Joint Publication 3-12

Doctrine for Joint Nuclear Operations

Final Coordination (2)
15 March 2005

PREFACE

1. Scope

This publication provides guidelines for the joint employment of forces in nuclear operations. It provides guidance for the employment of US nuclear forces; 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 joint doctrine to govern the activities and performance of the Armed Forces of the United States in operations and provides the doctrinal basis for interagency coordination and for US military involvement in multinational operations. It provides military guidance for the exercise of authority by combatant commanders and other joint force commanders (JFCs) and prescribes joint doctrine for operations and training. It provides military guidance for use by the Armed Forces in preparing their appropriate plans. It is not the intent of this publication to restrict the authority of the JFC from organizing the force and executing the mission in a manner the JFC deems most appropriate to ensure unity of effort in the accomplishment of the overall objective.

3. Application

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

b. The guidance in this publication is authoritative; as such, this doctrine will be followed except when, in the judgment of the commander, exceptional circumstances dictate otherwise. If conflicts arise between the contents of this publication and the contents of Service publications, this publication will take precedence unless the 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:

NORTON A. SCHWARTZ
Lieutenant General, USAF
Director, Joint Staff

SUMMARY OF CHANGES

REVISION OF JOINT PUBLICATION 3-12, DATED 15 DECEMBER 1995

- **Contains discussion of both strategic and theater and nuclear operations**
- **Covers the purpose of United States nuclear forces**
- **Revises the discussion of nuclear weapons use across the range of military operations**
- **Provides an updated and expanded discussion of nuclear operations**
- **Introduces the joint targeting cycle process to nuclear operations**
- **Updates employment and force integration considerations**
- **Adds an entire chapter on theater nuclear operations**

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EXECUTIVE SUMMARY
COMMANDER'S OVERVIEW

- **Covers Nuclear Force Fundamentals**
- **Discusses Nuclear Operations**
- **Covers Theater Nuclear Operations**

Nuclear Force Purpose and Principles

The US defense strategy serves the national objective of peace with prosperity.

The US defense strategy aims to achieve **four key goals** that guide the development of US forces capabilities, their development and use: assuring allies and friends of the **US steadfastness of purpose** and its capability to fulfill its security commitment; **dissuading adversaries** from undertaking programs or operations that could threaten US interests or those of our allies and friends; **deterring aggression and coercion** by deploying forward the capacity to swiftly defeat attacks and imposing sever penalties for aggression on an adversary's military capability and supporting infrastructure; and, **decisively defeating** an adversary if deterrence fails.

2001 Nuclear Posture Review.

The **2001 Nuclear Posture Review** (NPR) constituted the first comprehensive review of nuclear forces since 1994. 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. 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 recognizes the unpredictable security environment and responds to US strategic deterrence objectives and force capability requirements.

The new triad.

The new triad offers a mix of strategic offensive and defensive capabilities that includes 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. Enhanced command and control (C2), intelligence, and adaptive planning capabilities support the new triad. The new triad provides a deterrence posture suitable for the emerging threat environment; it incorporates post-Cold War advances in defensive and nonnuclear capabilities;

and, it provides additional military options that are credible to adversaries and reassuring to allies.

Fundamental Considerations

Deterrence. Strategic deterrence is defined as the prevention of adversary aggression or coercion that threatens vital interests of the United States and/or our national survival. **Strategic deterrence convinces adversaries not to take grievous courses of action by means of decisive influence over their decision making.**

Deterrence broadly represents the manifestation of a potential adversary's decision to forego actions that he would otherwise attempt. Diplomatically, the central focus of deterrence is for one nation to exert such influence over a potential adversary's decision-making process that the potential adversary makes a deliberate choice to refrain from a course of action. **The focus of US deterrence efforts is therefore to influence potential adversaries to withhold actions intended to harm US' national interests.** Such a decision is based on the adversary's perception of the benefits of various courses of action compared with an estimation of the likelihood and magnitude of the costs or consequences corresponding to these courses of action. It is these adversary perceptions and estimations that US deterrent actions seek to influence. Potential adversary decision making in the face of US deterrent actions is also influenced by their strategic culture, idiosyncrasies of decision mechanisms and the leader's decision style, and leadership risk tolerance.

Declaratory Policy. **The US does not make positive statements defining the circumstances under which it would use nuclear weapons.** Maintaining US ambiguity about when it would use nuclear weapons helps create doubt in the minds of potential adversaries, deterring them from taking hostile action. This calculated ambiguity helps reinforce deterrence. If the US clearly defined conditions under which it would use nuclear weapons, others might infer another set of circumstances in which the US would not use nuclear weapons. This perception would increase the chances that hostile leaders might not be deterred from taking actions they perceive as falling below that threshold.

Force Capabilities. **Real force capabilities, US national determination to use them, and a potential adversary's perception of both the capabilities and the will to use them contribute to the effectiveness 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 may not know with confidence what threats a state, combinations of states, or nonstate actors pose to US interests, it is possible to anticipate the capabilities an adversary might use. Developing and sustaining a modern and diverse portfolio of military capabilities serves the four key defense policy goals, identified earlier, that guide the development, deployment, and use of military forces and capabilities, including nuclear forces.

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 force capabilities, and alternative employment options. The use of nuclear weapons represents a significant escalation from conventional warfare and may be provoked by some action, event, or threat. However, like any military action, **the decision to use nuclear weapons is driven by the political objective sought**. This choice involves many political considerations, all of which impact nuclear weapon use, the types and number of weapons used, and method of employment.

International Reaction.

International reaction toward the country or nonstate entity that first employs weapons of mass destruction (WMD) is an important political consideration. The United States and its allies articulated their abhorrence of unrestricted warfare by codifying "laws of war," and turning to definitions of "just war." The tremendous destructive capability of WMD and the consequences of their use resulted in a number of agreements 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 prohibits nations from employing nuclear weapons in armed conflict.**

The Law of Armed Conflict.

The principle of proportionality requires that the anticipated loss of civilian life and damage to civilian property incidental to attacks must not be excessive in relation to the concrete and direct military advantage expected to be gained. Commanders therefore have the responsibility to attempt to minimize collateral damage to the greatest extent practicable. **The law of armed conflict does not prohibit nuclear weapons use in armed conflict** although they are unique from conventional and even other WMD in the scope of their destructive potential and long-term effects.

Nuclear Operations

There are four critical elements of strategic and theater nuclear operations.

The critical elements of strategic and theater nuclear operations include detailed command relationships, command responsibilities, and C2 actions; integrated planning and targeting; employment and force integration; and combat readiness.

Detailed command relationships, command responsibilities, and command and control actions.

National policy requires a single execution and termination authority for the use of nuclear weapons. **The President retains sole authority for the employment and termination of nuclear weapons.** 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 transmitted over reliable, secure, and survivable communications systems** ensures critical orders are received for execution, increases survivability, and reduces vulnerability of C2 systems across the range of military operations. The **Commander, US Strategic Command, 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. Circumstantially, geographic combatant commanders may be assigned operational control over US Strategic Command nuclear-capable forces employed for nuclear operations in support of theater conflicts.

Integrated planning and targeting.

Detailed planning is key to the execution of strategic nuclear operations. The President, Secretary of State, and Chairman of the Joint Chiefs of Staff each provide guidance for nuclear weapon planning. 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. 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.

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 that strategic forces are fully capable of responding to any new threats that might

arise. Strategic planners must also be prepared to conduct **crisis action planning** in those cases where adaptable, deliberate plans do not exist.

Targeting is the process of selecting and prioritizing targets and matching the appropriate response to them, taking into account operational requirements and capabilities. As nonnuclear strike capabilities and nuclear strike are integrated, targets that may have required a nuclear weapon to achieve the needed effects in previous planning may be targeted with conventional weapons, provided the required effects can be achieved.

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: commander's objectives, guidance, and intent; target development, validation, nomination, and prioritization; capabilities analysis; commander's decision and force assignment; mission planning and force execution; and, combat assessment.

Employment and force integration.

For many contingencies, existing and emerging conventional capabilities will meet anticipated requirements; however, some contingencies will remain where the most appropriate response may include the use of US nuclear weapons. **Integrating conventional and nuclear attacks** will ensure the most efficient use of force and provide US leaders with a broader range of strike options to address immediate contingencies. Integration of conventional and nuclear forces is therefore crucial to the success of any comprehensive strategy. This integration will ensure optimal targeting, minimal collateral damage, and reduce the probability of escalation.

Basic employment considerations are closely tied to the capabilities of assigned nuclear forces (i.e., weapons, delivery systems, and supporting systems under the combatant command (command authority) of Commander, United States Strategic Command (CDRUSSTRATCOM) and operational control of the geographic combatant commanders). **Each leg of the nuclear triad** offers characteristics that collectively provide a wide range of employment capabilities such as flexibility, effectiveness, survivability, and responsiveness.

Combat readiness.

To maintain their deterrent effect, US nuclear forces must maintain a **strong and visible state of readiness**. Strategic nuclear force readiness levels are categorized as either operationally deployed or as part of the responsive capability. US Operationally Deployed Strategic Nuclear Warheads will be limited to 1,700 to 2,200 by 2012. The remaining US strategic nuclear weapons remain in storage and serve as an augmentation capability should US strategic nuclear force requirements rise above the levels of the Moscow Treaty.

Theater Nuclear Operations

Theater nuclear support forces.

Theater nuclear support may be provided by a geographic combatant commander's assigned forces, United States Strategic Command (USSTRATCOM), or from a supporting combatant commander. **Weapons in the US nuclear arsenal include:** gravity bombs and cruise missiles deliverable by Dual Capable Aircraft and long-range bombers; the Tomahawk Land Attack Missile/Nuclear deliverable by attack submarines; submarine-launched ballistic missiles; and intercontinental ballistic missiles. 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.

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 command, 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. **Execution procedures** are flexible and allow for changes in the situation. Commanders will ensure that 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 headquarters destruction.

Planning.

When directed by the President and Secretary of Defense, **joint force commanders (JFCs) plan for nuclear weapon employment in a manner consistent with national policy and strategic guidance.** 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 a supporting

combatant commander, provides detailed planning support to meet theater planning requirements. All theater nuclear option planning follows prescribed Joint Operation Planning and Execution System 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 perform crisis action planning and execute those plans. Crisis action 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 Theater Nuclear Options to achieve those effects (e.g., disrupt, delay, disable, or destroy).

Nuclear weapons and associated systems may be deployed into theaters, but combatant commanders have no authority to employ them until that authority is specifically granted by the President.

CONCLUSION

This publication outlines military guidance for the exercise of authority by combatant commanders and other JFCs. It prescribes doctrine for joint nuclear planning, operations, and training and serves as a reference to more definitive and classified guidance. US nuclear forces deter potential adversary use of WMD and dissuade against a potential adversary's development of an overwhelming conventional threat. The decision to employ nuclear weapons at any level requires the explicit decision from the President.

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CHAPTER I
NUCLEAR FORCE FUNDAMENTALS

> *"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 Nuclear Forces**

(1) The US defense strategy serves the national objective of peace with prosperity. The strategy aims to achieve four key goals that guide the development of US force capabilities, their development and use:

(a) Assuring allies and friends of the US steadfastness of purpose and its capability to fulfill its security commitments.

(b) Dissuading adversaries from undertaking programs or operations that could threaten US interests or those of our allies and friends.

(c) Deterring aggression and coercion by deploying forward the capacity to swiftly defeat attacks and imposing severe penalties for aggression on an adversary's military capability and supporting infrastructure.

(d) Decisively defeating an adversary if deterrence fails.

(2) The size, composition, and readiness posture of US nuclear forces contribute to each of these four goals.

(a) **Assurance.** US nuclear forces assure our friends and allies by remaining available for the President to employ should he determine that a threat to a friend or ally warrants a potential nuclear response.

(b) **Dissuasion.** US nuclear forces dissuade potential adversaries by being so numerous, advanced, and reliable that the US retains an unassailable edge for the foreseeable future.

(c) **Deterrence.** US nuclear forces deter potential adversaries by providing the President the means to respond appropriately to an attack on the US, its friends or allies. US nuclear forces must be capable of, and be seen to be capable of, destroying

those critical war-making and war-supporting assets and capabilities that a potential adversary leadership values most and that it would rely on to achieve its own objectives in a post-war world. Thus, US nuclear forces deter potential adversary use of weapons of mass destruction (WMD) and dissuade against a potential adversary's development of an overwhelming conventional threat.

(d) **Defeat.** US nuclear forces provide the means to apply overwhelming force to a broad range of targets in a time and manner chosen by the President.

b. **Nuclear Policy.** National Security Presidential Directive-14 lays out Presidential nuclear weapons planning guidance. It provides broad overarching guidance for nuclear weapon planning. National Security Presidential Directive-28 provides Presidential guidance on the command and control (C2), safety, and security of nuclear weapons. The Policy Guidance for the Employment of Nuclear Weapons 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 ~~I~~instruction (CJCSI) 3110.04B, *Nuclear Supplement to ~~JSCP~~ Joint Strategic Capabilities Plan for FY05 (U)*, provides the Chairman of the Joint Chiefs of Staff's (CJCS's) guidance to the combatant commanders and Service Chiefs 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

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

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.

(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 FY 2002 Defense Authorization Act (Public Law 107-107).

d. The 2001 NPR constituted the first comprehensive review of nuclear forces since 1994. 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 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 recognizes the unpredictable security environment and responds to US strategic deterrence objectives and force capability requirements.

Note: The 1994 NPR focused on the strategic nuclear force structure which would have been deployed under the second Strategic Arms Reduction Treaty (START II), which was never ratified. "START II: Strategic Arms Reduction Treaty Executive Summary," Internet available at http://www.defenselink.mil/acq/acic/treaties/start2/st2_es.htm.

(1) **Capabilities-Based Forces.** Under the capabilities-based approach to planning, the United States will reduce its operationally deployed strategic nuclear warheads to a range of 1,700 to 2,200. This range establishes the lowest possible number consistent with national security requirements and alliance obligations while maintaining a level that provides a credible deterrent. The weapons retained in a non-deployed status will preserve the ability to respond to deterioration in the international security environment if necessary. The NPR established an initial approach to reduce operationally deployed strategic nuclear forces, outlined plans to sustain and modernize existing nuclear force structure, and defined a new triad of strategic capabilities.

(2) **Mix of Strategic Capabilities.** The new triad offers a mix of strategic offensive and defensive capabilities that includes 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 (see Figure I-1). Enhanced C2, intelligence, and adaptive planning capabilities support the new triad. The new triad provides a deterrence posture suitable for the emerging threat environment; it incorporates post-Cold War advances in defensive and nonnuclear capabilities; and, it provides additional military options that are credible to adversaries and reassuring to allies.

(a) **Strike Capabilities.** Nonnuclear strike capabilities include advanced conventional weapons systems (long-range, precision-guided weapons and associated delivery means), offensive information operations, and special operations forces which

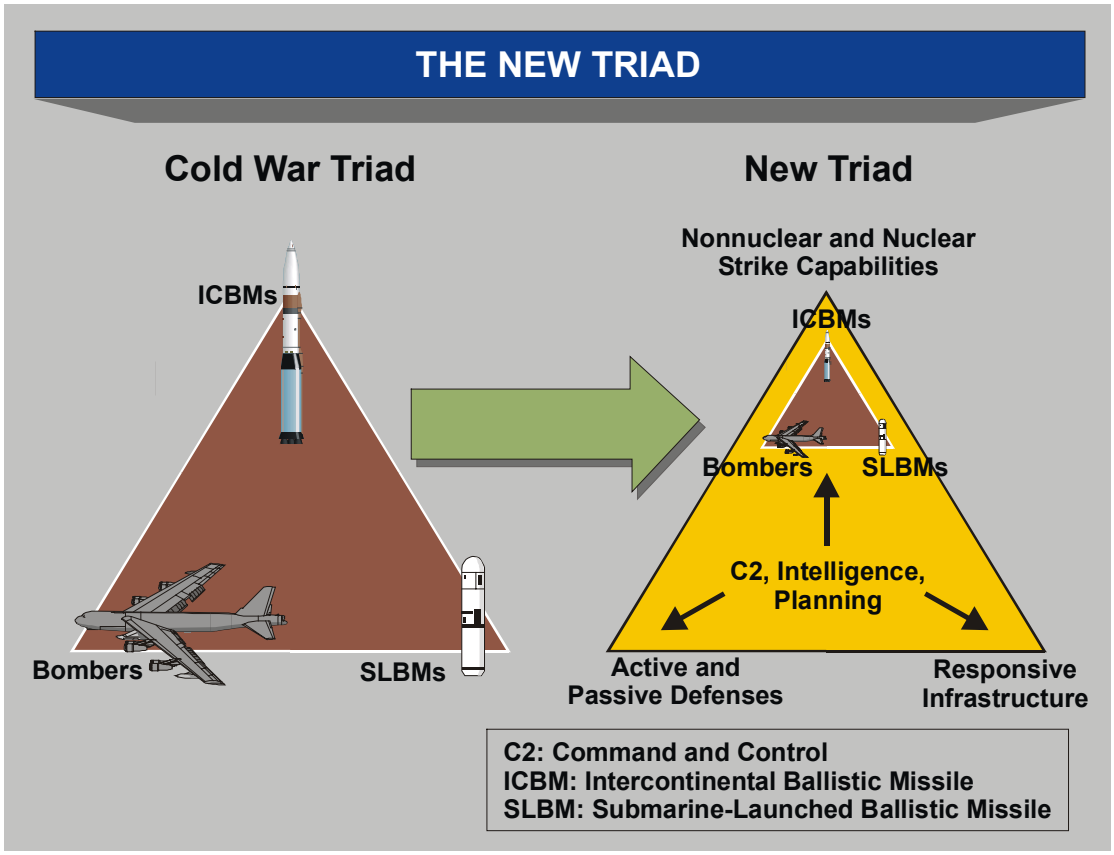

Figure I-1. The New Triad

can be used to hunt for mobile missiles or operate against WMD facilities. Deployed nuclear strike capabilities include the three legs of the ~~existing strategic~~ nuclear triad (intercontinental ballistic missiles [ICBMs], submarine-launches ballistic missiles [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 Initiatives, are secured in central areas where they remain available, if necessary.

(b) **Defenses.** Active defenses include missile and air defenses. Passive defenses include measures that reduce vulnerability through operations security, communications, security, emission security, physical security, mobility, dispersal, redundancy, deception, concealment, and hardening. Passive defenses warn of imminent attack, support consequence management activities that mitigate the damage caused by WMD use, and protect critical information systems. This element of the new triad comprises defenses for the US homeland, forces abroad, allies, and friends.

(c) **Infrastructure**

1. 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 new triad as well as supporting intelligence

and C2 capabilities.

2. A responsive infrastructure that can augment US military capabilities through the development of new systems or accelerated production of existing capabilities in a timely manner provides strategic depth to the new triad. In particular, a secure, modern, responsive nuclear weapons infrastructure is indispensable, especially as the size of the operationally deployed nuclear arsenal is reduced.

(3) **The New Triad and the Defense Policy Goals.** The new triad 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) Assuring allies and friends.

(b) Dissuading future military competition.

(c) Deterring threats and coercion against US interests.

(d) If deterrence fails, decisively defeating any adversary.

(4) **New Thinking for a New Era.** In a major break from Cold War thinking, the results of the 2001 NPR reflect the capabilities required of nuclear forces in the new strategic environment. This approach allows 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~~ regional states armed with WMD will likely test US security commitments to its allies and friends. In response, the US needs a range of capabilities to assure friend and foe alike of its resolve. A broader array of capability is needed to dissuade states from undertaking diplomatic, 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 WMD and the means to deliver them.

(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 simultaneously complies with START limits and limits operationally deployed strategic nuclear warheads (ODSNW) to 1,700 - 2,200 by 2012. The ODSNW total is a result of the May 2002 Treaty Between the United States of America and the Russian Federation on Strategic Offensive Reductions (The Moscow Treaty). It is important to note that the Moscow Treaty and START are separate. The START provisions do not extend to the Moscow Treaty, and the Moscow Treaty does not

terminate, extend or in any other way affect the status of START. START will remain in effect until December 5, 2009 unless it is superseded by a subsequent agreement or extended. The NPR fulfilled the need for a new approach to nuclear forces planning, one that will enable the United States to meet the myriad 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**

(1) Strategic Deterrence is defined as the prevention of adversary aggression or coercion that threatens vital interests of the United States and/or our national survival. Strategic deterrence convinces adversaries not to take grievous COAs by means of decisive influence over their decision making. [**Note:** Strategic Deterrence Joint Operating Concept, November 2004, p8.]

(2) Deterrence broadly represents the manifestation of a potential adversary's decision to forego actions that he would otherwise attempt. Diplomatically, the central focus of deterrence is for one nation to exert such influence over a potential adversary's decision-making process that the potential adversary makes a deliberate choice to refrain from a COA. The focus of US deterrence efforts is therefore to influence potential adversaries to withhold actions intended to harm US' national interests. Such a decision is based on the adversary's perception of the benefits of various COAs compared with an estimation of the likelihood and magnitude of the costs or consequences corresponding to these COAs. It is these adversary perceptions and estimations that US deterrent actions seek to influence. Potential adversary decision making in the face of US deterrent actions is also influenced by their strategic culture, idiosyncrasies of decision mechanisms and the leader's decision style, and leadership risk tolerance.

(3) The effectiveness of deterrence depends on how a potential adversary views US capabilities and its will to use those capabilities. If a potential adversary is convinced that US forces can deny them their goals (by damage to their military, its support, or other things of value); and if that perception leads the potential adversary to limit their actions, then deterrence is effective. Deterrence of potential adversary WMD use requires the potential 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.

(4) 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 WMD. Here deterrence may be directed at states that support their efforts as well as the terrorist organization itself. However, the continuing proliferation of 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, use those weapons. In such cases, deterrence, even based on the threat of massive destruction, may fail and the United States must be prepared to use nuclear weapons if necessary. A major challenge of deterrence is therefore to convincingly convey both will and capability to the opposing actor.

(5) Figure I-2 lists the most prominent deterrence challenges in a 2003 strategic deterrence requirements study commissioned by the Joint Requirements Oversight Council for the Joint Staff.

b. **Declaratory Policy**

(1) The US does not make positive statements defining the circumstances under which it would use nuclear weapons. Maintaining US ambiguity about when it would use nuclear weapons helps create doubt in the minds of potential adversaries, deterring them from taking hostile action. This calculated ambiguity helps reinforce deterrence. If the US clearly defined conditions under which it would use nuclear weapons, others might infer another set of circumstances in which the US would not use nuclear weapons. This perception would increase the chances that hostile leaders might not be deterred from taking actions they perceive as falling below that threshold.

(2) In the past, when North Atlantic Treaty Organization (NATO) faced large Warsaw Pact conventional forces, the US repeatedly rejected calls for adoption of a 'no first use' policy of nuclear weapons, since this policy could undermine deterrence. The US countered such calls by stating that it would not be the first to use force (vice nuclear force).

DETERRENCE CHALLENGES:
WHAT THE OPPOSING ACTOR MUST BELIEVE

- Costs of escalation will be severe, exceeding the negative consequences of restraint
- US can/will effectively deploy power projection forces despite weapons of mass destruction (WMD) use
- US stake in conflict is high, political will is strong
- US can counter aggression across the spectrum of conflict
- US can effectively protect its allies from attack
- WMD use will bolster rather than undermine US resolve
- US will not be deterred by WMD threat/use, and is willing to risk escalation
- US WMD defenses of its forces, population, and critical assets are effective
- Transfer of WMD to terrorists will be detected and attributed
- WMD use will result in severe personal consequences
- WMD use will be attributed to those responsible in a timely way
- They have something left to lose

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

(3) The US declaratory policy also supports its nonproliferation objectives. The US has made policy statements and binding commitments in the nonproliferation context that may seem to create tension with its desire to enhance deterrence through ambiguity. The US policy of Negative Security Assurance responds to that apparent tension and ensures that there is no contradiction in US policy. The US continues to reaffirm its 1978 Negative Security Assurances which state: "The US will not use nuclear weapons against nonnuclear weapon states party to the Nonproliferation Treaty except in the case of an invasion or any other attack on the United States, its territories, its armed forces or other troops, its allies, or on a state toward which it has a security commitment, carried out or sustained by such a nonnuclear-weapon state in association or alliance with a nuclear-weapon state."

c. **Force Capabilities.** Real force capabilities, US national determination to use them, and a potential adversary's perception of both the capabilities and the will to use them contribute to the effectiveness of 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 may not know with confidence what threats a state, combinations of states, or nonstate actors pose to US interests, it is possible to anticipate the capabilities an adversary might use. Developing and sustaining a modern and diverse portfolio of military capabilities 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 forces capable of high-intensity, sustained, and coordinated actions across the range of military operations; employed in concert with survivable and secure nuclear forces; and the command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) systems required to inform and direct these

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

forces. For deterrence to be effective, the force mixture must hold at risk those assets most valued by adversary leaders and provide a range of options for the US. It is possible, however, that a potential adversary either may misperceive or choose to disregard the risk posed by US deterrence actions. Therefore, if deterrence fails, the force mixture must provide a variety of options designed to control escalation and terminate the conflict on terms favorable to the United States and its allies.

d. **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 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. The use of nuclear weapons represents a significant escalation from conventional warfare and may be provoked by some action, event, or threat. However, like any military action, the decision to use nuclear weapons is driven by the **political** objective sought. This choice involves many political considerations, all of which impact nuclear weapon use, the types and number of weapons used, and method of employment.

e. **International Reaction.** International reaction toward the country or nonstate entity that first employs WMD is an important political consideration. The United States and its allies articulated their abhorrence of unrestricted warfare by codifying "laws of war," and turning to definitions of "just war." The tremendous destructive capability of WMD and the consequences of their use resulted in a number of agreements (see Figure I-3, which summarizes US Treaty Limitations on Nuclear Weapons) 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 prohibits nations from employing nuclear weapons in armed conflict.

f. **The Law of Armed Conflict (LOAC)**

(1) The LOAC is a portion of international law that seeks to regulate the conduct of armed hostilities. The LOAC is primarily derived from generally accepted principles (customary law) of international law, treaties, and conventions that bind countries under international law. The 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 the 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.

(2) However, the principle of proportionality requires that the anticipated loss of civilian life and damage to civilian property incidental to attacks must not be excessive in relation to the concrete and direct military advantage expected to be gained. Commanders therefore have the responsibility to attempt to minimize collateral damage

SUMMARY OF US TREATY LIMITATIONS ON NUCLEAR WEAPONS	
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 • Entered into force 01 June 2003
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 nonnuclear state to manufacture or acquire such weapons or devices • Through the Moscow Treaty, the US continues to reduce nuclear arms in accordance with the NPT • North Korea withdrew from the NPT effective February 2003
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 I-3. Summary of US Treaty Limitations on Nuclear Weapons

to the greatest extent practicable. The LOAC does not prohibit nuclear weapons use in armed conflict although they are unique from conventional and even other WMD in the scope of their destructive potential and long-term 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, protect allies, and help assure their

security. Because the use of nuclear weapons in a conflict could provoke serious diplomatic, political, economic, and military consequences; clear allied and potential adversary understanding of US nuclear weapons policy is essential. This broad range of possible applications for nuclear weapons use requires that planners and policymakers be fully aware of the correspondingly broad range of planning considerations that accompany the decision to use a nuclear weapon.

a. **Peacetime and Crisis Considerations**

(1) **Force Employment.** The US must carefully consider nuclear force survivability, credibility, safety, and security when organizing and employing US nuclear forces. Moreover, decisions regarding nuclear force structure, deployments, or uses must accommodate the concerns outlined in Figure I-4.

(2) **Conflict Avoidance.** Pursuing alternative mechanisms and disincentives to conflict such as nonproliferation, counterproliferation, arms control and verification, and confidencebuilding 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

Figure I-4. Nuclear Forces and Strategy Evaluation Criteria

US forces to maintain visibly increased states of alert. Delivery system postures can send a clear warning. Nuclear-capable bombers and submarines deploying to dispersal locations can send a forceful message that demonstrates the national will to use nuclear weapons, and increase their 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 may also signal the willingness to de-escalate through overt measures.

(4) **Crisis.** The United States maintains the capability to rapidly posture 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 inadvertent escalation of the kind that could result from, for example, erroneous warnings of an adversary's 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 also requires careful management. US and multinational leaders must also consider potential military advantages an adversary might gain as US nuclear alert levels are reduced. The adversary may choose to destabilize the de-escalation effort by exploiting those advantages.

b. **Wartime Considerations** (see Figure I-5).

(1) **Deterring WMD Use and Conventional Military Operations.** Deterrence of a 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 force or a prolonged conventional conflict the WMD threshold may be lowered, making WMD use appear to be the only viable option for regime survival.

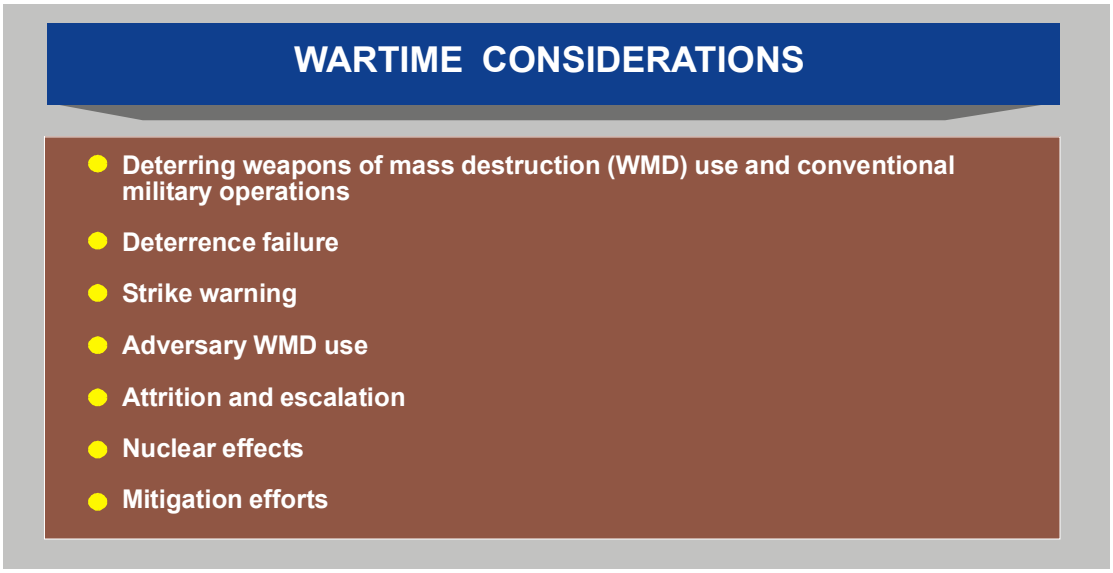

Figure I-5. Wartime Considerations

(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, scope of conflict, and destruction. Specific nuclear objectives and employment plan development guidance are delineated in the nuclear supplement to the JSCP.

(3) **Friendly Nuclear Strike Warning.** Friendly forces must receive advanced warning of friendly nuclear strikes. This allows them to take actions to protect themselves from the effects of the attack. In theater operations, the commander ordering the strike issues the initial warning to subordinate headquarters whose units are likely to be affected by the strike. Geographic combatant commands must develop procedures to ensure multinational forces receive warning if they are likely to be affected by the effects of US nuclear strikes. Commanders must ensure that warning is given in enough time for friendly units to take actions to limit their damages caused by a US use of nuclear weapons.

(4) **Adversary WMD Use.** When formulating COAs, operation planning must address the possibility that an adversary will use 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*, and JP 3-40, *Joint Doctrine for Combating Weapons of Mass Destruction,* provide additional guidance. The combatant commander must consider the adversary's WMD and delivery system capability when considering COAs. If the adversary threat capability assessment indicates a 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 or conventional warfare may result in attrition of nuclear forces and supporting systems which could negatively affect nuclear employment. If this attrition results in a radical change in the strategic force posture by eliminating intermediate retaliatory steps, escalation is possible. Thus the ability to precisely gauge the attrition of conventional and nuclear forces directly affects the decision processes for both escalation to and termination of nuclear warfare.

(6) **Nuclear Effects.** The immediate and prolonged effects of nuclear weapons including blast (overpressure, dynamic pressure, ground shock, and cratering), thermal radiation (fire and other material effects), and nuclear radiation (initial, residual, fallout, blackout, and electromagnetic pulse), impose physical and psychological challenges 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. US forces must prepare to survive and perhaps operate in a nuclear/radiological environment. Commanders and military planners must contend with significant challenges in a nuclear/radiological environment and incorporate mitigating or avoidance measures into operation planning.

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

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

(1) **War Termination.** Although the development and implementation of broad war termination objectives are discussed in JP 3-0, *Doctrine for Joint Operations*, the differences between wholly conventional conflicts and nuclear conflicts are worthy of examination. In the case of a global nuclear conflict, an intense exchange may limit the pool of available negotiators, especially if leaders have been targeted. In many foreseeable cases, however, nuclear weapons might only be used in coordination with conventional forces, with the intent to coerce war termination from the opponent. Depending on the scope and intensity of a conflict involving nuclear weapons, the termination conditions may differ from solely conventional conflicts. The war termination phase may initially involve the end of nuclear combat actions, but not necessarily all aspects of conventional warfighting.

(2) **Termination Strategy.** The objective of a termination strategy is to end a conflict with the least amount 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 WMD would be 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 must be survivable, redundant, secure, and safe to ensure their survival and deny adversary war aims.

(3) **Reserve Nuclear Forces.** Retaining an adequate reserve of nuclear forces should preclude another country or nonstate actor from coercing the United States before,

MITIGATION

Mitigation of weapons of mass destruction (WMD) effects, and at least partial preservation of the operational and functional capabilities of people and equipment, requires the following specific actions be taken by commanders:

- **Planning and warning, in conjunction with systematic, precautionary survivability measures (such as dispersal of vital combat and support assets, increased force mobility, concealment, deception, individual protective measures, and nuclear hardening) can reduce the physical and psychological trauma.**
- **Partially offset long-term degradation of effectiveness produced by WMD warfare through comprehensive force training, preconditioning, and protection.**
- **Establish and carefully assess operating procedures to avoid disproportionate or unacceptable loss of personnel, units, or equipment and to ensure continuity of operations during the initial and subsequent phases of a conflict involving WMD.**

Figure I-6. Mitigation

Figure I-7. Post Wartime Considerations

during, or after the use of nuclear weapons. Such forces provide the United States with the capability to continue nuclear deterrence, deny adversary war aims, exert leverage for war termination, dissuade potential adversaries from action, and assure allies.

(4) **Consequence Management (CM).** JP 1-02, *Department of Defense Dictionary of Military and Associated Terms*, defines CM as "Those measures taken to protect public health and safety, restore essential government services, and provide emergency relief to governments, businesses, and individuals affected by the consequences of a chemical, biological, nuclear, and/or high-yield explosive situation." The effects of nuclear weapons mandate that commanders plan for operations in the postnuclear environment.

(5) **Transition to Post-conflict Operations.** Conflict termination operations should establish the basis for post-conflict operations that assure accomplishment of US long-term objectives in the region. To the degree that US forces and personnel are integral to post-conflict operations, planning for the transition should emphasize continuity across all relevant tasks, consistent with redeployment requirements

Additional doctrine relating to consequence management and post-conflict operations is in JP 3-11, Joint Doctrine for Operations in Nuclear, Biological, and Chemical (NBC) Environments.

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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, command responsibilities, and C2 actions; integrated planning and targeting; employment and force integration; and combat readiness. (see Figure II-1)

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

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

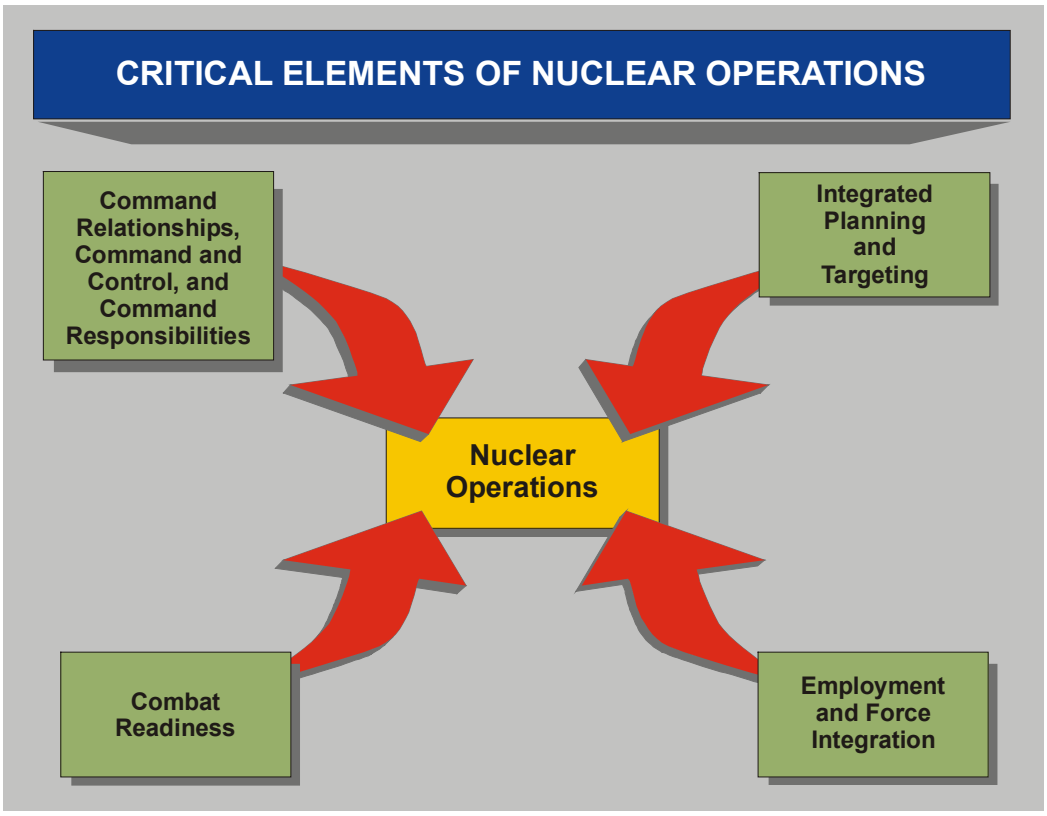

Figure II-1. Critical Elements of Nuclear Operations

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 orders are transmitted from the President and Secretary of Defense via the Chairman of the Joint Chiefs of Staff in accordance with established procedures.

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 transmitted over reliable, secure, and survivable communications systems ensures critical orders are received for execution, increases survivability, and reduces vulnerability of C2 systems across the range of military operations.

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. Circumstantially, geographic combatant commanders may be assigned operational control (OPCON) over United States Strategic Command (USSTRATCOM) 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. Integrated Planning and Targeting

a. **Strategic Nuclear Planning.** Detailed planning is key to the execution of strategic nuclear operations. The President, Secretary of State, and Chairman of the Joint Chiefs of Staff each provide guidance for nuclear weapon planning. This guidance ensures optimal targeting and integration of US nuclear and conventional forces prior to, during, and after conflict. CDRUSSTRATCOM uses this framework to develop plans; and detailed mission planning is coordinated with standing task force commanders of all strategic nuclear forces and US nuclearcapable 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 that strategic forces are fully capable of responding to any new threats that might arise.

(3) **Crisis Action Planning.** Strategic planners must also be prepared to conduct crisis action planning in those cases where adaptable, deliberate plans do not exist.

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 (S)*.

c. **Targeting.** Targeting is the process of selecting and prioritizing targets and matching the appropriate response to them, taking into account operational requirements and capabilities. As nonnuclear strike capabilities and nuclear strike are integrated, targets that may have required a nuclear weapon to achieve the needed effects in previous planning may be targeted with conventional weapons, provided the required effects can be achieved. Nuclear targeting decisions must also consider environmental considerations and impacts in accordance with JP 3-0, *Doctrine for Joint Operations*, JP 3-34, *Engineer Doctrine for Joint Operations*, and JP 4-04, *Joint Doctrine for Civil Engineering Support*. Environmental considerations will probably be most relevant as elements of collateral damage, since the environment falls short of most, if not all, of the criteria associated with legal targets. JP 3-60, *Joint Doctrine for Targeting*, addresses the myriad factors associated with the targeting process.

(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.

(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. CDRUSSTRATCOM provides additional targeting guidance for strategic planning, while geographic combatant commanders, subordinate joint force commanders, and component commanders provide additional guidance for theater nuclear planning.

(b) **Target Development, Validation, Nomination, and Prioritization.** The net result of target development is to produce a target nomination list that identifies appropriate elements within an adversary's power base (e.g., forces, infrastructure, and political support) for attack. Successful attacks against these targets should closely support US objectives.

(c) **Capabilities Analysis.** Commander's guidance on desired effects is translated into weapon recommendations. Targeting personnel translate the commander's guidance on desired effects into weapon recommendations as a result of capabilities

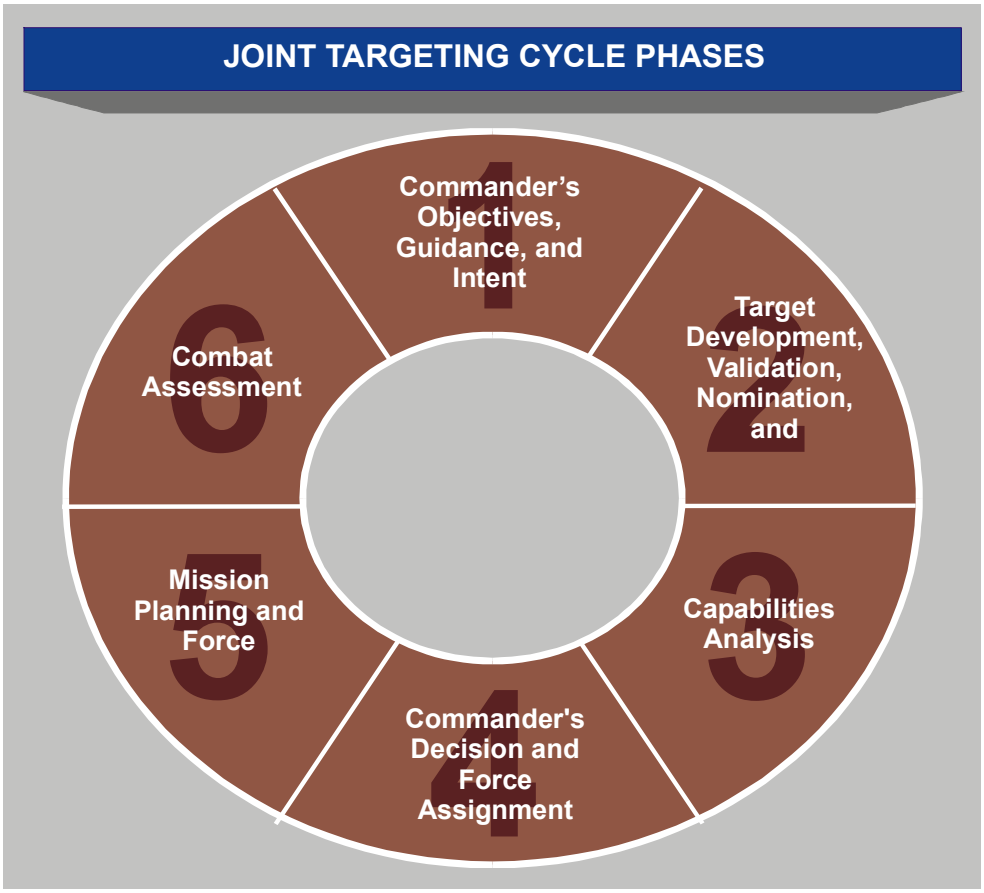

Figure II-2. Joint Targeting Cycle Phases

analysis, which includes quantification of the expected results, consequences of execution, and calculated desired ground zeros based on targeting intelligence.

(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.** This phase includes preparation and transmission of the final tasking order, specific mission planning and material preparation at the unit level, Presidential authorization for use, and execution.

(f) **Combat Assessment.** In the final phase, the commander determines whether the achieved target effects are consistent with either the strategic or the theater campaign objectives. Combat assessment is composed of 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 (S).*

(a) **Nuclear Targeting.** Nuclear targeting seeks to hold at risk those things upon which a potential adversary places a high value as it pursues its interests, and which support the accomplishment of US objectives. These include those critical war-making and war-supporting assets and capabilities that a potential adversary leadership values most and that it would rely on to achieve its own objectives. They may include military forces, military bases of operation, infrastructure supporting those forces; C2 systems and nodes, and WMD storage facilities, delivery systems and deployment sites.

Figure II-3. Target Planning Considerations

(b) **Prioritization of Targets.** Strategic nuclear targets 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 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.

(c) **Layering.** Layering is a target defeat mechanism used by USSTRATCOM. In layering, more than one weapon is planned against a target to increase the probability of the target's destruction; or to improve the confidence that a weapon will arrive and detonate in the right location, and achieve the required level of damage.

(d) **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, SLBMs, or aircraftdelivered weapons increases the probability of achieving the desired damage or target coverage.

(e) **Planning.** JP 5-0, *Doctrine for Planning Joint Operations*, sets forth the fundamental principles and doctrine that guide planning by the Armed Forces of the United States in joint or multinational operations. Additional guidance is available in Chairman of the Joint Chiefs of Staff Manual 3122.01, *Joint Operation Planning and Execution System Vol I (Planning Policies and Procedures);* and CJCS emergency action procedures. The following paragraphs focus on the unique aspects of nuclear planning.

1. **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 planning.

2. **Crisis Action Planning.** The time-sensitive development of joint operation plans and orders in response to an imminent crisis. Crisis action planning follows prescribed crisis action procedures to formulate and implement an effective response within the time frame permitted by the crisis. It is distinct from adaptive planning in that emerging targets are likely to have no preexisting plans that could be adapted. Success in engaging these types of targets depends heavily upon the speed with which they are identified, targeted, and attacked.

3. **Adaptive Planning.** Within the context of nuclear operations,

adaptive planning is a subset of crisis action planning. In adaptive planning, a deliberate plan of sufficient similarity to the developing crisis already exists and can be changed to meet national needs. Adaptive planning must synchronize emergent target attacks with existing force employment plans.

(f) **Nuclear Collateral Damage**

1. Collateral damage can be described as the unintentional or incidental injury or damage to persons or objects that would not normally be considered lawful military targets. As with collateral damage arising from the use of conventional weapons, such damage is not unlawful so long as the anticipated loss of life and damage to property incidental to the use of force is not excessive in relation to the concrete and direct military advantage expected to be gained by the attack.

2. Commanders and staffs responsible for developing nuclear plans must strive to minimize collateral damage as they develop strike options and targeting strategies. Specific techniques for reducing nuclear collateral damage may include lower yield weapons, improving accuracy, employing multiple smaller weapons, adjusting the height of burst, and offsetting the desired ground zero. As the advanced conventional capabilities of the new triad are developed, the reliance on nuclear weapons to achieve the required effects will be reduced. Consequently, anticipated nuclear collateral damage will be reduced. CJSCI 3110.04B, *Nuclear Supplement to the Joint Strategic Capabilities Plan (~~TS~~U)*, provides detailed requirements to minimize anticipated collateral damage resulting from US use of nuclear weapons. Additionally, a detailed discussion of techniques and collateral damage avoidance data is contained in JP 3-12.1, *Joint Tactics, Techniques, and Procedures for Theater Nuclear Planning* (S), forthcoming.

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

(3) **Target Selection Factors**

(a) Combatant commanders may consider the following target selection factors to determine how to defeat individual targets. These factors may help determine the appropriateness of a target for nuclear weapon employment as well as specific weapon and delivery system selection. These factors are:

1. Time sensitivity.

2. Hardness (ability to withstand conventional strikes).

3. Size of target.

4. Surrounding geology and depth (for underground targets).

5. Required level of damage.

6. Defenses.

7. Mobility.

8. Proximity to populated areas.

9. Potential for collateral damage.

(b) Considering these factors, possible adversary targets include:

1. WMD, associated delivery systems, C2, production, and logistic support units.

2. Ground combat units, associated C2, and support units.

3. Air defense facilities and support installations.

4. Naval installations, combat vessels, associated support facilities, and C2 capabilities.

5. Nonstate actors (their facilities and operation centers that possess WMD).

6. Nuclear storage, nonnuclear storage, and hardened ICBM launch facilities.

7. Political and military C2.

4. Employment and Force Integration

a. Force Integration

(1) **Theater Nuclear Force Integration.** See JP 3-12.1, *Joint Tactics, Techniques, and Procedures for Theater Nuclear Planning* (S), for guidance on theater nuclear force integration.

(2) **Conventional and Nuclear Force Integration.** For many contingencies, existing and emerging conventional capabilities will meet anticipated requirements; however, some contingencies will remain where the most appropriate response may include the use of US nuclear weapons. Integrating conventional and nuclear attacks will ensure the most efficient use of force and provide US leaders with a broader range of strike options to address immediate contingencies. Integration of conventional and

nuclear forces is therefore crucial to the success of any comprehensive strategy. This integration will ensure optimal targeting, minimal collateral damage, and reduce the probability of escalation. As the OPLANs are developed, planners must articulate the contribution to the overall strategy and describe how nuclear and conventional integration will be achieved. To make the most efficient use of the nation's strategic assets, to maximize combat power, or to facilitate alliance or coalition action, strategic nuclear operations may also be accomplished through the integration of US and allied nuclear assets. Integration of forces exploits the full range of characteristics offered by US nuclear forces to support national and regional objectives.

(a) Nuclear-capable aircraft offer a greater degree of flexibility in escalation control because they may be a highly visible sign of resolve and, once ordered to conduct a nuclear strike, are recallable, if necessary. Aircraft-delivered weapons also provide strike capability across the range of nuclear operations.

(b) SLBM and ICBM forces offer the capability to strike high-priority timesensitive targets. Fleet ballistic missile submarines (SSBNs) offer the added characteristic of increased survivability due to their unpredictable location while underway. As a sign of national resolve and readiness, SSBNs may be deployed.

(c) Specific planning factors must be considered when planning integrated nuclear and conventional attacks. These factors include:

1. Prelaunch survivability.

2. Weapon system reliability.

3. Circular error probable.

4. Weapon system performance characteristics.

5. Sortie separation criteria.

6. Adversary defense capabilities and limitations.

See associated definitions in the glossary and JP 3-12.1, Joint Tactics, Techniques, and Procedures for Theater Nuclear Planning *(S), forthcoming.*

(3) **Offensive and Defensive Integration.** Offensive and defensive force integration is becoming increasingly important. Offensive and defensive forces are becoming linked doctrinally and procedurally to achieve successful integration. Defensive systems include space warning, air defense warning and interceptors, computer network defense systems, ballistic missile defense warning, and worldwide integrated tactical warning and attack assessment (ITW/ AA) systems. These systems, coupled with additional passive defense measures, attempt to limit attack damage to US warfighting capabilities and population. JP 3-13, *Joint Doctrine for Information Operations*,

elaborates on the integration of offensive and defensive information operations capabilities. Defensive forces can directly support offensive forces in five important areas:

(a) In a national-level application, strategic defensive systems may improve the US deterrence posture by increasing a potential 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 geographic combatant commander to consider employing offensive counterforce strikes while enhancing 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 and Secretary of Defense with the means 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.

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

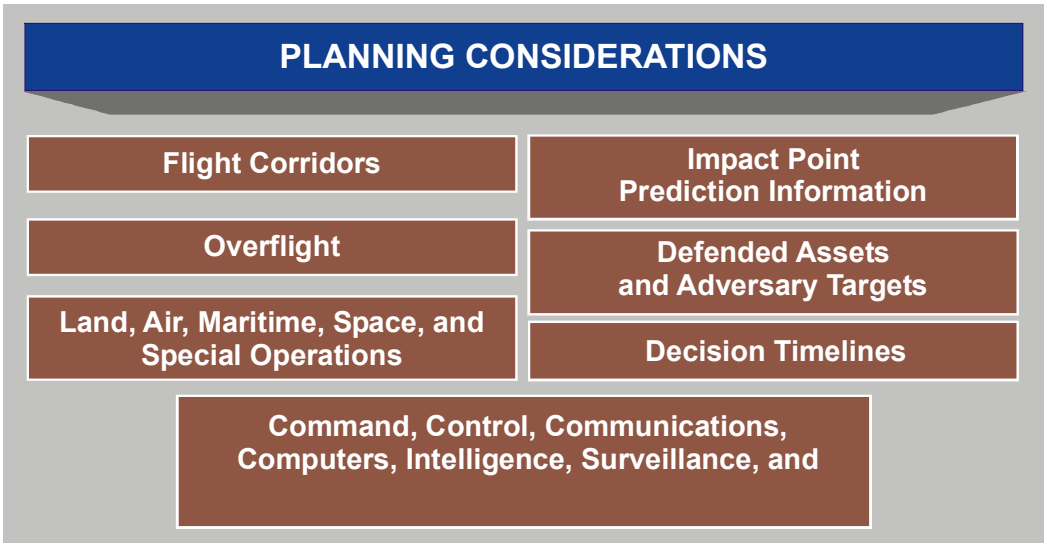

Figure II-4. Planning Considerations

(a) **Aircraft and Cruise Missile Flight Corridors.** Flight corridors must comply with international law governing airspace rights of non-hostile sovereign nations. Because nuclear forces could simultaneously occupy the same flight corridors it is imperative that flight corridors are deconflicted.

(b) **Overflight.** ICBM and SLBM flight corridors may traverse the territory and airspace of other sovereign nations only when permitted under international law. As a matter of national policy and pursuant to international law, the US respects the airspace rights of nonhostile, sovereign nations.

(c) **Land, Air, Maritime, Space, and Special Operations Forces.** To the maximum extent practical, land, air, maritime, space, and special operations forces employment into or through an area with a high concentration of nuclear warheads or delivery systems should be avoided. Nuclear weapon use in areas where friendly forces are operating should be carefully planned to prevent fratricide.

(d) **Impact Point Prediction (IPP) Information.** Ground, maritime, and space systems can provide the commander 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 an intercept (of some adversary missiles), or monitor the missile's flight and impact.

(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 may be deployed near the highest priority resources. Priority lists for defended assets may include protection of C4ISR nodes, supply points, transportation nodes, and population centers.

(f) **Decision Timelines.** Decision makers may be required to review and select defensive and offensive actions within severely compressed timelines. Procedures and equipment must facilitate informed decisions in this stressed environment. In the future, predelegated defensive engagement authority may be appropriate under certain conditions to permit effective engagement of ballistic missile threats. Additionally, visible 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. Assigned nodes should analyze tracks of launched adversary ballistic missiles to determine impact points, and when feasible, intercept locations. Offensive and defensive systems share C4ISR assets to acquire information and transmit the execution orders to the forces. Critical C4ISR nodes require survivable (electromagnetic pulse, radiation hardened, secure, robust and reliable) communications with each other and must be able to operate independently if adversary attacks eliminate individual

nodes. In addition to providing warning of a nuclear attack and the data necessary to initiate a response, defensive C4ISR systems also provide information to update the offensive commander on counterforce targeting options. Furthermore, integrated offensive and defensive C4ISR systems will provide the President and Secretary of Defense a single decision support capability across the range of military operations. This process will strive to correlate offensive and defensive information in real time to eliminate redundant information and facilitate rapid decision-making capabilities.

b. **Employment**

(1) **Employment Considerations.** 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 CDRUSSTRATCOM and OPCON of the geographic combatant commanders). As addressed earlier, each leg of the strategic triad offers characteristics that collectively provide a wide range of employment capabilities such as flexibility, effectiveness, survivability, and responsiveness.

(2) **Employment Options.** Nuclear options define the type and number of weapons and the employment area. Options range from the selective employment of a small number of nuclear weapons against a carefully constrained target set to a general attack against a larger, more diverse set of targets. Executing a nuclear option, or even a portion of an option, should send a clear signal of United States' resolve. Hence, options must be selected very carefully and deliberately so that the attack can help ensure the adversary recognizes the "signal" and should therefore not assume the United States has escalated to general nuclear war, although that perception cannot be guaranteed.

5. Combat Readiness

a. To maintain their deterrent effect, US nuclear forces must maintain a strong and visible state of readiness. Strategic nuclear force readiness levels are categorized as either operationally deployed or as part of the responsive capability.

(1) US Operationally Deployed Strategic Nuclear Warheads (ODSNW) will be limited to 1,700 to 2,200 weapons as discussed previously. In the "Treaty Between the United States of America and the Russian Federation on Strategic Offensive Reductions," (Moscow Treaty), ODSNW are defined as:

(a) Reentry vehicles on ICBMs in their launchers.

(b) Reentry vehicles on SLBMs in their launchers onboard submarines.

(c) Nuclear armaments loaded on heavy bombers or stored in weapons storage areas of heavy bomber bases.

(2) The remaining US strategic nuclear weapons remain in storage and serve as an augmentation capability. ~~should US strategic nuclear force requirements rise above the~~

~~levels of the Moscow Treaty.~~

b. These two readiness levels provide nuclear forces that can respond to potential, immediate, and unexpected threats as depicted in Figure II-5. Specific conditions for employment are provided in CJCSI 3110.04B, *Nuclear Supplement to the Joint Strategic Capabilities Plan forFY05 (U).*

c. A portion of the US operationally deployed strategic nuclear force maintains a readiness level that permits a swift response to any no-notice nuclear attack against the United States, its forces, or allies. In a developing crisis, the augmentation capability may be required to ~~increase the number~~ change the mix of ODSNW. ~~above the limits of the Moscow Treaty. Such a change to the US operational nuclear force level could only be considered following a US withdrawal from the Moscow Treaty and appropriate action by the President and the Congress.~~

6. Continued Operations After Nuclear Weapons Use

a. The effects of nuclear weapons on the battlefield and the resulting casualties can produce friendly casualties from the psychological and physiological stresses. Training can help prepare friendly forces to survive the effects of nuclear weapons and improve 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.

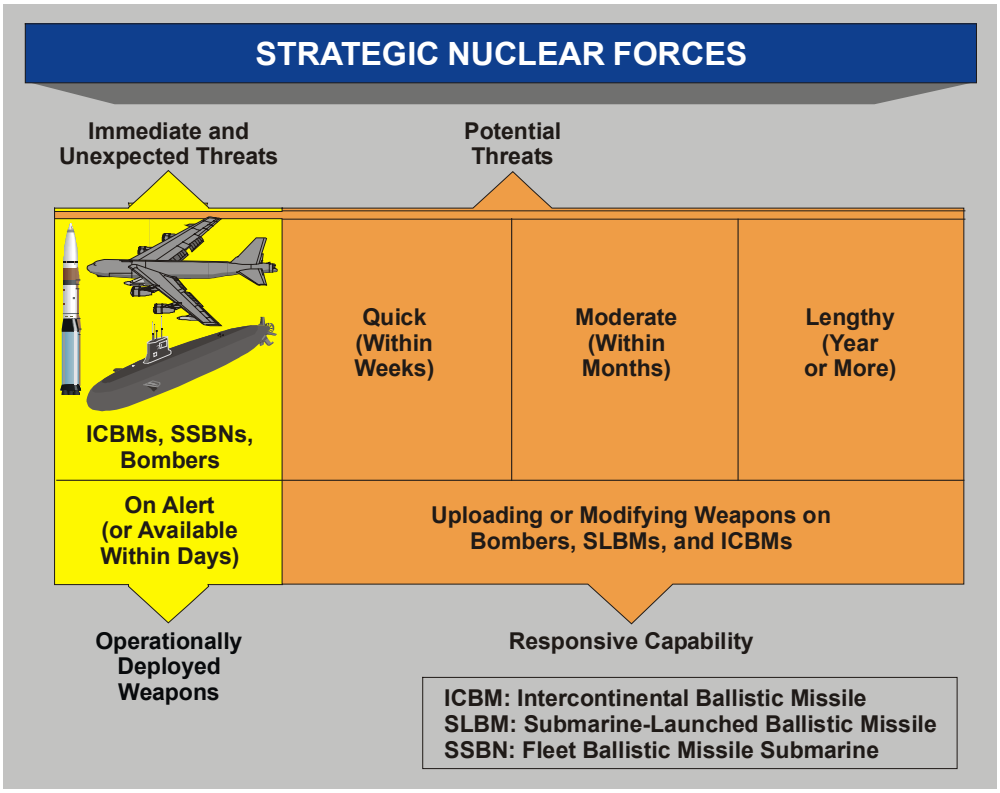

Figure II-5. Strategic Nuclear Forces

b. US, allied, and multinational forces must prepare for further operations under conditions ranging from continued nuclear weapons use to a resumption of conventional-only operations. The US must be prepared to fight and win on a contaminated battlefield following a US nuclear strike. The demonstrated ability of US forces to survive and to sustain successful combat operations in WMD environments presents a stronger deterrent force to potential US adversaries.

CHAPTER III
THEATER NUCLEAR OPERATIONS

> *"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**

1. The Role of US Theater Nuclear Operations

a. **Proliferation.** While the end of the Cold War lowered concerns for global nuclear war, the proliferation of WMD raises the danger of nuclear weapons use. There are numerous nonstate organizations (terrorist, criminal) and about thirty nations with WMD programs, including many ~~rogue~~ regional states. Further, the possible use of WMD by nonstate actors either independently or as sponsored by an adversarial state, remain a significant proliferation concern.

(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 through WMD use.

(2) US military operations rely on computers and high-tech electronics that may be vulnerable to the electromagnetic pulse (EMP) effects of nuclear weapons detonated at high altitude. An adversary may conclude that the military advantages gained by the effects of a single high altitude nuclear detonation on global communications, computers, and electronic components outweigh the negative geopolitical ramifications of using a nuclear weapon. Furthermore, the blast and radiation effects of EMP-optimized detonations are less likely to impact the surface of the Earth, and could make this option more appealing.

b. **Preparation.** Responsible security planning requires preparation for threats that are possible, though perhaps unlikely today. The lessons of military history remain clear: unpredictable, irrational conflicts occur. Military forces must prepare to counter weapons and capabilities that exist or will exist in the near term even if no immediate likely scenarios for war are at hand. To maximize deterrence of WMD use, it is essential US forces prepare to use nuclear weapons effectively and that US forces are determined to employ nuclear weapons if necessary to prevent or retaliate against WMD use.

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 plans 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.

d. **Theater Nuclear Weapon Use**

(1) Geographic combatant commanders may request Presidential approval for use of nuclear weapons for a variety of conditions. Examples include:

(a) An adversary using or intending to use WMD against US, multinational, or alliance forces or civilian populations.

(b) Imminent attack from adversary biological weapons that only effects from nuclear weapons can safely destroy.

(c) Attacks on adversary installations including WMD, deep, hardened bunkers containing chemical or biological weapons or the C2 infrastructure required for the adversary to execute a WMD attack against the United States or its friends and allies.

(d) To counter potentially overwhelming adversary conventional forces, including
mobile and area targets (troop concentration).

(e) For rapid and favorable war termination on US terms.

(f) To ensure success of US and multinational operations.

(g) To demonstrate US intent and capability to use nuclear weapons to deter adversary use of WMD.

(h) To respond to adversary-supplied WMD use by surrogates against US and multinational forces or 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),* forthcoming, will provide theater planners the nuclear weapons data necessary to determine troop safety information such as minimum safe distances, collateral damage distances and least separation distances.

(3) Geographic combatant commanders are responsible for the development of TNOs and their submission to the Secretary of Defense for approval. CDRUSSTRATCOM, the Defense Threat Reduction Agency (DTRA), and the United States Army Nuclear and Chemical Agency (USANCA), provide nuclear expertise to the supported combatant commander throughout the planning process.

(4) CDRUSSTRATCOM will continue to assist geographic combatant commanders by coordinating 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 a supporting combatant commander. Weapons in the nuclear arsenal include: gravity bombs and cruise missiles deliverable by Dual Capable Aircraft and long-range bombers; the Tomahawk Land Attack Missile/Nuclear deliverable by attack submarines; 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. It should be noted that these weapon types support both strategic and theater nuclear plans. Each system has specific advantages and disadvantages when applied in a theater nuclear support context. Specific weapon data will be found in JP 3-12.1, *Joint Tactics, Techniques, and Procedures for Theater Nuclear Planning (S),* forthcoming.

Note: Nuclear-armed sea-launched cruise missiles, removed from ships and submarines under the 1991 Presidential Nuclear Initiative, are secured in central areas where they remain available, if necessary for a crisis.

3. 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 command, 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 will ensure that 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 headquarters destruction. Command, control, and coordination must be flexible enough to allow the geographic combatant commander to strike time-sensitive targets such as mobile 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 United States European Command has a unique nuclear C2 relationship with Supreme Headquarters Allied Powers Europe to facilitate nuclear operations conducted in conjunction with NATO.

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

(3) CJCSI ~~3100~~3110.04B, *Nuclear Supplement to Joint Strategic Capabilities Plan for FY05 (U)*, describes situations that could lead to a combatant commander's

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.

b. **Support Coordination.** Nuclear support is coordinated through geographic combatant commander 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 and space operations center by the collocated Army battlefield coordination detachment. Coordination with the Navy component is through the naval and amphibious liaison element. Coordination with the Marine Corps component is through the Marine liaison officer. Coordination with special operations forces is through the special operations liaison element found in the joint force air component command (if designated), or appropriate Service component air C2 organization.

c. When assisting in the preparation of nuclear support plans, CDRUSSTRATCOM coordinates with supporting Service components and the geographic combatant commander. 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 through direct consultations between the supporting and supported combatant commander's staffs. CDRUSSTRATCOM will deploy a strategic support team, familiar with the theater, to the supported combatant commander to provide nuclear planning and WMD expertise. The strategic support team, in addition to deployed teams from DTRA and USANCA, will provide a consequence of execution and hazard prediction analysis to the supported combatant commander. The

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

consequence of execution analysis provides the decision maker with an estimate of the anticipated collateral damage that will follow from the use of nuclear weapons.

4. 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 CDRUSSTRATCOM, and appropriate supporting combatant commanders, initiates crisis action planning procedures contained in CJCSI 3110.04B, *Nuclear Supplement to Joint Strategic Capabilities Plan for FY05 (U)*, and the appropriate CDRUSSTRATCOM support plans. Geographic combatant commander OPLANs and Chairman of the Joint Chiefs of Staff Emergency Action Procedures provide additional guidance. Nuclear operations planning is integrated into theater plans to ensure conventional campaign plans are complemented by nuclear weapons employment.

(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 a supporting combatant commander, provides detailed planning support to meet theater planning requirements. All theater nuclear option planning follows prescribed Joint Operation Planning and Execution System 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 perform crisis action planning and execute those plans. Crisis action 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 TNOs to achieve those effects (e.g., disrupt, delay, disable, or destroy).

(2) As a supporting combatant 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, effects beyond the target country, and allied and coalition perception and possible reactions to nuclear strikes.

(3) Nuclear operations in the theater may require a significant conventional support package that addresses concerns such as aerial refueling, combat search and

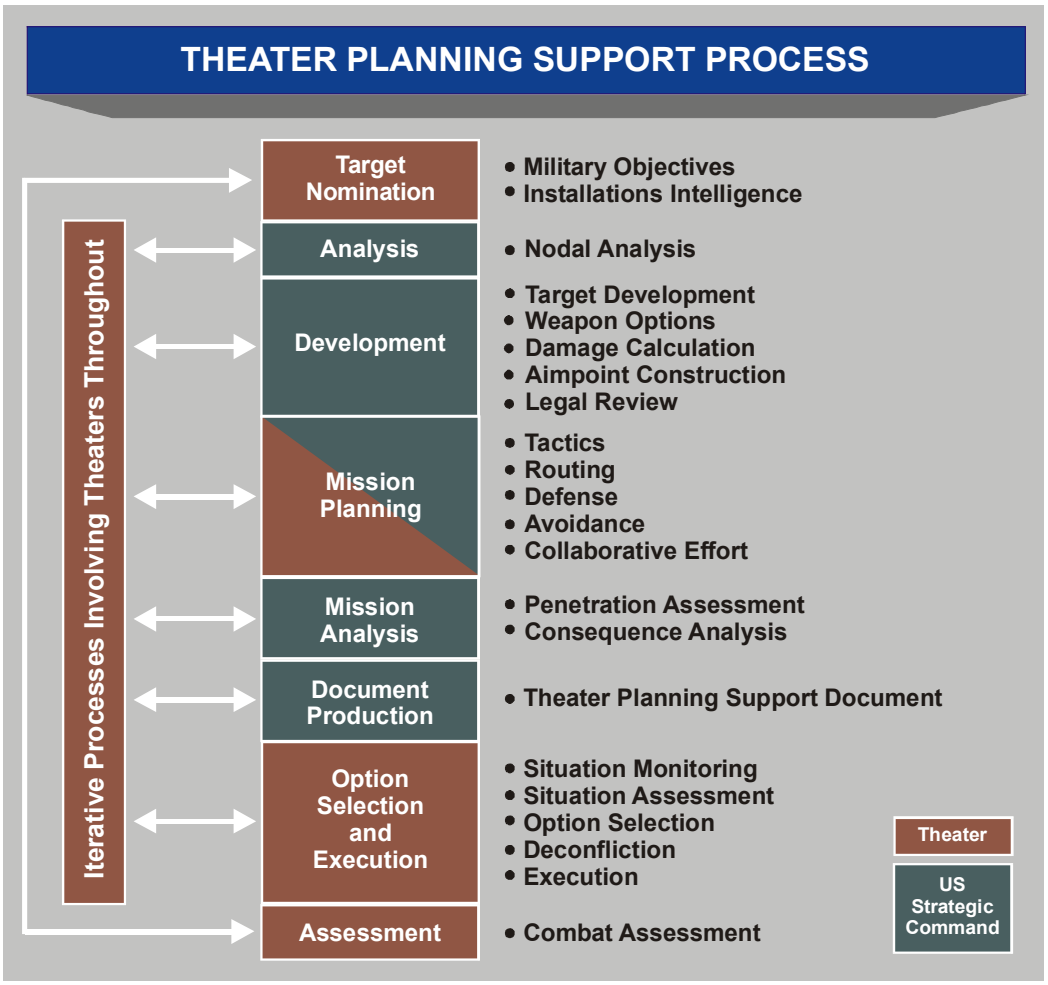

Figure III-1. Theater Planning Support Process

rescue, CM, suppression of enemy air defenses, and nuclear weapons recovery. Geographic combatant commanders and staffs evaluate and balance force allocation for conventional and nuclear operations. Combatant commanders should understand the interaction between nuclear and conventional forces and contribution of nuclear missions to their strategy.

b. Nuclear weapons and associated systems may be deployed into theaters, but combatant commanders have no authority to employ them until that authority is specifically granted by the President. There are myriad considerations governing theater nuclear use, and a complete listing is beyond the scope of this unclassified doctrine. Some of the more common considerations include:

(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 of employment.

(5) Timing and duration of employment.

(6) Damage constraints.

(7) Target analysis.

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APPENDIX A
REFERENCES

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

1. Policy Guidance for the Employment of Nuclear Weapons (NUWEP), 19 April 2004.

2. CJCSI 3110.01E, *Joint Strategic Capabilities Plan FY 2002*, 01 October 2002.

3. CJCSI 3110.04B, *Nuclear Supplement to Joint Strategic Capabilities Plan for FY05 (U)*, 31 December 2004.

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6. National Military Strategy of the United States of America, 13 March 2004.

7. Strategic Planning Guidance, Fiscal Years 2006-2011, 15 March 2004.

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

10. Nuclear Posture Review: Implementation Plan, DOD Implementation of the December 2001 Nuclear Posture Review Report to Congress, March 2003.

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

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

13. National Security Presidential Directive – 14, Nuclear Weapons Planning Guidance, June 2002.

14. National Security Presidential Directive – 28, United States Nuclear Weapons Command, Control, Safety, and Security, June 2003.

15. National Security Presidential Directive - 34, Fiscal Year 2004-2012 Nuclear Weapons Stockpile Plan, May 2004.

16. National Security Presidential Directive - 35, Nuclear Weapons Deployment Authorization, May 2004.

17. National Strategy to Combat Weapons of Mass Destruction, December 2002.

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20. Presidential Nuclear Initiatives, 27 September 1991.

21. Law of Armed Conflict.

22. Proliferation Security Initiative – Statement of Interdiction Principles, 04 September 2003.

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

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

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

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

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

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

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

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

31. JP 3-09.3, *Joint Tactics, Techniques, and Procedures for Close Air Support (CAS).*

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

33. JP 3-12.1, *Joint Tactics, Techniques, and Procedures for Theater Nuclear Planning (U)*, and its forthcoming Secret revision

34. JP 3-13, *Joint Doctrine for Information Operations*

35. JP 3-30, *Command and Control for Joint Air Operations*.

36. JP 3-34, *Engineer Doctrine for Joint Operations*

37. JP 3-40, *Counterproliferation.*

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

39. JP 4-04, *Joint Doctrine for Civil Engineering Support*

40. JP 5-0, *Doctrine for Planning Joint Operations*

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

42. Strategic Deterrence Requirements 2020 Study, Joint Requirements Oversight Council Memorandum (JROCM) 132-03, 17 June 2003.

43. 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.

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APPENDIX B
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, ATTN: Doctrine and Education Group, 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 Strategic Plans and Policy (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:

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INFO: JOINT STAFF WASHINGTON DC//J7-JEDD//
CDRUSJFCOM SUFFOLK VA//DOC GP//

Routine changes should be submitted electronically to Commander, Joint Warfighting Center, Doctrine and Education Group and info the Lead Agent and the Director for Operational Plans and Joint Force Development J-7/JEDD via the CJCS JEL at http://www.dtic.mi./doctrine.

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 Joint Staff/J-7, 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

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

b. Individuals and agencies outside the combatant commands, Services, Joint Staff, and combat support agencies are authorized to receive only approved joint publications and joint test publications. 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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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.

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GLOSSARY

PART I — ABBREVIATIONS AND ACRONYMS

C2	command and control
C4ISR	command, control, communications, computers, intelligence, surveillance, and reconnaissance
CDRUSSTRATCOM	Commander, United States Strategic Command
CJCS	Chairman of the Joint Chiefs of Staff
CJCSI	Chairman of the Joint Chiefs of Staff instruction
CM	consequence management
COA	course of action
COCOM	combatant command (command authority)
DOD	Department of Defense
DTRA	Defense Threat Reduction Agency
EMP	electromagnetic pulse
FY	fiscal year
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
NATO	North Atlantic Treaty Organization
NBC	nuclear, biological, and chemical
NPR	Nuclear Posture Review
ODSNW	operationally deployed strategic nuclear warheads
OPCON	operational control
OPLAN	operation plan
QDR	Quadrennial Defense Review
SLBM	submarine-launched ballistic missile
SSBN	fleet ballistic missile submarine
START	Strategic Arms Reduction Treaty
TNO	theater nuclear option

USANCA	United States Army Nuclear and Chemical Agency
USSTRATCOM	United States Strategic Command
WMD	weapons of mass destruction

PART II — TERMS AND DEFINITIONS

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 operation plans. Additional authority is required for the actual deployment of allocated weapons to locations desired by the commander to support the operation plans. Expenditure of these weapons is not authorized until directed by the President through the chain of command. (This term and its definition modify the existing term "allocation (nuclear)" and its definition and are approved for inclusion in the next edition of JP 1-02.)

augmentation capability (nuclear). The inventory of US strategic nuclear warheads that are not operationally deployed and that could serve to augment the deployed forces should the US strategic nuclear force requirements rise above the level of the Moscow Treaty. In a developing crisis, the augmentation capability may be required to increase the number of operationally deployed strategic nuclear warheads above the limits of the Moscow Treaty. Such a change to the US operational nuclear force level could only be considered following a US withdrawal from the Moscow Treaty and appropriate action by the President and the Congress. See also operationally deployed strategic nuclear weapons. (Approved for inclusion in the next edition of 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 the delivered bombs or projectiles are expected to fall. Also called CEP. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

collateral damage distance. 1. 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. 2. It is the sum of the radius of collateral damage and the buffer distance. Also called CDD. For more information see JP 3-12.1, *Joint Tactics, Techniques, and Procedures for Theater Nuclear Planning (S)*, forthcoming. (Approved for inclusion in the next edition of JP 1-02.)

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)

conventional forces. 1. Those forces capable of conducting operations using nonnuclear weapons. 2. Those forces other than designated special operations forces. (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 adversary the use of space, personnel, or facilities. It may include destruction, removal, contamination, or erection of obstructions. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of 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 an attack against those things an adversary values. (Approved for inclusion in the next edition of JP 1-02.)

least separation distance. 1. 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 generation with 99 percent assurance. 2. It is the sum of the radius of preclusion and the buffer distance. For more information see JP 3-12.1, *Joint Tactics, Techniques, and Procedures for Theater Nuclear Planning (S)*, forthcoming. Also called LSD. (This term and its definition are provided for information and are proposed for inclusion in the next edition of JP 1-02 by JP 3-12.1.)

minimum safe distance (nuclear). 1. The distance from a desired ground zero at which

a specific degree of personnel risk and vulnerability will not be exceeded with 99 percent assurance. 2. It is the sum of the radius of safety and the buffer distances. For more GL-5 Glossary information see JP 3-12.1, *Joint Tactics, Techniques, and Procedures for Theater Nuclear Planning (S)*, forthcoming. Also called MSD. (This term and its definition are provided for information and are proposed for inclusion in the next edition of JP 1-02 by JP 3-12.1.)

multiple independently targetable reentry vehicle. A ballistic missile system having warheads aimed at independent targets that can be launched by a single booster rocket. Also called MIRV. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of 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 operational area. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

nuclear collateral damage. Undesired damage or casualties produced by the effects from friendly nuclear weapons. (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 nuclear attack. (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)

Operationally Deployed Strategic Nuclear Warheads. Defined as reentry vehicles on intercontinental ballistic missiles in their launchers; reentry vehicles on submarine-launched ballistic missiles in their launchers onboard submarines; or nuclear armaments loaded on heavy bombers or stored in weapons storage areas of heavy bomber bases. Also called ODSNW. (Approved for inclusion in the next edition of JP 1-02.)

operationally deployed nuclear weapons. Nuclear weapons that are on operational ballistic missiles, bombers, in bomber or dual-capable aircraft base weapon storage, or aboard ships. (Approved for inclusion in the next edition of JP 1-02.)

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

proliferation (nuclear weapons). The process by which nations that do not possess nuclear capabilities come into possession of, or into the right to determine the use of nuclear weapons. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of 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)

special operations liaison element. A special operations liaison team provided by the joint forces special operations component commander to the joint force air component commander (if designated), or appropriate Service component air command and control organization, to coordinate, deconflict, and integrate special operations air, surface, and subsurface operations with conventional air operations. Also called SOLE. (JP 1-02)

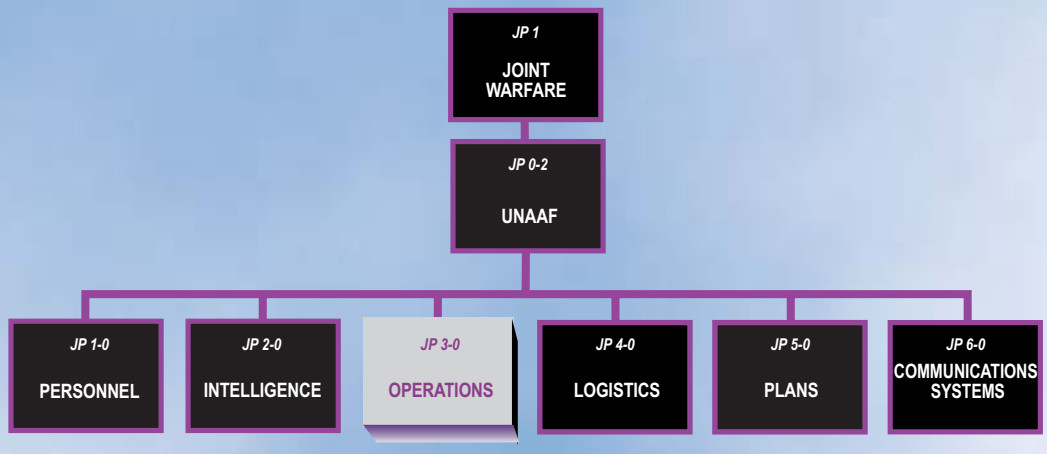
theater missile. A missile, which may be a ballistic missile, a cruise missile, or an air-to-surface missile (not including short-range, nonnuclear, direct fire missiles, bombs, or rockets such as Maverick or wire-guided missiles), whose target is within a given theater of operation. Also called TM. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

~~**United States Operationally Deployed Strategic Nuclear Warheads.** Defined as reentry vehicles on intercontinental ballistic missiles in their launchers; reentry vehicles on submarine-launched ballistic missiles in their launchers onboard submarines; or nuclear armaments loaded on heavy bombers or stored in weapons storage areas of heavy bomber bases. Also called ODSNW. (Approved for inclusion in the next edition of JP 1-02.)~~

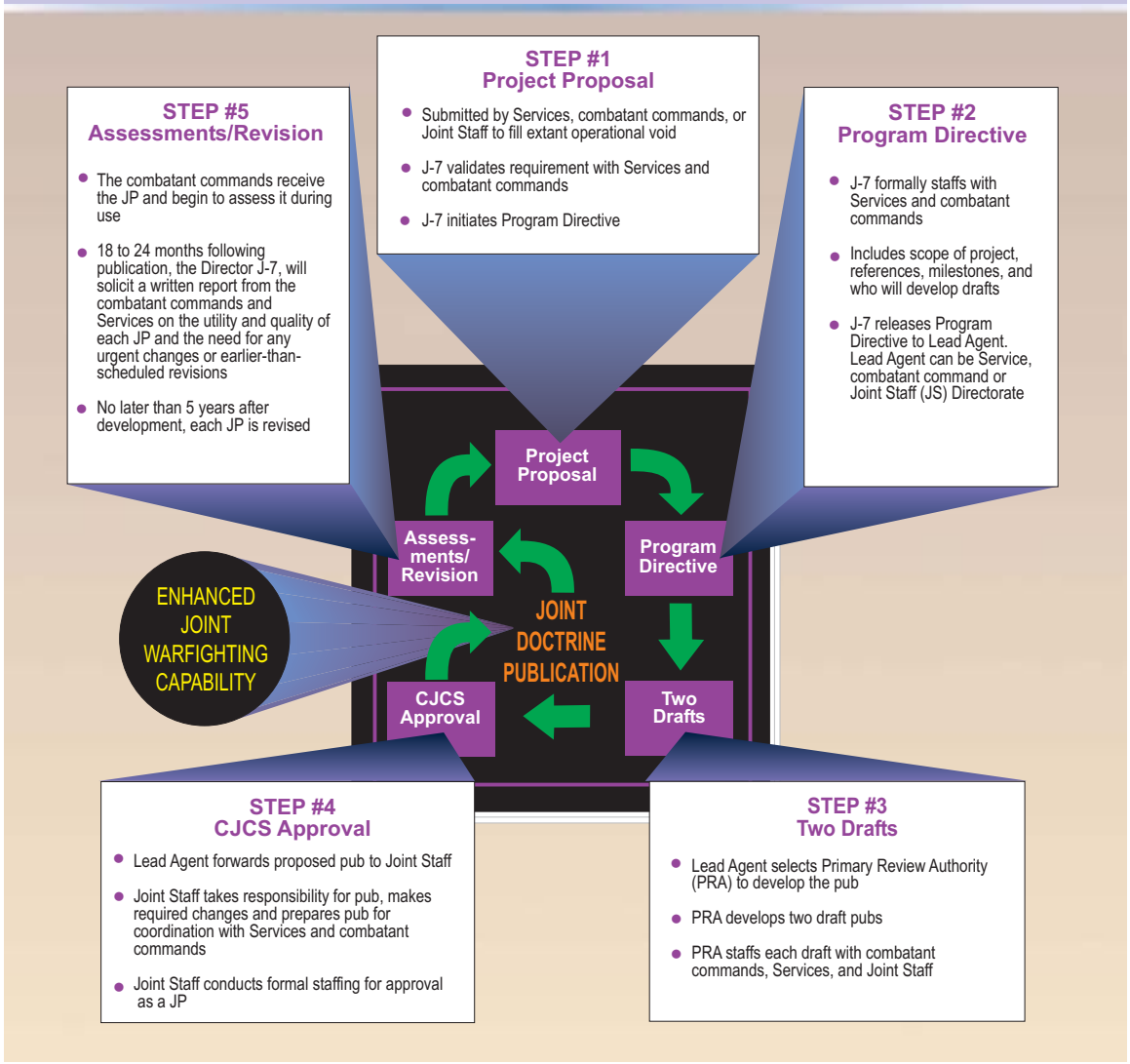
weapons of mass destruction. Weapons that are capable of a high order of destruction and/or of being used in such a manner as to destroy large numbers of people. Weapons of mass destruction can be high explosives or nuclear, biological, chemical, and radiological weapons, but exclude the means of transporting 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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