of those capabilities being proliferated, lost, or stolen. If follow-on activities to complete WMD program dismantlement are required, WMD disablement may transition to another department or agency for final disposition. Before conducting WMD disablement tasks, the JFC establishes control of the specified WMD threat.

(a) **Exploit Task.** WMD exploitation tasks seek to maximize the value of intelligence gained from personnel, data, information, and materials obtained during CWMD operations. Site exploitation should be integrated into CWMD operations due to the inherently strategic implications of WMD. Processing and exploitation of information, personnel, and/or materiel found during the conduct of CWMD operations may be conducted at various locations in conjunction with interagency and international partners, as required to produce timely, actionable intelligence.

For further guidance on processing and exploitation, refer to JP 2-0, Joint Intelligence, *and JP 2-01,* Joint and National Intelligence Support to Military Operations.

(b) **Degrade Task.** Typically destruction and disposal of an actor's WMD capability are preferred to degradation, but factors such as time, resources, access, and

security may necessitate only the most critical at-risk elements be degraded and/or destroyed. Whatever the reason, the JFC may need to accept that degradation is the best course of action given the circumstance. Degradation should ensure the actor of concern is not able to threaten friendly forces for a period of time. The JFC should consider consequences stemming from degradation of WMD capabilities.

(4) **Dispose Supporting Tasks.** This task involves the systematic effort to get rid of the remnants (program elements, facilities, personnel, surplus, dual-use capacity, confiscated/seized cargo, equipment, delivery systems) of an actor's WMD program. This may include deliberate technical processes that reduce or dismantle production methods, materials, stockpiles, and technical infrastructure; establishment of protocols of reductions and compensation or agreements to return seized cargo; the redirection of WMD, related technologies, materials, or an actor's efforts and expertise towards peaceful productive activities; and monitoring to ensure expertise or program elements are not re-constituted or reused in any illicit capacity. Typically the JFC sets conditions for disposition of an actor of concern's WMD program, final disposition will probably require a larger USG or international effort.

(a) **Reduce Task.** This disposal task seeks to diminish a potential threat, improve the security of the remnants, reduce costs of sustaining the program elements, and eliminate excess capacity or capability. Reduction programs and operations, such as demilitarization of stockpiles, may be led by another USG department or agency, or international partner or organization. GCCs should coordinate activities to make certain they are mutually supporting and do not conflict.

(b) **Dismantle Task.** Dismantling a WMD facility, stockpile, or program is the process by which the program is systematically reduced to a level that it can no longer operate for its intended purpose. Depending on the operating environment, the lead for this effort may have already transitioned to another organization or PN. The JFC should be prepared to provide support as directed. If tasked to execute this task, the JFC may require specialized capabilities and needs to consider possible consequences of execution.

(c) **Redirect Task.** Redirection involves repurposing facilities, expertise, and material associated with an actor of concern's WMD program elements. This is especially acute when program elements have a dual-use nature. Redirection of expertise includes retaining personnel with WMD expertise (e.g., scientists and engineers) for new, legitimate employment. Depending on the environment on the ground, the lead for this effort will mostly likely have transitioned to another organization or PN. The JFC should be prepared to provide support as directed.

(d) **Monitor Task.** Monitoring is the disposal task action to continually review and inspect programs, personnel, and facilities to ensure that they are not producing WMD and that remnants are not being reconstituted or reused in any illicit capacity. The JFC and DOD will normally be functioning in support of USG interagency and international partners. Depending on the strategic environment, the JFC may require intelligence, surveillance, and reconnaissance assets or other collection methods to support this task.

EXAMPLES OF TYPICAL OPERATIONS IN SUPPORT OF WEAPONS OF MASS DESTRUCTION ACTIVITY 3

Targeting. The joint force commander (JFC) targets critical elements of an actor of concern's weapons of mass destruction (WMD) program for neutralization or destruction. Although the initial effect of conventional munitions on a WMD-related target may cause little collateral damage, secondary effects could include a release or dispersal of chemical, biological, or radiological material or even a partial yield of a nuclear device. For this reason, WMD-related targets are usually placed on a restricted target list. JFCs should seek to minimize collateral damage and plan for follow-on chemical, biological, radiological, and nuclear consequence management operations to mitigate potential WMD effects.

Interdiction Operations. Interdiction operations enable the JFC to isolate, divert, intercept, seize, or otherwise delay the proliferation or development of WMD. Geographic and functional combatant commands (CCMDs) conduct control activities as part of their regional and transregional efforts. Through these efforts the CCMDs may affect the decision making of actors of concern, effectively interdicting materials of concern in transit by using direct or indirect action.

Storage and Security of WMD Sites. Suspected WMD sites are isolated, seized, and secured to prevent unintended destruction, looting (with its associated danger to the civilian population), or transfer of WMD-related materials. Guidelines for storage and security of confiscated and/or captured materiel may be subject to international treaties or agreements. At the earliest stages of planning and throughout execution, JFCs need to determine the most effective means to secure WMD-related sites (e.g., consolidation) and assess mission risk if combat power has to be diverted.

Special Operations Forces Actions. Special operations forces are uniquely qualified to conduct special reconnaissance, direct action, and counterterrorism operations that support small-scale countering weapons of mass destruction efforts. The JFC may use special operations forces independently or integrated with conventional forces, to perform tasks to control, defeat, or disable actor of concern WMD capabilities.

Information-related Capabilities. Prior to the initiation of combat operations, military information support operations reinforce targeting of government and military leadership and technical experts associated with illicit activities in an attempt to delay or disrupt progress in a WMD acquisition, development, or proliferation. During execution, information operations staff sections integrate additional information-related capabilities in concert with other lines of operation to influence, disrupt, corrupt, or usurp decision making of actors of concern.

Security Cooperation. JFCs should be aware of, and be prepared to, support Department of Defense and non-DOD Cooperative Threat Reduction programs that allow the United States Government to disable and then dispose of WMD threats with the consent of the host nation.

e. **CWMD Activity 4: Safeguard the Force and Manage Consequences.** The purpose of this activity is to allow the joint force and other mission-critical personnel to sustain effective operations and support US and foreign civil authorities and their populations by responding to a CBRN incident and mitigating the hazards and the effects of their use. When conducted on a small scale, safeguard the force and manage consequences tasks may constitute part or all of a crisis response or limited contingency operation. For major operations and campaigns, which balance offensive, defensive, and stability operations, this activity supports the joint force's defensive and stability actions. Within the construct of such operations, the joint force needs to be prepared for a variety of WMD situations, such as an inadvertent release, release due to joint force action, or actor of concern's employment of CBRN materials.

For more information to safeguard the force and manage consequences, see JP 3-11, Operations in Chemical, Biological, Radiological, and Nuclear Environments, *and JP 3-41*, Chemical, Biological, Radiological, and Nuclear Consequence Management, *respectively.*

(1) **Mitigate Task.** Mitigate is the ability to plan, prepare, respond to, and recover from CBRN incidents. This task focuses on maintaining the joint force's ability to continue military operations in a CBRN contaminated environment, and on minimizing or negating the vulnerability to, and effects of, CBRN attacks. These activities may support civil authorities and foreign governments.

(2) **Sustain Tasks.** Sustain is the ability to maintain response, and recover operations from CBRN incidents. In reference to the joint force, sustainment is the ability to support operations in a CBRN environment and conduct recovery/reconstitution operations to regenerate unit combat readiness (e.g., detailed troop decontamination, detailed equipment decontamination, medical activities, and rest and relaxation). These activities may support civil authorities and foreign governments.

(3) **Support Task.** In many scenarios DOD, and the JFC, will be directed to support another USG department or agency (e.g., DHS or DOS) in the conduct of operations initiated to provide assistance to civil authorities when their own capabilities are insufficient to save lives and maintain essential government services. In the event of a CBRN incident where HN support for local population and DOS does not have a presence, DOD may be directed by the President or SecDef to lead support operations. The JFC should be aware of any standing agreement that may provide a means to deliver this support as required.

EXAMPLES OF TYPICAL OPERATIONS IN SUPPORT OF COUNTERING WEAPONS OF MASS DESTRUCTION ACTIVITY 4

Force Protection. Joint force commanders (JFCs) and their subordinate commanders implement force protection measures appropriate to all anticipated threats, to include both weapons of mass destruction (WMD) attacks and other chemical, biological, radiological, and nuclear (CBRN) hazards. Force protection often requires both active and passive defense capabilities to mitigate operational impacts and sustain the force following an event.

Contamination Avoidance. Successful contamination avoidance prevents disruption to operations and organizations by eliminating unnecessary time in cumbersome protective postures and decontamination requirements. Avoiding contamination requires the ability to detect and report the presence of CBRN hazards.

***For further information on contamination avoidance, see JP 3-11,* Operations in Chemical, Biological, Radiological, and Nuclear Environments.**

Health Services. Medical and health issues have an operational impact on many other areas regardless of whether countering weapons of mass destruction (CWMD) is the JFC's primary mission or operations are conducted in a potentially CBRN-contaminated area. The CWMD tasks to mitigate, sustain, and support other entities outside of the Department of Defense are supported by health services.

Force Health Protection (FHP). JFCs and their subordinate commanders implement FHP measures appropriate to all anticipated health threats. Specific FHP measures would include the health risk assessment of potential exposures to WMD and other CBRN hazards in order to sustain the mental and physical well-being of military personnel for continued operations.

Intentionally Blank

APPENDIX A
WEAPONS OF MASS DESTRUCTION BACKGROUND, MATERIALS, AND TECHNOLOGIES

1. Purpose

This appendix supplements Chapter II, "Weapons and Associated Concerns."

2. Nuclear Weapons Materials Production

a. **Mining, Milling, Refining, and Conversion.** During mining and milling, uranium ore is processed to isolate the uranium into concentrate called yellow cake. Uranium that is to become reactor fuel is reduced to metal for further fabrication into reactor fuel elements. Uranium to be enriched for medical use or weapons development is converted into UF6 [uranium hexafluoride].

b. **Uranium Enrichment.** Isotope separation (enrichment) technologies are processes that usually begin with natural uranium and result in enriched uranium and depleted uranium. Enrichment seeks to isolate and collect the relatively small percentage of the isotope uranium-235 (235U), in natural uranium, which is suitable for fission weapons. Highly enriched uranium contains 20 percent or more of 235U; low enriched uranium contains less than 20 percent 235U. Most power reactors require low enriched uranium containing between three to five percent 235U. Weapons grade uranium will contain 90 percent or more of 235U. Natural uranium can be used in certain types of reactors for fuel—a byproduct of the energy production from that fuel is plutonium-239 (239Pu).

c. **Plutonium Enrichment.** Plutonium, one of the two fissile elements used to fuel nuclear explosives, is not found in significant quantities in nature. Plutonium can only be made in sufficient quantities in a nuclear reactor. It must be produced (i.e., bred) usually in a production reactor. To achieve the high percentages of Pu-239 required for weapon grade plutonium, it must be produced specifically for this purpose. The uranium must spend several weeks in the reactor core and then be removed. Production reactors are used to make plutonium (and often tritium) efficiently. Production reactors can be graphite-moderated and either air-, CO_2 -, or helium-cooled, some programs have used heavy water reactors. The longer a given sample of fuel is irradiated, the greater the build-up of Pu-240, an isotope which decays by spontaneous fission and which should be minimized in weapon fuel. Consequently, plutonium production reactors usually are designed to be refueled while operating (on-line refueling) so that relatively little Pu-240 is found in the "spent" fuel. Plutonium is removed from spent fuel by chemical separation; no nuclear or physical separation (as for example in uranium enrichment) is needed. To be used in a nuclear weapon, plutonium must be separated from the much larger mass of non-fissile material in the irradiated fuel. After being separated chemically from the irradiated fuel and reduced to metal, the plutonium is immediately ready for use in a nuclear explosive device. If the reactor involved uses thorium fuel, U-233, also a fissile isotope, it can be recovered in a process similar to plutonium extraction.

For further guidance on enrichment, refer to The Effects of Nuclear Weapons.

3. Radiological Weapons and Sources

a. **Radiological Weapons Development Lifecycle.** The lifecycle of radiological weapons is derived in a similar manner as nuclear weapons. This pathway is more difficult to characterize due to the prevalence of radioactive sources in everyday life.

b. **RDD Candidate Materials.** Radioactive materials that make the best candidates for use in an RDD are those that are widely used in medicine, industry, and research. RDD candidates should have an intermediate half-life–highly radioactive materials decay too quickly to assemble and deliver as an RDD, while those with very long half-lives are not radioactive enough to cause much damage. All of the candidate isotopes that pose the greatest security risk for an RDD are produced in the nuclear fuel cycle and for industrial applications of radiation.

RESEARCH REACTORS

Most radioisotope production occurs in research reactors, with power ranges from tens of kilowatts to several hundred megawatts, compared to 2,000 megawatts in commercial nuclear reactors. However, a few commercial power reactors also function as radioisotope producers.

From the security viewpoint, it is worth noting that both reactor and accelerator produced radioisotopes are usually processed in hot cells near the production facility. The processing involves chemical preparation after initial manufacture to produce a more pure form of the radioisotope for commercial use. It also physically shapes the product into the desired form (e.g., pellets or pencils).

SOURCE: "Commercial Radioactive Sources: Surveying the Security Risks", Charles D. Ferguson, Tasheen Kazi, and Judith Perera. Occasional Paper No. 11, Center for Nonproliferation Studies. Monterrey Institute of International Studies

4. Biological Weapons and Sources

a. **Biological Weapons Development Lifecycle.** The lifecycle of a biological weapon begins with the culturing of a specific organism with the virulence required. This capability generally runs on a continuum from research, product scale-up, testing production, weaponization, storage, deployment/employment, and demilitarization. These stages can run in parallel as a capability is upgraded, or circumvented as capability is contracted, out-sourced, imported, or stolen. Additionally, production times may be relatively short within the lifecycle as some bacteria can double in number every twenty minutes. Large stockpiles could be produced within a few years in a modest-sized pharmaceutical plant before it is repurposed for another use.

b. **Production.** Fermenters may be employed to grow large amounts of certain bacteria but biological agents are not stored in bulk containers or in munitions. Biological agents would most likely be stored in small quantities of a few milliliters in plastic "cryovials" in liquid nitrogen canisters or in -80 degrees Celsius freezers in a containment room or building, such as biosafety

level 3-4 facilities with access control and exterior security. Maintaining the capability does not depend on continued serviceability of the agent as it can be kept in frozen storage until needed. When prepared for use, large volumes of liquid nutritive media would be necessary to revive bacterial agents in incubators or warm rooms, possibly in flasks on shaker platforms for extracellular bacteria or in tissue culture for intracellular species. Virus preparation from the frozen state would require, depending on the species, numerous live eggs in incubators, or tissue cultures employing commercially available cell lines, large amounts of liquid media, and numerous flasks to expand the amount of agent for deployment.

c. **Biological Agents.** Biological agents (pathogens and toxins) pose a risk of deliberate misuse with significant potential for mass casualties or devastating effects to the economy, critical infrastructure, and public confidence (see Figure A-1). Many diseases caused by weaponized biological agents present with nonspecific clinical signs that could be difficult to diagnose and recognize as a biological attack.

Agents with Significant Risks of Deliberate Misuse

Pathogens	Viruses	Influenza viruses (avian, swine, etc.) Ebola virus Marburg virus Variola major and minor viruses (Smallpox) Alphaviruses (Eastern Equine Encephalitis, Venezuelan Equine Encephalitis) Foot-and-mouth disease virus (animal disease only) Rinderpest virus (animal disease only)
	Bacteria	Bacillus anthracis (Anthrax) Burkholderia mallei (Glanders) Burhkolderia pseudomallei (Melioidosis) Francisella tularensis (Tularemia) Yersinia pestis (Plague) Coxiella burnettii (Q fever) Brucella species (Brucellosis) Rickettsia prowazekii (Epidemic typhus)
	Toxins	Clostridium botulinum neurotoxin Ricin toxin Abrin toxin Staphylococcus enterotoxins

Exemplary list, not exhaustive of Pathogens and Toxins.

Figure A-1. Agents with Significant Risks of Deliberate Misuse

For further guidance on biological weapons, refer to US Army Medical Research Institute of Infectious Diseases Pocket Reference Guide to Select Biological Agents and Toxins.

5. Chemical Weapons and Sources

Chemical Weapons Development Lifecycle. The lifecycle of a chemical weapon capability runs on a continuum from research through production, weaponization, storage, deployment/employment, and demilitarization. Agents and munitions that have exceeded their shelf life should be disposed of in a manner that precludes their continuing to be a hazard (e.g., incineration or neutralization). These stages can run in parallel as a capability is upgraded or circumvented as the capability is franchised or imported. Research involves gathering and cultivating needed expertise and validating production and weaponization processes. Production times are often relatively short within the life-cycle. Large stockpiles can be produced within a few years in a modest-sized chemical plant before it is re-purposed to another use. Agents are usually stored in munitions or in bulk containers. Maintaining the capability depends on continued serviceability of the munitions, the agent, and the munitions filling equipment for agents stored in bulk. Deployment and employment may involve specialized units qualified to handle agents and fill munitions. The task of controlling chemical warfare agent identification is further complicated through countries' use of binary compounds. Binary compounds have significantly extended storage life. Frequently, the agent must be reprocessed or replaced to maintain the usefulness of the weapon. Eventually, agents and munitions will need to be demilitarized. Burial of chemical warfare agents is not a permitted destruction method in accordance with the CWC (Verification Annex, Part IV (A), Section C, paragraph 13). Munitions buried prior to CWC entry into force may remain buried; but if recovered, must be destroyed in accordance with an approved destruction method. Weapons degraded beyond normal military usefulness can still pose significant hazards, especially if proper control is lost. Agents and munitions that were disposed of through burial or ocean dumping prior to the CWC Treaty should remain undisturbed; and if they pose an environmental hazard, or are recovered, they should be destroyed in an approved manner as any other munition or agent.

For further guidance on chemical weapons, refer to US Army Medical Research Institute for Chemical Defense Field Management of Chemical Casualties.

APPENDIX B
TREATIES, RESOLUTIONS, ACTIVITIES, AND LEGAL CONSIDERATIONS

1. General

This appendix provides a reference for staff officers assigned to CCMDs, JTF, or other major staff and operational elements responsible for CWMD planning and execution. It addresses treaties, resolutions, control regimes, activities, and legal considerations which JFCs account for and which will shape the design of operations and campaigns that deal with the WMD threats or hazards.

2. Treaties and Control Regimes

a. **Overview.** Treaties and control regimes are two tools that are used to implement the NSS. They establish global norms against the proliferation of WMD precursors, dual-use goods, weapons, and their means of delivery. Both provide international standards to gauge and address the activities of potential proliferators. Joint forces will comply with treaties to which the US is a party and may be required to support initiatives aimed at building cooperation and support for arms control and treaty monitoring activities. Several of the cornerstone treaties regarding WMD are listed within this appendix. Joint forces also need to be aware of those treaties that the US is not party to but may pose constraints or restraints, such as nuclear-weapon-free zones. (See http://www.un.org/disarmament/WMD/ for text of treaties.)

b. **Nuclear Policies and Agreements.** The US has historically used two methods to counter the threat and proliferation of nuclear weapons. The first is its overt strategic deterrence policy laid out in the current *Nuclear Posture Review.* The second is its nonproliferation policy, which is implemented through a network of formal arms control treaties and agreements such as CTR programs and informal agreements like the PSI. While the US is not party to all of these policies and agreements, and some are nonbinding, they can affect joint force actions and the JFC should account for them. Significant nuclear-related policies and agreements include the *New Strategic Arms Reduction Treaty (START)*, the *NPT,* nuclear weapon-free-zones, the *Comprehensive Nuclear Test-Ban Treaty (CTBT)*, the *Global Initiative to Combat Nuclear Terrorism (GICNT)*, various United Nations (UN) Security Council resolution (UNSCR) sanctions and the Nuclear Suppliers Group control lists. The Deputy Assistant Secretary of Defense for CWMD represents DOD interests on these and other counterproliferation and nonproliferation policy issues.

(1) **The NPT.** The NPT is the cornerstone of international efforts to prevent the spread of nuclear weapons as it prohibits non-nuclear-weapon state party from receiving, manufacturing, and acquiring nuclear weapons and nuclear-weapon state party from transferring nuclear weapons, related materials, and technology. DOD supports US efforts to promote full compliance by all parties to the treaty. With 189 state parties, the NPT is unique in its near universality. Only India, Pakistan, Israel, and North Korea are not members of the NPT. In becoming party to the NPT, non-nuclear weapon states pledge not to acquire nuclear weapons in exchange for a pledge by the nuclear weapon states (US, United Kingdom, France, Russia, and China) not to assist the development of nuclear

weapons by any non-nuclear weapon states and to facilitate "the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy." The nuclear weapon states, defined as any state that tested a nuclear explosive before 1967, also agree to "pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament."

(2) **START.** New START reduces the number of US and Russian strategic nuclear warheads. As part of New START, the US and Russia verify compliance with obligations through a regime of on-site inspections, notifications, a comprehensive and continuing exchange of data regarding strategic offensive arms, and provisions for the use of national technical means of verification. Each party has the flexibility to determine for itself the structure of its strategic forces within the aggregate limits of the treaty. These limits are based on the analysis conducted by DOD planners in support of the 2010 Nuclear Posture Review Limits on Warheads and Launchers. New START contains three central limits on US and Russian strategic offensive nuclear forces. First, it limits each side to no more than 800 deployed and nondeployed intercontinental ballistic missiles (ICBMs) and submarine-launched ballistic missiles (SLBMs) launchers and deployed and nondeployed heavy bombers equipped to carry nuclear armaments. Second, within that total, it limits each side to no more than 700 deployed ICBMs, deployed SLBMs, and deployed heavy bombers equipped to carry nuclear armaments. Third, the treaty limits each side to no more than 1,550 deployed warheads. Deployed warheads include the actual number of warheads carried by deployed ICBMs and SLBMs, and one warhead for each deployed heavy bomber equipped for nuclear armaments.

(3) **Nuclear Test Ban Treaties.** Efforts to curtail nuclear weapon tests have been made since the 1940s. Previous treaties have restricted nuclear testing as follows: the 1963 Limited Test Ban Treaty barred explosions in the atmosphere, in space, and under water; the 1974 US-USSR Threshold Test Ban Treaty banned underground nuclear weapons tests having an explosive force of more than 150 kilotons, the equivalent of 150,000 tons of TNT, 10 times the force of the Hiroshima bomb; and the Peaceful Nuclear Explosions Treaty, signed in 1976, extended the 150-kiloton limit to nuclear explosions for peaceful purposes. While the CTBT was opened for signature in 1996, it has not entered into force, leaving a ban on nuclear testing as the oldest item on the arms control agenda–the CTBT would ban all nuclear explosions.

(4) **Nuclear-Weapon-Free Zones.** Several regions of the world have treaties in force between the states in those regions that ban those states from developing, possessing, and using nuclear weapons, known as nuclear-weapon-free zones, including Latin America (Treaty of Tlatelolco), Central Asia (Treaty on a Nuclear-Weapon-Free Zone in Central Asia), the South Pacific (Treaty of Rarotonga), Africa (Treaty of Pelindaba), and Southeast Asia (Treaty of Bangkok). The US is party to the protocols for the Treaty of Tlatelolco, which obligates the US not to use or threaten to use nuclear weapons against the states in Latin American that are parties to Treaty of Tlatelolco.

c. **Chemical Policies and Agreements**

(1) **Policies.** DOD has developed an array of policy and implementation guidance to ensure adherence to treaties, control regimes, and to forward global norms. They ensure

efforts to demilitarize stockpile weapons, current research, and development of defensive measures are conducted in a manner that ensures safety and adherence to state and national regulations and international obligations.

(2) **The CWC.** The CWC seeks to eliminate, under international verification, an entire category of WMD. The US is a party to this multilateral treaty, which prohibits the development, production, stockpiling, and use of chemical weapons except for limited research, development, test, and evaluation and requires the destruction of existing stockpiles under international verification. Each signatory is allowed to operate one small-scale facility to manufacture small quantities of chemical agents for use in research and development of defensive measures. The Army's Edgewood Chemical Biological Center at Aberdeen Proving Ground, Maryland, serves in that capacity for the US. DOS is the US National Authority for the CWC. The CWC is internationally implemented by the Organization for the Prohibition of Chemical Weapons, which verifies compliance with the treaty. The Organization for the Prohibition of Chemical Weapons is the international organization tasked to implement the CWC. The CWC, coupled with the activities of the Australia Group, seeks to limit transfer of dual-use technology that could be used to make chemical weapons to states that are not states parties to the CWC. The CWC seeks to eliminate, under international verification, an entire category of WMD. The OPCW is the international organization tasked to implement the CWC.

(3) **The Australia Group.** The Australia Group is an informal, multinational association of countries, which aims to minimize the risk of assisting chemical and biological weapon proliferation and terrorism. Members commit to implementing effective export controls for items on the Australia Group common control list and to provide adequate licensing and enforcement. Participants meet annually to maintain the currency of the control list, exchange information on proliferation threats, and explore best practices for export controls and customs enforcement. Candidates for membership must be a manufacturer, exporter, or trans-shipper of Australia Group controlled items; meet the group's stated nonproliferation credentials; demonstrate a willingness to implement the regime's control guidelines, and are admitted by a consensus decision.

d. **Biological Policies and Agreements**

(1) The *National Strategy for Countering Biological Threats* provides the basis for US policy on countering biological threats. It is a Presidential document with the overarching goal to protect against the misuse of the life sciences to develop or use biological agents to cause harm. The *National Strategy for Countering Biological Threats* identifies biological threat challenges, strategic objectives, and the roles and responsibilities of the federal, state, and local governments, the private sector, individuals and families, and international partners. Additionally, the *National Strategy for Biosurveillance* emphasizes information-sharing among USG departments and agencies to identify biological threats.

(2) **Policy for Oversight of Life Sciences.** The dual-use research of concern (DURC) policy establishes regular review of USG-funded research with certain high-consequence pathogens and toxins with the potential to be deliberately misused. The DURC policy is designed to mitigate risks and collect information for the oversight of agents and

toxins with the most significant potential for mass casualties or devastating effects to the economy, critical infrastructure, or public confidence. The aim of the DURC policy is to preserve the benefits of life sciences research and minimize the risk of misuse of knowledge, information, products, or technologies provided by such research. The DURC policy focuses on fourteen pathogens and one toxin regulated by DHHS and US Department of Agriculture Select Agent Program due to their potential to pose a severe threat to human, animal, or plant health or to animal and plant products. The responsibility for maintaining this policy falls to OBA, under the Office of Science Policy within NIH, DHHS. The NSABB and the DURC policy help to align interagency partners' situational awareness of biological agents with the potential to be used as WMD.

(3) **The Biological and Toxin Weapons Convention (BTWC).** The BTWC established the first multilateral treaty banning the development, production, or stockpiling of an entire category of weapons. The BTWC prohibits parties from developing, producing, and stockpiling biological agents and toxins in types and quantities that have no justification for prophylactic, protective, or other peaceful purposes. The BTWC does not prohibit the biological agents or toxins themselves, but rather certain purposes for which they may be employed. Parties agree to the voluntary exchange of confidence-building measures "in order to prevent or reduce the occurrence of ambiguities, doubts, and suspicions and in order to improve international cooperation in the field of peaceful biological activities." The confidence-building measures consist of six measures, including exchange of data on research centers and laboratories; national biological defense research and development programs and outbreak of infectious diseases and similar occurrences caused by toxins; encouragement of publication of results and promotion of use of knowledge; declaration of legislation, regulations, and other measures; declaration of past activities in offensive and/or defensive biological research; and development programs and declaration of vaccine production facilities.

3. United Nations Security Council Resolutions

a. **Overview.** UNSCRs 1540, 1673, and 1810 require member states to "detect, deter, prevent, and combat, including through international cooperation when necessary, the illicit trafficking and brokering" of WMD and delivery systems to non-state actors. UNSCRs 1695, 1718, 1874, 2087, and 2094 require member states to prevent proliferation of WMD and missile technology to and from North Korea. Similarly, UNSCRs 1696, 1737, 1747, 1803, and 1929 require member states to prevent proliferation of nuclear and missile technology to and from Iran. Additional related UNSCRs apply to North Korea and Iran. It is important to understand that UNSCRs are not US law, but the US has an international obligation under the UN Charter to comply with them. The US must approve legislation, executive orders, or regulations which support UNSCRs goals, or use existing authorities that support UNSCR enforcement in their current form.

b. **UNSCR 1540.** UNSCR 1540 requires member states to "criminalize proliferation, enact strict export controls and secure all sensitive materials within their borders. It also requires states to enforce effective domestic controls over WMD and WMD-related materials in production, use, storage, and transport; to maintain effective border controls; and to develop national export and trans-shipment controls over such items, all of which should

help interdiction efforts. The resolution does not, however, provide any enforcement authority, nor does it specifically mention interdiction. About two-thirds of all states have reported to the UN on their efforts to strengthen defenses against WMD trafficking. UNSCRs 1673, 1810, and 1977 extended the duration of the 1540 Committee, with the 2011 resolution extending the Committee's mandate for 10 years.

4. International Activities

a. **Overview.** The US, along with its partners and allies, participates in a variety of international activities to counter the threat of WMD, particularly to stop the proliferation of WMD and the materiel, technology, and expertise necessary to create and sustain a WMD program. These activities seek to strengthen international norms and common values and build capacity through cooperation, information-sharing, and exercises. The following list highlights select relevant international activities but is not an all-inclusive listing.

b. **The PSI.** On May 31, 2003, President Bush announced the PSI during a speech in Krakow, Poland. PSI is a global effort that aims to stop shipments of WMD, their delivery systems, and related materials worldwide. In Paris on September 4, 2003, 11 countries; Australia, France, Germany, Italy, Japan, the Netherlands, Poland, Portugal, Spain, the United Kingdom, and the US; agreed to and published the PSI Statement of Interdiction Principles that identified specific steps participants can take to effectively interdict WMD-related shipments and prevent proliferation. The PSI Principles also recognize the value in cooperative action and encourage participating countries to work together to apply intelligence, diplomatic, law enforcement, military, and other capabilities to prevent WMD-related transfers to state and non-state actors. A group of diplomatic, law enforcement, legal, military, and intelligence experts from 21 PSI participating states form an operational experts group. The operational experts group works on behalf of all PSI partners and meets regularly to develop operational concepts, organize the interdiction exercise program, share information about national legal authorities, and pursue cooperation with key industry sectors. As of April 27, 2014, a total of 103 countries have endorsed the PSI Statement of Interdiction Principles. Participation in PSI is voluntary. There is no organizational HQ or secretariat. Support for PSI is an acknowledgement of the need for stronger measures to defeat proliferators through cooperation with other countries.

c. **Nuclear Suppliers Group.** The Nuclear Suppliers Group is a multinational body concerned with reducing nuclear proliferation by controlling the export and re-transfer of materials that may support nuclear weapon development and by improving safeguards and protection of existing materials. The US encourages adherence to the Nuclear Suppliers Group's guidelines, seeks to improve information sharing on countries of concern and commodities sought by proliferators, and seeks to ensure that Nuclear Suppliers Group control lists are current and properly focused.

d. **Missile Technology Control Regime (MTCR).** The MTCR is an informal and voluntary association of countries which share the goal of nonproliferation of unmanned delivery systems capable of delivering WMD. The MTCR limits the transfer of long-range (i.e., greater than 300 kilometers in range or 500 kilograms in payload) missiles and associated technology. The MTCR rests on adherence to common export policy guidelines

applied to a common list of controlled items, making it more difficult for countries seeking to achieve capability to acquire and produce unmanned means of WMD delivery.

e. **GICNT.** In July 2006, Russia and the US announced the creation of the GICNT before the Group of Eight Summit in St. Petersburg. The mission of the GICNT is to strengthen global capacity to prevent, detect, and respond to nuclear terrorism by conducting multilateral activities that strengthen the plans, policies, procedures, and interoperability of PNs. Like PSI, this initiative is nonbinding and requires agreement on a statement of principles. Thirteen nations—Australia, Canada, China, France, Germany, Italy, Japan, Kazakhstan, Morocco, Turkey, the United Kingdom, Russian, and the US—endorsed a Statement of Principles at the first meeting in October 2006. Today, the GICNT is an international partnership of 85 nations and four official observers who are committed to working individually and collectively to implement a set of shared nuclear security principles to: improve accounting, control, and protection of nuclear and radiological materials and facilities; develop capabilities to detect and halt illicit trafficking of such materials; prevent terrorists/other non-state actors from acquiring nuclear materials; put in place laws to counter nuclear terrorism-related activity; share information; and develop a capability to respond and mitigate acts of nuclear terrorism. The US and Russia serve as co-chairs of the GICNT, and Spain serves as Coordinator of the Implementation and Assessment Group. The International Atomic Energy Agency, the European Union, the International Criminal Police Organization, and the United Nations Office on Drugs and Crime have observer status. Without dues or a secretariat, actions under the Initiative will take legal guidance from the International Convention on the Suppression of Acts of Nuclear Terrorism, the Convention on the Physical Protection of Nuclear Materials, and UNSCRs 1540 and 1373. GICNT PNs periodically hold exercises and workshops to improve coordination and exchange best practices.

5. Interdiction Legal Considerations

a. **Introduction.** WMD interdiction encompasses operations directed towards weaponized CBRN devices/warheads and delivery vehicles; dual-use items required to produce weapons, their precursors, or related items; related technology; financial and transportation intermediaries which facilitate trade in WMD; and individuals associated with all of the above. JFCs must fully account for the legal issues inherent in WMD interdiction operations in order to fully comply with US law, treaties, and international agreements. Planners should involve their respective general counsel or SJA representative early in the campaign design or mission analysis phase and throughout execution to identify key issues and work to resolve them (see JP 1-04, *Legal Support to Military Operations*). Additionally, allies and PNs may have differing interpretations of rights and obligations under international law than the US. This will require sensitivity, cooperation, and negotiation when operating in a multinational environment.

For further guidance on legal support, see JP 1-04, Legal Support to Military Operations.

b. **General Considerations.** The international treaties and agreements discussed in the previous section, in addition to specific UNSCRs, obligate member states to prevent WMD proliferation. Treaties, US laws, US regulations, and bilateral agreements also identify,

however, certain rights and obligations of states, ships, and aircraft related to search and seizure in territorial and international waters and airspace. These issues include state of belligerency, territorial rights, legal status of the target vessel, aircraft, or vehicle, use of military forces, seizure of material and detention of persons, preservation of evidence, and rules of engagement/rules for the use of force during interdiction. Use of cyberspace operations to support WMD interdiction in cyberspace may pose additional legal concerns. Where CCDRs believe they require additional legal authority to conduct WMD interdiction activities, they should seek guidance from OSD and JS.

(1) **State of Belligerency.** International law recognizes a difference in the rights of states during armed conflict (state of belligerency). Belligerent states may seize and condemn enemy vessels or vehicles, stop and search neutral vessels, aircraft, or vehicles, for contraband; and blockade enemy port(s) and airspace on both the high seas and within the enemy's territorial seas. This right does not extend to the territorial seas or airspace of neutral states or to international straits. Less clear are circumstances where no declared state of belligerency exists. This is the circumstance under which most WMD interdiction activities will occur. Some potential interdiction authorities include flag-state consent, ship master's consent, or specific boarding authorities contained within The United Nations Convention on the Law of the Sea (UNCLOS) that constitute customary international law. Article 51 of the UN Charter (right to self-defense) may provide some basis for action in this circumstance. UNSCRs may also provide basis for action under certain circumstances.

(2) **Territorial Rights.** The authority to stop and inspect a ship, aircraft, or ground vehicle resides with the nation in whose territory the vessel, aircraft, or vehicle is transiting. The UNCLOS and Chicago Convention on International Civil Aviation are cornerstone territorial rights agreements. Although the US may not be a party to the UNCLOS, many provisions of the treaty reflect customary norms, which give rise to rights and obligations under international law.

(a) **High Seas or International Airspace.** UNCLOS identifies five circumstances in which a warship or military aircraft may exercise a right of visitation and board a ship otherwise engaged in legitimate commerce on the high seas. These are:

1. Vessel is engaged in piracy,

2. Vessel is engaged in slave trade,

3. Vessel is engaged in unauthorized broadcasting and the warship's flag state has jurisdiction,

4. Vessel is without nationality, or

5. Vessel is same nationality as warship.

(b) It is important to note that some military actions, such as hailing and querying vessels on the high seas, can be supportive of USG counterproliferation goals without being classified as interference with ships otherwise engaged in legitimate commerce.

(c) **National Airspace.** The requirement for a state to obtain diplomatic clearance for state aircraft prior to entering or transiting another nation's airspace (over its territory or territorial waters) affects all aspects of planning and deployment. Overflight constraints are to be complied with by all forces and are a key element in the planning process. Under the 1944 Chicago Convention on International Civil Aviation, also known as the Chicago Convention, a state has the right to enforce its domestic laws and regulations on aircraft transiting its national airspace to include the airspace above its territorial borders and waters and to ensure the observance of any obligation of such state under a multilateral international agreement. A state may deny access to its national airspace or compel an aircraft entering its national airspace to land for inspection if suspected of violating its laws or if it poses an imminent security risk. A state may also deny access to its national airspace to aircraft contaminated by WMD. No state aircraft may fly over, or land on, the territory of a foreign nation without prior diplomatic clearance.

1. **PSI Statement of Interdiction Principles (Aircraft).** PSI calls upon participant states to take specific actions in support of interdiction efforts, to the extent permissible under their national legal authorities and international legal obligations, to include:

a. At their own initiative or upon request and good cause shown by another state: require aircraft transiting their airspace to land for inspection if reasonably suspected of carrying WMD cargo to or from states or non-state actors, seize any such cargo; and deny transit rights to aircraft reasonably suspected of carrying such cargo.

b. Conduct aircraft inspections and seize WMD cargo at their airfields or other facilities used for transshipment to/from states or non-state actors.

2. **Interdiction in National Airspace**

a. General principles

(1) The Chicago Convention, International Air Services Transit Agreement and other instruments of international air law attempt to strike a balance between the legitimate safety and security interests of territorial states, and the economic and social benefits of unimpeded transit/overflight.

(2) Ultimately, every state has complete and exclusive sovereignty over the airspace above its territory (Chicago Convention, Article 1).

b. State aircraft (e.g., military aircraft) require "authorization by special agreement or otherwise" to overfly a foreign state (Chicago Convention, Article 3(c)). Usually this is accomplished through the diplomatic clearance process. Transit and landing rights may be withdrawn at any time. As a matter of international custom and practice, state aircraft are not subject to search or inspection in a foreign state.

c. Non-scheduled (e.g., charter) international civil flights are granted right of overflight by the Chicago Convention without prior permission (Chicago Convention, Article 5); however, the right is conditional. Overflown states have the right to

require landing (Chicago Convention, Article 5) as a condition of overflight and may conduct an inspection of aircraft; may require prior notification and special permission for overflight in the interests of safety (Chicago Convention, Article 5); expect that aircraft not carry "munitions of war or implements of war" (defined nationally) without permission; may prohibit the transit of other items (defined nationally); and expect aircraft to comply with UNSCR obligating denial of overflight.

d. "Scheduled" international civil flights require special permission to transit foreign airspace. For states that are parties to both the Chicago Convention and International Air Services Transit Agreement, this permission is granted for non-stop transit and non-traffic stops (International Air Services Transit Agreement, Article 1). Additional bilateral/multilateral agreements apply for traffic stops (e.g., scheduled airline passenger service). States have the right to deny transit or order landing for inspection of a flight over its territory suspected of violating its laws or applicable UNSCRs and international law, or if the aircraft poses an imminent security risk.

3. **National Registry of Civil Aircraft.** States of registry maintain international jurisdictional rights and legal obligations over their civil aircraft. Aircraft have the nationality of the state in which they are registered. Under some circumstances, UNSCRs may obligate states to prevent the use of their registered aircraft for WMD proliferation (Iran UNSCRs 1737, 1747, 1803, 1929; North Korea UNSCRs 1718, 1874, 2087, 2094). Once entered into force, the Beijing Convention (2010) will require states of registry to establish jurisdiction and criminalize air transport of WMD and some precursors.

(d) **Territorial Waters and the Right of Innocent Passage.** Under international law, states generally have the authority to enforce their domestic law within their territorial waters. However, the right of innocent passage constrains this right. Innocent passage is the right of a ship to transit territorial waters without undue impediment as long as it does not interact with any agency, business, or person of the state.

(e) **International Strait and Archipelagic Waters.** Within international straits and archipelagic waters, ships and aircraft enjoy transit rights to proceed without impediment, other than that required to ensure safe navigation.

(3) **Legal Status.** The commercial maritime shipping and aviation industries often involve multiple layers of nationality in ownership, operating company, voyage contracting, leasing, flagging, vessel's master/captain, etc. Each country associated with a specific transaction can be approached in some fashion to cooperate with WMD interdiction efforts.

(a) **Flag State Consent.** Unless a UNSCR expressly states otherwise, the authority to stop and inspect a ship or civil aircraft in international waters or airspace or authority to authorize a third-party nation to stop and inspect in international waters or airspace, generally depends upon the "flag" registry of the ship or aircraft. The flag state can be different from the owner or operator nationality, and ship or aircraft is considered under the jurisdiction of the laws and directives of competent authority of the flag state. Generally, states have the right to stop and search any ship or aircraft in international waters or airspace flagged (registered) by the state or authorize a third party to do the same. Under the PSI, the

US has negotiated a series of ship "boarding agreements" with certain other participants. These agreements provide for US boarding of these states' flagged ships under specific circumstances and conditions. Planners should consult their command's political advisor and SJA on these specific agreements.

(b) **Master's or Command Pilot's Consent.** The US holds that it may board and carry out certain activities on ships otherwise immune if the master (captain) of the ship provides consent. Although such boarding, while in international waters, is technically limited to a visit only, the master may authorize a boarding party to examine any portion of the ship. The master is, however, not obligated to provide extended authorization unless directed by competent authority of the flag state. With respect to aircraft in international airspace, the command pilot of a civil aircraft may consent to have the aircraft diverted from its original destination to a designated airport so it can land and be boarded for inspection. Some states do not necessarily concur with the US position.

(c) **Sovereign Immunity.** Warships and military aircraft of a state enjoy sovereign immunity. Coastal states may not stop and search warships and military aircraft but may direct them to depart the coastal state's territorial waters.

c. **Seizure of Material and Detention of Persons.** Seizures and detentions must have basis in international law, US law, or HN law. Specific cases and circumstances are too numerous to be recounted here. It is critical to involve the SJA as early as possible in the planning process to aid in determining requirements to support seizures, detentions, and expedite disposition.

d. **Disposition–Availability of Evidence and Chain of Custody.** In cases involving probable prosecution by the US or prosecuting state, agencies should take measures and provide guidance to field units regarding preservation of relevant evidence and establishing chain of custody. Preservation of the chain of custody is also essential to support attribution.

(1) In cases involving possible foreign prosecutions arising from US interdictions and investigations, the interagency team should ascertain whether US investigators intend to make available all unclassified and relevant evidence to their counterparts in the prosecuting state for use by the prosecuting state in any hearings, trials, etc. This may include testimony, weapons, ammunition, imagery, small vessels, and other physical evidence requiring special handling or storage.

(2) The prosecuting state should consider its transport and storage options (items are often located in third-party states or at-sea), as well as chain of custody procedures it may wish to communicate to the US and other investigators. The prosecuting state may wish to engage in immediate coordination with officials and investigators of other concerned states to establish early chain of custody and collection and preservation of evidence in ways that ensure admissibility in prosecuting state courts.

(3) The US will, in appropriate circumstances, facilitate delivery of statements from US military witnesses to the prosecuting state. All requests for such personnel or their statements will normally be made to the cognizant US embassy for forwarding to DOD, the

DHS (for the USCG), and DOJ. Consideration should be given to the availability of witnesses and facilitating contact with (including travel of) potential prosecuting state investigators while the witnesses remain available.

6. Domestic Legal Considerations

a. **Introduction.** Accounting of legal considerations is also essential for domestic operations. For CWMD-related DSCA activities, military forces could be requested and used to manage the consequences of a CBRN event. In a domestic setting, it is imperative that JFCs understand the statutory and operational relationships among US states, territories, and federal government. They must also understand the distinctive roles, responsibilities, capabilities, and limitations of Titles 10, 14, and 32, USC, and state active duty personnel.

b. **The Posse Comitatus Act (PCA)**

(1) **The PCA.** The PCA restricts the use of federal US Army and US Air Force military personnel in conducting direct civilian law enforcement activities. Except as expressly authorized by the Constitution of the US or by another act of Congress, the PCA prohibits the use of Title 10, USC, Army and Air Force personnel, as enforcement officials to execute state or federal law or to perform direct law enforcement functions. Pursuant to Title 10, USC, Section 375, SecDef issued DODI 3025.21, *Defense Support of Civilian Law Enforcement Agencies*, which restricts members of the Army, Navy, Air Force, or Marine Corps from direct participation in searches, seizures, arrests, or other similar activities unless otherwise authorized by law.

(2) These restrictions also apply to reserve members of the Army, Navy, Air Force, and Marine Corps who are on active duty, active duty for training, or inactive duty training in a Title 10, USC, duty status.

(3) The PCA does not apply to NG personnel operating in state active duty or Title 32, USC, status. Only when the NG is in a Title 10, USC, duty status (federal status) are they subject to the PCA. Nor does the PCA restrict the USCG, even when it falls under the operational control of the Navy, due to the fact that the USCG has inherent law enforcement powers under Title 14, USC.

c. **Title 10, USC (Armed Forces).** Title 10, USC, provides guidance on the Armed Forces. Guidance is divided into five subtitles: one on general military law, and one each for the US Army, US Navy and US Marine Corps, the US Air Force, and the reserve component. In addition, Title 10, USC, Section 382 provides authority for the SecDef, in coordination with the Attorney General, to provide assistance in support of DOJ activities during emergencies involving WMD/CBRN. Pursuant to this authority and subsequent legislation, the SecDef established a domestic terrorism response team (Title 50, USC, Section 2314[a]) and the NG established WMD civil support teams (Title 10, USC, Section 12310[c]), to provide CBRN response support to both state and federal authorities in Title10 and Title 32, USC, status, respectively.

d. **Title 14, USC.** Title 14, USC, applies to the USCG personnel when they are performing their normal duties, which include enforcing US laws. USCG personnel can be

used to enforce US laws anywhere in the world, with certain restrictions, and can participate in regular DOD-led interdiction operations retaining their Title 14, USC, authorities, even if assigned as additional Title 10, USC, forces. Roles and responsibilities for USCG personnel must be clearly laid out by area commanders prior to interdiction operations.

e. **Title 18, USC.** Under Title 18, USC, Section 831, the Attorney General may request that SecDef provide emergency assistance if civilian law enforcement is inadequate to address certain types of threats involving the release of nuclear materials, such as potential use of a nuclear or radiological weapon. SecDef may provide such assistance in accordance with Title 10, USC, Chapter 18, providing personnel under the authority of DOD.

APPENDIX C
REFERENCES

The development of JP 3-40 is based on the following primary references:

1. General

a. Aviation Operational Threat Response Plan.

b. Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction (BTWC).

c. Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction.

d. *Department of Defense Strategy for Countering Weapons of Mass Destruction.*

e. Guidance for Employment of the Force (GEF).

f. HSPD-5: *Management of Domestic Incidents.*

g. Joint Strategic Capabilities Plan (JSCP).

h. Maritime Operational Threat Response Plan.

i. *National Defense Strategy.*

j. *National Incident Management System.*

k. *National Response Framework.*

l. *National Strategy for Countering Biological Threats (NS-CBT).*

m. *National Strategy for Homeland Security.*

n. *National Strategy for Strategic Interdiction.*

o. NSPD-17/Homeland Security Presidential Directive (HSPD)-4: *National Strategy to Combat Weapons of Mass Destruction*

p. NSPD-20: *Counterproliferation Interdiction.*

q. *National Strategy to Combat Weapons of Mass Destruction.*

r. Presidential Decision Directive/NSC-62, *Protection Against Unconventional Threats to the Homeland and Americans Overseas (U).*

s. PPD-8: *National Preparedness.*

t PPD-21: *Critical Infrastructure Security and Resilience.*

u. *The National Security Strategy.*

v. *The Proliferation Security Initiative: Statement of Interdiction Principles.*

w. Title 10, USC.

x. Title 32, USC.

y. Title 50, USC.

z. Unified Command Plan (UCP).

2. Department of Defense Publications

a. DODD 2060.02, *Department of Defense (DOD) Combating Weapons of Mass Destruction (WMD) Policy.*

b. DODD 3025.18, *Defense Support of Civil Authorities (DSCA).*

c. DODI 3025.21, *Defense Support to Civilian Law Enforcement.*

d. DODD 5134.08, *Assistant Secretary of Defense for Nuclear, Chemical and Biological Defense Programs ASD[NCB]).*

e. DODD 5205.14, *DOD Counter Threat Finance (CTF) Policy.*

f DODI 2000.21, *Foreign Consequence Management (FCM).*

g. DODI 3020.52, *DOD Installation Chemical, Biological, Radiological, Nuclear, and High-Yield Explosive (CBRNE) Preparedness Standards.*

h. DODI 6055.17, *DOD Installation Emergency Management (IEM) Program.*

i. DODI 6200.03, *Public Health Emergency Management Within the Department of Defense.*

j. DODI 6490.03, *Deployment Health.*

k. DODD S-2060.04, *DOD Support to the National Technical Nuclear Forensics (NTNF) Program.*

3. Chairman of the Joint Chiefs of Staff Publications

a. CJCSI 2030.01C, *Chemical Weapons Convention Compliance Policy Guidance.*

b. CJCSI 2110.01E, *International Transfer of US Defense-Related Technology and Munitions.*

c. CJCSI 3100.01B, *Joint Strategic Planning System.*

d. CJCSI 3125.01C, *Defense Response to Chemical, Biological, Radiological, and Nuclear (CBRN) Incidents in the Homeland.*

e. CJCSI 3214.01D, *Defense Support for Chemical, Biological, Radiological, and Nuclear Incidents on Foreign Territory.*

f. CJCSI 3401.01E, *Joint Combat Capability Assessment.*

g. CJCSI 3500.01G, *Joint Training Policy and Guidance for the Armed Forces of the United States.*

h. CJCSI 3520.02A, *Proliferation Security Initiative (PSI) Activity Program.*

i. CJCSI 5113.03, *Counterproliferation Interdiction Policy.*

j. CJCSM 3500.04F, *Universal Joint Task Manual.*

k. Joint Staff, J-7, *Commander's Handbook for Counter Threat Finance.*

l. JP 1, *Doctrine for the Armed Forces of the United States.*

m. JP 1-04, *Legal Support to Military Operations.*

n. JP 1-06, *Financial Management Support in Joint Operations.*

o. JP 2-01.3, *Joint Intelligence Preparation of the Operational Environment.*

p. JP 3-0, *Joint Operations.*

q. JP 3-01, *Countering Air and Missile Threats.*

r. JP 3-03, *Joint Interdiction.*

s JP 3-07.2, *Antiterrorism (FOUO).*

t. JP 3-08, *Interorganizational Coordination During Joint Operations.*

u. JP 3-10, *Joint Security Operations in Theater.*

v. JP 3-11, *Operations in Chemical, Biological, Radiological, and Nuclear Environments.*

w. JP 3-12, Cyberspace Operations.

x. JP 3-13, *Information Operations.*

y. JP 3-15.1, *Counter-Improvised Explosive Device Operations.*

z. JP 3-27, *Homeland Defense.*

aa. JP 3-28, *Defense Support of Civil Authorities.*

bb. JP 3-29, *Foreign Humanitarian Assistance.*

cc. JP 3-33, *Joint Task Force Headquarters.*

dd. JP 3-41, *Chemical, Biological, Radiological, and Nuclear Consequence Management.*

ee. JP 3-50, *Personnel Recovery.*

ff. JP 4-0, *Joint Logistics.*

gg. JP 4-02, *Health Services.*

hh. JP 4-06, *Mortuary Affairs.*

ii. JP 5-0, *Joint Operation Planning.*

jj. JP 6-0, *Joint Communications System.*

4. Multi-Service Publications

a. ATP 4-02.84/Navy Tactical Reference Publication (NTRP) 4-02.23 AFMAN 44-156/Marine Corps Reference Publication (MCRP) 4-11.1C, *Multi-Service Tactics, Techniques, and Procedures for Treatment of Biological Warfare Agent Casualties.*

b. FM 3-11/MCWP 3-37.1/Navy Warfare Publication (NWP) 3-11/AFTTP(I) 3-2.42, *Multi-Service Doctrine for Chemical, Biological, Radiological, and Nuclear Operations.*

c. FM 3-11.3/MCRP 3-27.2A/NTTP 3-11.25/AFTTP(I) 3-2.56, *Multi-Service Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Contamination Avoidance.*

d. FM 3-11.4/MCWP 3-37.2/NTTP 3-11.27/AFTTP(I) 3-2.46, *Multi-Service Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection.*

e. FM 3-11.5/MCWP 3-37.3/NTTP 3-11.26/AFTTP(I) 3-2.60, *Multi-Service Tactics, Techniques, and Procedures for Chemical, Biological Radiological, and Nuclear Decontamination.*

f. FM 3-11.21/MCRP 3-37.2C/NTTP 3-11.24/AFTTP(I) 3-2.37, *Multi-Service Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Consequence Management Operations.*

g. FM 4-02.283/MCRP 4-11.1B/NTRP 4-02.21, *Treatment of Nuclear and Radiological Casualties.*

h. FM 4-02.285/MCRP 4-11.1A/NTRP 4-02.22, *Multi-Service Tactics, Techniques, and Procedures for Treatment of Chemical Agent Casualties and Conventional Military Chemical Injuries.*

i. FM 4-02.7/MCRP 4-11.1F/NTTP 4-02.7/AFTTP 3-42.3, *Multi-Service Tactics, Techniques, and Procedures for Health Service Support in a Chemical, Biological, Radiological and Nuclear Environment.*

j. FM 6-05/MCWP 3-36.1/NTTP 3-05.19/AFTTP 3-2.73/USSOCOM Publication 3-33, *Multiservice Tactics, Techniques, and Procedures for Conventional Forces and Special Operations Forces Integration Interoperability, and Interdependence.*

k. MCRP 3-37B/NTTP 3-11.34/AFTTP(I) 3-20.70, *Multi-Service Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear (CBRN) Aspects of Command and Control.*

l. MCRP 6-23A/NWP 3-13.1.16/AFTTP (I) 3-2.22, *Multi-Service Procedures for Joint Task Force–Information Management.*

m. NAVMED P-5059, *NATO Handbook on the Medical Aspects of NBC Defensive Operations AMedP-6(B).*

5. Army Publications

a. Army Doctrine Publication (ADP) 3-0, *Unified Land Operations.*

b. ADP 3-07, *Stability Operations.*

c. ADP 3-27, *Defense Support of Civil Authorities.*

d. ADP 5-0, *The Operations Process.*

e. Army Doctrine Reference Publication (ADRP) 3-0, *Unified Land Operations.*

f. ADRP 3-07, *Stability Operations.*

g. ADRP 5-0, *The Operations Process.*

h. Army Regulation 385-61, *Toxic Chemical Agent Safety Standards.*

i. FM 3-13, *Inform and Influence Activities.*

j. FM 5-0, *Army Planning and Orders Production.*

6. Marine Corps Publication

MCWP 3-37, *Marine Air-Ground Task Force (MAGTF) Nuclear, Biological, and Chemical Defensive Operations.*

7. Navy Publication

Navy Doctrine Publication (NDP) 1, *Naval Warfare.*

8. Air Force Publications

a. Air Force Doctrine Document (AFDD)-1, *Air Force Basic Doctrine, Organization, and Command.*

b. AFDD 3-0, *Operations and Planning.*

c. AFDA 3-40, *Counter-Chemical, Biological, Radiological, and Nuclear Operations.*

d. Air Force Instruction 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations.*

e. Air Force Manual (AFMAN) 10-2503, *Operations in a Chemical, Biological, Radiological, Nuclear, and High-Yield Explosive (CBRNE) Environment.*

f. Air Force Policy Directive (AFPD) 10-25, *Emergency Management.*

g AFPD 10-26, *Counter-Chemical, Biological, Radiological and Nuclear Operations.*

9. Other Sources

a. *Handbook for Joint Weapons of Mass Destruction (WMD) Elimination Operations.*

b. DTRA-AR-40H-4, *WMD Facility, Equipment and Munitions Identification Handbook.*

c. *DOD Chemical and Biological Defense Program (CBDP) Overview.*

d. *Weapons Technical Intelligence (WTI) Improvised Explosive Device (IED) Lexicon, 4th Edition.*

e. *Weapons Technical Intelligence (WTI) Handbook.*

APPENDIX D
ADMINISTRATIVE INSTRUCTIONS

1. User Comments

Users in the field are highly encouraged to submit comments on this publication to: Joint Staff J-7, Deputy Director, Joint Education and Doctrine, ATTN: Joint Doctrine Analysis Division, 116 Lake View Parkway, Suffolk, VA 23435-2697. These comments should address content (accuracy, usefulness, consistency, and organization), writing, and appearance.

2. Authorship

The lead agent for this publication is the US Strategic Command. The Joint Staff doctrine sponsor for this publication is the Director for Strategic Plans and Policy (J-5).

3. Supersession

This publication supersedes JP 3-40, *Joint Doctrine for Combating Weapons of Mass Destruction,* 10 June 2009.

4. Change Recommendations

a. Recommendations for urgent changes to this publication should be submitted:

TO: JOINT STAFF WASHINGTON DC//J7-JED//

b. Routine changes should be submitted electronically to the Deputy Director, Joint Education and Doctrine, ATTN: Joint Doctrine Analysis Division, 116 Lake View Parkway, Suffolk, VA 23435-2697, and info the lead agent and the Director for Joint Force Development, J-7/JED.

c. When a Joint Staff directorate submits a proposal to the CJCS that would change source document information reflected in this publication, that directorate will include a proposed change to this publication as an enclosure to its proposal. The Services and other organizations are requested to notify the Joint Staff J-7 when changes to source documents reflected in this publication are initiated.

5. Distribution of Publications

Local reproduction is authorized, and access to unclassified publications is unrestricted. However, access to and reproduction authorization for classified JPs must be IAW DOD Manual 5200.01, Volume 1, *DOD Information Security Program: Overview, Classification, and Declassification,* and DOD Manual 5200.01, Volume 3, *DOD Information Security Program: Protection of Classified Information.*

6. Distribution of Electronic Publications

a. Joint Staff J-7 will not print copies of JPs for distribution. Electronic versions are available on JDEIS Joint Electronic Library Plus (JEL+) at https://jdeis.js.mil/jdeis/index.jsp (NIPRNET) and http://jdeis.js.smil.mil/jdeis/index.jsp (SIPRNET), and on the JEL at http://www.dtic.mil/doctrine (NIPRNET).

b. Only approved JPs are releasable outside the combatant commands, Services, and Joint Staff. Release of any classified JP to foreign governments or foreign nationals must be requested through the local embassy (Defense Attaché Office) to DIA, Defense Foreign Liaison, PO-FL, Room 1E811, 7400 Pentagon, Washington, DC 20301-7400.

c. JEL CD-ROM. Upon request of a joint doctrine development community member, the Joint Staff J-7 will produce and deliver one CD-ROM with current JPs. This JEL CD-ROM will be updated not less than semi-annually and when received can be locally reproduced for use within the combatant commands, Services, and combat support agencies.

GLOSSARY
PART I–ABBREVIATIONS AND ACRONYMS

ADP	Army doctrine publication
ADRP	Army doctrine reference publication
AFTTP	Air Force tactics, techniques, and procedures
AOR	area of responsibility
APEX	Adaptive Planning and Execution
ATSDR	Agency for Toxic Substances and Disease Registry (DHHS)
AVC	Bureau of Arms Control, Verification, and Compliance (DOS)
BTWC	Biological and Toxin Weapons Convention
C2	command and control
CBP	Customs and Border Protection (DHS)
CBRN	chemical, biological, radiological, and nuclear
CBRN CM	chemical, biological, radiological, and nuclear consequence management
CCDR	combatant commander
CCMD	combatant command
CDC	Centers for Disease Control and Prevention (DHHS)
CJCS	Chairman of the Joint Chiefs of Staff
CJCSI	Chairman of the Joint Chiefs of Staff instruction
CJCSM	Chairman of the Joint Chiefs of Staff manual
CNGB	Chief, National Guard Bureau
CSA	combat support agency
CT	counterterrorism
CTBT	Comprehensive Nuclear Test-Ban Treaty
CTF	counter threat finance
CTR	cooperative threat reduction
CWC	Chemical Weapons Convention
CWMD	countering weapons of mass destruction
DEA	Drug Enforcement Administration (DOJ)
DHHS	Department of Health and Human Services
DHS	Department of Homeland Security
DIA	Defense Intelligence Agency
DNDO	Domestic Nuclear Detection Office (DHS)
DOC	Department of Commerce
DOD	Department of Defense
DODD	Department of Defense directive
DODI	Department of Defense instruction
DODS-CWMD	Department of Defense Strategy for Countering Weapons of Mass Destruction
DOE	Department of Energy
DOJ	Department of Justice

DOS	Department of State
DSCA	defense support of civil authorities
DTRA	Defense Threat Reduction Agency
DURC	dual-use research of concern
EMP	electromagnetic pulse
FBI	Federal Bureau of Investigation (DOJ)
FCM	foreign consequence management
FDO	flexible deterrent option
FM	field manual (Army)
GCC	geographic combatant commander
GCP-CWMD	Global Campaign Plan for Combating Weapons of Mass Destruction
GEF	Guidance for Employment of the Force
GICNT	Global Initiative to Combat Nuclear Terrorism
HD	homeland defense
HN	host nation
HQ	headquarters
ICBM	intercontinental ballistic missile
ICE	Immigration and Customs Enforcement (DHS)
ICS	integrated country strategy
IGO	intergovernmental organization
ISN	Bureau of International Security and Nonproliferation (DOS)
JFC	joint force commander
JIPOE	joint intelligence preparation of the operational environment
JOPP	joint operation planning process
JP	joint publication
JS	Joint Staff
JSCP	Joint Strategic Capabilities Plan
JTF	joint task force
LOE	line of effort
MCRP	Marine Corps reference publication
MCWP	Marine Corps warfighting publication
MSRP	mission strategic resource plan
MTCR	Missile Technology Control Regime
NCPC	National Counterproliferation Center
NCTC	National Counterterrorism Center
NG	National Guard

NG JFHQ-State	National Guard joint force headquarters-state
NGO	nongovernmental organization
NIH	National Institutes of Health (DHHS)
NNSA	National Nuclear Security Administration (DOE)
NPT	Treaty on the Nonproliferation of Nuclear Weapons
NRF	National Response Framework
NSABB	National Science Advisory Board for Biosecurity (NIH)
NSPD	national security Presidential directive
NSS	national security strategy
NTA	nontraditional agent
NTRP	Navy tactical reference publication
NTTP	Navy tactics, techniques, and procedures
OBA	Office of Biotechnology Activities (NIH)
ODNI	Office of the Director of National Intelligence
OE	operational environment
OSD	Office of the Secretary of Defense
PCA	Posse Comitatus Act
PI&ID	pandemic influenza and infectious disease
PM	Bureau of Political-Military Affairs (DOS)
PN	partner nation
PPD	Presidential policy directive
PSI	Proliferation Security Initiative
RDD	radiological dispersal device
RED	radiological exposure device
SC	security cooperation
SecDef	Secretary of Defense
SJA	staff judge advocate
SLBM	submarine-launched ballistic missile
SOF	special operations forces
START	Strategic Arms Reduction Treaty
TCP	theater campaign plan
TIC	toxic industrial chemical
TREAS	Department of the Treasury
UCP	Unified Command Plan
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNSCR	United Nations Security Council resolution
USAID	United States Agency for International Development
USC	United States Code
USCG	United States Coast Guard

USG	United States Government
USNORTHCOM	United States Northern Command
USPACOM	Unites States Pacific Command
USSOCOM	United States Special Operations Command
USSTRATCOM	United States Strategic Command
USTRANSCOM	United States Transportation Command
WMD	weapons of mass destruction

PART II–TERMS AND DEFINITIONS

chemical, biological, radiological, and nuclear passive defense. None. (Approved for removal from JP 1-02.)

countering weapons of mass destruction. Efforts against actors of concern to curtail the conceptualization, development, possession, proliferation, use, and effects of weapons of mass destruction, related expertise, materials, technologies, and means of delivery. Also called **CWMD.** (Approved for inclusion in JP 1-02.)

counterproliferation. Those actions taken to reduce the risks posed by extant weapons of mass destruction to the United States, allies, and partners. Also called **CP.** (Approved for incorporation into JP 1-02.)

nonproliferation. Actions to prevent the acquisition of weapons of mass destruction by dissuading or impeding access to, or distribution of, sensitive technologies, material, and expertise. Also called **NP.** (Approved for incorporation into JP 1-02.)

nuclear reactor. None. (Approved for removal from JP 1-02.)

threat reduction cooperation. None. (Approved for removal from JP 1-02.)

weapons of mass destruction. Chemical, biological, radiological, or nuclear weapons capable of a high order of destruction or causing mass casualties, and excluding the means of transporting or propelling the weapon where such means is a separable and divisible part from the weapon. Also called **WMD.** (Approved for incorporation into JP 1-02.)

weapons of mass destruction active defense. None. (Approved for removal from JP 1-02.)

weapons of mass destruction consequence management. None. (Approved for removal from JP 1-02.)

weapons of mass destruction elimination. None. (Approved for removal from JP 1-02.)

weapons of mass destruction interdiction. None. (Approved for removal from JP 1-02.)

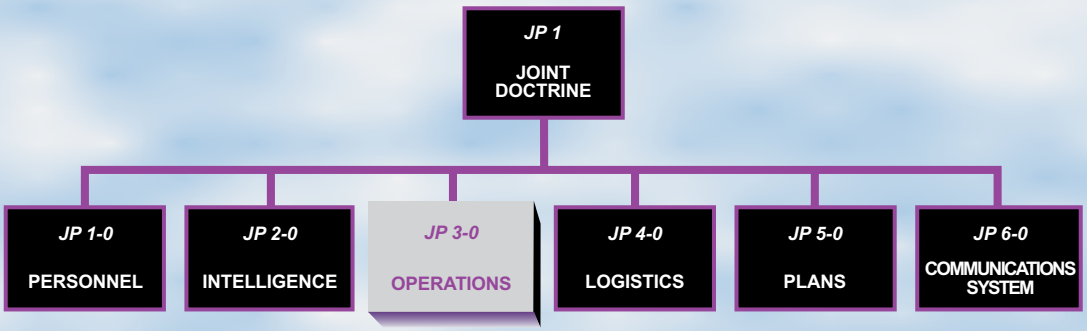
weapons of mass destruction offensive operations. None. (Approved for removal from JP 1-02.)

weapons of mass destruction proliferation. The transfer of weapons of mass destruction or related materials, technology, and expertise from suppliers to state or non-state actors. (Approved for replacement of "proliferation" and its definition in JP 1-02.)

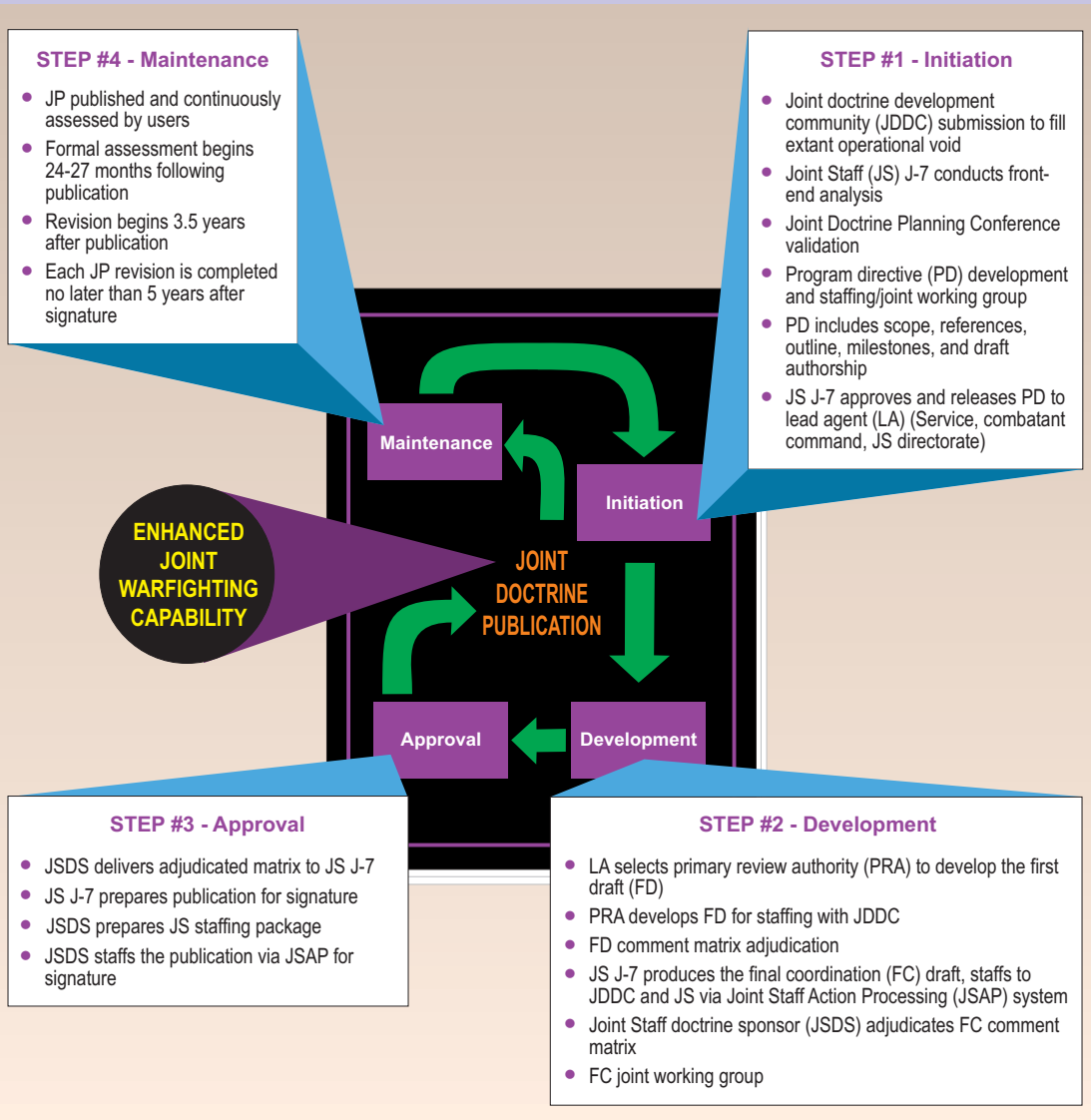
weapons of mass destruction security cooperation and partner activities. None. (Approved for removal from JP 1-02.)

Intentionally Blank

JOINT DOCTRINE PUBLICATIONS HIERARCHY



All joint publications are organized into a comprehensive hierarchy as shown in the chart above. **Joint Publication (JP) 3-40** is in the **Operations** series of joint doctrine publications. The diagram below illustrates an overview of the development process:




JOINT
CHIEFS OF STAFF