

**AIR FORCE DOCTRINE PUBLICATION 3-04**

# **COUNTERSEA OPERATIONS**



**U.S. AIR FORCE**

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# **Air Force Doctrine Publication 3-04, *Countersea Operations***

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“The Air Force organizes, trains, and equips forces to be an air component to a joint force commander (JFC). As part of the joint force’s air component, our forces must be prepared to accomplish JFC objectives. The air component commander’s administrative authorities are derived from Title 10, U.S. Code, and exercised as the commander, Air Force forces (COMAFFOR). The air component commander’s operational authorities are delegated from the JFC and exercised as both the COMAFFOR, over Air Force forces, and as the functional joint force air component commander (JFACC), over joint air forces made available for tasking. Thus, the air component commander leads Air Force forces as the COMAFFOR and the JFC’s joint air operations as the JFACC. This duality of authorities is expressed in the axiom: Airmen work for Airmen and the senior Airman works for the JFC.”

-- Air Force Doctrine Publication (AFDP) 1, *The Air Force*

Since the COMAFFOR and JFACC are nearly always the same individual, this AFDP will use the term “air component commander” when referring to duties or functions that could be carried out by either or both, unless explicit use of the term “COMAFFOR” or “JFACC” is necessary for clarity.

## CHAPTER 1: COUNTERSEA OPERATIONS

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The United States (US) depends on assured access to the world's waterways and coastal regions for global economic trade and to provide a stabilizing military presence abroad. These waterways, along with our maritime fleet, provide the means to project the bulk of our forces forward, sustain them over the long term, and project force ashore from the seas. In the same way that airpower is key to rapid forward presence and striking power over long distances, sea power is key to extended forward presence, maritime power projection, mass force deployment, and sustainment through sealift.

US Air Force (USAF) countersea capabilities fulfill Department of Defense requirements for the use of USAF forces to counter adversary air, surface, and subsurface threats; ensure the security of vital sea and coastal areas; and enhance the maritime scheme of maneuver. The overarching objective of countersea operations is maritime superiority — denying the adversary use of the domain while assuring access and freedom of maneuver for US and allied maritime forces. USAF countersea missions support the achievement of maritime superiority by securing and dominating operations in the maritime domain through the destruction, disruption, delay, diversion, or other neutralization of maritime threats.

With the emergence of credible peer/near-peer adversaries, maritime operations increasingly focus on defeating enemy naval forces while retaining focus on the role of maritime power projection ashore from the littorals. Airpower provides a rapid, maneuverable, and flexible element in this environment. USAF capabilities can extend the reach and increase the flexibility of naval surface, subsurface, and aviation assets, playing a key role in controlling the maritime domain.

Countersea operations can be used in various ways to support JFC operations. Conducted independently, or in conjunction with other military operations, countersea operations may be used to:

- ★ Support the establishment of military lodgments during initial operational phases.
- ★ Deny use of an area or facilities to the enemy, or to fix enemy forces' attention in support of other combat operations.
- ★ Deter war, resolve conflict, promote peace and stability, or support civil authorities.
- ★ Prevent the disruption of sea lines of communication and attacks against the US and its interests.
- ★ Achieve operational or strategic objectives in the maritime domain.

### THE MARITIME DOMAIN

Joint Publication (JP) 3-32, *Joint Maritime Operations*, defines the maritime domain as the oceans, seas, bays, estuaries, islands, coastal areas, and the airspace above these, including the littorals. Countersea operations are equally relevant to “brown water” environments (navigable rivers, lakes, bays, and their estuaries), “green water”

environments (coastal waters, ports, and harbors), and “blue water” environments (open oceans).

Domains are useful constructs for visualizing and characterizing the physical environment in which operations unfold. However, the use of the term “domain” does not imply or mandate exclusivity, primacy, or command and control (C2) of any domain. Rather, C2 is established by the joint force commander (JFC) through command relationships within the various operational areas (OAs), as described in JP 3-0, *Joint Campaigns and Operations*. Following this logic, inclusion of the “airspace above” in the maritime domain definition should not be a source of friction or confusion.

## NAVAL WARFIGHTER PERSPECTIVE

Countersea operations require familiarity with naval warfare, organization, and terminology. This familiarity is key for successful countersea operations in a maritime area of operations (AO) and is one reason why joint training is vital.

The US Navy (USN), US Marine Corps (USMC), and the US Coast Guard (USCG) are the principal organizations that conduct military operations within the maritime domain. The US relies on the combined capabilities of these forces to secure its interests across the competition continuum. In cooperation and competition, the carrier strike group (CSG), expeditionary strike group (ESG), and surface action group (SAG) represent credible military power and reinforce our nation’s ability to influence events, deter potential aggressors, promote regional stability, and provide the requisite force to influence multinational collective security. Likewise, ahead of crisis or conflict, the inherent mobility and extended presence of US naval forces provide a means to achieve strategic and operational advantage. Finally, during crisis and conflict, the ability to project timely, intense combat power from the sea is critical to meet JFC objectives

## FIVE ENDURING NAVAL FUNCTIONS

According to Naval Doctrine Publication (NDP) 1, *Naval Warfare*, to effectively operate in the maritime domain, the USN continuously hones its five enduring functions: **sea control**, **power projection**, **deterrence**, **maritime security**, and **sealift**. Though not inclusive of all functions that naval forces have executed for our nation, or will execute in the future, these are enduring functions the USN has consistently employed over the course of our country’s history to defend our homeland and achieve national objectives.

**Sea control.** Throughout history, control of the sea has been a precursor to victory in war. Sea control is the manifestation of lethality afloat and serves to enable all other naval functions. Sea control is the condition in which one has freedom of action to use the sea for one’s own purposes in specified areas and for specified periods and, where necessary, to deny or limit its use to the enemy. Sea control allows naval forces to close within striking distance to remove landward threats to access, which in turn enhances freedom of action at sea. Freedom of action at sea enables the projection of forces ashore. Sea control is achieved primarily through the demonstrated use or credible threat of force. It is established through naval, joint, or combined operations designed to secure the use of ocean and littoral areas by one’s own forces and to prevent their use by the

enemy. The elements of sea control are (1) surface warfare, (2) undersea warfare, (3) strike warfare, (4) mine warfare, (5) air and missile defense, (6) maritime domain awareness, and (7) intelligence, surveillance, and reconnaissance.

**Power projection.** Power projection is the ability to inflict costs on our enemy from the maritime domain to the degree of our choosing, at the time and place of our choosing, with strike, amphibious, and naval special warfare capabilities. The USN provides a means to overcome diplomatic, military, and geographic access challenges and project power ashore without reliance on ports and airfields in an objective area. Power projection in and from the maritime domain includes a broad spectrum of offensive military operations to destroy enemy forces or logistic support or to prevent enemy forces from encroaching on friendly forces within range of enemy weapons. Importantly, the ability to project power increases in importance as access is diminished. Among other advantages, naval power projection provides:

- ★ The ability to engage enemies as far from US shores as possible.
- ★ A means to mitigate the political and diplomatic difficulties presented by the introduction of forces into a theater.
- ★ A broad range of options, unhindered by the need to obtain host-nation permission and access.
- ★ A means to demonstrate US commitment without imposing a lasting footprint ashore.

US naval forces are forward deployed around the clock. This posture serves several key functions: it enables familiarity with the operational environment; supports an awareness and understanding of the capabilities, culture, and behavior patterns of regional actors; and it enables influence. The resulting knowledge and influence facilitate:

- ★ Regional stability.
- ★ A more timely and effective response to crisis.
- ★ The understanding and experience required for successful combat operations.

At the end of the Cold War, the emphasis of maritime warfare changed from blue water operations against enemy navies to brown water force projection ashore. The naval perspective similarly changed. In contrast, the growing naval threats in the 21st century and the possibility of entering into combat with a peer or near-peer adversary have forced the USN to readdress its capabilities in the blue water environment. To employ in this fashion, USAF forces should be familiar with and understand the maritime warfare areas and three-dimensional battlespace from which maritime forces develop their operations.

**Deterrence.** Deterrence is the prevention of action by the existence of a credible threat of unacceptable counteraction and/or belief that the cost of action outweighs the perceived benefits. It refers to the demonstrated ability and willingness to inflict unacceptable damage on an adversary and to making sure the potential adversary is aware of the risk so that the adversary refrains from aggression or action. At the strategic

level, ballistic missile submarines continue to be a cornerstone of the nation's survivable nuclear deterrent. Other US naval forces are persistently forward-postured in key regions to deter conventional aggression as well as compete below armed conflict. When necessary, our inherent mobility allows us to rapidly move to crisis areas and conduct tactical actions that signal US intentions and demonstrate the ability to reverse or respond to acts of aggression.

**Maritime security.** Maritime security includes those operations to protect resources; preserve maritime sovereignty; and counter maritime related terrorism, weapons proliferation, transnational crime, piracy, environmental destruction, and illegal seaborne migration. Security at sea mitigates violent extremist threats and transnational criminal organizations. Maritime security operations are conducted to assist the establishment of conditions for security and protection of sovereignty in the maritime domain. They also include participating in security cooperation operations with allies and partners, sharing situational awareness, and conducting maritime interception and law enforcement operations. Additionally, maritime security operations are enhanced by operations that support safety and stewardship of the maritime commons and associated natural resources.

**Sealift.** Sealift consists of the afloat pre-positioning and ocean movement of military materiel in support of US and multinational forces. Military sealift ships sustain US armed forces around the globe and deliver specialized maritime services in support of national security objectives in peace and war. Sealift provides the majority of support for large-scale military deployment, reinforcement, onloading, offloading, and resupply. Historically, sealift accounts for ninety to ninety-five percent of total military cargo delivered during war. Unlike maritime power projection, sealift largely depends on secure port infrastructure for offloading materiel and equipment.

For additional information on the USN's enduring missions, see NDP 1, *Naval Warfare*.

## NAVAL ORGANIZATION

The common feature among USN, USMC, and USCG forces is the ability to task-organize for specific missions. The naval task force and Marine air-ground task force (MAGTF) constructs provide organizational and operational flexibility.

**Fleet.** Within the USN, the fleet is the highest tactical echelon. Whether conducting operations in a maritime component, Service component, or fleet context, the commander normally task-organizes assigned tactical forces into formations with the capabilities to operate throughout the maritime domain according to the anticipated mission(s). These formations may remain at the fleet level or be scaled to provide the right mix of capability and capacity through various combinations of task forces (TFs), task groups (TGs), task units (TUs), or task elements (TEs).

**Marine Air Ground Task Force.** A USMC component commander normally applies a similar approach by forming MAGTFs. The largest MAGTF, and highest tactical formation within the USMC, is the Marine expeditionary force (MEF). Like the USN's formations, MAGTFs may also be scaled and tailored to suit the anticipated mission(s) with options



that roughly correspond to the USN construct. These include MEFs, Marine expeditionary brigades (MEBs), Marine expeditionary units (MEUs), or major subordinate elements (MSEs) that are task-organized for ground, air, or logistics operations or operations in the information environment.

## NAVAL WARFARE AREAS

**Air warfare and air and missile defense.** Naval air warfare and air and missile defense (AMD) are combined arms efforts, involving sensors and weapons operated from aircraft, ships, and select Fleet Marine Force (FMF) elements, designed to contest control of the air in the maritime domain and counter an enemy's ability to strike naval forces.

**Expeditionary warfare.** Expeditionary warfare is the projection of naval forces into, and their employment within or from, a foreign country and adjacent waters to accomplish a specific mission. It includes amphibious operations, naval special warfare operations, maritime pre-positioning force off-load operations, coastal and riverine operations, explosive ordnance disposal operations, and expeditionary advanced base operations.

**Warfare in the information environment.** The USN, USMC, and USCG each have, and are advancing, a variety of informational capabilities to further US warfighting effectiveness throughout the maritime domain.

**Strike warfare.** Strike warfare is the use of naval forces—aircraft, ships, submarines, and FMF assets—to deliver lethal and nonlethal fires to create desired effects against targets on land.

**Surface warfare.** The original form of naval warfare, surface warfare is the massing of fires to take or sink enemy ships. This warfare discipline is a combined-arms effort that can involve a variety of weapons delivered by aircraft, ships, submarines, and integrated FMF capabilities operating from afloat or ashore.

**Undersea warfare.** Undersea warfare encompasses actions to establish and maintain control of the undersea portion of the maritime domain using submarines, mines, and other undersea systems.

## TERMINOLOGY

USAF personnel operating in the maritime domain will likely do so in conjunction with maritime forces. The discussion below highlights terms used by the respective services for similar or overlapping functions, missions, or capabilities. An awareness and understanding of these variances should contribute to clear communication and minimize confusion during operations

**Air warfare vs counterair.** The USN describes air warfare as operations conducted to destroy or neutralize enemy aircraft or missiles in the atmosphere, including nullifying their effectiveness.<sup>1</sup> It includes the use of fighters, bombers, ship antiaircraft guns, ship

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<sup>1</sup> For additional information, see Marine Corps Tactics Publication (MCTP) 3-20C, *Antiair Warfare*. The Marine Corps term “antiair warfare” uses a similar definition—action required to destroy or reduce the enemy air and missile threat to an acceptable level.



surface-to-air missiles, air-to-air missiles, and cruise missiles launched from ships or submarines, as well as electromagnetic attack, to destroy, disrupt, delay, or deceive the air or missile threat before or after it is launched. It also includes measures taken to minimize the effects of hostile air action using cover, concealment, dispersion, deception (including electromagnetic), and mobility.

USN and USMC aviators label and define operations such as offensive counterair (OCA), defensive counterair (DCA), and suppression of enemy air defenses (SEAD) in line with USAF and joint terminology. What is different is the USN and USMC, outside of the aviation community, identify all or partial employment in this operational function as either “AMD” or “air warfare.” Thus, doctrinally the terms “AMD/air warfare” and elements of “counterair” are similar. USAF doctrine and joint doctrine identify this function solely as counterair.

**Fleet air and missile defense vs defensive counterair.** DCA incorporates both active and passive AMD. From a doctrinal perspective, DCA and fleet AMD are synonymous. AMD is not only a mission performed by the CSG, but a C2 authority (air and missile defense commander [AMDC]) within the CSG, normally located on an Aegis-equipped surface vessel. Further confusion for USAF forces could come from the USMC’s definition of anti-air warfare (AAW), used to indicate those actions required to destroy the enemy air and missile threat or reduce it to an acceptable level. The USMC breaks down AAW into offensive AAW (OAAW) and air defense (AD), which parallels the OCA and DCA elements of counterair.

**Strike warfare vs counterland and strategic attack.** Strike warfare is another potentially confusing and encompassing term USN and USMC forces use to describe what the USAF generally refers to as counterland or strategic attack. NDP 1 defines strike warfare as the use of naval forces—aircraft, ships, submarines, and FMF assets—to deliver lethal and nonlethal fires to create desired effects against targets on land. This includes targets such as leadership or control mechanisms, as well as operating bases and other facilities from which an enemy is capable of conducting or supporting operations against friendly forces.

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## **CHAPTER 2: AIR FORCE MISSIONS IN COUNTERSEA OPERATIONS**

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Resulting from its inherent offensive nature, precision, speed, range, and flexibility, airpower offers distinct advantages when employed in the maritime domain. Accordingly, the USN and USMC field a formidable array of carrier-based air capabilities, enabling maritime forces to achieve strategic, operational, and tactical effects in support of JFC objectives. Similarly, USAF forces can support and complement maritime operations by providing additional protection; extended reach; intelligence, surveillance, and reconnaissance (ISR); and strike capabilities. Many of the missions detailed in this chapter commonly support counterland or counterair operations. However, driven by distinct differences in the maritime domain, these same missions may differ significantly when supporting countersea operations.

### **MARITIME SURVEILLANCE AND RECONNAISSANCE**

According to NDP 1, battlespace awareness is an awareness of the environment and the status of adversary and friendly forces that provides timely, relevant, and accurate assessments of friendly and adversary operations within the battlespace. Battlespace awareness is formed by fusing a picture from operations and intelligence systems, processes, and people to develop and maintain a comprehensive understanding of all activities in the battlespace. Accurate battlespace awareness enables the effective coordination of intelligence and maneuver to gain tactical advantage by finding and targeting enemy forces while neutralizing their ability to locate friendly naval forces.

Surveillance and reconnaissance data is a key component of battlespace awareness. Capable of rapid and large area coverage, USAF ISR assets may be tasked to conduct surveillance and reconnaissance of maritime areas. Planning for ISR operations should address stated intelligence requirements and objectives; classification of contacts; prioritization of contacts; and rules of engagement (ROE) regarding contact location, type, and overflight. Operations may involve multinational, USN, or USMC forces, or USCG or other agencies. Preparation and execution of ISR should include coordination through liaison officers (LNOs) working in the air operations center (AOC) or with other agencies.

Advantages USAF assets may offer in surveillance and reconnaissance in a maritime AO:

- ★ Rapid response.
- ★ Wide area coverage.
- ★ Persistence.
- ★ Passive and active detection, classification, and identification.
- ★ Real-time target tracking and reporting.
- ★ Targeting and strike support, including over the horizon targeting.
- ★ Timely and relevant indications and warnings.
- ★ Rapid and accurate battle damage assessment.

## AIR OPERATIONS IN MARITIME SURFACE WARFARE

Air operations in maritime surface warfare (AOMSW) is the employment of airborne assets in direct support of the joint force maritime component commander (JFMCC) and directed by a naval surface warfare commander (SUWC) to achieve surface warfare (SUW) objectives. AOMSW is similar to other missions in this chapter. However, **due to the proximity of friendly surface forces, AOMSW is controlled by a SUWC to integrate air operations with the fire and movement of maritime forces.** C2 of AOMSW is normally exercised through aircraft control units (ACU) capable of maritime air control (MAC).

The missions below, identified by Air Force Tactics, Techniques, and Procedures (AFTTP) 3-2.74, *Multi-Service Tactics, Techniques, and Procedures for Air Operations in Maritime Surface Warfare*, comprise the concept formerly known as Maritime Air Support:

- ★ **Surface surveillance coordination (SSC).** SSC provides reconnaissance and surveillance to support the maritime commander's objectives. The SSC mission plays a critical role in establishing and maintaining the common operational picture.
- ★ **War-at-sea (WAS) strike.** WAS is the execution of deliberate attacks that are offensive in nature against symmetric enemy surface combatants and materiel. WAS can be preplanned or immediate, depending on the response time and urgency required. Preplanned requests are those made early enough to include on the air tasking order (ATO). Immediate requests arise from situations that necessitate an urgent requirement for air support or to exploit a time-sensitive opportunity.
- ★ **Strike coordination and reconnaissance (SCAR).** SCAR involves detecting targets and coordinating or performing attacks on, or reconnaissance of, those targets.
  - ★★ **Armed reconnaissance.** The primary purpose of this mission is locating and attacking targets of opportunity (e.g., enemy materiel, personnel, and facilities) in assigned general areas or along assigned lines of communication, and not for the purpose of attacking specific briefed targets.<sup>2</sup>
  - ★★ **Counter-fast attack craft/fast inshore attack craft.** A subset of the SCAR mission conducted in direct defense of maritime assets that requires increased integration between air and surface delivered fires and maritime force movement.
- ★ **Airborne maritime mining (AMM).** AMM involves planning maritime minefields and laying naval mines by aerial means.

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<sup>2</sup> Per JP 3-03, *Joint Interdiction*, the USAF equivalent to armed reconnaissance is airborne alert air interdiction. Armed USAF assets that support armed reconnaissance are referred to as air interdiction.

## AIR INTERDICTION OF MARITIME TARGETS

USAF assets may be tasked to conduct air interdiction (AI) to destroy or neutralize enemy maritime surface forces. Importantly, these missions differ from AOMSW in that they are not controlled by the SUWC and that detailed integration with friendly naval surface forces is not required. Per JP 3-09, *Joint Fire Support*, the Joint Force Air Component Commander (JFACC) “is normally the supported commander for the JFC’s overall AI effort; however, within their OAs, the...JFMCC...remain[s] the supported [commander].” If theater- or joint operations area (JOA)-wide operations present a potential adverse impact within the maritime AO, the commander assigned to execute operations will discuss the potential risks with the maritime component commander with any unresolved issues elevated to the JFC for resolution. In most cases, the sea combat commander (an optional navy position that integrates antisubmarine warfare and surface warfare)<sup>3</sup> or the SUWC is authorized to designate surface contacts for strike during AI of maritime target execution.

Airborne alert AI, SCAR, and kill box are viable TTPs for AI of maritime targets. However, interdiction in the maritime environment differs significantly from operations conducted over land. Airspace coordination measures (ACM) and fire support coordination measures (FSCMs) such as the forward line of own troops (FLOT), fire support coordination line (FSCL), and forward edge of the battle area (FEBA) are used to deconflict participating aircraft and aid the conduct and deconfliction of air-to-surface and surface-to-surface fires. Though common to AI in a land AO, they do not have maritime AO analogs. Planning should address and define marshaling areas; areas of attack; ROE; required coordination and deconfliction with friendly vessels in or near the area of operation; fighter, joint, missile, and self-defense engagement zones; vessel identification; and other factors that may influence platform choices, weapons loadout, tactics, and support requirements.

Most USAF fighter, bomber, and attack aircraft can employ a variety of precision-guided munitions effectively against the majority of maritime surface vessels. Though the capability to engage mobile surface vessels in clear air conditions is robust, there is only limited capability to hit these targets in adverse weather conditions.

## ANTISUBMARINE WARFARE

USAF assets can perform antisubmarine warfare (ASW) in support of the JFMCC's undersea warfare efforts. Equipped with sensors and weapons required to detect and engage surfaced submarines, USAF assets may be tasked in an ISR or interdiction role to monitor and, if needed, attack enemy submarines **that have surfaced, are underway, or in port**. Likewise, USAF assets may be tasked to attack submarine ports or related logistics or fueling hubs that support enemy submarine operations. Importantly, USAF assets are not generally trained or equipped to attack submarines beneath the surface.

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<sup>3</sup> For more information on the sea combat commander, see Naval Warfare Publication (NWP) 3-56, *Composite Warfare: Maritime Operations at the Tactical Level of War*.

## AERIAL MINELAYING OPERATIONS

Maritime mining is used to support the broad tasks of establishing and maintaining control of essential sea areas. Mines may be employed either offensively or defensively to restrict the movement of surface ships and submarines. They can be used alone to deny free access to ports, harbors, and rivers, as well as movement through sea lines of communication. Sea mines can also be used as a force multiplier to augment other military assets and reduce the surface and submarine threat. Aircraft are the most suitable delivery vehicles for most offensive mining operations. Most aircraft capable of carrying bombs can carry a similar load of sea mines of the same weight. However, aerial mining is generally conducted by USAF bomber or USN strike aircraft.

Planning and execution of maritime mining operations require detailed subject matter expertise. The JFMCC is generally the supported commander for aerial minelaying operations. Though in direct support of the JFMCC, these missions differ from those conducted in AOMSW as they are not controlled by a SUWC.

There are several advantages associated with aerial-mine delivery:

- ★ Aircraft can access areas inaccessible to ships and submarines in addition to being able to replenish existing minefields without danger from previously laid sea mines.
- ★ Aircraft are likely the most responsive and rapid means for laying sea mines.
- ★ Aircraft can carry a wide variety of naval mines.<sup>4</sup>

## COUNTERAIR OPERATIONS

The counterair mission integrates OCA and DCA operations to attain and maintain a desired degree of air superiority and protection by neutralizing or destroying enemy aircraft and missiles, both before and after launch.<sup>5</sup> Though an air component commander is normally tasked to secure theater-wide air superiority, the nature of operations may necessitate a portion or majority of that effort to be focused on the maritime AO. As such, **Airmen should understand the purpose for which maritime assets are employed to conduct air warfare and fleet AMD.**

While OCA is the USN's preferred method of countering air and missile threats, its approach to air warfare and AMD is primarily defensive in nature. Controlled by an AMDC within the USN's composite warfare organization, USN and USMC aircraft and surface vessels conduct air warfare and AMD to protect a carrier or ESG from air threats. Where air superiority is a primary mission for the USAF, the USN's aim is to gain and maintain sea control. With sufficient freedom from air and missile attack, maritime forces are afforded the necessary freedom to maneuver and attack to gain and maintain sea control.

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<sup>4</sup> For additional information, see NWP 3-15M Vol 1, *Naval Mine Warfare*.

<sup>5</sup> For additional information, see JP 3-01, *Countering Air and Missile Threats*.

## AIR REFUELING

Flight operations aboard an aircraft carrier are very dynamic and time-sensitive, requiring carrier-based crews to plan their missions with flexibility regarding fuel and timing. There are instances where extra fuel can give these aircraft, or the aircraft carrier, the needed time and flexibility to conduct their operations safely and efficiently without having to divert aircraft to land-based facilities. When able and practical to do so, USAF air mobility planners should accommodate the USN and USMC practice of “opportunity tanking” without sacrificing planned air refueling offloads.

Planning air refueling in support of USN, USMC, and coalition operations should ensure refueling compatibility between tankers and aircraft receiving fuel.<sup>6</sup> Transit distances for carrier-based aircraft to reach mission areas may be significantly greater than other joint air assets. Distances may also vary as operations progress. Air planners should remain mindful of aircraft operating radii, distance to and from mission areas, and additional fuel needed for tactical maneuvering when determining air refueling tracks and offload requirements.

## AMPHIBIOUS OPERATIONS

An amphibious operation is a military operation launched from the sea by an amphibious force to conduct landing force operations within the littorals. Amphibious operations are complex and may involve all components of the joint force. They are typified by the close integration of forces trained, organized, and equipped for different combat functions. Operations in the amphibious objective area (AOA) are particularly risky due to the high density and close proximity of friendly forces attempting to achieve initial lodgment with a variety of supporting fires. Landing forces are generally supported by ship artillery, land-based artillery, organic USN and USMC aviation, and USAF aircraft, all in the same airspace. The risk of friendly fire in this environment is high.

Broadly, the phases of an amphibious operation are planning, embarkation, rehearsal, movement, and action. C2 requirements should be clearly established prior to employment. Air component commander coordination with the JFMCC; commander, amphibious task force (CATF); and commander, landing force (CLF), and subordinate agencies, from initial planning through the different phases of amphibious operations to termination is key to mission success.<sup>7</sup> Prepare amphibious operations by accomplishing the following tasks:

- ✪ Air superiority must be gained and maintained to protect the amphibious forces at sea during the transition to land and until the amphibious assault is complete.
- ✪ Enemy forces in the littoral environment should be reduced or suppressed through AI to an acceptable level prior to an amphibious assault.

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<sup>6</sup> USN, USMC, and various allied or partner nation aircraft refuel using a drogue. Though all USAF tanker aircraft are capable of refueling with this method, premission configuration may be required.

<sup>7</sup> For a complete discussion of amphibious operation phases, see JP 3-02, *Amphibious Operations*.

- ★ ISR assets should be employed to monitor enemy forces and support friendly forces throughout the amphibious operation.
- ★ When required, the air component commander should coordinate with the CATF to designate a subordinate air defense commander (ADC) and airspace coordination authority (ACA) within the AOA or high-density airspace control zone (HIDACZ).

Amphibious operations may require USAF forces to perform functions such as counterair, counterland [both AI and close air support (CAS)], airlift for air assault or resupply, and ISR. Importantly, amphibious operations involve many fire support elements creating deconfliction challenges and increased potential for friendly fire as air, surface and sub-surface, and land elements converge in one confined area to support the landing force. C2 in an amphibious operation is complex, requiring both horizontal and vertical integration bringing fire support coordination agencies under one hierarchy. Planning and coordination require familiarity with maritime terminology and C2 arrangements, especially for instances in which the controlling agency transitions from afloat operations to landing force operations. Given these challenges, aircrew cannot afford to operate without significant preplanning, rehearsal, and a clear understanding of friendly force locations and scheme of maneuver.

## **OTHER AIR FORCE COUNTERSEA OPERATIONS**

Other USAF operations such as airlift, cyberspace operations, operations in the information environment, special operations, personnel recovery, electromagnetic spectrum (EMS) operations, and weather services may also provide support to countersea operations.

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## **CHAPTER 3: COMMAND AND ORGANIZATION**

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Countersea operations require flexibility in organization, command, and control. Since Air Force forces may be directed to accomplish these operations in supported or supporting roles in a joint or multinational environment, command relationships should be tailored to provide the degree of adaptability required.

### **COMMAND RELATIONSHIPS**

Support relationships convey priorities to commanders and staffs and are established to aid, protect, complement, or sustain one force by another. Generally, the air component commander should be the supported commander for instances in which the air component constitutes the JFC's primary combat arm in the maritime AO. However, in most cases, the maritime component commander is the supported commander for operations within the maritime AO.

### **COORDINATING MARITIME AND JOINT AIR OPERATIONS**

The JFMCC is the supported commander for operations within the JFC-designated maritime AO. Likewise, the JFC normally designates a JFACC to establish unity of command and unity of effort for joint air operations. The JFC normally also designates the JFACC as the ACA and the area air defense commander (AADC) with theater or JOA-wide responsibility.

Within the maritime AO, the JFMCC may be designated control authority for a specific airspace control area or sector. However, to ensure unity of effort and minimal interference along adjacent boundaries, the commander responsible for maritime airspace control must coordinate with the ACA. Similarly, though commanders tasked by the JFC to execute theater or JOA-wide operations (e.g., JFACC) have the latitude to plan and execute operations within land and maritime AOs, they are required to coordinate the operation with the appropriate commander to avoid adverse effects and friendly fire incidents. To aid this coordination and ensure adequate joint and multinational representation, the air component commander's staff should be augmented with relevant Service component and coalition partner liaisons. During countersea operations the naval and amphibious liaison element (NALE) and the Marine liaison element (MARLE) provide a clear understanding of the JFMCC's desired and prioritized effects.

### **THE AIR COMPONENT COMMANDER**

Typically, the Service component commander with the preponderance of air forces and the ability to plan, task, and control air operations should be designated the JFACC. In this "dual-hatted" role, the air component commander is normally tasked with theater-wide responsibility in support of JFC objectives. Though capable of supporting maritime operations, the priority for doing so is set by the JFC through the air apportionment decision. Based on recommendations from the air component commander, the JFC's apportionment decision drives subsequent allocation and tasking of air component capabilities. As the supported commander, the JFMCC provides requirements in terms of objectives and required effects. This may also include the designation of specific maritime

targets or target sets. As the supporting commander, the air component commander determines how best to achieve those effects.

The air component commander normally exercises operational control (OPCON) of USAF forces and tactical control (TACON) of other Service forces made available for tasking. Though the other Services employ significant air capabilities, portions of these forces may not be made available and employed organically to meet Service component requirements instead. Among others, examples could include the retention of USMC aviation to cover an amphibious assault or the use of naval assets for fleet air defense. Though included on the ATO for awareness and deconfliction purposes, the air component commander does not have TACON of such forces. However, all air activity in the AOR remains subject to authorities assigned by the JFC to the AADC and ACA.

### **SEA-BASED JOINT FORCE AIR COMPONENT COMMANDER**

Though rare, in certain operational environments or when USAF forces have not yet been deployed en masse, another Service component commander may be designated as the JFACC. In such instances, the COMAFFOR maintains OPCON of Service component forces and transfers TACON of forces made available for tasking to the JFACC. In such an arrangement, the COMAFFOR coordinates with the JFACC through a liaison team and fills designated billets within the JFACC staff and joint AOC (JAOC).

**AOC Afloat.** In operations where a shore-based AOC facility has not been or cannot be established, the AOC may be located afloat on a USN C2 ship. This scenario is most likely during the initial stages of an operation, in maritime forced entry operations, or prior to the establishment of an AOC on land. Sea-based AOC positions are jointly manned by personnel from the other Services who may fill key air component commander staff positions while aboard the command ship. Such ships can host several hundred augmentees and have sufficient connectivity to meet requisite C2 requirements for initial operations until the AOC is transitioned ashore.

### **TRANSITION OF JOINT FORCE AIR COMPONENT COMMANDER BETWEEN COMPONENTS**

When the AOC transitions to a suitable host shore-based facility (or from shore-based to sea-based) and when the preponderance of air assets shifts from one component to another, several concerns need to be addressed. During any JFACC transition, the JFC should ensure additional authorities (i.e., AADC, ACA) are transferred appropriately.<sup>8</sup>

- ★ **Planned Transition.** The air component commander should develop a plan for the transition of JFACC duties to another component or location. Planned JFACC transitions are possible as a function of buildup or scale down of joint force operations. During transition of JFACC responsibilities, the component passing responsibilities should continue monitoring joint air planning, tasking, and control systems, and remain

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<sup>8</sup> For additional information and planning considerations on the transition of JFACC responsibilities, see JP 3-30, *Joint Air Operations*.

ready to reassume JFACC responsibilities until the gaining component has achieved full operational capability.

- ★ **Unplanned Transition.** During unplanned shifts of JFACC responsibility, as a result of battle damage or major C2 equipment failure, a smooth transition is unlikely. Therefore, the JFC should predesignate alternates (both inter- and intracomponent) and establish preplanned responses/options to the temporary or permanent loss of primary C2 capability. Frequent backups and exchanges of databases are essential to facilitate a rapid resumption of operations should an unplanned transition occur.

**Transition Events.** The following events may cause the air component commander's responsibilities to shift:

- ★ Establishment of a subordinate joint task force (JTF) with delegated joint air operations responsibilities and attachment of forces to that JTF.
- ★ Requirements related to ATO planning and execution exceed the component capability.
- ★ Buildup or relocation of forces shifts the preponderance of the air capabilities/forces and the ability to effectively plan, task, and control joint air operations to another component commander; and the JFC decides that the other component is in a better position (location, C2 capability, or other considerations) to accomplish JFACC responsibilities.
- ★ C2 systems become unresponsive or unreliable.

## **MARITIME COMMAND ORGANIZATION**

### **JOINT FORCE MARITIME COMPONENT COMMANDER**

Normally, the commander, naval forces (COMNAVFOR), serves as the JFMCC and exercises OPCON over assigned or attached maritime assets and forces. Maritime forces are generally centrally controlled and tasked from a command ship within a TF. Maritime tasking occurs through publication of the maritime tasking order. Though organic USN and USMC air assets are often retained by the JFMCC, they may also be made available for JFACC tasking to conduct countersea or other air operations. In either case, all air missions within the AOR should be placed on the ATO for awareness and deconfliction purposes. Detailed coordination with JFACC tasked air assets operating within or adjacent to the JFMCC's OA is necessary to ensure safe, effective operations.

The JFMCC is also responsible for advising the JFC on the proper employment of maritime forces, and in some situations, may plan and direct limited USAF support operations in coordination with the air component commander. For instance, a communications support unit operating in the maritime AO may be TACON to JFMCC for specific missions.

## **THE NAVY COMPOSITE WARFARE COMMANDER**

Naval units are deployed in TG organizations that can be tailored as required according to the composite warfare doctrine, as described in Navy Warfare Publication 3-56, *Composite Warfare: Maritime Operations at the Tactical Level of War*. The commander of each TG is responsible for all aspects of operations and for carrying out missions assigned by JFC. Composite warfare doctrine represents the USN's implementation of mission command. USN doctrine emphasizes decentralized execution through subordinate warfare commanders who are focused on ADC, strike, sea, and surface information operations. This organizational construct is similar to how the USAF organizes an air expeditionary task force.

In a joint context, maritime operations are distributed operations that stress communications capabilities. The coordination, synchronization, and integration of land-based air operations with maritime air and sea operations are challenging but necessary. The air component commander's staff, as well as land-based air units, should establish communication channels and points of contact well in advance of integrated joint air operations. Detailed coordination is required when USAF forces operate in close proximity to USN forces or when USAF forces are placed under TACON or in support of the Navy Composite Warfare Commander (e.g., coordinated AD, SSC, or strike warfare operations with a CSG).

## **MARITIME REGIONAL/SECTOR AIR DEFENSE COMMANDER**

In joint maritime operations, C2 is normally directed either from a command ship, a CSG, or the lead ship in an ESG or SAG. Command ships have the most robust capabilities to support a sea-based air component commander or JFMCC. The mobile air base and layered defense system represented by aircraft carriers and their surface screening units (cruisers, destroyers, and frigates) create a network of control options. The maritime C2 structure may differ from those used in a land-based operation and may require establishing a regional or sector air defense commander (RADC/SADC) to integrate and best use unique maritime capabilities and operations.

The ACA may designate the COMNAVFOR, or JFMCC, as the control authority for a specific airspace control area or sector for the accomplishment of a specific mission. The massing of maritime forces into a battle force of combined arms (air, surface, and undersea) under a single commander reduces the front to be defended, enhances mutual support, and simplifies identification and deconfliction of friendly aircraft and other AD measures. To ensure seamless integration, unity of effort, and minimal interference along adjacent boundaries, the commander responsible for the maritime airspace sector should coordinate with the ACA.

Where no sector control authority is designated by the ACA and where joint operations composed of adjacent maritime and land environments exist, specific control and defensive measures may be a composite of those measures normally employed in each environment. The JFC for such operations needs to ensure detailed coordination of control and defensive measures with the affected air, land, and maritime commanders. The exchange of liaison personnel at the joint force level facilitates coordination to ensure:

- ✧ Establishment of procedures for integration and coordination of air operations along adjacent boundaries.
- ✧ Agreement on procedures for coordination of flight information, clearance of aircraft to enter and depart the adjoining airspace, and the coordination of airspace control services.

These coordination items should be clearly stated in the ACP and daily special instructions (SPINS) as required.

## **COMMAND AND CONTROL OF AMPHIBIOUS OPERATIONS**

To conduct amphibious operations, an amphibious task force, commanded by the CATF, is formed as a USN task organization in charge of the initial afloat operations. The landing force, commanded by the CLF, is formed as a USMC or US Army task organization in charge of the subsequent shore operations. The two commanders are responsible for planning the operation. Once initiated, the CATF is the supported commander until enough combat power is on land. The CATF then transitions this supported role to the CLF ashore who controls operations until complete or a withdrawal occurs. When an AOA or AO is initially established, USAF forces could be tasked to support the CATF. Later, during the amphibious operation, USAF forces will transition to support the CLF. Until the requisite combat power exists ashore, the amphibious operation is quite vulnerable. It is during this transition from afloat to ashore that USAF forces can create needed effects and play a pivotal role in the success of an amphibious operation.

## **AIRSPACE CONTROL DURING AMPHIBIOUS OPERATIONS**

During amphibious operations, the ACA normally designates the maritime component commander as the controlling authority for a specific airspace control area during amphibious operations. The complexity and size of an amphibious operation directly affects the amount of airspace allocated. If an AO is established, the amphibious force may request that the ACA establish a HIDACZ over this geographic area. A HIDACZ is airspace designated in an ACP or airspace control order (ACO) where there is concentrated employment of numerous and varied weapons and airspace users. Access is normally controlled by the maneuver commander who has the requisite capabilities to C2 the designated area. The items below should be considered when establishing a HIDACZ:

- ✧ Airspace control capabilities and limitations of the amphibious force.
- ✧ Minimum risk routes into and out of the HIDACZ (and to the target area).
- ✧ Air traffic advisory requirements. Procedures and systems should also be considered for air traffic control service during instrument meteorological conditions.
- ✧ Procedures that offer expeditious movement of aircraft into and out of the HIDACZ while providing aircraft deconfliction as well as awareness to surface units.

- ★ Coordination of fire support, as well as AD weapons control orders or status within and in the vicinity of the HIDACZ.
- ★ Range and type of naval surface fire support available.
- ★ Location of enemy forces inside and in close proximity to the HIDACZ.
- ★ At a minimum, the HIDACZ should cover the amphibious task force sea echelon areas and extend inland to the LF's fire support coordination line. Additionally, the HIDACZ should be large enough to accommodate the flow of fixed-wing aircraft into and out of the amphibious airspace.

## **AFLOAT AND ASHORE COMMAND AND CONTROL**

Both the USN's and USMC's air control systems are capable of independent operations. However, in the conduct of an amphibious operation, elements of both systems are used to different degrees from the beginning of the operation until the C2 of aircraft and missiles are phased ashore. While the preponderance of forces are sea-based, airspace control in the AOA will be performed by the USN tactical air control center (TACC). The TACC's role is to provide air planning, direction, and control over all air efforts within the airspace sector until such time as a land-based control center is established. Within the TACC, the USN produces airspace control measures for incorporation into the ACP and SPINS. The TACC is usually collocated with the supporting arms coordination center (SACC). The SACC works closely with the USN TACC to integrate both helicopter and fixed-wing air operations with naval surface fire support, land-based artillery, and any other supporting arms. The SACC is the naval equivalent of the USMC fire support coordination center (FSCC). The USMC establishes a tactical air direction center (TADC) on initial build-up ashore to affect air operations through the USN TACC.

Once sufficient combat power is massed ashore, C2 of the AOA is passed to the CLF. This transition requires extensive planning and coordination in execution. When established ashore, the USMC TADC becomes the TACC and the afloat USN TACC becomes a TADC supporting the USMC TACC. The USMC TACC works in conjunction with the USMC FSCC to integrate operations.

Air C2 functions are traditionally sequenced ashore in five phases:

- ★ Phase one is characterized by the arrival of various "supporting arms controllers" ashore; namely the tactical air control party (TACP), forward observers, air support liaison teams, and naval surface fire spot teams.
- ★ Phase two, the USMC direct air support center (DASC) is normally the first principal air control agency ashore during amphibious operations. When control is afloat, the USN TACC supervises DASC operations.
- ★ Phase three, the movement of the USMC TADC ashore is the principal event.
- ★ Phase four, the senior organization of the USMC air control group is established ashore and functions as the USMC TADC under control of the USN TACC.

- ★ Phase five is characterized by the passage of command responsibility ashore. The USMC TADC assumes the role of the TACC. Once the USMC TACC receives control of all air operations, the USN TACC becomes a TADC supporting the land-based air control agency.
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## **CHAPTER 4: COUNTERSEA PLANNING AND EMPLOYMENT**

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Planning and employment of countersea operations by USAF forces require close coordination with maritime component planners. The planning processes used by USN and USAF forces are consistent in structure and method with the joint planning process described in JP 5-0, *Joint Planning*. Collaboration is critical to integrate and synchronize planning, execution, and assessment processes and enable multiple echelons to work effectively and efficiently together. Likewise, timely mechanisms for assessment, that are understood by all forces involved, facilitate decision-making and enable the entire force to adapt rapidly and exploit opportunities in complex dynamic circumstances.

### **COUNTERSEA OPERATIONS PLANNING CONSIDERATIONS**

#### **COMMAND RELATIONSHIPS**

Establishing proper command relationships between components and functions is necessary to achieve unity of effort. The following considerations guide the establishment of support relationships between air and maritime component commanders:

- ★ The air component commander normally retains TACON of all common and joint-use sorties.
- ★ All AD sorties are considered common/joint-use sorties. However, fleet defense sorties are not solely AD sorties because they tend to be dual-role sorties for both air warfare and surface warfare.
- ★ To conduct maritime superiority operations the JFMCC retains air assets for organic support and fleet defense.

#### **RESPONSIBILITY AREAS**

Clearly understood responsibility areas are a prerequisite for successful joint operations in a maritime AO.

- ★ The air component commander, land- or sea-based, is normally also designated as the AADC and ACA responsible for the overall defense of the JOA.
- ★ The JFMCC or COMNAVFOR is typically assigned regional AD responsibilities over water.
- ★ Whereas land and naval commanders are normally given AOs within an AOR, the JFC normally tasks the air component commander with theater-wide responsibilities such as interdiction or strategic attack. Per joint doctrine, AOs do not normally apply to the joint air component.
- ★ DCA operations or missions are typically sourced jointly for efficient C2 and economy of force whether over land or water.

## **STRIKE PLANNING**

Strike planning should ensure maximum integration of land- and sea-based air, space, cyberspace, and EMS operations. Attention should be given to the complexity of the operation, as well as communications challenges.

- ★ Determine joint or combined packaging for efficient employment of available assets.
- ★ Use airborne C2 to assist real-time package coordination for joint air operations.
- ★ Cruise missile harmonization and launch deconfliction should be coordinated through the air component commander and the cruise missile strike coordinator to ensure deconfliction with other air operations.
- ★ Flight deck operations, limitations, and carrier cycle times are major restrictions to maritime flight operations and require constant coordination between the air component commander and JFMCC.
- ★ SEAD and air refueling are typically operations with the greatest demand. Consider all limiting factors when conducting strike planning.
- ★ Exchanging USAF unit representatives with the JFMCC, COMNAVFOR, and carrier air wings is highly effective in facilitating tactical planning and operations coordination.

## **COUNTERAIR AND FLEET AIR AND MISSILE DEFENSE**

Maritime strike groups generally employ a missile engagement zone (MEZ) around the carrier or other high-value unit. Air defense measures in a maritime AO are generally defined by altitude, range, and azimuth from the high-value unit, an AMD unit, or the screen center. Fighter engagement zones (FEZs) and joint engagement zones (JEZs) typically apply farther from the high-value unit where fighter aircraft operate as the maritime force's outer defensive layer. Planners should coordinate airspace deconfliction, identification procedures and responsibilities, entry and exit procedures, and minimum risk routing within the strike group's OA. More importantly, all MEZ, FEZ, JEZ, and self-defense zones should be published in the ACO to preclude friendly fire.<sup>9</sup>

## **AIR REFUELING OPERATIONS**

Air refueling coordination and integration between maritime and USAF air assets require constant management by planners, and details should be stated in the SPINS. Planning should account for the following considerations:

- ★ Appropriate control procedures should be used in combination with an awareness of potential air traffic congestion.
- ★ Organic maritime aircraft operating at lower altitudes (below 10,000 feet) can be a risk factor in the maritime operating environment.

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<sup>9</sup> For additional information on counterair planning and execution, see JP 3-01, *Countering Air and Missile Threats*.

- ✧ Planners should ensure air refueling procedures used in all air component commander controlled air operations are clearly communicated.
- ✧ Planners should ensure that aircraft assigned to refuel probe-and-drogue aircraft are properly configured and procedures are fully understood.

## **INTEGRATION WITH MARITIME FORCES**

Many variables not encountered in typical USAF training environments are essential to the success of planning integrated operations with maritime forces. Integration during the planning process should consider and determine issues such as:

- ✧ Priority and weight of joint air effort towards achieving maritime superiority.
- ✧ Inter-component coordination and planning mechanisms for joint air operations.
- ✧ Planning for joint packaging.
- ✧ Coordination and procedures to ensure cross-component information flow.
- ✧ ADC responsibilities within the maritime AO.
- ✧ Sector and regional AD authorities and responsibilities.
- ✧ Requirements, procedures, and C2 of DCA for maritime force protection.
- ✧ Requirements and coordination for AOMSW.
- ✧ Requirements and procedures for deliberate and dynamic targeting in the maritime AO.
- ✧ Planning, coordination, and C2 of surface attacks in support of the maritime component commander.
- ✧ Integration of EMS operations.
- ✧ Integration of cyberspace operations.
- ✧ Requirements and procedures for air mobility and air refueling.

## **ENVIRONMENTAL CONDITIONS**

Weather conditions in a maritime AO may change rapidly. Characteristics such as wave height and sea spray impact visibility and radar or sensor effectiveness for platforms and munitions. Ducting, a phenomenon that allows radar energy to travel extended distances within a few hundred feet of the sea surface under some conditions, can influence tactical planning. Therefore, these conditions require thorough analysis. For example, carrier-based aircraft may encounter sea-state constraints for launch and recovery. Operations, in turn, may impact joint land- and sea-based strike packaging as well as counterair. Advance planning should address the need for sufficient airpower assets to offset the loss of capability and desired effects due to environmental factors.

## **ENEMY THREAT, LOCATION, AND CAPABILITIES**

Maritime targets tend to be more difficult to engage than land-based targets for attacking forces. The maritime domain does not offer the protection afforded by terrain for either the attacker or defender. In this medium, the threat can often detect and engage aircraft from long distances. Additionally, because maritime targets are constantly moving, maintaining target-quality location data can be challenging. Such factors may increase the number of aircraft needed to successfully strike targets or meet desired effects and objectives.

## **NAVAL NOMENCLATURE AND TERMINOLOGY**

Integration with maritime forces during employment should be thoroughly planned for and understood. C2 structure, element and agency call signs, and communication procedures are, in most cases, different than those in the USAF. Aircrew should be able to identify, understand, and interface with maritime elements. For instance, conducting CAS in an amphibious objective area requires coordination with the DASC as opposed to the air support operations center in traditional CAS.

## **LIAISON ROLES IN COUNTERSEA OPERATIONS**

Liaisons are an important aspect of joint force planning, employment, and assessment. Liaison teams or individuals may be dispatched from higher to lower, lower to higher, laterally, or in any combination. They generally represent the interests of the sending commander to the receiving commander, but can greatly promote understanding of the commander's intent at both the sending and receiving headquarters and should be assigned early in the planning stage of joint operations.

Due to the joint nature of most countersea operations, liaisons serve a vital and active role in coordinating, integrating, and planning effects in a maritime AO. The NALE, MARLE, and special operations liaison element (SOLE) provide the necessary face-to-face contact among USN, USMC, special operations planners, air component commander, and respective planning staff to ensure mutual understanding and unity of effort and reduce friction between components. These LNOs are not assigned or attached to the air component commander's staff and participate in the AOC planning to represent their respective component commanders' interests. Similarly, USAF personnel can expect to be liaisons to the JFMCC or COMNAVFOR during joint maritime operations. USAF liaisons within the staff(s) of the respective maritime commander offer tactical expertise, operational guidance, doctrinal implementation, and real-time coordination of operations with USAF forces.

## **JOINT AIR COMPONENT COORDINATION ELEMENT**

The mission of a joint air component coordination element (JACCE) is to represent the air component commander to the counterpart component commander. The JACCE director is the air component commander's primary operational level conduit for this task. The JACCE works to ensure the director has all the requisite knowledge, understanding, and background information to facilitate this mission. The JACCE provides component-

to-command level presence in forward headquarters. It provides operational level assessment and coordination of air component commander planning and execution to ensure integration with the operations plan and operational intent to meet JFC guidance.

## **APPENDIX: INTERNATIONAL LAW**

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To effectively conduct countersea operations, commanders, planners, and aircrews should be aware of the legal issues that can impact such operations. In a maritime AO, national policy, US law, and international law, including customary international law as recognized by the US and international conventions to which the US is a party, are all relevant. When planning and conducting countersea operations, commanders, planners, and aircrew should obtain the legal advice of the supporting judge advocate. Countersea operations are conducted in accordance with international law and national policy requirements. The law relating to countersea operations is particularly complex in that much of the law is customary international law developed throughout naval history. Part of the preparation for countersea operations should be a review of the law of war and law of the sea requirements that affect these operations.

Although not ratified by the US, portions of the United Nations Convention on the Law of the Sea of 1982 are consistent with customary international law concerning maritime navigation and overflight rights. USAF members involved in countersea operations should be aware of the rights of aircraft over the various maritime zones. Knowledge of these conventions is essential for aircrew to assert and exercise their lawful rights when navigating these zones. Though some nations may assert security zones beyond the limits of their territorial sea, international law does not recognize such zones. Military aircraft generally have freedom of overflight outside the airspace above a nation's territory and territorial sea.

In the exercise of their inherent right of self-defense, nations may declare various forms of maritime control areas. These may include air or maritime exclusion zones or other types of defensive sea areas in which a measure of control is exercised over foreign ships and aircraft. Additionally, nations may declare a temporary warning zone, including over areas of the high seas. These zones do not restrict the right of navigation but advise ships and aircraft of hazardous (but lawful) activities. These may include missile testing, gunnery practice, and space vehicle recovery operations. During times of conflict, USAF units should be particularly aware of the rights of neutral nations. These rights protect the sovereignty of neutral nations, which includes national ships and aircraft.

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