TENTATIVE MANUAL FOR EXPEDITIONARY ADVANCED BASE OPERATIONS

FEBRUARY 2021

DEPARTMENT OF THE NAVY
HEADQUARTERS, UNITED STATES MARINE CORPS

HEADQUARTERS
UNITED STATES MARINE CORPS
WASHINGTON, D.C. 20350-3000

PRIMARY REVIEW AUTHORITY: DC CD&I

RECORD OF CHANGES		
NUMBER	DATE	ENTERED BY

PCN 501 007704 00

INTENTIONALLY BLANK

DEPARTMENT OF THE NAVY
Headquarters, United States Marine Corps
Washington, DC 20350-3000

5 Feb 2021

FOREWORD

OVERVIEW

The *Tentative Manual for Expeditionary Advanced Base Operations* (TM EABO) was developed as part of an iterative process to test, refine, and codify the *Concept for Expeditionary Advanced Base Operations* signed in March 2019 by the Chief of Naval Operations and Commandant of the Marine Corps, as well as to inform force design and development. The manual consists of both unclassified and classified portions that describe how naval forces will conduct expeditionary advanced base operations (EABO) across the competition continuum. The information contained herein is therefore authoritative but not definitive; it provides the official baseline of ideas to be tested but cannot be considered fully formed doctrine.

The approach intentionally emulates the evolution of "Advanced Base Operations in Micronesia," a concept written in 1921, into a *Tentative Manual for Landing Operations* generated by the Marine Corps in 1934 and then into a shared naval product, *Landing Operations Doctrine*, Fleet Training Publication 167, in 1938. Unlike this historical precedent, which serves as our model and progressed very deliberately, we are moving out on EABO at a startling but necessary pace. Between now and 2023, we will need to test and refine the ideas in this volume to give new formations sufficient guidelines for applying their new capabilities effectively to accomplish their missions.

PURPOSE

The primary purpose of this first edition of TM EABO is to provide a baseline of information, focused on *Force Design 2030*, to inform the live, virtual, and constructive experimentation that will test and refine force structure and capabilities. These experimental evolutions will enable development of the detailed tactics, techniques, and procedures for employment by the future force. Secondarily, it provides an educational primer on the ideas, logi c, context, and terminology associated with EABO. Finally, it provides a foundation for expansion into formal naval doctrine.

SCOPE

This manual consists of both unclassified and classified products that describe how naval forces will conduct EABO. It describes the general characteristics and terms of EABO, and it provides planning considerations and options for force and battlespace organization. Since current force structure and capabilities are inadequate for conducting EABO as envisioned within the approved concept, this manual lays out for experimentation and assessment the future force structure and capabilities associated with the Marine littoral regiments and the naval vessels envisioned to support and sustain them. Included are considerations for command arrangements, as well as a series of cross-functional topics for exploration.

This edition will remain in effect until superseded by a second edition supporting further force development and eventually a formal doctrinal publication.

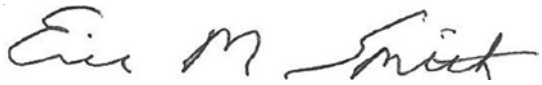
FEEDBACK

To support development of those products, readers and users can submit feedback to the Marine Corps Warfighting Laboratory at https://intelshare.intelink.gov/sites/mcwl/TMEABOAssessment (NIPRNET) and https://intelshare.intelink.sgov.gov/sites/mcwl/TMEABOAssessment (SIPRNET).

AVAILABILITY

TM EABO is available online at https://www.mcwl.marines.mil/TMEABO. Users with the appropriate credentials can access the manual's controlled and classified content respectively at https://intelshare.intelink.gov/sites/mcwl/TMEABOAssessment (NIPRNET) and https://intelshare.intelink.sgov.gov/sites/mcwl/TMEABOAssessment (SIPRNET).

Reviewed and approved this date.



ERIC M. SMITH
Lieutenant General, US Marine Corps
Deputy Commandant for Combat Development and Integration

PCN 501 007704 00

This manual is dedicated to the late

Colonel Arthur J. Corbett, USMC (Ret.),

who served the Marine Corps Warfighting Laboratory for ten years after leaving active duty. He was a visionary, mentor, enthusiastic proponent of expeditionary advanced base operations, and good shipmate to all hands. He challenged us to disruptive thinking and changing the paradigm. His untimely passing occurred on the eve of publication.

INTENTIONALLY BLANK

ACKNOWLEDGEMENTS

Development of this first edition of *Tentative Manual for Expeditionary Advanced Base Operations* was a multiphased team effort. A core team from the Marine Corps Warfighting Laboratory was augmented with additional subject matter experts from the Deputy Commandants for Aviation, Information, Installations and Logistics, and Training and Education, as well as from various branches within the Capability Development Directorate. Additionally, the Navy Warfare Development Command, the Navy Expeditionary Combat Command, and the Navy's Surface and Mine Warfare Development Center were especially generous in responding to the Marine Corps' request for assistance and their contributions provided essential content and insights. Finally, several elements of the manual were positively influenced by ongoing discussions with and innovation by Marine Forces and Navy Fleets.

It is a credit to the leadership and membership of the aforementioned organizations that they embraced participation in the project so enthusiastically. Without their support and expertise, development and publication of the product would not have been possible.

INTENTIONALLY BLANK

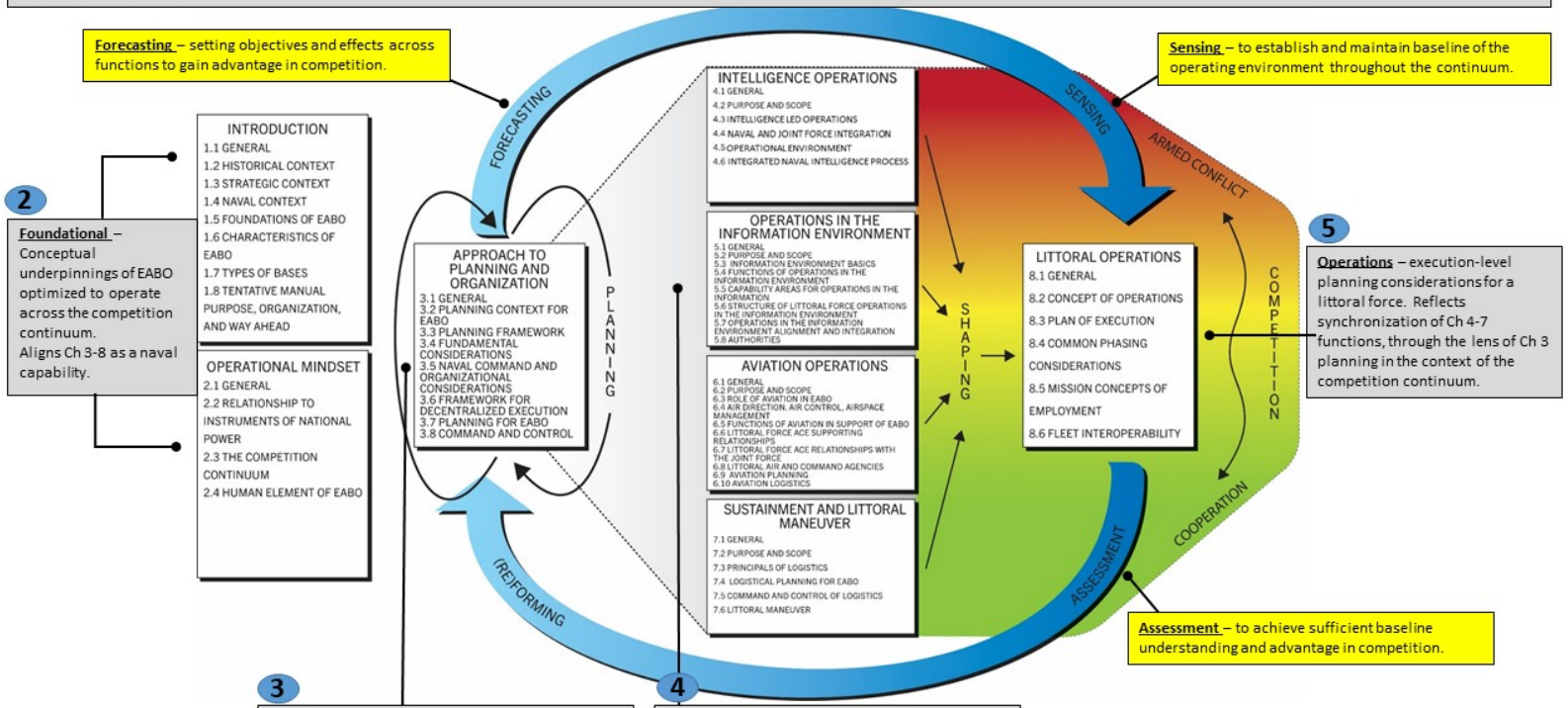
TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

TENTATIVE MANUAL FOR EABO AND ACTIVITIES ROAD MAP

1

The below diagram is provided to support understanding of the Manual's design. The Manual is intended to progress the EABO concept to capability. The Road Map places the ideas and logic of EABO in Chapters 1 and 2, advances into construct of the warfighting functions of Chapters 4-7, and achieves the operational design of Chapter 8. All of this is provided in the framework of the competition continuum.



CHAPTER 1

Introduction

1.1 GENERAL

In 2019 the Chief of Naval Operations and the Commandant of the Marine Corps approved *Concept for Expeditionary Advanced Base Operations*, a foundational naval concept. It "seeks to address challenges created by potential adversary advantages in geographic location, weapons system range, precision and capacity while creating opportunities by improving our own ability to maneuver and exploit control over key maritime terrain…by fully integrating Fleet Marine Force (FMF) and Navy capabilities to enable sea denial and sea control, as well as support sustainment of the fleet."[1] It was the latest addition to the naval concept family, advocating integrated yet distributable naval formations to support sea denial and sea control in the face of potential adversaries who pose increasing challenges to current naval forces.

> "The Marine Corps will be trained and equipped as a naval expeditionary force-in-readiness and prepared to operate inside actively contested maritime spaces in support of fleet operations. In crisis prevention and crisis response, the Fleet Marine Force—acting as an extension of the Fleet—will be first on the scene, first to help, first to contain a brewing crisis, and first to fight if required to do so."
>
> —Commandant of the Marine Corps, *Commandant's Planning Guidance, 38th Commandant of the Marine Corps*, July 2019

This manual sets forth pre-doctrinal considerations for forces conducting ***expeditionary advanced base operations*** (EABO).[2] Its provisions are applicable in varying degrees to all related situations, task organizations, tactics, techniques, and procedures. The specific missions, available means, and other variables of the operational environment will necessitate adjustments to the provisions as discussed in subsequent chapters and as we gain experience with EABO.

1.2 HISTORICAL CONTEXT

In 1921, upon the completion of "Operational Plan 712: Advanced Base Operations in Micronesia," the US Marine Corps outlined a potential for conflict, where it might be fought, and the manner in which it would be carried out.[3] The work underpinned strategic thought, the direction impacting fleet design, and the development of amphibious doctrine. This vision stood the test of time and manifested in World War II operations two decades later. The campaign for Micronesia diverged from the original plan only by means of technological innovations, and the foresight displayed in the 1920s underwrote the United States' eventual victory.

Today, the US Marine Corps is moving forward to meet the demands of future operating environments with a full understanding of the heavy burdens placed on the nation's Naval Service. Meeting the demands of the future, however, calls for significant adaptation in posture and approach, ideas that will be developed in successive chapters. *Rather than a force designed to fight its way into a contested area, the*

---

[1] Office of the Chief of Naval Operations and Headquarters, US Marine Corps, *(U) Concept for Expeditionary Advanced Base Operations*, classified (Washington, DC: US Department of the Navy, 2019), 3.
[2] Throughout the tentative manual, terms set in ***bold and italics*** are defined and/or discussed in greater detail in the glossary.
[3] "Advanced Base Operations in Micronesia," *ibiblio.org*, accessed 27 August 2020, https://www.ibiblio.org/hyperwar/USMC/ref/AdvBaseOps/index.html.

Marine Corps is building a force capable of persisting and operating forward as a critical component of a naval campaign. The planning guidance of the 38th Commandant clearly communicates a requirement to support fleet operations within the maritime domain.

1.3 STRATEGIC CONTEXT

The United States has long maintained forward-postured forces afloat and ashore to reassure friends, deter aggression, respond to crises, maintain alliances, and enforce international norms. For over 75 years the naval services have subscribed to a paradigm of expeditionary operations to secure the ends of assured peace and security of the nation and its allies and partners. Contemporary force structures and capabilities within this paradigm are built upon three assumptions: presumptive or readily achieved *sea control*, *air superiority*, and *assured communications*. Potential adversaries have recently acted to challenge these fundamental assumptions, thus weakening the foundation upon which US naval forces were built to contribute to joint warfighting capabilities. Global competitors are fielding ***stand-off engagement capabilities***—long-range systems designed to keep US forces out of key operating areas and push them farther from overseas allies and partners while minimizing risk to their own forces. The impending challenge is significant and cannot be met by merely refining current methods and capabilities.

> "By working together with allies and partners we amass the greatest possible strength for the long-term advancement of our interests, maintaining favorable balances of power that deter aggression and support the stability that generates economic growth."
>
> —*2018 National Defense Strategy*, January 2018

The United States could counter this approach by fielding stand-off capabilities that outrange an adversary's—and there is value in having such capabilities. However, relying exclusively on this partial solution cedes strategic success to the adversary by willingly distancing US forces from friends overseas and forfeiting the proximity needed to influence events across the *competition continuum*.[4] Relinquishing forward posture also limits US strategic options during developing crises by precluding off-ramps that national leaders might encourage or take, thus leaving armed conflict the only option on the escalation ladder.

The *2018 National Defense Strategy* identifies the re-emergence of great-power competition and the need to strengthen alliances and attract new partners. Toward this end, it calls for the creation of a networked security architecture capable of deterring aggression, assuring and enhancing allies and partners, maintaining stability, and ensuring free access to common domains. A return to great-power competition requires the US naval services to understand the changing character of conflict so they can offer and employ practical means and methods to counteract a deteriorating strategic balance. For the Marine Corps this will be done through meaningful integration in support of joint maritime campaigns based on a threat-informed, concept-based force design that not only counters emerging threats but also creates new opportunities for the joint force to secure operational advantage in concert with allies and partners to maintain strategic initiative across the global commons.

1.4 NAVAL CONTEXT

Naval Warfare, NDP 1, explains that the "United States Navy, the United States Marine Corps, and the United States Coast Guard collectively form the nation's Naval Service."[5] The Naval Service performs four enduring functions:

---

[4] In 2019 the Joint Chiefs of Staff published *Competition Continuum*, Joint Doctrine Note 1-19, which re-conceptualized strategic competition among nations as "a mixture of cooperation, competition below armed conflict, and armed conflict." See Joint Chiefs of Staff, *Competition Continuum*, JDN 1-19 (Washington, DC: US Department of Defense, 2019) and chapter 2 for further discussion.

[5] Office of the Chief of Naval Operations, *Naval Warfare*, NDP 1 (Washington, DC: US Navy, 2020), iii and 4.

- Ensures the safe seaborne movement of friendly commerce and military forces
- Influences events, to include projecting military power, overseas
- Prevents an adversary's seaborne movement of commerce and military forces
- Prevents an adversary from influencing events, to include projecting military power, on US or other friendly shores

Adversary anti-access/area denial (A2AD) capabilities, as previously alluded to, pose operationally significant, disruptive, and cost-imposing barriers to the Naval Service. While US naval forces remain dominant in open oceans, the A2AD systems credibly threaten vessels in close and confined seas relatively near to adversary territory. The crux of the challenge for naval forces is fighting an enemy that seeks to avoid direct fleet engagement while offering battle under a mixed umbrella of land-based and airborne long-range precision fires. Further, expanded range and magazine depth of land-based rocket forces and bomber-borne antiship missiles generate a disproportionate threat to surface naval forces.

Modern sensors and weapons range hundreds of miles both seaward and landward, blurring the distinction between operations at sea and on land and necessitating an operational approach that treats the littorals as a single, integrated battlespace. Doing so requires the ability to conduct ***expeditionary warfare***, which is the projection of naval expeditionary forces into or from a foreign country and its adjacent waters to accomplish a specific mission. As a naval service, the Marine Corps, in support of maritime actions, will execute EABO to contribute to the joint force in contested maritime domains.

While naval forces may conduct EABO in support of all four enduring functions described in NDP-1, it is but one of many types of naval operations. Fleet Marine Forces (FMF)[6] contribute to a modular, scalable, and integrated naval network of seaward and landward sensors, weapons, information-related capabilities, and sustainment capabilities. This allows commanders to flexibly task organize naval formations to cooperate with allies and partners, compete below the threshold of violence to deter aggression,[7] and, if necessary, defeat a peer competitor as part of the maritime component within a joint or combined force.

In addition to EABO, the FMF also conducts a variety of missions, most prominently afloat forward presence, crisis response, and all forms of amphibious operations. Thus, although it has some units designed primarily for EABO, the FMF as a whole is *capable of* EABO rather than designed *exclusively for* EABO. Furthermore, even those units optimized for EABO retain the flexibility to conduct other missions.

The reliance on advanced information systems in warfare, however, presents challenges. Adversaries have developed, acquired, and fielded modern, state-of-the-art information technologies of their own to disrupt and exploit the US military's information dependence. In response to these challenges, the Navy organizes and employs information-specific capabilities and resources to enable, protect, and enhance its warfighting capability. Navy information warfare hinges on three fundamental capabilities: *assured command and control* (C2), *battlespace awareness*, and *integrated fires*. These capabilities, have to be planned and executed in a competitive maritime environment. EABO provides a means to enable and support naval operations in light of these potential vulnerabilities.

1.5 FOUNDATIONS OF EXPEDITIONARY ADVANCED BASE OPERATIONS

Definition. EABO are a form of expeditionary warfare that involves the employment of mobile, low-signature, persistent, and relatively easy to maintain and sustain naval expeditionary forces from a series

[6] Per MARADMIN 004/20, issued 7 January 2020, the FMF includes all Marine Corps operating forces at or below the Marine expeditionary force level.
[7] Headquarters, US Marine Corps, *Competing*, MCDP 1-4 (Washington, DC: US Marine Corps, 2020), 2-19 to 2-20.

of austere, temporary locations ashore or inshore within a contested or potentially contested maritime area in order to conduct sea denial, support sea control, or enable fleet sustainment.

EABO support the projection of naval power by integrating with and supporting the larger naval campaign. Expeditionary operations imply austere conditions, forward deployment, and projection of power. EABO are distinct from other expeditionary operations in that forces conducting them combine various forms of operations to persist within the reach of adversary lethal and nonlethal effects. It is critical that the composition, distribution, and disposition of forces executing EABO limit the adversary's ability to target them, engage them with fires and other effects, and otherwise influence their activities.

Missions of EABO include:

- Support sea control operations;
- Conduct sea denial operations within the littorals;
- Contribute to maritime domain awareness;
- Provide forward command, control, communications, computers, combat systems, intelligence, surveillance, reconnaissance, targeting (C5ISRT), and counter-C5ISRT capability;
- Provide forward sustainment.

EABO tasks include:

- Conduct surveillance and reconnaissance;
- Conduct operations in the information environment;
- Conduct screen/guard/cover;[8]
- Deny or control key maritime terrain;
- Conduct surface warfare operations;
- Conduct air and missile defense;
- Conduct strike operations;
- Conduct antisubmarine warfare;
- Conduct sustainment operations;
- Conduct forward arming and refueling point (FARP) operations.

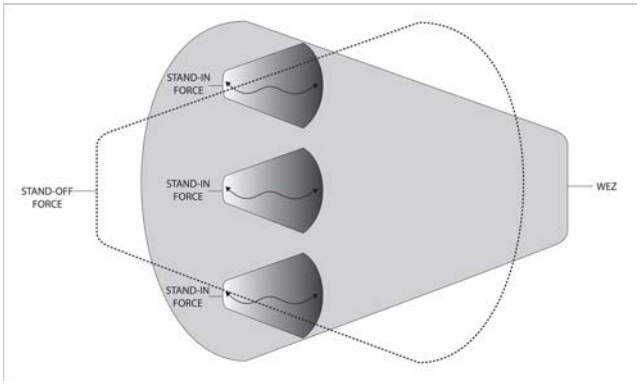


Figure 1-1. Idealized conceptual depiction of stand-off and stand-in engagement

FMF formations may execute these tasks across the competition continuum both above and below the threshold of violence. In the former case, they are normally conducted to deny an adversary access to adjacent battlespace or to support a more comprehensive effort to establish sea control. In the latter, they are often conducted with the goal of deterring the enemy while preparing for conflict if deterrence fails.

1.6 CHARACTERISTICS OF EXPEDITIONARY ADVANCED BASE OPERATIONS

Stand-in Forces. EABO provide engagement capabilities throughout the competition continuum. During competition below the threshold of violence, EABO engage allies and partners, preserve access, and shape the theater for future operations. EABO also enables stand-in engagement capabilities by the persistent posturing of littoral forces within a potential adversary's ***weapons engagement zone*** (WEZ). During armed conflict, the combination of stand-in and stand-off engagement capabilities (see figure 1-1)

[8] The terms "screen," "guard," and "cover," as used here, should be understood according to definitions contained in the current version of *Marine Corps Supplement to the DOD Dictionary of Military and Associated Terms*, MCRP 1-10.2, and included in this document's glossary.

places the adversary on the horns of a dilemma: while the adversary seeks to discover and engage friendly stand-off forces, he exposes himself to the sensing, nonlethal, and lethal capabilities of stand-in forces.

Mobility. Forces conducting EABO have the organic resources and platforms sufficient to transit within a theater and conduct tactical maneuver across the seaward and landward portion of the littoral to accomplish assigned missions.

Persistence. Forces conducting EABO persist forward by moving with a high degree of flexibility within areas of ***key maritime terrain***, presenting a light posture, sustaining themselves in an austere setting, and protecting themselves from detection and targeting. EABO diminish the reliance on fixed bases and easily targetable infrastructure.

Low Signature. Forces conducting EABO carefully manage signatures at all times and especially while conducting localized movement and maneuver. This allows them to remain positioned to achieve the desired operational effects while complicating adversary efforts to find and target them. Where feasible, they leverage host-nation government and commercial assets to perform select support functions and reduce their reliance on external sustainment.

Integrated Naval Forces. The assigned mission sets within EABO are conducted within a joint and coalition framework, as part of not merely an interoperable, but an integrated naval force. Task-organized Marine and Navy units project naval power through EABO by fusing their landward and seaward roles. For the purpose of this tentative manual, integrated naval units executing assigned tasks within and from ***expeditionary advanced bases*** (EABs) are referred to as *littoral forces*. Littoral forces do not connote a specific unit or formation. However, once task-organized as true blue-green teams, littoral forces embody the characteristics of EABO and persist within contested areas as they apply all available means to accomplish their missions.

Cost-effective. A stand-in force executing EABO is strategically cost-effective by virtue of its ability to undermine a potential adversary's cost-imposition strategy. Potential adversaries are investing in large numbers of comparatively inexpensive systems of adequate lethality, extended range, and greater precision to hold at risk the US military's expensive, sophisticated, and relatively few multimission platforms. Forces executing EABO are small, numerous, dispersed, and relatively inexpensive and difficult to target, thus inverting an adversary's cost-benefit calculation when deciding whether to engage and upsetting the cost-imposition strategy.

1.7 TYPES OF BASES

EABO must be understood in relation to the types of bases that may support a naval campaign. Joint doctrine defines a ***base*** simply as "a locality from which operations are projected or supported." Despite this broad definition, the common perception of a base is something specifically composed of well-developed, fixed infrastructure that not only supports operations and forces but also provides physical security. This common perception is not accurate in all cases and is unnecessarily restrictive. Understanding various manifestations of bases is pertinent to understanding EABO.

Advanced Base. An ***advanced base*** is defined in joint doctrine as one located in or near an operational area whose primary mission is to support military operations. This definition leaves open the possibility that advanced bases may be temporary or permanent.[9] Currently, the United States maintains a number of

[9] Temporary advanced bases may also be characterized as ***contingency locations***, ***cooperative security locations***, or ***forward operating sites***. Permanent advanced bases may also be referred to as ***main operating bases***. Definitions for these terms are established in CJCS CM-0007-05 and included in this document's glossary.

advanced bases overseas that can be considered permanent in nature in light of long-term agreements with the host nations and established infrastructure.

Advanced Naval Base. An ***advanced naval base*** (ANB) is not currently defined in doctrine but is increasingly being used in reference to temporary bases established in or near an operational area whose primary mission is to support fleet operations, to include EABO, during the conduct of a naval campaign. Ideally, an ANB is best positioned *outside* an adversary's WEZ.[10]

Expeditionary Advanced Base. An EAB is a locality within a potential adversary's WEZ that provides sufficient maneuver room to accomplish assigned missions seaward while also enabling sustainment and defense of friendly forces therein. Its expeditionary nature means it is not permanent and must be able to change location quickly enough to maintain relative advantage.

Sea Base. A ***sea base*** is an inherently maneuverable, scalable aggregation of distributed, networked platforms that enables the global power projection of offensive and defensive forces from the sea and includes the ability to assemble, equip, project, support, and sustain those forces without reliance on land bases within the joint operations area.

1.8 TENTATIVE MANUAL PURPOSE, ORGANIZATION, AND WAY AHEAD

This tentative manual's purpose is, above all, to facilitate live force experimentation and drive action for future force development. It also seeks to inform the Naval Service and joint force as to the capabilities and missions associated with EABO. The Fleets, Fleet Marine Forces, and force development community have devoted a tremendous amount of energy to address future warfighting challenges. However, these challenges place demands on naval forces to deter aggression and win battles that require *not just a better way* to employ current capabilities. This tentative manual aims to bring forth in the near future new approaches, capabilities, and methods that will empower a bold force to exploit opportunities in an operating environment that is complex and ever changing.

Building on this chapter, which introduced the context, foundations, and general characteristics of EABO, chapter 2 discusses how EABO fit within national strategy and the competition continuum. Chapter 3 thoroughly addresses planning and organizational considerations. Next, EABO are explored and addressed in functional terms in chapters 4 through 7. The final chapter focuses in an integrated manner on littoral operations. Throughout the manual, emphasis has been placed on naval integration while recommending command arrangements, organizational design, and concepts of employment. Classified portions of the manual detail specific future capabilities, mission threads under development, and experiment objectives. Each chapter concludes with a fictional vignette designed to illustrate that chapter's main points. No vignette could hope to illuminate all the many possibilities that are inherent to EABO. Instead, they provide examples to stimulate further thinking and discussion.

As the document's name clearly implies, the *tentative* manual is not prescriptive in nature. Rather, new or modified forces, planning authorities, battlespace constructs, and procedures are offered in multiple options for live, virtual, and constructive force experimentation to validate, refine, and develop future warfighting capability.

Just as the *Tentative Manual for Landing Operations* was continually refined during fleet landing exercises in the 1930s, this document must be swiftly refined over the next three years. An online repository for feedback and after-action reports from wargaming, experimentation, and exercises will

[10] Note that Title 10 also uses the phrase "advanced naval bases" without providing a specific definition.

accompany its release. Ultimately, this effort will contribute to in-stride learning and capability development for the execution of EABO as an integrated naval force.

A COMMAND AND STAFF COLLEGE SEMINAR IN 203X

The Professor enjoyed teaching the history of how the Marine Corps developed the current 203X version of expeditionary advanced base operations. Her own understanding of EABO really started to mature in 2021 with the release of the *Tentative Manual for Expeditionary Advanced Base Operations*. Getting her students to explain how it evolved over the years usually resulted in spirited discussions. She always started the first class of the semester by focusing on EABO's definition from the tentative manual. That EABO is a "form of expeditionary warfare" and that forces performing them have attributes such as "mobile," "low-signature," "persistent," etc. were ideas typically embraced by her students. They also understood well that operating areas for EABO were typically austere and temporary—and could be contested. She really enjoyed the subsequent discussions, when she focused the class on the purpose for EABO.

The tentative manual gave the purpose of EABO as "in order to conduct sea denial, support sea control, or enable fleet sustainment." This purpose statement was augmented by the next sentence, "EABO support the projection of naval power by integrating with and supporting the larger naval campaign." The Professor allocated the most discussion time in class to this topic, because understanding the purpose for EABO in the context of a naval campaign was so important for the problem framing and subsequent planning her students would do when they graduated to the FMF. Understanding what the fleet needed shaped the choices Marines made when planning and then conducting EABO.

The Professor was well known among several generations of students for her hypothesis that EABO made its strongest contributions to sea denial and supporting sea control by helping the fleet win its scouting/anti-scouting battle, doing so in all domains. Once her audience understood this point, she went on to explain that Marines spend most of their time conducting EABO below the violence threshold in the contact layer. This set up another important point: EABO conducted below the threshold of violence on the competition continuum set the conditions for performing it when conflict emerged. So in her mind, it was always critical for her students to know why they were doing EABO in the contact layer, then understand how these contact layer activities helped establish what might be possible in the blunt layer.

She liked to make clear that her hypothesis did not discount the other missions and tasks Marines could perform with EABO. But she believed that for forces conducting EABO to deliver fires, maneuver in the littorals, or provide FARPs and maritime logistic nodes, Marines first had to win two contests: the already mentioned scouting/anti-scouting battle and the littoral recon/counter-recon battle. Winning these contests was a critical step in supporting the fleet's goals and in advancing a naval campaign.

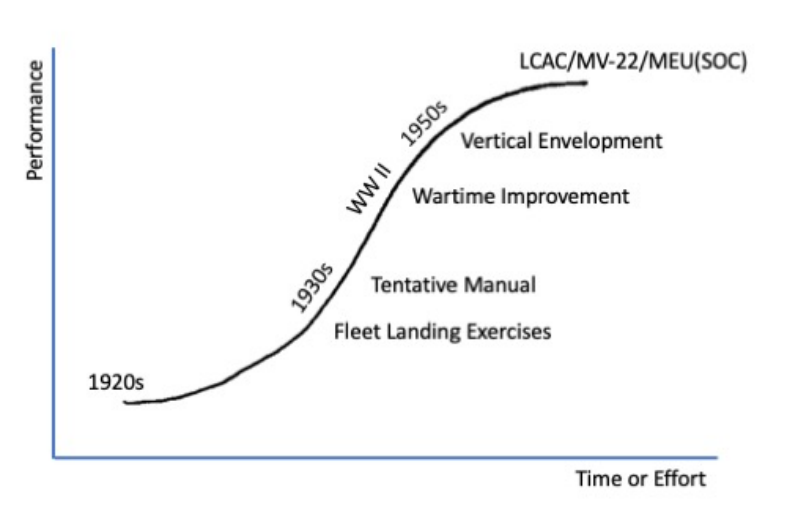
The Innovation S-Curve

Next, the Professor explained the innovation S-curve, an idea she borrowed from an old book.[11] The concept helped her explain how EABO evolved from some early ideas into a well-resourced, all-domain

[11] This section on the S-curve is derived from Clayton M. Christensen, *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail* (Boston: Harvard Business School Publishing, 2000), Kindle edition, ch. 2.

capability. It also helped her illustrate challenges that came with organizational changes, particularly in the early days.

The S-curve is relatively straightforward. It applies to the introduction of any new "technology," where technology is defined broadly not just as equipment or an information system, but as a process by which an organization transforms labor, capital, materials, and information into products or services of greater value. She used the development of amphibious operations before and during World War II to illustrate the point. The Marine Corps combined things like amphibious doctrine with trained Marines, specialized landing craft, and close-air support, transforming these inputs into the "technology" known as amphibious operations in places like Guadalcanal and Iwo Jima.



Amphibious Operations S-Curve

She used the development of amphibious operations to illustrate the S-curve idea. Roughly speaking, in the 1920s the growth of amphibious operations was relatively slow, with the inputs of time and effort producing small performance improvements. The slope of the curve in the twenties was flat because the changes were small at first, so the capability was only incrementally better than what came before. The first elbow in the curve appears sometime in the 1930s, as performance of amphibious operations improved at a much faster rate than in the 1920s. For example, it was toward the end of the thirties when landing exercises transitioned from Marines going ashore in whaleboats to going ashore in purpose-built landing craft. The Professor pointed out that this rapid improvement continued through the end of World War II, as new techniques, better equipment, and better training were constantly added as the Marine Corps learned more from each amphibious operation. The Professor thought the curve's second elbow, when the "technology" of amphibious operations matured and the performance improvement plateau was reached, probably occurred in the early 1960s after the addition of vertical assault matured.

In her view, everything that followed that second bend in the curve were sustaining innovations. Things like the LCAC and MV-22 represented better capabilities for ship-to-shore movement, but they didn't fundamentally change the game. Acquiring those capabilities needed ever increasing resources (e.g., money, time, engineering effort), while they provided only incremental improvements on the existing "technology" of amphibious operations. The systems became more complex, increasing the amount of effort required to gain even minor performance improvements. The MEU (SOC) program of the 1980s and 1990s fell into this category. Those Marines honed their skills to a very high degree, but what they

actually did would seem familiar to their WW II forbearers. The Professor always pointed to the AAAV/EFV as compelling evidence of a mature amphibious operations S-curve.

Ultimately, she used the S-curve discussion to explain the context surrounding the release of the tentative manual for EABO's first edition in 2021. It seemed to really help her students understand the effort, while it also illustrated many of the challenges associated with change management.

INTENTIONALLY BLANK

CHAPTER 2

Operational Mindset

2.1 GENERAL

Naval forces execute EABO throughout the competition continuum to deter aggression, set conditions within the theater before armed conflict occurs, and swiftly posture to fight within the maritime environment during a joint campaign. Deterrence, as well as reassuring allies and partners, requires forces to selectively reveal if not overtly signal their presence and capability in the contact layer. Advantageous force posture can be leveraged to disproportionately draw or distract enemy forces, or create dilemmas, which enable fleet forces to mitigate risk in a contested environment or seize opportunities elsewhere. The mobile and distributed nature of EABO imposes difficult choices upon the competitor and provides a force able to adapt and regenerate more quickly. The operating environment is likely one where the littoral force conducting EABO will be at a disadvantage in numbers of personnel and weapons, and proximity to interior lines. To succeed in this environment, commanders must promote an alert mindset that keenly balances risk to mission and risk to force, and seeks decisive engagement when it enables the fleet as part of the larger campaign.

Conceptually, naval expeditionary forces operating from the landward portion of the littoral—combined with the fleet's ability to operate seaward and in the airspace, in cyberspace, and in the electromagnetic spectrum—give naval commanders the ability to operate in all five dimensions of the littorals in the maritime domain.[12] These five dimensions include seaward (both surface and subsurface), landward (both surface and subterranean), the airspace above, cyberspace, and the electromagnetic spectrum. Given these organic capabilities, along with access to space-based capabilities, naval forces have the ability to gain and regain advantage in all-domain operations.

2.2 RELATIONSHIP TO INSTRUMENTS OF NATIONAL POWER

The resurgence of great-power competition brings to the forefront the importance of coordinating efforts among all instruments of national power: *diplomatic*, *informational*, *military*, and *economic* (DIME).[13] These instruments must be mutually supporting, leverage all available capabilities across government, and contribute to the creation of effects in all domains. Continual rapid technological advancement and increases in the range and accuracy of fielded weapons systems challenge US conventional military superiority and require the US military to continually reevaluate how it supports global power projection. As depicted below in figure 2-1, the application of military force has uses and implications across all elements of national power, and throughout the *competition continuum*.[14] The Naval Service remains the preeminent US military component for sustained power projection, and a littoral force conducting EABO is a key enabler to a naval campaign. Setting the conditions for successful EABO relies on effective use of all aspects of DIME. EABO can support these same instruments to achieve US competitive strategic aims, support the joint force, and influence operations, activities, and investments across the competition continuum.

---

[12] Office of the Chief of Naval Operations and Headquarters, US Marine Corps, *Littoral Operations in a Contested Environment* (Washington, DC: US Department of the Navy, 2017), 9 (full-size edition) and 13 (pocket edition).
[13] Joint Chiefs of Staff, *Doctrine for the Armed Forces of the United States*, JP 1 (Washington, DC: US Department of Defense, 2017), I-12 to I-14.
[14] JCS, *Competition Continuum*, JDN 1-19, 2–4.

In the current environment, every action may affect multiple instruments of national power across the spectrum of conflict. Operational planning must consider these impacts, and the coordination among agencies and nations must be consistent and continuous.

2.2.1 Diplomatic

Diplomacy, the primary instrument for engaging with foreign governments, aims to advance US objectives abroad, organize coalitions and alliances, and garner support for military operations. Aligning military activities with diplomatic activities around the world is the shared responsibility of combatant commanders and ambassadors, and close coordination of military and diplomatic actions can facilitate achieving strategic aims at all levels on the competition continuum. Diplomatic efforts can facilitate future EABO through mechanisms such as basing and staging rights, status of forces agreements (SOFAs), increased information sharing or other supporting host-nation agreements. These cooperative actions can also facilitate competition below armed conflict by providing diplomatic efforts with a forward-positioned US force that can reassure allies and partners, project power, develop host-nation EABO capabilities, and provide credible deterrence options that enable discussions and negotiations.

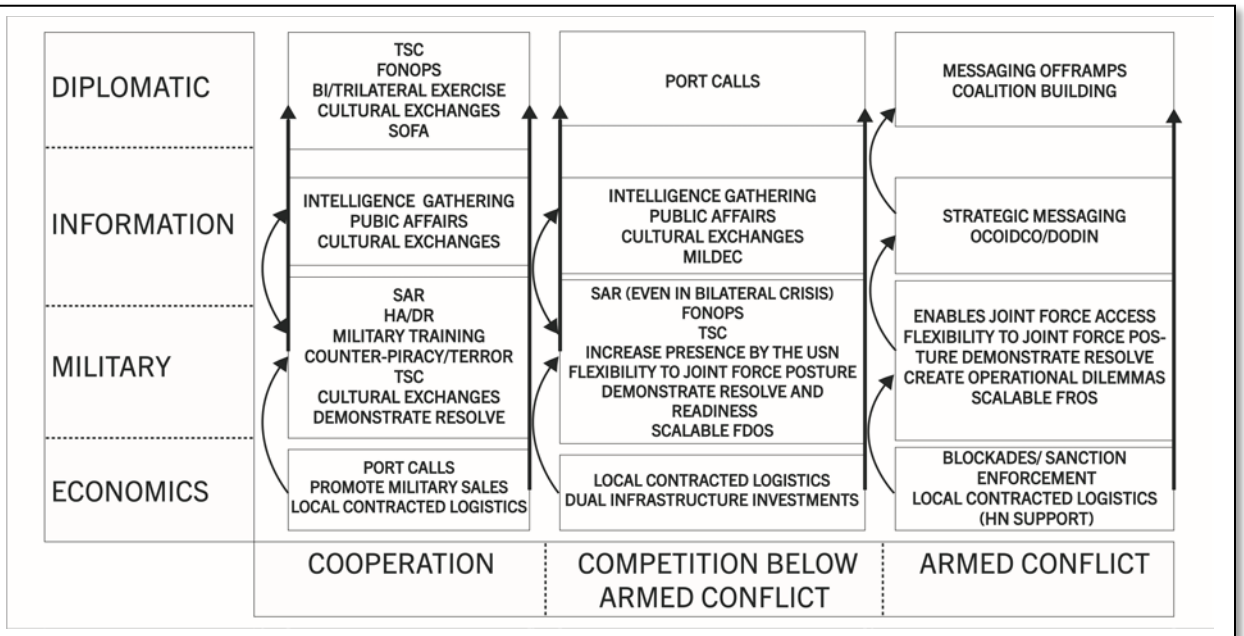


Figure 2-1. Application of naval forces to enable DIME across the competition continuum

2.2.2 Informational

History has demonstrated that outcomes in the battle of narratives can set conflict-winning conditions far more than kinetic military action in pursuit of strategic goals. The ***information environment*** (IE) is a valuable medium used to generate effects, develop an understanding of opponent intent, and shape military actions or force posture. *Joint Operations*, JP 3-0, discusses informational power and its ability to modify behavior and actions. Competition within the IE provides a means to convey intent, build relationships, promote partnerships, and undermine adversary efforts while providing off-ramps from or during conflict. By leveraging ***operations in the information environment*** (OIE), the commander of littoral forces may serve as an enabler to strategic messaging and take advantage of opportunities that support tactical and operational opportunities. Operations in the information environment for EABO will be discussed further in chapter 5.

2.2.3 Military

The military instrument of national power is fundamentally coercive in nature when employed in support of US national security goals. Within the joint force, the Naval Service is key to power projection across the competition continuum. The inherent global to regional mobility and persistent presence of EABO enable joint force access and the ability to posture in international waters adjacent to friends, partners, competitors, and other actors. The effects produced by littoral forces are relevant for competition across the spectrum of conflict. These effects influence the calculus of both friends and adversaries, by improving the US strategic position with increased presence in a contested area or by reducing force size in a given area. Operational planning for armed conflict should always be considered in conjunction with other instruments of power when developing courses of action to achieve strategic goals through cooperation or competition with adversaries. Naval forces are scalable and rapidly self-deployable, can cooperate with partners, demonstrate resolve to allies and competitors, and create operational dilemmas for adversaries. These characteristics enable the Naval Service as the force of choice for providing flexible deterrent options (FDOs) and flexible response options (FROs)[15] towards strategic aims.

2.2.4 Economic

The Naval Service may execute EABO in conjunction with US employment of the economic instrument of power. When cooperating with partners, the use of local contractors for logistical support can improve the US position in a region and counter a competitor's move to sideline US forces. Economic incentives can facilitate long-term security cooperation and ensure the availability of dual-use facilities such as sufficient harbors, docks, and bases. If planned effectively, these investments in foreign-nation infrastructure will potentially enhance US influence and set conditions for future operations.

2.3 COMPETITION CONTINUUM

Competition is a fundament aspect of international relations. As states and nonstate actors seek to protect and advance their own interests, they continually compete for advantage. States typically use all instruments of national power to advance their interests. They leverage these to develop competitive advantages to help them pursue their goals even when they conflict with the goals of another political actor. These "advantages" are relative to a competitor, when one actor is able to do something better than its rival or rivals.

> "Total war and perfect peace rarely exist in practice. Instead, they are extremes between which exist the relations among most political groups. This range includes routine economic competition, more or less permanent political or ideological tension, and occasional crises among groups."
>
> —*Warfighting*, MCDP 1

The US Department of Defense (DOD) has reconceptualized strategic competition. *Competition Continuum*, Joint Doctrine Note 1-19, posits that, rather than a world either at peace or at war, there is "a world of enduring competition conducted through a mixture of cooperation, competition below armed conflict, and armed conflict."[16] It espouses the idea of "integrated campaigning," which requires the "skillful combination of cooperation, competition below armed conflict, and, when appropriate, armed conflict integrating with diplomatic, informational, military, and

[15] Joint Chiefs of Staff, *Joint Planning*, JP 5-0 (Washington, DC: US Department of Defense, 2017), II-21 to II-22 and VII-4.

[16] As discussed above in note 4, *Competition Continuum*, JDN 1-19, envisioned the competition continuum as encompassing "a mixture of cooperation, competition below armed conflict, and armed conflict." In December 2020, the Marine Corps published *Competing*, MCDP 1-4, which discusses the competition continuum using terminology that differs slightly from Joint Doctrine Note 1-19, although it is not inconsistent. This manual will adhere to the terminology in MCDP 1-4 when discussing competition and the competition continuum. For detailed discussion of the competition continuum in Marine Corps doctrine, see HQMC, *Competing*, MCDP 1-4, 1-6 to 1-10.

economic efforts to achieve and sustain strategic objectives" over extended timeframes. The integration of these elements of power takes places throughout the continuum.

In competition, the military is employed in coordination with the other elements of national power to either attract or coerce. *Attraction* makes use of incentives to induce another political actor to take favorable action. Military cooperation with allies and partners is one component of an attraction approach. *Coercion* seeks to compel a rival to take favorable action (or to stop taking action that is not favorable) or to deter a rival from taking action in the first place. For both compellence and deterrence, the goal is to use the *threat of military force* to achieve the desired outcome. Note that competitive advantage does not necessarily equal military superiority. A competitor's strength of will, along with the nonmilitary tools of policy, are part of the equation too.[17]

Competition takes place on both sides of the violence threshold. The threat of violence and violent acts themselves are competitive tools in international relations. The two models in figure 2-2 below depict two views of the competition continuum and its relationship to the violence threshold. The linear model on the left illustrates how various approaches to competition use the threat of violence to help achieve their goals. The circular model on the right shows how negotiations and deterrence can reset a competition below the violence threshold. It also shows that conflict sets the conditions for the type of competition that will follow it.[18]

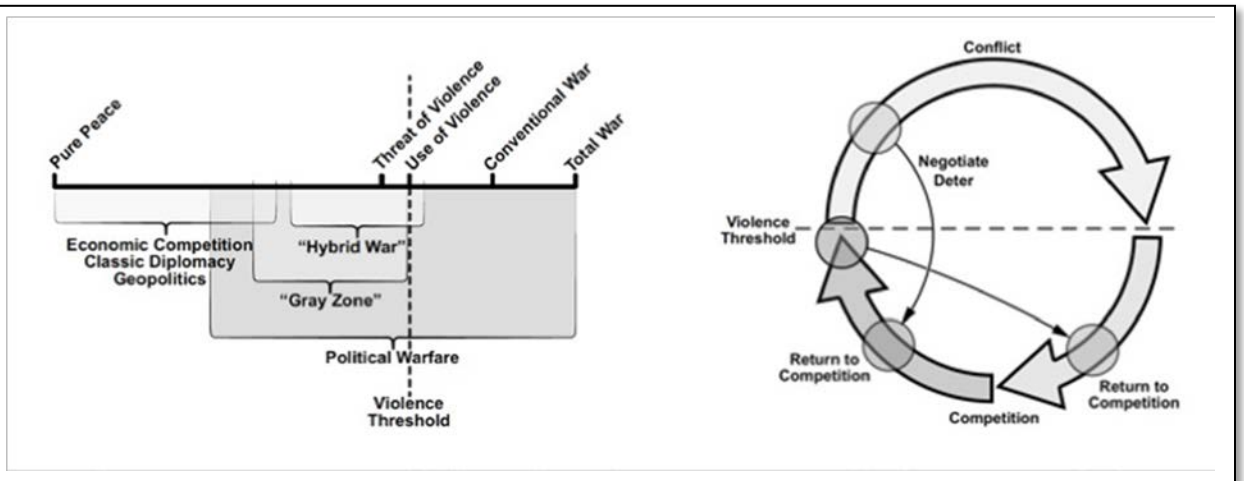


Figure 2-2. Two views of the competition continuum

Within the aspect of cooperation, we undertake activities within EABO as a cooperative effort with like-minded nations during pre-conflict competition as a means of gaining and maintaining access, developing/enhancing allies' and partners' capabilities, countering malign behavior, and deterring regional aggression. The most common applications of EABO in this context involve contributing to regional surveillance to inform and support diplomatic, informational, military, and economic counteraction to violations of international norms. Cooperative activities may also include increasing familiarity with potential operating areas, collaborating in development and fielding of common equipment and materiel solutions, improving infrastructure, and conducting exercises that enhance collective warfighting capabilities and promote deterrence.

[17] HQMC, *Competing*, MCDP 1-4, 2-9 to 2-13.
[18] HQMC, *Competing*, MCDP 1-4, 1-6 to 1-9.

In the event of conflict, naval forces conduct EABO to augment, enhance, or assist partner nations in defending sovereignty, control key maritime terrain, contest *fait accompli* gambits,[19] deny enemy freedom of action, impose costs, and shape the operational environment in support of integrated sea control and maritime power-projection operations. During the latter, forces conducting EABO accept risk relative to decisive naval maneuver by major fleet units to accomplish important tasks inside the WEZ in support of the overall fleet concept of operations. As we see in the circular model above, the outcome of conflict sets the conditions for a return to competition below the violence threshold.

2.4 HUMAN ELEMENT OF EXPEDITIONARY ADVANCED BASE OPERATIONS

The challenges of the environment, both physical and operational, demand that littoral force personnel be mentally resilient and agile in order to thrive within austere conditions while solving complex challenges. Operationally, forces will be dispersed in a potentially denied or degraded C2 environment. Further, adversaries may choose to bypass elements, thus providing windows of opportunity in moments of risk. Each Marine and Sailor must be prepared to seize opportunities and conduct decisive actions while remaining cognizant of the risk inherent with independent operations in a contested area.

Although written about small wars, the inset passage is equally applicable to EABO. The forces involved will be widely dispersed within littoral areas where civilian populations make their livelihood and considerable commercial activity takes place. Commanders at all echelons will be required to exercise initiative that is nested with the higher commander's intent while at the same time cooperating with other US government and nongovernmental organizations, host-nation forces, and the local population.

Warfighting Spirit. The hallmark of Marines and Sailors is their fighting spirit and ability to adapt quickly to changing situations and circumstances. These qualities have enabled successes in every clime and place around the globe in support of national defense. The breadth and depth of EABO mission sets require each uniformed member to draw from the collective memory of the services. Wide-ranging historical parallels across the spectrum of conflict are directly applicable to the development of today's littoral forces. The unique qualities of *character*, *mental toughness*, and *tactical ability* born of rigorous training will remain critical within the developing littoral forces.

Commander's Initiative. The role of the commander of littoral forces, at every level, is to develop and exploit opportunities through bold action. Given human nature, commanders may have a natural inclination to employ larger formations in order to ensure mission accomplishment while enhancing self-defense. However, the virtues of smaller, more numerous, more dispersed formations offer inherent force protection against an adversary with pervasive sensors and long-range precision weapons. Capitalizing on these attributes, commanders are able to employ well-placed, disciplined units across the littorals to achieve effects without resorting to traditional concentration of forces to achieve mass—this poses a credible threat to potential adversaries.

> "Psychology has always played an important part in war. This knowledge was important in ancient wars of masses; it becomes more so on the modern battlefield, with widely dispersed forces and the complexity of many local operations by small groups, or even individuals, making up the sum total of the operation. In former times the mass of enemy troops, like our own, was visible to and under the immediate control of its leaders. Now troops are dispersed in battle and not readily visible, and we must understand the psychology of the individual, who operates beyond the direct control of his superiors."
>
> —US Marine Corps, *Small Wars Manual*, December 1990

Mindset. The actions of a force at the lowest level can have strategic implications. The psychology and moral characteristics of forces that conduct EABO will contribute significantly to tactical, operational, and strategic success. Enduring US policy recognizes the

[19] Per *Webster's II New Riverside University Dictionary*, a fait accompli is "an accomplished and presumably irreversible deed or fact."

freedom and sovereignty of all nations and the inherent rights of free peoples. Adherence to these values is a powerful competitive advantage against many adversaries. Operations of the US military must complement other instruments of national power, including US strategic messaging. As noted in *Small Wars Manual*, in decentralized expeditionary operations such as EABO, "we are dealing not only with our own forces, but also with the civil population which frequently contains elements of doubtful or antagonistic sentiments. The very nature of our own policy and attitude toward the opposing forces and normal contacts with them enable the personnel of our Force to secure material advantages through the knowledge and application of psychological principles."[20]

The complexity and danger found in EABO require the mental rigor to plan effectively and set the conditions for success during conflict but also before conflict begins. A littoral force is only relevant if it maintains the ability to apply force at the time necessary to generate options and influence the greater campaign. Operating in a distributed environment with limited support and resources will require a force with the warrior mindset, as well as the mental agility to rapidly shift perspectives and generate alternatives.

MAKING USE OF EABO IN THE CONTACT LAYER

As the first edition of *Tentative Manual for Expeditionary Advanced Base Operations* was published in 2021, Marines were already figuring out how to use EABO in the contact layer, on the competition continuum below the violence threshold. They analyzed what the fleet sought to achieve in support of the theater campaign plan (TCP), such as maintaining freedom of navigation. They also analyzed the TCP itself to understand the CCDR's goals. This analysis helped the Marines build their own supporting plans, informing how they would use EABO over the long time horizon of the theater campaign.

In 203X, the Democratic Republic of Centralia (DRC) continued to practice incrementalism in the waters adjacent to its territory, in the seas where other nations had competing claims of ownership. For several decades, the DRC worked to establish permanent positions on contested features, such as occupying and then building facilities on small islands or turning rocks and shoals into small islands they could use in similar ways. These positions frequently included long runways and harbors with refueling capability, so they could be used for both commercial and military purposes.

Most of these positions included a variety of sensors that were tied into a reporting grid. Some were used for routine weather and maritime surveillance. Others focused on the aviation picture in the surrounding airspace. Most sensors were dual use, although some were for solely military uses, such as targeting radars, signals intelligence collection, etc. The DRC also had electronic-attack gear on some of the islands. These fixed positions were part of a larger system that included DRC Navy and Coast Guard ships, fishing boats, and surveillance vessels. DRC air force and space capabilities were also part of this system. They had a significant ability to sense and manipulate the environment through the electromagnetic spectrum.

One of the fleet's primary objectives in the region, in support of the CCDR's TCP, was to reinforce the US commitment to freedom of navigation. The campaign plan also sought to constantly maintain an all-domain operational picture in the region. The two objectives mutually supported each other. The fleet's

[20] Headquarters, US Marine Corps, *Small Wars Manual*, FMFRP 12-15 (Washington, DC: US Marine Corps, 1990), 17.

performance of freedom of navigation operations often caused the DRC to use various sensors and to emit in the electromagnetic spectrum. This provided opportunities to collect on DRC emissions, which contributed to a better understanding of the all-domain operational picture.

The fleet did not have enough capacity to maintain constant presence in every area where they might perform a freedom of navigation operation. Littoral forces conducting EABO as part of a maritime campaign, maintains contact within the operating environment. Over time, they constantly rotated detachments to allied and partnered nations that bordered the region. Their plan supporting the TCP guided them to always find ways to practice support to sea-control and sea-denial operations. The DRC regarded this frequent exercising as a sustained maritime operation by the United States and its allies and partners.

In one specific example that occurred in 202X, the FMF participated in an annual exercise with the allied nation of Ficticia. One of the exercise objectives was to rehearse sea denial and support to sea control, in particular by conducting a live-fire exercise of the Marines' newly fielded antiship missiles. As an integrated naval force, FMF elements exercised live fires landward while other fleet elements performed a freedom of navigation operation through parts of Ficticia's EEZ, the same waters the DRC also claimed as their territorial waters. In effect, the exercise of these naval capabilities demonstrated that the joint force could employ EABO as an integrated land-to-sea maneuver with other fleet assets.

The live-fire drill was the most visible—though not only—way the Marines and sailors, operating as an integrated naval force in the contact layer, sustained support to the fleet. The combination of the freedom of navigation operation and EABO exercise provided a chance to practice fleet screening tactics maneuvering into and then out of the contested area. The littoral forces launched long-range, unmanned surface vessels and unmanned aerial systems from the littorals of Ficticia. Keeping the systems within Ficticia's EEZ aligned with the exercise directives and supporting diplomatic agreements. The Marines not only practiced feeding their sensor information into the maritime domain awareness picture but also rehearsed some of the actions they might take to screen other naval forces sailing into, operating within, and then sailing out of the contested area.

The exercise design also intentionally incorporated the Fictician Marine Corps and Coast Guard. It thus served as a demonstration of how the FMC could provide overwatch for their coast guard counterparts as patrolling the Fictician EEZ.

Throughout the exercise, the FMF demonstrated a key contribution to the maritime campaign conducting fleet operations in its all domain scouting/anti-scouting battle with the DRC, especially in the contact layer. This focus overlapped with the CCDR's goal to build and maintain the current operational picture. The exercise design took advantage of the Marines' understanding the fleet's and CCDR's information requirements. This analysis identified the approval chain the Marines needed to follow to obtain authorities necessary to perform collections and help build that picture, both for the fleet and the combatant command. Demonstrating to the FMF how EABO in the littorals could enable other forces afloat provided them a pattern to follow as they sought to integrate with and support their coast guard.

INTENTIONALLY BLANK

CHAPTER 3

Approach to Planning and Organization

3.1 GENERAL

The military serves as one instrument of national power, as discussed in chapter 2, and the military's role varies across the competition continuum. The military plays an important role in *competition below the threshold of violence*. Above this threshold, the military plays a more prominent role. With this in mind, EABO clearly requires commanders and staffs to envision military actions and their effects across the competition continuum. Commanders must develop a campaigning mindset not only in armed conflict but also in competition below armed conflict. The cultivation of a campaigning mindset in planning, characterized by long-term thinking and coordination with allies and partners, increases political-military options while also presenting potential adversaries with increasing dilemmas. Campaigning across the competition continuum also demands more effective and complete naval integration.

The traditional naval expeditionary force (NEF) combines capabilities of the Navy and Marine Corps that are complementary but distinct. To deliver on the potential of EABO and achieve desired effects, however, the traditional roles of blue and green components of a NEF must evolve. Command arrangements and functions must no longer restrict Navy components to seaward contributions and Marine Corps components to landward contributions to naval operations and power projection. Complete integration of a NEF conducting EABO requires an appreciation of the importance of integrating landward and seaward activities under fleet cognizance to achieve effects in all domains.

3.2 PLANNING CONTEXT FOR EXPEDITIONARY ADVANCED BASE OPERATIONS

The environment in which littoral forces will conduct EABO is both complex and dynamic. The commander must plan to operate across multiple domains and within the adversary's WEZ. Planning procedures require detailed integration and coordination at all echelons. Understanding the planning implications and requirements gained through analysis of the strategic environment, direction, and guidance is critical to ensuring mission success. Coordinating littoral force actions in the complex time, space, and geography of the littorals requires intricate planning, especially given the changing naval and joint force environment.

3.2.1 Planning for Competition

Strategic goals in competition are derived from national interests, and commanders must constantly evaluate what must be accomplished to contribute to the larger campaigning effort in alignment with these goals. Providing a positive aim for succeeding in competition helps to align actions taken toward reaching intermediate goals. In both current and future operations, focus must be placed on the competitor to develop an understanding of their systems and exploitable vulnerabilities. Likewise, commanders must continually refine models to evaluate the reactions of competitors and partners alike. Further, actions must be taken to conduct self-assessment for awareness of internal vulnerabilities that may be exploited. As such, operations are designed to stimulate known aspects of an adversary system. Intelligence collection planning efforts are purposefully integrated to observe and measure anticipated system deviations.

3.2.2 Planning for Escalation

All planning efforts must seek to shape the general conditions of competition over an extended period of campaigning to be responsive to escalation and successful in armed conflict. After a baseline within the operating environment is established, all missions and activities will be linked to measurable outcomes of the assessment plan. Understanding the pattern variance of adversary systems will enable local commanders to disrupt decision making processes, break kill-chains, and add ambiguity of allied and partner force intentions. By linking activities in this manner, the commander of a littoral force will be able to monitor and assess if a situation is escalating or de-escalating while providing options to respond appropriately and direct allocation of resources to emergent requirements.

3.2.3 Inherent and Prescribed Conditions of Expeditionary Advanced Base Operations

EABO require flexibility in operational planning. Since littoral forces conduct operations throughout the competition continuum, the potential for and scope of unforeseen contingencies is greatly increased. Commanders must ensure that plans account for the need to anticipate and react to rapidly evolving tactical situations. Thus, commanders must account for a variety of conditions to ensure littoral forces maintain a light, mobile, expeditionary posture, which is a requirement of successful EABO.

Littoral forces conduct EABO under the following inherent conditions:

- Task organization must be flexible, as task-organization requirements will vary depending on whether the forces are embarked, landing, or conducting operations within EABs ashore.
- Littoral forces must disperse as widely as possible to enable force protection, complicate the adversary's targeting cycle, and impose cost upon the enemy in time and material.
- Widely distributed operations may create competition for limited shipping, connectors, tactical airlift, and assault support assets across the task force. Yet forces conducting EABO must rely on these for movement to the area of operations and maneuver within EABs. When movement means are insufficient to support planned operations and additional means cannot be made available, commanders must reevaluate and modify the scheme of maneuver.
- Littoral forces must carefully manage their signatures across spectrums and domains to enhance survivability while conducting localized movement and maneuver. Where possible, host-nation support may enable forces to reduce their signatures.
- Forces conducting EABO must be able to plug into higher echelons for information and intelligence.

Also inherent to EABO and the maritime domain is the imperative to sustain the force from the sea. This requirement, combined with mobility limitations imposed by terrain and infrastructure, may guide the commander to more heavily weight access to intermodal transfer points in positioning forces. Intermodal transfers represent periods of vulnerability that require close coordination among forces. Reliance on sustainment afloat through intermodal transfers may be a limiting factor for littoral force operations ashore.

Prescribed conditions also influence and demand attention during planning for EABO in several ways. These conditions are usually, but not exclusively, prescribed by the establishing authority in the initiating directive in the form of constraints and restraints. First, the host nation often imposes restrictions that limit the commander's freedom of action. For example, specific conditions may limit the allocation, employment, and control of surface attack munitions. Host-nation prescribed constraints and restraints will influence the planning and operations of the littoral force in both competition and armed conflict.

Second, during planning for operations across the competition continuum, higher headquarters may initially assign the littoral force multiple potential objectives, with the selection of a specific objective

delayed until just prior to execution. This requirement provides flexibility at the operational level by exploiting the littoral force's inherent mobility and flexibility. However, it complicates littoral force task organization and ship-to-objective-area planning. Separate plans for separate objectives must be prepared with normal attention to detail and, to the extent permitted by the various schemes of maneuver, must provide for the employment of the same littoral forces in the same general configuration and order. The planning challenge is similar to that faced by Marine expeditionary units (MEUs), which must be configured and embarked to execute multiple missions. Littoral forces must be configured and embarked so that they are capable of executing a variety of missions to achieve multiple objectives across the competition continuum.

Finally, higher headquarters may set conditions for strict emissions control, which creates a unique challenge during distributed operations. Given the character of EABO requiring extensive use of communications and electronic equipment to coordinate, direct, and support execution of EABO, widely dispersed EABs are potentially vulnerable to exploitation by adversary signal intelligence and electronic warfare efforts. Special attention is required to ensure effective signature management and signal security during each phase, stage, and step of an operation.

3.3 PLANNING FRAMEWORK

Planning for EABO is built on the framework provided by the established military decision-making model. It is guided by the tenets found in the Marine Corps Planning Process/Navy Planning Process: *top-down planning*, *single-battle concept*, and *integrated planning*.[21] As with all planning, the enduring requirement is both continual refinement and the iterative nature of the process, with emphasis on branch plans and sequels. As stated in *Marine Corps Planning Process*, MCWP 5-10, planning should not be simply a series of steps. The incorporation of feedback loops and informed analysis is critical to allow the commander to function and thrive in an austere and dynamic environment.

The following focus areas provide a starting point for planning purposes but are not all-inclusive.

Operational Design. A valuable tool enabling understanding and decision making for commanders and their staffs, which helps frame the environment, clarify inherent problems, and develop a common understanding of the *current state* of the ***operational environment*** (OE). Factors such as mission, strategic objectives, and guidance provide clarity for defining the desired *future state* of the OE. Identifying and reconciling the differences between these two states helps the commander shape the operational approach—giving lines of operation, lines of effort, and the associated military objectives—and solve the operational problem.

Purpose and Tasks. Clear understanding of purpose and assigned tasks enables the commander of littoral forces (hereafter, *littoral force commander*, or LFC) to focus planning efforts and ensure operations will accomplish the mission, thus helping the joint force to achieve operational objectives and strategic aims. As a naval force, the littoral force may be integrated with various elements of the fleet or joint force. Further, clear purpose and tasks are essential because the littoral force must operate in a distributed manner and very likely within a communications-degraded environment, which makes ongoing direction and guidance from higher headquarters improbable. The purpose and task carry the littoral force forward to fight, survive, and accomplish the mission in this complex environment.

Sequencing. The commander must think in detail to determine the best arrangement of actions to accomplish the mission. Operating within a potential adversary's WEZ, the littoral force must expect to be covered at all times by observation and potential fires. For the littoral force to survive and accomplish

[21] Headquarters, US Marine Corps, *Marine Corps Planning Process*, MCWP 5-10 (Washington, DC: US Marine Corps, 2020), 5–7.

the mission in this environment, the commander must sequence all actions and movements to minimize an adversary's advantage. For example, the commander must consider task organization for force protection, signature management, and other planning factors.

Phasing. When planning phases of the operation, the commander must account for whether the littoral force is already within the operating area or whether it will need to gain entry to the area. For example, a littoral force already deployed and conducting TSC may swiftly transition to other mission tasks as forces to augment the littoral force close to the area of operations. The phasing construct assigned by higher headquarters should be mirrored whenever possible in operational plans at and below littoral force level. Staffs must identify the conditions for the commander's decision to transition into the next operational phase. The planning must detail assessments, authorities, and criteria to be met before transition, and they must provide the commander timely and accurate information.

Integration. *Joint Maritime Operations*, JP 3-32, outlines the importance of integrating maritime planning and ensuring consistency with the Joint Planning Process.[22] When conducting EABO, the need to function in a high-paced, resource-constrained environment adds importance to taking every opportunity to collaborate. This promotes efficient use of resources and capabilities across domains and through multiple echelons of command. Integration is key, as the littoral force, operating in a mobile and distributed manner, will often need to leverage joint, coalition, and host-nation capability to sustain itself and maintain its resilience. In addition to integrating littoral force efforts with those of the greater joint force, the commander must seek these same efficiencies and integrate the operations and capabilities of the littoral force across time, space, and purpose.

Risk. Risk describes a situation involving exposure to danger or damage. Risk to force and risk to mission are inherent in all military operations. The LFC must also understand risk in terms of the opportunities that reside within the operating environment. Through understanding of the battlespace and appropriate planning, the commander manages risk through sequencing, phasing, and integration. Boldness is a key attribute in littoral operations.

3.4 FUNDAMENTAL CONSIDERATIONS

The LFC must consider the requirements of the theater commander, how to best integrate with theater operations, and development of an assessments plan. Additionally, prior to deployment littoral force elements must continuously assess the OE to build a baseline understanding of the activities of adversaries, allies, and partners. Further, they must be aware of shaping activities by echelon taking place to set the conditions for the deployment of the littoral force. Adversary responses to both joint-force and littoral force shaping activities will demand continued assessment of the OE to support further littoral force planning efforts in the event of escalatory actions.

Theater Requirements. Planning for actions across the competition continuum informs force posture and its contribution to theater deterrence. Through both diplomatic and informational instruments of national power, favorable force posture can also improve relationships with allies and partners. Additionally, the LFC must understand the theater commander's aim and the planning horizons associated with each campaign plan. Further, an understanding of allied and partner nation goals, capabilities, and capacities plays an integral role in planning for long-term campaigning.

Theater Integration. Achieving goals in competition requires integrated action across the whole of government. The LFC must analyze all relevant sources of direction and guidance. These sources include a wide variety of documents such as domestic and international laws, bilateral and multilateral

[22] Joint Chiefs of Staff, *Joint Maritime Operations*, JP 3-32 (Washington, DC: US Department of Defense, 2018), III-2

agreements, executive orders, government agency and interagency policies, military directives, and military doctrine to list a few. While it is understood that direction and guidance from strategic documents can be vague, they are important because they help the littoral force to understand its role in the greater campaigning effort.

Developing an Assessment Plan. Assessment is an integral part of EABO planning and execution. It fulfills the critical requirement to continuously monitor and evaluate the OE and the progress of operations toward the desired end state in the desired timeframe. The aim is to understand the problem and develop effective actions to solve it. In EABO, commanders must leverage their staffs, subordinate commanders, and interagency and multinational partners to provide a holistic understanding of desired and undesired effects observed in the OE.

Building an assessment plan begins early in the planning process with the identification of desired operational outcomes, and includes the development of collection requirements that support the commander's ability to evaluate progress. The assessment plan will define indicators to help determine whether operations are achieving stated objectives and ultimately advancing toward the desired end state. In the context of EABO, the assessment plan must address indicators of operational effectiveness in both competition and armed conflict, as well as indicators that signal to the commander that a transition is occurring across the threshold from competition to armed conflict.

During operations, assessment is a continuous process that entails three distinct tasks: (1) continuously monitoring the situation and operational progress; (2) evaluating the operation against measures of effectiveness and measures of performance to gauge progress relative to the mission, objectives, and end state; and (3) developing guidance and recommendations for improvement.[23]

Assessment supports the commander's decision making, and the commander balances the assessments conducted by the staff, as well as interagency and multinational partners, with commander's judgement and intuition to determine how to best direct operations. Assessment of the OE and operational progress is continuous, with the commander receiving periodic updates unless an emergent problem is detected.

Shaping by Echelon. Activities that shape the OE help set conditions for successful theater operations. These activities are executed continuously to enhance operational effects within the OE. Shaping activities are vital to littoral forces conducting operations with allies and partners. Responsibility for shaping at any level of littoral forces normally resides at the numbered fleet and Marine expeditionary force (MEF) level. Considerations such as country access, port access, over-flight permission, and contracting matters must be accounted for at the level of command possessing the required authorities to influence them. Commanders at appropriate levels must consider several additional factors:

- Infrastructure improvement to ensure access or facilitate EABO and, in particular, engineers and naval construction forces improving civilian infrastructure like airports, seaports, roads, and bridges for dual-use
- Civil affairs and communications strategy and operations specialists influencing local perceptions of US forces
- Contracting agents establishing contact with local vendors
- Bilateral exercises with host-nation forces to improve rapport and interoperability
- Targeted counterinsurgency operations, stability operations, or irregular warfare (IW) to stabilize key maritime terrain, prevent adversary IW, or destabilize adversary control of key terrain

[23] Joint Chiefs of Staff, *Commander's Handbook for Assessment Planning and Execution*, Version 1.0, 9 September 2011, https://www.jcs.mil/Portals/36/Documents/Doctrine/pams_hands/assessment_hbk.pdf.

Once higher headquarters (HHQ) issues an order such as an initiating directive or ***operational tasking message*** (OPTASK) that assigns a specified mission set to a designated force, the authorities for shaping actions within a given theater are delegated to a lower level. However, this does not mean the responsibility to support from higher levels diminishes.

Special Operations Forces (SOF) Integration. SOF play a critical role especially in competition below the violence threshold to shape the environment due to their unique authorities, relationships and capabilities. These features enable SOF to illuminate the OE and set conditions on the ground to sustain advantage in competition and win in conflict. Interdependence and interoperability with SOF can enable early access to critical EABO terrain and partners. SOF relationships, particularly with other agency partners, coalition forces, and local state and nonstate partners, can pave the way to access critical infrastructure and ensure freedom of maneuver. Finally, SOF-unique capabilities and authorities enable access to politically sensitive environments otherwise often denied to conventional military forces. These authorities are included in but are not limited to operation plans, execute orders, other authoritative SOF guidance, and congressional funding. These capabilities critical to shaping the environment include but are not limited to:

- Special reconnaissance (SR)
- Preparation of the environment (PE), including operational preparation of the environment (OPE) and advance force operations (AFO)
- Foreign internal defense (FID)
- Unconventional warfare (UW)
- SOF-unique application of OIE,[24] such as when conducting military information support operations

Together, SOF's unique authorities, relationships, and capabilities provide critical support to EABO when connected to relevant operational concepts and approaches. One such supporting concept from Marine Forces Special Operations Command (MARFORSOC) is strategic shaping and reconnaissance (SSR). SSR is a unique hybrid blending of SOF global authorities, partnerships, and capabilities to illuminate and shape the environment through tailored SOF footprints in support of national, combatant command, and service priorities and objectives.

The mobility and other characteristics of littoral forces along with the aforementioned SOF attributes provide a dominant force capability for the joint force.

3.5 NAVAL COMMAND AND ORGANIZATIONAL CONSIDERATIONS

3.5.1 Command Arrangements

Command arrangements include decisions made about how forces are task organized, what tasks each formation is assigned, what area of operations they are responsible for, who commands the different formations, and the command relationships among commanders. Naval command arrangements are based upon centralized guidance, collaborative planning, and decentralized control and execution. "Unity of command facilitates unity of effort. Unity of effort, the product of successful unified action, assures coordination and cooperation among all forces toward a commonly recognized objective, although they

[24] SOF apply OIE in unique ways when connected to their authorities, networks, and other technology and capabilities and when executed in hostile, denied, or politically sensitive environments requiring small tailored footprints.

are not necessarily part of the same command structure."[25] When possible, naval tactical organizations seek to achieve unity of effort through unity of command.

Navy tactical forces provide operational commanders numerous capabilities through multimission platforms. Marine tactical forces provide operational commanders capabilities that complement those of Navy tactical forces and extend the reach of the fleet into both landward and seaward portions of the littorals.

Integrated Navy and Marine Corps forces conducting EABO are further integrated with joint forces and other combined elements. In support of a maritime force, EABO are focused within the littorals of a wider maritime domain. Like other naval operations, EABO are conducted by naval forces tailored to a given situation and mission through task organization.

3.5.2 Task Organization of Fleet and Maritime Forces

Naval task forces are normally delegated the authority to plan and execute tactical missions on behalf of the joint force maritime component commander (JFMCC), and they represent the highest echelon of task-organized naval forces. The fleet commander normally task organizes assigned tactical forces—including forces assigned to the FMF under the fleet commander's operational or tactical control—into formations with the capabilities to operate throughout all dimensions of the maritime domain to accomplish a given mission or set of missions. 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*, *task groups*, *task units*, or *task elements*.

3.5.3 Naval Task-Organization Hierarchy

Naval task organization typically involves a tailored hierarchy of task forces (TFs), task groups (TGs), task units (TUs), and task elements (TEs), as depicted in figure 3-1.

Three-Star/Three-Digit Task Forces. Navy numbered fleets and Marine expeditionary forces are the largest TFs in the maritime component, normally two-digit TFs. When employed in naval operations with multiple fleets or multinational partners, they are usually designated as three-digit TFs.

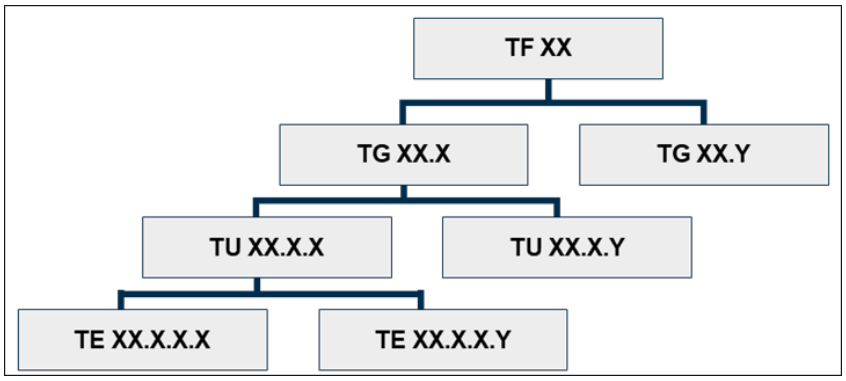


Figure 3-1. Notional naval task organization

[25] Office of the Chief of Naval Operations, *Maritime Operations at the Operational Level of War*, NWP 3-32 (Washington, DC: US Navy, 2008), 3-2. For thorough discussions of unity of command and unity of effort in addition to *Maritime Operations at the Operational Level of War*, NWP 3-32, see Office of the Chief of Naval Operations, *Composite Warfare: Maritime Operations at the Tactical Level of War*, NWP 3-56 (Washington, DC: US Navy, 2015), 1-15 to 1-16 and JCS, *Doctrine for the Armed Forces*, JP 1, V-1 to V-21.

Navy Warfare Area and Functional Task Forces/Task Groups. Below each numbered fleet, subordinate commands are divided by naval warfare areas and functional areas. Although each fleet is slightly different in composition and organization, these are typically fleet battle forces, special warfare, maritime patrol and reconnaissance, logistics, undersea forces, naval expeditionary combat forces, and amphibious forces. These are identified as two-digit TFs in peacetime, but may be re-designated as three-digit TGs for operational employment.

Fleet Marine Forces Organized as Naval Task Forces and Task Groups. When a MEF is assigned to the JFMCC to conduct EABO, major subordinate commands, such as the division, are normally designated as TGs.

Multi-mission Task Groups. These TGs are the largest mobile naval formations and may include carrier strike groups (CSGs), expeditionary strike groups (ESGs), surface action groups (SAGs), littoral combat groups, and littoral combat forces.

Task Units. Task units typically consist of smaller groups of ships and other naval assets that serve a functional purpose or are assigned a specific mission or limited range of missions in support of a multimission task group, in support of the fleet, or in support of a specific joint force function such as ballistic missile defense. Littoral forces will normally be task organized to conduct EABO as a TU and will normally be composed of forces at the O-6 level of command. These littoral forces may be subordinate to a multimission TG.

Task Elements. Task elements are often single ships. In situations involving a littoral force designated as a TU, its TEs would constitute the littoral force's smallest units of action.

3.6 FRAMEWORK FOR DECENTRALIZED EXECUTION

3.6.1 Mission Command and Control

The principles of maneuver warfare and mission command and control must permeate all actions of littoral forces conducting EABO, from planning through execution. During planning, commanders aim to create conditions during execution that enable subordinates to operate guided by the essential elements of mission command and control: *low-level initiative*, *commonly understood commander's intent*, *mutual trust*, and *implicit understanding and communications*.[26] Planning for EABO avoids a high degree of scripting and top-down direction, which usually aims to minimize uncertainties; rather, it must lead to understanding of the mission, intent, and broad guidance, creating freedom of action and maximizing opportunities for subordinates. Planning must be participatory, enabling leaders at every level within the littoral force to engage in the planning process and not merely consume a finalized and overly prescriptive directive. Given the anticipated OE, planning for EABO must ultimately foster a C2 environment which enables commanders at every level of the littoral force to cope with uncertainty, exercise initiative, generate tempo, and seize opportunities guided by mission and intent and bounded by a limited set of operational parameters.

Littoral forces may conduct EABO as part of either standing or temporary task forces. Given the anticipated OE, littoral forces are likely to find themselves dynamically retasked to support adjacent units and execute operations based on direction from outside the immediate chain of command. Thus, commanders must prepare their forces, at times, to respond to the control of external units that have been delegated authority to accomplish functionally aligned missions. Composite warfare enables operations

[26] Headquarters, US Marine Corps, *Command and Control*, MCDP 6 (Washington, DC: US Marine Corps, 2018), 3-5 to 3-11.

within this type of fluid C2 environment. Operating within this construct requires coordination, planning, and procedures distinct from those typically familiar to Marine commanders and their staffs.

3.6.2 Composite Warfare

Composite warfare doctrine is a framework for command characterized by *command by negation*, *decentralized control and execution*, and *collaborative planning*. Due to the widely distributed nature of maritime forces, composite warfare employs command through preplanned actions to address threats by delegating warfare functions to subordinate commanders. Subordinates take action without delay, guided by the commander's intent, keeping the commander informed of the actions they take. Just as Marine commanders will communicate mission and tasks via operations orders updated by fragmentary order, composite warfare commanders issue orders via OPTASK updated by daily intentions message (DIM).

Key personnel within this construct include the officer in tactical command (OTC), composite warfare commander (CWC), warfare commanders, functional group commanders, and coordinators, as depicted below in figure 3-2. The OTC is the senior officer present eligible to assume command. In application, the officer in tactical command is often the fleet commander. The OTC may retain the duties of the composite warfare commander but will often assign these command functions to a subordinate. The OTC always retains responsibility for missions and forces assigned.[27]

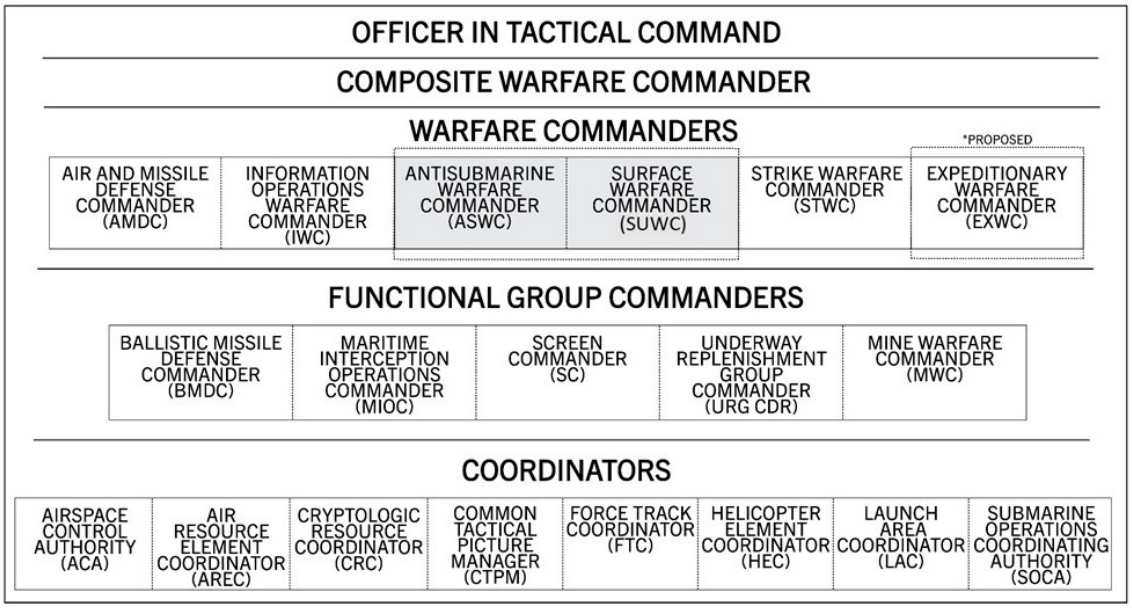


Figure 3-2. Notional composite warfare organization

The CWC delegates assignments as warfare commanders to subordinates. Warfare commanders are assigned duties of extended duration and broad situational applicability such as the air and missile defense commander, surface warfare commander, and information warfare commander. The assignment of subordinate warfare commanders enables simultaneous offensive and defensive actions through decentralized execution.

[27] OPNAV, *Composite Warfare*, NWP 3-56, 1-15 to 1-16.

The ***air and missile defense commander*** (AMDC) is the officer assigned some or all of the OTC's detailed responsibilities for defensive counter-air warfare and granted the tactical-control authority to accomplish the assigned missions and tasks.

The ***information operations warfare commander*** (IWC) is the officer responsible to the OTC for creating effects and operationally desirable conditions to influence, disrupt, corrupt, or usurp the decision making of adversaries and potential adversaries while protecting friendly forces and to assess the information environment to support warfare commanders' objectives in accordance with CWC direction.

The ***antisubmarine warfare commander*** (ASWC) is the officer assigned some or all of the OTC's detailed responsibilities for antisubmarine warfare and granted the tactical-control authority to accomplish the assigned missions and tasks.

The ***surface warfare commander*** (SUWC) is the officer assigned some or all of the OTC's detailed responsibilities for surface warfare and granted the tactical-control authority to accomplish the assigned missions and tasks.

The ***strike warfare commander*** (STWC) is the officer assigned some or all of the OTC's detailed responsibilities for strike warfare and granted the tactical-control authority to accomplish the assigned missions and tasks.

The ***expeditionary warfare commander*** (EXWC) is the officer assigned some or all of the OTC's detailed responsibilities for expeditionary warfare and granted the tactical-control authority to accomplish the assigned missions and tasks.[28]

Note: When the level of activity and complexity in the mission areas involved are considered manageable, the tasks of ASWC and SUWC can be assigned to one commander, titled the ***sea combat commander*** (SCC).

Littoral forces should anticipate employment in a manner similar to a multimission ship or group of ships, extending the sensing range of the fleet and providing capabilities to warfare commanders in the surface, subsurface, and air domains.

The CWC may form temporary or permanent functional groups within the overall organization. Functional groups are subordinate to the CWC and are usually established to perform duties that are generally more limited in scope and duration than those conducted by warfare commanders. In addition, the duties of functional group commanders generally span assets normally assigned to more than one warfare commander. The ballistic missile defense commander is an example of a functional group commander that may be supported by littoral forces.

Finally, resource coordinators may be established to execute the policies of the CWC and respond to the specific tasking of either warfare commanders or functional group commanders. Resource coordinators are usually designated when specific resources impact more than one warfare commander. The air resource element coordinator is an example of a coordinator who executes the policies of the CWC with all providers of air resources.

[28] This description of the EXWC is provisional. Although the EXWC is not included in the current version of *Composite Warfare*, NWP 3-56, this manual proposes its addition to the composite warfare construct to support further wargaming and experimentation with EABO.

The commanders and staff of littoral forces must be thoroughly familiar with the contents of *Composite Warfare: Maritime Operations at the Tactical Level of War*, NWP 3-56, and the proposed adjustments to NWP 3-56 as outlined in this manual.

3.7 PLANNING FOR EXPEDITIONARY ADVANCED BASE OPERATIONS

Initiating Directive. The initiating directive is an order directed to the officer in tactical command to conduct specified missions, including during the execution of EABO. It is issued by the commander delegated overall responsibility for the operations. The initiating directive may take the form of a campaign plan, an operation plan, or an order to execute an already existing plan or order. The initiating directive:

- Provides for the establishment of a task-organized naval expeditionary force, the assignment of a mission, and the necessary forces to accomplish the mission
- Delineates command arrangements of fleet forces and littoral force commanders at echelon, and other command and supporting relationships
- Provides special instructions on command relationships and supporting situations, if required.
- Defines the joint operations area/maritime area of operations
- Provides information about or assigns responsibility for the sustainment of the force and the integration of naval logistics
- Delineates authorities at echelon for the activities for various mission sets and operations within the OE

3.7.1 Main Planning Considerations

While the initiating directive is prescriptive in nature, the following planning considerations allow the commander to design the littoral force appropriately to accomplish assigned tasks.

Assessing Requirements and Task-Organizing EABs. Forces organized for EABO may be assigned a single task, a few tasks, or many tasks depending on requirements of the mission. Once the requirements of an EAB are established, the commander task organizes elements of the littoral force to accomplish the mission. By designing a ***unit of action*** (typically a reinforced platoon), supporting staff, and sustainment package of a purpose-built task element, the commander best supports mission requirements while minimizing signature. It must be understood that there is no standing unit of action. The littoral force's units of action should be organized based upon the commander's analysis of mission requirements.

Warfighting Functions. The commander must conceptualize capabilities to execute operations in terms of the warfighting functions. Considering the assigned tasks through the lens of the warfighting functions encourages planning for the design and employment of forces in the most ideal posture to achieve desired effects across the competition continuum.

Warfare Commander Requirements. The commander of littoral forces may be designated an EXWC. As an EXWC, the littoral force commander may be delegated authority and resources to accomplish missions assigned by the CWC. Simultaneously, the EXWC would retain the requirement to support hierarchically adjacent warfare commanders in support of their assigned missions within respective domains. The EXWC must also be aware and capable of executing relevant preplanned responses as prescribed in the OPTASK.

Evaluating EAB Posture. The fundamentals of offensive and defensive planning provide useful considerations for the commander to integrate into his/her planning model. These may include *flexibility*, including the desire to maintain multiple courses of actions; *mutual support*, where the relationship and positioning of units mitigate gaps that exist when units operate independent of each other; and *surprise*,

where the commander employs available capabilities to deceive the adversary and manages the signature of his/her forces to present a desired posture.

Designating Critical Capabilities. Based on the mission and the commander's assessment of the threat, the commander must determine the critical capabilities of the littoral force. Some of these critical capabilities may result from the littoral force's role and functions within the composite warfare organization and the demands of the various warfare commanders. The commander organizes the force to fully capitalize on these capabilities and ensure responsiveness within composite warfare.

Identifying Gaps/Shortfalls. During initial planning, staff estimates assist the commander's identification of potential gaps and shortfalls. In a continuous process, gaps and shortfalls need to be reevaluated and assessed throughout all phases. Gaps and shortfalls impact the capabilities that the littoral force commander offers the CWC. Communicating these gaps and shortfalls may result in task modification, reallocation of resources, or posture modification to maximize the capabilities of the task group.

Assigning Subordinate Missions. Having considered the requirements of the warfare commanders and joint force, capabilities of the adversary, impacts of the local environment, and requirements to sustain the force, the commander is prepared to organize the littoral force to conduct operations. The littoral force commander assigns subordinate forces and missions and, perhaps most importantly, communicates the capabilities of the task-organized force to the CWC and warfare commanders.

3.7.2 Other Planning Considerations

Considering the warfighting functions and requirements of warfare commanders, a natural tension may develop between mission accomplishment and force protection, which the commander must reconcile. Terrain, local infrastructure, and known enemy capabilities may drive a commander toward a specific force posture, but the necessity to provide sensing in support of the CWC may require a different posture. The LFC must coordinate in detail to ensure that littoral force capabilities are integrated with those of the fleet. Detailed planning on the C2 architecture, in particular, is critical to guarantee resilience and flexibility within the C2 system.

Similarly, the commander may need to consider the natural tensions between mobility and sustainability and between lethality and force protection that are associated with organizing a larger, more capable combat force.

The commander may also wish to consider the littoral force's contributions by domain and in terms of lethal or nonlethal activity. The sensing and shooting capabilities of the littoral force within a single domain may not be neatly correlated, nor may the combined capabilities of the littoral force within one domain may be comparable to its contributions within another.

For example, if the commander determines that long-range precision fires (LRPF) constitute the littoral force's critical capability, the commander would array the force to maximize employment of LRPF with additional considerations to prioritize force protection and sustainment of LRPF. Should the commander determine that sensing is the critical capability, he/she would naturally array the force to maximize the sensors' capabilities while considering the risk associated with this employment posture.

3.7.3 Planning Responsibilities

Commanders must understand the different levels of authority and the impact each has on the commander's ability to control assigned and attached forces. Commanders provide tactical direction and guidance through a clear statement of intent. The nature and focus of planning varies by echelon, while all actions are coordinated through the lens of single battle. To achieve unity of effort, commanders ensure

that (1) subordinates clearly understand the command authority they have been granted and (2) the forces assigned understand what this authority allows.

Officer in Tactical Command. The OTC is the senior officer present eligible to assume command or the officer to which the senior officer present has delegated tactical command. The OTC's planning will normally focus on power projection and sea-control operations.

Composite Warfare Commander. Appointed by the OTC, the CWC's planning efforts will normally focus on operations to counter threats to the force. The CWC appoints warfare commanders who in turn align resources to ***surveillance areas***; ***classification, identification, and engagement areas***; and ***vital areas***, which are discussed below in subsection 3.7.5.

Expeditionary Warfare Commander. The EXWC is the senior commander of littoral forces who is subordinate to the CWC for the execution of assigned missions. As a warfare commander, the EXWC simultaneously possesses certain delegated authorities of the CWC, while also supporting hierarchically adjacent warfare commanders in the execution of their assigned missions. Thus, the EXWC's planning efforts must address his/her own operational requirements, while also planning to support those of other warfare commanders. If the EXWC is assigned a ***littoral operations area*** (LOA),[29] this commander may also be assigned authorities of the littoral force commander, discussed in the next paragraphs and therefore be responsible for several primary decisions during planning, which are discussed below in subsection 3.7.5.

For the purposes of experimentation, this manual uses the general term *littoral force commander* to describe the individual who, regardless of the task organization or echelon, exercises command over all littoral forces conducting EABO within an LOA. While not exhaustive, the following examples illustrate some possible implementations:

- A naval O-6 task-unit commander, subordinate to a task group, may fulfill this role as the senior commander of a littoral force.
- A naval O-8 task-group commander may fulfill this role, exercising command over littoral forces within multiple LOAs.

The rationale for introducing the term LFC is twofold. First, during EABO an LFC may not operate within the composite warfare construct and therefore not fulfill any composite warfare roles. Second, an LFC operating within composite warfare may *not* be designated a warfare commander, function group commander, or coordinator.

3.7.4 Primary Decisions

Based on guidance and direction from the JFMCC or fleet commander, the LFC is responsible for the following primary decisions:

- Determine subordinate mission(s)
- Recommend establishment of or refinements to littoral operating area(s)
- Identify engagement areas or other fire-support coordination measures
- Identify EAB locations
- Identify landing zones
- Identify littoral transition points
- Determine required level of OIE authorities

[29] Discussed in greater detail in subsection 3.7.5 and the classified portion of appendix A, an LOA is a geographical area of sufficient size for conducting necessary sea, air, and land operations in order to accomplish assigned mission(s) therein.

- Establish seaward surface control measures
- Establish airspace control measures
- Establish landward maneuver control measures
- Establish measures and capabilities to execute preplanned responses

3.7.5 Organization of Battlespace

The LFC's requirement to coordinate efforts in time and space are directly related to the degree of independence or interdependence between the littoral force and the greater naval force. The commander must consider the naval and joint force commander's framework for battlespace requirements.

Defined by a geographic combatant commander or subordinate unified commander, a joint operations area (JOA) is an area of land, sea, and airspace in which a joint force commander (JFC), normally a joint task force (JTF) commander, conducts military operations to accomplish a specific mission.

When the JFC establishes a JFMCC, the JFC normally also establishes a maritime area of operations (AO). JFCs establish maritime AOs to decentralize execution of maritime component operations, enable rapid maneuver, and provide the ability to fight at extended ranges. The size, shape, and positioning of maritime AOs will be based on the JFC's concept of operations and the maritime commander's requirements to accomplish missions and protect forces. This AO's configuration can be dynamic and evolve as the operation or campaign matures. It should be of sufficient size and geography to allow for movement, maneuver, and employment of weapons systems and effective utilization of warfighting capabilities, as well as provide operational depth for surveillance of the threat axis and the enemy's avenue of approach. The maritime AO may not encompass the entire littoral area. However, it should be large enough for the JFMCC to accomplish the mission and sustain and protect the maritime force. The maritime domain within this AO includes oceans, seas, bays, estuaries, islands, coastal areas, and the airspace above these, including the littorals.[30] The maritime AO may therefore encompass land, sea, and airspace.

Within the maritime AO, the JFMCC may then establish subordinate maneuver space that allows for independent yet supporting operations of subordinate elements, while enabling the synchronized and effective employment of forces across all components.

When employed in naval operations with multiple fleets or multinational partners, numbered fleet and MEF commanders are designated as three-digit task forces by the JFMCC. A likely construct for naval-force employment is that these three-digit task forces will be assigned AOs by the JFMCC, and each will serve as OTC within the assigned AO. Task force commanders will organize and manage their battlespace according to doctrinal measures to such as use maneuver control measures, fire support coordination measures (FSCMs), waterspace management (WSM), and prevention of mutual interference (PMI). Specific control measures, such as zones of action, zones of fires, and littoral operations areas as proposed in this manual, will be discussed in a classified annex.

When conducting EABO, task force commanders must take advantage of littoral terrain to integrate with joint force operations and generate tempo in decision making and action against the adversary. Maneuver in the littorals creates the possibility to extend the range of fleet sensors and shooters beyond the classification, identification and engagement areas and surveillance areas of traditional task groups. Accordingly, this manual allows for task force commanders, and the task groups supporting them, to experiment with appropriate naval command and control to best enable integrated, all-domain operations for modern naval warfare. Task force commanders can employ littoral forces to conduct EABO at any

[30] Joint Chiefs of Staff, *Command and Control for Joint Maritime Operations*, JP 3-32 (Washington, DC: US Department of Defense, 2018), I-5.

echelon (TE, TU, TG, and TF), as required by mission and geography. Task group commanders may be designated as CWCs, and littoral forces designated as task units and below may operate under task group command using composite warfare. Marine Corps units in those formations must be able to integrate seamlessly with the CWC structure. Task force commanders may also integrate littoral forces conducting EABO with adjacent task groups using other battlespace management constructs described in the classified portion of appendix A.

For purposes of simplicity, these various options can be compressed into three general types of commands arrangements for experimentation, summarized as follows:

- Littoral forces operate under the CWC of an afloat Navy task group
- Littoral forces operate as their own task group using Marine air-ground task force (MAGTF) C2
- Littoral forces operate as their own task group using composite warfare

The following chart provides examples of a maritime AO integrating littoral forces with other forces of the fleet operating in the air, sea, undersea, and in space and cyberspace.

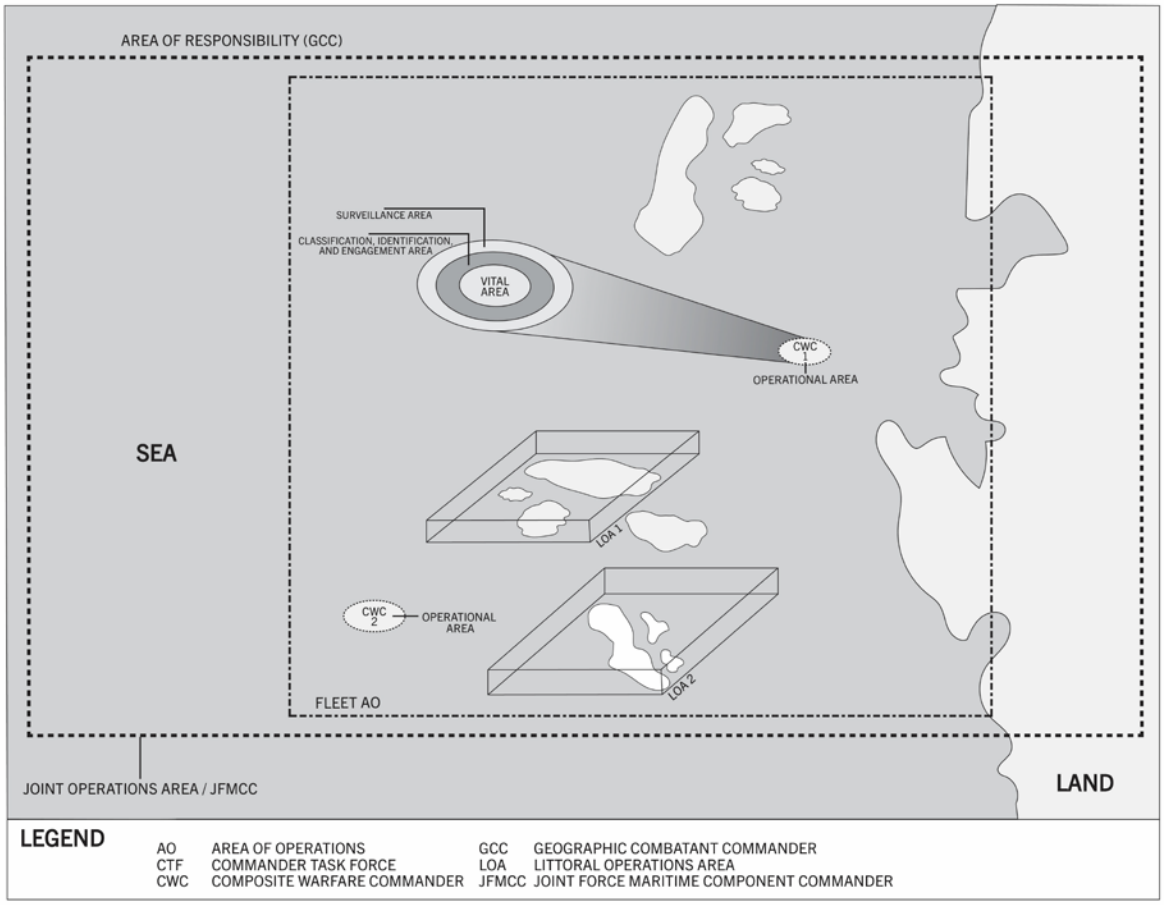


Figure 3-3. Littoral operations areas in the context of composite warfare

Littoral Operations Area. Among the battlespace control measures the JFMCC and fleet commanders may use, this manual proposes for experimentation two forms of a LOA within the maritime AO: the LOA as battlespace and the LOA as a permissive control measure.

LOA as Battlespace. When the JFC appoints a JFMCC, the JFC will normally designate a maritime AO. The JFMCC may then establish subordinate maneuver space for subordinate elements. The LOA encompassing both landward and seaward littoral terrain may be assigned as subordinate maneuver space. The designation of the LOA as battlespace within the maritime AO is intended to ensure unity of effort and the integration of resources under a fleet or JFMCC commander to accomplish assigned missions. This could include controlling a maritime chokepoint or controlling portions of the littorals necessary to support the fleet's freedom of maneuver and operational design. The designation of the LOA as battlespace assigned to one subordinate commander should not exclude other naval force actions within the LOA such as transit or coordination of fires; these actions simply require the coordination and approval of the commander within the LOA. The authority to designate the LOA within the maritime AO may be retained at a level as high as the JFMCC.

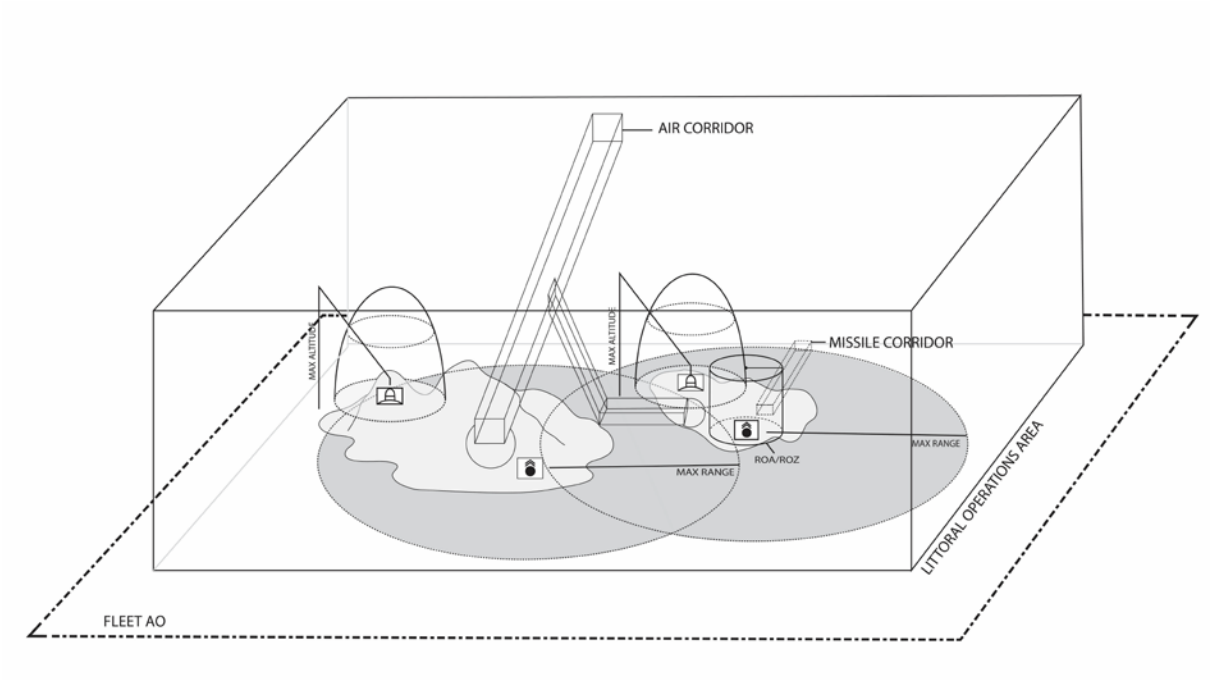


Figure 3-4. Notional littoral operations area

LOA as a Control Measure. Within the established battlespace of the maritime AO and the subordinate maneuver space, the LOA may be a control measure. As a control measure, it could be assigned by the fleet commander to a subordinate commander for positioning of forces, or assigned by a CWC for the EXWC for maneuver of expeditionary forces. This requires the integration of the CWC's resources across specified domains and within the limits of the LOA. In effect, the EXWC is delegated the authority of a CWC within the LOA while retaining the authorities of the EXWC and the requirement to support other hierarchically adjacent functional warfare commanders in their various domains.

Considerations for LOA Planning and Development. The LOA is a multidomain control measure. Within composite warfare, the LOA enables a commander designated as the EXWC employing littoral forces to mass the combined resources of the CWC within the LOA. The CWC, appointed by the OTC, may in turn appoint functional or subordinate warfare commanders. The EXWC, acting within the limits of the LOA, is effectively a subordinate warfare commander responsible for integrating the resources of the task group to achieve a specific outcome within the three dimensional limits of the LOA. Simultaneously, the EXWC remains responsive to the requirements of hierarchically adjacent warfare commanders.

Within the LOA, each unit of action will be assigned a *sector*, which is an area designated by boundaries within which the unit will operate and for which it is responsible. Units of action may also be assigned *engagement areas* wherein the commander intends to contain and destroy an enemy force with the effects of massed weapons and supporting systems. Forces assigned responsibility for engagement areas must ensure that their internal fire support coordination measures support the requirements of the engagement area.

Naval Battlespace Terminology Related to Afloat Formations. Three doctrinal terms associated with battlespace constructs for operations of composite task organizations at sea, discussed below in further detail, should also be understood by forces conducting EABO: *surveillance area* (SA); *classification, identification, and engagement area* (CIEA); and *vital area* (VA). The CWC defines the task force's protected asset(s), and warfare commanders such as the SCC or AMDC define the ranges associated with these battlespace constructs. Littoral forces must consider the requirements of these battlespace constructs when positioning assets. Through experimentation, they must also explore how landward forces might contribute to operations in the following areas defined within composite warfare.

- Surveillance Area. In surface warfare, a SA encompasses the operational environment that extends out to a range that equals the force's ability to conduct a systematic observation of a surface area to detect vessels of military concern. The dimensions of the SA are a function of strike group surveillance capabilities, sensors, and available theater and national assets.[31]
- Classification, Identification, and Engagement Area. In maritime operations, a CIEA describes the area within the surveillance area and surrounding the vital area(s) in which all objects detected are classified, identified, and monitored. Within the CIEA, friendly forces maintain the capability to escort, cover, or engage. The goal is not to destroy all contacts in the CIEA, but rather to make decisions about actions necessary to mitigate the risk each contact poses. The CIEA typically extends from the outer edge of the VA to the outer edge of where surface forces effectively monitor the operational environment. It is a function of friendly force assets/capabilities and reaction time, threat speed, the warfare commander's desired decision time, and the size of the VA.[32]
- Vital Area. A VA is a designated area or installation defended by air defense units. The VA typically extends from the center of a defended asset to a distance equal to or greater than the expected threat's weapons release range. The intent is to engage threats prior to them breaching the perimeter of the VA. The size of the VA is a function of the anticipated threat. In some operating environments, such as the littorals, engaging threats prior to their breaching the VA is not possible because operations are required within the weapons-release range of potential threats. Preplanned responses shall include measures for engaging contacts initially detected within, rather than outside, the VA.

Note: Potential exists for multiple organizations to conduct operations within a JFMCC's area of operations. To ensure unity of command and unity of effort, the JFMCC should ensure common processes and procedures exist for the shifting of tracking across organizational seams.[33]

Control Measures. The naval services are used to coordinating operations through their battlespace in three dimensions. Control measures coordinating maneuver, fires, and airspace are critical for managing the battle, providing operational flexibility and minimizing risk. The littoral force will plan and coordinate control measures that cover all domains and enable integration with the larger joint fight. This system

[31] OPNAV, *Composite Warfare*, NWP 3-56, 7-6.
[32] OPNAV, *Composite Warfare*, NWP 3-56, 7-6.
[33] OPNAV, *Composite Warfare*, NWP 3-56, 7-6.

must be clearly communicated at all times but also include processes to allow for responsive action in a communication degraded/denied environment.

Existing doctrinal terms, symbols, and naming conventions will be used, as appropriate, when designating control measures for surface and air movement and maneuver—whether seaward or landward—in conjunction with EABO.

Littoral Transition Point (LTP). These are locations where forces conducting surface littoral maneuver will shift between waterborne and overland movement in either direction. Normally, forces conducting EABO will preplan multiple LTPs and avoid repeated use of the same point in order to reduce the likelihood of detection and targeting. Arabic numerals will be used to number LTPs.

3.8 COMMAND AND CONTROL

After receipt of the initiating directive, mission analysis, and task organization of forces, the commander must prepare the staff and subordinate elements to function within the assigned command structure. It should be expected that command relationships will remain dynamic and may rapidly shift based on operational requirements. Commanders must ensure that their staffs are prepared to execute transitions between command structures. For example, the commander and staff may initially be subordinate to a MEF within the MAGTF construct and then become a task element subordinate to a task group within the CWC construct.

Authorities. Within the assigned battlespace, the LFC receives specific command authority as prescribed by the commander with overall authority. The initiating directive prescribes how control over littoral forces will be exercised as needed to enable decentralized execution.

OPTASKs/DIMs. Unambiguous command and supporting relationships delineated in OPTASKs and as updated in DIMs are essential. These documents are parallel in nature to OPORDs and FRAGOs. Both will be used in day-to-day operations of the littoral force.

Command Relationships. Operational control (OPCON) and tactical control (TACON) authorities may be exercised at any level below the level of combatant command authority. Thus the LFC may be under the OPCON or TACON of a superior commander.

Supporting Relationships/Support Situations. While a commander may establish and direct the nature of support between two subordinate commanders, this authority is less commonly employed by naval forces. Instead, naval commanders prefer to establish supporting situations. Supporting situations establish supporting and supported commanders, specify the level of integration with the supported commander, and do not modify existing command relationships.

The Marine Corps provides for the establishment of supporting and supported commander relationships; similarly, the Navy provides for a common commander to direct the nature of support between subordinates without establishing or modifying command relationships. This direction is known as a *support situation* (SUPSIT). In a supporting situation, the respective commanders are designated as either the supporting or supported commander. The Navy recognizes three forms of SUPSITs, as figure 3-5 below illustrates, differentiated by levels of integration and the discretion granted to the supporting commander. The commander directing the support operations must specify the type of SUPSIT between the subordinate commanders. SUPSITs establish collaborative relationships between subordinate commanders without the necessity to modify command relationships.[34] Forces conducting EABO execute under this SUPSIT framework.[35]

[34] OPNAV, *Composite Warfare*, NWP 3-56, 6-1.
[35] OPNAV, *Composite Warfare*, NWP 3-56, 6-4.

SUPPORT SITUATION	ADVANTAGES	DISADVANTAGES
ALPHA (INTEGRATED) TWO OR MORE FORCES JOIN INTO ONE FORCE	UNITY OF COMMAND, EFFORT, AND FOCUS INTEGRATED PLANNING AND SYNCHRONIZED EXECUTION MASSED FORCES FOR MISSION EXECUTION LESS DUPLICATION OF EFFORT, BETTER CONSERVATION OF ASSETS ENHANCED COORDINATION OF ASSET APPOINTMENT BETTER RESOLUTION OF COMPETING TASKS AND PRIORITIES ASSIGNED TO MULTI-MISSION PLATFORMS	REQUIRES MERGER OF TWO OR MORE SEPARATE ORGANIZATIONS INCREASED LEVEL OF EFFORT/C2 REQUIREMENTS FOR THE OTC AND STAFF POTENTIAL LOSS OF FOCUS/TEMPO OF OPERATIONS WHILE TRANSITIONING TO THE NEW COMMAND STRUCTURE
BRAVO (COORDINATED) TWO OR MORE FORCES REMAIN SEPARATE; SINGLE OTC DIRECTS THE TACTICAL OPERATIONS OF ALL FORCES.	COORDINATED TACTICAL OPERATIONS BETWEEN NON JOINED FORCES CENTRALIZED PLANNING, DECENTRALIZED EXECUTION	DECREASED UNITY OF COMMAND, INCREASED LEVEL OF EFFORT/C2 REQUIREMENTS FOR THE OTC AND STAFF HARDER TO AVOID MUTUAL INTERFERENCE OR ELIMINATE REDUNDANT EFFORTS THAN SUPSIT ALPHA MORE DIFFICULT TO DEVELOP SHARED SITUATIONAL AWARENESS BETWEEN STRIKE GROUPS THAN SUPSIT ALPHA POTENTIAL SLOWER DECISION MAKING PROCESS THAN SUPSIT ALPHA
CHARLIE (DISCRETION) TWO OR MORE TASK ORGANIZATION COMMANDERS COORDINATE ACTIONS.	NO CHANGE IN COMMAND STRUCTURE OR C2 REQUIRED TASK ORGANIZATION COMMANDERS CONTINUE TO FOCUS ON THEIR RESPECTIVE MISSION(S) TASK(S)	HARDER TO COORDINATE AVOIDANCE OF MUTUAL INTERFERENCE AND ELIMINATION OF REDUNDANT EFFORTS THAN SUPSIT'S ALPHA OR BRAVO SUPPORT CHANGE REQUIREMENTS MAY TAKE LONGER TO OBTAIN REQUIRES SIGNIFICANT COORDINATION TO OBTAIN UNITY OF EFFORT

Figure 3-5. Navy supporting situations

As stated in subsection 3.7.5, littoral forces may operate under the CWC of an afloat task group or as a separate task group with its own CWC. Establishing a separate CWC is likely the preferred choice for longer duration operations to avoid tying the seagoing elements of the fleet, such as CSGs, ESGs, and SAGs, to relatively confined operating areas. If a separate CWC is established, the littoral force may be tasked with providing support to other naval task groups or, conversely, receive support from such groups. In such cases, SUPSITs Bravo and Charlie are the most likely options, inasmuch as the littoral force cannot “join or integrate with” underway task groups.

A 203X FLEET OPERATIONS PLAN

In 203X, Jento rebels sank an oil tanker while it was transiting the Mara Straits using an antiship cruise missile (ASCM). This effectively shut down this maritime chokepoint to all commercial traffic, a route that normally carried 10–15 percent of the world's oil trade every year. Unfortunately for the international community, these rebels were a proxy force, and their sponsors kept them well supplied with sophisticated sensors and weapons, as well as the training to employ them. (Training was accomplished rapidly in the 2030s; the marriage of gamer culture and user interfaces for military hardware made training much easier than in the past, even in the developing world.) The Jentos possessed highly capable integrated air-defense systems (IADS), drones with powerful sensors, and loitering munitions to go with their ASCMs. Intel suspected they might even have a few hypersonic missiles and was also certain the Jentos' sponsors provided them with space-based collections.

The transition briefing from the FOPS planners to the COPS team at the Maritime Operations Center started at the task-force level and then worked down the operational chain through the task groups and task units. The audience seemed especially interested when the briefers discussed 25th MLR, which was assigned as a task unit in the operation. The MLR had trained in the AO before, but this was the first time EABO had supported this fleet for a real-world mission. Fortunately, the MLR had several elements performing TSC on the other side of the straits when the tanker was sunk.

This proximity led directly to assignment of the MLR's primary mission for the operation, providing forward C5ISRT and counter-C5ISRT to enable the task force to re-establish sea control. By this point in 203X, it was standard procedure for deploying elements of any MLR to put together a collection plan based on relevant fleet/MEF, JFMCC, and CCDR information requirements. Submitting the plan through the operational chain and receiving approval before deployment gave the MLR elements the authorities needed to collect. The best of these plans included triggers for additional authorities if certain contingencies arose. Naval forces conducting EABO in the contact layer anywhere in the world understood the need to contribute to the AO's maritime domain awareness. The Marines from the 25th MLR were doing it now. They already had custody of many high-value Jento targets.

The plan designated the MLR CO as the expeditionary warfare commander. Experiments and exercises with the various fleets in the 2020s developed EXWC into a working part of naval composite warfare doctrine. The plan also assigned a littoral operating area to the EXWC as a control measure. The planners used a conservative LOA that extended seaward only a few nautical miles due to the restricted operating area in the straits. However, the LOA gave the MLR freedom to reposition elements as needed to make them hard for the Jentos to target (in 203X, it seemed everyone had the ability to connect whatever sensors they could access to their lethal fires). Essentially, it gave the MLR freedom to maneuver within the LOA without coordinating every displacement, while giving the rest of the task force similar freedom to operate in and out of the LOA with appropriate coordination.

The planners emphasized the be-prepared-to tasks for the MLR within the CWC construct, including support to surface warfare, strike, and FARP operations. In other words, dynamic retasking could occur at any time as the situation changed. The MLR units, having the capability and capacity to integrate and contribute to a warfare commander's fight, are fully prepared.

The Marine FOPS planner concluded the briefing by explaining the MLR's force laydown, starting closest to the enemy, operating within the Jentos' WEZ, and then working outward. The MLR's unmanned systems, both surface and air, were naturally closest to the Jentos. Next came the elements

launching and recovering the long-range unmanned surface vehicles. These small units worked from several hot and cold positions, moving frequently to avoid Jento targeting. Next came a layer of firing units (capable of firing missiles or launching loitering munitions) and additional sensors, all operating inside the Jentos' WEZ. For this operation, FARPs were located just outside the range rings of the Jento IADS. The Marine planner explained that this was a luxury but was preferred whenever possible. Several years of TSC work also paid off, as the main FARP location actually consisted of an expeditionary airfield in a nearby partner country.

The planners concluded the briefing by reminding everyone that the task group needed to win the recon/counter-recon battle in the littorals, and they needed to win it in all domains. The MLR Marines needed to know who was observing them, how they were doing it, and what capabilities the observers could use to attack them. The planners reminded the COPS team that now in 203X the MLR used an AI-enabled system to fuse all domain sensing and help them create this single picture. There were so many possible threat vectors, from the Jentos' sponsor's space-based systems to locals paid to inform on MLR movements, that they needed the speed provided by computer assistance. Building this picture effectively required everyone in the MOC to make sure their systems connected to and fed this picture, even the Space Force liaison team.

As the briefing concluded, one of the COPS team asked how the MLR would work with the ESG, which the plan designated as an adjacent task group underneath the task-force commander. The lead FOPS planner replied that the commander chose SUPSIT Bravo. This meant the task force would coordinate actions as necessary, but the adjacent elements would also work together under composite warfare methodology. As a practical matter, this meant the MLR focused on its primary mission of reconnaissance and surveillance in support of the task group, while staying ready to respond in other ways like striking Jento targets when requested by the task forces' STWC. The MLR's FARPs and expeditionary airfield site would support the F-35Bs from the MEU/ESG.

After asking a few follow up questions, the COPS team was ready to go. The integrated naval exercises of the past half dozen years had really paid off.

INTENTIONALLY BLANK

CHAPTER 4

Intelligence Operations

4.1 GENERAL

The naval character of EABO requires integrated naval intelligence operations to support execution. The foundation of intelligence support to EABO is battlespace awareness through continued sensing of the maritime environment to identify deviations from baseline conditions across the competition continuum. There are several challenges inherent to this effort, including the complex nature of the maritime domain, the dynamic nature of the competition continuum, and the finite number of capabilities and resources with which to execute intelligence operations. Establishing ***maritime domain awareness*** (MDA) and an operational environment baseline are necessary first steps to meet these challenges. These also serve as the building blocks to help plan and execute subsequent intelligence operations.

Maritime domain awareness refers to the understanding of anything associated with the maritime domain that could impact the security, safety, economy, or environment of a nation. Obtaining and maintaining accurate MDA is a key enabler of an active and layered maritime defense in depth. It facilitates expeditious and precise actions by the JFMCC and subordinate commanders, and it enables effective integration with joint force operations.[36] Day-to-day littoral force activities during competition will establish an operational baseline that informs the littoral force commander's future decisions. Ongoing sensing both enables awareness of actual or potential escalatory and de-escalatory baseline deviations, and it facilitates future planning and execution.

Intelligence operations in support of EABO require the judicious application of intelligence capabilities and resources—organic, theater, and national—to meet the challenges of the maritime domain's scale and complexity, as well as those of the competition continuum. The ability to provide intelligence to and leverage intelligence from the greater Intelligence Community (IC) is also fundamental to integrating the EABO intelligence effort. Littoral forces must execute daily intelligence operations during competition to set conditions for success in conflict. This chapter outlines the integration points and planning considerations that are necessary to provide effective intelligence support to EABO within a highly contested environment against peer adversaries.

4.2 PURPOSE AND SCOPE

Intelligence support to EABO requires an evolutionary step in the continuous development of a Navy and Marine Corps intelligence, surveillance, and reconnaissance enterprise that must be validated through rigorous experimentation, training, exercises, and operations. The concepts below do not change *what* Marine Corps and Navy intelligence provides from a functional perspective. They propose instead changes to *how* intelligence operations provide awareness and responsiveness to littoral forces in the transition from competition to conflict.

4.3 INTELLIGENCE-LED OPERATIONS

Operations during prior conflicts have demonstrated that intelligence collection is the most challenging part of the intelligence and operations cycle. Experience has revealed a need to shift from pursuing "actionable intelligence" to conducting "actions to produce intelligence." Actions to produce intelligence

[36] JCS, *Joint Maritime Operations*, JP 3-32, III-8.

are termed "intelligence-led operations." Intelligence-led operations, to include OIE, are crucial to EABO in competition because they help develop a baseline picture of the maritime OE. The baseline allows the fleet to identify anomalies, act preemptively to counter the adversary's plans, and prepare for escalation to armed conflict.

While conducting EABO during competition, OIE and other activities provide littoral forces the opportunity for collection and baseline development in littoral areas. This baseline should span the entire scope of the littoral environment encompassing, as already discussed, key terrain, adversary presence and activity, ASCOPE and PMESII considerations, and friendly, adversary, and neutral activities in the IE. The need to baseline areas during competition should be an important factor in the prioritization of exercises, exchanges, and EABO activities.

Locating and targeting the adversary's concealed sensors and anti-access/area denial weapons require effort beyond waiting and watching with networked sensors. EABO missions provide littoral forces an opportunity to employ organic ISR and maneuver elements to draw adversary forces from cover, learn their tactics, and baseline their operations. Having established the baseline during competition, littoral forces can create a collection plan and conduct activities within the OE and IE to capture responses by adversary forces, local populations, and other relevant actors and target audiences. EABO provide LFCs the opportunity to "raise the noise floor" and generate adversary activities in response. EABO intelligence operations should seek to collect, analyze, and distribute relevant and timely intelligence products based on these adversary actions.

In sum, intelligence-led operations in support of EABO seek to generate adversary activity against which littoral forces will plan and execute future missions across the competition continuum. The following paragraphs explain several efforts that are critical to this process.

4.4 NAVAL AND JOINT FORCE INTEGRATION

The primary objectives of Naval Service intelligence—to provide accurate, timely, and relevant knowledge about both the enemy and the environment[37]—still apply in EABO. These objectives become broader in scope when supporting battlespace awareness about the greater joint environment within which EABO will be executed. Along with these primary objectives, joint intelligence operations are responsible for countering adversary deception and surprise, supporting friendly deception efforts, and assessing the effectiveness of operations.[38] Littoral force intelligence operations enable EABO by utilizing organic intelligence resources and capabilities to support and extend the JFMCC's maritime sensor network. As part of a naval force, littoral force intelligence operations not only provide the awareness necessary for littoral forces to execute effectively, but also support joint requirements for JFMCC and JFC decisions.

Close coordination with joint, coalition, host-nation, and national intelligence organizations early in planning is essential to align platform and sensor employment plans, which optimizes intelligence, surveillance, and reconnaissance (ISR) and associated processing, exploitation, and dissemination systems throughout the joint force. The complexity of operating in the maritime domain requires a baseline of organic intelligence collection assets, augmented by joint forces and capabilities allocated to maintain MDA and to succeed in military operations.[39] The collective JFMCC effort to provide the maritime perspective on the OE is crucial to attaining joint force objectives. To support this effort, the JFMCC advocates for the use of other component and national level assets to provide the optimum support to maritime operations. Thus, the littoral force's role in providing intelligence support to joint

[37] Headquarters, US Marine Corps, *Intelligence*, MCDP 2 (Washington, DC: US Marine Corps, 2018), 1-5.
[38] Joint Chiefs of Staff, *Joint Intelligence*, JP 2-0 (Washington, DC: US Department of Defense, 2013), I-3.
[39] JCS, *Joint Maritime Operations*, JP 3-32, II-9.

operations is essential to the allocation of limited intelligence resources and the planning and execution of joint force operations.

SOF integration is an important piece of joint force integration. SOF provide perhaps their greatest value to EABO and the littoral force through support to intelligence operations. Early in cooperation and competition, SOF-unique authorities, relationships, and capabilities help to answer priority information requirements and illuminate the operating environment. Operating forward with a small, tailored footprint and typically working with other agency, coalition, and indigenous partners, SOF connect military activities to other intelligence networks. These PE activities inform the JFMCC effort and commander's decision making, while also operating within the adversary's decision-making cycle.

While the littoral force enables SOF operations early in cooperation and conflict, SOF activities and operations enable EABO and the littoral force by setting favorable conditions and preparing and shaping the environment to meet commander's intent. MARFORSOC's value as a strategic-shaping force will support wider intelligence collection by connecting the littoral force to US Special Operations Command, intelligence agencies, and coalition forces, assets, and capabilities.

In the context of this tentative manual, integration of intelligence with a numbered fleet includes collecting against the fleet's information requirements and sharing targeting data, collections tasking, battle-damage assessments, and tactical running intelligence estimates. Similarly, theater integration may consist of: coordination of the same with the standing joint information center and joint intelligence operations center, as wells as joint intelligence coordination with other service components. Integration with the IC may consist of validating and using national intelligence estimates, accessing and contributing to real-time intelligence broadcast feeds and collection lines, and satisfying national collection requirements. Finally, integration with allies and partners may consist of gathering local atmospherics, validating access assumptions, and leveraging their collection platforms and data.

4.5 OPERATIONAL ENVIRONMENT

The OE is "a composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander."[40] It includes the land, maritime, air, space, and cyberspace domains, the electromagnetic spectrum, and the information environment. Intelligence operations must focus on the littoral areas across the domains to support EABO planning. Understanding the littoral OE enables EABO problem framing, determining battlespace geometries, identifying resource shortfalls, identifying critical information requirements, and developing assessment measures. All of these aspects must be understood through the lens of competition to develop an OE baseline for future operations.

The principles and steps of the *joint intelligence preparation of the operational environment* (JIPOE) process are no different for EABO than for other types of operations. However, to support EABO effectively, the process must integrate multidomain naval considerations in the conduct of operations throughout the maritime environment.

[40] Joint Chiefs of Staff, *DOD Dictionary of Military and Associated Terms* (Washington, DC: US Department of Defense, 2020), 160.

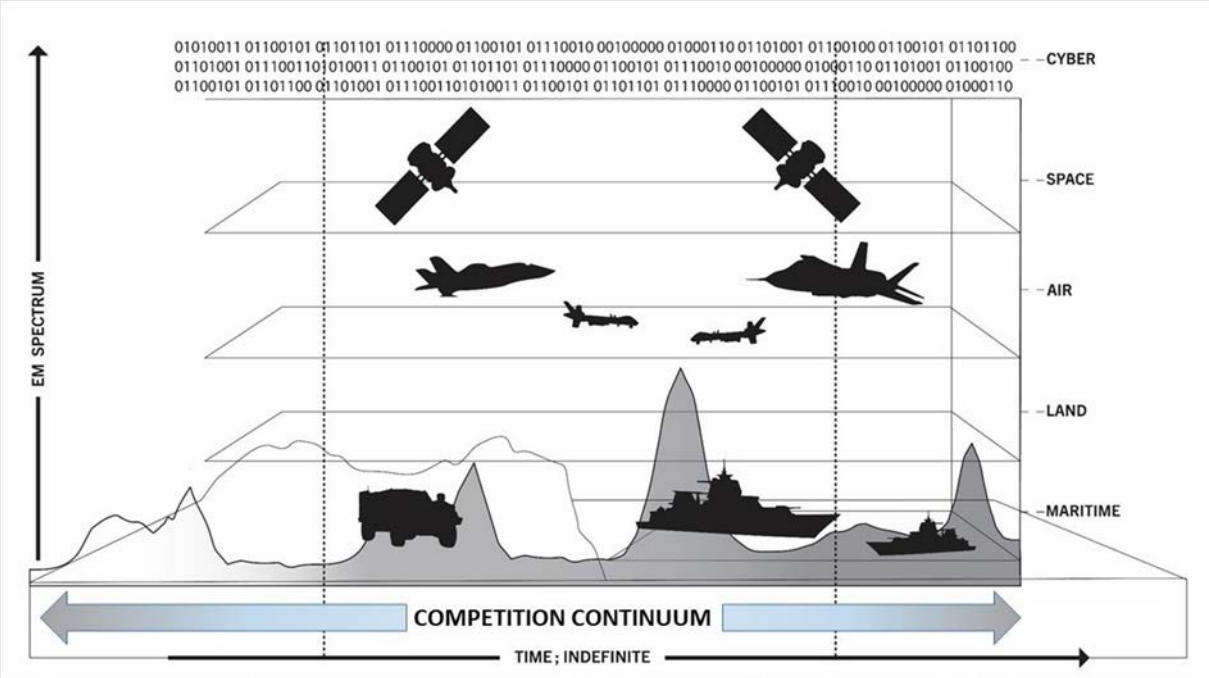


Figure 4-1. The operational environment includes all physical domains, cyberspace, and the electromagnetic spectrum. Intelligence operations seek to provide the littoral force with an understanding of how friendly, enemy, and neutral activities across the competition continuum can impact EABO efforts.

4.5.1 Contested Space

As EABO are executed in contested maritime environments, which encompass both uncertain and hostile environments that will vary by time and space. Whether those environments are influenced or controlled by state or nonstate actors, littoral forces face a variety of direct and indirect multidomain threats capable of limiting, interrupting, degrading, or denying their ability to attain objectives. This contested space presents a number of challenges for intelligence operations, not least of which is adherence to EABO characteristics.[41] Another significant challenge is understanding how to plan and execute operational activities to facilitate intelligence collection. In a contested environment where the adversary seeks to inhibit the littoral force's freedom of action, littoral force activities may elicit an adversary response that exposes a capability or vulnerability that the littoral force can exploit for a future competitive or combat advantage. This idea of "intelligence led operations" is explained in further detail below in section 4.6. As always, it requires close coordination and synchronization of effort between intelligence and operational planners.

Littoral forces plan and execute intelligence operations to facilitate cooperation with partners and allies in competition and create operational flexibility when escalation leads to armed conflict. Establishing an OE baseline and maintaining MDA require persistent awareness and analysis of the OE to determine whether actions therein constitute an escalation of intentions beyond competition. Littoral forces must build awareness beyond the traditional view of the physical environment to include IE awareness. Understanding the adversary's IE activities during competition below armed conflict can directly impact the littoral force's ability to operate effectively across the competition continuum.

[41] EABO characteristics include stand-in engagement, low signature, etc. Refer to subsection 1.6, "Characteristics of Expeditionary Advanced Base Operations" for the complete list.

4.5.2 The Information Environment

The IE is the aggregate of individuals, organizations, and systems that collect, process, disseminate, or act on information.[42] This definition expands the physical scope of potential variables that are capable of directly and indirectly impacting the OE. Actions in the IE across the world may potentially inhibit the littoral force's ability to conduct EABO in a designated littoral OE. To plan and execute OIE, littoral forces must understand these real and potential impacts from adversary, friendly, and neutral perspectives. As part of the integrated JIPOE process, littoral forces should analyze physical, human, and informational aspects of both the OE and IE.

Physical aspects are the natural and man-made environmental characteristics that enhance or inhibit communication. Human aspects are those elements that impact how humans interact with each other and their environments. Informational aspects of the OE reflect the ways that individuals, groups, and systems communicate and exchange information. Interaction among these aspects within littoral areas adds to the complexity of EABO planning and execution but must be accounted for to enable mission success.

Intelligence operations provide awareness of the adversary's capabilities in the IE. Use of the electromagnetic spectrum, cyberspace, and space is critical to both the protection of friendly networks and the identification of adversary networks, systems, and information to attack and exploit. Intelligence analysis can also support the identification of target audiences, relevant actors, and key influencers and decision makers to inform the planning and execution of influence and deception operations.

4.5.3 The Littoral Environment

Joint maritime operations occur in blue water (high seas and open oceans), green water (coastal waters, ports, and harbors), and brown water environments (navigable rivers, lakes, bays, and estuaries), and in littoral landward areas.[43] Each area presents unique characteristics that intelligence efforts must identify to provide LFCs the awareness necessary to make informed operational decisions. EABO are relevant to the entire maritime domain, but are optimized to occur within the littorals. Littoral forces must recognize the littorals as one contiguous area defined by two segments, the seaward and the landward. The seaward segment contains the area from the open ocean to the high water mark of the shore, which littoral forces must control to support operations ashore. The landward segment includes the inland areas, which littoral forces seek to support and defend directly from the sea. A JIPOE for a littoral OE must account for adversary capabilities and limitations across both segments, including how their forces operate within and between each in response to potential threats.

The cross-domain physical features in littoral areas create key maritime terrain relative to adversaries and allies throughout the world. EABO enable naval forces to shape actions and influence events to support sea control and sea denial through their ability to operate effectively in these areas. Littoral force commanders must understand the elements that make the littoral areas key terrain for both friendly and adversary forces. An integrated JIPOE process establishes a baseline understanding of the littoral OE in which littoral forces will execute a variety of missions. Understanding the unique physical characteristics and impacts of the littoral environment—and adversary capabilities and courses of action within that environment—facilitates EABO planning.

[42] JCS, *DOD Dictionary*, 104.
[43] JCS, *Joint Maritime Operations*, JP 3-32, I-7.

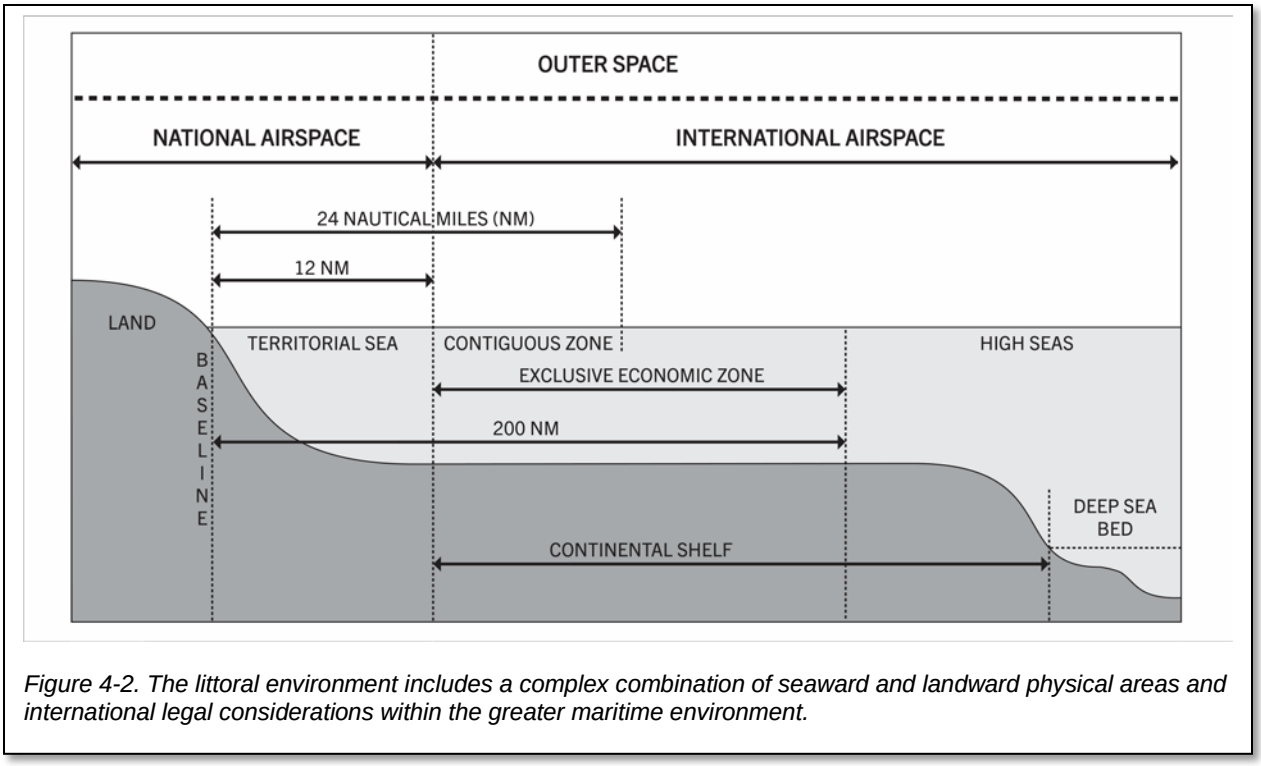


Figure 4-2. The littoral environment includes a complex combination of seaward and landward physical areas and international legal considerations within the greater maritime environment.

4.5.4 Systems Analysis and Civil Considerations (PMESII/ASCOPE)

Variables beyond the physical aspects of the operational environment also impact operations. EABO require an understanding of the unique diplomatic, informational, military, economic, and legal aspects that are specific to the maritime domain. Littoral environments comprise complex intersections of physical terrain, civil and commercial infrastructure, international and state laws, and cultural and social dynamics. In order to account for these variables, littoral forces should conduct an analysis of systems and civil considerations as part of the integrated JIPOE process to support the littoral OE assessment.

A systems perspective views an area through the political, military, economic, social, infrastructure, and information (PMESII) systems and subsystems that are present, then analyzes how those systems interact and impact the OE. Understanding the composition and interaction of systems relevant to the littoral OE in competition will help littoral forces determine how best to set conditions to achieve objectives and prepare for potential escalations to armed conflict. An accurate systems perspective of the OE requires cross-functional participation by staff elements of the joint force and collaboration with various intelligence organizations, US government agencies, and nongovernmental subject matter experts.[44] This integration and coordination ensures a common understanding of the littoral OE across echelons of command. Planners can find a more comprehensive discussion of systems analysis in *Joint Intelligence Preparation of the Operational Environment*, JP 2-01.3.

Understanding civil considerations in the littoral OE is critical to effective littoral force actions in competition. Littoral force OIE and shaping actions in competition seek to set the conditions to maximize freedom of action. Building a framework of civil considerations establishes a baseline awareness of the areas, structures, capabilities, organizations, people, and events (ASCOPE) that are specific to the littoral OE where littoral forces are likely to conduct EABO. The ASCOPE framework provides LFCs an

[44] Joint Chiefs of Staff, *Joint Intelligence Preparation of the Operational Environment*, JP 2-01.3 (Washington, DC: US Department of Defense, 2014), II-44.

understanding of the current state of critical conditions that must be met to enable future EABO missions. From the initial ASCOPE assessment, littoral forces should continue to plan and execute OIE to influence the conditions and shape the environment to enable EABO execution. Planners can find a more detailed discussion of the ASCOPE framework in *Civil-Military Operations*, JP 3-57.

In the continuous preparation for transition from competition to conflict, the Marine Corps Intelligence, Surveillance, and Reconnaissance Enterprise (MCISRE) analyzes target systems through an open-ended process called target systems analysis (TSA), utilizing all-source, fused intelligence to choose potential targets that, when engaged, are most likely to create desired effects that contribute to achieving the LFC's objectives. TSA is a process of identifying, describing, and evaluating the composition of an adversary target system and its components to determine its various functions, capabilities, requirements, and vulnerabilities. TSA is further refined to exploit target system vulnerabilities (e.g., target development at the entity level) that weaken the adversary's ability to engage successfully during competition or hostile operations. This process can be adapted for employment during operations in the competition phase to identify targets in the IE, such as PMESII systems or subsystems and components of the ASCOPE framework. Planners and analysts can find a more detailed discussion of target systems analysis in *Joint Targeting School Student Guide*.[45]

4.6 INTEGRATED NAVAL INTELLIGENCE PROCESS

Littoral forces must integrate Marine and Navy intelligence efforts at every level possible, to include the littoral force staff, littoral force intelligence enablers, and at higher echelons of command. This integration should occur across multiple lines of effort:

- Employing integrated systems
- Ensuring system interoperability
- Training and exercising littoral force ranks for cross-functional proficiency
- Ensuring interdisciplinary intelligence proficiency
- Synchronizing boards, bureaus, centers, cells, and working groups (B2C2WG) at echelon

Cross-functional proficiency seeks incorporation of intelligence operations with activities of other warfighting functions. Interdisciplinary proficiency helps avoid overreliance on one type of intelligence to support operational planning and execution. Littoral forces should seek both forms of proficiency to maximize the capacity of their intelligence efforts across Navy and Marine Corps capabilities and resources.

Littoral forces capitalize on naval integration as a fleet asset operating in the joint and coalition environment through coordination, collaboration, and cooperation. Marine ISR capabilities resident in the littoral force may be employed to answer higher-echelon requirements. For example, littoral forces can fuse intelligence efforts at the tactical level—maritime common operational picture, analytic products and assessments, and IE running estimate—to provide OE awareness to higher echelons and the greater IC. In the larger joint environment, the LFC is able to employ and integrate higher naval and joint assets and capabilities to enhance the intelligence fusion. Working with JFMCC and combatant command J-2 resources and collection processes, the littoral force extends the C5ISRT as a stand-in force.

Intelligence integration above the littoral force level must occur at intelligence sections of the numbered fleets and MEF headquarters levels. Littoral force-generated intelligence should be fused with fleet and MEF intelligence to provide persistent awareness and broader understanding of the joint OE for other

[45] Joint Targeting School, "Joint Targeting School Student Guide" (student guide, 1 March 2017), https://www.jcs.mil/Portals/36/Documents/Doctrine/training/jts/jts_studentguide.pdf?ver=2017-12-29-171316-067.

littoral forces and adjacent Navy and Marine Corps units throughout the theater. This highlights the push-pull nature of intelligence operations that provides operational awareness across a large geographical area.

4.6.1 Activity-Based Intelligence

Activity-based intelligence (ABI) is an analytic methodology that littoral forces can employ to fully leverage the large volume of data collected by the joint force. ABI can support EABO by rapidly integrating relevant data for area-specific assessments and indications and warning. A challenge to ABI is determining to what extent naval intelligence analysts can execute this methodology at the tactical level to support EABO.

In traditional intelligence analysis, an all-source analyst combines the specialized reporting from various intelligence disciplines into fused intelligence products and assessments. In ABI, collected data is integrated before it is analyzed by a specialist from the particular intelligence discipline that was responsible for the initial collection. ABI is designed to maximize the power and indicators within big data from multidomain sensors and sources. ABI seeks to rapidly integrate the data and indicators from activities, events, and interactions of actors and systems within the OE and IE to identify and characterize relevant patterns and anomalies, thus creating decision advantage for commanders.

Littoral forces must test and exercise ABI in C2 degraded training environments to understand the constraints and limitations associated with employing this method at the tactical level. ABI requires access to relevant and timely reporting to understand the most operationally significant factors impacting the OE. This may be difficult to execute in the contested maritime environment. Understanding and training with the procedural limitations can generate analytic tactics, techniques, and procedures (TTPs) that identify ABI requirements for tactical intelligence enablers and those that require reach-back support.

ABI is sequence neutral between archived and current data and between incidental collection and planned missions for targeted collections. Once the geo-referenced report is identified, a holistic, all-data analysis generates a multisource product with historical context. Leveraging ABI will enhance littoral force abilities to task sensors dynamically, provide force protection, develop target intelligence, and gain and maintain effective battlespace awareness. Fully leveraging ABI requires littoral forces to obtain support from intelligence sections at numbered fleets and MEFs. This support is necessary to both ensure the greatest possible access to available data and mitigate the potential effects of operating in a degraded communications environment. Achieving this level of integration between forward forces and reach-back support will require deep familiarity between the two. The ABI methodology and effective integration between forward forces and reach-back support should be practiced and exercised at every opportunity to ensure proficiency when operating in a contested maritime environment.

Successful execution of ABI depends on, but is not limited to, the following considerations to support EABO:

- Battlespace awareness: provide persistent surveillance of the landward and seaward portions of the littorals and leverage all sources of information to include ISR collections, open-source intelligence, and meteorological and oceanographic information
- Acquire knowledge of adversary intent and capabilities and an understanding of where, when, and how adversaries operate
- Plan and direct multidisciplinary intelligence, counterintelligence, and reconnaissance operations across all warfighting domains to satisfy the commander’s requirements
- Allocate intelligence resources and integrate planning and direction between intelligence, operations, and other staff sections
- Conduct reconnaissance and surveillance of the littoral area
- Convert collected information into forms suitable for further analysis and action

- Conduct technical processing and exploitation of organically collected and joint intelligence in contested maritime environments
- Distinguish abnormal from normal patterns of activities
- Integrate multidomain, geo-referenced data for immediate discovery
- Develop and use artificial intelligence and machine learning to support relevant data processing

4.6.2 Support to the Sensing Enterprise

By nature, EABO extend the naval sensor network. Sensing as an enterprise service is a conceptual vision for naval ISR operations. This approach seeks to shift the sensing paradigm from a specific operational focus to a broader service to support the simultaneous needs of many independent users and to provide more comprehensive situational understanding and battlespace awareness. By combining sensor and multiuser information services (i.e., user software interface), sensing as a service enhances decision advantage for naval and joint forces. The employment of Marine collection platforms during EABO plays a critical role in extending the enterprise-sensing network.

Using integrated maritime intelligence standards, processes, and sensor architectures, the naval services seek the flexible, dynamic, and responsive application of ISR capabilities and resources to the places where they are most needed, unconstrained by traditional organizational and geographic limitations. Ideally, the extensive network of people, systems, data, networks, and services across the naval services should expand as the mission dictates to include elements from other services, joint forces, coalition partners, the IC, and other government agencies and organizations.

Successful support to the sensing enterprise depends on, but is not limited to, the following considerations to support EABO:

- Contribute to the naval common intelligence picture
- Share a common tactical operations and intelligence picture that permits cooperative engagements between multidomain platforms
- Conduct ISR mission planning as part of the naval ISR enterprise while aboard ship and ashore in a contested environment
- Issue orders, requests, or tasking to naval and joint intelligence organizations
- Integrate with fleet sensors and leverage artificial intelligence to manage collection requirements and collection operations
- Ingest data from nonintelligence, joint, and coalition sensors
- Plan and distribute multiple layers of intelligence collection data across redundant communication pathways and in accordance with signature management requirements
- Support passive and active battlespace sensing on, above, and below the surface of the OE, as well as in the electromagnetic spectrum
- Provide indications and warnings from organic, joint, and combined sensor data while on board ship and ashore
- Integrate with the littoral force's fires architecture and the Naval Operational Architecture (NOA) to link sensor to shooter for an instantaneous detection-decision-action cycle that reduces kill-chain timelines and enhances fleet lethality through dynamic and responsive targeting and real-time assessments
- Sense beyond the maximum effective range of Marine Corps organic fires to detect, establish positive identification, and derive target-quality location data of adversary naval and proxy forces using organic, naval, and joint sensors for the littoral force and designated composite warfare commander(s)

4.6.3 Collections Planning

Collections includes those activities related to the acquisition of data required to satisfy specified information requirements that support planning and operational efforts, including establishing OE and IE baseline development, gaining and maintaining MDA and IE battlespace awareness, informing signature management and force protection, and support to assessments.[46]

Day-to-day littoral force collection activities should support higher echelon collection requirements and set conditions to execute EABO. Maintaining MDA for forces throughout the theater is a persistent requirement. Along with support to theater collection requirements, littoral forces must continually develop a maritime OE baseline of adversary and neutral activities during competition to prepare for potential escalations to armed conflict. The critical elements drawn from the integrated JIPOE process allow littoral force staffs and commanders to discern key terrain, adversary disposition and capabilities, relevant actors, target audiences, and key decision makers within the littoral force OE against which to focus collection efforts.

Intelligence collections is critical to supporting assessments at all levels of war and across the competition continuum. Strategic and operational assessment efforts concentrate on broad tasks, effects, objectives, and progress toward specified end states.[47] Littoral force collection platforms must use this approach to assess the success or failure of efforts to shape the maritime environment in support of potential EABO.

Successful planning and execution of a collections plan depends on, but is not limited to, the following considerations to support EABO:

- Gather intelligence data and information from all intelligence disciplines across all domains to satisfy identified requirements
- Create persistent and resilient sensor operations regardless of time of day or weather conditions
- Visualize coverage of both intelligence-directed and nonintelligence sensors in operations and layer multidomain sensors to fill collection gaps
- Disseminate collection data across multiple communications pathways to ensure forces at the EABs receive force protection and targeting data while also supporting joint targeting efforts
- Perform rapid and accurate combat assessments of littoral and naval targets in the littoral force's area of interest
- Conduct battle damage assessment

4.6.4 Signature Management

Signature management is critical to the survivability of Marine forces executing EABO missions within the adversary's WEZ. The ability to alter or limit observable and measurable signatures will preserve and extend the capabilities and proficiency of personnel and systems supporting EABO by making them more difficult to identify and target.

Adversaries employ a variety of collection and sensing platforms to support the identification of friendly force locations, purposes, personnel, and systems. Intelligence support to signature management should focus heavily on these adversary's collection and targeting assets. The aim is to develop an overall threat picture that allows littoral force planners to determine what signatures are most vulnerable to adversary collection and exploitation. This analysis should include sensor type and availability, conduit analysis focused on the pathways from sensor to decision maker, specific types of adversary collection assets focused on areas of friendly activity, and the adversary's understanding of friendly force abilities to

[46] JCS, *Joint Intelligence*, JP 2-0, I-15.
[47] JCS, *Joint Intelligence*, JP 2-0, IV-12.

conduct specific missions. Once collection and targeting capabilities are identified, intelligence and operations planners must collaborate to develop an understanding of adversary's information and decision-making processes.

Conduit and emulative analysis must both be conducted after determining the collection and targeting assets to be analyzed. The challenge for littoral forces is the testing and experimentation necessary to determine the level of detail and understanding that can be attained by tactical intelligence analysts to support analysis of friendly force signature management. To prepare for EABO in C2 degraded or denied environments, littoral forces must exercise and test understanding of the constraints and limitations at the tactical level in a forward maritime environment. These analytic efforts may require reach-back support to the numbered fleet and MEF intelligence sections, but they must also manage the challenge of distributing the relevant intelligence analysis to forward forces to support signature management efforts.

Conduit analysis is a key supporting activity to operations security and deception planning. It is a systems approach to mapping information or intelligence pathways from sensor to decision maker, which includes cross-cueing, transmit time between nodes, effect of filters, and intelligence fusion and dissemination times. Emulative analysis is a psychological and sociological understanding of biases, perceptions, and predispositions of adversary decision makers, which helps identify how adversaries might act based on information available to them.

Applying conduit analysis to adversary targeting activities leads to kill-chain analysis. Kill chains describe the process by which a force can find, fix, track, target, engage, and assess (F2T2EA) a target. This analysis is critical to planning effective signature management for survivability. Littoral forces must understand how the adversary observes friendly actions and targets friendly capabilities. By understanding the adversary process, littoral forces avoid wasting time and resources to manage signatures that are unseen or unimportant to the adversary's process. This chain of dependent activities presents opportunities for disruption, destruction, or defeat through offensive action, as well as through active and passive defensive measures. Through a holistic approach to signature management, intelligence operations can support the littoral force's counter-ISR and deception efforts.

Successful planning and execution of intelligence support to signature management operations depends on, but is not limited to, the following considerations for EABO:

- Support protection activities in the IE
- Measure and monitor own-force electromagnetic signature to enable its management and avoid detection during operations
- Sense chemical, biological, radiologic, nuclear, and explosive signatures
- Conduct sensor-to-shooter, kill-chain (i.e., F2T2EA) analysis
- Determine multidomain indicators and signatures associated with sustainment operations by friendly forces
- Detect adversary surveillance of friendly forces and provide electronic countermeasures for targeting data
- Conduct counterintelligence activities to support critical technology protection

EXERCISE SHOULDER-TO-SHOULDER—203X

Practicing Intelligence-led Operations

A major focus for the bilateral 203X Exercise Shoulder-to-Shoulder was to "practice" intelligence-led operations. The word "practice" was in quotations by design because, ever since publication of the tentative manual in 2021, most Marines realized exercises such as Shoulder-to-Shoulder were about more than just training or "practice"—they contributed to establishing the environmental baseline. The line between training and operations in the contact layer had blurred ever since.

At the exercise, the firing platoons and sensor elements rehearsed survivability displacements along with their Dakota Marine Corps counterparts. This included practice employing decoys, measuring and managing signatures, and using the commercial communications grid as much as possible. Of course the Marines worked to meet several training and readiness standards. They even worked in some rapid resupply drills.

At another level, the exercise stimulated the environment, making it possible to observe the evolving recon/counter-recon battle. Major Drake, the senior intelligence officer at the exercise, gave the following comments as part of the post-exercise debrief.

As a reminder, we did this exercise in part to cause a reaction in the operating environment. The displacement drills were good training for the firing and sensor platoons, and a TSC success with the Dak Marines. Just as good though, and maybe more valuable in the long run, was that the exercise "stimulated the environment." It helped reveal who was trying to collect on us, and some of how they were trying to do it. Here's a couple things I want to emphasize as we put together our after-action report for the CO.

First, we suspected some of the local population near the town of Dakotaville was being paid to report on our activities. Let's make sure we have a single slide and one page narrative that describes what we learned when we displaced the firing platoon to the town's outskirts. Let's put everything into the database and see if the automated tools can find any correlations among the HET reports, SIGINT hits, social media scrapes, etc. We also need to confirm that any FMV is included to look for observers and match their actions to the database outputs. Finally, let's also correlate the FMV with anything we collected on the frequencies used by small drones. I know the Marines reported a few small- or micro-UAV overflights during the exercise, so we need to track those down as well.

Okay, that will do it for the close fight I think. Next we need a slide depicting longer-range sensors. Start with EMS—did our passive sensors pick up any radars? We need to show the band and estimate the type, like commercial, maritime, navigation, weather, or search. Then we need to show how these sensors reacted as we displaced. Also, we need to know if the reactions happened when the exercise force changed its EMS profile by moving in and out of EMCON or shifting to the local cell network.

Finally, let's pull down and synthesize the outputs of all the collection requests we submitted before the exercise. I'd like to create a multidomain picture for the CO on any reactions by the DRC elements we collected on as the displacements happened. He was particularly interested in the DRC fishing boats by John's Bank. Did they change locations or emit any signals when we displaced? What happened when our signature increased during the resupply drills? That sort of thing.

Okay, any questions? Let's get to work.

CHAPTER 5

Operations in the Information Environment

5.1 GENERAL

The ability to execute EABO displays a strategic resolve that resonates with allies and adversaries alike. Expeditionary advanced base operations have the potential to influence strategic, operational, and tactical decisions of friendly forces, allies, and adversaries alike, both directly and indirectly, across the competition continuum. EABO may significantly impact the information environment by deterring or countering adversary actions and enabling friendly actions in a contested maritime area. Conversely, adversary actions in the IE originating far outside the physical reach or influence of an EAB may have tangible effects on EABO.

5.2 PURPOSE AND SCOPE

Operations in the information environment are defined as actions taken to generate, preserve, or apply military information power in order to increase and protect competitive advantage or combat power potential within all domains of the operational environment. The joint force leverages information across the competition continuum to assure, deter, coerce, and compel relevant actors in pursuit of US national objectives. Littoral forces conduct OIE primarily to gain access to adversary command and control networks, build support for US presence, deter adversary aggression, disrupt adversary confidence, expose and counter malign behavior, and protect and defend littoral force C2 and ISR networks.

This chapter serves as a tool for those planning and executing OIE in support of EABO. It describes the information environment, discusses OIE functions and capabilities in the context of EABO, and provides key planning considerations and tasks relating to OIE during conduct of EABO.

5.3 INFORMATION ENVIRONMENT BASICS

5.3.1 Adversary Activities in the Information Environment

Adversary activities in the IE will seek to frustrate littoral forces in two primary ways: *systems confrontation* and *public opinion manipulation*. Both approaches are intended to disrupt and deny US power projection. With respect to systems confrontation, adversaries opposing EABO will employ technical means through cyberspace, space, and the electromagnetic spectrum to target, attack, and exploit friendly forces' ability to gather intelligence, understand the situation, and command and control forces. They will also seek to foment mistrust, discord, and unrest in the vicinity of EABs, among the forces conducting EABO, and among the US domestic audience. Given the nature of the modern IE, EABs must assume they will be under constant observation. As a result, adversaries will attempt to sway public opinion locally and globally against US forces and the United States.

5.3.2 Military Information Power

An expanded view of the military instrument of national power includes two mutually reinforcing elements—*physical combat power* and *military information power*. ***Military information power*** is

broadly applicable across the competition continuum. The ability to manipulate, deny, or destroy the information required by adversaries for the basic functioning of military operations provides significant advantage. Fostering favorable public opinion also generates competitive advantage. Opposing forces, in competition below armed conflict and armed conflict, are in a continuous struggle to gain and maintain these combat power advantages. The essence of military information power is the ability to exert one's will or influence over an opponent through the *generation*, *preservation*, *denial*, or *projection* of information. These actions are organized, coordinated, and executed through physical actions conducted in all domains and through operations in the information environment—all integrated and synchronized under the information warfighting function.

5.3.3 Information Warfighting Function

The information warfighting function involves the management and application of information, including its deliberate integration and synchronization with other warfighting functions, to support the planning and execution of operations. Marines conduct OIE to create and leverage military information power. EABO are intended to alter the behavior of the opponent by communicating messages of credible lethality and demonstrating the resolve to use it. Therefore EABO are fundamentally an application of OIE.

5.4 FUNCTIONS OF OPERATIONS IN THE INFORMATION ENVIRONMENT

Operations in the information environment comprise seven functions, encompassing a collection of activities aiming to increase, maintain, or exploit potential competitive or combat power in all domains. These functions equip littoral forces with a variety of ways and means to potentially impact strategic outcomes. The functions of OIE are explained below.

5.4.1 Assure Command and Control and Critical Systems

The success of joint operations, including EABO, in all domains requires assured access to trusted information. This requirement preserves the integrity of C2 systems and contributes to decision superiority. The opponent will seek to manipulate, disrupt, or destroy the information within friendly C2, ISR, and weapon systems. Their purpose will be to obfuscate, confuse, and shatter friendly cohesion and deny EABO forces the ability to function and fight. Therefore, forces engaged in EABO must take aggressive offensive and defensive actions to preserve the integrity of friendly information, which includes the fundamentals of both operations security and signature management.

Principles for assuring C2 and critical systems when conducting other types of operations in austere environments apply equally to EABO. Littoral forces must employ systems with small physical footprints capable of low-signature emanations, especially in cyberspace and across the electromagnetic spectrum (EMS) to neutralize or delay the adversary's targeting cycle, thereby creating a time advantage relative to the adversary.

EABO are conducted in contested, degraded, and denied environments to execute specific missions in support of naval and joint operations. Littoral forces, in close coordination with Navy information warfare and Marine Corps OIE support, must monitor in near-real-time potential threats and vulnerabilities to overall health and status of C2 systems. In return, EABO must contribute to reliability and resiliency of C2 networks across all domains to ensure completion of mission essential tasks. Reliability, resiliency, and *graceful degradation*[48] based on network and data prioritization are achieved through sound design of

[48] The term "graceful degradation" describes systems that continue to run at some reduced level of performance after one or more components fail. It is a level below "fault-tolerant" systems, which continue operating at normal speed and performance despite a component failure.

the overarching naval C2 architecture, effective integration of the systems that compose that architecture, and effective training of network operators in the human and automated procedures at the tactical level.

Littoral forces must understand how the adversary intends to target and engage friendly C2 systems, and they must actively develop appropriate responses to mitigate the adversary's potential effects on C2 systems. The goal is to have a naval C2 architecture that can absorb adversary effects yet continues to function effectively and support mission objectives.

To perform the "Assure Command and Control and Critical Systems" function, littoral forces conducting EABO must accomplish several key tasks:

- Monitor in near real time the overall health and status of C2 systems and other critical systems
- Monitor in near real time the threats and vulnerabilities to C2 systems and other critical systems
- Provide alerts when critical systems are compromised or become vulnerable to exploitation or attack
- Control and monitor ***defensive cyberspace operations*** (DCO) in near real time and employ DCO internal defensive measures (DCO-IDM)
- Monitor and map electromagnetic and cyberspace signatures emanating from the use of C2 systems and other critical systems
- Monitor the use of EMS-dependent systems to identify and minimize EMS fratricide

5.4.2 Provide Information Environment Battlespace Awareness

EABO contributes to naval power projection by augmenting the Navy's fleet sensor network and enhancing understanding of the information environment. Understanding IE vulnerabilities, threats, opportunities, and their potential strategic, operational, and tactical impacts enables flexible responses across the competition continuum. Providing flexible response options in the IE and across all domains requires the ability to gather and fuse relevant information from as many sources as time and resources permit.

Expeditionary advanced base operations will impact the IE in both intentional and unintentional ways. These impacts will affect all domains, influence both local and global audiences, and shape the perspectives of friends, foes, and neutral parties. Understanding these impacts will support the development of potential responses in the IE in support of EABO and will be essential to mission accomplishment and successful naval operations.

Littoral forces must assess IE-specific conditions across all domains. This includes understanding how littoral force physical, technical, and administrative signatures are seen and understood by nearby observers and by the adversary seeking intelligence or a firing solution. This effort requires the fusion of assessments and near-real-time actions to have as complete of a picture as possible of the IE and OE in relation to each other. This effort should result in the planning and execution of deliberate blue-force activities across all domains with an understanding of potential effects in the IE. This requires measuring and assessing blue-force activities to determine IE effects and understand how conditions change.

Littoral forces must accomplish several key tasks under the "Provide Information Environment Battlespace Awareness" function:

- Develop and maintain a running estimate of the IE
- Incorporate the following types of threat information into the IE running estimate: intelligence, indications, and warnings regarding technical, organizational, or human targets and target system parameters; target C2 networks and nodal dependencies; cyberspace-operations capabilities and actions; space-operations capabilities and actions; and electromagnetic spectrum operations (EMSO) capabilities and actions

- Incorporate the following types of environmental information into the IE running estimate: foundational geospatial intelligence; meteorological information; electromagnetic environment; information on the cyberspace physical layer, cyberspace logical layer, and cyberspace social layer information (to include social media information); open-source intelligence (OSINT), which includes analysis of local, regional, and global media; visual information (VI); enemy satellite surveillance identification; and civil information
- Incorporate the following types of friendly force information into the IE running estimate: health, status, and vulnerabilities of C2 systems and critical systems; electromagnetic and cyberspace signatures emanating from the use of C2 systems and critical systems; communications strategies of adjacent headquarters, higher headquarters, and US government (USG) agencies within the area of operations to prevent information fratricide; plans, orders, and coordination instructions; instances of EMS fratricide; and the position, location, payload, and mission of OIE assets across the battlespace
- Fuse information about naval and joint-force OIE with competitor, adversary, enemy, and neutral OIE to identify vulnerabilities, threats, and opportunities in the IE

5.4.3 Attack and Exploit Networks, Systems, and Information

Maritime power projection includes "a broad spectrum of offensive military operations to destroy adversary forces or logistic support or to prevent enemy forces from approaching within enemy weapons' range of friendly forces."[49] EABO supports maritime power projection and other naval functions by targeting and engaging adversary networks, systems, and their underlying information through both traditional combat power and military information power. EABO potentially increase the range and lethality of traditional strike effects relative to standoff capabilities alone, while also providing "avenues of approach" to information-specific targets across all domains and the EMS. Effective attack and exploitation of enemy networks, systems, and information requires a comprehensive understanding of the relationships between and among many variables to identify the target most appropriate to mission accomplishment.

By their proximity to adversary networks, systems, and information, littoral forces conducting EABO gain targeting flexibility in the execution of specific missions while producing operational or strategic effects. Littoral forces target adversary information dependencies through both technical and nontechnical means to disrupt their ability to function or effectively make decisions. Technical means target the adversary's data and underlying information networks, while nontechnical means target the human and social elements of the adversary's decision-making system.

OIE capability areas described below in section 5.3 provide potential pathways to attack the adversary's ability to make decisions or take action. Traditional combat power capabilities now included attacking adversary networks, systems, and information. Determining how and when to engage targets, however, must be balanced with the EABO requirement to manage signatures and persist forward in contested environments.

Under the "Attack and Exploit Networks, Systems, and Information" function, littoral forces must execute the following key tasks:

- Employ OIE attack and exploit capabilities in support of and synchronized with the concept of fires in near real time throughout the area of operations
- Monitor, in coordination with HHQ, fleet forces, and the joint task force, ***electronic warfare*** (EW) operations, ***offensive cyberspace operations*** (OCO), and intelligence operations (including

[49] JCS, *DOD Dictionary*, 136.

signals intelligence [SIGINT]) to avoid EMS fratricide and recommend alternative courses of action or combined-arms solutions to achieve the desired effects
- Conduct and coordinate OIE missions that target enemy networks, systems, and information
- Coordinate with HHQ agencies to ensure a shared situational awareness of human dynamics, social network links and nodes, atmospherics, environmental characteristics, and personal intent
- Submit and deconflict requests for support (RFSs), such as electronic attack requests and space support requests, throughout the targeting process
- Deconflict EMSO-related RFSs with the C2 architecture, intelligence collection plan, planned cyberspace fires, airspace control order, and the joint restricted frequencies list (JRFL)

5.4.4 Inform Domestic and International Audiences

Inform operations seek to affect the knowledge, perceptions, attitudes, and behavior of publics to support attainment of friendly force objectives while maintaining institutional reputations. The adversary will seek to discredit US operations by conducting aggressive information operations to swing local, regional, and global public opinion against US naval forces. EABO require dedicated operations to identify and inform various audiences, publics, and stakeholders with clear and accurate communications to build understanding and support for operational and institutional objectives, as well as to counter false narratives. Such inform operations in support of EABO require constant integration with HHQ communications assets and day-to-day engagement with key publics to reinforce strategic messaging and to reassure local, regional, and global partners and allies.

In day-to-day competition and throughout the competition continuum, it is a vital concern of littoral forces to understand the impacts of their operations on the local population and environment. Inform operations must also aggressively preempt, counter, and mitigate adversary disinformation and propaganda campaigns aimed at undermining friendly operations. In coordination with HHQ and given appropriate authorities, littoral forces must execute a deliberate and coordinated communications strategy targeted at key public and other relevant audiences to create a sufficiently permissive operating environment to enable employment of combat capabilities at the desired time and place.

Communication strategy and operations (COMMSTRAT) Marines create information products that support all levels of war for release to audiences, publics, and stakeholders to reinforce strategic messaging. Whether through print or digital media, official messaging from littoral force leaders serves as a means to both connect friendly-force activities to a larger strategic purpose and counter adversary propaganda and disinformation, as well as maintain institutional and command reputation by preserving credibility with the US population, which may include national-level decision makers.

Key leader engagement (KLE) provides direct and valuable person-to-person communication. Careful consideration should be given to not only which leaders and audiences to engage but also when to conduct engagement. EABO objectives will help determine the purpose and intent of KLE and allow decision makers to determine how best to engage, whether through direct leader-to-leader dialogue, media engagements, or other opportunities to inform key audiences in support of EABO objectives.

To perform the “Inform Domestic and International Audiences” function, littoral forces conducting EABO must accomplish several key tasks:
- Integrate and synchronize with HHQ COMMSTRAT, joint force public affairs, and regional USG communication efforts (e.g., public diplomacy officers at US embassies to conduct strategic communication and assess communication effects)
- Acquire surface, subsurface, and aerial VI to document all EABO

- Conduct, coordinate, and monitor in near real time EABO actions that will have effects in the IE, which include physical attacks, force movements, psychological operations (PSYOP), and all civil affairs (CA) operations
- Acquire, process, and transmit operational imagery in a command and control denied or degraded environment (C2D2E)
- Create and disseminate visual information/communication products in a C2D2E
- Establish a clear release authority process with HHQ to ensure communication at relevant speeds
- Ensure close integration and synchronization with influence operations to prevent information fratricide

5.4.5 Influence Foreign Target Audiences

Military competition with an opponent is inherently information-centric. Influence operations seek to affect perceptions, attitudes, decision making, and behavior to support attainment of friendly force objectives. For example, naval power projection is a strategy aimed at global deterrence through forward-postured naval forces.[50] Such deterrence is an effort to influence competitors and adversaries to limit actions detrimental to our strategic objectives. EABO support this effort by providing and maintaining the ability to posture naval forces forward. Influence operations, in turn, should be designed to reinforce national strategic objectives and create a permissive environment for EABO.

Littoral forces must operate with the understanding that every action in the OE has the potential to influence target audiences in the IE. The physical maneuver of forces, civil-military operations, and ***military information support operations*** (MISO) are key contributions to shaping the EABO environment. During operational design, these activities must be understood for their value in influencing target audiences and incorporated into the EABO planning process.

To perform the "Influence Foreign Target Audiences" function, littoral forces conducting EABO must accomplish several key tasks:

- Monitor MISO
- Coordinate MISO message and theme dissemination
- Coordinate CA operations
- Support ongoing assessments of all influence operations
- Maintain awareness of the target list, nominate effects against approved target audiences in the targeting process, and coordinate influence operations with HHQ's fire-support plan
- Coordinate operations with expeditionary psychological operations teams and organic capabilities for the dissemination of audio, visual, and audio-visual messages, including by loudspeaker, leaflet and other print products, face-to-face engagements, and radio broadcasts
- Coordinate operations with expeditionary COMMSTRAT operational support teams (OSTs)
- Coordinate organic capabilities, such as directed imagery capability, for the acquisition, production, and dissemination of both written and visual information, including by loudspeaker, leaflet and other print products, face-to-face engagements, and radio broadcasts
- Coordinate COMMSTRAT and expeditionary COMMSTRAT OST support with intelligence requirements development, intelligence collection, surveillance, reconnaissance, targeting, site exploitation, surveys, and combat assessment
- Perform target audience analysis and recommend and prioritize audiences for development and engagement

[50] OPNAV, *Naval Warfare*, NDP 1, 22.

5.4.6 Deceive Adversary Decision Makers

Deception actions deliberately mislead adversary decision makers. They aim to cause their targets to take or not to take specific actions, thereby contributing to attainment of friendly force objectives. This function differs from the influence function in four main ways: (1) by the intended effect, (2) by a focus on a much more limited and specific target audience, (3) by a focus on the target's sensing capabilities, and (4) in the authorities required to execute the actions. Succeeding in this function requires the integration of physical actions with specialized capabilities.

Refer to the classified portion of appendix A for considerations in planning and executing deception operations in support of EABO.

Littoral forces must accomplish several key tasks under the "Deceive Adversary Decision Makers" function:

- Coordinate and ensure deception actions are aligned and integrated with higher-level plans
- Plan, coordinate, and execute deception in support of operational security (OPSEC) and tactical deception
- Coordinate the timing and tempo of deception actions in support of tactical-level commanders and ensure deception actions are synchronized with other operations that may affect or be affected by deception actions (e.g., EMSO, OCO, DCO, COMMSTRAT, fires, and maneuver)
- Maintain awareness of efforts by counterintelligence personnel to protect against threats from outside the unit
- Plan, coordinate, and manage the use of administrative, physical, and technical signatures

5.4.7 Control Information Capabilities, Resources, and Activities

This function is vital to creating and leveraging military information power. It is through this function that OIE capabilities, resources, and activities are synchronized with all operations. The multidomain nature of OIE requires vertical and horizontal coordination in both time and space. Awareness, timing, and close coordination with all warfighting functions throughout planning and execution are critical to effective OIE.

OIE in support of EABO necessitate synchronization among the OIE coordination elements of the littoral force and both higher and adjacent forces and alignment with mission objectives. Proper control and integration of information activities requires littoral forces to host and participate in B2C2WG to support a daily battle rhythm.

Littoral forces must accomplish the following key task under the "Control Information Capabilities, Resources, and Activities" function:

- Track, monitor, and display all OIE relevant to the littoral force mission and operations
- Coordinate and/or control the employment of OIE per HHQ direction
- Provide near-real-time retasking and reprogramming recommendations based on the mission, emergent battlespace conditions, and capabilities and disposition of friendly forces
- Maintain an updated list of the commander's OIE-related authorities
- Coordinate the timing of OIE in support of naval and joint operations
- Coordinate emergent requirements and requests for reach-back support, including naval, joint, or national support requests

5.5 CAPABILITY AREAS FOR OPERATIONS IN THE INFORMATION ENVIRONMENT

Capability areas for OIE include a group of six information-specific disciplines through which OIE are planned and executed as part of littoral operations. These capability areas align to either technical or cognitive disciplines. The technical capability areas include electromagnetic spectrum operations, cyberspace operations, and space operations, while the cognitive capability areas include inform operations, influence operations, and deception operations.

5.5.1 Electromagnetic Spectrum Operations

Military operations in the EMS involve the transmission and reception of electromagnetic energy in the electromagnetic operating environment (EMOE). EMSO are military actions undertaken by a force to exploit, attack, protect, and manage the EMOE. The EMS is a maneuver space, and conducting maneuver within it is similar to maneuver in other domains, requiring three-dimensional positioning and time. During cooperation and competition, EMSO are conducted to ensure adequate access to the EMS. As situations escalate towards armed conflict, EMSO shifts to achieving EMS superiority.[51]

EMSO actions to exploit, attack, protect, and manage the EMOE rely on personnel and systems from the EW, EMS management, intelligence, space, and cyberspace mission areas. EABO will be conducted in an EMOE that is constrained, congested, and contested. Throughout the competition continuum, littoral forces will conduct EABO with denied, degraded, or disrupted access to the EMS. It is paramount that EABO incorporate dedicated EMSO planning and execution to incorporate electronic attack in naval-force power projection while understanding risks to mission and force when EMS access is nonpermissive. To mitigate adversary and neutral actors' actions within the EMS, littoral forces must understand EMS maneuver, signature management, and the larger naval campaign.

Successful planning and employment of EMSO must consider several factors:

- TTPs for fusing ISR feeds and EMSO payloads with lethal and nonlethal fires to compress the sensor-shooter "kill chain"
- Authorities available to plan, conduct, and coordinate EMSO
- Agile/dynamic employment of EMSO to minimize friendly electromagnetic interference (EMI)
- Coordination of EW, collection, and communications plans to identify potential EMS fratricide
- Coordination of electronic attack requests with C2 architecture, intelligence collections, cyberspace fires, airspace control, and the JRFL
- EMSO timing and tempo coordinated with plans for signature management plan

5.5.2 Cyberspace Operations

Cyberspace operations include three distinct efforts: Department of Defense information network (DODIN) operations, DCO, and OCO. DODIN operations and DCO are the most common and are critical to assuring C2.

Given the proximity of EABO to adversary infrastructure, the cyber domain presents both opportunities and vulnerabilities. Both DCO and select OCO can be conducted to assess, build, and protect local infrastructure in the operational area. The purpose of such operations is to deny adversary access and potentially prepare the environment for achievement of strategic, operational, and tactical objectives. As with EMSO, however, any OCO must be executed in accordance with signature management principles,

[51] Joint Chiefs of Staff, *Joint Electromagnetic Spectrum Operations*, JP 3-85 (Washington, DC: US Department of Defense, 2020), I-1 to I-11.

allowing the adversary to see or exploit only carefully selected signals and capabilities because they offer possible exposure of further adversary vulnerabilities.

Successful planning and employment of cyberspace operations must consider several factors:

- TTPs and capabilities required to continuously monitor the health and status of C2 networks and critical systems
- Tailored intelligence to support full-spectrum cyberspace operations and identify key terrain in cyberspace
- TTPs and capabilities required for DCO-IDM efforts to assess networks, weapon systems, and C2 systems based on identified key terrain in cyberspace that are likely targets for exploitation
- TTPs, CONOPS, and authorities required to coordinate and employ externally provided OCO assets to defeat enemy capabilities that target C2 and critical systems
- Coordination of cyberspace operations with EMSO and other special capability to minimize friendly EMI
- Coordination of RFSs throughout the targeting process

5.5.3 Space Operations

Space operations are those operations impacting or directly utilizing space-based assets to enhance the capabilities of US forces. DOD space forces are the space and terrestrial systems, equipment, facilities, organizations, and personnel, or the combination thereof, necessary to conduct space operations. Space operations exist to provide space capabilities to the joint force. Space capabilities include space control (specifically ***navigation warfare***); positioning, navigation, and timing (PNT); ISR; satellite communications (SATCOM); environmental monitoring; and missile warning. The ability to leverage these space capabilities relies on access via the EMS and cyberspace to systems that provide the desired space capabilities.[52]

Littoral forces must consider space operations early in planning for the conduct of EABO. Adversary action in space is inevitable, and the adversary will generate effects that deny, degrade, and disrupt the space operating environment. Understanding when and how the space domain is likely to be affected informs decision makers of the availability of space capabilities and risk to mission and force. Littoral forces must understand how to conduct EABO when certain space capabilities are denied, degraded, or disrupted. Space capabilities are highly dependent on the EMS and cyberspace. Coordination with planners in those OIE capability areas is thus required to understand impacts to space due to adversary, friendly, and neutral actions in the EMS and cyberspace.

Refer to the classified portion of appendix A for considerations in planning and executing space operations in support of EABO.

Successful planning and employment of space operations must account for several factors:

- TTPs and capability to leverage space-based resources to support EABO
- Coordinate EABO requirements for SATCOM and PNT
- TTPs and capability for obtaining space-domain awareness of ISR satellite capabilities to support collections and signature management (SIGMAN)
- TTPs for ensuring RFSs are coordinated throughout the targeting process

[52] Joint Chiefs of Staff, *Space Operations*, JP 3-14 (Washington, DC: US Department of Defense, 2018), II-1 to II-8.

5.5.4 Inform Operations

Inform operations shape perceptions by countering misinformation, establishing facts, and putting fleet actions into context. Through the official release of information via traditional media, social media, and face-to-face engagements, these operations correct inaccuracies and discredit adversary propaganda with counter narratives.

Littoral forces, in coordination with fleet and service headquarters, communicate with internal, domestic, host-nation, coalition, international, and adversary audiences to support strategic, operational, and tactical objectives. These efforts are crucial to enhancing situational awareness and C2. They must be incorporated within the operational planning process to ensure integration in support of EABO objectives. Inform operations are the responsibility of all personnel who make up the littoral force, but personnel specializing in COMMSTRAT, information and knowledge management, and civil affairs will primarily plan, coordinate, and execute the inform operations strategy.

Successful planning and employment of inform operations must consider several factors:

- Knowledge of HHQ narrative, which requires integration with joint force and regional USG communications efforts
- TTPs and capability to gather and analyze publicly available information
- Authorities to microtarget and release messages to the local host-nation population
- Coordination with influence operations and military deception (MILDEC) operations to prevent information fratricide
- Measurement of communication effects, which requires the use of network and/or application-based data visualization and exploration tools that extract meaning and sentiment from any written content, including news, social media, and online forums to build awareness, spot trends, manage issues, and mitigate risk to operations and institutional reputation
- Status of release authority for public information
- Ability to create and disseminate information products in a SIGMAN-degraded environment
- Support to operational assessments

5.5.5 Influence Operations

Influence operations seek cognitive effects in the human aspects of the IE. The goal is to shape perceptions in the IE. To plan an effective influence campaign, operations to influence various actors in the environment must account for culture, life experience, social relationships, ideologies, and the influence of those within and outside of the actor's group. Influence operations include, but are not limited to; OPSEC, MISO, signature management, civil affairs, and other special technical capabilities.

All littoral force actions, whether physical movement, maneuver in the OE, or specific actions in the IE, have the capacity to influence key adversary and neutral decision makers to the benefit of fleet operations.

Successful planning and employment of influence operations must account for several factors:

- Knowledge of the HHQ narrative
- TTPs and capability to gather and analyze publicly available information
- Authorities at the local level to release MISO messages to various audiences, including the local population of the host nation
- Coordination with public affairs, civil affairs and civil-military operations
- Support to development of the protected target list
- Support to MILDEC, SIGMAN, and OPSEC
- Support to operational assessments

5.5.6 Deception Operations

Deception operations seek to mislead adversary decision makers, thereby causing the adversary to act or not action in a manner beneficial to friendly force objectives.

Refer to the classified portion of appendix A for considerations in planning and executing deception operations in support of EABO.

5.6 STRUCTURE OF LITTORAL FORCE OPERATIONS IN THE INFORMATION ENVIRONMENT

All personnel involved in executing EABO have a role in day-to-day OIE. There are, however, information enablers whose primary responsibilities are to plan, coordinate, and execute OIE functions. These specialists ensure OIE are synchronized with the larger operational design and aligned with strategic objectives. Littoral forces must deliberately test and evaluate which OIE functions can and cannot be executed effectively with current force structures. This assessment helps to determine the right division of labor for OIE between forward-deployed enablers and specialists providing reach-back support from outside the immediate operating area.

The littoral force's proximity to local and adversary infrastructure is a primary benefit of EABO because it provides unique access and targeting opportunity in support of fleet operations and denial of adversary capabilities. A major challenge for the littoral force is to determine the most effective means of integrating OIE into the operational planning process. There are several options for OIE integration. The most satisfactory method is for the primary OIE coordinator to have equal standing with primary staff officers of the littoral force, thus maintaining balance in the representation of all warfighting functions during planning and execution. An alternative is to fully integrate OIE expertise with the littoral force operations section, either as a standalone OIE cell or within the Fires and Effects Coordination Cell. Littoral force commanders shall experiment with the staff structure to find the best combinations for integrating OIE into operational planning.

The unique characteristics of EABO challenge the littoral force to determine the most effective task organization and table of equipment for EABO missions. Operational requirements must drive the appropriate mix of information-specific enablers included in forces conducting EABO. The following enablers should, at a minimum, be considered.

OIE Lead Planner. The OIE lead planner serves as a focal point of OIE planning and execution on the littoral force staff. This specialist:

- Integrates the information warfighting function into operational design, planning, and execution;
- Synchronizes OIE functions;
- Manages day-to-day OIE execution.

Cyberspace Operations Team. Littoral forces determine the most effective location from which cyberspace operators support EABO missions. In many cases, the cyberspace operations team may best support the littoral force from a position geographically removed from the littoral force main headquarters. The cyberspace operations team:

- Plans, integrates, and coordinates DCO and DODIN operations in support of tactical and operational units;
- Executes OCO to achieve specific tactical, operational, or strategic objectives when provided the capabilities, responsibilities, and authorities to do so.

Communications Strategy and Operations Team. COMMSTRAT teams include a mix of personnel capable of communication counsel, research and analysis, planning and integration, assessment and

evaluation, media engagement, issue management, crisis communication, imagery acquisition, and multimedia product creation and dissemination. Due to their ability to engage in the IE directly, daily, and globally, they can significantly and favorably impact the IE with accurate, truthful information that reinforces institutional credibility. The COMMSTRAT team:

- Integrates with HHQ COMMSTRAT to identify audiences, publics, and stakeholders in the area of operations.
- Provides accurate, truthful, timely, and relevant information to identified public audiences;
- Provides capabilities in surface, subsurface, and aerial photography; motion media; graphic design; and reproduction in support of operational and planning requirements.

Civil Affairs Team. Civil affairs is the commander's conduit between littoral forces and the local civil authorities. The civil affairs team:

- Establishes, maintains, influences, and exploits relations among military forces, governmental and nongovernmental organizations, and the civilian populace in pursuit of mission objectives;[53]
- Facilitates access and maintains permissive relationships in the forward operating environment.

Psychological Operations Team. PSYOP teams are capable of supporting influence operations at the tactical, operational, and strategic levels. For the littoral force, the PSYOP team:

- Influences foreign audience behavior in a manner beneficial to friendly force actions and objectives;
- Facilitates operational and tactical actions to further littoral force ability to influence foreign audiences;
- Supports military deception operations.

Electronic Warfare Team. EW missions are executed from a variety of platforms across multiple domains. EW enablers provide necessary experience and expertise to conduct offensive and defensive electronic warfare in support of the littoral force. The EW team:

- Plans and executes operations designed to shape, limit, disrupt, exploit, or attack the adversary's access to and use of the EMS;
- Protects friendly freedom of action in the EMS.

5.7 OPERATIONS IN THE INFORMATION ENVIRONMENT ALIGNMENT AND INTEGRATION

Operations in the information environment do not occur in isolation. Enablers from all OIE capability areas shall operate with an understanding of the available support from, and their responsibilities to, the larger information enterprise. Coordination with higher echelons is essential to both (1) ensuring proper authorities to execute specific OIE activities and (2) aligning these activities to operational and strategic objectives.

5.7.1 Higher Echelon Alignment and Coordination

Operations in the information environment in support of EABO provide geographic and functional combatant commands the opportunity to leverage forward-deployed information resources and capabilities to directly support strategic objectives. Forces conducting EABO within the adversary's WEZ gain unique placement and access, which may be employed to prepare the environment for future operations. To leverage OIE activities while conducting EABO, littoral forces must exercise and test the

[53] Headquarters, US Marine Corps, *Marine Air-Ground Task Force Information Operations*, MCWP 3-32 (Washington, DC: US Marine Corps, 2018), 3-15.

connections and relationships with the Navy numbered fleets, the joint force, and the greater information community.

The Marine Corps information warfighting function provides a range of skillsets and capabilities that littoral forces can leverage to conduct EABO. Most OIE capabilities reside within the MEF Information Group. There are also planning and coordination elements within the service components at the combatant commands. Headquarters, Marine Corps provides strategic planning and guidance to the wider Marine Corps information community. Not only can EABO OIE enablers leverage the collective expertise of the Marine Corps, but lessons learned while conducting OIE in support of EABO should drive system and force design and further development of information capabilities across the service.

5.7.2 Naval Integration

The naval character of EABO demands that littoral forces execute OIE in close coordination with fleet objectives. OIE planners and enablers should operate in close coordination with, and, in many cases, under the cognizance of the Navy IWC in composite warfare. OIE enablers and units of action in the littoral force should understand that EABO support fleet operations. OIE supporting EABO not only enable successful execution but also support fleet operations through their role in EABO missions. OIE enablers with the littoral force must understand their supporting relationship to the IWC and their role in supporting fleet objectives.

The OIE and IW relationship requires extensive experimentation, testing, and integrated training to develop mutual understanding among Marines within the OIE capability areas and Sailors within the Navy's IW communities. With the Navy's IW missions in mind, littoral forces should test and experiment with emerging technical capabilities and OIE enablers to mature their ability to support EABO. Follow-on experimentation should examine how littoral force OIE and IW can more specifically support fleet objectives through EABO. United States Coast Guard international engagements and partner capacity building efforts within the OE will also require deliberate OIE integration.

Finally, two variables are critical to ensuring naval integration for OIE activities: (1) understanding the authorities needed to provide commanders the flexibility to execute all OIE functions in support of EABO and (2) leveraging these authorities.

5.7.3 Special Operations Force Integration

Special operations force integration provides vital means to conduct OIE, especially in cooperation and competition. SOF's unique authorities, relationships, and capabilities provide access and placement to conduct OIE across all functions and capability areas to meet commander's intent. OIE often provide the critical means to compete below the threshold of armed conflict. They also enable and set conditions for EABO and littoral force priorities and lines of effort. SOF increasingly employ OIE to shape the environment to seize and sustain advantage in competition and enable naval expeditionary forces to win in conflict.

5.8 AUTHORITIES

Effective OIE require multidomain activities executed simultaneously across the competition continuum. Commanders must fully understand their authorities (the power to perform some act or take some action), which is often characterized as permission. They must consider not only things that provide affirmative permission to act, but also those things that restrict their ability to act and where approval of those

authorities resides. Therefore, authorities provide the "left and right limits" within which one has freedom of action and dictate the echelon at which authorities are retained.[54]

Authorities to perform specific information functions and employ specific capabilities reside at different echelons depending on whether the littoral force is conducting day-to-day steady state operations or is tasked to execute an EABO mission during armed conflict. The GCC or JFMCC may direct OIE-related tasks to set conditions for future EABO missions. Once tasked with an EABO mission, the littoral force commander and staff must leverage organic and enterprise information capabilities to execute the seven functions of OIE and set conditions in the OE to execute the EABO mission.

Mission-specific command relationships define the authority a commander has over assigned or attached forces. Effective command relationships enable the expeditious and effective employment of OIE capabilities. In many cases, the authorities for employing capabilities across space, cyberspace, and the EMS reside at levels above the littoral force. Some authorities reside at the combatant command level—or are retained at even higher levels—while others are delegated to the operational commander.[55]

The delegation of authorities to lower levels could provide commanders the flexibility to gain and maintain advantages relative to the adversary. The littoral force must demonstrate during training and experimentation the capability to responsibly employ authorities not currently assigned. Attaining OIE objectives is predicated on possessing the right amount of situational awareness in conjunction with the operational control to execute. These elements together provide the commander an understanding of risk to mission, risk to force, and risk to adjacent activities.

Littoral forces must streamline authorities to the greatest degree possible. EABO within an adversary's WEZ place a high priority on responsiveness to orders and permissive executive authorities. The authorities to execute all aspects of OIE do not currently exist at the littoral force level. Identifying gaps in OIE authority requirements should be a primary concern of littoral forces in EABO testing and experimentation to ensure littoral forces can execute all OIE functions.

[54] Joint Chiefs of Staff, "Insights and Best Practices Focus Paper," *Authorities* (Washington, DC: US Department of Defense, 2016), 2.
[55] Refer to the classified portion of appendix A for specific authorities for OIE functions.

BATTLE OF NARRATIVES: A FISHING DISPUTE IN 203X

Colonel Robinson Takes Command

Colonel Robinson took command of 25th MLR with a feeling of excitement and a bit of apprehension. Tensions were again on the rise in the AO. This time, much of it was because of the population growth taking place in the countries bordering the Dakota Sea. This rising population placed pressure on each country's fishing fleet to bring home ever-increasing amounts of protein to help feed their people. At the same time, the Marines of 25th MLR were understandably curious, and maybe even a bit nervous, about Col Robinson's ability to lead them successfully in this environment. Everyone sensed that Marines would get more involved in the unfolding situation; they just didn't know exactly what that might look like.

Fishing rights in the Dakota Sea had been under dispute for decades. The pressure to bring home more and more of a catch placed ever increasing pressure on the sea's finite fish stocks. The DRC continued to pursue its "territorial sea" claims, which conflicted with many other countries' EEZs. When the DRC's trawler fleet tried to fish along the borders and especially inside EEZs claimed by their neighbors, they found themselves frequently encountering resistance from other nations' coast guard and fishing vessels, leading to "shouldering" and ramming actions, use of water cannon, and competing narratives transmitted through the international media and across the internet.

Not long after the change of command, the MLR received a warning order. With the DRC flexing its muscles in the Dakota Sea, the COCOM was examining available flexible deterrent options. The warning order directed the JFMCC to provide options for how they could deter DRC aggression. Both MEF and 8th Fleet were tasked accordingly and the MLR and other naval forces were formed into a Task Force.

The Intel Officer provided an overview of the DRC fishing fleet's encroachment into the Dakota EEZ. It was especially active around John's Bank. This area supports significant amounts of sea life, and is also believed to be rich in hydrocarbons beneath its shallow depths. Intelligence assessed the DRC's goal to achieve de facto control of John's Bank by using their large advantage in numbers of fishing vessels to overwhelm the Dakota Coast Guard. The DRC also chose the John's Bank area because it was claimed only by Dakota and the DRC, so it was a one-on-one game of intimidation and not the DRC against several different claimants. There was also a DRC Navy surface action group over the horizon but within supporting range if needed.

Col Robinson finished writing a few notes, then looked up and gave his initial planning guidance.

First, I see this primarily as a battle of narratives, meaning both sides will try to win this contest through operations in the information environment without using lethal military force. Some violence might occur, if a coast guard ship or fishing boat rams another ship or if someone uses a water cannon, that sort of thing, but everyone will try to avoid armed conflict. The DRC wants to get as much as they can out of creating this situation, but they want to do so at the lowest possible cost. We need to be ready to bring lethal force to bear—the DRC will have plenty of firepower over the horizon too—but that is definitely plan B. Based on my conversations with Admiral McGuire at Task Force 80, we need to drive up the political costs to the DRC by calling them out and painting them as the aggressors—which they are—and do so by every possible informational means. The main goal is to help Dakota demonstrate sovereignty over their EEZ by preventing DRC encroachment. We need to assist Dakota by pushing a strong story, helping them make the case that they are well within their rights to protect their EEZ despite the bullying tactics of their DRC neighbors. As you work through this, explore ways to also make this a multilateral narrative, which will complicate things for the DRC.

OpsO, make sure to confirm how Task Force 80 and 8th Fleet plan to structure C2 of their information warfare ops. We need to route all of our OIE CONEMPs through the IWC for approval. Let's make sure we relate everything we submit to a task force or a fleet objective, making it easy for them to say yes and give us the permissions and authorities we need for proactive engagements. I'm okay if they hold certain authorities at their level, or even if they're at the COCOM level, so long as we coordinate triggers with them ahead of time, or pre-coordinate permissions to use higher's authorities once conditions in our approved CONEMPs are met. In other words, if we see an opportunity emerge I want to be able to exploit it, which means we need our higher headquarters ready to act on our behalf if necessary—and act quickly! As well ensure coordination with the MIG on all of this.

Two final thoughts. One, our plan must include enough decoys or mimics so that we can hide in the noise if necessary. And two, the Marines and sailors know how to creatively challenge the DRC's efforts. We also know the DRC is very good at this kind of thing, so let's get all of our ideas on the table.

The staff was energized by Col Robinson's guidance. After asking some questions and having discussions on some techniques they had in mind, they got to work. Following a couple of in-progress reviews over the next several days, the staff reassembled for the confirmation brief. After a short update on the situation from the Intel Officer, the OpsO took over. After explaining highlights of the task organization and force laydown, she quickly arrived at the heart of the brief.

Sir, we've coordinated our overall concept of operations with Task Force 80, and they've been very supportive of our plan. We didn't get everything we wanted, but after working through the issues the past couple of days, we figured out how to achieve the effects we were looking for, even if it's not our finger on the trigger for all of them, so to speak.

The central theme for the operation is "deterrence by detection." If and when we witness someone from the DRC behaving badly, we can use this evidence to drive the narrative about how the DRC is exploiting someone else's natural resources for their selfish gain. There are many layers to this of course but that's the main message. We worked on it with Task Force 80 and 8th Fleet—they had something similar in mind—so now it's coordinated all the way up through the JFMCC and CCDR. The CCDR is working with the State Department to make it a coordinated regional message. State will help make it a multilateral problem for the DRC if we can provide proof of them violating Dakota's EEZ, putting other nation's vessels in jeopardy, etc.

Deterrence by detection works in all domains. I'll highlight a couple examples. First, we're supporting Task Force 80 by helping them keep constant, all domain surveillance over John's Bank. The MLR will provide a large majority of the visual coverage through our LRUSVs and UAVs. We are using the task force's and other supporting agencies' covert means to help cue our unmanned assets, and then we'll leverage the video footage they collect to drive our narrative through media channels. The messages have been pre-coordinated according to certain triggers. For example, if we capture video of a DRC Coast Guard vessel interfering with a Dakota fishing boat, we know where to send that video so it quickly gets published through multiple media channels in the region and internationally, including on social media. The Task Force 80 IWC shop is taking the lead on making sure the messages get translated correctly into the right regional languages.

The other example I'll highlight is how we are integrating defensive cyber operations into supporting our narrative. We've coordinated a "name and shame" message through Task Force 80 and 8th Fleet. We want to catch the DRC while they try to interfere with our networks in some way. Once we get evidence of it, we have several pre-coordinated and pre-approved messages to launch. We will have intrusion

detection on all of the MLR's networks to make this happen. Even better, I think, at least for the strength of our narrative in the region, our years of exercises and TSC with the Dakota Marines is paying off. Our DCO team is also going to monitor the Dak Marines' network, which means we'll get to monitor all of the Dakota Navy's network too, since they are basically the same thing. We have another set of pre-coordinated and approved messages ready to go if we get the right trigger. All those messages will go out through Dakota media channels, which will then quickly flood regional outlets as well. And because the Dakota Marine Corps is so small, they'll be able to get the same messages out on social media faster than we probably could.

We'll integrate our actions with the Dakota Coast Guard through Task Force 80. The task force's US Coast Guard liaison will provide us the sailing schedule and planned patrol routes for their cutters. I haven't gotten confirmation yet, but it's looking good that Task Force 80 will be able to coordinate similar DCO support for the Dak Coast Guard, too.

Remember the questions you asked about the assessment plan during Tuesday's IPR? Well Sir, without turning this into an assessments brief here are the answers to your RFIs. First, yes, we can off-board most of the assessment effort to others—MCIOC, MARFORCYBER, 10th Fleet are the main supporting agencies. We also confirmed they have the automation you asked about, including automated tools to do A/B message testing, recommend improved messages, etc. All of the outputs will be integrated easily into our battle rhythm. The answer to the other main question is also yes. The assessment metrics are integrated all the way up to the CCDR, and that system is automated as well. For example, we have metrics on trend and reach for anything the Dak Marines put out on social media. If someone at, let's say, at 8th Fleet inputs data on the metric, everyone will be able to see it in real time. In total, we have a few more individual data points in our metrics at our level, primarily because we'll have face-to-face contact opportunities, but all the data points feed into a common set of metrics.

Finally, for the last main question, we will be able to sustain this narrative over a much longer campaigning time horizon. We estimate this current crisis will last for months but will eventually recede. This estimate is based on historical trends—previous efforts by the DRC to flood an area with fishing boats have eventually receded. Also, the DRC would start to impose big costs on themselves if they tried to keep hundreds of boats around John's Bank, especially if they are not making noticeable progress toward their goals. Once this current crisis recedes, we'll be able to reduce the MLR footprint to our typical rotational presence. That said, we are making real progress in empowering the Dak Marines to perform many of these functions. We have more work to do and will brief you separately in the near future; however, the Dakota Marines, and Navy for that matter, understand now how to obtain the information their government needs to fight the narrative battle effectively. They'll use their own processes and systems, but they will know what to look for and how to take action once they get it. After this contingency recedes, I suspect we'll be more in an overwatch role, but we'll still be helping them fight the narrative fight for the long haul.

INTENTIONALLY BLANK

CHAPTER 6

Aviation Operations

6.1 GENERAL

Employment of joint and naval assets in the air domain is necessary for successful naval operations, especially in the littorals. By providing support to littoral forces, maritime aviation increases operational reach; provides fires and effects, assault support and mobility, reconnaissance, and surveillance; controls aircraft and missiles; and provides force protection and air superiority. Aviation forces are not limited to aircraft. They include afloat, ground-based, and maritime air-defense and antiair warfare units; aviation command and control agencies; bases in and around the littoral operating area; aviation ground support capabilities; and joint aviation capabilities. Through flexible combination of aviation units and capabilities, aviation provides lethality, flexibility, speed, and operational reach to the integrated naval force.

While joint and service doctrine for aviation planning and operations remains constant, there are additional considerations necessary to support EABO while ensuring effective coordination of airspace and resources. Specifically, aviation support to EABO demands new types of aviation task organizations and additional maritime aviation functions beyond the doctrinal functions of Marine aviation. These adaptations are necessary to littoral forces, and they also contribute to the joint campaign.

6.2 PURPOSE AND SCOPE

This chapter discusses the roles, functions, and tasks of aviation as they relate to littoral forces conducting EABO without focusing on specific aircraft, weapons, or systems used in execution of EABO.

Littoral operations are inherently aviation intensive, because naval operations are inherently aviation intensive. Protecting forces ashore and at sea, strike warfare, maritime patrol and reconnaissance operations, assault support, and counterair warfare have all proven to be aviation intensive in the modern era; conducting such operations in a contested littoral area is bound to be similarly intensive. Consequently, aviation forces tasked with supporting littoral forces conducting EABO and aviation units organic to these forces must be aware of the unique requirements of littoral operations.

6.3 ROLE OF AVIATION IN EXPEDITIONARY ADVANCED BASE OPERATIONS

Aviation operations in EABO span a wide range of mission areas under a range of threats across the competition continuum. The six functions of Marine aviation remain broadly valid: offensive air support, antiair warfare, assault support, air reconnaissance, electronic warfare, and control of aircraft and missiles. During competition below armed conflict, however, Marine aviation support may be limited to an air support element located with a regiment providing situation updates to itinerant aircraft. During armed conflict, aviation units and an aviation combat element may be simultaneously conducting all six functions of Marine aviation, as well as additional functions supporting sea control and sea denial while furnishing aviation support to the JFC's campaign.

The role of aviation in EABO is to support the LFC's mission to conduct sea denial and support sea control operations. Because aviation resources are limited, aviation assets should normally be placed under centralized command within the littoral force. As with other types of operations, these aviation assets of the littoral force are normally organized as an *aviation combat element* (ACE), and they are

placed under the command of the senior Navy or Marine Corps aviator with the preponderance of the aviation assets and the ability to C2 all the littoral force's aviation assets. Effectively, this creates an integrated Navy-Marine Corps aviation task force or task group supporting the broader maritime campaign in the littorals. Additionally, if the LCF is designated as JTF, the ACE will function as the JTF's joint force air component commander (JFACC). The littoral force ACE, as a unified Navy-Marine Corps aviation element, executes aviation functions in support of the littoral force's missions of sea denial and sea control. In supporting these missions, the littoral force ACE commander is responsible for accomplishment or coordination of the following tasks:

- Plan aviation operations and use of airspace
- Plan and coordinate the availability of aircraft, crews, ordnance, fuel, facilities, and vessels capable of flight operations
- Task littoral force aviation assets, including drafting the air tasking order (ATO) and air plan
- Direct employment of littoral force aviation assets and coordinate their employment with joint, coalition, and host-nation aviation assets, capabilities, and resources
- Generate the air tactical picture
- Serve as the STWC when tasked under composite warfare
- Serve as the AMDC when tasked under composite warfare
- Serve as the EXWC when tasked under composite warfare
- Serve as the airspace control authority (ACA) within a littoral operations area when tasked under composite warfare
- Serve as the air resource element coordinator (AREC) when tasked under composite warfare
- Serve as the helicopter element coordinator (HEC) when tasked under composite warfare
- Generate aviation capabilities supporting the CWC, warfare commanders, functional group commanders, and coordinators under composite warfare

Refer to chapters 3 through 5 and appendix A of *Composite Warfare: Maritime Operations at the Tactical Level of War*, NWP 3-56, for detailed discussion of functions and responsibilities of the various warfare commanders, functional group commanders, and coordinators as they related to aviation operations.

The littoral force ACE commander uses a combination of facilities, agencies, and capabilities located at sea, in the air, and ashore to execute decentralized control of ACE aviation, as well as joint aviation supporting the littoral force. This includes:

- Executing aviation operations;
- Providing air and missile defense to the littoral force and friendly units in the LOA;
- Managing and controlling the air domain within the LOA;
- Coordinating with joint, coalition, multinational, and host-nation air-control agencies;
- Executing the littoral force's ATO and air plan;
- Providing timely and accurate information to subordinate and adjacent commanders, including commanders operating under composite warfare, to support tactical decisions.

6.4 AIR DIRECTION, AIR CONTROL, AND AIRSPACE MANAGEMENT

Refer to chapter 4 of *Aviation Operations*, MCWP 3-20, for a discussion of air direction, air control, and airspace management. These methods of aircraft control and management of airspace are used by the LFC and the littoral force ACE to ensure centralized command and decentralized control of Navy and Marine Corps aviation assets.

6.5 FUNCTIONS OF AVIATION IN SUPPORT OF EXPEDITIONARY ADVANCED BASE OPERATIONS

Aviation in support of EABO, as with other types of operations, is multifunctional and includes the doctrinal six functions of Marine aviation, as reflected below in figure 6-1. EABO are aviation intensive, with aircraft often operating at long ranges and high endurance. The mere presence of an adversary WEZ does not obviate the requirement for aviation operating in support of fleet objectives in the context of a maritime campaign. Aviation operations in support of EABO differ from many contemporary aviation operations in the following ways:

- Unmanned aircraft are emphasized even more than in current operations
- Adversaries present a qualitatively and quantitatively more dangerous threat than has been experienced in recent operations
- Projected advances in artificial intelligence, machine learning, and sensor technology—and increased use of tactical data links—will speed targeting cycles and decentralize decision making
- Signatures of aircraft, C2 agencies, aviation capable ships, and supporting bases will require constant management to complicate adversary targeting

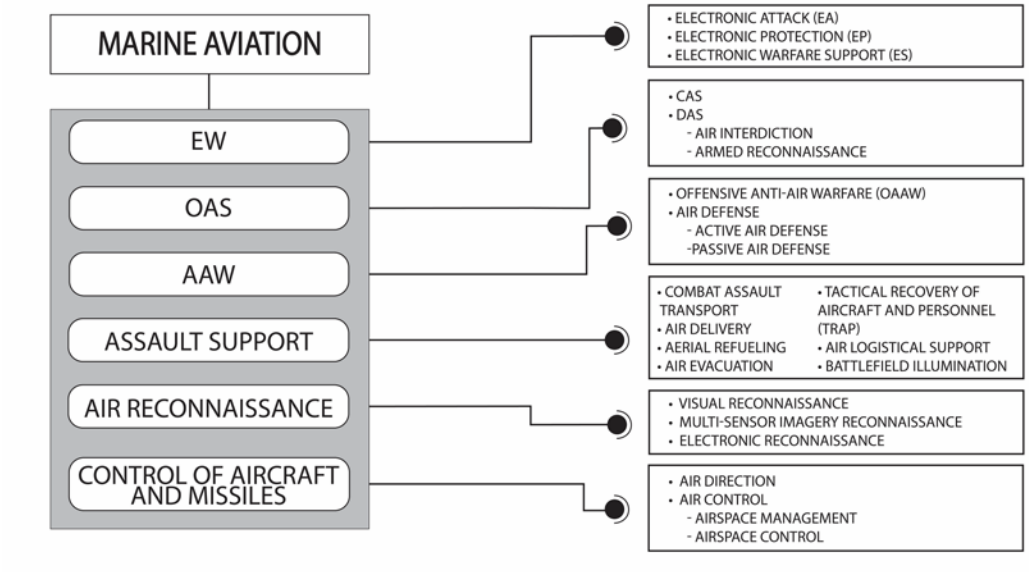


Figure 6-1. Six functions of Marine aviation

Refer to *Aviation Operations*, MCWP 3-20, for a complete discussion of the six functions of Marine aviation.

As discussed in section 3.6, EABO C2 methodology may be executed under MAGTF C2, composite warfare, or both. *Composite Warfare*, NWP 3-56, lists air and missile defense, strike warfare, maritime airborne control, offensive counterair (OCA), defensive counterair (DCA), electronic attack support, and mobility operations (including aerial refueling). Collectively, these mission areas of Navy aviation broadly parallel the six functions of Marine aviation. However, these mission areas alone do not facilitate functional planning of integrated naval aviation operations in support of a maritime campaign. Additional maritime aviation functions are therefore necessary. The following functions, when combined with the functions of Marine aviation, collectively are the functions of maritime aviation, and they facilitate functional aviation planning, ATO development, and similar processes:

Antisubmarine Warfare (ASW). The CWC may utilize a variety of aviation platforms, including aircraft and capabilities resident in the littoral force, to support or conduct antisubmarine warfare. Persistent ISR is essential for the ASW mission, given the nature of the operating environment, size of the area to be covered, and need to find, fix, track, target, engage, and assess enemy submarines.

Surface Warfare (SUW). The CWC may utilize a variety of aviation platforms, including aircraft and capabilities resident in the littoral force, to facilitate or conduct surface warfare. For further discussion, see *Multi-Service Tactics, Techniques, and Procedures for Air Operations in Support of Maritime Service Warfare*, NTTP 3.20.8. While the Marine OAS techniques may be broadly similar to those of SUW, the maritime environment, capabilities of enemy ships and the unique weapons involved demand that SUW be considered a distinct discipline and function of maritime aviation.

Information Operations Warfare. The IWC under composite warfare may utilize the littoral force's aviation assets to support information operations, which may overlap with the EW function of Marine aviation and the littoral force's OIE.

Intelligence, Surveillance, and Reconnaissance. While air reconnaissance is a function of Marine aviation, maritime ISR functions are broader, including maritime surveillance supporting maritime domain awareness. Maritime ISR is therefore a distinct function of maritime aviation.

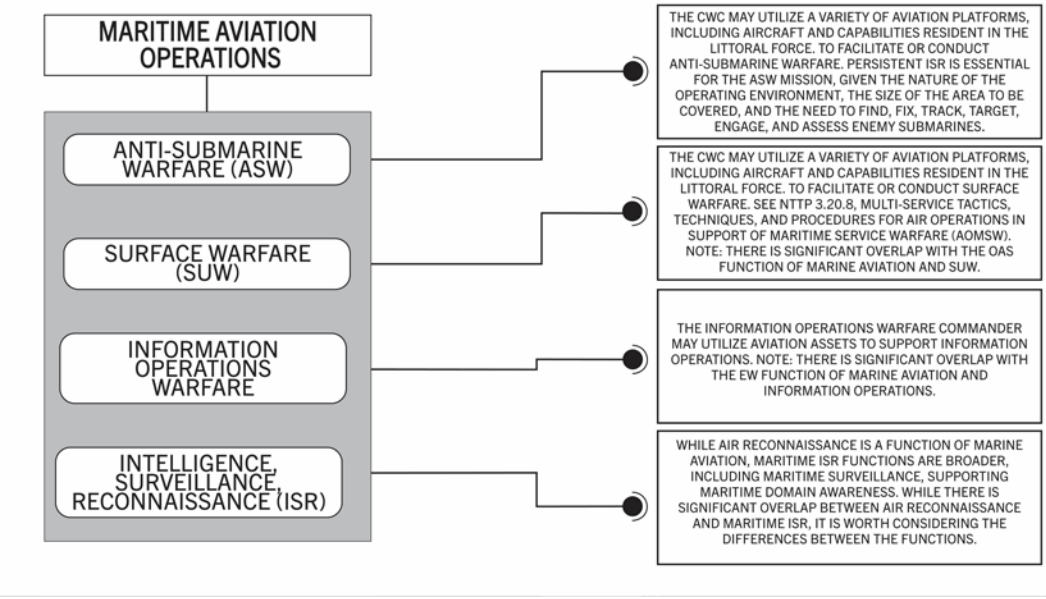


Figure 6-2. Additional aviation functions supporting maritime operations

Ultimately, Navy-Marine Corps aviation in support of EABO demands a combined and integrated approach due to the high demand for aviation assets, the relatively short supply of available assets, consequent need for prioritization of aviation assets, and need for flexibility in employment of aviation.

6.6 LITTORAL FORCE AVIATION COMBAT ELEMENT SUPPORTING RELATIONSHIPS

6.6.1 General Support

The support relationship between the ACE and the littoral force is almost always one of general support. This relationship supports the centralized-command and decentralized-control approach to naval operations desired in LOAs. Since demand for aviation support almost always exceeds supply of aviation capabilities, the littoral force commander keeps the ACE in general support of the force. This contributes to the most efficient, effective allocation of aviation capabilities, while ensuring effective response to rapidly changing circumstances. The air tasking cycle allocates aircraft to missions and tasks. By using the air tasking cycle, the ACE commander allocates finite aviation assets to achieve maximum effect with correct prioritization based on the needs of the littoral force and/or CWC.

6.6.2 Direct Support

This support relationship, when set by the littoral force commander, requires the ACE to respond directly to the supported force's requests for assistance. This type of relationship should be established only rarely by the littoral force commander due to the scarcity of aviation assets and the wide range of potential missions that the ACE may undertake in support of the littoral force. With the designation of a direct-support relationship, direct communications are required between supporting and supported units, including direct liaison, coordination, and typically local security and logistic support provided by the supported unit.

Individual sorties may be placed in direct support of a unit in the context of a particular mission tasking. Since these sorties do not represent a specific unit, an existing general-support relationship is not affected.

A littoral force ACE unit in direct support is responsive to the needs of the supported unit. It furnishes continuous support to that unit and its scheme of maneuver. The direct-support role creates a one-to-one relationship between supporting and supported units. The higher headquarters of the supporting and supported units becomes involved only "by exception." However, each unit must keep its higher headquarters informed of its operations and plans. Examples include an attack squadron in direct support of a subordinate unit of a ground combat element, a helicopter section in direct support of a maneuver battalion, or a low-altitude air defense (LAAD) battery in direct support of a littoral ground unit.

6.6.3 Close Support and Mutual Support

Normally, aviation units, manned and unmanned, do not use close or mutual support. Ground-based and maritime missile and air surveillance units may be placed in a close-support or a mutual-support role relative to other units within the littoral force, or in joint and multinational operations. Additionally, Marine Corps and Navy personnel conducting aviation ground support and aviation maintenance functions may effectively be in close support while in forward areas.

6.7 LITTORAL FORCE AVIATION COMBAT ELEMENT RELATIONSHIPS WITH THE JOINT FORCE

The JFMCC contributes to and relies on the joint force for the accomplishment of specific functions. Aviation operations, including operations of aviation elements within the littoral force, represent a portion of the LFC's contribution to the JFMCC and the JFC's campaign. Specific littoral force ACE functions in relation to the joint force include the following:

Air and Missile Defense. The JFMCC normally defends the open ocean and littoral regions with an air and missile defense commander, who also functions as a sector air defense commander (SADC) or regional air defense commander (RADC), responsive to the area air defense commander (AADC). The

AMDC may be a Navy officer, normally with the commanding officer of a cruiser filling this role. In this case, the AMDC will coordinate use of aviation assets, C2 agencies, and DCA sorties for the conduct of air and missile defense. Alternatively, the littoral force ACE commander may be designated AMDC. Such a warfare commander under composite warfare must have facilities and capabilities required for the conduct of air and missile defense. The AMDC must also be prepared to employ US Army Patriot brigades and US Air Force capabilities and sorties for the conduct of air and missile defense in the littorals.

Strike Warfare. Strike warfare includes joint fire support, interdiction, strategic attack, offensive air support, ballistic and cruise missiles, aircraft, littoral forces, and SOF to attack targets in the operating area. The JFC may task the JFACC or joint force special operations component commander (JFSOCC) to support the JFMCC or the LFC. In this case, the LFC may task the littoral force ACE to assist with air control of JFSOCC or JFACC assets to facilitate strike warfare.

Additionally, a littoral force ACE commander is capable of serving as a JFACC when the LFC is designated as a JTF commander. As such, the ACE commander should see himself or herself as a integrator of joint aviation for the JTF, with consequent linkages to the theater JFACC and the requirements to bear responsibilities of ACA and air defense commander (ADC), as well as to generate the JTF's air tactical picture and fulfill similar responsibilities outlined in JP 3-30, *Joint Air Operations.*

6.8 LITTORAL AIR COMMAND AND CONTROL AGENCIES

Navy and Marine Corps air command and control agencies may be employed by the littoral force ACE commander for the planning and execution of aviation operations and relevant composite warfare operations in support of LFC objectives. Commanders must consider the roles and capabilities of the following existing agencies:

Marine Tactical Air Command Center (TACC). The Marine TACC is the senior Marine air C2 agency, providing command authority, control, and direction of aviation forces. The Marine TACC is Link 16 capable. With augmentation from broader US Navy aviation and personnel, the Marine TACC may serve as a scalable facility from which to plan and direct aviation operations. The TACC is not normally a mobile agency, however, and unscaled it creates a significant electromagnetic signature and logistic footprint, which are challenges that must be addressed in EABO. *Tactical Air Command Center Handbook*, MCWP 3-25F.2, provides detailed information on employing the TACC.

The role of the TACC, as the senior ACE command agency, is to provide facilities, personnel, equipment, and processes so that the ACE commander can execute his or her functions ashore. The TACC is a Marine Corps capability, fashioned out of elements of the Marine air control group, Marine wing headquarters squadron, and augments. However, in the context of EABO, the TACC should not be seen as purely a Marine Corps agency that provides direction to Marine aviation only. When operating as the senior ACE C2 agency, it is a blended Navy-Marine Corps agency, providing unified command of Marine Corps and Navy aviation forces.

The Marine TACC has significant limitations. It is not currently a tactically mobile agency, and it has large administrative, electromagnetic, and cyber signatures. The Marine TACC, as currently configured and employed, is likely not survivable inside the WEZ of peer adversaries. Consideration should be given to physically distributing TACC functionality inside the WEZ and also toward locating some TACC functions outside the WEZ entirely. Experimentation with alternative TACC employments is required and should be included with fleet experiments.

Navy Tactical Air Control Center (also TACC, or TACC Afloat). The Navy TACC is located aboard amphibious ships and manned by Sailors from a tactical air-control squadron (TACRON). The TACC

provides air direction and air control in the vicinity of amphibious ships, including control of itinerant aircraft, air-support control, and air-defense control. Frequently, Marine Corps aviators and air C2 Marines serve as liaisons in the TACC. The TACC is a positive-control agency, is Link 16 capable, and can be an effective location from which to control air operations.

Helicopter Direction Center (HDC). Located aboard amphibious ships, the HDC controls helicopters operating in vicinity of amphibious ships.

Marine Tactical Air Direction Center (TADC). The TADC is a task-organized agency to provide all or most of the Marine TACC's tasks, but it is employed in a subordinate role to a senior air C2 agency. In this capacity, the TADC may serve in a subordinate role to a Marine or Navy TACC. Due to the task-organized nature and generally smaller signature, a TADC may be a more optimal air command and control agency ashore to the Marine TACC. TADCs may be given Link 16 capabilities. Detailed information on the TADC is found in *Tactical Air Command Center Handbook*, MCWP 3-25F.2.

Like the Marine TACC, the TADC should closely manage its signatures. TADCs, operating in conjunction with a TACC (afloat or ashore), can provide options for managing signatures and distributing command capacity across the adversary's WEZ, thereby complicating targeting.

Direct Air Support Center (DASC). The DASC is a Marine air-control agency principally responsible for the direction of air operations directly supporting ground forces. The DASC normally operates through use of DASC extensions, including the tactical air-control party; tactical air coordinator (airborne), or TAC (A); forward air controller (airborne), or FAC (A); assault support coordinator (airborne), or ASC (A); helicopter support team (HST); air support element (ASE); and air support liaison team (ASLT). Due to its lack of organic sensors, the DASC is a procedural control agency. However, if operating with Link 16 capabilities, or a joint range extension (JRE), the DASC is capable of viewing an air picture provided by other radar-capable agencies and thereby controlling aviation more like a positive control agency. In amphibious operations, it is frequently the first air-control agency ashore. *Direct Air Support Center*, MCWP 3-25.5, provides detailed information on the DASC and its extensions.

Tactical Air Operations Center (TAOC) and the Early Warning/Control (EW/C) Center. The TAOC and EW/C conduct airspace control and airspace management. These agencies conduct real-time surveillance of assigned airspace; detect, classify, identify, and control the interception of hostile aircraft and missiles; and direct, control, and provide navigational assistance to friendly aircraft. The TAOC and EW/C, when augmented with equipment and personnel, can provide a facility from which a SADC, RADC, or AMDC may operate. The TAOC and EW/C also contribute to the air tactical picture and provide both tracks and radar plots to other missile units and air-control agencies. The TAOC and EW/C use radars (and, in the future, likely passive sensors) to surveil assigned airspace and to generate an air picture. Additionally, the TAOC's and EW/C's radars may be used to contribute radar plots directly to platforms capable of cooperative engagement in the fleet, including Aegis-equipped cruisers and destroyers and E-2D Advanced Hawkeye aircraft. This can extend radar coverage farther ashore than is normally possible using only ship-based radar systems. The TAOC and EW/C are Link 16 capable, and they have significant cooperative engagement capabilities. The TAOC and EW/C present a substantial electromagnetic signature, and imprudent emission control (EMCON) will compromise the force. *Marine Sector Antiair Warfare Commander Handbook*, MCWP 3-25.6, and *Tactical Air Operations Center Handbook*, MCWP 3.25.7, contain additional information on Marine SADC, TAOC, and EW/C employment.

The TAOC and EW/C present large administrative and cyber signatures, and very large electromagnetic signatures (due to the use of radars). In the future, the TAOC and EW/C must make use of passive sensors to the maximum extent possible and must be organized as a tactically mobile agencies to complicate targeting. Active radars must be closely managed to address signature concerns. Maximum use of passive

sensors is imperative. New tactics must be developed to effectively integrate sea-based radars, ashore radars, and passive sensors to produce a single air picture. The facilities from which TAOC and EW/C crews operate must become disaggregated from the sensors, more mobile, and be capable of operating effectively with less manpower than often currently practiced.

Marine Air Traffic Control Detachment (MATCD). MATCD is the primary Marine air traffic control (ATC) agency, and it is capable of providing ATC capabilities at airfields, air sites, and air points. MATCD contributes to the overall air-surveillance effort, and, in coordination with LAAD, may operate a base defense zone in the vicinity of an airfield. Additionally, MATCD can coordinate with host-nation ATC agencies to ensure the efficient and safe integration of Navy and Marine Corps aviation with host-nation military and civil aviation in and around air bases. *Marine Air Traffic Control Detachment Handbook*, MCWP 3-25.8, provides information relating to MATCD capabilities and limitations.

In the context of EABO, MATCDs should anticipate increased requirements to control austere landing zones, FARPs, and temporary or permanent host-nation airfields, as well as to conduct ATC liaison tasks.

Low-Altitude Air Defense. LAAD battalion provides close-in, low-altitude, surface-to-air weapons support. LAAD will normally coordinate with the SADC and/or AMDC to receive cueing and increase situational awareness. LAAD units are capable of receiving an air picture, using its JRE, from a Link 16-capable agency. *Low Altitude Air Defense Handbook*, MCWP 3.25.10, provides additional information.

Littoral Antiair Battalion (LAAB). LAAB, an aviation unit within the Marine littoral regiment, contains units capable of air and missile defense, antiair warfare, air support control, and aviation ground support in support of the LFC. These units must operate under a senior air C2 agency to operate with appropriate authorities and to be able to control and direct air operations.

"Hybrid" Air C2 Agencies. Experimentation and exercises with EABO provide the opportunity to experiment with different aviation C2 arrangements supporting the ACE and the LFC. Equipped with tactical-picture equipment, radios, sensors, and other C2 equipment (like the Small Form Factor Common Aviation Command and Control System, or SFF CAC2S), small teams of air-support, air-defense, ATC, and communications Marines and Sailors can test new ways to conduct aviation operations in support of EABO.

Other Navy Platforms. US Navy aircraft carriers, cruisers, destroyers, and E-2D aircraft can serve as platforms from which air control and air direction can be performed.

Proposed New Agency: Sea Combat Air Operations Center (SCAOC). The SCAOC is envisioned as an ashore air C2 agency that would operate under the direction of the TACC or TADC to facilitate air operations in the maritime space and littoral areas. It would support the CWC's SUWC, ASWC, or the SCC. It is envisioned to be Link 16 capable. As the DASC is primarily focused on OAS and assault support functions and the TAOC primarily concerns itself with AAW, the SCAOC would focus primarily on the maritime aviation functions of SUW and ASW. Due to its connectivity with sea-based and ashore sensors, it is capable of serving as an alternate location from which SADC, AMDC, TAOC, and EW/C functions are executed. It should have sufficient connectivity with antiship batteries ashore so that such fires and aviation can be effectively integrated. Additionally, it must have connectivity to the supported warfare commander(s) under composite warfare. SCAOC tasks would include:

- Control of maritime airspace, aircraft, and missiles, particularly over waters in the littoral operating area;
- Execution of the ATO;
- Processing immediate requests for air support for sea combat functions;
- Supporting the SUWC, ASWC, or the SCC with aviation sorties from the littoral force ACE and joint or coalition air force.

- Briefing aircraft enroute to mission areas in and around maritime airspace.

6.9 AVIATION PLANNING

Whether operating under MAGTF C2 or composite warfare, the fundamental methods of Marine Corps aviation planning remain valid. For detailed discussions of how to perform aviation planning, refer to *Aviation Operations*, MCWP 3-20; *MAGTF Aviation Planning*, MCTP 5-10A; and *Composite Warfare*, NWP 3-56. Refer to *Marine Corps Planning Process*, MCWP 5-10, for a more general treatment of Marine Corps planning processes.

The overall of objective of planning for aviation operations is to reach the optimum balance of efficiency, effectiveness, and flexibility in allocating scarce aviation assets when demand for those assets exceeds supply. In the context of EABO, these planning efforts should strive for aviation operations that demonstrate resilience. The result of such efforts are an air plan, ATO, and supporting aviation documents (e.g., .airspace control order, air defense plans, and special instructions).

Broadly speaking, when a littoral force ACE is operating in general support of a littoral force commander:

- The LFC, or CWC when designated, fulfills the role of the MAGTF commander in aviation planning;
- The littoral force ACE commander similarly fulfills the role of the ACE commander in traditional MAGTF operations;
- The responsibilities of the AREC and the HEC, should the littoral force ACE commander assume this role, are generally performed by his/her future plans and future operations sections, in coordination with the ATO development cell.

6.9.1 Littoral Force Aviation Combat Element in Support of Joint Operations

Per *Doctrine for the Armed Forces of the United States*, JP 1, excess tactical air sorties shall be made available to the JFC, coordinated by the JFACC, to accomplish JFC-desired objectives and effects. Marine Corps forces also have a responsibility to provide three different types of sorties in addition to "excess sorties":

- Long-range interdiction
- Long-range reconnaissance
- Air defense (i.e., DCA)

Given that these sorties were traditionally provided in the context of a land campaign, with the Marine Corps fighting under a service-component headquarters (as in Operation DESERT STORM), or under a joint force land component commander (JFLCC) (as in Operation IRAQI FREEDOM), this arrangement of providing long-range interdiction, reconnaissance, and air-defense sorties may merit renegotiation. Such renegotiation may be desired because during EABO the littoral force ACE is integral to the operations of the JFMCC, and consequently is subsumed by the broader naval aviation forces.

6.9.2 Littoral Force Aviation Combat Element Liaison with Joint/Combined Entities

The littoral force ACE should provide a liaison element to the joint air operations center (JAOC)/combined air operations center (CAOC). This liaison element should provide representation to all departments of the JAOC/CAOC, communicate and coordinate between the ACE and joint/combined entities, and provide technical and subject matter expertise concerning how the JFACC, AADC, and theater ACA can best work with littoral force aviation.

In the past, the Navy and Marine Corps each provided separate liaison elements (naval and amphibious liaison element [NALE] and Marine liaison element [MARLE] respectively.) Because the littoral force

ACE is an integrated naval aviation formation, operating under the littoral force in support of the JFMCC, the MARLE should be subsumed by the NALE, and the NALE should become a Navy-Marine Corps integrated liaison element. This integrated liaison element should be led by a general officer or flag officer from the Marine Corps or Navy to ensure appropriate weight is carried in joint targeting boards, JFACC apportionment decisions, and coordination and cooperation with the AADC.

6.10 AVIATION LOGISTICS

Aviation logistics in support of EABO operates with fundamentally the same considerations as Marine Corps aviation logistics. Refer to chapters 6 and 7 of *Aviation Operations*, MCWP 3-20, for detailed discussion of these considerations. It is nevertheless worth highlighting some particular areas of concern for EABO:

- Forward arming and refueling points are especially salient in EABO, because they increase the operational reach of aviation forces, add resilience to aviation logistics, increase sortie-generation rates in operating areas, and increase flexibility in the use of aviation. The Marine wing support squadron (MWSS) and LAAB both contain assets for employing FARPs that support Marine Corps aviation. Refer to *Aviation Ground Support*, MCTP 3-20B, for detailed information concerning Marine Corps aviation ground support in general and FARPs in particular.
- Marine Corps FARPs do not currently support all US Navy aircraft. Aviation ground support planners must conduct detailed planning in coordination with counterparts from the Navy Expeditionary Combat Command (NECC), supported flying squadrons, and subject matter experts in Navy-specific aircraft.
- FARPs, over the last several decades, have emphasized refueling aircraft over the reloading of ordnance. Aviation operations supporting COIN were almost always more likely to run out of time on station before expending all ordnance. In an intensive naval campaign, particularly as competition escalates, aircraft my require ordnance before they run out of fuel. Consequently, new partnerships between aviation ground support (AGS) units and Marine aviation logistics squadrons will be necessary to provide ordnance in forward areas. Additionally, it will likely be necessary to pre-position ordnance and fuel in forward areas and to resupply FARPs from ports and airfields. Flying squadrons should expect to augment FARPs with additional ordnance Marines and Sailors.
- Certain functions of AGS must receive greater emphasis, including explosive ordnance disposal, base recovery after attack, and airfield damage and repair.
- Functions that must receive less emphasis in the future are food service support, aspects of general engineering support (particularly utility support and heavy equipment support), and intrabase motor transport support. It is expected that many of these types of support will be procured through partnerships with host nations and contingency contracting.
- Alternative methods of obtaining fuel will be necessary. AGS planners should expect to use fuel from many sources, including host nations, portable fuel bladders, and pre-positioned stocks. There must be less emphasis on using motor transport assets to move fuel.
- Marine Corps aviation maintenance and supply functions must seek even greater integration with the naval aviation logistics enterprise to fully leverage the complementary aspects of ashore and afloat aviation maintenance and supply capabilities. New methods of delivering maintenance equipment, spare parts, and technicians must be explored so that aviation maintenance capabilities can be distributed across the WEZ to complicate adversary targeting. Temporary aviation maintenance locations will need to be established for short time periods to conduct specific maintenance functions. Other maintenance functions should be located outside the adversary WEZ.

ASW IN NORTHLANDIA

In early 203X, the Republic of Redland faced a presidential election, and their economy was not doing well. Redland's workforce had become significantly older due to a low birth rate in the preceding decades. The number of older people exiting the workforce outpaced the number of young people starting work for the first time, shrinking the overall size of the workforce. Worried about maintaining control of the population, Redland's aging president returned to the playbook that had worked for him in the past. He sought ways to create enemies abroad in an effort to sustain domestic unity.

Planners at the combatant command responsible for US military operations in Redland's "neighborhood" recognized the signs, Redland was becoming more aggressive. They estimated that Redland would try to provoke arguments with their neighbors and use those arguments as part of a messaging campaign directed at their own people. The planners pointed to events in 2014 as an example. Redland aircraft had flown dangerously close to airliners and military training flights. Redland submarines had evaded monitoring and appeared in several nations' coastal waters, making threats against shipping and sowing confusion among decision makers in the region.

The submarine threat was especially troublesome. Once they slipped away from surveillance, they were very difficult to reacquire. This difficulty gave Redland several advantages. Neighboring countries that complained about these incursions struggled to provide clear evidence of them, which helped the Redland government deny the accusations and claim they were victims of a smear campaign. Redland would then link these denials with other perceived slights, strengthening the "us against them" narrative aimed at their own people.

The fleet commander viewed the antisubmarine effort within the context of a larger naval campaign. In her mind, it did no good to surge for a short time and acquire Redland's subs, only to lose them again when the surge came to an end. History repeatedly showed Redland would exploit opportunities created by the end of any surge. However, geography created a potential vulnerability for Redland's submarines. The submarines had to transit through one of several maritime chokepoints to get from their ports to their operating areas. They had done this successfully in 2014, and it was believed they would try again.

The fleet convened a secure VTC so the Admiral could issue her planning guidance. She also looked forward to receiving input from her subordinate commanders. After introductions and an overview of the situation from the N2 and N3, she shared her initial guidance.

My overall goal for our ASW campaign is to find a way to take this tool away from Redland for years into the future. We don't want to let them use their subs to intimidate, provoke, or confuse our allies and partners in the region, and we'll do this by acquiring them and then keeping track of their location after they leave port. This effectively means we must find them before they move through one of the gaps up north into the open ocean.

We need to think of this as a long-term effort from the start. I've spoken with the CCDR about this, and he agrees; a big part of the overall campaign will be figuring out how to include our allies and partners. This AOR will see more partnered ASW exercises in the coming years, and the CCDR intends to identify our shortfalls to Congress in testimony and his next Program Objective Memorandum submission. He's also working with the State Department to create a multilateral team that can do this in the region with sustainable support from the US. We'll build this capability so we can do it at a steady state in the contact layer. But this will take several years to pull together, and until it's ready we need to plug this gap.

As the N3 said, we don't have enough assets in the Navy to maintain that kind of coverage over such a timeline and still meet our other global commitments. If it were <u>just</u> the ASW mission, we could probably do it, but we also need to protect those assets from the harassment we know Redland will throw at them. The N2 did a good job painting that picture.

I'm emphasizing all of this to frame the rest of the discussion. I spoke at length with LtGen Trebek from V MEF last night. The use of EABO offers very useful possibilities. General, would you give us an overview of what we discussed.

"Yes, ma'am," General Trebek said. *"We've been thinking about this problem for several years now."*

Trebek continued…

Our many discussions with the fleet taught us there just isn't quite enough Navy to cover these gaps, whether it's MPRA aircraft, surface ships, etc. Especially if some of the MPRA flights are harassed or contested, which is what we expect. Where would all the CAPs, the DCA, come from? There will be periodic carrier aviation coverage, but there just isn't enough of it to cover the campaign's projected two- or three-year timeline.

We've been working on a concept that can help cover these gaps. We think of it as an aviation-heavy version of EABO. We would center our efforts in Northlandia and extend our reach out to other remote sites as necessary to provide sufficient coverage. Here's some specifics to illustrate what I mean.

First, we can take some of the burden off the MPRA aircraft by using MV-22s and KC-130Js to insert sonobuoys. The MAW has cross-trained on these tasks for the past several years, so we have a baseline of proficiency in our squadrons, which we can build on as we get ready to deploy. We can also establish an aerial layer with our long-loitering UAVs to establish the necessary comm path from the buoys into the maritime network. We can expand or contract this effort based on MPRA availability.

At the same time, we can establish DCA from expeditionary airfields in Northlandia and elsewhere. Provided we maintain access to these airfields, we could sustain this for quite a while. We actually don't need a lot of F-35Bs to do this now that our loyal wingman program is fully up and running. To maintain a viable CAP, we just need a few F-35s up at a time; they will quarterback the mission, and their many loyal wingmen will provide the numbers we need. Whether we're using MV-22s, KC-130s, or P-8s to drop sonobuoys doesn't matter; they'll be covered by this combination of assets.

We know Redland likes to combine their surface vessels with their subs' movements from time to time, especially when they're trying to intimidate our allies' ASW efforts. The MEF can't provide surface assets to help with this of course, but we can provide plenty of overwatch. And we can make sure that Redland knows it's there, so that we can make them think twice about getting too aggressive. In addition to the SM-6 batteries we have ashore, our aviation assets can hold their surface vessels at risk, too. They won't know which or how many of the loyal wingmen have LRASMs in their loadout, for example. And we can have those same shore positions launch loitering munitions. Even better are the swarms they can put up—those always put fear into anyone aboard a ship or in a vehicle. Just seeing those things on the horizon puts a scare into people.

Finally, we can provide the C2 needed to integrate all of this. Since EABO's tentative manual was published, we've worked hard on reducing the footprint and signature of our TACCs and TAOCs. With

the right augmentation and reach-back, we can scale this up to a two-star headquarters to run this whole thing from within the region, even surface vessels, which we've done in exercises in the past few years.

The Admiral took over from here.

"Thanks General Trebek," she said. *"I'm really excited about the possibilities here."* She looked over at the N3 and gave her closing planning guidance…

For our campaign, assume we need to fill a coverage gap for three years. The coalition ASW effort is supposed to be ready in two, but we need to plan for worst case. Over those three years, we know when the carrier strike groups will be on station and same for the MPRA squadrons. Our base plan should use V MEF to fill the holes in that schedule. My intent is to always have a two-star task force leading this effort. It will be afloat when led by the strike group commander and ashore when led by the MEF.

Our campaign plan should focus tightly on the transitions from one headquarters to another. We need to make absolutely certain we're all using the same language, not Navy-speak and then a Marine version. Include the coalition elements in this from the beginning; we need to all be on the same page. Any questions?

INTENTIONALLY BLANK

CHAPTER 7

Sustainment and Littoral Maneuver

7.1 GENERAL

Logistics sustains readiness and operations by planning and executing the movement and support of forces across the competition continuum. "Logistics provides the resources of combat power, positions those resources on the battlefield, and sustains them throughout the execution of operations."[56] Littoral forces rely on resilient and agile logistics that adapt to changing environments and conditions to conduct EABO. Persistence, a key characteristic of EABO, is enabled by a framework of integrated naval logistics supporting the movement and sustainment of decentralized forces throughout the littorals.

Sustainment is the provision of logistics and personnel services to maintain operations until mission accomplishment and redeployment of forces. Effective sustainment provides the means to enable freedom of action and endurance while extending operational reach. Sustainment determines the depth to which a force can conduct decisive operations, allowing a commander to seize, retain, and exploit the initiative.

7.2 PURPOSE AND SCOPE

This chapter provides an overview of logistical topics and issues relating to the conduct of EABO. The primary emphasis is on operational logistics and planning for support of the littoral force through a single and complete naval structure. It includes planning considerations and specific information in the six functional areas of logistics. Considerations for deployment and subsequent aspects of littoral maneuver are discussed in terms of parallel actions found within amphibious operations.

7.3 PRINCIPLES OF LOGISTICS

The seven principles of logistics as described in *Operational-Level Logistics*, MCTP 3-40C, remain relevant in describing the overarching framework for effective logistical planning in support of EABO.[57] Although these principles, at times, can seem at odds with one another, adhering to them contributes to persistence of the supported force and encourages efficiencies within the supporting force structure.

Responsiveness. Providing the littoral force the right support when and where required is fundamental to effective sustainment. Responsiveness is particularly important given unique aspects of EABO and the anticipated OE, which demands lightening both supported and supporting forces, increasing mobility to enhance force protection while limiting *unnecessary* movement, reducing forward-located stockpiles, and reducing signature. By focusing on supported force requirements and supporting force capabilities, planners can develop a responsive logistical plan without necessitating the buildup of large, fixed combat service support areas.

Simplicity. Distributed operations in a contested littoral environment are inherently complicated, and supporting them promises to be no less complicated. Planners must seek opportunities to simplify logistical plans in support of EABO. The littoral force's ability to streamline supporting and supported relationships, execute resupply in conjunction with littoral maneuver, and enable operational contracting

[56] Headquarters, US Marine Corps, *Logistics*, MCDP 4 (Washington, DC: US Marine Corps, 2018), 1-3.
[57] Headquarters, US Marine Corps, *Operational-Level Logistics*, MCTP 3-40C (Washington, DC: US Marine Corps, 2018), C-1.

at the point of need can reduce complexity in a distribution network. Simple logistical planning allows for in-, on-, and cross-network adaptability, thus promoting persistence of the distributed force.

Flexibility. Forces conducting EABO are expected to operate in a more mobile, distributed manner. This requires establishment of a flexible, adaptive distribution network to support a littoral force. Moreover, supporting-supported relationships may need to be flexible, able to rapidly adjust to changes in the situation. The distribution network must accommodate, manage, and provide visibility on supplies moving through and transitioning from one domain to the next. It must also include the capability to redirect supplies in motion, which is crucial to support highly mobile littoral forces and generate unpredictability. Creating unpredictability—as perceived by an adversary on the outside—within the concept of support enhances persistence of the stand-in force. Similar unpredictability within a network certainly increases complexity (and is in tension with the principle of *simplicity*, as must be acknowledged), but it also reduces signature and increases survivability of both supported and supporting forces.

Economy. Eliminating *unnecessary* duplication and redundancy while still providing the required support is crucial to enabling the littoral force to persist. Economy is achieved by providing required support using the fewest resources within acceptable levels of risk. Planners must weigh the risk of a force culminating due to lack of support (too much economy) against the heightened risk to forward-located stockpiles given the anticipated OE. Balancing the two risks, planners must devise new approaches to applying the principle of economy during EABO. For example, the use of afloat caches for bulk fuels creates economy in the fuel network by increasing inventory control in a low-signature manner, thereby reducing fuel storage in more vulnerable locations ashore.

Attainability. To ensure sufficient supplies are available to the littoral force, accurate and timely reporting of stock levels is required. The ability of the littoral force to redistribute supplies across capability sets reduces the need to create large supply points.

Sustainability. Sustainability of the littoral force is not only a function of the ability to distribute materiel and supplies forward but also dependent on commanders ensuring the most effective uses of the assets received. The optimal employment of assets by the littoral force can increase the sustainability of the force, while also contributing to economy by reducing unnecessary use of supplies and equipment.

Survivability. The ability to distribute logistical support through multiple domains contributes to a survivable network that allows the littoral force to persist as a stand-in force. Given the OE where EABO will take place, achieving survivability is particularly dependent on maintaining dispersion, designing the distribution network in light of unique threats, and allocating forces to protect critical logistic capabilities. For example, using unmanned aerial systems to resupply widely distributed forces and executing resupply, rearm, refuel, and refit while maneuvering in the littorals contributes to survivability of the littoral force.

7.4 LOGISTICAL PLANNING FOR EXPEDITIONARY ADVANCED BASE OPERATIONS

Per joint doctrine and as with other types of operations, logistical planning for EABO is accomplished in the broad areas for deployment and distribution, supply, maintenance, engineering, services, health services, and operational contract support. This planning aims to ensure the ability to move and maintain forces within LOAs and among EABs. It normally occurs at the task-force level and higher. However, the task-organized littoral force at the task-group level and below places primary emphasis on the six functional areas discussed in subsection 7.4.4, “Planning Considerations.” Logistical planning must be integrated with the broader operational plan, especially the plan for littoral maneuver to ensure logistic activities and movements do not compromise operational maneuver.

7.4.1 Planning Responsibilities

Depending on the command arrangements established by higher authority, the expeditionary force commander and littoral force commander may have individual or shared responsibility for the following:

- Determination of the logistic requirements of the naval force, including shipping requirements and special equipment
- Consolidation of logistic requirements common to all littoral forces, which must be provided by the naval logistic network
- Preparation of the overall littoral maneuver plan composed of both sea and air movements
- Organization of assigned shipping into littoral maneuver squadrons as needed to ensure continuing support to the EAB concept of operations
- Coordination of the means to establish and maintain an adequate logistical support system for LOAs within joint or maritime operations areas
- Development of plans for the deployment of littoral force aviation elements and other units into the LOA by air

7.4.2 Planning Sequence

Following receipt of the initiating directive, logistical planning will proceed concurrently at all echelons as the units of action planning for EABO are task organized to operate within assigned LOAs. The LFC is responsible to consolidate the total requirements of the force and allocate the available means of support. The EAB concept of operations is the basis for detailed planning, which generally proceeds in the following sequence:

1. Determination of overall requirements to support the scheme of maneuver
2. Identification of requirements to be satisfied from external sources such as naval and joint-logistics task forces
3. Allocation of capabilities to support littoral operations (as further described in section 8.2)
4. Preparation of detailed plans and orders

7.4.3 Planning Factors

The nature and extent of logistical planning is primarily shaped by the characteristics of the OE, objectives for which the operation is undertaken, mission of the EAB(s), and expected duration of operations. The littoral force commander must consider many factors, such as:

- Characteristics of the joint and maritime operations areas and specific LOAs, including specific factors such as climate, weather, terrain; local resources and available host-nation support (HNS); local transportation systems and networks; and adversary capabilities and expected interference with logistic functions;
- EAB force composition and array within an LOA, characteristics of supported operations, and operational tasks requiring special supplies and equipment;
- Distance between LOAs and distances from supporting areas;
- Capability and capacity of naval logistic elements providing logistics to the LOA(s);
- Requirements for infrastructure development, reconstruction, or improvement;
- Additional logistical responsibilities on termination of EABO.

7.4.4 Planning Considerations

The six functions of logistics provide a framework for developing logistic plans and organizing planning considerations for EABO. Planning for all six functions of logistics ensures comprehensive planning supports readiness and sustainment of the littoral force. At the same time, bearing in mind the principles of logistics contributes to development of an effective and complete plan.

7.4.4.1 Supply

With respect to supply, the principles of simplicity and economy imply a force operating in an expeditionary environment must reduce its number of supply hubs/cache sites and volume of stocks located in forward areas. It must seek efficiency through some consolidation of the supply network without compromising effectiveness—a significant challenge. To achieve simplicity and economy, the littoral force must structure a distribution network of supply hubs into smaller, more survivable sites, while being cognizant of the concurrent need for signature management.

At the lowest level of employment, planners must consider operational contract support (OCS), which enables expeditionary units to develop a foraging skillset enabled by micropurchases. Field ordering officers and unit paying agents provide a responsive capability to meet immediate mission needs quickly and directly through micropurchases of goods and services. Incorporation of these alternatives to the traditional military supply system is a force multiplier in support of stand-in forces. This requires a greater distribution of expeditionary contracting capability at the tactical level.

Commodities like water and fuel transported to the forward edge of operations increase costs and entail risk to the distribution network, as well as the receiver. Purification of available water and local procurement of fuel (made suitable for military equipment with fuel additives) can reduce the burden on the distribution network and satisfy these requirements at or close to the point of need.

Littoral force supply points must be resilient and survivable—and in many cases mobile—to persist forward within the WEZ. For potential cache sites, using a common system of containers may permit their location within existing commercial container areas, thus reducing the need for security forces and other "signature creators." Planners must make inventory decisions after considering factors such as item criticality, urgency of need, availability, distance, distribution mode, timeline, and costs. They must also first screen in-theater sources of supply planning to rely on more distant sources of supply.

Under the supply function, the following key tasks for the littoral force are particularly important in conducting EABO:

- Supply-chain distribution and management
- Management and execution of OCS and HNS agreements
- Minimization of storage location footprints
- Awareness of supply availability across and coordination of supply requirements with the combat logistics force (CLF)

7.4.4.2 Maintenance

The littoral force's ability to persist requires positioning of required maintenance capabilities as close to the point of need as feasible. Although stand-in forces may be able to evacuate equipment via multimodal means to higher maintenance activities for repair, the time and distance required for evacuation reduces the responsiveness of the maintenance system and risks reducing littoral force capability. If equipment cannot be repaired forward in an expeditious manner, then it should be evacuated, cannibalized, or abandoned. Given the anticipated OE, these circumstances are more acute during EABO than many other types of operations

Successful maintenance planning requires a focus on responsiveness of the supply and maintenance system. In EABO, maintenance forces must be capable of distributed operations. Distributing maintenance forces can reduce response timeframes, although this is challenging with low-density, high-demand skillsets. Moreover, distributing maintenance forces must be complemented by efficiency and responsiveness in the supply chain to ensure maintainers have timely access to need repair parts, enabling them to restore equipment to a mission capable status. Additive manufacturing is one method of

improving supply responsiveness and efficiency during EABO. Effective transportation planning for use of all domains also leads to efficiencies (e.g., using small, unmanned systems to deliver small repair parts, thus freeing the ground transportation and manned aviation for other tasks.

Equipment required to execute EABO grows more technologically advanced, potentially creating increased demand for civilian field service representatives (FSRs). The ability of FSRs to perform frequent or extensive maintenance as part of the stand-in force may be unrealistic. Planners must consider the requirement for uniformed personnel to acquire the knowledge, skill, abilities, and specialized tools that would be required to replicate FSR-capabilities, or they must consider increased sustainment and force protection requirements related to an increased role of FSRs supporting stand-in forces.

Finally, identifying maintenance sites that mask the nature of the operations and allow for maintenance support, including potentially FSR support, as far forward as practical to maintain critical items is a key planning consideration.

Under the maintenance function, the following key tasks for the littoral force are particularly important in conducting EABO:

- Reporting on materiel readiness status
- Employment of low-density, high-demand MOSs
- Prepositioning of repair parts
- Employment of additive and subtractive manufacturing capability

7.4.4.3 Transportation

Littoral force operations requires successful transportation planning: what, where, when and how personnel and materiel must move to sustain the force. The ability of the littoral force to execute effective transportation operations in a distributed environment requires an integrated approach to transportation via sea, land, and air, as well as utilization of both manned and unmanned systems.

An accurate picture of transportation requirements and resources, across all domains within the LOA, ensures employment of the minimum transportation assets to distribute needed resources to the end user. The littoral force's ability to utilize all modes of transportation and the entire geography within the LOA for both embarkation and debarkation reduces the adversary's ability to conduct pattern assessments of the littoral force's distribution network. Additionally, its ability to reduce the footprint and signature of the forces providing transportation can deliver outsized payoffs for signature management across the force.

The littoral force must coordinate transportation assets across all domains to ensure effective and timely distribution of required resources. Constant coordination among the littoral force, FMF logistics commands, and appropriate naval component commands contributes to increased responsiveness across available transportation domains. Coordination and integration across the tactical and operational levels of logistics ensures the realization of potential economies of scale, thus increasing the efficiency of distribution networks across one or more LOAs.

Several key tasks for the littoral force under the transportation function are particularly important in conducting EABO:

- Identification of critical points, whether resource- or infrastructure-based
- Movement control of naval transportation assets within the LOA
- Development and publication of daily resupply schedule
- Selection and establishment of temporary embarkation and debarkation sites
- Employment of manned and unmanned assault-support aviation assets

7.4.4.4 General Engineering

General engineering tasks include but are not limited to survivability improvements, airfield damage repair, horizontal and vertical construction, explosive ordnance disposal, route reconnaissance and improvement, and bulk-fuel storage and distribution. Integration of naval engineering teams and capabilities in support of the littoral force can generate more robust and effective support, allowing for more rapid development of EABs.

Relying on organic capabilities of the littoral force to execute general engineering tasks typically requires significant transportation due to the size and weight of engineering and construction equipment. During transitions between operational phases, transporting heavy equipment or material handling equipment creates a significant signature. Local contracting may mitigate this concern, but OPSEC may be compromised in the process; this must be managed. During competition, the littoral force may opt to support allies and partners with local infrastructure improvements, which can mask construction of dual-use infrastructure that will enable conduct of future distributed operations.

Although bulk-fuel storage and distribution are key engineering tasks, establishing bulk-fuel points creates valuable, stationary targets. Fuel stocks must be kept as mobile as possible or cached in a way that limits targetability. Establishing and employing caches both afloat and ashore adds resilience to the distribution network, contributing to maximum availability and flow of the required resources. Caching and distributing fuel in commercial containers may permit creation of ashore fuel farms without creating a significant signature. Similarly, the ability to procure locally available fuel and treat it with additives may also reduce littoral force signature and the need for transportation assets to mobile load and move fuel.

Modification of the natural landscape may be critical to littoral force operations, but doing so must mesh with a comprehensive signature management plan. The littoral force may elect to accomplish this task partially or wholly through OCS or HNS, thereby reducing the requirement for heavy equipment ashore. When doing so, however, the littoral force must again devise ways maintain OPSEC.

Under the general engineering function, the following key tasks for the littoral force are particularly important in conducting EABO:

- Route and site reconnaissance to inform future dual-use and military construction projects
- Concealed bulk-fuel distribution and storage
- Runway repair and preparation of potential forward arming and refueling points
- Infrastructure improvement

7.4.4.5 Health Services

Planning for health services during EABO encompasses a number of health service support (HSS) functions that occur at all levels of command: casualty care, casualty management, patient movement, medical treatment (organic and area support), medical evacuation, hospitalization, medical logistics, blood management, and health information management. Coordinating HSS with host nations and capitalizing on host-nation capabilities may reduce the burden of providing this support organically and the littoral force footprint ashore. Experimentation and exercising with both embarked and ashore HSS will help refine planning and TTPs for the provision of health services during distributed operations.

Several key tasks for the littoral force under the health services function are particularly important in conducting EABO:

- Coordination and reconnaissance of host-nation health service facilities
- Management and distribution of shock-trauma capability
- Coordination of extended patient holding periods and sites
- Coordination across the naval force for evacuation of patients

7.4.4.6 Services

Services encompass the remaining nonmaterial and administrative support provided by logistic forces, and they are categorized as either *combat service support (CSS) services* or *command services*.

Among CSS services, civil affairs, mortuary affairs, and operational contract support are particularly important in EABO. Civil affairs support underwrites the ability of the littoral force to gain and maintain a host nation's support and to rely on host-nation services to reduce signature while maintaining requisite capabilities. Contracting services enable the littoral force to lighten it footprint, provided contracting authorities distributed and granted at the lowest tactical level possible while still ensuring adherence to policy. Contracting for engineering services, material handling equipment, and other hard-to-deploy-and-maneuver capabilities acts as a force multiplier for the littoral force and may also reduce signature. Capitalizing on the local economy via OCS and HNS must, however, be pursued in ways that do not overwhelm the local economy, creating hostilities among civilian populations, or compromise operational security. Finally, mortuary affairs support faces significant challenges during conduct of EABO with forces operating in a highly mobile and dispersed manner throughout the littorals. The Marine Corps must develop new solutions to these challenges, especially since the Marine Corps' sole mortuary affairs unit is situated in the reserve component.

The Naval Service must consider varied approaches to the provision of command services. For example, reach-back solutions to providing personnel administration and financial management services may be suitable, while religious ministries support likely requires a more direct approach in the context of EABO. Food service support may be best provided using an approach that combines OCS and naval logistics.

Several key tasks for the littoral force under the services function are particularly important in conducting EABO:

- Leveraging commercial and host-nation capabilities
- Contracting services and materiel
- Disbursing and postal services, which may require unique solutions given challenges associated with distributed operations

7.5 COMMAND AND CONTROL OF LOGISTICS

Naval logistics is executed within the same overall command and control structure as the larger naval task organization. The logistic organizations and forces are both components and customers of the overall naval logistic system. Regardless of location or employment, all logistic forces supporting EABO rely on various supply, maintenance, and transportation systems to manage and control support to the littoral force, as discussed throughout the chapter, and their own support. Logistic forces supporting EABO must be equipped with C2 and information systems integrated with the wider naval logistic network, and these systems must provide the same maritime domain awareness and include the same signature management capabilities possessed by the littoral force.

7.5.1 Component and Operational-Level Logistics

The naval force must operate under a single, coordinated, and integrated naval logistic architecture capable of addressing supply and maintenance issues for all systems from warships to rifles within the LOA. Ideally, this takes place through a single automated information system that is ubiquitous, accessible, and secure. At the operational level, the fleet will sustain the littoral force from distributed bases across a theater directly alongside Naval Expeditionary Combat Force elements, US Coast Guard forces, and the joint force to ensure flexible and resilient capability and capacity.

7.5.2 Tactical-Level Logistics

Typically, logistic units under the command of the littoral force will provide CSS to subordinate units. Functional (e.g., transportation support battalion) and/or task-organized units serve as the bridge between operational- and tactical-level logistics to allow the lowest echelon units to distribute materiel and services to operational forces. The littoral force's concept of support should aim to flatten the logistic and sustainment networks as much as possible, with logistics assets at the operational level providing logistics directly to end users when feasible.

7.6 LITTORAL MANEUVER

Force closure, maneuver, and sustainment of naval forces within contested areas are essential to the success of the littoral force. Employment of numerous, small, versatile transportation assets permits naval logistics to disperse, enables maneuver and mobility, and provides resilience across the force. Persisting inside the WEZ requires frequent maneuver of forces along the littorals to achieve positions of advantage relative to adversary capabilities and enable survivability and sustainment.

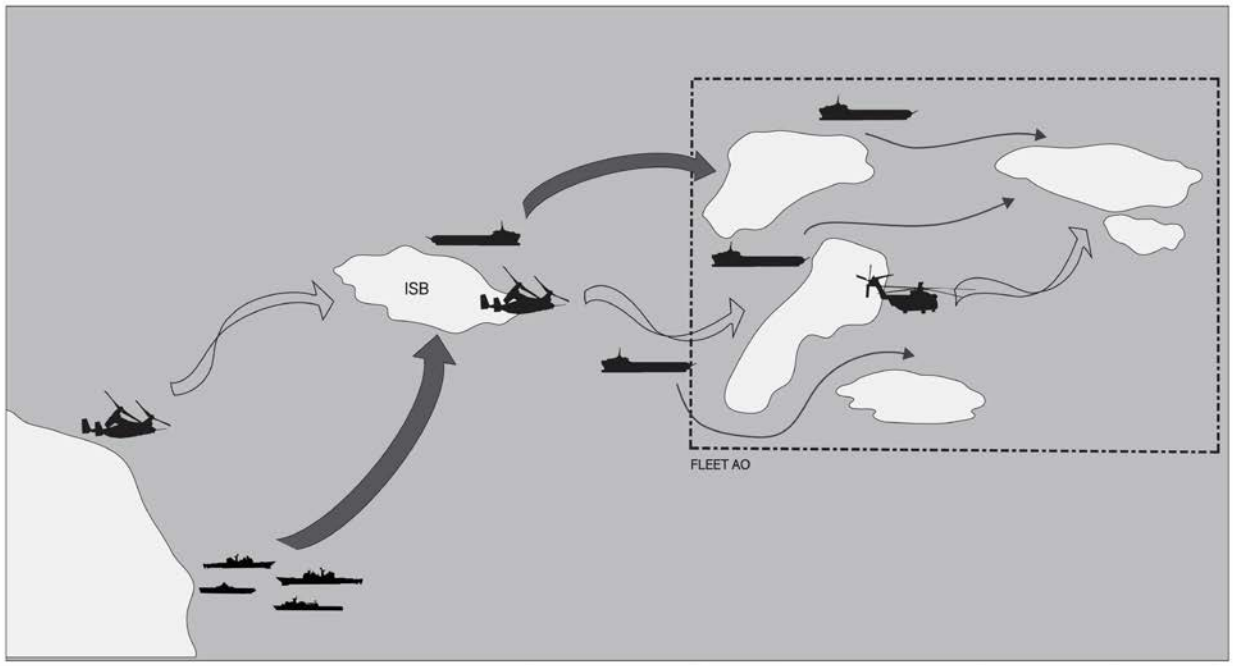


Figure 7-1. Notional force closure—advanced naval base through intermediate staging base

Naval forces executing EABO must be able to quickly maneuver over operational and strategic distances directly to tactical assembly areas/operating areas with minimal reception, staging, onward movement, and integration. This requires multimodal transportation solutions and leveraging prepositioning when possible.

Once established in the LOA, naval forces must maneuver tactically within the littoral, including (1) inter-island movement within an archipelago, (2) intra-island movement via ground, surface, or air modes, and (3) even displacement to another LOA. This maneuver allows the naval force to gain advantage by occupying or controlling key maritime terrain, remain survivable despite adversary targeting attempts, and execute or contribute to deception operations.

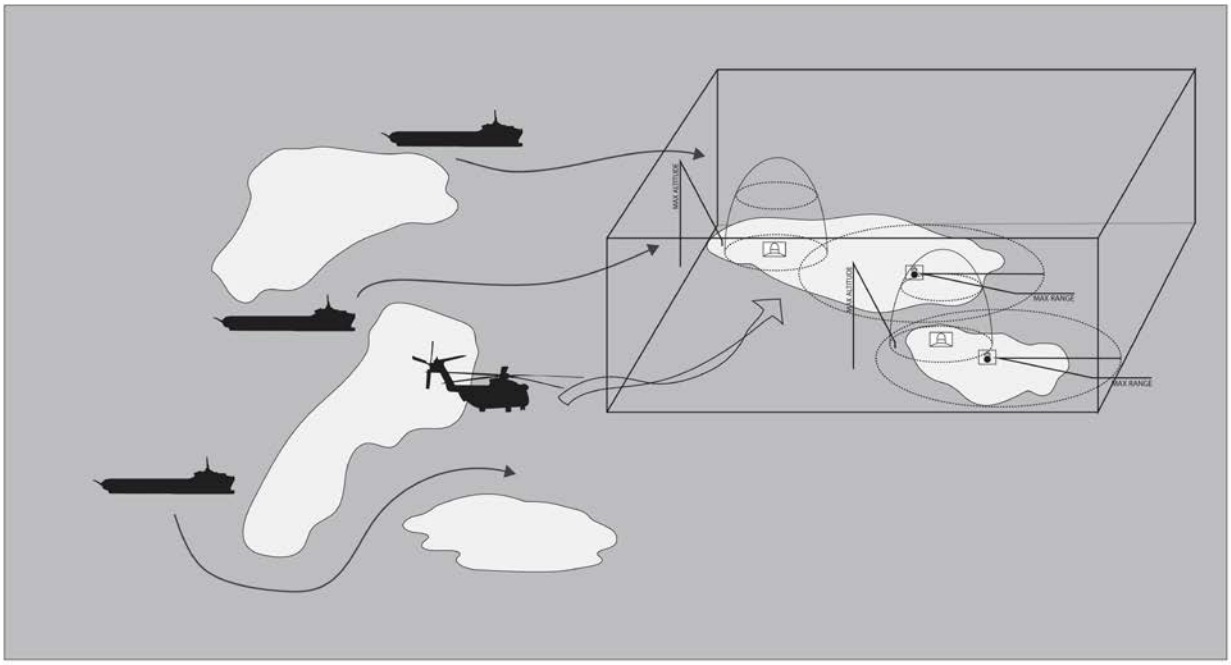


Figure 7-2. Notional maneuver into littoral operations area

Lastly, littoral maneuver assets must also contribute to the sustainment of naval forces operating within the LOA. These assets must be able to provide area support, supporting delivery of support across the beach or through the air to augment landward logistic networks. When performing these functions, these afloat maneuver assets serve as a seaward nodes of the logistic network supporting EABO.

The littoral force's ability to maneuver and operate the littorals generates the following benefits:

- Rapid deployment and employment based on a reduced footprint ashore configured to consume less and able to operate in areas with little to no infrastructure
- Agility, capable of rapid displacement and able to retain effectiveness while mobile
- Persistence, able to survive and endure within the adversary's WEZ
- Deception, not simply providing a service, but an active element of operations plan
- Regeneration, derived from no single points of failure, no linear lines of supply, and a "honeycomb" distribution system
- Decentralization, with logistics functions embedded in all maneuver operations

7.6.1 Light Amphibious Warship

Littoral maneuver will rely heavily on surface platforms such as the light amphibious warship (LAW) and a range of surface connectors, as well as aviation assets. The LAW is envisioned as the principal littoral maneuver vessel of the littoral force. Command and organization of these forces could remain under a purely Navy command or could be assigned to Fleet Marine Forces. Live-force experimentation and wargaming must assess different organization and command arrangements.

7.6.2 Light Amphibious Warship Employment

The LAW supports the day-to-day maneuver of stand-in forces operating in the LOA. It complements L-class amphibious ships and other surface connectors. Utilizing the LAW to transport forces of the surface

reduces the impacts of tactical vehicles on the road network, increases deception, and allows for the sustainment of forces during embarkation. The range, endurance, and austere access of LAWs enable the littoral force to deliver personnel, equipment, and sustainment across a widely distributed area. Shallow draft and beaching capability are keys to providing the volume and agility to maneuver the required capabilities to key maritime terrain.

LAW employment requires reconnaissance and prior planning relating to the bathymetry of the littoral environment. Effective LAW employment relies on knowledge of the beach makeup, slope, currents, tidal effects, and other environment factors.

As envisioned and when properly postured, LAWs possess the range, endurance, speed, sea-keeping, and C4ISR capabilities to support and conduct complementary operations with, but not as part of, US Navy tactical groups, including an expeditionary strike group (ESG) or amphibious ready group (ARG). Forward-positioned LAWs may augment the capabilities of deploying ARG/MEUs during regional engagement and response to crises or contingencies.

The LAW with embarked forces, generates and/or enables the following effects:

- Rapidly maneuver forces from shore-to-shore in a contested environment
- Sustain a combat-credible force ashore
- Conduct enduring operations
- Enable persistent joint-force operations and power projection
- Provide increased and capable forward presence

A CONVERSATION OVERHEARD IN 2029

By 2029, the Naval Service amassed considerable working knowledge about how to execute EABO. Many changes occurred in organization, training, equipment, etc. And these changes continued because the surrounding environment continued to change, in everything from budgets to new technology to how potential competitors and rivals adapted to the concept as it matured. The almost constant change affected logistics as much as any warfighting function. In many ways, we truly accepted logistics and sustainment as the pacing function to successfully compete.

As the Navy, Marine Corps, and Coast Guard officers checked into the fall 2029 Command and Staff College, all of the midcareer officers had spent a degree of their operational time in maritime campaigning as EABO developed into a naval capability. The officers, with specialties ranging from Marine Corps logistics, Navy supply, surface warfare, ground combat arms, and naval aviation, had experience with it in numerous exercises since 2021 and at least one experience supporting it during a contingency operation.

Some of the officers had originally met at The Basic School, and others had served together on deployments and assignments. They were all colleagues, as well as friends, with a breadth of naval experience. Early in the academic year, they discussed potential paper topics; several considered littoral maneuver, particularly logistics and sustainment, in EABO. The discussion quickly turned into a debate in the hallways and conference rooms.

You know the most important consideration has to be the enemy situation, said Major Able. *It drives every possible logistic option available to support EABO. Even if you get a LAW safely to the intermodal transfer point, you know it makes no difference if it gets overwhelmed by a drone swarm. So intel-log integration has got to be the number one priority*.

Sure, that's important of course, said Major Baker. *You're basically describing what happened during Operation Praying Mantis II. Everyone will know that. But I think we were so focused on that enemy situation, we didn't sufficiently assess the responsiveness to the exercise force maneuver. We had the mobility and signature management set, especially with reduced stockpiles, but we still had to move throughout that large LOA and often took too much time.*

I remember that operation, injected LCDR Collins. *I was the XO on the Coast Guard cutter in the seas off Dakota. It was a huge task conducting escort and ensuring the survivability of the supply lines. The use of naval and joint ISR really helped our maneuver through the littorals. Many focused on the DRC, but there were also local militias we had to protect the supply lines from. Being able to leverage the ISR and understanding the weather patterns, several times we decided to shift the LTP on the fly and transloaded onto Marine aviation for the final distribution leg to the forces ashore. But I still think our survivability forward in the contact layer can be challenged.*

LCDR Davies followed, *As the SuppO of the group at the time, I'm in agreement with all said, but we are talking downstream only. I still say most of these problems can be solved way upstream. We've got to change acquisitions instead. There's so much potential to reduce footprints and signatures if we do.*

Change acquisitions? Change acquisitions? Ha, good luck! exclaimed Major Baker.

I know, I know, admitted LCDR Davies. *It's been discussed a million times before. But I really think it's possible this time. Think of all the factors favoring change. The Navy and Marine Corps' topline has basically stagnated since 2021, with even a couple of dips. That's causing people to really think differently. We've finally started to create clean data over the past decade ever since we started teaching ensigns and lieutenants that it's their job to make that happen. Plus all the AI-enabled things are possible now; everything we've talked about over the years like predictive maintenance and predictive resupply. The combination of additive manufacturing and real, responsive operational contracting means we can do so much on site now. It really reduces the transportation problem! We can get to the fight with gear that's designed for low signature and easy sustainment, and we can make or buy what we need when we get there. That's my thesis.*

You know my answer, replied Major Able. *We've been talking that way for years. I wish you luck, but I'm not holding my breath. What about all the legacy equipment? Until your miracles start to arrive, we still need to figure out how to sustain EABO throughout competition. So that's what I'll write my thesis on. We need to integrate intelligence and logistics like never before. In fact, I'd say this is commander's business. Log support needs to be treated like another maneuver element. In the most challenging cases, we need to think about how we can infiltrate it from outside the WEZ to the inside forces. And the infiltration is a naval, and a littoral, maneuver*. All agreed—THAT is a thesis!

The infantry officer and the pilot who overheard the conversation looked at each other, and both exclaimed at the same time, *I hope they both figure it out!*

INTENTIONALLY BLANK

CHAPTER 8

Littoral Operations

8.1 GENERAL

This chapter serves as the tactical and operational construct for planning littoral operations and conducting live-force experimentation and wargaming and outlines considerations for preparing the operations plan. It addresses unique factors specific to mission sets and operations conducted by the littoral force. Essential to preparation of the operation plan is a concept of operations that views activities as an integrated whole within the maritime domain. Critical planning considerations include application of warfighting functions to task organize elements capable of supporting warfare commanders with critical capabilities. Littoral operations are not merely reactive to crisis; rather, they validate the baseline of joint-force activities in day-to-day competition and provide a blunting capability to contain adversary aggression in escalation.

8.2 CONCEPT OF OPERATIONS

The development of the concept of operations is an iterative process. Detailed planning refines the initial concept and is an extension of day-to-day activities in the operating area. Critical to the success of units conducting EABO is a concept of operations that deliberately manages the operational environment by accounting for all activities across the competition continuum. The concept of operations will include deliberate condition setting through coordination with the US Department of State, host-nation agencies, and military partners as discussed in chapter 3. Several factors may necessitate modifying the concept. They include operational requirements of littoral force elements, shifts in the operational environment, and changes in the adversary posture. Throughout its formulation, the concept provides the basis for detailed and concurrent planning and is included in the operations plan to clarify the commander's purpose.

The detailed concept of operations outlines the commander's course of action decisions and visualizes the operation. It depicts a broad outline of the plan of execution. At a minimum, it should include the purpose and scope of the operation, major or essential tasks, and phasing or sequencing of actions to shape and assess events across the competition continuum.

8.3 PLAN OF EXECUTION

The plan of execution provides for the employment of the various elements of the littoral force. It consists of three parts:

Scheme of Maneuver. Description of how arrayed forces will accomplish the commander's intent. It is the central expression of the concept for operations and governs the design of supporting plans or annexes. Subordinate documents to the scheme of maneuver include the littoral maneuver plan and the plan for supporting operations.

Littoral Maneuver Plan. This plan covers the seaward and landward maneuver of forces to and within the LOA. Methods of maneuver may include any combination of L-class shipping, next-generation logistics ships, light amphibious warships, and surface connectors and craft (both manned and unmanned), as well as ground and aviation assets. The littoral maneuver plan must thoroughly address transitions between domains and multimodal transportation methods. The organization of littoral maneuver squadrons

comprising various shipping options assigned to task-organized littoral forces will be developed during initial planning as discussed in chapter 3.

Plan of Supporting Operations. The elements of the plan of supporting operations shape and establish conditions for executing the scheme of maneuver and accomplishing the mission. Elements of supporting operations may be delineated according to warfighting function, domain, and/or civil-military considerations. The following paragraphs, while not all encompassing, serve as a baseline for planning supporting operations.

- Plan for OIE. Actions in the OE, such as the physical movement and activities of combat systems and personnel, generate effects in both the OE and the IE. Consequently, OIE should be planned and executed to both enable the littoral force's scheme of maneuver and leverage maneuver activities that impact the IE. Actions in the OE must align to the OIE efforts, especially those meant to inform, influence, and deceive target audiences. Failure to plan for and align these efforts may produce a "say-do" gap that creates a potential vulnerability for the adversary to exploit or results in a loss of trust with partners and allies.
- Host Nation Coordination. Mission requirements influence the spectrum of host-nation coordination options available to planners. Options include contingency contracting and HNS. HNS may include preplanned contracting effective in time of conflict, which is known as wartime HNS (WHNS). Plans must identify the authorities necessary to execute pre-arranged agreements and contracts in support of the littoral force. Contingency contracting officer placement within appropriate forward elements of the littoral force is an essential element of contracting support.
- Reconnaissance. Reconnaissance is a mission undertaken to gain information about the enemy and the meteorological, hydrographic, or geographic characteristics of a particular area. Further, obtaining information about the activities and resources of potential adversaries, local populations, and other related groups provides the littoral force with baseline situational awareness prior to mission execution. Reconnaissance is a continuing multidomain action in EABO. Because dispersed and highly mobile littoral forces will frequently displace, continuous assessment of the OE is essential to the commander's planning to maintain a current and accurate picture of the displacement routes and destinations.

8.3.1 Plan for Sustainment

The concept of support establishes the plan for logistics and sustainment of the littoral force from embarkation through termination of littoral operations. This plan accounts for the employment, synchronization, and coordination of the littoral force's logistic elements, afloat fleet logistic task forces, and component and theater-level logistic commands.

8.3.2 Plan for Aviation

The plan for aviation support to the littoral force is guided by command relationships and the joint or combined force commander's aviation apportionment and allocation decisions. This plan coordinates the activities of organic littoral force aviation with combined and joint assets. Air operations executed by naval expeditionary force air elements and other joint air assets complement one another and constitute a collective capability supporting the concept of littoral operations. Littoral force aviation must be able to configure their combat systems from relatively secure areas, move into operational positions, set up and operate for limited duration missions, retrograde within the enemy's targeting cycle, and then repeat as necessary. Sequential operations from split sites may be necessary to accomplish longer duration missions.

The following are considerations for the employment of units of the littoral force ACE:

- Air-control agencies, call signs, and frequencies
- Air missions in support of task-organized littoral forces (e.g., OAS, assault support, aerial reconnaissance, and EW)
- Employment of organic antiair capabilities
- Joint targeting processes and making use of the joint ATO
- Air control measures and fire support coordination measures
- Aviation ground support
- Air support, assault support, and medical evacuation request processes

8.4 COMMON PHASING CONSIDERATIONS

Littoral operations may take many forms and require various task organizations of the littoral force. Activities in assigned operating areas and within LOAs may vary widely depending on assigned missions and tasks. However, movement to and occupation of designated localities for EABs have common phasing considerations across the range of available mission sets. The following paragraphs discuss common considerations that address the mission planning necessary to conduct littoral operations.

8.4.1 Shaping and Reconnaissance

As discussed in chapter 3, the littoral force conducts continuous shaping activities at echelon to set the conditions for littoral operations. These actions set conditions for the various task elements throughout the developed EAB(s) to gain access, occupy, and employ capabilities within assigned positions. Prior to final force closure, reconnaissance activities validate existing gaps in information and inform planning. The LFC may consider the following prior to and during EAB occupation:

- Conducting detailed intelligence preparation of the battlespace (IPB) of assigned battlespace
- Adversary posture and levels of activity
- Surveys of littoral transition points including: airfields, runways, landing sites, and landing points to determine suitability
- Establishing baseline of EM spectrum
- Conduct counter-C5ISRT
- Proximity to key maritime terrain where forces will be delivering effects
- Mobility in and out of LOA(s), positions, and hide sites
- Natural concealment available in the terrain
- Establishing pattern of life/local activities
- Verifying partnered force/host-nation training goals

As discussed in section 3.4, the LFC must leverage support from MARFORSOC and other SOF elements and their relationships, capabilities, and authorities in the operating area. Making liaison and establishing linkages with SOF elements during detailed planning facilitates expanded access to pre-established and mature relationships with agency partners, coalition partners, and local state and non-state partners.

8.4.2 Position Selection and Improvement

LFCs will need to select several primary locations for employing their capabilities along with multiple alternate positions in any operation. They must balance competing considerations of system ranges, proximity to vital areas and key maritime terrain, and threat levels when selecting the best positions for mission accomplishment. Activities to prepare and improve operational positions and locations by theater security cooperation initiatives, an advance party, or MARFORSOC elements prior to littoral force arrival are key. Preparation of physical locations helps generate relative tempo as the littoral force is in transition

during the conduct of littoral maneuver. The littoral force must continually reassess and improve positions relative to the changing OE and adversary threat posture. Key considerations for position selection include:

- Validating infrastructure surveys,
- Liaison with appropriate level governmental authorities,
- Liaison with local contracting officials,
- Assessing local population atmospherics,
- Proximity to host-nation forces and civilian population,
- Proximity to key infrastructure—for example, runways and port facilities,
- Establishing decoy units,
- Prestaging of caches,
- Availability of supplementary and alternate positions.

8.4.3 Loading the Expeditionary Advanced Base

This section provides information to littoral force commanders on the organization, control, and execution of movement to an assigned LOA and occupation of an EAB as outlined in the scheme of maneuver and littoral maneuver plan.

Planning Considerations. Sequencing the establishment of capabilities and assessing levels of security are key considerations in arraying the desired in individual sites to be occupied. Experimentation may reveal that EABO, akin to forcible entry, may consist of a rapid buildup of combat power (including sensing, queuing, force protection, network integration), whether relying on swift occupation of a defensive position or resorting to techniques for infiltration. Planning aims to ensure forces, equipment, and supplies land via sea and/or air at the prescribed times and locations and in the operational posture required by the scheme of maneuver.

Basic Considerations. The requirements for support to initial EAB loading are (1) preserving tactical integrity of the littoral force and (2) achieving optimal dispersion of forces and assets used in the littoral maneuver plan.

- Tactical Integrity. The organization for loading an EAB must assure adequate control of dispersed littoral forces while retaining overall tactical control by subordinate commanders within an EAB. The force preserves tactical integrity by proper loading of littoral maneuver squadron shipping and littoral force aviation assets. The tactical integrity of littoral force elements does not require an entire element to embark on a single mode of transportation. For example, a unit of action assigned to conduct SUW may embark in several LAWs while littoral force security elements land via assault support.
- Dispersion of Assets. The required degree of dispersion is reflected in the design of the LOA and planned array of forces within and EAB. Preparation and implementation of the littoral maneuver plan must account for the sequence of critical capabilities required to achieve desired effects.

Task Organization of Littoral Maneuver Squadron (LMS). As discussed in section 7.4 and appendix A, the LMS is the task-organized collection of LAWs, next-general logistics ships, and other connectors that enable movement of the littoral force to and within LOA(s). The type and availability of shipping composing the LMS is informed by the concept of operations. At times, elements of the LMS supporting a particular EAB may support operational-level logistics while also supporting tactical-level maneuver. The littoral force commander and commander of the LMS must coordinate to ensure accomplishment of the scheme of maneuver (SOM) in conjunction with sustainment logistics activities.

Organization for Embarkation. The organization for embarkation must support both the plan for littoral maneuver and the SOM. It must also provide for maximum flexibility to support multiple loading sites both ashore and at sea. The tenets of combat loading guide the arrangement of personnel and stowage of equipment to facilitate the anticipated tactical operation.

Control of Seaward and Landward Operations. There are multiple methods to control seaward and landward operations. Possible methods range from the possible adaptation of current amphibious doctrine to a tailored method based on the envisioned littoral force relationship with other forces afloat. In all of these relationships, command authorities and responsibilities, planning considerations, and command relationships have a commonality. The forces afloat controlling seaward operations must fully integrate with fleet operations and maneuver at sea. EABO experimentation will require testing of the littoral force commander's ability to integrate forces from the seaward side and transition to a landward operation. These transitions may occur continuously throughout the operation.

8.4.4 Force Protection and Expeditionary Advanced Base Security

Force protection is the ability of the littoral force to avoid or withstand adversary actions or environmental conditions while retaining the ability to fulfill its primary mission. Signature management, camouflage, concealment, and deception operations enable the littoral force to avoid or mitigate the effects of adversary actions.

Security is critical at and within the various sites that compose an EAB. Adversary attacks may take the form of air and missile strikes, naval gunfire, special-forces raids, attacks in the EM spectrum, and activities within the IE. The littoral force will combine active and passive measures to ensure the preservation of capabilities and overall combat power.

Local Site Security. Each task-organized element of the littoral force possesses selected capabilities to accomplish the SOM. The LFC assesses baseline activities and the threat level in the locality where a given element is operating. The composition and size of the task-organized element will be tailored to each EAB based on the assessed threat level, assets requiring protection, and proximity to adjacent units. The LFC must weigh the trade-offs between increased security-element size and added signature, movement requirements, and sustainment needs.

8.4.5 Signature Management

The littoral force may employ signature management techniques to disrupt target acquisition, tracking, and terminal guidance. These techniques include both offensive and defensive actions. In keeping with the characteristics of EABO, they are primarily passive measures and must be considered by all elements of the littoral force. In terms of force protection, SIGMAN is an element of OPSEC, and the littoral force must manage signatures for two fundamental reasons:

- Support force protection (Survivability)
- Achieve surprise (Deception).

This section focuses on requirements and planning considerations necessary to perform SIGMAN in support of littoral-force survivability. Although many considerations are the same, SIGMAN in support of deception is discussed in chapter 4, "Operations in the Information Environment," and chapter 5, "Intelligence Operations."

SIGMAN Requirements. SIGMAN depends on knowledge of *indicators*, which are detectable, friendly actions and open-source information that an adversary can interpret and piece together to derive critical information about the littoral force. Indicators have one or more of the following characteristics:

- Signatures, which are observable activities and operational trends that reveal critical information to adversary intelligence collection
- Profiles, which refer to the sum of unique signatures and associations generated by a functional activity
- Associations, which make an indicator identifiable or cause it to stand out
- Contrasts, which refer to the differences observed between an activity's standard profile and its most recent or current actions
- Exposures, which refer to when and for how long an indicator is observed

Indicators may also be categorized as physical, technical or administrative.[58] *Physical signatures* are those the adversary can collect by direct observation or geospatial-intelligence assets. Detection of *technical signatures* typically requires specialized equipment, such as adversary SIGINT or measurement and signature intelligence (MASINT) assets. Individuals and units create *administrative signatures* when planning, maneuvering, contracting for support, and performing other administrative actions. An adversary observes or detects administrative signatures via human intelligence (HUMINT), SIGINT, OSINT, and OCO.

Understanding how an enemy perceives friendly indicators is the crucial second step, informed by intelligence processes of conduit and kill-chain analysis described in chapter 5, "Intelligence Operations." Insights gained from these processes lead to the third step of SIGMAN: countermeasures taken to reduce, modify, or display indicators to achieve commander's intent.

Own-Force Signature Assessment (OFSA). The littoral force must continually integrate the OFSA process with training and exercises to refine and incorporate SIGMAN procedures into operations. The ability to understand own-force signatures supports a functional signature management process, and it is a critical requirement to enable assessment of countermeasures effectiveness or determine future signature protection capabilities. The littoral force must include OPSEC considerations in the planning process and assess indicators during operations. OFSA validates baseline data in order to capture unintended or unexpected indicators using a variety of collection methods.

OFSA requirements must be balanced with the tempo and scale of operations. Increased use of overt OFSA may be appropriate for exercises and experimental TTP development, whereas during combat operations OFSA may be limited to EMCON monitoring of high-value C4 nodes, actions by individuals or small unit leaders, or incidental collection.

Self-awareness coupled with commander's intent then allows Marines at all levels of leadership to manage select indicators and manipulate their exposed profiles in relation to the adversary capability.

Electronic Signature Control. Some techniques for countering electronic signature vulnerabilities lie within the realm of sophisticated technology such as highly directional or low-probability-of-intercept transmissions. However, many effective countermeasures to increase electronic protection are derived from traditional OPSEC disciplines employed for electronic signature control. These may include:

- Setting emission control conditions that restrict use of own force electronic systems to specific periods or conditions;
- Remotely locating transmitters and/or antennas at some distance from a C2 or communications nodes;

[58] Joint Chiefs of Staff, *Operations Security*, JP 3-13.3 (Washington, DC: US Department of Defense, 2016) and Joint Chiefs of Staff, *Military Deception*, JP 3-13.4 (Washington, DC: US Department of Defense, 2017).

- Using highly directional antennas to reduce the signal strength available for adversary exploitation (refer to *Antenna Handbook*, MCRP 8-10B.11, for field-expedient antenna techniques);
- Using wire and fiber optics pathways for communications;
- Using frequency hopping/spread-spectrum radios;
- Employing a scheme of maneuver or avenues of approach that interpose terrain between friendly transmitters and adversary intercept stations;
- Employing sound radio discipline, to include using minimum required power;
- Using brevity codes and digital communication;
- Reducing reporting requirements and unnecessary traffic (e.g., routine communications checks)
- Employing proper terrain-screening crest by radars;
- Operating effectively with a smaller technical footprint and the decreased information that results.

Sensor/Conduit Disruption. Refer to the classified portion of appendix A.

Intelligence in Support of SIGMAN. For SIGMAN intelligence requirements, see the discussion in chapter 4, "Intelligence Operations."

Counter-Reconnaissance. Counter-reconnaissance activities degrade or deny an adversary's ability to determine composition, disposition, and strength of an EAB. Baseline intelligence collections and reconnaissance activities set the initial conditions for the counter-reconnaissance effort. Counter-reconnaissance activities may be either passive or active depending on the assessed threat level and requirement. Counter-reconnaissance activities may include:

- Local security patrols,
- Hide sites,
- Information collection from the local populace,
- Unmanned aerial systems,
- Fixed- or rotary-wing aviation assets.

Counter-reconnaissance efforts also look across all other domains to sense anomalies in the baseline and contribute to commander's situational awareness and ability to detect adversary efforts to disrupt littoral force activities.

Passive Defensive Measures. Camouflage and concealment use materials and techniques to hide, blend, disguise, or disrupt the appearance of military targets and/or their backgrounds. Effective use of these materials and techniques degrades the effectiveness of adversary intelligence, surveillance, reconnaissance, and targeting capabilities. Obscuring or altering telltale signatures of units on the battlefield can defeat both skilled observers and sophisticated sensors.

To be effective, camouflage, concealment, and signature alteration must function in the frequency wavebands that will degrade sensor and seeker performance sufficiently to deny or delay targeting and weapon guidance. Consequently, a variety of systems and techniques are necessary to defeat the range of possible adversary battlefield sensors and munitions seekers. Camouflage, concealment, and signature alteration actions are an essential part of tactical operations. Littoral forces must practice them with discipline and continuously integrate them into mission planning and IPB processes.

Movement and Dispersion. Movement supports denial of adversary targeting by repositioning friendly forces at a rate faster than the adversary network can effectively complete its decision cycle. Dispersion stresses the adversary's kill chain by greatly increasing the number of potential targets while also reducing the potential lethality of an individual round. Greater dispersion reduces the efficiency of

adversary target acquisition, since more ISR assets are required to find the same number of targets. As countermeasures, effective movement and dispersion require both careful planning and a clear understanding of the adversary decision cycle. Too frequent movement, however, may increase opportunities for adversary collection.

8.4.6 Defensive Fires Plan

Air and Missile Defense Fires. The littoral force, in concert with the RADC, SADC, and/or AMDC, conducts air and missile defense operations to protect vital areas and defend critical assets. Defensive fires in the air domain involve the fundamental practice of constructing a kill chain. Key elements of air and missile defense include:

- Determining critical assets and vital areas;
- Applying air and missile defense assets to critical assets to generate a defended asset list;
- Granting authorities to air-control agencies to manage the defense of the vital area;
- Employing missile engagement zones, fighter engagement zones, and joint engagement zones by the controlling agency;
- Exchanging timely information between air- and missile-defense assets (including sensors, firing units, and C2 agencies);
- Employing tactical data links and voice communications;
- Planning missile defense with the wider naval and joint forces.

Refer to *Countering Air and Missile Threats*, JP 3-01, for detailed joint doctrine concerning air and missile defense and *Composite Warfare*, NWP 3-56, for comparable naval doctrine.

Other Fires Planning. While the littoral force provides fires to support assigned missions and objectives, it must also plan for the employment of fires to preserve combat power. The littoral force may establish boundaries or control measures between echelons possessing fire support coordination centers (FSCCs) to facilitate the responsive employment of fires.

The LFC will assess threat levels and determine the size of security elements needed to preserve the combat power of fires capabilities.

External Agencies. To leverage external fire-support agencies in defense of the littoral force, the senior FSCC within the LOA must maintain sufficient battlespace awareness to approve fires into the LOA and potentially within close proximity of friendly forces.

8.5 MISSION CONCEPTS OF EMPLOYMENT

The following subsections offer concepts of employment (CONEMPs) for use by forces conducting EABO missions and tasks. These CONEMPs reflect the developing capabilities associated with future force design. They are presented by system and/or littoral force element to illustrate in isolation the key requirements and employment considerations for each. When combined, these systems employed by task-organized littoral force elements create the units of action that comprise an EAB. Figure 8-1 below on page 8-9 illustrates combined actions by littoral forces conducting EABO.

8.5.1 Fires in Support of Surface Warfare

The littoral force plays a vital role within the greater naval force by applying fires against maritime surface targets to deny or control sea space (see figure 8-2 below on page 8-10). Fires in the maritime domain fundamentally require construction of a maritime-fires kill chain that results an effective, efficient ability to hold adversary forces at risk and protect vital areas and units. These fires consist of land-based, sea-based, and air-launched missiles and loitering munitions delivered from manned and unmanned

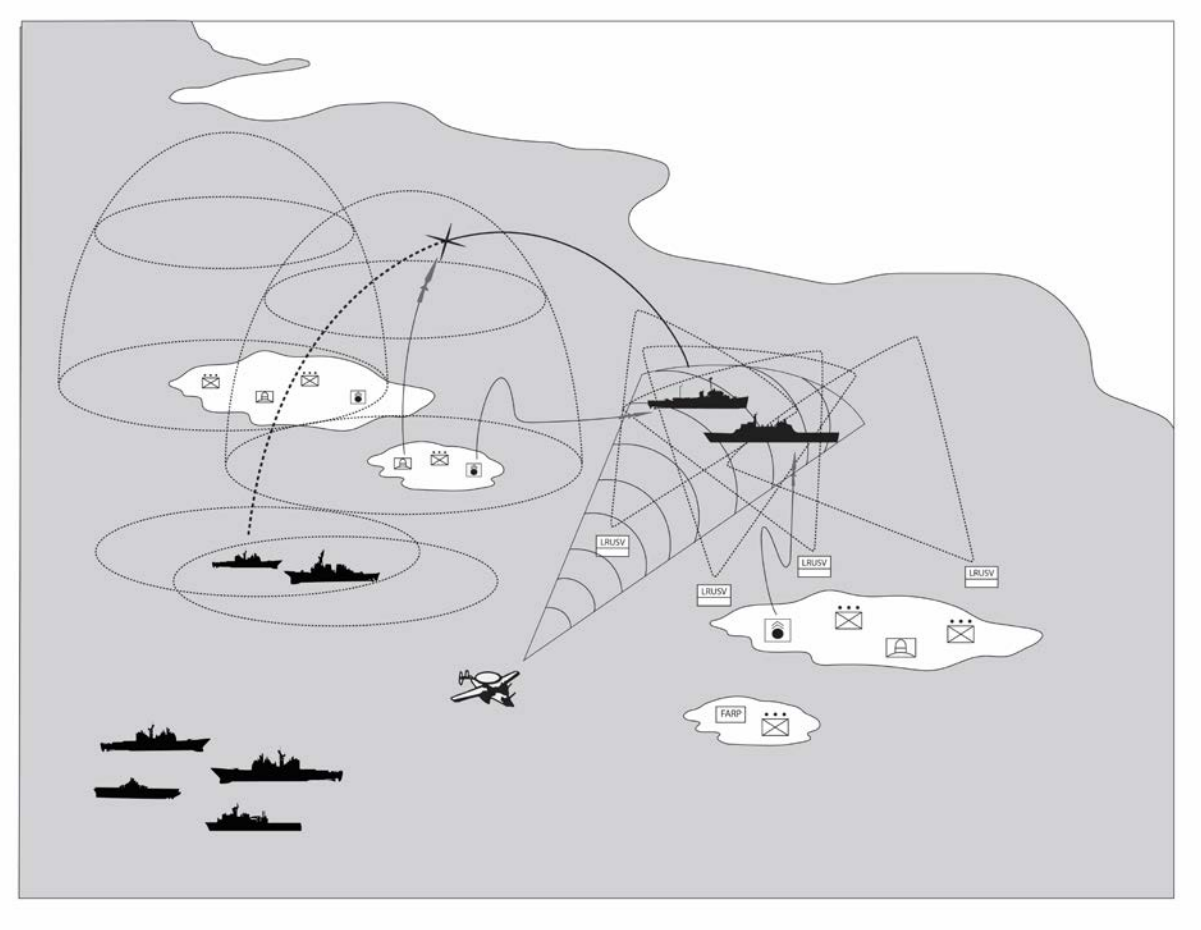


Figure 8-1. Notional concepts of employment for maritime fires

platforms. The littoral force may control fires using the methodologies of either the MAGTF fires framework or composite warfare construct. Mission-engineering threads will vary based on the C2 methodology in effect and assets employed to accomplish the SOM.

Key requirements follow:

- Network. The littoral force's firing units must be capable of receiving firing data from multiple sources: forward observers, reconnaissance assets, aircraft, adjacent units, tactical headquarters, or even directly from the maritime operations center (MOC). Regardless of the source, firing units receive targeting data directly rather than through several echelons of the task organization. Receipt of firing data in this direct fashion implies precoordination of the mission, airspace deconfliction, and approval by the very nature of the transmission. Organic to the littoral force, the commander needs sufficient communications capabilities to mass fires from both land- and sea-based manned and unmanned platforms that vary significantly in speed, trajectory, munitions effectiveness, and quantity.
- Sensing. Sensing requirements will vary in complexity. Within composite warfare, the littoral force must maintain communications with the SUWC or SCC and contribute sensing capabilities to the combined force. However, the littoral forces may not require the same level of maritime domain awareness as the SUWC/SCC. Situations where the appropriate tactical commander

directly provides targeting information to a firing unit reduce requirements for maritime domain awareness.

- Classification and Identification of Maritime Objects. The littoral force must have the ability to distinguish threats from benign objects among the maritime clutter or receive this clarity from another source.
- Decision Making. The littoral forces must have appropriate authority and capability to make a timely, correct, and lawful determination to engage the threat; determine the appropriate firing unit and weapons system; issue a firing command; observe the effects; and conduct a damage assessment.
- Preplanned Responses. The littoral force must participate in the development of and be thoroughly familiar with the naval force's preplanned responses. These are normally contained in the classified OPTASK.
- Site Selection. The firing battery must be positioned on terrain suitable for the employment of its munitions, have access to numerous alternate positions for survivability, and be able to maneuver and disperse to the limits of the littoral force's sustainment capabilities. Given the missile defense capabilities of adversary vessels, the battery must be able to mass geographically disparate platoons and sections as necessary to achieve desired effects. Commanders must also consider the intervening terrain and overflight of noncombatants.

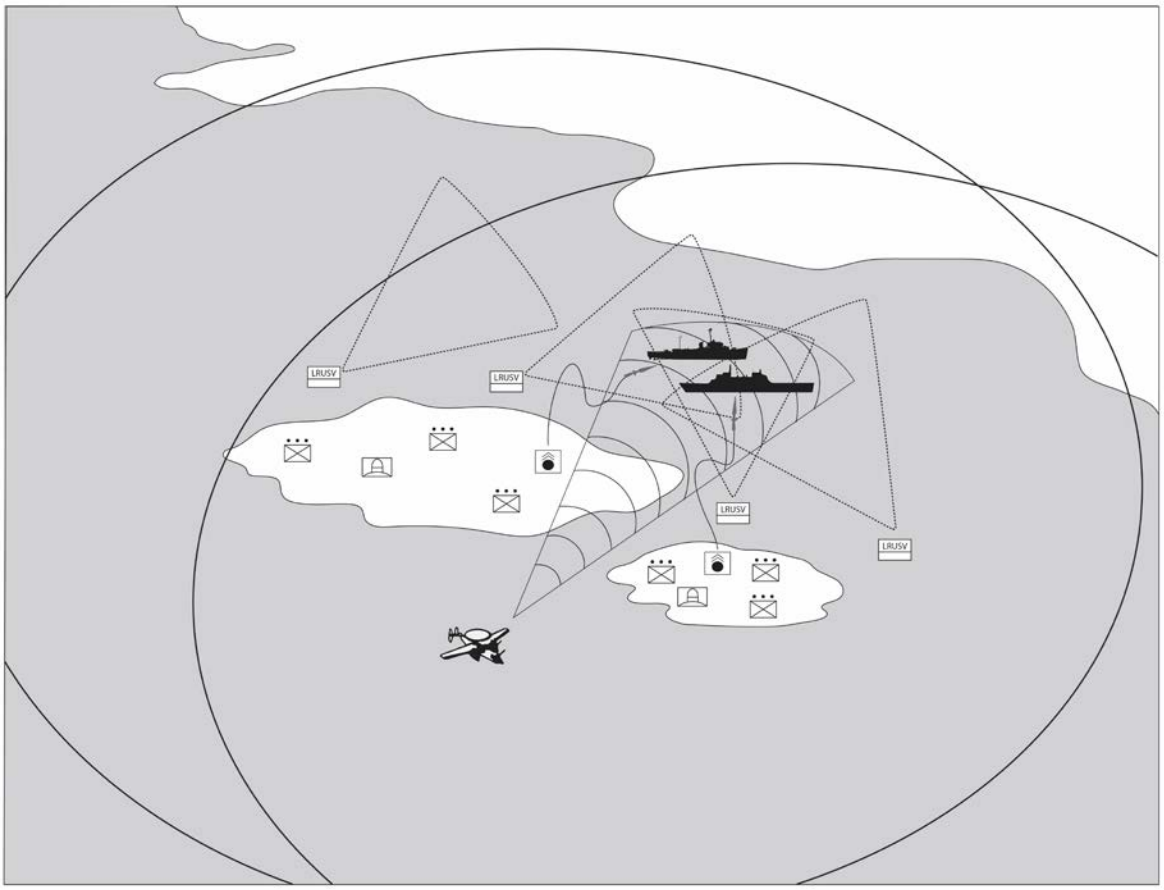


Figure 8-2. Notional surface warfare unit of action delivers fires

Employment considerations follow:

- Units equipped with an optionally manned, long-range unmanned surface vessel (LRUSV) may be organized into platoons, but their employment need not reflect this organization. LRUSV units require coastal terrain sufficient to mitigate adversary threats from land and sea, as well as sanctuary to protect against adverse weather effects. LRUSV platoons must consider a tactical rotation aligned with these considerations.
- LRUSV platoons must assess and account for unique requirements associated with maintenance, rearming, and refueling autonomous systems.
- LRUSV platoons should consider one-for-one vessel rotations to support maintenance, rearming, and refueling.
- While LRUSVs combine sensing and shooting capabilities, the commander must consider a balanced employment of these capabilities. Forward positioning facilitates timely employment of organic precision fires, but exposes the vessel to adversary to engagement. The commander must weigh the value of the LRUSV as a reconnaissance asset versus a fires platform.

8.5.2 Fires in Support of Strike Warfare

The littoral force may employ strike warfare capabilities in support of strategic tasking. Planning considerations for this capability may be found within the classified portion of appendix A.

8.5.3 Fires in Support of Air and Missile Defense

The littoral force conducts defensive actions to destroy, nullify, or reduce the effectiveness of hostile air and missile threats against friendly forces and assets (see figure 8-3 below). Air and missile defense

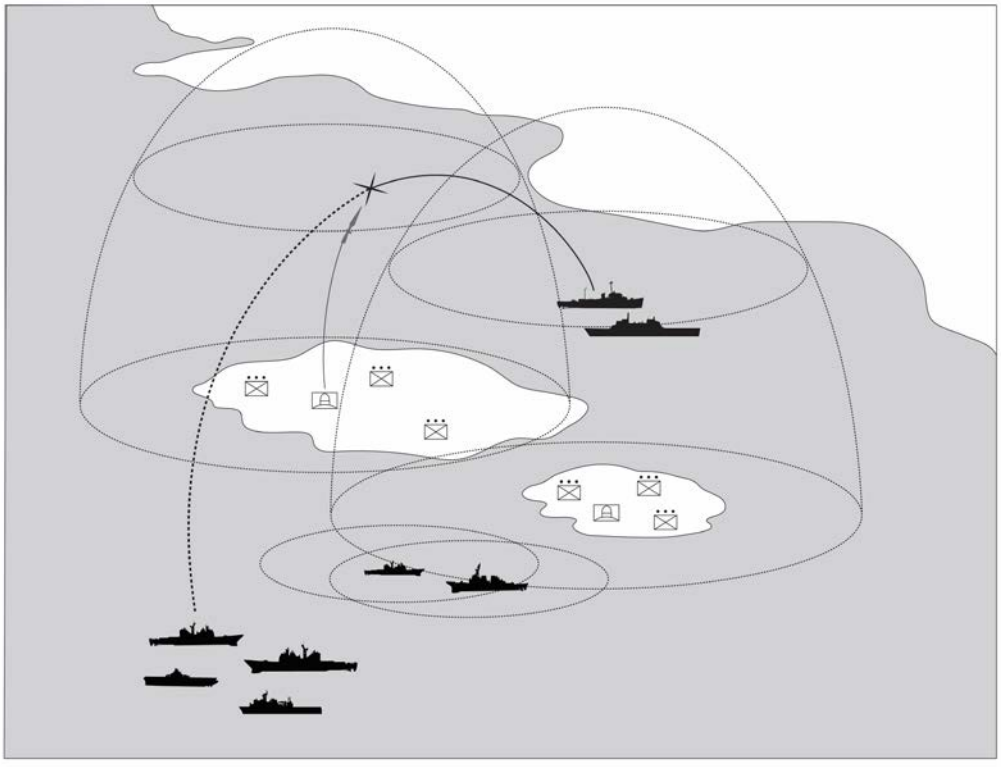


Figure 8-3. Notional antiair warfare unit of action intercept

(AMD) will primarily be conducted using joint and organic short-, medium-, and long-range surface-to-air weapons with indications and warnings provided by external sources along with local, passive sensors. Engagements may also use active sensors.

Key requirements follow:

- For AMD, the littoral force must be capable of sensing organically or integrating with an external network to receive joint tracks.
- The littoral force must be capable of command and control in the naval and joint systems to employ the common operational picture, tactical networks, and data systems in the execution of preplanned responses.

Employment considerations follow:

- The commander must understand the requirements for continuous or varying AMD coverage. Based on threat analysis, coverage requirements may vary between persistent or episodic.
- Given the range of AMD capabilities, commanders must consider carefully position assets requiring protection, as well as the vital area specified by the warfare commander. Positioning these capabilities may require balancing these potentially competing requirements.
- Considering the relative difficulty of sustaining various elements of the combined force, the commander must be prepared to recommend the appropriate employment of AMD weapons in order to mass effects. Ultimately, the commander must ensure the efficient employment of available munitions to conserve finite resources.
- Similar to surface warfare capabilities, AMD assets must displace frequently for survivability. The littoral force must consider displacing by echelon in order to mitigate capabilities gaps while providing protection to the force and within the vital area.
- AMD units will likely be employed as elements of a larger task-organized group afloat or ashore.

8.5.4 Operations in Support of Antisubmarine Warfare

The littoral commander may task organize an EAB or multiple EABs to support ASW and be responsive to the ASWC when operating under composite warfare. The employment of ASW capabilities will enhance the scouting and anti-scouting of sustained theater-level undersea warfare campaigns. EABs operating in support of ASW provide sensing and data collection for the maritime COP while also enabling forward logistics and support.

8.5.5 Support to Information Warfare

For IWC planning considerations and employment, refer to sections 5.5 and 5.6.

8.5.6 Forward Arming and Refueling Points

Marine Corps aviation has well-established doctrine and procedures for expeditionary airfield and FARP operations, which applies to EABO. Naval Air Training and Operating Procedures and Standardization (NATOPS) manuals contain mandatory procedures to enable safe aviation operations in austere environments and preserve sortie generation capability. Relevant NATOPS manuals include the Expeditionary Airfield NATOPS, the Air Traffic Control NATOPS, and NATOPS manuals by aircraft type, model, and series to use FARPs. Given the flexibility envisioned in EABO, consideration should also be given to employing FARPs in support of platforms other than aircraft. Finally, additional considerations for FARP operations include host-nation coordination and adherence to minimum manning levels contained in technical and safety directives.

Key requirements and planning considerations follow:

- Refueling Operations. Operational requirements and impacts influence the decision to execute a hot or cold FARP. This choice will affect the responsiveness and rapidity of aircraft employment, but planners must evaluate the benefits of a hot FARP against limitations such as quantity of aircraft refueling, crew rest, and planning time for further missions.
- Ordnance. Requirements for ordnance crew, especially for handling specific munitions, will determine the number and type of ordnance personnel to support the FARP.
- Expeditionary Airfield (EAF). Tasks associated with establishing and operating an EAF include the layout and setup of the site, to include the proper spacing, marking, and lighting for aircraft operations.
- Expeditionary Firefighting and Rescue (EFR). For FARP operations during contingency operations, EFR support is not required. However, safety concerns dictate that, when available, one EFR apparatus and rescue vehicle should support a FARP.
- Controlling Agencies. Requirements for controlling agencies such as a Marine ATC Mobile Team are based on the type, model, and series of aircraft that the FARP is supporting, volume of aircraft expected at the FARP, requirement for expedient landing-zone survey, and airspace management considerations.
- Force Protection. Airborne aircraft in the vicinity of a FARP and grounded aircraft are susceptible to both air and ground fires. Consideration must be made for AMD and ground security to protect sortie generation.

8.5.6.1 Forward Arming and Refueling Point Planning

During EABO, FARPs must operate in small, highly mobile units that have the ability to rapidly deploy and effectively manage their signatures. In moderate- or high-threat environments, FARPs must move frequently to avoid detection. In a low-threat environment with a static front and little enemy air activity, FARPs may displace less often. Varying situations will determine whether to employ multiple FARPs or rapidly relocate a single FARP between multiple sites.

During establishment of multiple FARP sites or relocation of a single FARP, the new FARP should be operational before the operating FARP is shut down. Speed of movement to establish the FARP site is of prime importance, and planners must allocate adequate time to set up equipment. Three primary FARP methods, features of which may be combined in execution, exist for employment:

- Ground Transported. Establishing a FARP using ground vehicles is the most common means of employment.
- Air Delivered. Using assault support assets is an alternate means of establishing a FARP. Operators employ air-delivered FARPs in tactical operations requiring rapid emplacement or when ground transportation is infeasible due to insufficient assets or inhospitable terrain.
- Surface Transported. The operational situation may dictate establishing a FARP using surface connectors. Once ashore, the FARP operates in the same manner as a ground-transported FARP. These FARPs are logistically flexible and do not require use of aviation assets for setup or resupply. Surface-transported FARPs are preferred when the tactical situation, terrain, and time do not allow for the movement of ground assets into the desired location.

Important considerations in selecting the FARP method include:

- Coordination requirements and potential logistic sustainment;
- Availability and type of surface connectors (both manned and unmanned), aircraft, or landing craft;
- Location of combat service support areas;

- Landing locations and obstructions;
- Main supply routes;
- Distance to the FARP;
- Timing;
- Threats and security requirements.

8.5.6.2 Forward Arming and Refueling Point Designs

Factors such as mission requirements, aircraft constraints, such as weight and maneuverability, and environmental constraints will determine the type of FARP necessary to enable operations. The LFC and staff must understand this because each type of FARP comes with varying requirements relating to size, personnel, equipment, engineering preparation, and sustainment.

FARP designs are contingent on the type of aircraft being supported. There are two primary support layouts: (1) an *assault FARP* for tilt-rotor, rotary-wing, or fixed-wing aircraft without forward-firing ordnance (see figure 8-4 below) and (2) an *attack FARP* for rotary- and fixed-wing aircraft with forward-firing ordnance (see figure 8-5 below). For attack FARPs supporting fixed-wing aircraft, the ability to taxi from arm/de-arm headings is required. Ordnance operations can take place in an assault FARP based on the type, model, and series of aircraft supported. Assault FARPs normally require a larger area for operations due to the required safety distances.

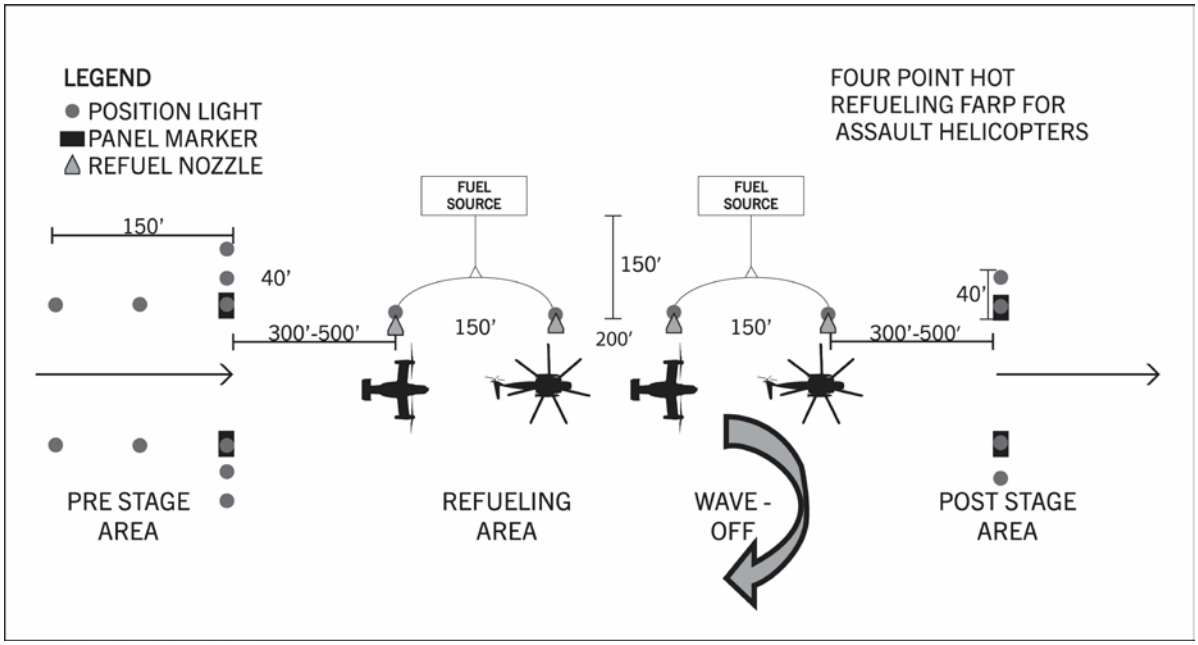


Figure 8-4. Notional assault (rotary-wing and tilt-rotor aircraft) FARP

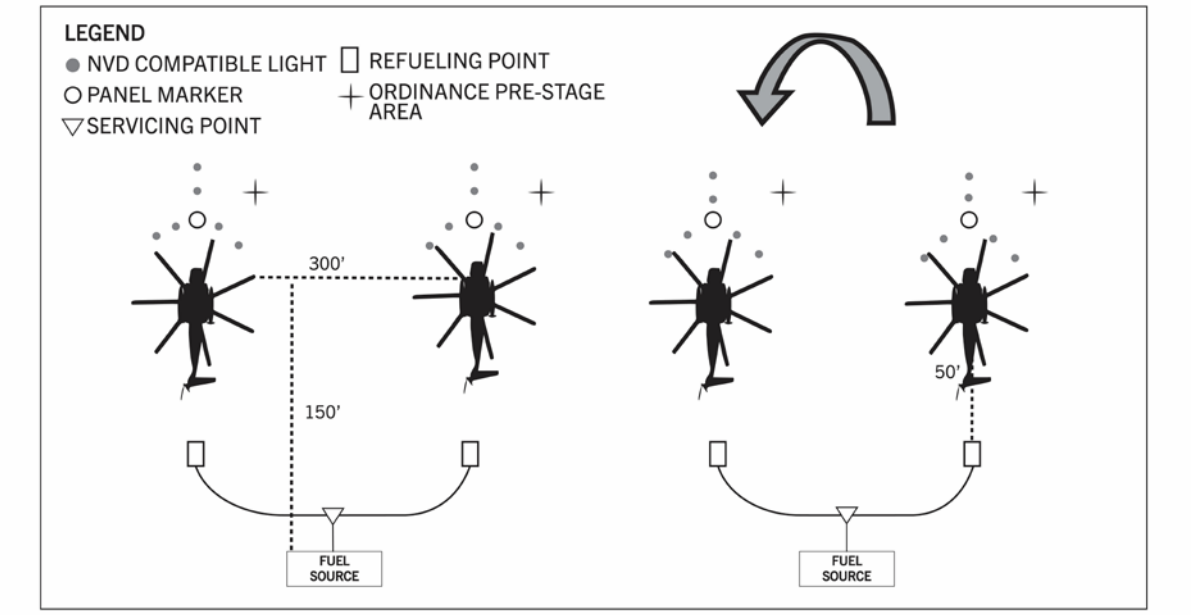


Figure 8-5. Notional attack (HOT) FARP

8.6 FLEET INTEROPERABILITY

As stated in section 1.5, EABO take place within the context of a larger naval campaign. As such, EABs are designed to complement the seagoing elements of a fleet. On occasion CSGs, ESGs, SAGs, ARG/MEUs, and CLFs execute tasks to enable or support EABO as part of a littoral force. For future experimentation, the following are potential missions:

- Support movement of littoral forces into the fleet AO and LOA
- Support seizure of maritime terrain
- Support establishment of an EAB
- Support defense of an EAB
- Support sustainment of littoral forces

SPECTRUM OF CONFLICT WITH DRC IN 203X

The DRC sought to "unify" Centralia by absorbing the island off their coast, known as the Republic of Centralia (which most called the "ROC"). The DRC's strategy sought to surround the ROC in a multitude of ways: physically, by incrementally occupying the seas and small features flanking the island; diplomatically, by penalizing any country that recognized the ROC government; and militarily, by making sure the island was comfortably inside the WEZ extending from the DRC's mainland. All of this was in addition to the DRC's overmatch of the ROC military, in the air, on land, and at sea. Ideally, the DRC wanted to intimidate the ROC into "unifying" without firing a shot.

As the DRC's economy grew in size over the years, so did its other instruments of national power. Now in 203X, the DRC felt confident enough to ramp up its intimidation campaign. Months of diplomatic and economic bullying caused turmoil in the region, sowing doubt among the ROC's neighbors. Throughout the competitive narrative, fleet forces maintained a baseline of understanding of the operational environment. The United States had been expanding its diplomatic and military cooperation with the ROC, to include US Coast Guard advisors to improve the ROC's ability to exercise maritime sovereignty over their territorial waters as well ISR-T assistance from FMF units of action operating from ashore in Dakota territory. This military assistance was complemented by diplomatic actions, such as US statements in support of peaceful discussions among all the parties, while also publicly condemning the DRC's bullying tactics.

Despite this US support of the ROC, the DRC eventually escalated by placing its forces on higher alert levels and increasing its air and maritime patrols, especially along the informal boundaries between the Centralian mainland and the ROC. DRC and ROC vessels of all kinds (navy, coast guard, surveillance, fishing, etc.) shadowed each other. Aggressive actions became more frequent. DRC Coast Guard ships developed a habit of crossing the bow of ROC fishing vessels. The ROC Coast Guard responded by "shouldering" DRC fishing boats out of the ROC's 12-nautical-mile exclusion zone. Several ROC fishing boats had to be towed back to port when they were rammed by DRC vessels. Similar confrontations also occurred between the two side's air forces, though fortunately without any midair collisions.

With tensions running high, the CCDR reviewed options to support the U.S. and international community's response to the situation. Deterring the DRC from using armed conflict to seize the Republic of Centralia quickly emerged as the main goal, followed by deterring the DRC from using violence of any kind to bully the ROC government into agreeing to DRC terms.

After the CCDR discussion with his leadership team, the fleet commander followed her practice of conducting a SVTC with her commanders down to the unit CO level. She gave a brief, informative summation of the CCDR's meeting then shared her thinking. She then entertained questions from her principal subordinates. After the SVTC concluded, the subordinate task force and task groups held similar discussions with their subordinate commanders. The MEF CG led a follow-on Marine discussion, and then Col Robinson of the 25th MLR gathered his commanders and staff for a back brief and to provide his planning guidance, as described below.

I'm glad the Admiral includes a wide audience in her debriefs, and when she gives her guidance it's giving me pretty good insight into the direction the planning is going at the theater level. What has been decided already is that a CJTF will be formed for this operation, and the Admiral will be dual-hatted as 8th Fleet and the CFMCC, because she does expect coalition participation. The CCDR is working hard to make that happen.

The CJTF's main goal is to deter the DRC from using force to make the ROC submit to unification. The CJTF's operation is part of a larger strategy along with diplomatic and informational ways and means.

From a maritime perspective, the Admiral wants to make sure we have the ability to prevent the DRC from crossing the strait and then use this ability to make the DRC decision makers hesitate to put their navy and other maritime assets at risk. She wants to make sure the DRC can't reach out and take that ability away from us. We'll need to demonstrate we can prevent the DRC from crossing the strait to affect the thinking of those decision makers. The CFMCC staff is refining the details of how we'll do that.

Initially, the fleet will employ TF 81 to the north and TF 80 in the south. Both task forces will be prepared to deny their portion of the maritime domain around the Republic of Centralia to the DRC. Since we already have contact-layer forces operating in and around Dakota, we'll form a task group working for Task Force 80. 24th MLR working in and around Onyx will do something similar for TF 81 to the north.

Both MLRs will perform the same mission to start, which is to help our respective task forces win the surveillance/counter-surveillance contest. This breaks down into two parts. The first is direct support to TF 80's scouting/anti-scouting battle and all that implies. This requires an understanding of the task force's battle plan and commander's intent. The second part is the local recon/counter-recon fight, with a focus on survivability for the naval expeditionary force—those of us operating around in the littorals. A key part of our role as part of the fleet is to stay operationally effective, which means understanding how the enemy is trying to target us and then negating those efforts. Both of these need to be done in every domain.

The fleet commander mentioned the work the MLRs are doing in the contact layer. She knows we constantly work on the scouting picture to feed the COP, build maritime domain awareness, and do so with allies and partners. She's eager to leverage all of that for certain. The task force commanders both commented on how the MLRs can screen for them as they move in and out of the chain of islands. The exercises we've done with the fleet over the past half dozen years are really paying off—that seems clear.

"Col Robinson?" said Lt Clarkson. *"Sir, sorry to interrupt, but I'm a little unclear on how partners are contributing to the COP. Would you mind explaining that a little bit?"*

Col Robinson continued…

The technical answers to that question are classified beyond what this room can support of course, but the conceptual answer isn't classified. It really breaks down into two parts. The first is relationships. We had to identify which of our allies and partners we wanted to pursue for inclusion and then include a shared COP as a campaign goal in our competition planning. It takes years to build the kind of trust needed to share meaningful information for something like a common operating picture. It took a lot of effort to coordinate it up through the CCDR staff and then with the interagency, especially the State Department. The second part involved solving the technical challenges. We had to work with our overseas friends to determine what sensors they had and what part of the picture they could help build. Getting Dakota on board was a priority, and as many of you know they've been part of this now for almost ten years.

We also had to work in parallel with the fleet and joint force to generate an integrated COP using something like an Application Programming Interface (API). Luckily, this was a goal for them as well. It still took a lot of work, but many organizations contributed to moving in this direction. I think it was a

DARPA project that came up with a way to allow allies and partners to plug into the COP. Basically, that allows a user to be a customer of all the sensor data that is pushed into the COP, but on the customer's side of the API there's no attribution on where the data came from; its source could be Navy, joint, coalition, etc.

It was a real competitive advantage versus the DRC. They have never liked the US alliance structure, and they really, really don't like us having an alliance COP.

These competitive activities, and others like them, helped set conditions for the operation we are planning now. Our intentional focus over the years has already constrained the DRC's freedom of action. Efforts like multi and bilateral exercises that the division has led as a task group over the past six years to painstakingly build out the alliance COP. So maintenance of the OE baseline means we already have custody of many of the targets we need if we, the fleet, are going to win the scouting/anti-scouting battle. Not to mention how our understanding of the baseline will help us with our own force protection, to mask our signature with deception and decoys.

So to briefly summarize, the first or contact-layer phase is about the two task forces under the command of the CFMCC deterring the DRC. We will be a task unit under Task Force 80, our first priority will be to help them win the surveillance/counter-surveillance contest so they can deny the maritime domain around the ROC if necessary. We also need to be prepared to screen TF 80, as well as be prepared to help deny in the maritime domain. In this phase, we'll probably fit into TF 80's CWC architecture as the expeditionary warfare commander.

Next, the Admiral brought up what she thinks would happen if deterrence failed or if she gets strong I&W that it's about to fail. She said she would feel more comfortable at this point with a single task force commander in charge of the littoral fight and everything that goes with it. She explained that if deterrence were to fail, then from her perspective as the CFMCC, she really would see the littoral force—the naval forces performing EABO—as her screening force. So, she tasked her N3 to come up with a couple of COAs to address it. I'm pretty sure one of the COAs will be for the division or MEF CG to act as a littoral force commander, designated Task Force 82, working for the CFMCC. That's part of what we discussed with the MEF CG after the main meeting.

Significant maneuvering will take place if we get I&W of deterrence failing. Like we practiced in the last Exercise Shoulder-to-Shoulder, the MEF will reposition aviation assets so that, generally speaking, unmanned systems would be closest to the threat and more expensive manned platforms would bed down outside the WEZ. By this time, our firing batteries would be positioned to deny the Dakota Straits to the DRC. How long we might need to deny them and other specifics is being worked out in detailed planning.

CFMCC/8th Fleet are also working out the overall deception plan. For our piece of it, expect to employ multiple decoys for every surface platform—ground vehicles, LAWs, etc.—along with several dummy sites for each position. Even more important, I'd like to hide in the local background noise as much as we can. OpsO, let's pull the latest baseline data from our folks already deployed in Dakota…also, let's pull out the slides from our S2S after action from last summer. We know the DRC will be doing everything they can with deception, decoys, etc. We need to have our team ready to reprogram our sensors to pick up the changes we know the DRC forces are going to make. We may need to adjust the filters on our gear to overcome their spoofing, jamming, and other tricks.

By the end of this transition, I do anticipate Task Force 82, as the littoral force, being stood up. It may happen earlier as I mentioned, but it will be in place no later than the end of the transition. That will

take a load off our shoulders, especially for aviation and logistics. The MLRs will concentrate on all our surveillance and counter-surveillance tasks in support of the fleet and for our own littoral recon battle. Next in priority for us is making sure we're in position to deny the Dakota Straits to the DRC.

The Admiral gave a skeleton outline of what she thinks will happen if the situation does erupt into armed conflict. Essentially, Task Force 82 will screen forward to provide the rest of the fleet freedom to maneuver. We'll be denying the chokepoints to help make this happen, in addition to winning the surveillance fights. She thinks TF 82 will be her eyes and ears while the other task forces steam in EMCON. She wants to be as unpredictable as possible, so if we can blind the DRC then the other task forces will be able to strike in ways they don't expect.

Okay, any questions? Let's get started.

INTENTIONALLY BLANK

APPENDIX A

Future Force Design and Considerations

A.1 2030 MARINE LITTORAL REGIMENT (MLR)

The 2030 MLR will maneuver and persist inside a contested maritime environment and conduct sea-denial operations as part of the naval expeditionary force to enable fleet operations. It must be designed to:

- Conduct surveillance and reconnaissance,
- Conduct OIE,
- Conduct screen/guard/cover,
- Deny or control key maritime terrain,
- Conduct surface warfare operations,
- Conduct air and missile defense,
- Conduct strike operations,
- Conduct sustainment operations,
- Conduct FARP operations.

The MLR will be composed of a headquarters with fires (lethal and nonlethal), a littoral combat team, littoral logistics battalion, and littoral antiair battalion.

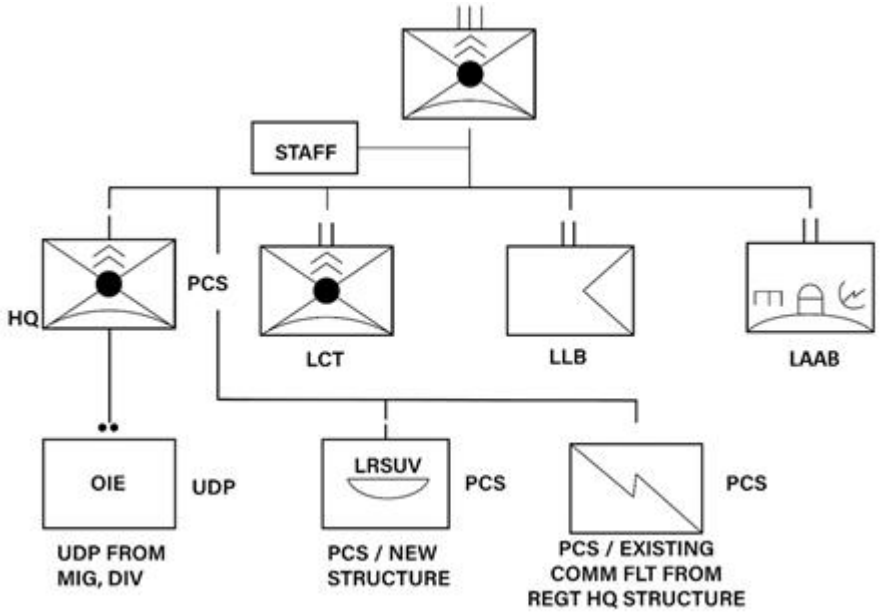


Figure A-1. Organization of the 2030 MLR

A.1.1 Littoral Combat Team (LCT)

The LCT will be employed as a task-organized maritime littoral unit, capable of commanding and controlling distributed EABs that are conducting sustained operations to enable fleet operations via sea denial.

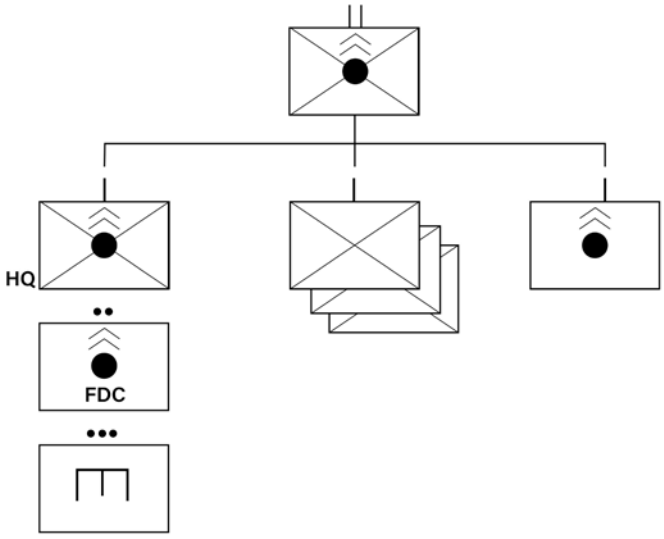


Figure A-2. Organization of the LCT

The proposed 2030 infantry formations from team to battalion will generate infantry units to support various missions via infantry core METs. These formations will provide the core forces for BLTs and LCTs, while preserving infantry battalions proficient in core METs for conventional major combat operations.

The LCT will be formed on the foundation of an infantry battalion with attached fires elements. It will be task-organized to provide an MLR commander the capability to operate multiple EABs, including fires EABs, FARP EABs, or combination of these, all operating under the C2 of the LCT headquarters.

A.1.2 Littoral Logistics Battalion (LLB)

The LLB will provide the MLR tactical logistic support beyond organic capabilities by supporting EABs, managing cache sites, and connecting to operational-level logistics. The LLB's decisive logistic capability will be distribution via a combination of organic and contracted trucks and manned/unmanned systems. Essential capabilities must also include expanded purchasing authorities, supply distribution, field-level maintenance, and limited Role II medical support.

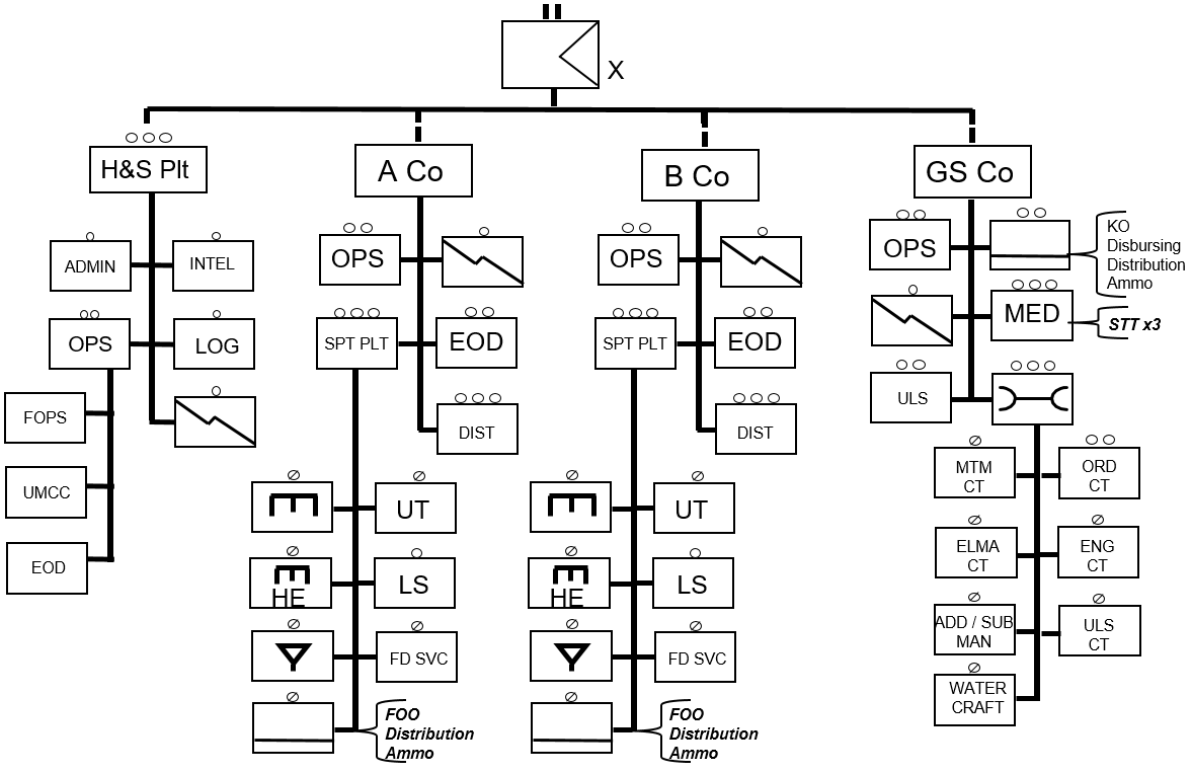


Figure A-3. Organization of the LLB

A.1.3 Littoral Antiair Battalion (LAAB)

Sourced from the Marine air wing, the LAAB will be a composite battalion that includes elements from the Marine wing support squadron, Marine wing communications squadron, Marine air support squadron, Marine air control squadron, and ground-based air defense.

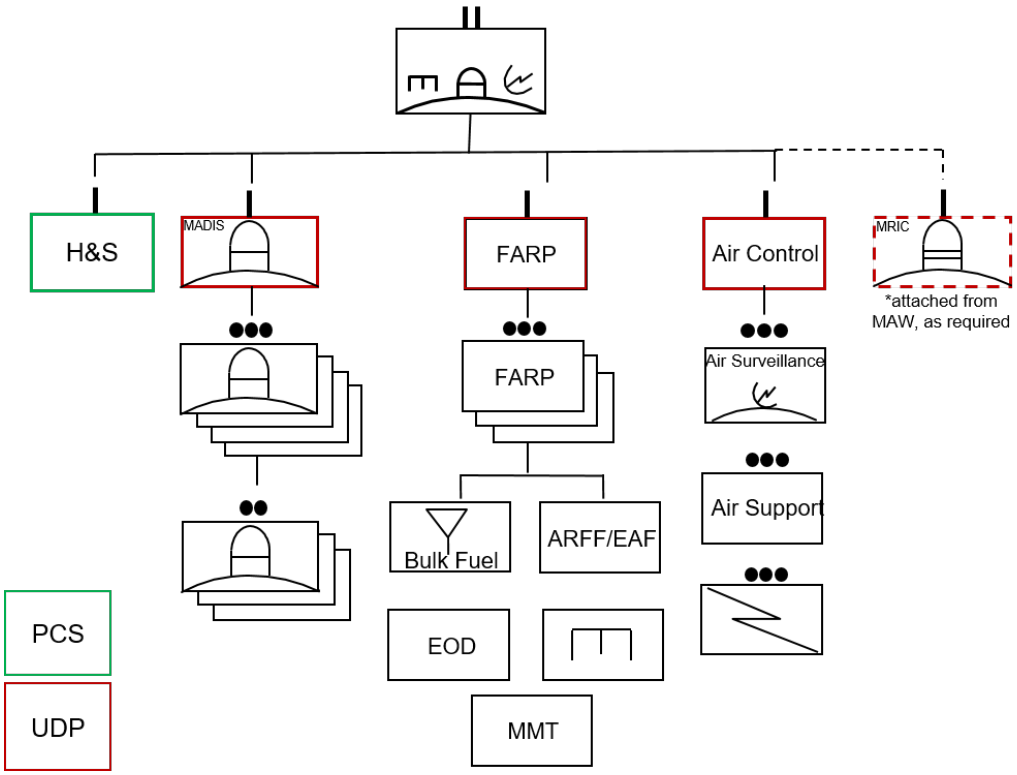


Figure A-4. Organization of the LAAB

A.2 2030 MARINE EXPEDITIONARY UNIT (MEU)

The 2030 MEU will provide the fleet a forward-deployed, all-domain MAGTF operating both from the sea and expeditionary advanced bases. It will be capable of enabling sea denial and conducting amphibious operations, crisis-response operations, and designated special operations to support the requirements of multiple combatant commanders. It must be designed to:

- Conduct MIO,
- Conduct sensitive site exploitation,
- Plan and direct intelligence operations,
- Integrate fire support with the scheme of maneuver,
- Conduct battlespace-shaping operations,
- Conduct OIE,
- Plan and direct logistic operations,
- Conduct embarkation support,
- Integrate and operate with JIIM organizations,
- Exercise command and control of all-domain forces,
- Plan and direct maritime operations.

The only fixed element of the 2030 MEU will be the command element.

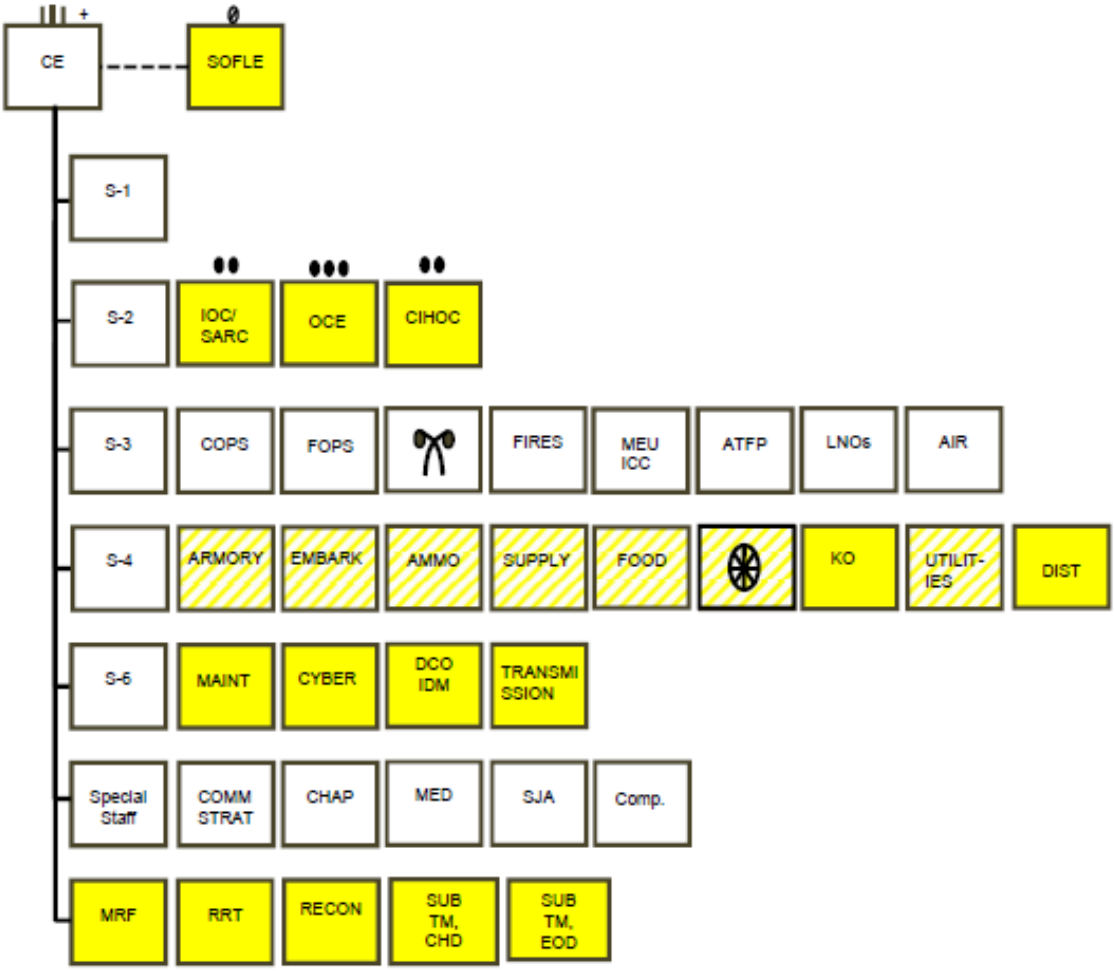


Figure A-5. Organization of the 2030 MEU CE

The 2030 MEU will operate from a combination of amphibious shipping, alternative platforms, and shore basing. It will not be exclusively tied to the three-ship ARG. However, the amphibious shipping combination of landing helicopter assault/dock (LHA/D), landing platform dock (LPD), and LPD Flight II, plus shore basing, will remain the optimum configuration to accomplish the maximum number of METs and will represent the baseline 2030 ARG/MEU.

The embarkation footprint for each MEU will vary depending on the specific mix of amphibious shipping, alternative platforms, and shore basing. The MEU commander will make specific embarkation decisions under the guidance of the MEF commanding general, informed by the commanding generals of the MARDIV, MAW, and MLG

Despite the dynamic nature of the 2030 MEU, its baseline elements *may* mirror or resemble the following:

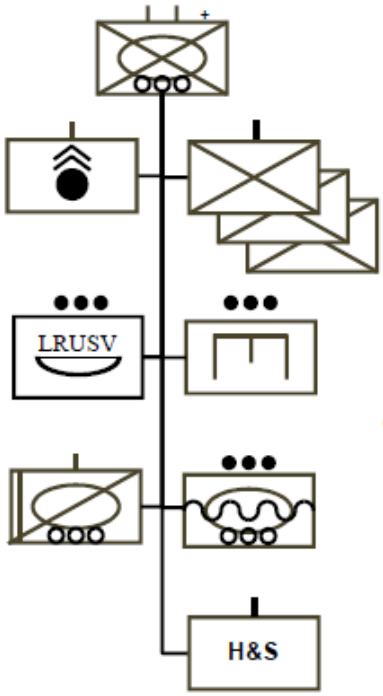


Figure A-6. Organization of the 2030 MEU GCE

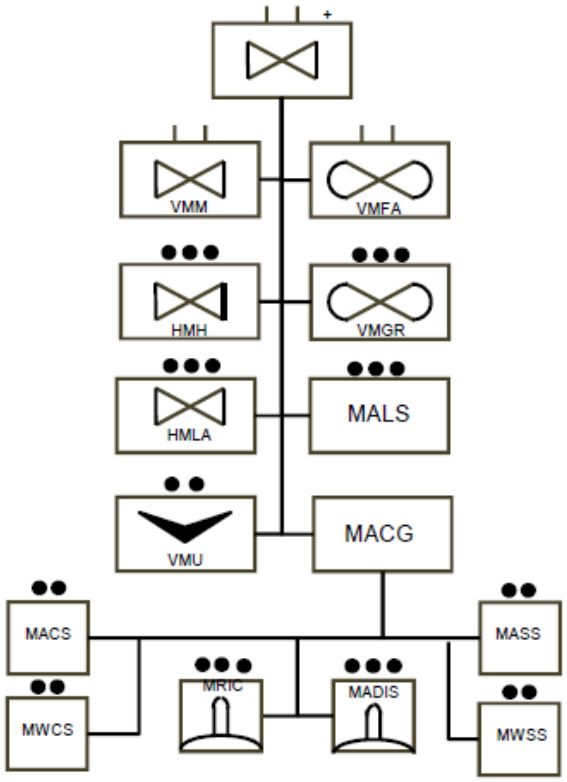


Figure A-7. Organization of the 2030 MEU ACE

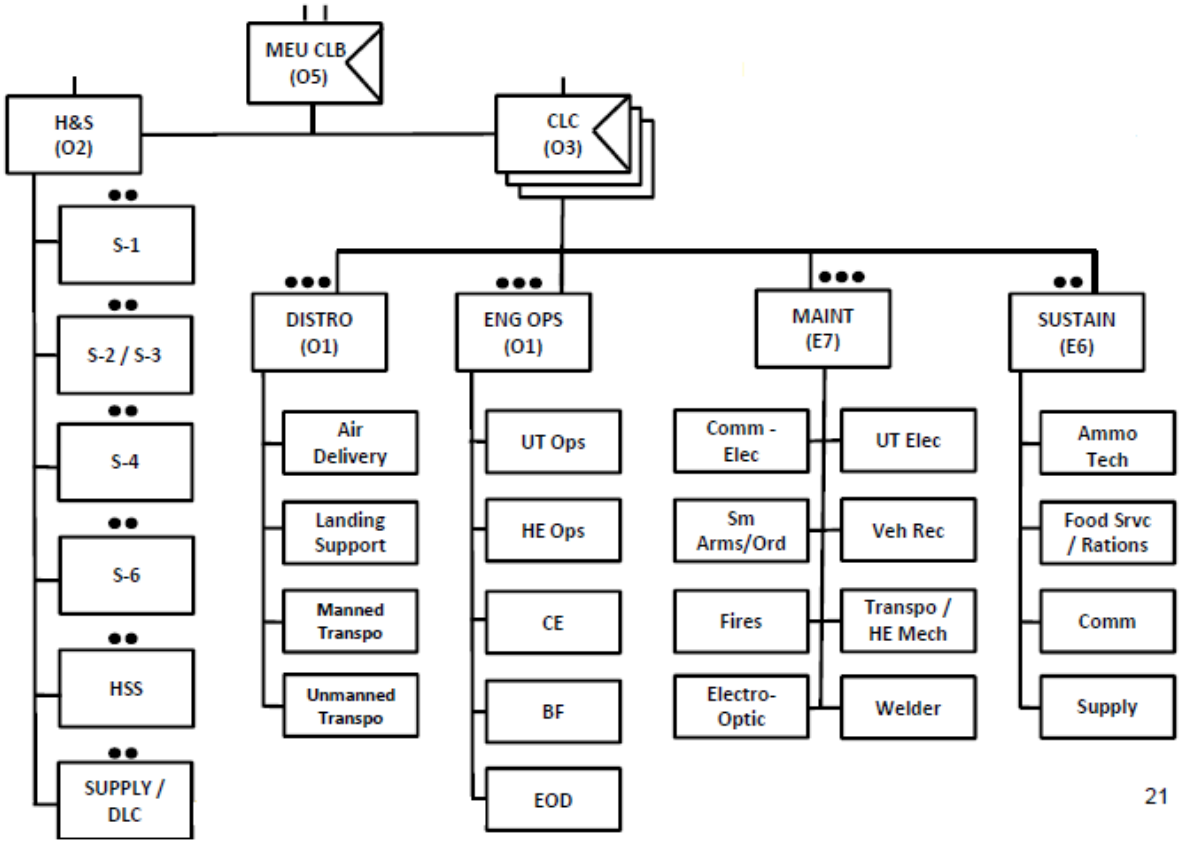


Figure A-8. Organization of the 2030 MEU LCE

A.3 2030 INFANTRY BATTALION

The 2030 Marine infantry battalion will contribute to joint and naval combined-arms formations that are essential components of the future, persistently forward-deployed naval expeditionary force. Optimized to operate in the contact layer, these transformed infantry forces will execute mission-critical tasks for the fleet commander or maritime component commander, often in conjunction with or in support of SOF partners. To accomplish their tasks, infantry battalions must be organically equipped, starting at the squad level, with resilient, networked communications and precision fires capabilities, including loitering munitions enabled by artificial intelligence. These units must be light, mobile, and capable of distributed operations. They must be able to embark aboard all types of Navy and auxiliary vessels. And they must be armed with organic systems capable of sensing, cueing, and shooting in support of naval and joint sea-control and assured-access missions. Mature, competent, highly trained and educated Marines equipped with state-of-the-art weapons and equipment are essential to achieving this vision.

Infantry battalions will deploy rotationally as the LCT of an MLR or as the BLT of a MEU. Rotational deployments to the Western Pacific maintain persistent forward presence to support allies and partners, deter aggression, and if attacked to fight and win. They will also deploy in response to crisis as part of an

infantry regiment or special purpose MAGTF. Core mission essential tasks for the 2030 infantry battalion will include:

- Conduct expeditionary operations,
- Conduct offensive operations,
- Conduct defensive operation.

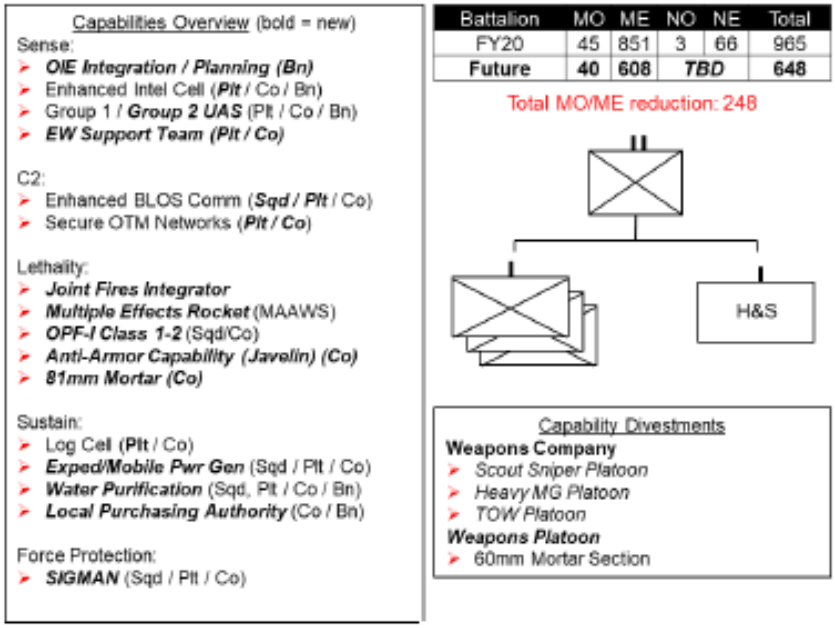


Figure A-9. Organization of the 2030 infantry battalion

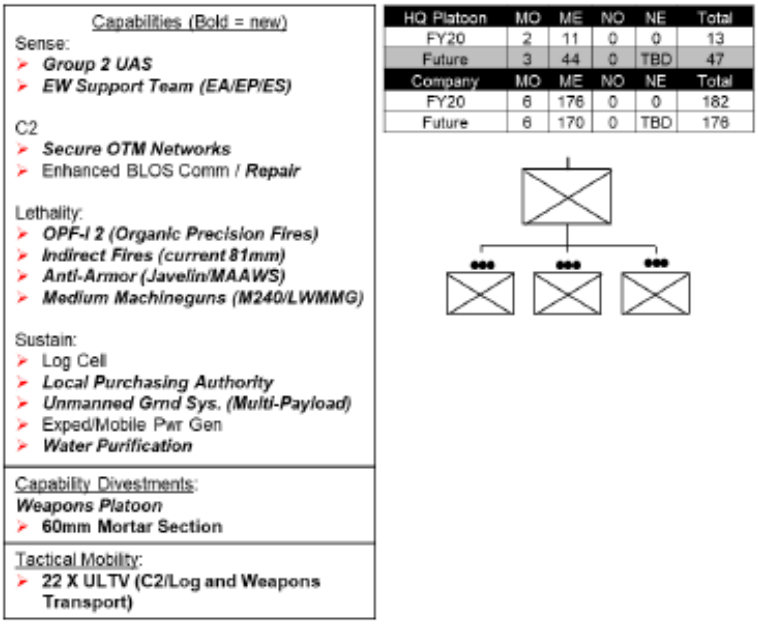


Figure A-10. Organization of the 2030 infantry company

A.4 2030 MARINE FIRES

2030 Marine fires forces will operate as part of a naval expeditionary force and provide fires to support and enable sea denial and sea control. It will do so to facilitate fleet operations and control key maritime terrain.

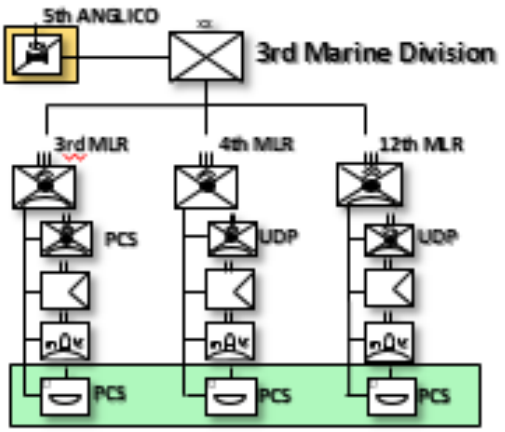


Figure A-11. Organization of 2030 fires forces within 3rd MARDIV

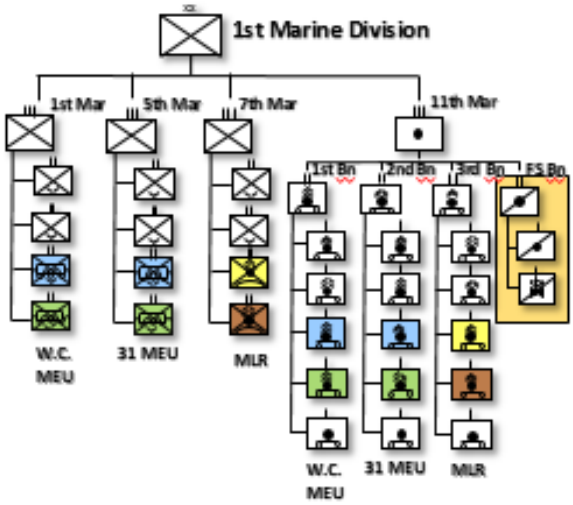


Figure A-12. Organization of 2030 fires forces within 1st MARDIV

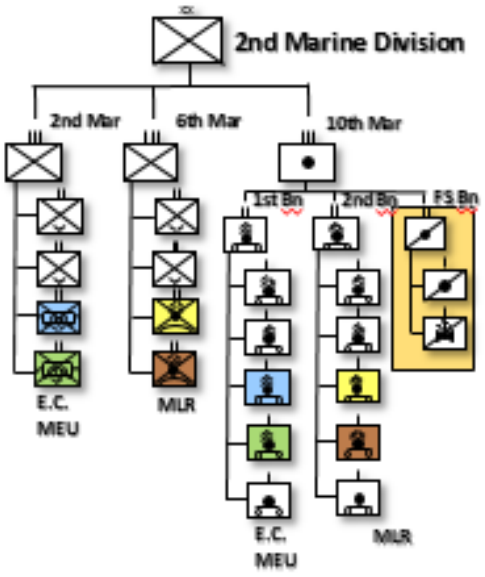


Figure A-13. Organization of 2030 fires forces within 2nd MARDIV

ILLUSTRATION OMITTED PENDING REVISION AND RESUBMISSION

Figure A-14. Organization of NMESIS in support of 2030 MLR and MEU

ILLUSTRATION OMITTED PENDING REVISION AND RESUBMISSION

Figure A-15. Organization of proposed 2030 NMESIS battery

ILLUSTRATION OMITTED PENDING REVISION AND RESUBMISSION

Figure A-16. Organization of proposed 2030 LRUSV company

ILLUSTRATION OMITTED PENDING REVISION AND RESUBMISSION

Figure A-17. Organization of proposed 2030 cannon battery

ILLUSTRATION OMITTED PENDING REVISION AND RESUBMISSION

Figure A-18. Organization of proposed 2030 composite HQ battery

APPENDIX B

Mission Essential Tasks

B.1 GENERAL

Preparing to conduct EABO requires development of Marine Corps tasks (MCTs) for the Marine littoral regiment (MLR) and Marine expeditionary unit (MEU). Ultimately, these MCTs must include manning, training, and equipping requirements with associated qualitative and quantitative standards when they are chosen as mission-essential tasks (METs) and included in a mission-essential task list (METL). Development and coordination of MCTs/METs/METLs takes place according to the established and codified process outlined within *Policy and Guidance for Mission-Essential Task List (METL) Development, Review, Approval, Publication and Maintenance*, MCO 3500.110. Deputy Commandant for Combat Development and Integration (specifically MCTL Branch, MCID, CDD) leads this process with participation by stakeholders and subject matter experts from the other Deputy Commandants, the Operating Forces, and the Supporting Establishment.

The proposed MCTs listed below include titles only and do not yet encompass all required action/activities. In conjunction with the experimental objectives in appendix C, these MCTs are intended to support further development of necessary conditions and standards leading to validation of capability requirements and development of doctrine.

B.2 PROPOSED MCTs FOR THE MARINE LITTORAL REGIMENT

11 New MCT Recommendations:

MCT X.X.X	Conduct Expeditionary Advanced Based Operations (EABO) (New Task)
MCT X.X.X	Command and Control Distributed Forces (New Task)
MCT X.X.X	Plan and Conduct Littoral Movement and Maneuver (New Task)
MCT X.X.X	Plan and Direct Shore-Based Tactical Logistics (New Task)
MCT X.X.X	Support Operations in the Information Environment (OIE) (New Task)
MCT X.X.X	Plan and Conduct Forward C5ISRT (New Task)
MCT X.X.X	Support Maritime Domain Awareness (New Task)
MCT X.X.X	Support Surface Warfare (New Task)
MCT X.X.X	Support Antiair Warfare (New Task)
MCT X.X.X	Support Strike Warfare (New Task)
MCT X.X.X	Support Antisubmarine Warfare (New Task)
MCT 1.15.1.2	Coordinate Foreign Humanitarian Assistance (FHA)
MCT 5.5.5.1	Conduct/Support Theater Security Cooperation (TSC) Activities
MCT 5.5.1	Integrate and Operate with Joint, Interagency, Intergovernmental and Multinational (JIIM) Organizations

B.2.1 Littoral Combat Team

4 New MCT Recommendations:

MCT X.X.X	Conduct Expeditionary Advanced Based Operations (EABO) (New Task)[59]
MCT X.X.X	Conduct Reconnaissance of Key Maritime Terrain (New Task)
MCT X.X.X	Conduct Fires and Effects in Support of Sea-Denial Operations (New Task)
MCT X.X.X	Conduct EAB Security Operations (New Task)

B.2.2 Littoral Logistics Battalion

4 New MCT Recommendations:

MCT X.X.X	Conduct Integrated Naval Logistics (New Task)
MCT X.X.X	Conduct Littoral Transportation Operations (New Task)
MCT X.X.X	Conduct Shore-Based Tactical Logistics (New Task)
MCT 1.12.3	Conduct Prepositioning Operations (Existing Task)
MCT X.X.X	Employ Proliferated Contracted Authorities (New Task)

B.2.3 Littoral Antiair Battalion

4 New MCT Recommendations:

MCT 5.3.5	Control Aircraft and Missiles (Existing Task)
MCT X.X.X	Support Air Reconnaissance (New Task)
MCT 5.3.5.3.2	Conduct Airspace Surveillance (Existing Task)
MCT X.X.X	Support Offensive Antiair Warfare and Air Defense (New Task)
MCT X.X.X	Disseminate Air-Ground Missile Attack Warning (New Task)
MCT X.X.X	Provide Forward Arming and Refueling Points at Expeditionary Aviation Shore-Based Sites (New Task)

B.3 PROPOSED MCTs FOR THE MEU

3 New MCT Recommendations:

MCT X.X.X	Seize Maritime Key Terrain (New Task)
MCT X.X.X	Conduct Expeditionary Advanced Based Operations (EABO) (New Task)
MCT X.X.X	Conduct Defense of Naval Task Force (New Task)

B.3.1 MEU Command Element

2 New MCT Recommendations:

MCT X.X.X	Conduct Sea-Denial Operations (New Task)
MCT X.X.X	Provide Task-Organized Forces in Support of Sea-Denial Operations in the Littorals (New Task)

B.3.2 MEU Aviation Combat Element

1 New MCT Recommendation:

[59] MCT 1.12.8, "Establish and Operate Expeditionary Advanced Bases (Existing Task)," is an existing MET that is inconsistent with the design and characteristics of EABO as articulated within this manual. EABO involve the conduct of operations; they do not represent a physical basing construct.

MCT X.X.X Conduct Long-Range Strike (New Task)

B.3.3 Change Recommendations (MEU Recommended) to Existing MCT Titles

MCT 5.7 Exercise Command and Control of ~~Air and Ground~~ All-Domain Forces
MCT 5.7.1 Plan and Direct ~~Amphibious~~ Maritime Operations

B.3.4 MEU METs to Enable EABO

In reviewing the proposed MCTs to be used *in the future* as FMF-unit readiness-reportable METs within the Defense Readiness Reporting System, the following METs are provided for comparison and reference. These are the current METs for the MEU.

These METs, with the associated man-train-equip resources and standards, describe current MEU capabilities. Future assessments will identify any gaps or disparities between what the MEU can currently provide to EABO and what future MEU capabilities are needed to support EABO.

Current MEU (Core) METs:

MCT 1.12.1.2	Conduct Amphibious Raid
MCT 1.12.1.3	Conduct Amphibious Assault
MCT 1.12.1.8	Conduct Maritime Interception Operations (MIO)
MCT 1.12.8	*Establish and Operate Expeditionary Advanced Bases*
MCT 1.15.1.2	Coordinate Foreign Humanitarian Assistance (FHA)
MCT 3.2.8	Conduct Expeditionary Strike
MCT 5.5.1	Integrate and Operate with Joint, Interagency, Intergovernmental and Multinational (JIIM) Organizations
MCT 5.5.5.1	Conduct/Support Theater Security Cooperation (TSC) Activities
MCT 6.2.1	Conduct Tactical Recovery of Aircraft and Personnel (TRAP)

INTENTIONALLY BLANK

APPENDIX C

Experiment Objectives

C.1 GENERAL

Experiment objectives provide a framework for the Marine Corps to assess the ability of units to execute operations according to the concepts laid out in *Tentative Manual for Expeditionary Advanced Base Operations*, as well as the validity of the concepts themselves. Collectively, they provide a methodology for assessing the missions and tasks that may be assigned to littoral forces. In addition to missions and tasks associated with the normal warfighting functions, there are specific missions and tasks that are unique to conducting EABO. This appendix aligns experiment objectives and sub-objectives with the EABO missions and tasks to evaluate task accomplishment and mission success.

The experiment objectives are intentionally conceptual, requiring analysis and planning to inform experimentation in EABO. Furthermore, identifying the methods by which tasks and missions are accomplished through experimentation informs future force development and refinement of this manual.

C.2 MISSIONS THAT MAY BE ASSIGNED DURING EABO

- Support sea control operations
- Conduct sea denial operations within the littorals
- Contribute to maritime domain awareness
- Provide forward C5ISRT and counter-C5ISRT
- Provide forward sustainment

C.3 EXPERIMENT OBJECTIVES FOR ASSESSING TASKS AND MISSIONS

Controlled content omitted. The remainder of this appendix can be found at the following web site: https://intelshare.intelink.gov/sites/mcwl/TMEABOAssessment.

INTENTIONALLY BLANK

APPENDIX D

Sample Orders

CLASSIFICATION

Copy no. ____ of ____ copies
1ST MARINE DIVISION (TG 101.1)
REPUBLIC OF CENTRALIA
01 0001Z Jul 30
Task Order 001-30

OPERATION ORDER 001-30 (Operation CENTRALIAN SHIELD) (U)
BASIC ORDER (U)

(U) REFERENCES
(a) *Tentative Manual for Expeditionary Advanced Base Operations*
(b) *Composite Warfare: Maritime Operations at the Tactical Level of War*, NWP 3-56
(c) *Marine Air-Ground Task Force Information Operations*, MCWP 3-32
(d) *Aviation Operations*, MCWO 3-20
(e) *Multi-Service Tactics, Techniques, and Procedures for Air Operations in Maritime Surface Warfare*, NTTP 3-20.8
(f) *Operational Level-Logistics*, MCTP 3-40C

(U) TIME ZONE: Hotel (UTC+8).

(U) TASK ORGANIZATION: Annex A.

1. (U) Situation

a. (U) General. After continued insurgency in Centralia and increasing support from the disaffected population through the 2010s and early 2020s, the Centralian Revolutionary Force (CRF) defeated the Armed Forces of Centralia (ARC) in 2022 and established the Democratic Republic of Centralia (DRC). The Centralian government-in-exile moved its capital from the mainland and established the Republic of Centralia (ROC). The ROC created an anti-DRC coalition among neighboring states, but while these states view the DRC as coercive and a potential threat to regional stability their policies are limited in scope regarding the ROC's territorial integrity. The United States has opposed the CRF and DRC from the outset, has pledged to provide for the ROC's defense, and provides it with military, economic, and diplomatic support. The ROC has a small land service, almost entirely gendarmerie, as it primarily invested in its Navy and Air Force to provide for its defense. Over the past year, increasingly hostile relations between the DRC and ROC have resulted in a probable conflict as the DRC attempts to compel the ROC to integrate it back under the mainland's political system. The United States has declared a maritime exclusion zone around Centralia to place economic and military pressure on the DRC. 1st Marine Division deployed as part of a larger naval and joint force to deter DRC aggression and return the strait to typical, day-to-day operations.

b. (U) Battlespace

(1) (U) Joint Operations Area/Higher Commander's Area of Operations. Combined Joint Task Force-South's (CJTF-S) CJOA includes Centralia, the ROC, Dakota, and the surrounding territorial waters and seas. It explicitly excludes any other states and their territorial waters. CJFMCC-S/TF 101's area of operations includes all maritime space within the CJOA, the ROC, and outlying islands in the strait. See Annex C, Appendix 16 for the detailed CJOA.

(2) (U) Area of Interest. Ports, airfields, and military facilities in west Centralia that can embark or support a DRC amphibious force.

(3) (U) Area of Operations. Task Group (TG) 101.1's AO includes the strait, the ROC, and its outlying islands. See Annex C, Appendix 16.

c. (U) Enemy Forces. The DRC military has near-peer capabilities across all warfighting functions and peer-level capability in select functions/domains.

d. (U) Friendly Forces

(1) (U) Higher. CJTF-S supports the ROC and deters DRC aggression in order to facilitate a favorable diplomatic resolution of the crisis. CJFMCC-S/TF 101 deters DRC aggression and secures the territorial integrity of the ROC in order to facilitate a favorable diplomatic resolution of the crisis.

(2) (U) Adjacent. TG 101.2, consisting of a reinforced carrier strike group (CSG), interdicts commercial shipping bound for DRC ports and develops targeting packages for DRC naval forces. TG 101.4, consisting of an expeditionary strike group, interdicts commercial shipping bound for CRF-controlled ports.

(3) (U) Supporting. TG 101.3, consisting of a carrier strike force (CSF), interdicts commercial shipping bound for DRC ports and provides supporting fires and aviation to TG 101.1. TG 101.5 provides maritime patrol and reconnaissance aircraft (MPRA), tactical fixed-wing aircraft (TACAIR), and fixed-wing assault support to TF 101 from airfields in the ROC. TG 101.6 sustains the TF across the CJOA.

e. (U) Civilian Populace. Omitted.

f. (U) Attachments and Detachments. See Annex A.

g. (U) Assumptions

(1) (U) Limited external air support is available from CJFACC-S during the operation.

(2) (U) The ROC military will provide the preponderance of area security across the island. See Annex J.

(3) (U) TF-level command and control will be disrupted and TG's will have to fight as independent units with minimal real-time integration with other TGs and the TF maritime operations center (MOC). See Annex J.

h. (U) Legal Considerations

(1) (U) US operations within the ROC must minimize collateral damage to the civilian populace and critical infrastructure based on DRC targeting/strike operations.

(2) (U) DRC units may only be targeted after identifiable hostile action. DRC-flagged commercial vessels may only be targeted with lethal fires after identifiable hostile action, but can be boarded and seized without hostile action or intent in the maritime exclusion zone.

(3) (U) Indirect fires employed for self-defense by US forces operating in the ROC must be authorized by the first general/flag officer in the chain of command.

2. (U) Mission. 1st Marine Division/TG 101.1, the TF 101 main effort, secures the Republic of Centralia in order to facilitate a favorable diplomatic resolution of the crisis. BPT defeat DRC aggression in order to maintain the Republic of Centralia's territorial integrity.

3. (U) Execution

a. (U) Commander's Intent

(1) (U) Purpose. Facilitate a favorable diplomatic resolution to the Centralian crisis.

(2) (U) Method. TG 101.1 will deploy to the Republic of Centralia and establish a maritime defense anchored on the island as part of a Combined/Joint all-domain defense-in-depth. Our defense must convince DRC leadership that any operation to reintegrate the island into the mainland would be either too costly or cannot be accomplished. We will employ an all-domain, vertical defense incorporating sub-surface assets (submarines, mines, etc.), surface assets (ships), and aviation assets (TACAIR, UAS) queued and covered by ground sensors and shooters. The TG will execute EABO, leveraging the ROC's terrain to decrease our targetability and increase our survivability. As such, TG 101.1 will fight as a naval team, not as individual batteries, ships, or squadrons. The TG will leverage the flexibility and integration of composite warfare to ensure that each salvo is effective in achieving its desired effect on DRC forces.

(3) (U) End State. DRC leadership deterred and convinced a diplomatic resolution to the crisis is the best strategic option.

b. (U) Concept of Operations. See Annex C, Appendix 18 (Operations Overlay).

(1) (U) Concept of Maneuver. TG 101.1 will primarily execute expeditionary advanced base operations across its assigned AO. TU 101.1.2 will operate within the western portion of ROC and its outlying islands, while TU 101.1.3 operates in the east. TU 101.1.4, the TG 101.1 reserve, will establish a central position inland in order to contain and destroy and potential DRC lodgments. TU 101.1.7 will operate throughout assigned waterspace, using the ROC's terrain to its advantage. Organic light amphibious warships and TU 101.1.5 aircraft will maneuver and sustain the Marine littoral regiments to complicate DRC targeting and inject doubt into their decision making. See Annex C, Appendix 18 (Operations Overlay).

(2) (U) Concept of Fires. All surface and air-and-missile-defense fires will be queued by the Information Warfare Commander (Bravo Quebec). The Surface Warfare Commander (Bravo Sierra) will order the employment of antiship surface fires across all applicable task units. The Air and Missile Defense Commander (Bravo Whiskey) will order the employment of air defense assets, with the exception of self-defense fires and preapproved assets on the CAL/DAL. Unit commanders may exert command by negation for all tactical direction issued by warfare commanders; however, command by negation may not be exercised for tactical directions ordered by CTG 101.1. The Expeditionary Warfare Commander (Bravo Mike) will order the employment of close air support and indirect fires at the direction of joint terminal attack controllers and fire support teams. Employment of indirect fires will be made to CTG 101.1 based on the ROE.

(3) (U) Concept of Information Warfare. The Bravo Quebec will process, exploit, and disseminate all sensor feeds produced by TG 101.1 assets regardless of TU commander ownership. Bravo Quebec will cross-reference all information with TF 101, the host nation, and joint and national intelligence feeds to ensure accurate intelligence dissemination to the warfare commanders and coordinators. The Bravo Quebec will execute all seven functions of operations in the information environment across six capability areas in accordance with delegated authorities and messaging approved by the ROC country team.

(4) (U) Concept of Support. TG 101.6 will provide operational-level logistics to key nodes in the southeast of the ROC. CLR-1, as the Underway Replenishment Group Commander, will operate ports and airfields, maintain key supply points, and distribute logistics to the other TU combat logistics forces.

c. (U) Tasks

(1) (U) Commander, Expeditionary Strike Group THREE

(a) (U) Serve as the Deputy Commander, TG 101.1 and alternate composite warfare commander.

(b) (U) Establish an alternate command post to ensure redundant TG command and control.

(2) (U) Director, Fire Support Coordination Center

(a) (U) Serve as the Surface Warfare Commander.

(b) (U) Develop and disseminate the surface surveillance plan, and coordinate and control surface surveillance to identify potential threats.

(c) (U) Divide the SUW area into sectors, if required, and designate sector surface warfare commanders to ensure executable span of control.

(d) (U) Coordinate and control employment of all task group SUW weapons to prosecute enemy surface tracks.

(3) (U) Commander, Regimental Combat Team 1 (CTU 101.1.4)

(a) (U) Serve as the Expeditionary Warfare Commander.

(b) (U) You are the TG reserve.

(c) (U) Plan and establish a mobile defense in order to contain and destroy any DRC lodgment.

(d) (U) Divide the area of operations into sectors, if required, and designate sector expeditionary warfare commanders to ensure executable span of control and security operations.

(4) (U) Commander, 3rd Ground-Based Air Defense Battalion (CTE 101.1.5.4)

(a) (U) Serve as the Air and Missile Defense Commander.

(b) (U) Develop and implement the air surveillance and protection plan.

(5) (U) Officer-in-Charge, MEF Information Group Detachment (CTE 101.1.1.1)

(a) (U) Serve as the Information Warfare Commander.

(b) (U) Develop and implement the electronic warfare, military deception, operational security, information operations, and emissions control plans.

(c) (U) Disrupt DRC command and control networks to inject doubt into DRC decision making.

(6) (U) Commander, 1st Marine Littoral Regiment (CTU 101.1.2)

(a) (U) Provide fires to the warfare commanders based on CWC priorities.

(b) (U) Provide sensors and deception capabilities to the IWC based on CWC priorities.

(7) (U) Commander, 2nd Marine Littoral Regiment (CTU 101.1.3)

(a) (U) Provide fires to the warfare commanders based on CWC priorities.

(b) (U) Provide sensors and deception capabilities to the IWC based on CWC priorities.

(8) (U) Commander, Marine Aircraft Group 16 (CTU 101.1.5)

(a) (U) Serve as the Air Resource Element Coordinator.

(b) (U) Provide aviation support to all warfare commanders based on CWC priorities.

(9) (U) Commander, Littoral Combat Squadron ONE (CTU 101.1.7)

(a) (U) Provide fires to the warfare commanders based on CWC priorities.

(b) (U) Provide sensors and deception capabilities to the IWC based on CWC priorities.

(10) (U) Commander, Headquarters Battalion (CTU 101.1.1)

(a) (U) Provide headquarters support to CTG 101.1.

(b) (U) Provide fires to the warfare commanders based on CWC priorities.

(c) (U) Provide sensors and deception capabilities to the IWC based on CWC priorities.

(11) (U) Commander, Combat Logistics Regiment 1 (CTU 101.1.6)

(a) (U) Serve as the Underway Replenishment Group Commander.

(b) (U) Provide sustainment and general combat service support to the TG.

(12) (U) AC/S G-2

(a) (U) Serve as the Cryptologic Resource Coordinator.

(b) (U) Coordinate with the IWC to disseminate signals intelligence information.

(c) (U) Adjust cryptologic coverage to meet emerging threats or revised intelligence requirements.

(13) (U) AC/S G-3

(a) (U) Serve as the Common Tactical Picture Manager.

(b) (U) Coordinate with the IWC to disseminate a common tactical picture throughout the task group.

(14) (U) Officer-in-Charge, Marine Air Control Group 38 Detachment (CTE 101.1.5.5)

(a) (U) Serve as the Airspace Control Authority.

(b) (U) Coordinate and integrate the TG 101.1 airspace with organic units as well as supporting/adjacent TGs.

d. (U) Reserve. RCT-1.

e. (U) Commander's Critical Information Requirements. Omitted.

f. (U) Coordinating Instructions. Omitted.

4. (U) Administration and Logistics

a. (U) Personnel. Omitted.

b. (U) Logistics. Omitted.

c. (U) Communications Strategy and Operations. Omitted.

d. (U) Civil-Military Operations. Omitted.

e. (U) Meteorological and Oceanographic Services. Omitted.

f. (U) Geospatial Information and Services. Omitted.

g. (U) Medical Services. Omitted.

5. (U) Command and Signal

a. (U) Command Relationships. See Annex J (Command Relationships).

b. (U) Command Posts and Headquarters. See Succession to Command.

c. (U) Succession to Command

Tactical Assignment	**Primary** (Location)	**Alternate** (Location)
Officer-in-Tactical Command	CTF 101 (MOC)	DCTF 101 (MOC Forward)
Composite Warfare Commander	CTG 101.1 (1st MarDiv HQ)	DCTG 101.1 (ESG-3 HQ)
Air and Missile Defense Commander	CTE 101.1.5.4	CTE 101.1.3.2
Information Warfare Commander	CTE 101.1.1.1	FSCC
Surface Warfare Commander	FSCC	CTU 101.1.2
Anti-Submarine Warfare Commander	CTU 101.1.7	CTE 101.1.7.2

Tactical Assignment	**Primary** (Location)	**Alternate** (Location)
Expeditionary Warfare Commander	CTU 101.1.4	CTU 101.1.1
Underway Replenishment Group Commander	CTU 101.1.6	G-4
Air Resource Element Coordinator	CTU 101.1.5	None
Airspace Control Authority	CTE 101.1.5.5	CTE 101.1.2.2
Common Tactical Picture Manager	G-3	None
Cryptologic Resource Coordinator	G-2	None

d. (U) Signal. Omitted.

ACKNOWLEDGE RECEIPT

W. Z. Phalanx
Major General, USMC
Commanding General

ANNEXES:

A – Task Organization
B – Intelligence (Omitted)
C – Operations
D – Logistics/Combat Service Support (Omitted)
E – Personnel (Omitted)
F – Public Affairs (Omitted)
G – Civil Affairs (Omitted)
H – Meteorological and Oceanographic Operations (Omitted)
J – Command Relationships
K – Combat Information Systems (Omitted)
L – Environmental Considerations (Omitted)
M – Geospatial Information and Services (Omitted)
N – Space Operations (Omitted)
P – Host Nation Support (Omitted)
Q – Medical Services (Omitted)
S – Special Technical Operations (Omitted)
U – Information Management (Omitted)
W – Aviation Operations (Omitted)
X – Execution Checklist (Omitted)
Z – Distribution (Omitted)

OFFICIAL:

T. O. Strack
Colonel, USMC
AC/S G-3

Copy no. ____ of ____ copies
1ST MARINE DIVISION (TG 101.1)
REPUBLIC OF CENTRALIA
01 0001Z Jul 30
Task Order 001-30

ANNEX A TO OPERATION ORDER 001-30 (Operation CENTRALIAN SHIELD) (U)
TASK ORGANIZATION (U)

(U) REFERENCES
(a) *Tentative Manual for Expeditionary Advanced Base Operations*
(b) *Composite Warfare: Maritime Operations at the Tactical Level of War*, NWP 3-56
(c) *Marine Air-Ground Task Force Information Operations*, MCWP 3-32
(d) *Aviation Operations*, MCWO 3-20
(e) *Multi-Service Tactics, Techniques, and Procedures for Air Operations in Maritime Surface Warfare*, NTTP 3-20.8
(f) *Operational Level-Logistics*, MCTP 3-40C

(U) TIME ZONE: Hotel (UTC+8)

(All attachments effective 01 0001Z JUL 30)

1st Marine Division, Fleet Marine Forces Pacific (CTG 101.1) — MajGen Phalanx

- Expeditionary Strike Group THREE — RDML Jones
- Headquarters Battalion, 1st Marine Division (TU 101.1.1) — Col Shield
  - Headquarters Company
  - Communications Company
  - Detachment, 1st Marine Information Group (TE 101.1.1.1)
  - Truck Company (-)
  - Anti-Ship Missile Platoon (MST) (TE 101.1.1.2)
  - Combat Logistics Company 51
- 1st Marine Littoral Regiment (TU 101.1.2) — Col Hammer
  - Headquarters Company
  - Littoral Combat Team 1 (TE 101.1.2.1)
  - Littoral Anti-Air Battalion 1 (TE 101.1.2.2)
  - Littoral Logistics Battalion 1
  - 1st LRUSV Platoon (TE 101.1.2.3)
- 2nd Marine Littoral Regiment (TU 101.1.3) — Col Blade
  - Headquarters Company
  - Littoral Combat Team 2 (TE 101.1.3.1)
  - Littoral Anti-Air Battalion 2 (TE 101.1.3.2)
  - Littoral Logistics Battalion 2
  - 2nd LRUSV Platoon (TE 101.1.3.3)
- Regimental Combat Team 1 (-)(REIN) (TU 101.1.4) — Col Cherokee
  - Headquarters Company
  - 1st Battalion, 1st Marines (TE 101.1.4.1)
  - 2nd Battalion, 1st Marines (TE 101.1.4.2)
  - 1st Battalion, 11th Marines (M777) (TE 101.1.4.3)

1st Light Armored Reconnaissance Battalion (TE 101.1.4.4)
Company A, 1st Assault Amphibian Battalion

Marine Aircraft Group 16 (REIN) (TU 101.1.5) — Col Arrow
Headquarters Company
Marine Medium Tiltrotor Squadron 161 (TE 101.1.5.1)
Marine Light Attack Helicopter Squadron 369 (TE 101.1.5.2)
Marine Heavy Helicopter Squadron 469 (TE 101.1.5.3)
Marine Aircraft Logistics Squadron 16 (-)(REIN)
3rd Ground-based Air Defense Battalion (-) (TE 101.1.5.4)
Detachment, Marine Air Control Group 38 (TE 101.1.5.5)

Combat Logistics Regiment 1 (-)(REIN) (TU 101.1.6) — Col Liberty
Combat Logistics Battalion 1
Combat Logistics Battalion 5 (-)
Intermediate Supply and Maintenance Battalion 15
Surgical Company A, 1st Medical Battalion
Detachment, 1st Dental Battalion
7th Engineer Support Battalion (-)

Littoral Combat Squadron ONE (TU 101.1.7) — CAPT Perry
USS Rafael Peralta (DDG-115) (TE 101.1.7.1)
USS Freedom (LCS-1) (TE 101.1.7.2)
USS Independence (LCS-2) (TE 101.1.7.3)
USS Fort Worth (LCS-3) (TE 101.1.7.4)

ACKNOWLEDGE RECEIPT

W. Z. Phalanx
Major General, USMC
Commanding General

APPENDICES:

1 – Time-Phased Force and Deployment List (Omitted)
2 – Shortfall Identification (Omitted)
3 – Force Module Identification (Omitted)
4 – Deterrent Options (Omitted)
5 – Reserve Component Requirements Summary (Omitted)

OFFICIAL:

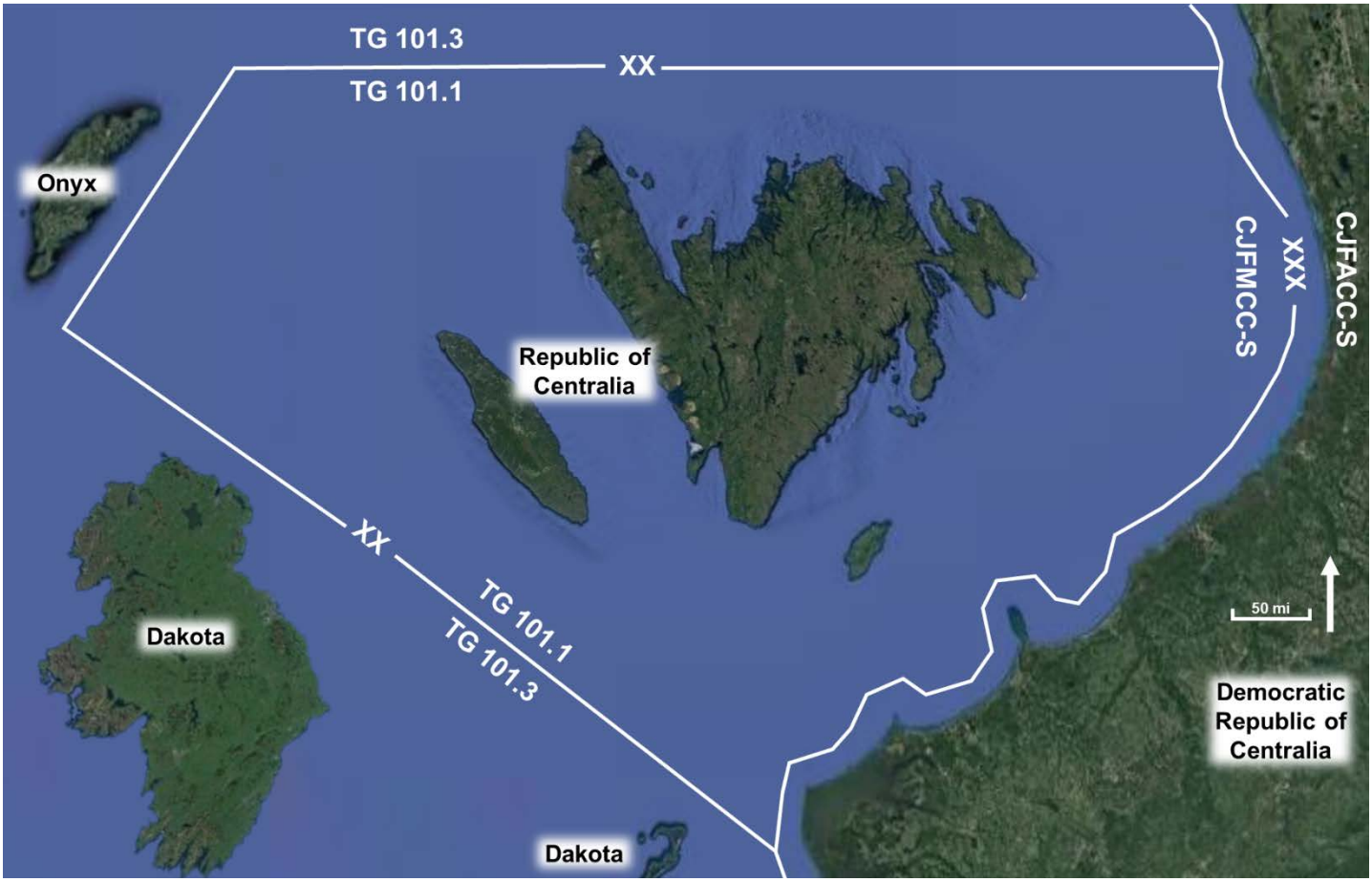
T. O. Strack
Colonel, USMC
AC/S G-3

Copy no. ____ of ____ copies
1ST MARINE DIVISION (TG 101.1)
REPUBLIC OF CENTRALIA
01 0001Z Jul 30
Task Order 001-30

APPENDIX 16 TO ANNEX C TO OPERATION ORDER 001-30 (Operation CENTRALIAN SHIELD) (U)
OPERATIONS OVERLAY (U)

(U) REFERENCES
(a) *Tentative Manual for Expeditionary Advanced Base Operations*
(b) *Composite Warfare: Maritime Operations at the Tactical Level of War*, NWP 3-56
(c) *Marine Air-Ground Task Force Information Operations*, MCWP 3-32
(d) *Aviation Operations*, MCWO 3-20
(e) *Multi-Service Tactics, Techniques, and Procedures for Air Operations in Maritime Surface Warfare*, NTTP 3-20.8
(f) *Operational Level-Logistics*, MCTP 3-40C

(U) TIME ZONE: Hotel (UTC+8)



ACKNOWLEDGE RECEIPT

W. Z. Phalanx
Major General, USMC
Commanding General

OFFICIAL:

T. O. Strack
Colonel, USMC
AC/S G-3

Copy no. ____ of ____ copies
1ST MARINE DIVISION (TG 101.1)
REPUBLIC OF CENTRALIA
01 0001Z Jul 30
Task Order 001-30

ANNEX J TO OPERATION ORDER 001-30 (Operation CENTRALIAN SHIELD) (U)
COMMAND RELATIONSHIPS (U)

(U) REFERENCES
(a) *Tentative Manual for Expeditionary Advanced Base Operations*
(b) *Composite Warfare: Maritime Operations at the Tactical Level of War*, NWP 3-56
(c) *Marine Air-Ground Task Force Information Operations*, MCWP 3-32
(d) *Aviation Operations*, MCWO 3-20
(e) *Multi-Service Tactics, Techniques, and Procedures for Air Operations in Maritime Surface Warfare*, NTTP 3-20.8
(f) *Operational Level-Logistics*, MCTP 3-40C

(U) TIME ZONE: Hotel (UTC+8)

1. (U) General

a. (U) Purpose. To establish the relationships among naval and allied forces assigned to 1st Marine Division/Task Group 101.1.

b. (U) Scope. These command relationships exist for the purpose of executing Operation CENTRALIAN SHIELD in the assigned area of operations and are in force from receipt of this order until the operation's completion.

2. (U) Command Lines

a. (U) Service and Functional Components. Marine Forces Pacific (MARFORPAC) assigned 1st Marine Division OPCON to TF 101. TF 101 will provide common-user logistics, while MARFORPAC will supply service-specific logistics.

b. (U) Other Subordinate Commands. Omitted.

c. (U) Augmentation Forces. None.

d. (U) Composite Warfare Assignments. See Annex J, Appendix 1.

3. (U) Support and Coordination Relationships

a. (U) Supporting Military Forces. Air and space effects will provide requested/approved effects to TG 101.1 via the TF 101 MOC and the Air Tasking Order (ATO) and Space Tasking Order (STO). TG 101.1 will not exercise any TACON/OPCON over air or space forces.

b. (U) Coordinating Authorities. Warfare commanders, functional group commanders, and coordinators have DIRLAUTH to coordinate with TF 101 HQ and TGs 101.3, 101.5, and 101.6 within their respective role/responsibilities.

c. (U) Supporting Agencies. Omitted.

d. (U) Inter-Service Support Arrangements. Omitted.

e. (U) Coordination with Diplomatic Agencies. Omitted.

4. (U) Relationships with International and Foreign Commands and Organizations. DIRLAUTH is granted between TG 101.1 and Armed Forces of Centralia Homeland Defense Command.

5. (U) Planning Relationships. Omitted.

ACKNOWLEDGE RECEIPT

W. Z. Phalanx
Major General, USMC
Commanding General

APPENDIX:

1 – Command Relationships Diagram

OFFICIAL:

T. O. Strack
Colonel, USMC
AC/S G-3

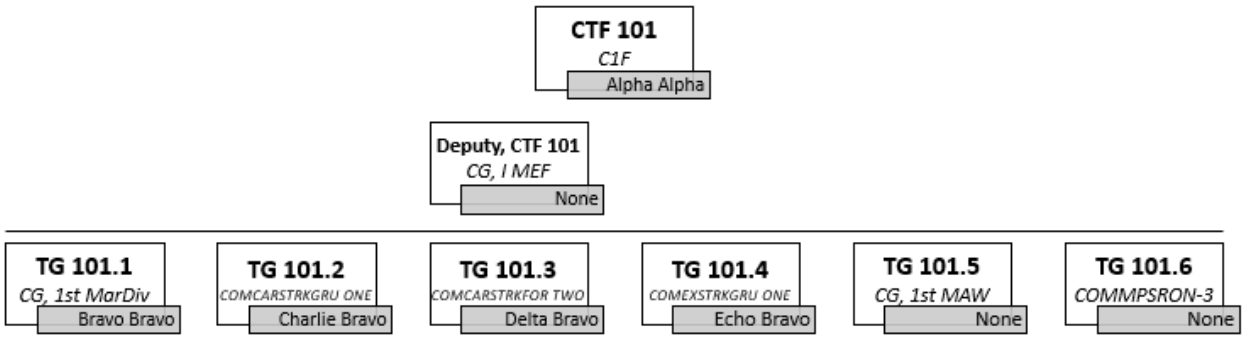
Copy no. ____ of ____ copies
1ST MARINE DIVISION (TG 101.1)
REPUBLIC OF CENTRALIA
01 0001Z Jul 30
Task Order 001-30

APPENDIX 1 TO ANNEX J TO OPERATION ORDER 001-30 (Operation CENTRALIAN SHIELD) (U)
COMMAND RELATIONSHIPS DIAGRAM (U)

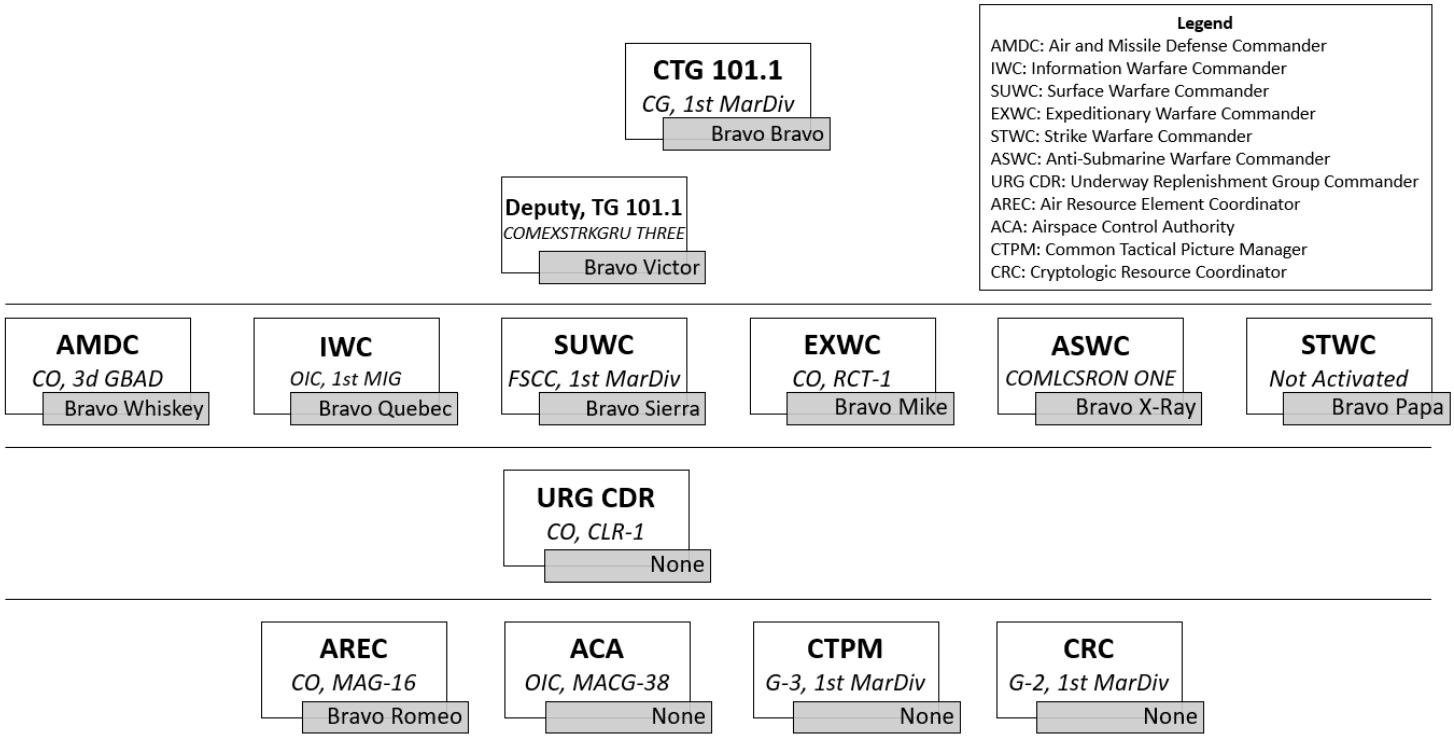
(U) REFERENCES
(a) *Tentative Manual for Expeditionary Advanced Base Operations*
(b) *Composite Warfare: Maritime Operations at the Tactical Level of War*, NWP 3-56
(c) *Marine Air-Ground Task Force Information Operations*, MCWP 3-32
(d) *Aviation Operations*, MCWO 3-20
(e) *Multi-Service Tactics, Techniques, and Procedures for Air Operations in Maritime Surface Warfare*, NTTP 3-20.8
(f) *Operational Level-Logistics*, MCTP 3-40C

(U) TIME ZONE: Hotel (UTC+8)

(U) Operational-Level Command Relationships



(U) Tactical-Level Composite Warfare Command Arrangements



ACKNOWLEDGE RECEIPT

W. Z. Phalanx
Major General, USMC
Commanding General

OFFICIAL:

T. O. Strack
Colonel, USMC
AC/S G-3

INTENTIONALLY BLANK

APPENDIX E

Abbreviations

A2AD	anti-access/area denial
AADC	area air defense commander
AAW	antiair warfare
ACA	airspace control area; airspace control authority
ACE	aviation combat element
AFO	advance force operations
AGS	aviation ground support
AMD	air and missile defense
AMDC	air and missile defense commander
ANB	advanced naval base
AO	area of operations
AREC	air resource element coordinator
ARG	amphibious ready group
ASC (A)	assault support coordinator (airborne)
ASCM	antiship cruise missile
ASE	air support element
ASLT	air support liaison team
ASW	antisubmarine warfare
ASWC	antisubmarine warfare commander
ATC	air traffic control
B2C2WG	boards, bureaus, centers, cells, and working groups
C2	command and control
C2D2E	command and control denied or degraded environment
C5ISRT	command, control, communications, computers, combat systems, intelligence, surveillance, reconnaissance, targeting

CA	civil affairs
CAOC	combined air operations center
CAS	close air support
CE	command element
CIEA	classification, identification, and engagement area
C-IED	counter-improvised explosive device
CLF	combat logistics forces
COMSTRAT	communications strategy and operations
CONEMP	concept of employment
COPS	Current Operations (branch, cell, or team)
CORIVGRU	coastal riverine group
CSG	carrier strike group
CSS	combat service support
CWC	composite warfare commander
DAS	deep air support
DASC	direct air support center
DCA	defensive counterair
DCO	defensive cyberspace operations
DCO-IDM	defensive cyberspace operations-internal defensive measures
DIM	daily intentions message
DIME	diplomatic, informational, military, economic
DOD	Department of Defense
DODIN	Department of Defense information network
EAB	expeditionary advanced base
EABO	expeditionary advanced base operations
EAF	expeditionary airfield
EFR	expeditionary fire and rescue
EMCON	emission control

EMI	electromagnetic interference
EMOE	electromagnetic operation environment
EMS	electromagnetic spectrum
EMSO	electromagnetic spectrum operations
EOD	explosive ordnance disposal
EPF	expeditionary fast transport
ESG	expeditionary strike group
EW	electronic warfare
EW/C	early warning/control
EXWC	expeditionary warfare commander
F2T2EA	find, fix, track, target, engage, and assess
FAC (A)	forward air controller (airborne)
FARP	forward arming and refueling point
FDO	flexible deterrent option
FHA	foreign humanitarian assistance
FID	foreign internal defense
FMF	Fleet Marine Force
FMV	full-motion video
FONOPS	freedom of navigation operations
FOPS	Future Operations (branch, cell, or team)
FRO	flexible response option
FSCM	fire support coordination measure
FSR	field service representative
FSV	fast supply vessel
GCE	ground combat element
HA/DR	humanitarian assistance/disaster relief
HDC	helicopter direction center
HEC	helicopter element coordinator

HHQ	higher headquarters
HNS	host-nation support
HSS	health service support
HST	helicopter support team
HUMINT	human intelligence
IADS	integrated air-defense system
IE	information environment
IPB	intelligence preparation of the battlespace
ISB	intermediate staging base
ISR	intelligence, surveillance, and reconnaissance
IW	information warfare; irregular warfare
IWC	information operations warfare commander
JAOC	joint air operations center
JFACC	joint force air component commander
JFC	joint force commander
JFLCC	joint force land component commander
JFMCC	joint force maritime component commander
JFSOCC	joint force special operations component commander
JIIM	joint, interagency, intergovernmental, and multinational
JIPOE	joint intelligence preparation of the operational environment
JOA	joint operations area
JRE	joint range extension
JTF	joint task force
KLE	key leader engagement
LAAB	littoral antiair battalion
LAAD	low-altitude air defense
LAW	light amphibious warship
LCE	logistics combat element

LCF	littoral combat force
LCG	littoral combat group
LCT	littoral combat team
LFC	littoral force commander
LLB	littoral logistics battalion
LMS	littoral maneuver squadron
LOA	littoral operations area; limit of advance
LRPF	long-range precision fires
LRUSV	long-range unmanned surface vessel
LTP	littoral transition point; launch time preferred
MADIS	Marine Air-Defense Integrated System
MAGTF	Marine air-ground task force
MARDIV	Marine division
MARLE	Marine liaison element
MASINT	measurement and signature intelligence
MATCD	Marine air traffic control detachment
MAW	Marine aircraft wing
MCISRE	Marine Corps Intelligence, Surveillance, and Reconnaissance Enterprise
MCM	mine countermeasures
MCT	Marine Corps task
MDA	maritime domain awareness
MEF	Marine expeditionary force
MET	mission essential task
METL	mission essential task list
MEU	Marine expeditionary unit
MIG	MEF information group
MILDEC	military deception
MIO	maritime interception operations

MISO	military information support operations
MLG	Marine logistics group
MLR	Marine littoral regiment
MOA	maritime operations area
MOC	maritime operations center
MRIC	Medium Range Intercept Capability
MWSS	Marine wing support squadron
NALE	naval and amphibious liaison element
NATOPS	Naval Air Training and Operating Procedures and Standardization
NAVELSG	Navy expeditionary logistics support group
NCR	naval construction regiment
NECF	Navy expeditionary combat force
NEF	naval expeditionary force
NEIC	Navy Expeditionary Intelligence Command
NEO	noncombatant evacuation operations
NMESIS	Navy-Marine Expeditionary Ship Interdiction System
NOA	Naval Operational Architecture
NSM	naval strike missile
OA	objective area; operational area
OAS	offensive air support
OCA	offensive counterair
OCO	offensive cyberspace operations
OCS	operational contract support
OE	operational environment
OFSA	own-force signature assessment
OIE	operations in the information environment
OPCON	operational control
OPE	operational preparation of the environment

OPSEC	operational security
OPTASK	operation task; operational tasking (message)
OSINT	open-source intelligence
OST	operational support team
OTC	officer in tactical command
PE	preparation of the environment
PMI	prevention of mutual interference
PNT	positioning, navigation, and timing
PSV	platform supply vessel
PSYOP	psychological operations (forces)
RADC	regional air defense commander
RFS	request for service; request for sourcing; request for support
ROGUE-Fires	Remotely Operated Ground Unit for Expeditionary Fires
SA	surveillance area
SADC	sector air defense commander
SAG	surface action group
SAR	search and rescue
SATCOM	satellite communications
SCC	sea combat commander
SIGCON	signature control
SIGINT	signals intelligence
SIGMAN	signature management
SOF	special operations forces
SOFA	status of forces agreement
SOM	scheme of maneuver
SR	special reconnaissance
SSF CAC2S	small form factor common aviation command and control system
SSR	strategic shaping and reconnaissance

STWC	strike warfare commander
SUPSITs	support situation
SUW	surface warfare
SUWC	surface warfare commander
TAC (A)	tactical air coordinator (airborne)
TACC	tactical air command center (Marine); tactical air control center (Navy)
TACON	tactical control
TADC	tactical air direction center
TAOC	tactical air operations center
TCP	theater campaign plan
TE	task element
TF	task force
TG	task group
TRAP	tactical recovery of aircraft and personnel
TSC	theater security cooperation
TU	task unit
UoA	unit of action
UoE	unit of employment
USG	United States government
USSOCOM	United States Special Operations Command
UW	unconventional warfare
VA	vital area
VTC	video teleconference
WEZ	weapons engagement zone
WHNS	wartime host-nation support
WSM	waterspace management

APPENDIX F

GLOSSARY

advanced base — A base located in or near an operational area whose primary mission is to support military operations. (NTRP 1-02 & MCRP 1-10.2)

advanced force operations (AFO) — Operations conducted to refine the location of specific, identified targets and further develop the operational environment for near-term missions. (JP 3-05)

advanced naval base — A temporary base established in or near an operational area whose primary purpose is to support fleet operations during the conduct of a naval campaign. (Working definition)

air and missile defense (AMD) — Direct (active and passive) defensive actions taken to destroy, nullify, or reduce the effectiveness of hostile air and ballistic missile threats against friendly forces and assets. (JP 3-01)

air and missile defense commander (AMDC) — Under the composite warfare commander construct, the officer assigned some or all of the officer in tactical command's detailed responsibilities for defensive counterair and granted the tactical control authority to accomplish the assigned missions and tasks. (NTRP 1-02)

air corridor — A restricted air route of travel specified for use by friendly aircraft and established for the purpose of preventing friendly aircraft from being fired on by friendly forces. (JP 3-52)

airspace control authority (ACA) — The commander designated to assume overall responsibility for the operation of the airspace control system in the airspace control area. (JP 3-52)

alternate position — A position to be occupied when the primary position becomes untenable or unsuitable to carrying out the task. Its position allows fulfillment of the original task. (MCRP 1-10.2)

amphibious ready group (ARG) — A Navy task organization formed to conduct amphibious operations, commanded by an amphibious squadron commander. (JP 3-02)

antiair warfare (AAW) — That action required to destroy or reduce to an acceptable level the enemy air and missile threat. Antiair warfare integrates all offensive and defensive actions against enemy aircraft, surface-to-air weapons, and theater missiles into a singular, indivisible set of operations. Antiair warfare is one of the six functions of Marine aviation. (MCRP 1-10.2)

antisubmarine warfare (ASW) — That segment of naval warfare that involves sensors, weapons, platforms, and targets in the subsurface environment. (NTRP 1-02)

antisubmarine warfare commander (ASWC) — Under the composite warfare commander construct, the officer assigned some or all of the officer in tactical command's detailed responsibilities for antisubmarine warfare and granted the tactical control authority to accomplish the assigned missions and tasks. (NTRP 1-02)

area of operations (AO) — An operational area defined by a commander for land and maritime forces that should be large enough to accomplish their missions and protect their forces. (JP 3-0)

base — A locality from which operations are projected or supported. (JP 1-02)

campaign — A series of related operations aimed at achieving strategic and operational objectives within a given time and space. (JP 5-0)

canalize — 1. To restrict operations to a narrow zone by use of existing or reinforcing obstacles or by fire or bombing. (JP 3-15) 2. To restrict enemy movement to a narrow zone by the use of existing or reinforcing obstacles, fires, or friendly maneuver. (MCRP 1-10.2)

classification, identification, and engagement area (CIEA) — In maritime operations, the area within the surveillance area and surrounding the vital area(s) in which all objects detected must be classified, identified, and monitored; and the capability maintained to escort, cover, or engage. (NTRP 1-02, MCRP 1-10.2)

coastal riverine group (CORIVGRU) — A Navy formation designed primarily to provides port and harbor security, high value assets security, and maritime security operations in the coastal and inland waterways. (Working definition)

combat logistics force (CLF) — A force that includes both active Navy ships and those operated by the Military Sealift Command within the Naval Fleet Auxiliary Force that carry a broad range of stores, including fuel, food, repair parts, ammunition, and other essential materiel to keep naval forces operating at sea for extended periods. (NTRP 1-02)

composite warfare commander (CWC) — An officer to whom the officer in tactical command of a naval task organization may delegate authority to conduct some or all of the offensive and defensive functions of the force. (JP 3-32)

contested environment — An operational environment that encompasses both the uncertain and hostile environments as defined in joint doctrine. (Working definition derived from JP 3-0)

contingency location — A non-enduring location outside of the United States that supports and sustains operations during named and unnamed contingencies or other operations as directed by appropriate authority and is categorized by mission life-cycle requirements as initial, temporary, or semi-permanent. (DODD 3000.10)

cooperative security location (CSL) — A facility located outside the United States and US territories with little or no permanent US presence, maintained with periodic service, contractor, or host-nation support. Cooperative security locations provide contingency access, logistic support, and rotational use by operating forces and are a focal point for security cooperation activities. (CJCS CM-0007-05)

counter-improvised explosive device operations (C-IED) — The organization, integration, and synchronization of capabilities that enable offensive, defensive, stability, and support operations across all phases of operations or campaigns in order to defeat improvised explosive devices as operational and strategic weapons of influence. (JP 3-15.1)

cover — 1. A type of security operation that protects the force from surprise, develops the situation, and gives commanders time and space in which to respond to the enemy's actions. 2. A form of security operation whose primary task is to protect the main body by fighting to gain time while also observing and reporting information and preventing enemy ground observation of and direct fire against the main body. 3. Offensive or defensive actions to protect the force. (MCRP 1-10.2)

defensive cyberspace operations (DCO) — Missions to preserve the ability to utilize blue cyberspace capabilities and protect data, networks, cyberspace-enabled devices, and other designated systems by defeating on-going or imminent malicious cyberspace activity. (JP 3-12)

electronic warfare (EW) — Military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy. (JP 3-13.1)

engagement area — An area where the commander intends to contain and destroy an enemy force with the effects of massed weapons and supporting systems. (MCRP 1-10.2)

expedition — A military operation conducted by an armed force to accomplish a specific objective in a foreign county. (MCDP 3)

expeditionary advanced base (EAB) — A locality within a potential adversary's WEZ that provides sufficient maneuver room to accomplish assigned missions seaward while also enabling sustainment and defense of friendly forces therein. (Working definition)

expeditionary advanced base operations (EABO) — A form of expeditionary warfare that involves the employment of mobile, low-signature, persistent, and relatively easy to maintain and sustain naval expeditionary forces from a series of austere, temporary locations ashore or inshore within a contested or potentially contested maritime area in order to conduct sea denial, support sea control, or enable fleet sustainment. (Working definition)

expeditionary fast transport (EPF) — An intra-theater, wave-piercing catamaran used to move personnel, vehicles, and cargo. (Working definition)

expeditionary force — An armed force organized to accomplish a specific objective in a foreign country. (JP 3-0)

expeditionary strike group (ESG) — An amphibious ready group/Marine expeditionary unit, supported by other forces and led by an embarked Navy flag officer or Marine Corps general officer and an associated command element staff. An expeditionary strike group provides a greater range of amphibious and/or expeditionary warfare planning capabilities for the execution of a variety of missions in the operational environment, including the ability to conduct and support operations ashore and function as a sea base. (NTRP 1-02)

expeditionary warfare — The projection of naval forces into, and their employment within or from, a foreign country and adjacent waters to accomplish a specific mission. (NDP-1)

expeditionary warfare commander (EXWC) — Under the composite warfare commander construct, the officer assigned some or all of the officer in tactical command's detailed responsibilities for expeditionary warfare and granted the tactical control authority to accomplish the assigned missions and tasks. (Working definition derived from NWP 3-56.)

explosive ordnance disposal (EOD) — 1. The detection, identification, on-site evaluation, rendering safe, recovery, and final disposal of unexploded explosive ordnance. 2. The organizations engaged in such activities. (JP 3-42)

fast supply vessel (FSV) — A commercial-style vessel used to move personnel, small repair parts, and limited cargo. (Working definition)

fire support coordination measure (FSCM) — A measure employed by commanders to facilitate the rapid engagement of targets and simultaneously provide safeguards for friendly forces. (JP 3-0)

fleet — An organization of ships, aircraft, Marine Corps forces, and shore-based fleet activities under a commander who may exercise operational, as well as administrative, control. (JP 3-32)

foreign internal defense (FID) — Participation by civilian agencies and military forces of a government or international organizations in any of the programs and activities undertaken by a host nation government to free and protect its society from subversion, lawlessness, insurgency, terrorism, and other threats to its security. (JP 3-22)

forward operating site (FOS) — A scalable location outside the United States and US territories intended for rotational use by operating forces. Such expandable "warm facilities" may be maintained with a limited US military support presence and possibly pre-positioned equipment. Forward operating sites support rotational rather than permanently stationed forces and are a focus for bilateral and regional training. (CJCS CM-0007-05)

guard — 1. To protect the main force by fighting to gain time while also observing and reporting information. 2. A form of security operation whose primary task is to protect the main force by fighting to gain time while also observing and reporting information, and to prevent enemy ground observation of and direct fire against the main body by reconnoitering, attacking, defending, and delaying. A guard force normally operates within the range of the main body's indirect fire weapons. (MCRP 1-10.2)

hide — The positioning of a vehicle, individual, or unit so that no part is exposed to observation or direct fire. (MCRP 1-10.2)

high-value asset (HVA) — Any landside or waterside asset that is of high value. High-value assets may include military and commercial vessels, waterfront facilities, submarines, or commercial vessels carrying certain dangerous cargo. (NTRP 1-02)

high-value unit (HVU) — Maritime assets including aircraft carriers, maritime pre-positioning ships, combat logistics force ships, and amphibious ships conducting assaults and landings. (NTRP 1-02)

hostile environment — An operational environment in which hostile forces have control, intent, and capacity to effectively oppose or react to the operations a unit intends to conduct. (JP 3-0)

human intelligence (HUMINT) — A category of intelligence derived from information collected and provided by human sources. (JP 2-0)

information environment (IE) — The aggregate of individuals, organizations, and systems that collect, process, disseminate, or act on information. (JP 3-13)

information operations (IO) — 1. The integrated employment, during military operations, of information-related capabilities in concert with other lines of operation to influence, disrupt, corrupt, or usurp the decision making of adversaries and potential adversaries while protecting our own. (JP 3-13); 2. The integration, coordination, and synchronization of actions taken to affect a relevant decision maker in order to create an operational advantage for the commander. (MCRP 1-10.2)

information operations warfare commander (IWC) — The officer responsible to the OTC for creating effects and operationally desirable conditions in order to influence, disrupt, corrupt, or usurp the decision making of adversaries and potential adversaries while protecting friendly forces and to assess the information environment to support warfare commanders' objectives in accordance with OTC/CWC direction. (Working definition derived from NWP 3-65)

information warfare (IW) — The integrated employment of Navy's information-based capabilities to degrade, deny, deceive, or destroy an enemy's warfighting capabilities, or to enhance the effectiveness of friendly operations across all domains. (NTRP 1-02)

information-related capability (IRC) — A tool, technique, or activity employed within a dimension of the information environment that can be used to create effects and operationally desirable conditions. (JP 3-13)

intelligence preparation of the battlespace (IPB) — The analytical methodologies employed by the Services or joint force component commands to reduce uncertainties concerning the enemy, environment, time, and terrain. See also **joint intelligence preparation of the operational environment**. (JP 2-01.3)

joint intelligence preparation of the operational environment (JIPOE) — The analytical process used by joint intelligence organizations to produce intelligence estimates and other intelligence products in support of the joint force commander's decision-making process. (JP 2-01.3)

joint operations area (JOA) — An area of land, sea, and airspace, defined by a geographic combatant commander or subordinate unified commander, in which a joint force commander (normally a joint task force commander) conducts military operations to accomplish a specific mission. (JP 3-0)

key maritime terrain — Any landward portion of the littoral that affords a force controlling it the ability to significantly influence events seaward. (EABO Concept)

light amphibious warship (LAW) — A combatant designed to operate inside an adversaries weapons-engagement zone characterized by a stern ramp used for embarkation and tactical offload across a beach. (Working definition)

littoral — The littoral comprises two segments of operational environment: 1. Seaward: the area from the open ocean to the shore, which must be controlled to support operations ashore. 2. Landward: the area inland from the shore that can be supported and defended directly from the sea. (JP 2-01.3)

littoral antiair battalion (LAAB) — A battalion-sized element within a Marine littoral regiment that provides antiair, forward arming and refueling, and air control capabilities. (Working definition)

littoral combat force (LCF) — A task-organized Navy-Marine Corps formation that is composed of two or more littoral combat groups. (Working definition)

littoral combat group (LCG) — A task-organized Navy-Marine Corps formation that may combine an amphibious ready group with embarked Marine expeditionary unit with a surface action group and other capabilities in order to accomplish specific missions. (Working definition)

littoral combat team (LCT) — A battalion-sized element within a Marine littoral regiment that provides ground combat and surface warfare capabilities. (Working definition)

littoral force commander (LFC) — A conceptual term, versus a formal title, for the officer who commands all forces within a littoral operations area. (Working definition)

littoral logistics battalion (LLB) — A battalion-sized element within a Marine littoral regiment that provides direct support and general support logistics capabilities. (Working definition)

littoral operations area (LOA) — A geographical area of sufficient size for conducting necessary sea, air, and land operations in order to accomplish assigned mission(s) therein. (Working definition)

littoral transition point (LTP) — A designated location where forces conducting surface littoral maneuver will shift from waterborne to overland movement or from overland to back to waterborne movement. (Working definition)

long-range unmanned surface vessel (LRUSV) — A remote-controlled, rigid-hulled, inflatable boat that can carry and launch expendable unmanned aerial systems. (Working definition)

main operating base (MOB) — A facility outside the United States and US territories with permanently stationed operating forces and robust infrastructure. Main operating bases are characterized by command and control structures, enduring family support facilities, and strengthened force protection measures. (CJCS CM-0007-05)

malign behavior — The employment of nonmilitary activities designed to achieve military ends. (EABO Concept)

Marine Air Defense Integrated System (MADIS) — An air-defense system that includes both vehicle- and ground-mounted missiles, multifunctional electronic warfare capability, direct-fire weapons, electro-optical infra-red optics, radars, and supporting C2 communications suite. (Working definition)

Marine air-ground task force (MAGTF) — The Marine Corps' principal organization for all missions across the range of military operations, composed of forces task organized under a single commander capable of responding rapidly to a contingency anywhere in the world. The types of forces in the MAGTF are functionally grouped into four core elements: a command element, an aviation combat element, a ground combat element, and a logistics combat element. The four core elements are categories of forces, not formal commands. The basic structure of the MAGTF never varies, though the number, size, and type of Marine Corps units composing each of its four elements will always be mission dependent. The flexibility of the organizational structure allows for one or more subordinate MAGTFs to be assigned. In a joint or multinational environment, other service or multinational forces may be assigned or attached. (MCRP 1-10.2)

Marine littoral regiment (MLR) — A Marine Corps formation designed to persist within an adversary's weapons-engagement zone in order to conduct expeditionary advanced base operations in support of fleet operations. (Working definition)

maritime domain — The oceans, seas, bays, estuaries, islands, coastal areas, and the airspace above these, including the littorals. (JP 3-32)

maritime domain awareness (MDA) — The effective understanding of anything associated with the maritime domain that could impact the security, safety, economy, or environment of a nation. (JP 3-32)

maritime interception operations (MIO) — Efforts to monitor, query, and board merchant vessels in international waters to enforce sanctions against other nations, such as those in support of United Nations Security Council resolutions, and/or prevent the transport of restricted goods. (JP 3-03)

Medium Range Intercept Capability (MRIC) — A defense system against cruise missiles designed to be operated by expeditionary forces persisting inside the WEZ in support of fleet operations. (Working definition)

military information power — The total means of force or information capability applied against a relevant actor to enhance lethality, survivability, mobility, or influence. (DC I and DC CD&I joint memorandum dtd 22 Jan 2020).

military information support operations (MISO) — Planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately the behavior of foreign governments, organizations, groups, and individuals in a manner favorable to the originator's objectives. (JP 3-13.2)

mine countermeasures (MCM) — All methods for preventing or reducing damage or danger from mines. (JP 3-15)

mission, enemy, terrain and weather, troops and support available–time available — 1. In the context of information management, the major subject categories into which relevant information is grouped for military operations. 2. In the context of tactics, the major factors considered during mission analysis. Also called **METT-T**. (MCRP 1-10.2)

naval construction regiment (NCR) — A Navy formation designed to provide a wide range of construction, including roads, bridges, bunkers, airfields and logistics bases; provide responsive support disaster recovery operations; perform civic action projects to improve relations with other nations; and provide antiterrorism and force protection for personnel and construction projects. (Working definition)

naval expeditionary forces (NEF) — A broad term covering all amphibious ships, landing craft, and associated crews, naval beach groups, Navy expeditionary combat forces, and Marines. (Working definition)

navigation warfare (NAVWAR) — Deliberate defensive and offensive action to assure and prevent positioning, navigation, and timing information through coordinated employment of space, cyberspace, and electronic warfare operations. (JP 3-14)

Navy expeditionary combat forces (NECF) — The individual components of Navy Expeditionary Combat Command (coastal riverine force, explosive ordnance disposal, mobile diving and salvage unit, Navy Expeditionary Logistics Support Group, naval construction force, Navy Expeditionary Intelligence Command) utilized to make up the body of an adaptive force package. (Pending update to NTRP 1-02 by the removal of "combat camera")

Navy Marine Expeditionary Ship Interdiction System (NMESIS) — An antiship missile system that combines Remotely Operated Ground Unit for Expeditionary Fires (ROGUE-Fires) vehicles with the Naval Strike Missile (NSM). (Working definition from MARCORSYSCOM)

noncombatant evacuation operation (NEO) — An operation whereby noncombatant evacuees are evacuated from a threatened area abroad, which includes areas facing actual or potential danger from natural or manmade disaster, civil unrest, imminent or actual terrorist activities, hostilities, and similar circumstances, that is carried out with the assistance of the Department of Defense. (JP 3-68)

offensive cyberspace operations (OCO) — Missions intended to project power in and through cyberspace. (JP 3-12)

officer in tactical command (OTC) — In maritime usage, the senior officer present eligible to assume command, or the officer to whom the senior officer has delegated tactical command. (JP 3-32)

operational area (OA) — An overarching term encompassing more descriptive terms (such as area of responsibility and joint operations area) for geographic areas in which military operations are conducted. (JP 3-0)

operational control (OPCON**) —** The authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. (JP 1)

operational environment (OE) — A composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander. (JP 3-0)

operational preparation of the environment (OPE) — The conduct of activities in likely or potential areas of operations to prepare and shape the operational environment. (JP 3-05)

operational tasking (message) (OPTASK) — Maritime-unique formatted message used by both the United States Navy and NATO to provide detailed information for specific aspects within individual areas of warfare and for tasking resources. This includes logistics, may be issued at all levels above the unit, and may be Navy-wide or focused on a particular theater or strike group. (NTRP 1-02)

operations in the information environment (OIE) — A Marine Corps term that encompasses the seven functions of OIE: assure C2 and critical systems; provide battlespace awareness; attack and exploit adversary networks; inform domestic and international audiences; influence foreign target audiences; deceive adversary target audiences; and control information capabilities, resources, and activities. (NDP-1)

platform supply vessel (PSV) — A commercial-style vessel used to move fuel and cargo. (Working definition)

position — 1. A location or area occupied by a military unit. 2. The location of a weapon, unit, or individual from which fire is delivered upon a target. (MCRP 1-10.2)

preparation of the environment (PE) — An umbrella term for operations and activities conducted by selectively trained special operations forces to develop an environment for potential future special operations. (JP 3-05)

prevention of mutual interference (PMI) — In submarine operations, procedures established to prevent submerged collisions between friendly submarines, between submarines and friendly surface ship towed bodies and arrays, and between submarines and any other hazards to submerged navigation. (JP 3-32)

primary position — A position that provides the best means to accomplish the assigned mission. (MCRP 1-10.2)

screen — 1. A security element whose primary task is to observe, identify, and report information, and only fight in self-protection. 2. A form of security operation that primarily provides early warning to the protected force. (MCRP 1-10.2)

sea base — An inherently maneuverable, scalable aggregation of distributed, networked platforms that enables the global power projection of offensive and defensive forces from the sea and includes the ability to assemble, equip, project, support, and sustain those forces without reliance on land bases within the joint operations area. (NTRP 1-02)

sea basing — The deployment, assembly, command, projection, reconstitution, sustainment, and re-employment of joint power from the sea without reliance on land bases within the operational area. (JP 3-02)

sea combat commander (SCC) — Under the composite warfare commander construct, the officer assigned some or all of the officer in tactical command's detailed responsibilities for sea combat and granted the tactical control authority to accomplish the assigned missions and tasks; this is an optional position within the composite warfare commander structure. (NTRP 1-02)

sea control — 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 of time and, where necessary, to deny or limit its use to the enemy. Sea control includes the airspace above the surface and the water volume and seabed below. (NTRP 1-02)

sea denial — The ability to partially or completely denying the adversary the use of the sea with a force that may be insufficient to ensure the use of the sea by one's own forces. (NTRP 1-02)

sector — An area designated by boundaries within which a unit operates and for which it is responsible. (NTRP 1-02, MCRP 5-2A)

signature control (SIGCON) — The management and assessment of observable and measurable force signatures and profiles across all domains and spectrums to deny, degrade, or deceive the adversary's ability to detect and engage the strike force. SIGCON affects the ability of an adversary's sensor(s) to detect friendly forces by understanding and controlling activities within exploitable domains. SIGCON is a discipline focused on affecting the adversary's "left of kill chain" ISRT capabilities. (TM 3-13.1-17)

signature management (SIGMAN) — The process by which we understand own-force signatures and indicators; identify adversary methods and capabilities to collect and analyze those signatures; develop and implement countermeasures to mask those signatures; develop and implement, when necessary, methods to project false signatures that protect friendly forces from adversary exploitation or draw the adversary toward a specific course of action or position of disadvantage. (*Marine Corps Concept for Signature Management*)

special reconnaissance (SR) — Reconnaissance and surveillance actions conducted as a special operation in hostile, denied, or diplomatically and/or politically sensitive environments to collect or verify information of strategic or operational significance, employing military capabilities not normally found in conventional forces. (JP 3-05)

stand-in engagement capabilities — Low-signature forces designed to accept risk and persist inside a competitor's weapons-engagement zone to cooperate with partners, support host-nation sovereignty, confront malign behavior and, in the event of conflict, engage the enemy in close-range battle. (Working definition)

stand-off engagement capabilities — Long-range capabilities designed to be employed from outside the effective range of an opponent's weapons in order to minimize risk to one's own forces. (Working definition)

strike — An attack to damage or destroy an objective or a capability. (JP 3-0)

strike warfare (STW) — Naval operations to destroy or neutralize enemy targets ashore, including attacks against strategic targets, such as manufacturing facilities and operating bases, from which the enemy is capable of conducting or supporting air, surface, or subsurface operations against friendly forces. (NTRP 1-02)

strike warfare commander (STWC) — Under the composite warfare commander construct, the officer assigned some or all of the officer in tactical command's detailed responsibilities for strike

warfare and granted the tactical control authority to accomplish the assigned missions and tasks. (NTRP 1-02)

supplementary position — A position which provides the best means to accomplish a task that cannot be accomplished from the primary or alternate position. (MCRP 1-10.2)

support — 1. The action of a force that aids, protects, complements, or sustains another force in accordance with a directive requiring such action. 2. A unit that helps another unit in battle. 3. An element of a command that assists, protects, or supplies other forces in combat. (JP 1)

support situations (SUPSITs) — The degree, manner, and duration of the action of a maritime task organization or portion thereof, which aids, protects, complements, or sustains any other maritime task organization when a support command relationship is not established. (NWP 3-56)

SUPSIT Alpha — The supporting force is to join and integrate with the supported force. The senior officer present, or the officer to whom he/she has delegated tactical command, becomes the OTC of the integrated force. (NWP 3-56)

SUPSIT Bravo — The supporting force does not integrate with the supported force. Unless otherwise ordered, the supported commander of the two forces is to coordinate the tactical operations of the two forces. (NWP 3-56)

SUPSIT Charlie — The supporting force commander has discretion on how best to provide support. (NWP 3-56)

surface action group (SAG) — A temporary or standing organization of combatant ships, other than carriers, tailored for a specific tactical mission. (JP 3-32)

surface warfare (SUW) — That portion of maritime warfare in which operations are conducted to destroy or neutralize enemy naval surface forces and merchant vessels. (JP 3-32)

surface warfare commander (SUWC) — Under the composite warfare commander construct, the officer assigned some or all of the officer in tactical command's detailed responsibilities for surface warfare and granted the tactical control authority to accomplish the assigned missions and tasks. (NTRP 1-02)

surveillance area (SA) — In surface warfare, the area in the operational environment that extends out to a range that equals the force's ability to conduct a systematic observation of a surface area using all available and practical means to detect any vessel of possible military concern. (NTRP 1-02)

tactical control (TACON) — The authority over forces that is limited to the detailed direction and control of movements or maneuvers within the operational area necessary to accomplish missions or tasks assigned. (JP 1)

tactical recovery of aircraft and personnel (TRAP) — A Marine Corps mission performed by an assigned and briefed aircrew for the specific purpose of the recovery of personnel, equipment, and/or aircraft when the tactical situation precludes search and rescue assets from responding and when survivors and their location have been confirmed. (JP 3-50)

uncertain environment — An operational environment in which host government forces, whether opposed to or receptive to operations that a unit intends to conduct, do not have totally effective control of the territory and population in the intended operational area. (JP 3-0)

unconventional warfare (UW) — Activities conducted to enable a resistance movement or insurgency to coerce, disrupt, or overthrow a government or occupying power by operating through or with an underground, auxiliary, and guerrilla force in a denied area. (JP 3-05.1)

unit of action (UoA) — A reinforced platoon task organized to conduct expeditionary advanced base operations as a subordinate element of a unit of employment. (Working definition)

unit of employment (UoE) — A reinforced company task organized to conduct expeditionary advanced base operations. (Working definition)

vital area (VA) **—** A designated area or installation to be defended by air defense units. (NTRP 1-02)

waterspace management (WSM) — The allocation of waterspace in terms of antisubmarine warfare attack procedures to permit the rapid and effective engagement of hostile submarines while preventing inadvertent attacks on friendly submarines. (JP 3-32)

weapons engagement zone (WEZ) — 1. In antisubmarine warfare, the area defined by a submarine datum expanded by a predicted furthest-on-circle and the maximum effective torpedo firing range (for a torpedo threat) or 2. The maximum effective missile firing range (for an antiship cruise missile threat). (NTRP 1-02) 3. The maximum range at which a combatant can detect adversary forces and effectively employ antiship missiles and land-attack missiles against them. (Working definition)

zone of action — A tactical subdivision of a larger area, the responsibility for which is assigned to a tactical unit; generally applied to offensive action. (JP 3-09)

zone of fire — An area into which a designated ground unit or fire support ship delivers, or is prepared to deliver, fire support. (JP 3-09)

INTENTIONALLY BLANK