Joint Publication 3-12

Doctrine for Joint Nuclear Operations

Final Coordination
3 September 2003

PREFACE

1. Scope

This publication provides guidelines for the joint employment of ~~joint~~ forces in nuclear operations. It provides guidance for employment of both strategic and nonstrategic (theater) ~~planning and employment of~~ nuclear forces; ~~and~~ command and control relationships; and weapons effect considerations~~.~~.

2. Purpose

This publication has been prepared under the direction of the Chairman of the Joint Chiefs of Staff. It sets forth doctrine to govern the joint activities and performance of the Armed Forces of the United States in joint operations and provides the doctrinal basis for US military involvement in multinational and interagency operations. ~~It~~Joint Publication 3-12 provides military guidance for the exercise of authority by combatant commanders and other joint force commanders (JFCs) and prescribes doctrine for joint operations and training. It provides military guidance for use by the Armed Forces in preparing their appropriate plans. ~~It is not~~ Tthe intent of this publication is not to restrict the authority of the JFC from 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 mission.

3. Application

a. Doctrine and guidance established in this publication apply to the commanders of combatant commands, subunified commands, joint task forces, and subordinate components of these commands. These principles and guidance also may apply when significant forces of one Service are attached to forces of another Service or when significant forces of one Service support forces of another Service.

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 for the activities of joint forces unless the Chairman of the Joint Chiefs of Staff, 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 United States. For doctrine and procedures not ratified by the United States, 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:

~~JAMES A. HAWKINS~~GEORGE W. CASEY, JR.
~~Major~~ Lieutenant General, USA~~F~~
~~Acting~~ Director, Joint Staff

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Nuclear Force Fundamentals

The first and fundamental commitment of the Federal Government is defending our Nation against its enemies.

US nuclear forces continue to deter the use of weapons of mass destruction (WMD), and to serve as a hedge against the emergence of an overwhelming conventional threat. The law requires the Department of Defense (DOD) to conduct a comprehensive review of the US nuclear posture and develop a long-range plan to sustain and modernize US strategic nuclear forces in order to counter emerging threats and satisfy evolving deterrence requirements.

In a major break from Cold War thinking, DOD organized the 2001 Nuclear Posture Review around the capabilities required of nuclear forces in the new strategic environment rather than around an arms control framework.

The 2001 Nuclear Posture Review (NPR), broader in scope than required by law, constituted the first comprehensive review of nuclear forces since the first NPR was completed in 1994. The 2001 NPR articulated a new capabilities-based strategy for US strategic nuclear forces that reflects the unpredictable security environment of the 21st century and responds to US strategic deterrence objectives and force capability requirements. This was a significant change to the US approach to offensive nuclear weapons. The NPR established an approach to reduce operationally-deployed strategic nuclear forces over the next decade, outlined plans to sustain and modernize existing nuclear force structure, and defined a new triad of strategic capabilities. The new triad offers a mix of strategic offensive and defensive capabilities that include nuclear and nonnuclear strike capabilities, active and passive defenses, and a robust research, development, and industrial infrastructure to develop, build, and maintain offensive forces and defensive systems. Lastly, the NPR summarized DOD plans to sustain and modernize the existing US nuclear force structure. Thus, it provides a roadmap that outlines the future of US nuclear capabilities and puts forward a new framework for national security in the 21st century.

The challenge of deterrence is to convey convincingly to the opposition both the will and capability to retaliate.

Fundamental Considerations. Deterrence of adversary WMD employment requires the adversary leadership to believe the United States has both the ability and will to preempt or retaliate promptly with responses that are credible and effective.

To fulfill deterrence, US military forces are capable of achieving US national objectives throughout the range of military operations. military capabilities serves key defense policy goals require maintaining a diverse mix of conventional forces capable of high-intensity, sustained, and coordinated operations range of military operations; survivable and secure nuclear forces; and the command, control, communications, computers, intelligence, surveillance, and reconnaissance systems required to direct these forces. Therefore, if deterrence fails, the force mixture must provide a variety of options designed to control escalation and terminate the conflicts on terms favorable to the United States and its allies.

Senior commanders make recommendations affecting nuclear policy decisions on force structure, weapon and/or force capabilities, and alternative employment options. the use of nuclear weapons represents a significant escalation from conventional warfare and is provoked by some action, event, or perceived threat. The decision to use nuclear weapons involves many political considerations, which impact not only nuclear weapon use, but type and number of weapons used and method of employment.

International reaction toward the country or non-state entity that first employs WMD constitutes an important political consideration. initiates nuclear warfare may find itself the target of world condemnation, no customary or conventional international law prohibits nations from employing nuclear weapons in armed conflict.

The Law of Armed Conflict (LOAC) is a portion of international law that regulates the conduct of armed hostilities. Nuclear weapons use is not prohibited in armed conflict by LOAC. They are, however, unique from conventional and even other WMD in the scope of their destructive potential and long-term physiological effects.

The United States maintains the capability to rapidly posture its nuclear forces.

Range of Military Operations. During peacetime, alternative mechanisms and disincentives to conflict make war less likely by improving communication, reducing opportunities for miscalculation, providing ways to resolve crises, and reducing the destructive capacity of available arsenals. An increased risk of attack, prompted by adversary war readiness measures, may require US forces to maintain visibly increased states of alert. However, the danger also exists that

the adversary may perceive either an exploitable vulnerability or the threat of imminent use. If the crisis is successfully resolved without employment of nuclear weapons, reductions in the alert posture of nuclear forces can send a reinforcing message.

Wartime circumstances may alter such perceptions. When an adversary is confronted with overwhelming conventional forces or a prolonged conventional conflict the WMD threshold may be lowered, making WMD use appear the only viable option for regime survival. In such cases, the US objective is to repel or defeat a military attack and terminate the conflict on terms favorable to the United States and its allies.

With regard to post wartime, the objective of a termination strategy is to end a conflict at the lowest level of destruction, while attaining national objectives. Depending on the scope and intensity of a nuclear war, the termination conditions may differ considerably from previous conflicts. The war termination strategy may initially involve the end of nuclear combat actions, but not necessarily all aspects of conventional warfighting.

Nuclear Operations

The pace of modern war dictates streamlined and efficient methods of command and control, planning, and execution.

The critical elements of strategic and theater nuclear operations include detailed command relationships, command and control (C2) and command responsibilities; integrated planning and targeting; employment and force integration; and combat readiness. The President retains sole authority for the employment and termination of nuclear weapons. This authority is exercised through a single **chain of command** that runs from the President to the Secretary of Defense directly to the combatant commanders. Top-down communication ensures critical orders are received for execution, increases survivability, and reduces vulnerability of C2 systems.

The Commander, US Strategic Command (CDRUSSTRATCOM), has **combatant command (command authority)** over selected portions of the nation's strategic nuclear forces and is responsible for the planning and execution of strategic nuclear operations. Geographic combatant commanders have **operational control** over nuclear-capable forces employed for nuclear operations in support of theater conflicts.

Strategic nuclear weapon **planning and execution** guidance ensures optimal targeting and integration of US nuclear forces prior to, during, and after conflict, and is the framework used by the

CDRUSSTRATCOM, to develop plans. An integrated operation plan or series of plans predicated on commonly agreed strategic objectives is an absolute prerequisite to unity of force and strategic nuclear operations execution. Strategic operational planning must include the ability to respond to new targets and changing priorities before or during the execution of strategic nuclear operations. **Targeting** is the process of selecting and prioritizing targets and matching the appropriate response to them, taking into account operational requirements and capabilities. At the geographic combatant commander or subordinate joint force commander level, targeting is the process of selecting, prioritizing, and identifying the desired effects on targets. The nuclear targeting process is cyclical, beginning with guidance and priorities issued by the President, Secretary of Defense, and Chairman of the Joint Chiefs of Staff and culminating with the final step of combat assessment.

Integration and Employment. Integration of conventional and nuclear forces is crucial to the overall strategy. To make the most efficient use of the nation's strategic assets and to maximize combat power, CDRUSSTRATCOM accomplishes strategic nuclear operations through the integration of US and allied strategic assets, both offensive and defensive forces, in order to exploit the full range of characteristics offered by US strategic nuclear forces to support national and regional deterrence objectives.

US nuclear forces must maintain a strong and visible state of **readiness** permitting a swift response to any no-notice nuclear attack against the United States, its forces, or allies. Nuclear force readiness levels are categorized as operationally-deployed or responsive. During force employment, the goal is de-escalation or as a minimum containing the conflict at the lowest possible level and termination on terms favorable to the US and its allies.

Theater Nuclear Operations

Adversaries may conclude that their only chance of victory is the use of WMD

The Role of US Theater Nuclear Operations. Proliferation of WMD raises the danger of nuclear weapons use. For example, an adversary may conclude that US global and theater military operations, reliant on computers and high-tech electronics, may be impacted by the electromagnetic pulse effects of nuclear weapons detonated at high altitude. Accordingly, to maximize deterrence of WMD use, it is essential for US forces to prepare to use nuclear weapons effectively on the battlefield and against adversary WMD. Furthermore, it is important that US forces appear determined to employ nuclear weapons if necessary to prevent and punish WMD use.

Command and Control. Geographic combatant commanders may request Presidential approval for the use of nuclear weapons for a variety of reasons, all with the intent of deterring or countering adversary use of WMD and to effect a rapid termination on US terms. The use of nuclear weapons within a theater requires that nuclear and conventional plans be integrated to the greatest extent possible and that careful consideration be given to the potential impact of nuclear effects on friendly forces. Theater nuclear support may be provided by a geographic combatant commander's assigned forces, US Strategic Command (USSTRATCOM), or from another supporting combatant commander with a wide range of nuclear-capable weapons, all with unique advantages and disadvantages in a theater nuclear support context.

The commander must ascertain the military situation, assess intelligence inputs, pass information and conclusions to higher levels of control, and upon receipt of execution instructions, control assigned forces to achieve the desired objectives. Subordinate commanders responsible for target nominations submit requests to the geographic combatant commander. Commanders must ensure constraints and release guidance are clearly understood, yet execution procedures need to be flexible and allow for changes in the situation. Command and control and coordination must be flexible enough to allow the theater commander to strike time-sensitive targets.

Support Coordination. Nuclear support is coordinated through geographic combatant commander and/or subordinate JFC channels. When assisting in the preparation of nuclear support plans, CDRUSSTRATCOM coordinates with supporting Service components and the geographic combatant commander to avoid fratricide and promote unity of effort. CDRUSSTRATCOM will deploy a strategic support team familiar with the theater to provide nuclear planning, WMD expertise, and a consequence of execution and hazard prediction analysis.

Planning. When directed by the President and Secretary of Defense, JFCs plan for nuclear weapon employment in a manner consistent with national policy and strategic guidance. Geographic combatant commanders are responsible for defining support those objectives, including selecting targets. The supported commander defines the desired operational effects and, with USSTRATCOM assistance through a strategic support team, theater objectives and developing nuclear plans required to develops courses of action to achieve those effects.

Successful integration of conventional and nuclear forces is crucial to fulfilling overall theater strategy. Nuclear operations in the theater may require a significant conventional support package that addresses concerns such as aerial refueling and nuclear weapons recovery.

Continued Operations After WMD Use. US and multinational forces must prepare for further operations under conditions ranging from continued WMD use to a resumption of conventional means only and be prepared to fight and win on a contaminated battlefield

CONCLUSION

This publication provides military guidance for the exercise of authority by combatant commanders and other joint force commanders and prescribes doctrine for joint nuclear planning, operations, and training. The fundamental purpose of US nuclear forces is to deter the use of WMD and to serve as a hedge against the emergence of an overwhelming conventional threat. The decision to employ nuclear weapons at any level requires the explicit decision from the President.

CHAPTER I
NUCLEAR FORCE FUNDAMENTALS

~~*"The current levels of our nuclear forces do not reflect today's strategic realities. I have informed President Putin that the United States will reduce our operationally deployed strategic nuclear warheads to a level between 1,700 and 2,200 over the next decade, a level fully consistent with American security."*~~

~~**President George W. Bush**~~
~~**(Press Conference by President Bush and President Vladimir Putin, November 13, 2001)**~~

"The nature of the Cold War threat required the United States—with our allies and friends—to emphasize deterrence of the enemy's use of force, producing a grim strategy of mutual assured destruction. With the collapse of the Soviet Union and the end of the Cold War, our security environment has undergone profound transformation."

The National Security Strategy of the United States, September 2002

1. Nuclear Force Purpose and Principles

a. **Purpose of United States (US) Nuclear Forces.** ~~The permanent security interest of the United States remains its survival as a free and independent nation, with its fundamental values intact, and its institutions and people secure.~~ The first and fundamental commitment of the Federal Government is defending our Nation against its enemies. We best achieve this through a defense posture that makes possible war outcomes so uncertain and dangerous, as calculated by potential adversaries, as to remove all incentive for initiating attack under any circumstance. Thus, US nuclear forces continue to deter the use of ~~chemical, biological, radiological, or nuclear (CBRN)~~ weapons of mass destruction (WMD), and to serve as a hedge against the emergence of an overwhelming conventional threat.

b. **Nuclear Policy.** National Security Presidential ~~Policy~~ Directive 14 lays out Presidential nuclear weapons planning guidance. It provides broad overarching guidance for nuclear weapon planning. The Policy Guidance for the Employment of Nuclear Weapons ~~(NUWEP)~~ is a Secretary of Defense document that implements Presidential guidance. The Joint Strategic Capabilities Plan (JSCP) Nuclear Supplement, Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3110.04A, provides the Chairman of the Joint Chiefs of Staff's (CJCSs) guidance to the combatant commanders and Service C~~e~~hiefs for preparing and coordinating plans to deploy and employ nuclear weapons.

c. **2001 Nuclear Posture Review (NPR).** The following laws required the Department of Defense (DOD) to conduct a comprehensive review of the US nuclear posture and develop a long-range plan to sustain and modernize US strategic nuclear forces in order to counter emerging threats and satisfy evolving deterrence requirements.

Submarineea-launched ballistic missiles deter potential aggressors from initiating an attack and remain deployed and ready should deterrence fail.

(1) Section 1041 and 1042 of the Floyd D. Spence National Defense Authorization Act for Fiscal Year (FY) 2001 (Public Law 106-398).

(2) Section 1033 of the FYiscal Year 2002 Defense Authorization Act (Public Law 107-107).

d. ThisThe 2001 NPR constituted the first comprehensive review of nuclear forces since the first NPR was completed in 1994, and because of the critical role played by US nuclear forces in the national security strategy of the United States and its allies, the report was broader in scope than required by law. Conducted in parallel with the Quadrennial Defense Review-2001 (QDR-2001), the 2001 NPR reflected and reinforced the strategic premises of the QDR-2001. In a significant change to the US approach to offensive nuclear weapons, the 2001 NPR articulated a new capabilities-based strategy for US strategic nuclear forces that reflects the unpredictable security environment of the 21st century and responds to US strategic deterrence objectives and force capability requirements.

(1) **Capabilities-Based Forces.** The QDR-2001 shifts defense strategy to a capabilities-based approach. This approach reflects the fact that although the United States cannot know with confidence what statenation, combinations of statesnations, or nonstate actors will pose threats to US interests, it is possible to anticipate the capabilities an adversary might employ to coerce its neighbors or to deter or directly attack the US or its US deployed forces. A capabilities-based approach focuses more on how an adversary might fight and the means it might use than who the adversary might be and where a war might occur. This approach requires a modern and diverse portfolio of military capabilities. Under the new capabilities-

based approach to planning, the United States will reduce its operationally-deployed strategic nuclear forces to ~~a range of 1,700 to 2,200 operationally-deployed strategic warheads:~~ the lowest possible number consistent with national security requirements and alliance obligations while maintaining a level that still provides a credible deterrent ~~but at the lowest possible number consistent with national security requirements and alliance obligations~~. At the same time, these levels will preserve the ability to respond to deterioration in the international security environment if necessary. Furthermore, the NPR established an approach to reduce operationally-deployed strategic nuclear forces over the next decade, outlined plans to sustain and modernize existing nuclear force structure, and defined a n~~N~~ew t~~T~~riad of strategic capabilities.

(2) **Mix of Strategic Capabilities.** The ~~N~~new ~~T~~triad offers a mix of strategic offensive and defensive capabilities that include nuclear and non-nuclear strike capabilities, active and passive defenses, and a robust research, development, and industrial infrastructure to develop, build, and maintain offensive forces and defensive systems (see Figure I-1). Enhanced command and control, intelligence, and adaptive planning capabilities support the n~~N~~ew t~~T~~riad. The n~~N~~ew t~~T~~riad postures deterrence suitable for the emerging threat environment; it incorporates post-Cold War advances in defensive and non-nuclear capabilities, and it provides additional military options that are credible to adversaries and reassuring to allies.

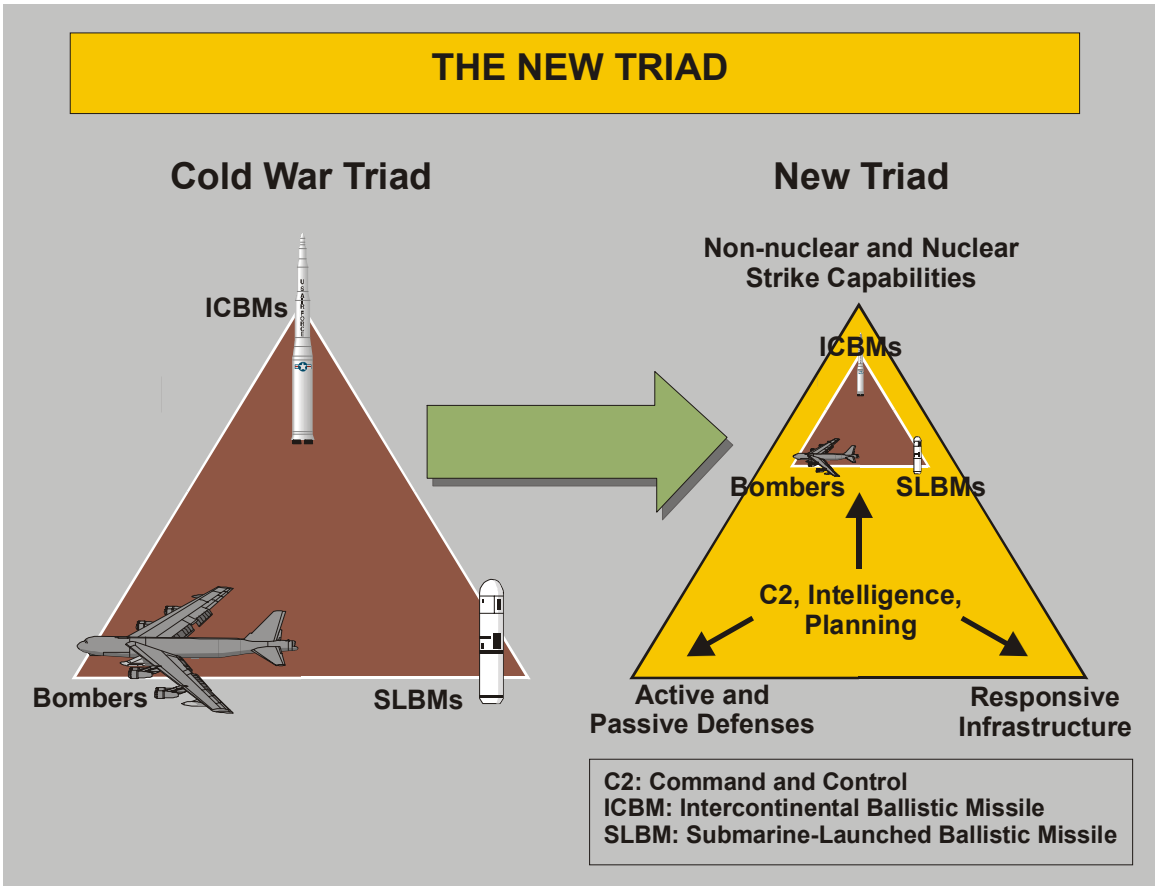

Figure I-1. The New Triad

(a) **Strike Capabilities.** Non-nuclear strike capabilities include advanced conventional weapons systems (long-range, precision-guided weapons and associated delivery means), offensive information operations, and special operations forces (the latter which can be used to hunt for mobile missiles or operate against ~~CBRN~~WMD facilities). Deployed nuclear strike capabilities include the three legs of the existing strategic triad (ICBMs, SLBMs, and bombers) and theater-based, nuclear-capable dual-role aircraft. Nuclear-armed sea-launched cruise missiles, removed from ships and submarines under the 1991 Presidential Nuclear Initiative, are maintained in a reserve status.

(b) **Defenses.** Active defenses include ballistic missile defense and air defense. Passive defenses include measures that reduce vulnerability through security, mobility, dispersal, redundancy, deception, concealment, and hardening; warn of imminent attack and support consequence management activities that mitigate the damage caused by ~~CBRN~~WMD use; and protection against attacks on critical information systems. This element of the n~~N~~ew t~~T~~riad comprises defenses for the US homeland, forces abroad, allies, and friends.

(c) **Infrastructure.** The research, ~~and~~ development, and industrial infrastructure includes the research facilities, manufacturing capacity, and skilled personnel needed to produce, sustain, and modernize the elements of the n~~N~~ew t~~T~~riad as well as supporting intelligence and command and control (C2) capabilities. A responsive infrastructure that can augment US military capabilities through development of timely new systems or accelerated production of existing capabilities ~~in a timely manner~~ provides strategic depth to the n~~N~~ew t~~T~~riad. In particular, a secure modern, responsive nuclear weapons ~~sector of the~~ infrastructure is indispensable, especially as the size of the deployed nuclear arsenal is reduced.

(3) **Broad Array of Options.** The n~~N~~ew t~~T~~riad provides the United States with a broad array of options to address a wide range of possible contingencies, and serves the four primary defense policy goals defined in the QDR-2001:

(a) Assure allies and friends of US steadiness of purpose and capability to fulfill its military commitments.

(b) Dissuade adversaries from pursuing programs or operations that threaten US interests or those of our allies and friends.

(c) Deter threats and counter coercion against the United States, its forces, allies, and friends.

(d) Decisively defeat any adversary and defend against attack if deterrence fails.

(4) **New Thinking for a New Era.** In a major break from Cold War thinking, DOD organized the 2001 NPR around the capabilities required of nuclear forces in the new strategic environment rather than around an arms control framework: capabilities that allow the United States to take the lead in reducing nuclear stockpiles rather than rely on protracted arms control negotiations. The NPR outlines implications for various arms control treaty regimes, underscores the need for a new cooperative approach to Russia, and establishes a new strategic

framework more consistent with the post-Cold War relationship between the two countries. Terrorists or rogue states armed with ~~CBRN~~WMD will likely test US security commitments to its allies and friends. In response, we will need a range of capabilities to assure friend and foe alike of US resolve. A broader array of capability is needed to dissuade states from undertaking political, military, or technical courses of action (COAs) that would threaten US and allied security. US forces must pose a credible deterrent to potential adversaries who have access to modern military technology, including ~~CBRN~~WMD ~~weapons~~ and the means to deliver them ~~over long distances~~.

(5) **Sustaining and Modernizing Nuclear Forces.** Lastly, the NPR summarized DOD plans to sustain and modernize the existing US nuclear force structure. It outlined estimated required weapon systems replacement dates and planned for the next generation of nuclear systems. Under the requirements of the NPR, the United States will maintain a force structure that not only complies with Strategic Arms Reduction Treaty (START) ~~I~~ limits but has significantly fewer operationally-deployed strategic nuclear warheads ~~(1,700 – 2,200 by 2012)~~ and uses a new framework for accounting and compliance than under START ~~I~~. The lower warhead total is a result of the May 2002~~November 2001~~ US-Russia Strategic Offensive Reductions Treaty (The Moscow Treaty). The NPR fulfilled the need for a new approach to nuclear forces planning, one that will enable the United States to meet the myriad of threats and challenges of the new strategic environment. It provides a roadmap that outlines the future of US nuclear capabilities and puts forward a new framework for national security in the 21st century.

2. Fundamental Considerations

a. **Deterrence.** The central focus of deterrence is to dissuade an adversary's leadership from attacking. The effectiveness of deterrence depends on how an adversary's leadership views US capabilities. If they think US forces can inflict such damage upon their military forces and means of support as to effectively deny them their war aims, and if that stops them from attacking, then deterrence is effective. Deterrence of adversary ~~CBRN~~WMD employment requires the adversary leadership to believe the United States has both the ability and will to preempt or retaliate promptly with responses that are credible and effective. Deterrence assumes an opposing actor's leadership proceeds according to the logic of self-interest, although this self-interest is viewed from differing cultural perspectives and the dictates of given situations. This will be particularly difficult with nonstate actors who employ or attempt to gain use of ~~a CBRN~~WMD ~~weapon~~. Here deterrence may be directed at states that support their efforts as well as the terrorist organization itself. However, the continuing proliferation of ~~CBRN~~WMD along with the means to deliver them increases the probability that someday a state/nonstate actor ~~nation/terrorist~~ may, through miscalculation or by deliberate choice, employ those weapons. In such cases, deterrence, even based on the threat of massive destruction, may fail and the United States must be prepared to ~~fight and~~ use nuclear weapons, if necessary. The challenge of deterrence is to convincingly convey both will and capability to the opposing actor. Figure I-2 lists deterrence challenges that were most prominent in a strategic deterrence requirements study commissioned by the Joint Requirements Oversight Council for the Joint Staff.

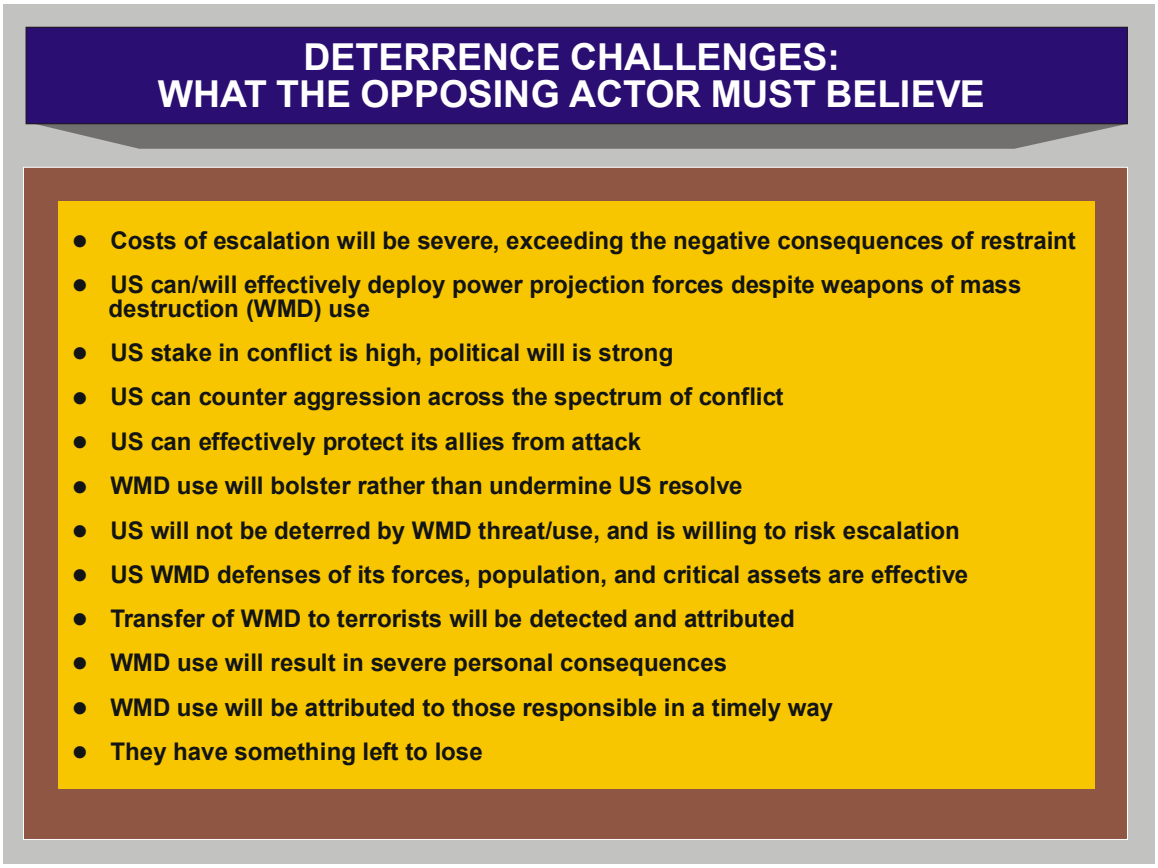

Figure I-2. Deterrence Challenges: What the Opposing Actor Must Believe

b. **Force Capabilities.** Real force capabilities and the perceived national determination to use these forces if necessary constitute deterrence. To fulfill this purpose, US military forces are capable of achieving US national objectives throughout the range of military operations. Although the United States cannot know with confidence what threats states~~nation~~, combinations of states~~nations~~, or nonstate actors pose threats to US interests, it is possible to anticipate the capabilities an adversary might employ. Thus, the capabilities-based approach focuses more on how an adversary might fight and the means it might use rather than who the adversary might be and where a war might occur. ~~This approach requires the United States to d~~Developing and sustaining a modern and diverse portfolio of military capabilities~~. This portfolio~~ serves the four key defense policy goals, identified earlier, that guide the development, deployment, and use of military forces and capabilities, including nuclear forces. These capabilities require maintaining a diverse mix of conventional ~~and special operations~~ forces capable of high-intensity, sustained, and coordinated operations ~~across the spectrum of conflict~~ range of military operations; survivable and secure nuclear forces; and the command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) systems required to direct these forces. The force mixture must hold at risk those assets most valued by adversary leaders and provide a range of options in response to attack. It is possible, however, that an adversary may misperceive or purposefully ignore a credible threat. Therefore, if deterrence fails, ~~both conventional and nuclear force structure and readiness~~ the force mixture must provide a variety of options designed to control escalation and terminate the conflicts on terms favorable to the United States and its allies.

c. **Implementing National Military Strategy.** The decision to employ nuclear weapons at any level requires explicit orders from the President. Senior commanders make recommendations affecting nuclear policy decisions on force structure, weapon and/or force capabilities, and alternative employment options. Consequently, those responsible for the operational planning and direction of US nuclear forces must fully appreciate the numerous and complex factors that influence the US nuclear planning process and would likely shape US decisions on the possible use of nuclear weapons. Clearly, the use of nuclear weapons represents a significant ~~vertical~~ escalation from conventional warfare and is provoked by some ~~grave~~ action, event, or perceived threat. However, like any military action, the use of nuclear weapons is fundamentally determined by the **political** objective sought. The decision to use nuclear weapons involves many political considerations, which impact not only nuclear weapon use, but ~~also how to employ them~~ type and number of weapons used and method of employment.

Bombers provide a flexible and recallable nuclear capability, which is essential in escalation management.

d. **International Reaction.** International reaction toward the country or nonstate entity that first employs ~~CBRN~~WMD constitutes an important political consideration. The United States and its allies articulated their abhorrence of unrestricted warfare, codifying "laws of war," and turning to definitions of "just war." The tremendous destructive capability of ~~CBRN~~WMD and the consequences of their use yielded a number of arms control agreements (~~refer to~~ see Figure I-3, which discusses the Nuclear Arms Control Treaties~~Appendix A, "Treaty Obligations"~~) restricting deployment and use. Nevertheless, while the belligerent that initiates nuclear warfare may find itself the target of world condemnation, no customary or conventional international law that prohibits nations from employing nuclear weapons in armed conflict.

SUMMARY OF APPLICABLE US ARMS CONTROL TREATIES	
TREATY	**IMPACT**
Strategic Offensive Arms Reduction and Limitation Treaty (START)	• Reduced US and former Soviet Union strategic systems by 30-40% from 1990 levels • Reduced to 1600 strategic nuclear delivery vehicles and 6000 accountable warheads • Entered into force 5 December 1994
Strategic Offensive Reductions Treaty (Moscow Treaty)	• Reduces US and Russian strategic nuclear warheads to a level between 1700-2200 by 31 December 2012 • No verification measures, but uses existing START verification regime to provide the foundation for transparency • Not yet entered into force
Intermediate and Shorter-Range Nuclear Forces (INF) Treaty	• Eliminates all US and former Soviet Union intermediate range and short-range ground launched ballistic missiles and ground-launched cruise missiles • Indefinite duration but 13-year onsite inspection and portal monitoring regime ended in May 2001
Comprehensive Test Ban Treaty (CTBT)	• Bans any nuclear test explosions for all time • 41 of the 44 countries known to possess nuclear power or nuclear research reactors have signed the Treaty and 31 have ratified (only North Korea, Pakistan, and India have not signed) • Not yet entered into force • The US Senate, on 13 October 1999, voted 51 to 48 against ratifying the CTBT
Nonproliferation Treaty (NPT)	• Nuclear weapons state signatories of treaty (US, United Kingdom, Soviet Union, France, and China) agree not to share any nuclear weapons technology, devices, or explosives, or control over such weapons or devices • Do not assist, encourage, or induce any non-nuclear state to manufacture or acquire such weapons or devices • Through the Moscow Treaty, the US continues to reduce nuclear arms IAW the NPT
Nuclear-Weapon-Free Zone Treaties	• The US is a party to several Nuclear-Weapon-Free Zone Treaties, including Antarctica, Latin America, Outer Space, and Africa • Commanders need to be aware that these treaties have important implications for basing/deployment of US nuclear forces

Figure IA-31. Summary of Applicable US Arms Control Treaties

e. **The Law of Armed Conflict (LOAC).** LOAC is a portion of international law that regulates the conduct of armed hostilities. LOAC primarily derives from generally accepted principles (customary law) of international law, treaties, and conventions that bind countries under international law. LOAC seeks to prevent combatants from unnecessary suffering, protect noncombatants, safeguard fundamental human rights, and facilitate the restoration of peace by limiting the amount and type of force, and the manner in which force is applied.

Neither LOAC nor national policy sanction devastation as an end in itself. Both recognize the necessity of force to achieve legitimate military objectives and to ensure military advantage gained by attack. However, both also recognize that these objectives and advantages cannot be ~~outweighed~~ offset by the expected collateral damage. Commanders have the responsibility to attempt to minimize collateral damage to the greatest extent practicable. ~~Most nuclear weapons are unique in this analysis only in their greater destructive potential and collateral effects (e.g., prompt radiation, electromagnetic pulse effects, and potentially long-term radioactive fallout).~~ Nuclear weapons use is not prohibited in armed conflict by LOAC. They are, however, unique from conventional and even other WMD in the scope of their destructive potential and long-term physiological effects.

3. Range of Military Operations

As part of the military instrument of national power, US nuclear forces help deter massive attacks against the American homeland, contribute to theater deterrence, serve as a hedge against actions by conventional forces, ~~and~~ protect allies, and help assure their security. Because the use of nuclear weapons in a conflict could provoke serious political, economic, military, and environmental consequences, clear allied as well as adversary understanding of US nuclear weapon policy is essential.

a. Peacetime and Crisis Considerations

(1) Force Employment. We must carefully consider nuclear force survivability, credibility, safety, and security when organizing and employing US nuclear forces. As ~~one element~~ part of the military instrument of national power, nuclear forces must meet the criteria shown in Figure I-~~42~~.

(2) **Conflict Avoidance.** Pursuing alternative mechanisms and disincentives to conflict such as nonproliferation, counterproliferation, arms control and verification, and confidence building measures during peacetime enhances conflict avoidance. These measures make conflict or war less likely by improving communication, reducing opportunities for miscalculation, providing ways to resolve crises, and reducing the destructive capacity of available arsenals.

(3) **Readiness.** Increased readiness levels help deter aggression. Consequently, an increased risk of attack, prompted by adversary war readiness measures, may require US forces to maintain visibly increased states of alert. Delivery system postures can send a clear warning. Nuclear delivery systems deploying to dispersal locations can send a forceful message that demonstrates the national will to use nuclear weapons if necessary, as well as increasing ~~their~~ the delivery system's survivability. However, the danger also exists that the adversary may perceive either an exploitable vulnerability or the threat of imminent use. Accordingly, while the United States signals national resolve through increased readiness postures, it must also signal the willingness to de-escalate through overt measures.

(4) **Crisis.** The United States maintains the capability to rapidly postur~~e~~ing its nuclear forces. Nuclear forces are properly generated and managed to ensure a sustained high level of readiness and survivability. Conventional forces and intelligence activities require prudent

management to avoid~~ensure avoidance of~~ inadvertent escalation or mistaken warnings of adversary ~~CBRN~~WMD attack. If the crisis is successfully resolved without employment of nuclear weapons, reductions in the alert posture of nuclear forces can send a reinforcing message. This ~~could~~ requires careful management. US, allied, or coalition leadership should consider ~~military~~ potential military advantages ~~that~~ an adversary might gain as nuclear weapons stand down. The adversary may choose to destabilize the de-escalation effort using those advantages.

Figure I-~~42~~. Nuclear Forces and Strategy Evaluation Criteria

b. **Wartime Considerations** (see Figure I-~~53~~).

(1) **Deterring ~~CBRN~~WMD Use and Conventional Military Operations.** Deterrence of a ~~CBRN~~WMD attack depends on the adversary's perception of its warfighting capabilities relative to those of the United States and its allies. However, wartime circumstances may alter such perceptions. Shifts in the strategic balance may result from military action in which an adversary suffers significant destruction of its military forces and means of support. Thus, when an adversary is confronted with overwhelming conventional forces or a prolonged conventional conflict ~~may lower~~ the ~~CBRN~~WMD threshold may be lowered, ~~by~~ making ~~CBRN~~WMD use appear the only viable option for regime survival.

(2) **Deterrence Failure.** If deterrence fails, the US objective is to repel or defeat a military attack and terminate the conflict on terms favorable to the United States and its allies. Accomplishing this objective requires the capability for measured and effective response to any level of aggression while seeking to control the intensity ~~and~~, scope of conflict, and destruction. Specific nuclear objectives and employment plan development guidance are delineated in the nuclear supplement to the ~~Joint Strategic Capabilities Plan (~~JSCP~~)~~.

Figure I-~~53~~. Wartime Considerations

(3) **Friendly Nuclear Strike Warning (STRIK~~E~~WARN).** Friendly forces receive advanced warning of friendly nuclear strikes to ensure they ~~mitigate unnecessary risk~~ can take actions to protect themselves from the effects of the attack. In theater operations, the commander executing the strike issues the initial warning to subordinate headquarters (HQ) whose units ~~will~~ are likely to be affected by the strike. Commanders must ensure that STRIKWARN messages are disseminated in a sufficient amount of time for subordinate units to take actions to mitigate the possible consequences of US use of nuclear weapons. Consideration should also be given for dissemination of STRIKWARN information to allies. The commander also ensures coordination with adjacent commands and elements of other commands in the vicinity, giving them sufficient time to provide warning and take protective measures. ~~Theater~~ Joint forces potentially affected by ~~the effects of~~ US nuclear strikes are informed of nuclear strikes through a STRIK~~E~~WARN message. Geographic combatant commands must develop procedures to ensure that multinational~~coalition/allied~~ forces receive STRIK~~E~~WARN information if they ~~will be potentially~~ are likely to be affected by ~~the effects of~~ US nuclear strikes. Disseminate nuclear STRIK~~E~~WARN messages as rapidly as possible and, when possible, over secure networks. When secure networks are not available, unit signal operations instructions contain authentication procedures and encoding instructions for disseminating STRIK~~E~~WARN messages. STRIKWARN messages may be sent in the clear if the issuing commander determines that safety warnings override security requirements.

(4) **Adversary ~~CBRN~~WMD Use.** When formulating COAs, operation planning must address the possibility that an adversary will use ~~CBRN~~WMD. Planning should also evaluate nuclear, biological, and chemical ~~(NBC)~~ defensive measures. Joint Publication (JP) 3-11, *Joint Doctrine for Operations in Nuclear, Biological and Chemical (NBC) Environments*, JP 3-40, *Joint Doctrine for Counterproliferation,* ~~and the appropriate JP 3-XX series~~ provide additional guidance. ~~In theater, t~~The combatant commander must consider the adversary's ~~CBRN~~WMD ~~weapon~~ and delivery system capability when considering COAs. If the adversary threat capability assessment indicates a~~n~~ ~~CBRN~~WMD potential, the campaign plan should address

active and passive defensive and offensive measures necessary to counter the potential use of such weapons and provide guidance for defending against such a threat.

(5) **Attrition and Escalation.** Nuclear weapons influence the objectives and conduct of conventional warfare. Additionally, conventional warfare may result in attrition of nuclear forces and supporting systems ~~(through antisubmarine warfare, conventional theater attacks, sabotage, or antisatellite warfare)~~ which could affect the forces available for nuclear employment. If this attrition results in a radical change in the strategic force posture by eliminating intermediate retaliatory steps, escalation is possible. The attrition of conventional and nuclear forces directly affects the decision process for escalation to nuclear warfare ~~and may also contribute to minimizing damage~~.

(6) **Nuclear Effects.** The immediate and prolonged effects of nuclear weapons — including blast~~,~~ (overpressure, dynamic pressure, ground shock, cratering), thermal radiation, and nuclear radiation (initial, residual, fallout, blackout, electromagnetic pulse)~~, visible light, blackout, thermal radiation, prompt (gamma and neutron) and activation products and fallout~~ — pose ~~challenging~~ physical and psychological challenges ~~problems~~ for combat forces and noncombatant populations alike. These effects also pose significant survivability requirements on military equipment, supporting civilian infrastructure resources, and host nation/coalition assets. Not only must US forces prepare to survive and perhaps operate in a nuclear/radiological environment for long periods of time, they must also develop, procure, field, and maintain effective, sustained C4ISR to accomplish their missions. Commanders and military planners must contend with significant challenges in a ~~CBRN~~nuclear/radiological environment and incorporate mitigating or avoidance measures into operation planning by using ~~utilizing~~ authoritative documents detailing ~~CBRN~~nuclear/radiological effects. The results of nuclear weapons may have a synergistic impact on the human body with the total effect being greater than the individual effect.~~An additional effect of radiation is that it may make a person more physiologically susceptible to the effects of biological agents from a biological weapon (BW) attack.~~

(7) **Mitigation Efforts.** Actions required to mitigate the effects of ~~CBRN~~WMD are shown in Figure I-6~~4~~.

c. **Post Wartime Considerations** (see Figure I-7~~5~~).

(1~~2~~) **Termination Strategy.** The objective of a termination strategy is to end a conflict at the lowest level of destruction, while attaining national objectives. It is fundamentally important to understand that termination of operations must be consistent with national security strategy, national military strategy, and end ~~-~~state goals. However, there are no assurances that a conflict involving ~~CBRN~~WMD is controllable or of short duration. Indeed, it may be essential to ensure that an adversary is unable to rearm expended delivery systems. Therefore, US nuclear forces and supporting C4ISR systems are survivable, redundant, secure, and safe to ensure their survival and deny adversary war aims. Information assurance protects and defends information by ensuring their availability, integrity, authentication, confidentiality, and nonrepudiation. This includes providing for restoration of information systems by incorporating, protection, detection, and reaction capabilities.

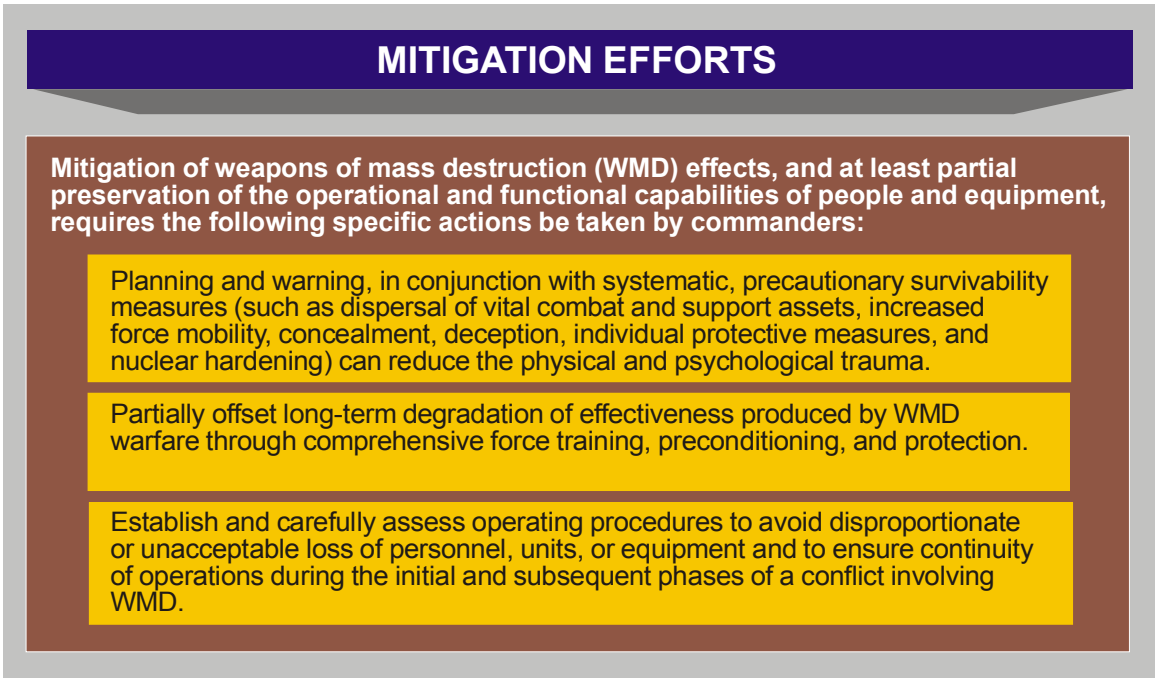

Figure I-64. Mitigation Efforts

(21) **War Termination.** The fundamental differences between a potential nuclear war and previous military conflicts involve the speed, scope, and degree of destruction inherent in most nuclear weapons employment, as well as the uncertainty of negotiating opportunities and ensduring control over military forces. Depending on the scope and intensity of a nuclear war, the termination conditions may differ considerably from previous conflicts. The wWar termination strategy may initially involve the end of nuclear combat actions, but not necessarily

Figure I-75. Post Wartime Considerations

all aspects of conventional warfighting.

(3) **Reserve Nuclear Forces.** An adequate reserve of nuclear forces would preclude another country or nonstate organization from coercing the United States before, during, or after the use of ~~CBRN~~ nuclear weapons. Such forces provide the United States with the capability to continue to deny adversary war aims, influence other nations, and exert leverage for war termination.

CHAPTER II
NUCLEAR OPERATIONS

"It is a doctrine of war not to assume the enemy will not come, but rather to rely on one's readiness to meet him; not to presume that he will not attack, but rather to make one's self invincible."

Sun Tzu, *The Art of War*

1. Introduction

The critical elements of strategic and theater nuclear operations include detailed command relationships, C2, and command responsibilities~~;~~, integrated planning and targeting~~;~~ employment and force integration~~;~~ and combat readiness. ~~These four elements~~ (see Figure II-1) ~~are core to both strategic and theater nuclear operations.~~

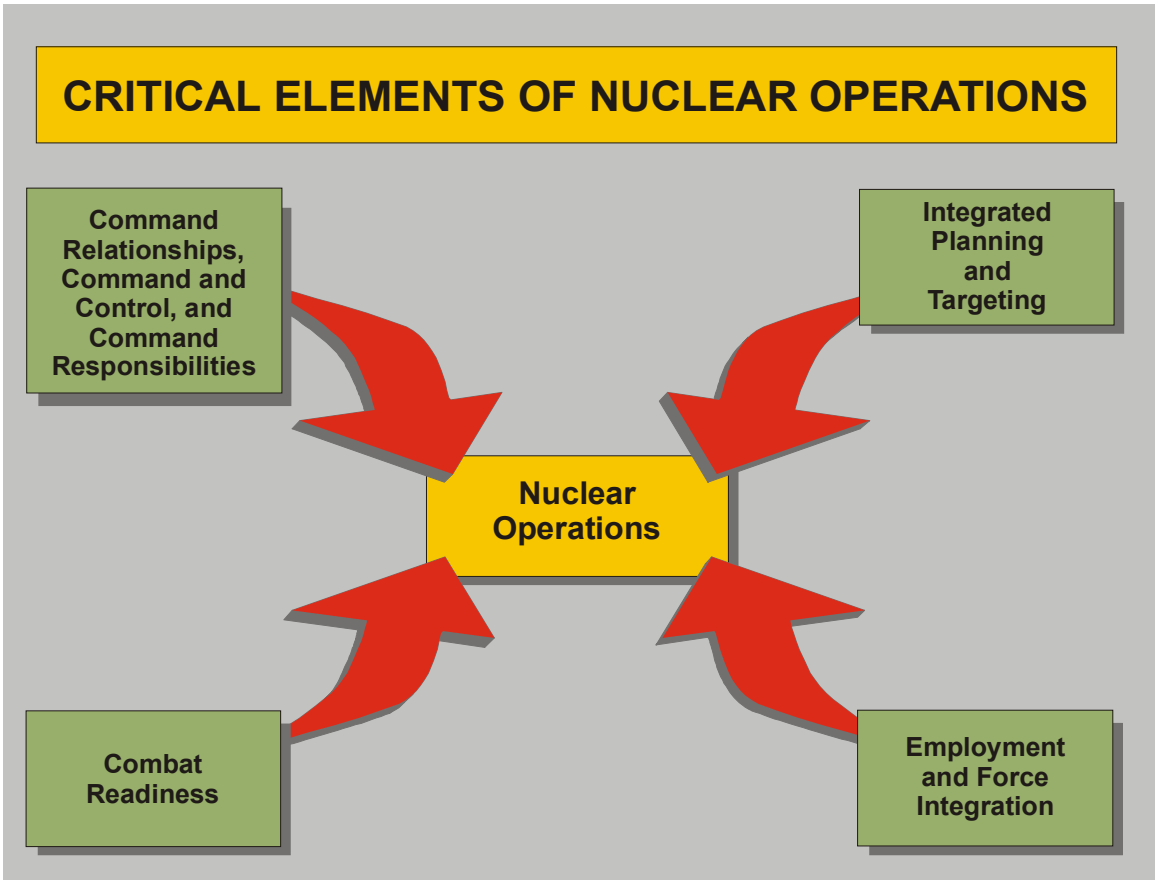

Figure II-1. Critical Elements of Nuclear Operations

2. Command Relationships, Command and Control, and Command Responsibilities

a. **Command Relationships.** National policy requires a single execution and termination authority ~~o~~for nuclear weapons. The President retains sole authority for the employment and termination of nuclear weapons. The President's decision to authorize the release of nuclear

weapons is based on the recommendations of the Secretary of Defense, Chairman of the Joint Chiefs of Staff, combatant commanders, and allies. This authority is exercised through a single chain of command that runs from the President to the Secretary of Defense directly to the combatant commanders. Nuclear weapon release/termination and related instructions are transmitted from the President and Secretary of Defense via the Chairman of the Joint Chiefs of Staff in accordance with (IAW) established emergency action procedures (EAPs).

b. **Command and Control.** The pace of modern war dictates streamlined and efficient methods of C2. The President and Secretary of Defense must have the most current and available situational information and intelligence and must comprehend all strategic and theater nuclear plans and options. Top-down communication ensures critical orders are received for execution, ~~and~~ increases survivability, and reduces vulnerability ~~problems~~ of C2 systems.

c. **Command Responsibilities.** The Commander, US Strategic Command (CDRUSSTRATCOM), has combatant command (command authority) (COCOM) over selected portions of the nation's strategic nuclear forces and is responsible for the planning and execution of strategic nuclear operations. Geographic combatant commanders have operational control (OPCON) over nuclear-capable forces employed for nuclear operations in support of theater conflicts. Theater nuclear operations are discussed in further detail in Chapter III, "Theater Nuclear Operations."

Nuclear weapon planning and execution guidance ensures optimal targeting and synchronization of US nuclear forces.

3. Planning and Targeting

a. **Strategic Nuclear ~~Force~~ Planning.** Detailed planning is key to the execution of strategic nuclear operations. Presidential, Secretary of Defense, and Chairman of the Joint Chiefs of Staff strategic nuclear weapon planning and execution guidance ensures optimal targeting and ~~synchronization~~ integration of US nuclear forces prior to, ~~and~~ during, and after conflict, and is the framework used by the ~~Commander,~~ CDRUSSTRATCOM, to develop plans. Detailed mission planning is expanded in coordination with standing task force commanders of all strategic nuclear forces and US nuclear-capable allies.

(1) **Integrated Operational Planning and Preplanned Options.** An integrated operation plan (OPLAN) or series of plans predicated on commonly agreed strategic objectives is an absolute prerequisite to unity of force and strategic nuclear operations execution. This plan or series of plans formalizes the integration of nuclear assets. They clarify command guidance and objectives, effectively assign and prioritize targets, and synchronize execution.

(2) **Adaptive Planning.** Strategic operational planning must include the ability to respond to new targets and changing priorities before or during the execution of strategic nuclear operations. This adaptive planning capability ensures the most efficient use of resources and ensures the strategic forces are fully capable of responding to any new threats that might arise. Adaptive planning must also respond to taskings directed by higher authorities.

b. **Theater Nuclear Planning.** Theater-specific planning and targeting considerations are addressed in JP 3-12.1, *Joint Tactics, Techniques, and Procedures for Theater Nuclear Planning*.

c~~b~~. **Targeting.** Targeting is the process of selecting and prioritizing targets and matching the appropriate response to them, taking into account ~~of~~ operational requirements and capabilities. At the geographic combatant commander or subordinate joint force ~~or geographic combatant~~ commander level, targeting is the process of selecting, ~~and~~ prioritizing, and identifying the desired effects on targets ~~and matching the appropriate operational attack package against them. The purpose of targeting at the strategic level is to select targets in support of the nation's nuclear war plans.~~ Targeting includes the analysis of an adversary situation relative to the commander's mission, objectives, and resources at the commander's disposal, as well as the identification and nomination of specific vulnerabilities that, if exploited, accomplish the commander's purpose through capture, neutralizing, deceiving, delaying, disrupting, disabling, or destroying critical adversary forces or resources. Targeting decision must also consider environmental considerations and impacts IAW JP 3-0, JP 3-34, and JP 4-04. Finally, targeting is accomplished IAW international law, international agreements and conventions, and rules of engagement approved by the President and Secretary of Defense.

(1) **Nuclear Targeting Process.** Whether supporting national strategic goals or geographic combatant commanders, the nuclear targeting process is cyclical. The process begins with guidance and priorities issued by the President, Secretary of Defense, and Chairman of the Joint Chiefs of Staff and culminates with the final step of combat assessment. The entire targeting process consists of six phases as depicted in Figure II-2.

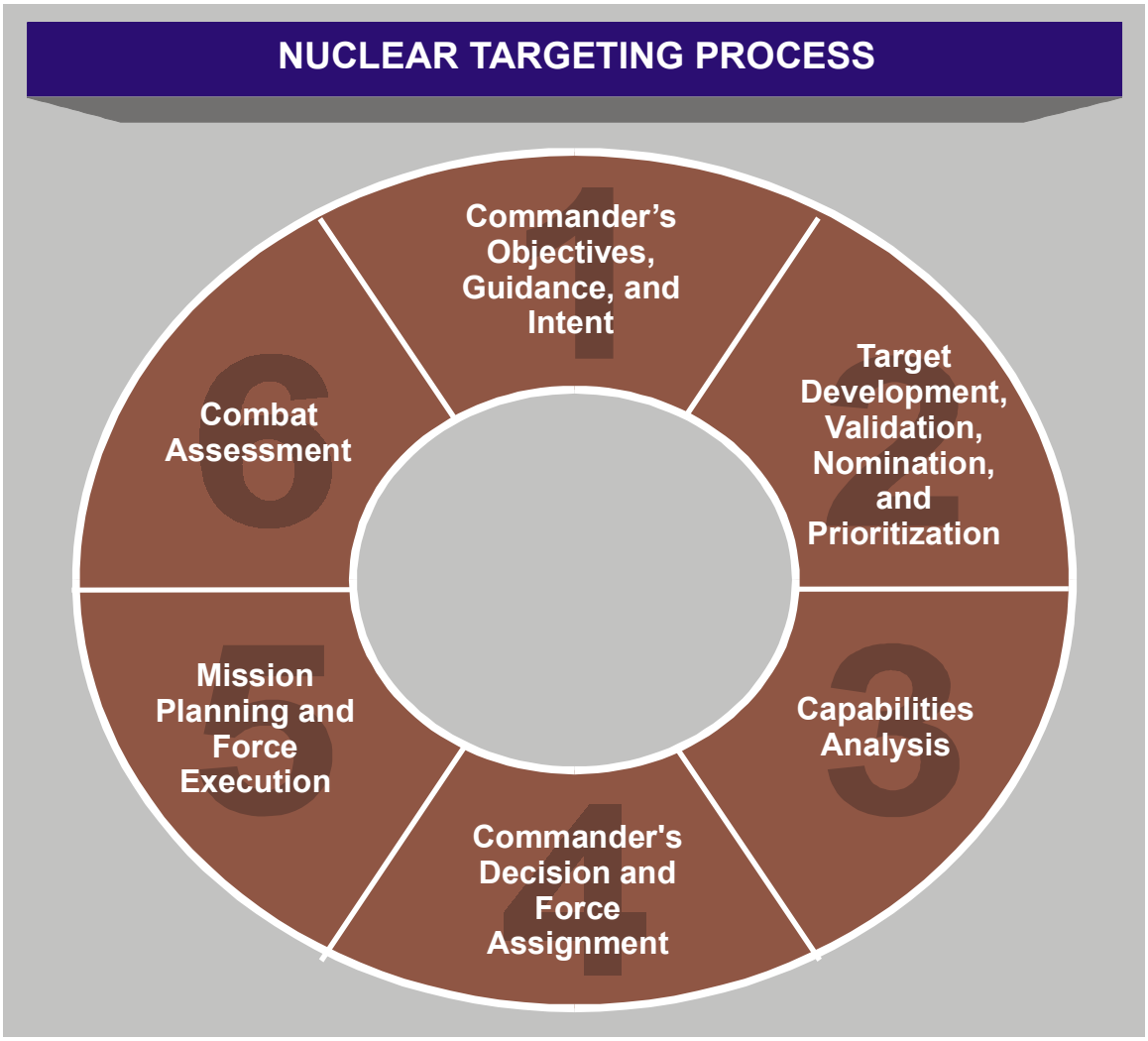

Figure II-2. Nuclear Targeting Process~~Cycle Phases~~

(a) **Commander's Objectives, Guidance, and Intent.** Guidance and objectives from the President, Secretary of Defense, and Chairman of the Joint Chiefs of Staff initiate the targeting cycle. The ~~Commander,~~ CDRUSSTRATCOM, provides additional targeting guidance for strategic ~~and theater~~ planning, while geographic combatant commanders, subordinate joint force commanders (JFCs), and component commanders provide additional guidance for theater nuclear planning.

(b) **Target Development, Validation, Nomination, and Prioritization.** Target development focuses on identifying and nominating critical adversary ~~military forces~~ capabilities and means of support and their means of support for attack.

(c) **Capabilities Analysis.** Commander's guidance on desired effects are translated into weapon recommendations and t~~T~~argeting personnel quantify the expected results, to include consequences of execution, and calculate desired ground zeros.

(d) **Commander's Decision and Force Assignment.** Targets are matched to specific weapon systems, integrating the results of previous planning phases.

(e) **Mission Planning and Force Execution.** Involves final tasking order preparation and transmission, specific mission planning and material preparation at the unit level, ~~and~~ Presidential authorization for use, and execution.

(f) **Combat Assessment.** The final phase determines if the achieved target effects are consistent with either the strategic or the theater campaign objectives. ~~Nuclear~~ Ceombat assessment is composed of ~~two segments~~ three interrelated components: battle damage assessment, munitions effectiveness assessment, and reattack recommendation.

Additional information on targeting can be found in JP 2-01.1, *Joint Tactics, Techniques, and Procedures for Intelligence Support to Targeting, and* JP 3-60, *Joint Doctrine for Targeting.*

(2) **Nuclear Targeting Planning Considerations.** Several strategies or factors are considered in planning nuclear operations (see Figure II-3). Theater-specific targeting considerations are addressed in JP 3-12.1, *Joint Tactics, Techniques, and Procedures for Theater Nuclear Planning.*

(a) **Counterforce Targeting.** Counterforce targeting is a strategy to employ forces to destroy, or render impotent, military capabilities of an adversary force. Typical counterforce targets include bomber bases, ballistic missile submarine bases, intercontinental ballistic missile (ICBM) silos, antiballistic and air defense installations, C2 centers, and WMD~~CBRN~~ storage facilities. Generally, the nuclear forces required to implement a counterforce targeting strategy have specifically designed yields and ~~the weapon systems~~ are more accurate weapon systems than the forces and weapons required to implement a ~~countervalue~~ critical infrastructure strategy, because counterforce targets are generally harder, more protected, difficult to find, and more mobile than ~~countervalue~~ critical infrastructure targets.

Figure II-3. Target Planning Considerations

(b) ~~**Countervalue**~~ **Critical Infrastructure Targeting.** ~~Countervalue~~ Critical Infrastructure targeting strategy directs the destruction or neutralization of selected adversary military forces and their means of support, such as industries, resources, and institutions that contribute to an adversary's ability to wage war. In general, weapons required to implement this strategy are not as numerous or accurate as those required to implement a counterforce targeting strategy, because ~~countervalue~~ Critical Infrastructure targets are generally softer and unprotected in relation to counterforce targets.

(c) **Prioritization of Targets.** Strategic nuclear t~~T~~argets are normally prioritized based upon the overall targeting strategy. Further refinement of target priorities occurs within each target category (e.g., industrial, military, energy facilities, storage facilities, and weapon storage areas) based on the operational situation and the objectives established by the appropriate command authority. Targets are not normally prioritized during the theater nuclear planning process. Theater nuclear targets are included in the ~~theater's~~ theater nuclear option (TNO) and provide the geographic combatant commander and the President a range of nuclear options to choose from depending upon theater conditions. Prioritization may change as the war/campaign progresses in time.

(d) **Layering.** Layering is a ~~targeting methodology~~ target defeat mechanisms used by STRATCOM in which more than one weapon is planned against a target to increase the probability of its destruction, or to improve the confidence that a weapon arrives and detonates on the specified target and achieves a specified level of damage.

(e) **Cross-targeting.** Cross-targeting is a type of "layering" using different platforms for employment against one target to increase the probability of at least one weapon arriving at that target. Using different delivery platforms such as ICBMs, submarine-launched ballistic missiles (SLBMs), or aircraft-delivered weapons increases the probability of achieving the desired damage or target coverage.

(f) **Deliberate Planning.** Deliberate planning is a highly structured process that engages commanders and staffs of the entire Joint Planning and Execution Community in the methodical development of fully coordinated, complex planning for nuclear contingencies. The deliberately developed nuclear plans and options provide the President, Secretary of Defense, and Combatant Commanders with the capability to rapidly respond to preplanned contingencies. Plans and options developed during deliberate planning provide a foundation for adaptive and crisis action planning. ~~**Preplanned Options.** Preplanned options are a means of maintaining centralized control while minimizing response time. These options are capable of individual execution or in combination with other options to expand the attack.~~

(g) ~~**Emergent Targets and**~~ **Adaptive and Crisis Action Planning.** Even after the initial laydown of nuclear weapons, a residual requirement to strike additional (follow-on and/or emerging) targets in support of retaliatory or war-termination objectives may exist. Commanders must maintain the capability to rapidly strike previously unidentified or newly emerging targets. ~~This capability includes planning for and being able to perform "ad hoc"~~ Adaptive and Crisis Action Planning procedures contained in JP 5-0 and CJCS Emergency

Action Procedures provide commanders with the procedures for conducting planning on ~~newly identified~~ emerging targets~~, and maintaining a pool of forces specifically reserved for striking previously unidentified targets.~~ It is important to recognize that success in engaging emerging targets depends heavily upon the speed with which they are identified, targeted, and attacked. Adaptive planning must also include synchronizing emergent targets with existing force employment plans and scheme of maneuver.

(h) **Nuclear Collateral Damage.** Nuclear collateral damage is defined as undesired damage or casualties produced by the effects from friendly nuclear weapons. Commanders and staffs responsible for developing nuclear plans must consider avoidance of collateral damage as they develop their strike options. Specific techniques for reducing collateral damage include reducing weapon yield, improving accuracy, employing multiple smaller weapons, adjusting the height of burst, and offsetting the desired ground zero (DGZ). Detailed discussion of these techniques and collateral damage avoidance data is contained in JP 3-12.1, *Joint Tactics, Techniques, and Procedures for Theater Nuclear Planning* (S). ~~US forces limit collateral damage consistent with employment purposes and desired effect on the target. US nuclear weapons have been designed to minimize collateral damage.~~

See CJCSI 3110.04A, Nuclear, the nuclear supplement to the JSCP*, for a more detailed discussion.*

(i) **Damage Criteria.** Damage criteria are standards identifying specific levels of destruction or materiel damage required for a particular target category. These criteria are normally levied on the executing commander by higher authority IAW national strategy and policy. Commanders must estimate the number and characteristics of the weapons and delivery systems required to achieve the level of desired damage to designated targets while minimizing undesirable collateral effects and environmental damage.

(3) **Target Selection Factors.** Combatant commanders may consider the following target selection factors to determine how to defeat individual targets. These factors help determine the appropriateness of a target for nuclear weapon employment as well as specific weapon and delivery system selection. These factors are: target hardness/ability to survive conventional strikes, size of target, geology/depth of target (for underground targets), desired level of damage, target defenses, proximity to populated areas, mobile/stationary target, potential for collateral damage. Considering these target selection factors, possible adversary ~~military forces and their means of support~~ targets are:

(a) WMD~~CBRN~~, associated delivery systems, C2, production, and logistic support units.

(b) Ground combat units, associated C2, and support units.

(c) Air defense facilities and support installations.

(d) Naval installations, combat vessels, associated support facilities, and command/control capabilities.

(e) Nonstate actors (their facilities and operation centers that possess ~~CBRN~~WMD).

(f) Underground facilities, to include nuclear storage, non-nuclear storage, and hardened ICBM missile launch control centers.

4. Integration and Employment

a. Force Integration

(1) **Nonstrategic Nuclear Force Integration.** JP 3-12.1, *Joint Tactics, Techniques, and Procedures for Theater Nuclear Planning*~~,~~ (S), provides additional guidance for theater ~~nonstrategic~~ nuclear force ~~employment~~ integration.

(2) **Conventional/Nuclear Force Integration.** Integration of conventional and nuclear forces is crucial to the overall strategy. For many contingencies, conventional capabilities meet all known requirements. Conventional capabilities may be particularly useful to limit collateral damage and danger of escalation. It must be understood how integration of nuclear and conventional forces will affect the overall strategy.

(3~~2~~) **Strategic Nuclear Force Integration.** Integration of conventional and nuclear forces is crucial to the overall strategy. For many contingencies, conventional capabilities meet all known requirements. Conventional capabilities may be particularly useful to limit collateral damage and conflict escalation. It must be understood how integration of nuclear and conventional forces will affect the overall strategy. To make the most efficient use of the nation's strategic assets and to maximize combat power, CDRUSSTRATCOM accomplishes strategic nuclear operations through the integration of US and allied strategic assets. Integration of forces exploits the full range of characteristics offered by US strategic nuclear forces to support national and regional deterrence objectives.

(a) Nuclear~~-~~-capable aircraft offer a relatively higher degree of flexibility in escalation control because they are a highly visible sign of resolve and are recallable, if necessary. Aircraft delivered weapons also provide ~~precision~~ strike capability across the ~~entire~~ range of nuclear operations.

(b) SLBM and ICBM forces offer the capability to strike high priority time-sensitive targets. Fleet ballistic missile submarines (SSBNs) offer the added characteristic of increased survivability due to their unpredictable location while underway. ~~Additionally, sending SSBNs, which are also recallable, to dispersal locations is a sign of national resolve.~~ As a sign of national resolve and readiness, the numbers of ICBMs on alert may be increased and SSBNs may be deployed to dispersal locations.

(c) Specific planning factors are considered during integration of strategic nuclear forces. These factors include prelaunch survivability, probable error in height of burst, probability to penetrate, weapons systems reliability, circular error probable, weapon system

performance characteristics, and sortie separation criteria. Equally important is the effect of adversary defense capabilities and limitations.

(42) **Offensive and Defensive Integration.** Offensive and defensive force integration is becoming increasingly important. Offensive and defensive forces are linked doctrinally and procedurally to achieve successful integration. Defensive systems include space warning, air defense warning and interceptors, ballistic missile defense (BMD) warning, and a worldwide integrated tactical warning and attack assessment (ITW/AA) system. ~~Active theater BMD interception capabilities add an additional dimension to defense capability.~~ These systems, coupled with additional passive defense measures, offer a damage limitation potential to US warfighting capabilities. Defensive and Offensive Information Operations as described in JP 3-13 expands the integration of offensive and defensive capabilities. Defensive forces can directly support offensive forces in five important areas:

(a) In a national-level application, strategic defensive systems offer the potential of improving US deterrence posture by increasing an adversary's uncertainty of achieving its attack objectives.

(b) In regional conflicts, missile defense offers some level of protection against adversaries who have acquired ballistic missile technology. Although offense is necessary for retaliation and conflict control, defense may also play an important, complementary role in nonstrategic applications (e.g., irrational actor scenarios).

(c) In an operational application, defenses allow a regional commander to consider employing offensive counterforce strikes while enhancing ~~ensuring~~ security from catastrophic results if an adversary launches a retaliatory strike while under attack.

(d) Early warning systems include an ITW/AA capability, providing the President ~~or~~ and Secretary of Defense with enough warning to maximize the survivability of US and allied forces. Deterrence is enhanced because of the increased survivability of US retaliatory forces and their associated C2.

(e) Air defenses also serve to enhance US deterrent capability by increasing an adversary's uncertainty that its weapon systems will strike their intended targets. Ensuring the survivability of US retaliatory strike capability complicates the decision processes of a potential adversary.

(53) **Planning Considerations** (see Figure II-4).

(a) **Flight Corridors.** Flight corridors must comply with international law governing airspace rights of non-hostile sovereign nations. In addition, ~~Since~~ strategic nuclear forces could occupy the same flight corridors simultaneously, affecting both ~~strategic~~ aircraft and missile flyout over friendly territory, it is imperative flight corridors are deconflicted and force employment is synchronized. Additionally, commanders must create and ensure strict adherence to flight plans through corridors that avoid potential launch sites and defense intercept areas. This planning must include using alternate landing sites and immediately

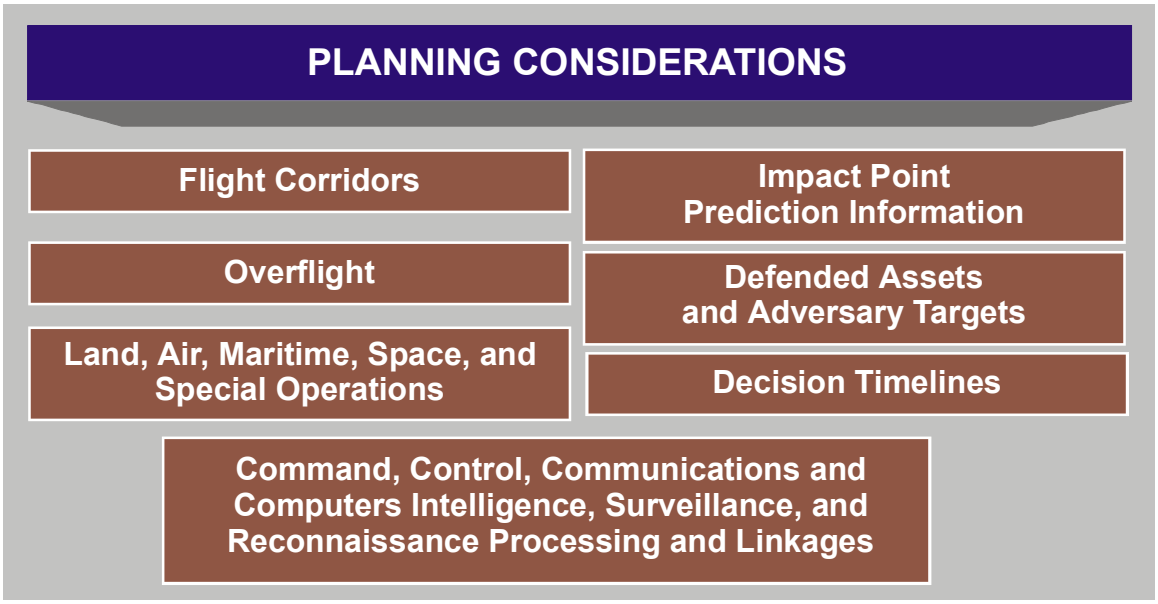

Figure II-4. Planning Considerations~~Offensive-Defensive Integration~~

identifying and transmitting alternative ingress and egress routes when friendly defenses are active. These routes must avoid areas scanned by defenses to reduce potential ~~execution against~~ engagement of friendly aircraft.

(b) **Overflight.** ICBM and SLBM flight corridors may traverse the territory and airspace of other ~~nuclear powers~~ sovereign nations only when permitted under international law. ~~Consideration must be made with regard to their response.~~ As a matter of national policy and pursuant to international law, the US respects the airspace rights of non-hostile, sovereign nations. Overflight plans must be carefully reviewed to ensure compliances with international law.

(c) **Land, Air, Maritime, and Special Operations Forces.** To the maximum extent practical, joint land, air, maritime, and special operations forces employment into or through an area with a high concentration of nuclear warheads or delivery systems should be avoided to the maximum extent practical. Conversely, nuclear weapon use in areas where friendly joint forces are operating should be carefully planned to prevent damage to friendly forces.~~Land, air, maritime, and special operations forces employment into or through an area with a high probability of adversary nuclear warheads or nuclear delivery systems must be avoided to the maximum extent practical. Operations in these areas may include high-payoff targets and have the greatest potential for nuclear detonations as the result of attack operations or defensive intercepts.~~

(d) **Impact Point Prediction (IPP) Information.** Ground, maritime, and space systems can provide the commander near real time ~~and/or near real time~~ IPP information following the launch of adversary missiles. Depending on the location of forces, the commander can use the IPP data to: move threatened forces to safer locations (time permitting)~~,~~ ~~execute intercept of adversary missiles,~~ or allow a missile to reach its predicted impact point

when the missile is expected to detonate in a noncritical area (e.g., desolate, uninhabited land or unoccupied waters).

(e) **Defended Assets and Adversary Targets.** A priority list for defended assets and adversary targets is crucial. This list helps commanders decide proper force employment as resources are expended, including execution of passive protection measures. Based on these priorities, active defenses are deployed near the highest priority resources to maintain effective execution of offensive forces. Priority lists for defended assets include protection of C4ISR~~command, control, communications, computers, and intelligence~~ nodes, supply points, transportation nodes, and population centers.

(f) **Decision Timelines.** Decision_makers are required to review and select defensive and offensive actions within severely compressed timelines~~ because of the short flight time of theater missiles and potentially increased uncertainty of mobile offensive force target locations~~. Procedures and equipment must facilitate informed decisions in this environment. Predelegated defensive engagement authority is appropriate under certain conditions to permit efficient engagement of ballistic missile threats. Early deployment of air defenses sends an unmistakable signal of US senior leadership concern and resolve, thereby maximizing the deterrent potential of these forces.

(g) **C4ISR Processing and Linkages.** Adequate C4ISR systems are required to process and provide timely warning of bomber, cruise missile, or ballistic missile attack. Processing nodes must analyze tracks of launched adversary ballistic missiles to determine intercept locations. Both offensive and defensive systems share C4ISR assets to acquire information and transmit the execution orders to the forces. ~~All~~ Critical C4ISR nodes require survivable (electromagnetic pulse [EMP]/radiation hardened, robust and redundant) communications with each other and must operate independently if adversary attacks eliminate individual nodes. In addition to providing warning of a nuclear attack and the data necessary to initiate a defensive response, defensive C4ISR systems also provide valuable information to update the offensive commander on counterforce targeting options. Furthermore, offensive and defensive C4ISR systems require full integration to provide the President and Secretary of Defense a single decision support capability across the range of military operations. This decision-making process must correlate offensive and defensive information in real time to eliminate redundant information and facilitate rapid decision-making capabilities.

b. **Employment.** Basic employment considerations are closely tied to the capabilities of assigned nuclear forces (i.e., weapons, delivery systems, and supporting systems under the COCOM of CDR USSTRATCOM and OPCON of the geographic combatant commanders). As addressed earlier, each leg of the strategic ~~nuclear~~ triad offers ~~special~~ characteristics that collectively provide a wide range of employment capabilities such as flexibility, effectiveness, survivability, and responsiveness.

(1) **Planning and Coordination.** Nuclear weapon employment is politically and militarily constrained. Senior political and military decisions, treaties, and agreements shape nuclear weapon employment doctrine. Therefore, advanced planning and coordination are crucial to effective nuclear weapon employment.

(2) **Employment Options.** Nuclear options define the type and number of weapons as well as the employment area. Options can range from the selective employment of a limited number of nuclear weapons against a carefully constrained preplanned or emerging target set to a general laydown of weapons against a larger or more diverse set of targets. An option or even a portion of an option can send a clear signal of resolve and criticality. Options that ~~which~~ are very restrictive in location and time can ensure the adversary recognizes the "signal" and therefore does not assume the United States has escalated to general nuclear war.

5. Force Readiness

a. To maintain their deterrent effect, US nuclear forces must maintain a strong and visible state of readiness. ~~Strategic n~~ Nuclear force readiness levels are categorized as operationally-deployed or responsive. These two readiness levels provide ~~strategic~~ nuclear forces responsive to potential, immediate, and unexpected threats as depicted in Figure II-5. Specific conditions for employment are provided in CJCSI 3110.04A, Nuclear, the nuclear supplement to the JSCP.

b. A certain percentage of US nuclear forces must maintain a readiness level permitting a swift response to any no-notice nuclear attack against the United States, its forces, or allies. In the event of a deteriorating military situation where there is adequate time prior to hostilities, remaining nonalert nuclear assets quickly integrate to favorably alter the strategic situation. During force employment, the goal is de-escalation or as a minimum containing the conflict at the lowest possible level and termination on terms favorable to the US and its allies.

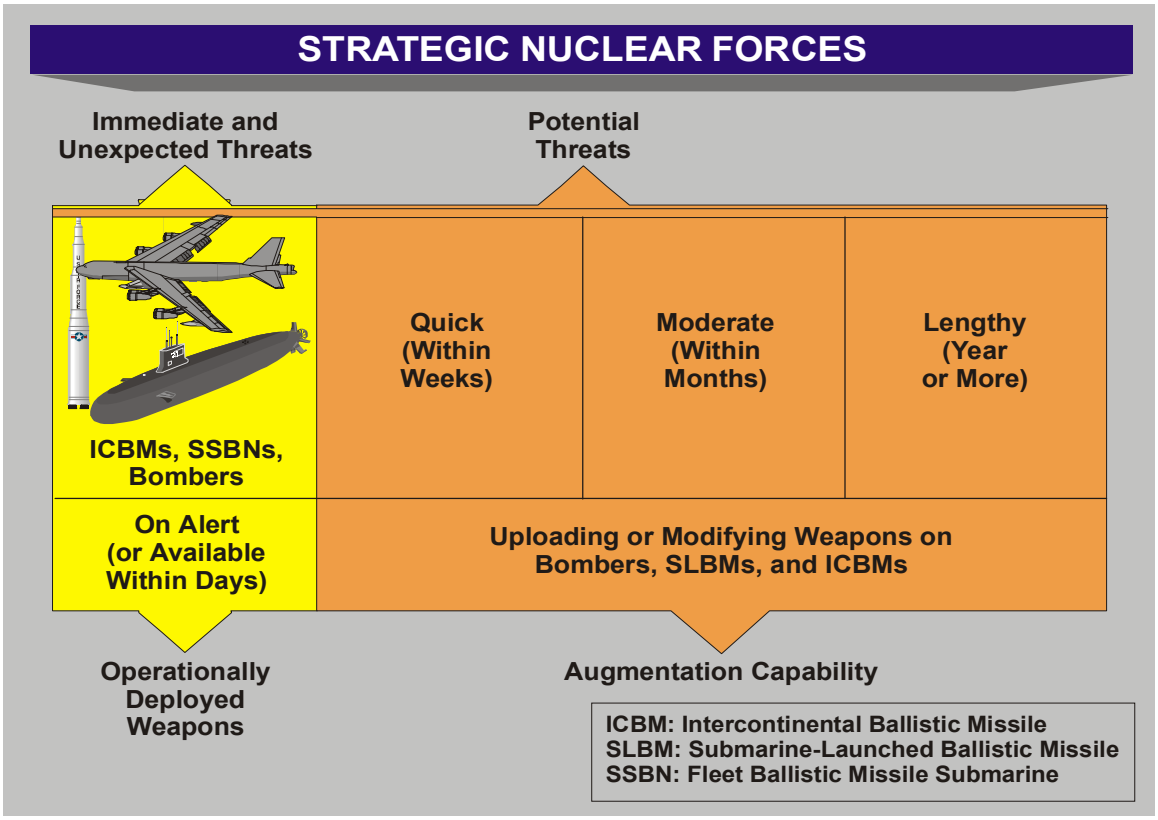

Figure II-5. Strategic Nuclear Forces

CHAPTER III
THEATER NUCLEAR OPERATIONS

"With the proliferation of nuclear, biological, and chemical weapons of mass destruction placing greater lethality in the hands of many challengers . . . the prospects are increasing that a future surprise failure of deterrence will result in an unprecedented catastrophe."

Keith Payne, *The Failures of Cold War Deterrence and a New Direction*, 2001

1. The Role of US Theater Nuclear Operations

a. **Proliferation and US Vulnerabilities.** While the end of the Cold War has lowered concerns for strategic nuclear war, proliferation of ~~CBRN~~WMD raises the danger of nuclear weapons use. There are 30 countries with various ~~CBRN~~WMD programs, including many rogue states. With continuing advances in science, information technology, and the unstoppable spread of knowledge, ~~CBRN~~WMD proliferation is likely.

(1) Future adversaries may conclude they cannot defeat US military forces and thus, if they choose war, may reason their only chance of victory is ~~CBRN~~WMD use ~~to pressure a US withdrawal or against ports and airfields to block reinforcements~~.

(2) ~~Another~~ US military operations have become ~~vulnerability inviting CBRN use is its~~ reliant~~ce~~ on computers and high-tech electronics, making global and theater military operations ~~the United States~~ much more vulnerable to the EMP effects of ~~air burst~~ nuclear weapons detonated at high altitude. An adversary may conclude that ~~J~~just one high altitude nuclear detonation could wreak enormous damage to theater and global communications, computers, and weaponry electronic components, possibly reducing ~~negating~~ the US high-tech warfare advantage.

~~*Who suspected Pearl Harbor would occur? Who suspected that Hitler would really be as dreadful as he turned out to be? You know, the worst possible case is generally worse than the imagination can imagine.*~~

~~**Paul Nitze**~~

b. **Preparation.** Responsible security planning requires preparation for threats that are possible though perhaps implausible today. The lessons of military history are clear: unpredictable, irrational wars occur. Military forces must prepare to counter weapons and capabilities that exist in the near term even if no immediate likely scenarios for war are at hand. To maximize deterrence of ~~CBRN~~WMD use, it is essential US forces prepare to use nuclear weapons effectively on the battlefield and against adversary ~~CBRN~~WMD, and that US forces appear determined to employ nuclear weapons if necessary to prevent and punish ~~CBRN~~WMD use. ~~To maximize deterrence of CBRN use, it is essential US forces plan to use nuclear weapons effectively on the battlefield and against adversary CBRN. US forces must be prepared to employ nuclear weapons if necessary to prevent and punish CBRN use.~~

c. **Theater Nuclear Weapon Use**

(1) Geographic combatant commanders may request Presidential approval for use of nuclear weapons for a variety of conditions. Amongst those conditions might be the following:

(a) An adversary using or intending to use ~~CBRN~~WMD against US/multinational/alliance forces and/or innocent civilian populations that conventional forces cannot stop.

(b) Imminent attack from adversary BWs that only nuclear weapons effects can safely destroy/incinerate (versus dispersed into atmosphere with conventional munitions).

(c) Attacks limited to adversary ~~CBRN~~WMD (e.g., against deep, hardened bunkers containing chemical or biological weapons or the C2 infrastructure required for the adversary to execute a ~~CBRN~~WMD attack) that could be employed against the United States.

(d) Counter potentially overwhelming adversary conventional forces~~,~~ to include mobile and area targets (troop concentration).

(e) Rapid and favorable war termination on US terms.

(f) Ensure success of US, coalition, and allied operations.

(g) Demonstration of US intent and capability to use nuclear weapons to deter adversary use of ~~CBRN~~WMD.

(h) Use of adversary-supplied ~~CBRN~~WMD by third party terrorist organizations against US/coalition/allied forces and/or innocent civilian populations.

(2) Use of nuclear weapons within a theater requires that nuclear and conventional plans be integrated to the greatest extent possible and that careful consideration be given to the potential impact of nuclear effects on friendly forces. JP 3-12.1, *Joint Tactics, Techniques, and Procedures for Theater Nuclear Planning (S)* provides theater planners the nuclear weapons planning data necessary to determine troop safety information such as minimum safe distances, collateral damage distances and least separation distances.

(3) ~~As the Plan Manager,~~ CDRUSSTRATCOM develops TNOs against facilities selected by the supported ~~regional~~ geographic combatant commander. CDRUSSTRATCOM provides nuclear expertise to the supported combatant commander throughout the planning process ~~to include~~:

~~(a) Preparing the WHISKEY message.~~

~~(b) Developing the TNO.~~

~~(c) Drafting the ROMEO message.~~

~~(d) Conducting required TNO maintenance.~~

(4) CDRUSSTRATCOM will coordinate all supporting component and combat support agency actions necessary and assist the supported combatant commander in understanding the effects, employment procedures, capabilities, and limitations of nuclear weapons.

2. Theater Nuclear Support Forces

Theater nuclear support may be provided by a geographic combatant commander's assigned forces, USSTRATCOM, or from another supporting Combatant Commander. Weapons in the US nuclear arsenal include: gravity bombs deliverable by Dual-Capable Aircraft (DCA) and long-range bombers; the Tomahawk Land Attack Missile/Nuclear (TLAM/N) deliverable by submarines; cruise missiles deliverable by long-range bombers; SLBM; and ICBM. These systems provide the President and the geographic combatant commander with a wide range of options that can be tailored to meet desired military and political objectives. Each system has unique advantages and disadvantages when applied in a theater nuclear support context. Specific weapon data can be found in JP 3-12.1, *Joint Tactics, Techniques, and Procedures for Theater Nuclear Planning (S).*

a. Gravity bombs deliverable by DCA and long-range bombers.

(1) Advantages

(a) Aircraft increases range (when properly supported by tankers) and provides flexibility and recall

(b) Weapons may be employed against mobile targets

(c) Various weapon yields available — from very high to very low

(d) Aircraft can be launched from the continental US

(2) Disadvantages

(a) Crew at risk in high threat environment

(b) Lead time required for planning and transit

(c) Significant combat support and ground support infrastructure may be required, depending on scenario

(d) Equipment may have to be released from other operation plan tasking

b. TLAM/N.

(1) **Advantages**

(a) Heavily defended areas may be penetrated without risk to crew

(b) Highly mobile platforms in international waters may serve as launch sites

(c) Weapons are highly accurate

(d) Launching platform is recallable

(e) Basing issues simplified; overflight of third party nations alleviated (depending on launch location)

(f) Maximum stealth and surprise can be maintained prior to launch

(2) **Disadvantages**

(a) Weapons not recallable in flight

(b) Lead time required to generate and transit needed to desired launch point

(c) System may be vulnerable to modern air defense systems

(d) Terrain factors limit employment flexibility

(e) Weapon yield may be too large for certain theater targets

(f) Launch platform must receive updated data transfer device in order to update a mission plan

c. **Cruise missiles launched from long-range bombers.**

(1) **Advantages**

(a) Weapon can penetrate heavily defended area without risk to crew

(b) Weapon can be launched from international airspace

(c) Bomber aircraft range is significant

(d) Weapon system is recallable prior to launch from bomber

(2) **Disadvantages**

(a) Weapon yield may be too large for certain theater targets

(b) System may have to be released from OPLAN 8044 commitment

(c) Missile is not recallable in flight

(d) System may be vulnerable to modern air defense systems

(e) Terrain factors limit employment flexibility

d. **SLBMs**.

(1) **Advantages**

(a) Weapon can penetrate heavily defended areas without risk to crew

(b) Weapon can be launched in international waters

(c) Weapon can be on target in minimal time

(d) Maximum stealth and surprise can be maintained prior to launch

(e) System provides flexible targeting capability

(f) Weapon has multiple warheads

(2) **Disadvantages**

(a) Weapon yield may be too large for certain theater targets

(b) Multiple warheads present more planning challenges

(c) Missile is not recallable in flight

(d) System must be released from OPLAN 8044 commitment

e. **ICBMs.**

(1) **Advantages**

(a) Weapon can penetrate heavily defended areas without risk to crew

(b) Weapon can be on target in minimal time

(c) Planning time is short

(d) Weapon has multiple warheads

(2) **Disadvantages**

(a) Weapon yield may be too large for certain theater targets

(b) System requires release from OPLAN 8044 commitment

(c) Missile is not recallable

(d) Booster may fall on US or Canadian territory

(e) Multiple warheads present more planning challenges

32. Command, Control, and Coordination

a. **Command and Control.** The geographic combatant commander is responsible for requesting nuclear support. The commander must ascertain the military situation, assess intelligence inputs, pass information and conclusions to higher levels of control, and upon receipt of execution instructions, control assigned forces to achieve the desired objectives. Subordinate commanders responsible for target nominations submit requests to the geographic combatant commander.

(1) Execution procedures are flexible and allow for changes in the situation. Commanders ensure constraints and release guidance are clearly understood. The commander controlling the nuclear strike package must maintain communications with the delivery unit and establish a chain of succession that maintains connectivity in case of HQ destruction. CDRUSSTRATCOM relays through a secure communications channel to ~~provides~~ the supported geographic combatant commanders the authority for the expenditure of nuclear weapons following Presidential authorization. Command and control and coordination must be flexible enough to allow the theater commander to strike time-sensitive targets such as missile launch platforms. Procedures must be well rehearsed so as to compress the time required between the decision to strike and actual strike. *Note that EUCOM has a unique nuclear command and control relationship with Supreme Headquarters Allied Powers Europe.*

(2) Operations with multinational forces require multinational doctrine and procedures for taskings, conflict resolution, target selection, and analysis. The US combatant ~~ponent~~ commander in a multinational command provides guidance and publishes directives on the use of nuclear weapons by US forces in such commands.

(3) The Nuclear Supplement to the JSCP describes situations that could lead to a request for the selective release of nuclear weapons. The commander's request must contain sufficient information to ensure complete understanding of the situation at the highest level of government.

Theater nuclear support is thoroughly coordinated among CDRUSSTRATCOM, the Services components, and the geographic combatant commander to ensure unity of effort.

b. **Support Coordination.** Nuclear support is coordinated through geographic combatant commander and/or subordinate JFC channels. US Air Force or Navy delivery systems can provide nuclear support to Army or Marine Corps operations. Coordination with the Air Force component is through the air operations center by the collocated Army battlefield coordination element. Coordination with the Navy and Marine Corps components is through the naval and amphibious liaison element. Coordination with special operations forces is through the special operations liaison element. When assisting in the preparations of nuclear support plans, CDRUSSTRATCOM coordinates with supporting Service components and the geographic combatant commander to avoid fratricide and promote unity of effort. USSTRATCOM planners require input from Service experts on the theater or joint task force staffs to ensure appropriate weapon yields, delivery methods, and safe delivery routing. Targeting conflicts are resolved with direct consultations between the supporting and supported combatant commander's staffs. CDRUSSTRATCOM will deploy a strategic support team~~Theater Planning Response Cell (TPRC),~~ familiar with the theater, to the supported combatant commander to provide nuclear planning and ~~CBRN~~WMD expertise. The~~ TPRC~~ strategic support team will ~~include~~ provide a consequence of execution and hazard prediction analysis to the supported combatant commander. The consequence of execution analysis provides the decision maker with an estimate of collateral effects during the expenditure of nuclear weapons.

4~~3~~. Planning

a. When directed by the President and Secretary of Defense, JFCs plan for nuclear weapon employment in a manner consistent with national policy and strategic guidance. The Chairman of the Joint Chiefs of Staff, in coordination with the Commander, USSTRATCOM, and

appropriate supporting combatant commanders, initiates crisis action planning ~~(CAP)~~ procedures contained in CJCSI 3110.04A, *Nuclear*, the nuclear supplement to the JSCP and the appropriate Commander, USSTRATCOM, support plans. Geographic combatant commander OPLANs and Chairman of the Joint Chiefs of Staff EAPs provide additional guidance. Nuclear operations planning is integrated into theater plans to maximize effects needed.

(1) **Theater Planning.** Geographic combatant commanders are responsible for defining theater objectives and developing nuclear plans required to support those objectives, including selecting targets. When tasked, CDRUSSTRATCOM, as the supporting combatant commander, provides detailed planning support to meet theater strategy during crisis action, adaptive, and deliberate planning. All theater nuclear option planning follows prescribed Joint Operation Planning and Execution System ~~(JOPES)~~ procedures to formulate and implement an effective response within the timeframe permitted by the crisis. Since options do not exist for every scenario, combatant commanders must have a capability to plan and execute nuclear options for nuclear forces generated on short notice during crisis and emergency situations. Adaptive planning addresses emerging targets during either deliberate or crisis action planning. Adaptive planning provides the capability to develop new options, or modify existing options, when current limited or major response options are inappropriate. The supported commander defines the desired operational effects, and with USSTRATCOM assistance, develops COAs to achieve those effects (e.g., disrupt, delay, disable, or destroy).

(2) As a supporting combatant commander, ~~Commander,~~ CDRUSSTRATCOM provides theater planning support to the supported geographic combatant commander through deployment of a strategic support team and detailed target analysis, development, weaponeering, and mission planning/analysis as depicted in Figure III-1. The geographic combatant commander continually monitors theater events and recommends (nominates) targets supporting theater strategy, based on military objectives that support the national security strategy. Geographic combatant commanders consider many factors when implementing theater strategy including alternative means to accomplish objectives, likelihood and acceptability of probable adversary response on the United States or its allies, relationship to US vital interests, treaty commitments, diplomatic agreements, nuclear weapon effects to include estimated adversary fatalities as well as environmental impacts, ~~those~~ effects beyond the target country, and allied and coalition perception and possible reactions to nuclear strikes.

(3) Successful integration of conventional and nuclear forces is crucial to fulfilling overall theater strategy. Nuclear operations in the theater may require a significant conventional support package that addresses concerns such as aerial refueling and nuclear weapons recovery. Geographic combatant commanders and staffs evaluate the impact of force allocation for conventional and nuclear operations. Combatant commanders must comprehend how nuclear and conventional forces interact and how nuclear missions ~~affect~~ support the conduct of the entire campaign ~~plan and, ultimately, theater strategy~~.

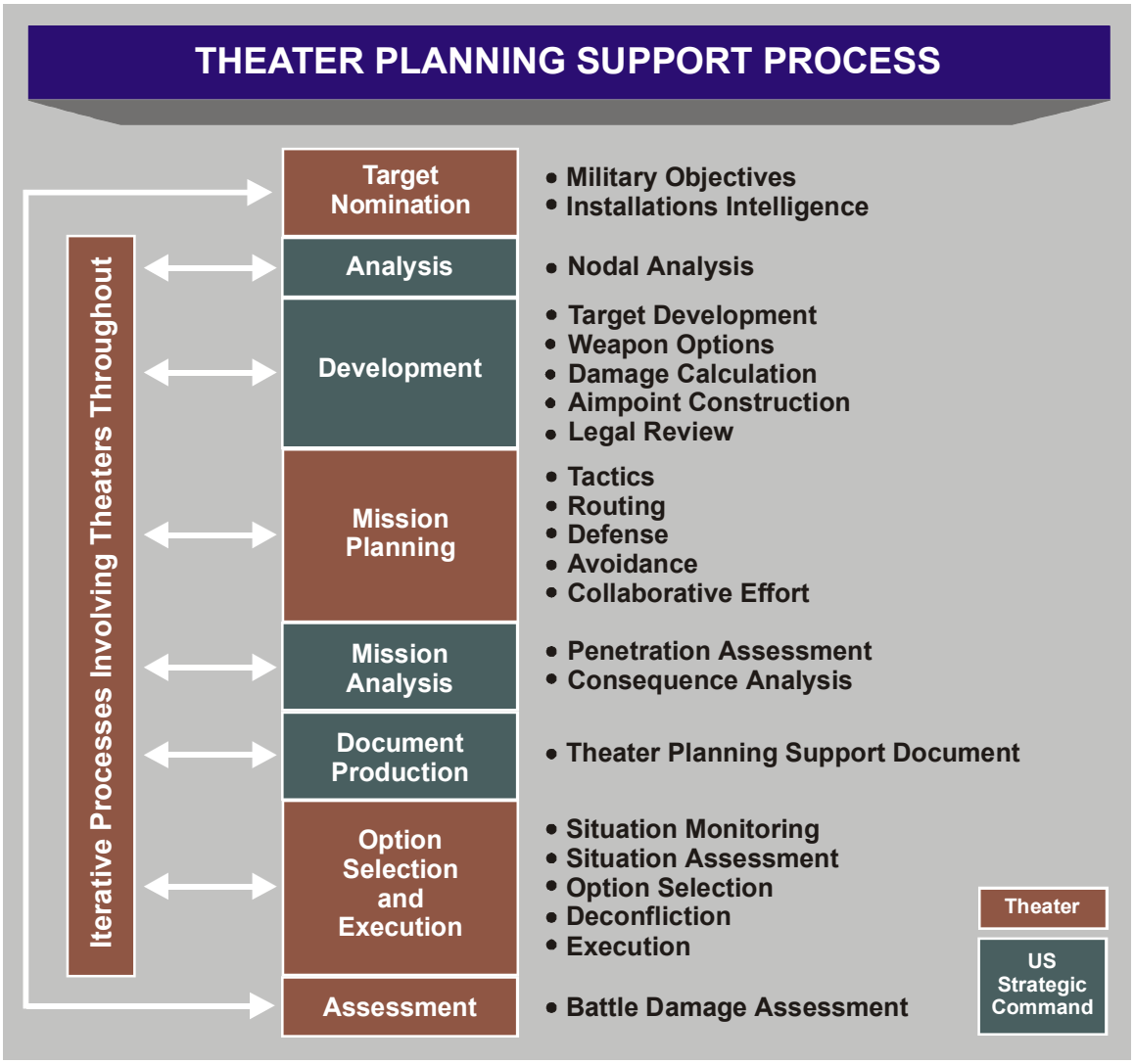

Figure III-1. Theater Planning Support Process

b. Nuclear w~~W~~eapons and nuclear weapon systems may be deployed into theaters, but geographic combatant commanders have no authority to employ them until specifically granted by the President. There are seven elements to control and constrain theater nuclear weapons use:

(1) A decision to use nuclear weapons.

(2) The number, type, and yields of weapons.

(3) Types of targets to be attacked.

(4) Geographical area for employment.

(5) Timing and duration of employment.

(6) Damage constraints.

(7) Target analysis.

c. When requesting or tasked with nuclear planning requirements, the geographic combatant commander is responsible for defining theater objectives, selecting specific targets and targeting objectives, and developing the OPLANs required to support those objectives. Theater nuclear forces and planning are closely coordinated with nuclear supporting forces and the supported conventional forces to ensure unity of effort. The intent is to facilitate timely consideration and refinement in a crisis and to facilitate the development and generation of new adaptively planned nuclear options.

54. Continued Operations After Weapons of Mass Destruction~~Chemical, Biological, Radiological, or Nuclear~~ Use

a. ~~Beyond t~~The effects of nuclear weapons on the battlefield and the casualties caused by ~~CBRN~~WMD weapons~~, they also~~ can produce casualties from the psychological stress and effect of their use. Training can help counter fear and uncertainty concerning exposure and future use of ~~CBRN~~WMD weapons. Better defenses and shielding are also critical in protecting and improving the effectiveness of surviving forces.

Additional information on shielding and NBC defense can be found in JP 3-11, Joint Doctrine for Operations in Nuclear, Biological and Chemical (NBC) Environments, and Service publications.

b. US~~, allied,~~ and multinational forces must prepare for further operations under conditions ranging from continued ~~CBRN~~WMD use to a resumption of conventional means only. The demonstrated ability of US forces to survive and to sustain successful combat operations in a ~~CBRN~~WMD environment presents a stronger deterrent force to potential US adversaries. The US must be prepared to fight and win on a contaminated battlefield following an adversary's or friendly ~~CBRN~~WMD attack or US offensive nuclear strike.

APPENDIX AB
REFERENCES

The development of JP 3-12 is based upon the following primary references:

1. CJCSI 3110.04A, *Nuclear Supplement to JSCP.*

2. JP 0-2, *Unified Action Armed Forces (UNAAF).*

3. JP 1-02, *DOD Dictionary of Military and Associated Terms.*

4. JP 2-0, *Joint Doctrine for Intelligence Support to Operations.*

5. JP 2-01.1, *Tactics, Techniques, and Procedures for Intelligence Support to Targeting.*

6. JP 3-0, *Doctrine for Joint Operations.*

~~6. JP 3-01 series.~~

7. JP 3-01, *Joint Doctrine for Countering Air and Missile Threats.*

8. JP 3-01.1, *Aerospace Defense of North America.*

9. JP 3-01.5, *Doctrine for Joint Theater Missile Defense.*

10. JP 3-11, *Joint Doctrine for Operations in Nuclear, Biological, and Chemical (NBC) Environments.*

11. JP 3-12.1, *Joint Tactics, Techniques, and Procedures for Theater Nuclear Planning.*

12. JP 3-40, *Counterproliferation.*

13. JP 3-60, *Joint Doctrine for Targeting.*

14. Joint Strategic Capabilities Plan—Annex C *(Nuclear).*

15. Law of Armed Conflict.

16. National Defense Authorization Act for FY 2001.

17. National Military Strategy Document—Annex B *(Nuclear).*

18. National Security Presidential Directive-17/Homeland Security Presidential Directive-4, *National Strategy to Combat Weapons of Mass Destruction,* December 2002.

19. NATO Standardization Agreement 2140, *Friendly Nuclear Strike Warning.*

20. Nuclear Posture Review Report to Congress, December, 2001.

21. NUWEP, *Guidance for the Employment of Nuclear Weapons.*

22. Operation Plan 8044 Revision 03~~Single Integrated Operational Plan -(Year) (Basic)~~.

23. Presidential Nuclear Initiatives.

24. Quadrennial Defense Review Report, September 30, 2001.

25. Section 1033 of FY 2002 Defense Authorization Act (Public Law 107-107).

26. Section 1041 and 1042 of the Floyd D. Spence National Defense Authorization Act (Public Law 106-398).

27. Weaver, Greg, and J. David Glaes, *Inviting Disaster: How Weapons of Mass Destruction Undermine U.S. Strategy for Projecting Military Power*, Mclean, VA: AMCODA Press, 1997.

APPENDIX BC
ADMINISTRATIVE INSTRUCTIONS

1. User Comments

Users in the field are highly encouraged to submit comments on this publication to: Commander, United States Joint Forces Command, Joint Warfighting Center Code JW100, 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 USSTRATCOM. The Joint Staff doctrine sponsor for this publication is the Director for Plans (J-5).

3. Supersession

This publication supersedes JP 3-12, 15 December 1995, *Doctrine for Joint Nuclear Operations*, and JP 3-12.1, 9 February 1996, *Doctrine for Joint Theater Nuclear Operations*.

4. Change Recommendations

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

TO: JOINT STAFF WASHINGTON DC//J5/J7-JDETD//

Routine changes should be submitted to the Director for Operational Plans and Joint Force Development (J-7), JDETD, 7000 Joint Staff, Pentagon, Washington, DC 20318-7000, with info copies to the USJFCOM JWFC.

b. When a Joint Staff directorate submits a proposal to the Chairman of the Joint Chiefs of Staff 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 Military Services and other organizations are requested to notify the Director, J-7, Joint Staff, when changes to source documents reflected in this publication are initiated.

c. Record of Changes:

CHANGE NUMBER	COPY NUMBER	DATE OF CHANGE	DATE ENTERED	POSTED BY	REMARKS

5. Distribution

a. Additional copies of this publication can be obtained through Service publication centers listed below (initial contact) or the USJFCOM JWFC in the event that the joint publication is not available from the Service.

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

c. Additional copies should be obtained from the Military Service assigned administrative support responsibility by DOD Directive 5100.3, 15 November 1999, *Support of the Headquarters of Unified, Specified, and Subordinate Joint Commands*.

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GLOSSARY
PART I — ABBREVIATIIONS AND ACRONYMS

BMD	ballistic missile defense
BW	biological weapon
C2	command and control
C4ISR	command, control, communications, computers, intelligence, surveillance, and reconnaissance
~~CBRN~~	~~chemical, biological, radiological, or nuclear~~
CJCS	Chairman of the Joint Chiefs of Staff
CJCSI	Chairman of the Joint Chiefs of Staff ~~I~~instruction
COA	course of action
COCOM	combatant command (command authority)
DOD	Department of Defense
EAP	emergency action procedures
EMP	electromagnetic pulse
FY	fiscal year
HQ	headquarters
IAW	in accordance with
ICBM	intercontinental ballistic missile
IPP	impact point prediction
ITW/AA	integrated tactical warning and attack assessment
JFC	joint force commander
JP	joint publication
JSCP	Joint Strategic Capabilities Plan
LOAC	law of armed conflict
~~NBC~~	~~nuclear, biological, and chemical~~
NPR	Nuclear Posture Review
~~NUWEP~~	~~Policy Guidance for the Employment of Nuclear Weapons~~
OPLAN	operation plan
QDR	Quadrennial Defense Review
SLBM	submarine-launched ballistic missile
SSBN~~M~~	fleet ballie~~s~~tic missile submarine
~~START~~	~~Strategic Arms Reduction Treaty~~
STRIK~~E~~WARN	Friendly Nuclear S~~s~~trike W~~w~~arning

TNO	theater nuclear option
TPRC	theater planning response cell
US	United States
USSTRATCOM	United States Strategic Command
WMD	weapons of mass destruction

PART II — TERMS AND DEFINITIONS

~~allocation~~ apportionment (nuclear). The apportionment of specific numbers and types of nuclear weapons to a commander for a stated time period as a planning factor for use in the development of ~~war~~ operation plans. (Additional authority is required for the actual deployment of allocated weapons to locations desired by the commander to support the ~~war~~ operation plans. Expenditures of these weapons are not authorized until released by proper authority.) (Upon approval of this revision, this term and its definition will modify the existing term and its definition and will be included in JP 1-02.)

augmentation capability.~~responsive force.~~ A force intended to address potential contingencies. The ability to reinforce in a timely and efficient manner the operationally deployed force ~~with warheads from the responsive force~~ will contribute to the deterrence of challenges and the dissuasion of arms competition. (Upon approval of this revision, this term and its definition will be included in JP 1-02.)

circular error probable. An indicator of the delivery accuracy of a weapon system, used as a factor in determining probable damage to a target. It is the radius of a circle within which half of a missile's projectiles are expected to fall. (JP 1-02)

Collateral Damage Distance. The minimum distance that a desired ground zero must be separated from civilian personnel and materiel to ensure with a 99 percent assurance that a 5 percent incidence of injuries or property damage will not be exceeded. For more information see JP 3-12.1, *Joint Tactics, Techniques, and Procedures for Theater Nuclear Planning (S).*

command, control, communications, and computer systems. Integrated systems of doctrine, procedures, organizational structures, personnel, equipment, facilities, and communications designed to support a commander's exercise of command and control across the range of military operations. Also called C4 systems. (JP 1-02)

counterforce targeting. The employment of strategic air and missile forces in an effort to destroy, or render impotent, selected military capabilities of an ~~enemy~~ adversary force under any of the circumstances by which hostilities may be initiated. (Upon approval of this revision, this term and its definition will modify the existing term and its definition and will be included in JP 1-02.)

~~countervalue~~ critical infrastructure targeting. Strategy directing the destruction or neutralization of selected ~~enemy~~ adversary military and military related activities, such as industries, resources, and institutions that contribute to the ~~enemy~~ adversary's ability to wage war. (Upon approval of this revision, this term and its definition will be included in JP 1-02.)

crisis. An incident or situation involving a threat to the United States, its territories, citizens, military forces, possessions, or vital interests that develops rapidly and creates a condition

of such diplomatic, economic, political, or military importance that commitment of US military forces and resources is contemplated in order to achieve national objectives. (JP 1-02)

cross-targeting (nuclear). The layering of weapons from different delivery platforms to increase the probability of target damage or destruction. (JP 1-02)

denial measure. An action to hinder or deny the ~~enemy~~ adversary the use of space, personnel, or facilities. It may include destruction, removal, contamination, or erection of obstructions. (Upon approval of this revision, this term and its definition will modify the existing term and its definition and will be included in JP 1-02.)

deployed nuclear weapons. 1. When used in connection with the transfer of weapons between the Department of Energy and the Department of Defense, this term describes those weapons transferred to and in the custody of the Department of Defense. 2. Those nuclear weapons specifically authorized by the Joint Chiefs of Staff to be transferred to the custody of the storage facilities or carrying or delivery units of the Armed Forces. (JP 1-02)

desired ground zero. The point on the surface of the Earth at, or vertically below or above, the center of a planned nuclear detonation. Also called DGZ. (JP 1-02)

deterrence. The prevention from action by fear of the consequences. Deterrence is a state of mind brought about by the existence of a credible threat of unacceptable counteraction. (JP 1-02)

dual-capable aircraft. Allied and US fighter aircraft tasked and configured to perform either conventional or theater nuclear missions. Also called DCA. (JP 1-02)

electromagnetic pulse. The electromagnetic radiation from a strong electronic pulse, most commonly caused by a nuclear explosion that may couple with electrical or electronic systems to produce damaging current and voltage surges. Also called EMP. (JP 1-02)

hold at risk. The ability to threaten to attack that generates a desired effect or level of damage against that which ~~what~~ the ~~enemy~~ adversary values. (Upon approval of this revision, this term and its definition will be included in JP 1-02.)

Least Separation Distance (LSD). The minimum distance that a desired ground zero must be separated from an object to ensure no more than a 10 percent incidence of damage or obstacles with 99 percent assurance. For more information see JP 3-12.1, *Joint Tactics, Techniques, and Procedures for Theater Nuclear Planning (S).*

Minimum Safe Distance. It is the distance from desired ground zero at which a specific degree of personnel risk and vulnerability will not exceeded with a 99 percent assurance. For more information see JP 3-12.1, *Joint Tactics, Techniques, and Procedures for Theater Nuclear Planning (S).*

multiple independently ~~-~~targetable reentry vehicle. A reentry vehicle carried by a delivery system that can place one or more reentry vehicles over each of several separate targets. Also called MIRV. (JP 1-02)

nonstrategic nuclear forces. Those nuclear-capable forces located in an operational area with a capability to employ nuclear weapons by land, sea, or air against opposing forces, supporting installations, or facilities. Such forces may be employed, when authorized by competent authority, to support operations that contribute to the accomplishment of the commander's mission within the ~~theater of operations~~ operational area. (Upon approval of this revision, this term and its definition will modify the existing term and its definition and will be included in JP 1-02.)

nuclear coordination. A broad term encompassing all the actions involved with planning nuclear strikes, including liaison between commanders, for the purpose of satisfying support requirements or because of the extension of weapons effects into the territory of another. (JP 1-02)

nuclear planning system. A system composed of personnel, directives, and electronic data processing systems to directly support geographic nuclear combatant commanders in developing, maintaining, and disseminating nuclear operation plans. (JP 1-02)

nuclear strike warning. A warning of impending friendly or suspected ~~enemy~~ adversary nuclear attack. (Upon approval of this revision, this term and its definition will modify the existing term and its definition and will be included in JP 1-02.)

nuclear weapon. A complete assembly (i.e. implosion type, gun type, or thermonuclear type), in its intended ultimate configuration which, upon completion of the prescribed arming, fusing, and firing sequence, is capable of producing the intended nuclear reaction and release of energy. (JP 1-02)~~A nuclear warhead and its necessary arming, fuzing, and firing components required to produce a nuclear yield. (Upon approval of this revision, this term and its definition will be included in JP 1-02.)~~

operationally deployed nuclear weapons. Nuclear weapons that are on operational ballistic missiles or bombers or in bomber base weapon storage. Operationally deployed weapons are for immediate and unexpected threats. (Upon approval of this revision, this term and its definition will be included in JP 1-02.)

prelaunch survivability. The probability that a delivery and/or launch vehicle will survive an enemy attack under an established condition of warning. (JP 1-02)

probability to penetrate. Depth that projectile and/or missile fuzes may be expected to penetrate as often as not. (Upon approval of this revision, this term and its definition will be included in JP 1-02.)

probable error height of burst. Error in height of burst that projectile and/or missile fuzes may be expected to exceed as often as not. (JP 1-02)

proliferation (nuclear weapons). The process by which one nation after another comes into possession of, or into the right to determine the use of, nuclear weapons; each nation becomes potentially able to launch a nuclear attack upon another nation. (JP 1-02)

residual forces. Unexpended portions of the remaining United States forces that have an immediate combat potential for continued military operations, and that have been deliberately withheld from utilization. (JP 1-02)

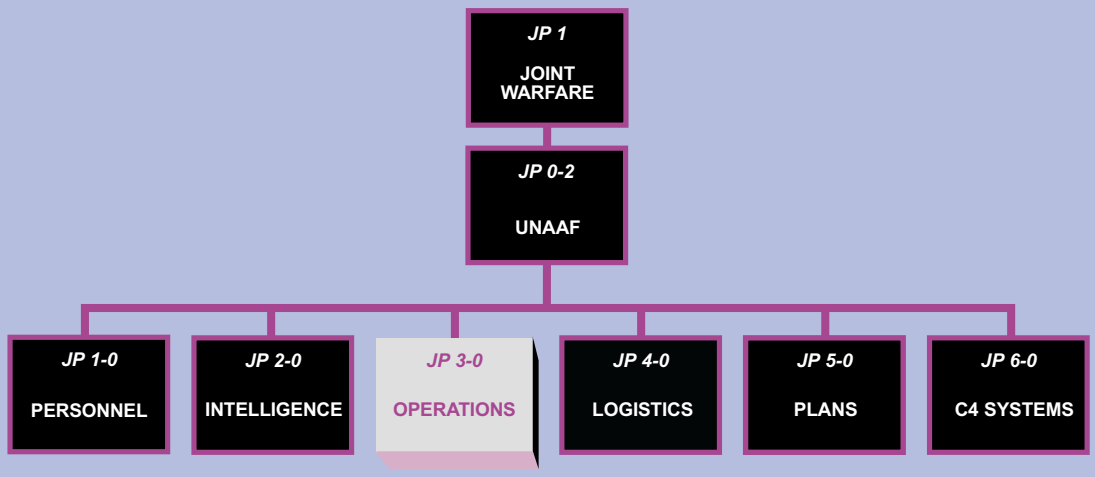
strategic nuclear forces. Those nuclear-capable forces with a capability to employ nuclear weapons by land, sea, or air forces against opposing forces, supporting installations, or facilities. Such forces may be employed, when authorized by competent authority, to support operations that establish national and multinational military objectives. (Upon approval of this revision, this term and its definition will be included in JP 1-02.)

theater missile. A missile, which may be a ballistic missile, a cruise missile, or an air-to-surface missile (not including short-range, non-nuclear, direct fire missiles, bombs, or rockets such as Maverick or wire-guided missiles), whose target is within a given theater of operation. Also called TM. (JP 1-02)

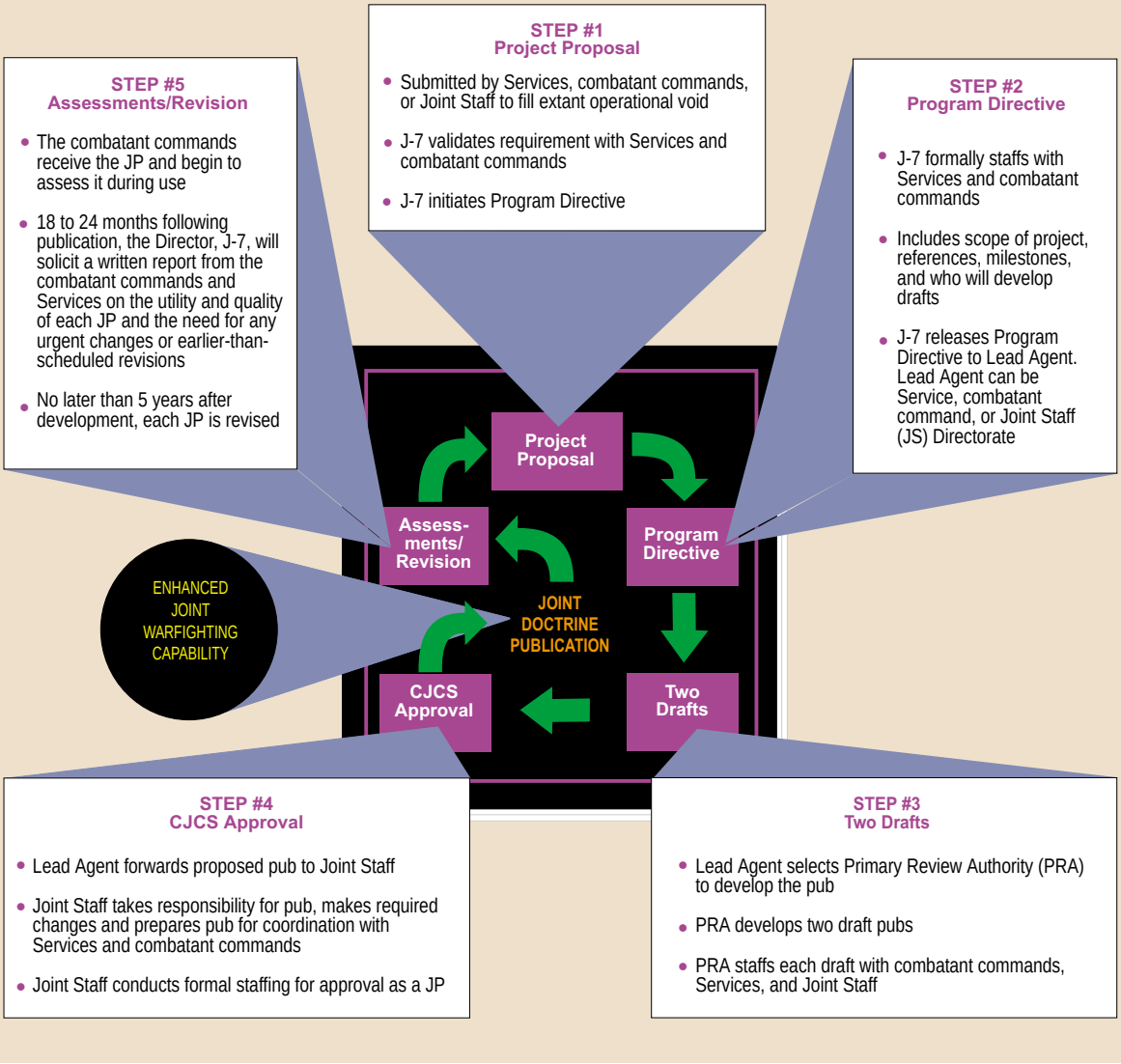
weapons of mass destruction. Weapons that are capable of a high order of destruction and/or of being used in such a manner as to destroy large numbers of people. Weapons of mass destruction can be high explosives or nuclear, biological, chemical, and radiological weapons, but exclude the means of transporting or propelling the weapon where such means is a separable and divisible part of the weapon. Also called WMD. (JP 1-02)

withhold (nuclear). The limiting of authority to employ nuclear weapons by denying their use within specified geographical areas or certain countries. (JP 1-02)

JOINT DOCTRINE PUBLICATIONS HIERARCHY



All joint doctrine and tactics, techniques, and procedures are organized into a comprehensive hierarchy as shown in the chart above. **Joint Publication (JP) 3-12** is in the Operations series of joint doctrine publications. The diagram below illustrates an overview of the development process:

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