Chapter 6

Power Projection

Whether the landing force lands by pulling boat, by motor sailer, by diesel-driven barge, or by helicopter, there must still be fighting men to project American maritime power onto the farther shores and the islands in between...America’s safety and well-being depend in primary measure upon American ability to control and, even more important, exploit control of the seas. Thus, maritime warfare is our predominant mode of warfare, and that is where the Marine Corps finds its place, as the nation’s ready maritime expeditionary force. This role suits the Marine Corps above all others, because of the naval character of the Corps. 14

Background: The Joint Expeditionary Era

During the Cold War the United States maintained a “global garrison” posture, wherein significant military forces were positioned overseas in close proximity to likely employment areas. Since the end of that conflict, U.S. military forces have been transitioning to an expeditionary posture. Most forces are now based in the United States and deploy overseas, rotationally or episodically, to meet operational requirements. Meanwhile, the United States’ global network of air and land bases has diminished. In this “joint expeditionary era,” U.S. forces are increasingly challenged by diplomatic, geographic and military impediments to access, necessitating a greater emphasis on power projection capabilities. The Capstone Concept for Joint Operations elaborates on this topic.

Diminishing overseas access is another challenge anticipated in the future operating environment. Foreign sensitivities to U.S. military presence have steadily been increasing. Even close allies may be hesitant to grant access for a variety of reasons. Diminished access will complicate the maintenance of forward presence, a critical aspect of past and current U.S. military strategy, necessitating new approaches to responding quickly to

developments around the world as well as more robust exploitation of existing U.S. advantages to operate at sea and in the air, space, and cyberspace. Assuring access to ports, airfields, foreign airspace, coastal waters and host nation support in potential commitment areas will be a challenge and will require active peacetime engagement with states in volatile areas. In war, this challenge may require forcible-entry capabilities designed to seize and maintain lodgments in the face of armed resistance.  

**Power projection** is defined as “the ability of a nation to apply all or some of its elements of national power—political, economic, informational, or military—to rapidly and effectively deploy and sustain forces in and from multiple dispersed locations to respond to crises, to contribute to deterrence, and to enhance regional stability.”

The United States has two broad military means—normally employed in combination—for projecting power overseas: air power and sea power. Air power provides a means to deliver fires, personnel (to include airborne and air-mobile forces), and limited materiel very quickly. It is less effective, however, in delivering equipment and supplies in the volume necessary to sustain larger military operations. Sea power provides a means to deliver fires, personnel (to include amphibious forces), and resources with somewhat less immediacy than air power, but in much greater weight and volume. The preponderance of joint force materiel—vehicles, equipment, ammunition, and supplies—is still delivered by sea. While air power can project a light force quickly, it is soon outpaced by, and cannot compete with, sea power in the projection and sustainment of larger forces.

Given the weight and volume advantages of seaborne transportation, sea power has long been recognized as the most useful means of projecting military power overseas. Strikes and amphibious assaults are the most commonly recognized naval contributions to power projection.

A **strike** is an attack to damage or destroy an objective or a capability. Naval strike capabilities include ballistic or cruise missiles, aircraft, naval surface fires, electronic warfare, computer network attack, Marines,

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and naval special warfare teams. Among the various strike options, the U.S. Navy’s aircraft carriers and sea-based missile platforms provide unique and preeminent capabilities. U.S. aircraft carriers (often containing Marine fighter/attack squadrons) are without peer among the world’s navies. Operating from international waters, their carrier air wings are capable of dominating portions of the maritime domain for hundreds of miles. In addition to the capabilities of the carriers and their embarked air wings, carrier strike groups (CSGs) may also include surface combatants and submarines capable of conducting precision missile strikes. They also provide the capability to protect power projection forces from surface, subsurface, and air-delivered threats, including ballistic missiles. The mobility, operational independence, and surge capability of these CSGs provides the access, endurance, range and volume of fires necessary to conduct a wide variety of strike operations, from time-sensitive, precision strikes against fleeting, high-value targets; to sustained, massed fires to destroy enemy ground formations. This versatility and lethality can be applied across the ROMO, from destroying terrorist base camps, to protecting friendly forces involved in sustained counterinsurgency or stability operations, or to defeating enemy anti-access/area-denial defenses in support of amphibious operations. Recent examples include the extensive air, surface, and subsurface strike operations in support of Operations ENDURING FREEDOM and IRAQI FREEDOM. They have also included small, precise attacks against terrorist cells and sanctuaries.

An amphibious assault involves establishing a landing force on a hostile or potentially hostile shore. Although landing forces may vary in size, they are normally organized as a MAGTF—each composed of four core elements: a command element, a ground combat element, an aviation combat element, and a logistics combat element. The largest, the Marine expeditionary force, is the Marine Corps’ principal warfighting organization and includes at least a Marine division, a Marine aircraft wing, and a Marine logistics group. The Marine expeditionary brigade is the “middleweight” MAGTF and is composed of at least one reinforced infantry regiment, a Marine aircraft group, and a combat logistics regiment. The Marine expeditionary unit is the standard deployed MAGTF and is composed of a reinforced infantry battalion, a composite squadron of rotary, tilt rotor, and fixed-wing aircraft, and a task-organized logistics combat element. An Amphibious ready group,
usually composed of three ships, provides the standard means of MEU deployment and employment. An SP MAGTF is a non-standing organization temporarily formed to conduct a specific mission. Amphibious assault ships, amphibious transport dock ships, and dock landing ships provide the complementary platforms required to project, sustain, and recover landing forces, while the Naval Support Element performs key support functions. Additionally, a host of naval capabilities, such as mine warfare, may be critical to the conduct of successful amphibious assaults.

Less well understood is the utility of naval forces in projecting and sustaining other forms of national power. While assault used to be the primary impetus for amphibious capability development, future force development must address all five types of amphibious operations. These include assaults, raids, demonstrations, withdrawals, and amphibious support to other operations. In the post-Cold War security era, the United States has repeatedly conducted all five of these doctrinal applications of amphibious capabilities. U.S. naval forces have conducted more than 120 amphibious operations since 1990, with 78 of them falling into the “other” category. The majority of these were non-combatant evacuations, disaster relief, or similar crisis response events conducted in austere and uncertain environments. Indeed, one of the largest and most complex amphibious operations in modern history, the withdrawal of more than 6,200 United Nations’ peacekeepers from Somalia, was conducted under the threat of surface-to-air missiles in the hands of local militants.

Not included in those amphibious operations are the increasing number of security cooperation and proactive humanitarian assistance activities conducted by naval forces, which both the national and maritime

strategies espouse as essential to preventing conflict. In addition to amphibious forces, these activities have been conducted by a wide variety of naval units, to include CSGs, joint high-speed vessels, hospital ships, cutters, maritime pre-positioning ships, combat logistics force ships, and the various elements of the Naval Expeditionary Combat Command. The variety of these applications has demonstrated the flexibility of naval forces and the usefulness of sea power in projecting not only combat power, but also smart power.

Also not well understood are the important interrelationships among strike, amphibious, and sea control operations. Extensive strike operations may be essential to the successful conduct of both sea control and amphibious operations, while amphibious raids by Marines or naval special warfare teams provide a lower-scale strike option. Conversely, extensive sea control operations may be required in order to close strike platforms within range of a target. Similarly, the establishment of local sea control is usually a pre-requisite for successful amphibious operations, as demonstrated at Normandy in 1944 and countless other historical examples. The reverse is also true. Amphibious operations may be essential to the prosecution of a larger sea control effort, as was the case during the Central Pacific campaign in World War II. In the future, amphibious operations may be required to remove landward threats to sea lines of communication, especially in key maritime choke points.

A primary strength of naval forces is their ability to quickly aggregate capabilities to form Expeditionary strike forces (ESF) capable of projecting overwhelming combat power from the sea to the shore. A few recent examples of the rapid aggregation of naval forces are chronicled below:

- During Operation ENDURING FREEDOM I, Fifth Fleet was rapidly expanded to include four carrier battle groups and two ARGs/MEUs. The USS CARL VINSON, THEODORE ROOSEVELT, JOHN C. STENNIS, and ENTERPRISE provided the preponderance of strike sorties for the operation.

- The USS PELELIU ARG/15th MEU and USS BATAAN ARG/26th MEU, aggregated into Task Force 58, were the first
conventional forces ashore in Afghanistan. Projected, supported, and sustained from the sea at a distance of 450 miles, they opened a lodgment for the introduction of additional joint forces. This lodgment, Forward Operating Base Rhino, supported the seizure of Kandahar and subsequent operations several hundred miles further inland.

- Operation IRAQI FREEDOM I involved aggregation of even more forces. These included five CSGs and three ARGs/MEUs, as well as two amphibious task forces (ATFs), two maritime pre-positioning ship squadrons, a MEF and a MEB. Operating in the Mediterranean Sea, USS THEODORE ROOSEVELT and HARRY S. TRUMAN maintained continuous strike fighter orbits over northern Iraq—700 miles away—for 27 days in order to overcome the lack of suitable land bases in the region. In the Arabian Gulf, USS ABRAHAM LINCOLN, CONSTELLATION and KITTY HAWK executed a full range of missions in support of operations in southern Iraq. ATF West and the maritime pre-positioning ships squadrons supported the establishment of I MEF in Kuwait in preparation for the overland attack into Iraq, while ATF East delivered 2nd MEB for the same purpose. The USS TARAWA ARG/15th MEU supported the seizure of the Al Faw Peninsula and its oil infrastructure by the United Kingdom’s 3 Commando Brigade. Eight days after the attack into Iraq began, the USS NASSAU ARG landed 24th MEU in order to reinforce I MEF. In the Mediterranean, the USS IWO JIMA ARG landed 26th MEU in order to secure Mosul in northern Iraq after its liberation by Kurdish forces.

17. ATFs West, East, and the MPS ships were not part of the ESF. They provided transportation for USMC forces from CONUS

18. OIF missions conducted by Arabian Gulf-based carriers included: including Strike, Interdiction, Suppression of Enemy Air Defenses (SEAD), Joint Close Air Support (JCAS), Strike Coordination and Reconnaissance, (SCAR), Forward Air Controller (Airborne) (FAC-A), ISR, Combat Air Patrol (CAP), Defensive Counter-Air (DCA), Offensive Counter-Air (OCA), Surface Combat Air Patrol (SUCAP), Airborne Battlefield Command and Control (ABCC), Electronic Warfare (EW), and Aerial Refueling.
Opportunity and Challenge

In the new joint expeditionary era, sea power provides the means for overcoming diplomatic, geographic and military impediments to access in order to project influence and power in a selectively discreet or overt manner. In addition to being able to “kick open the door” when required, the mobility and global reach of sea power allows forward postured, sea-based forces to conduct routine engagement activities and respond to episodic crises while treading lightly on partner sensibilities. As described in previous chapters, this approach can mitigate the unintended social, economic, and political consequences for a host nation partner that often accompany the basing of U.S. forces overseas. These discreet engagement and response activities can support the other elements of national power—diplomatic, informational, and economic—and contribute to establishing the mutual trust which helps alleviate reservations regarding Joint force access in times of crisis or conflict.

While the global reach of U.S. naval forces provides an inherent means of overcoming geographic impediments to access and the conduct of proactive sea-based activities by those forces may provide the opportunity to reduce diplomatic difficulties—we must also recognize that military challenges to access are expanding. These include the continued use of mines and terrorist attacks against shipping, as well as the development of anti-access weapons with increased range, speed, and precision. They also include the proliferation of such weapons among both state and non-state actors. As demonstrated during 2000 terrorist attack against the USS COLE and the 2006 Lebanon noncombatant evacuation, U.S. operations overseas—even those conducted for benign reasons—may be threatened by a variety of anti-access weapons. These conditions have generated considerable uncertainty regarding the capabilities and capacities required to project power—both soft and hard—ashore in the 21st century.
Central Idea

Power projection operations will be planned and executed based on one of three operating environments—permissive, uncertain, or hostile. Each of these operating environments, and the access challenges associated with them, must be understood in order to determine the appropriate mix of capabilities, capacities, and expertise required to operate successfully therein. A key to gaining that understanding is recognition that the capabilities, tactics, and techniques applied in future power projection operations may bear little resemblance to those employed by previous generations of Sailors, Marines, and Coast Guardsmen.

The sections below describe these operating environments, while also providing a conceptual framework to support capability and capacity assessments. They are succeeded by a summation of the naval logistics and command and control enhancements necessary to support power projection in the 21st century.

A **permissive environment** is one in which host country military and law enforcement agencies have control as well as the intent and capability to assist operations that a unit intends to conduct. Forward postured naval forces routinely conduct a variety of power projection operations in permissive environments. The capabilities that allow naval forces to project and sustain combat power against a hostile shore are the same capabilities that allow them to overcome limited or damaged local infrastructure, while also providing a diplomatically discrete alternative to basing U.S. forces overseas. Command and control centers, well decks, flight decks, surface and air connectors, emergency medical capability and cargo capacity all allow globally distributed, mission-tailored naval forces to conduct sea-based security cooperation activities; build partnerships; respond to disasters; and, when necessary, facilitate the introduction of additional naval, joint, or multinational capabilities, as well as interagency, multinational, or non-governmental organizations.

An **uncertain environment** is one 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. Forward postured naval forces have frequently conducted a number of crisis response operations,
such as noncombatant evacuation or embassy reinforcement, in uncertain environments. Occasionally, they have been called upon to aggregate with additional forces to conduct larger missions, such as the 1995 amphibious withdrawal of United Nations’ forces from Somalia. Similar applications of naval capability can be anticipated in the future.

Additionally, in the 21st century an increased number of ungoverned or under-governed areas throughout the world are being exploited as safe havens by terrorists, weapons traffickers, pirates, and other criminal elements. In all likelihood, these complex and uncertain environments may be the most prevalent arena for power projection in the foreseeable future. Naval forces are increasingly likely to be tasked with counterterrorism, counter-proliferation, and counter-piracy missions. These will likely involve strikes and amphibious raids conducted for the purposes of: destroying terrorists and their sanctuaries; capturing pirates or other criminals and seizing contraband; rescuing hostages; or securing, safeguarding and removing materiel, to include weapons of mass destruction.

Operations in complex and uncertain environments will be conducted with the expectation of armed opposition. In some cases, however, rules of engagement may constrain naval forces from conducting kinetic attacks. While a fully integrated anti-access defense is unlikely to be present, potential adversaries—including non-state actors—may still possess a variety of lethal anti-access weapons. Naval forces can limit the effectiveness of such weapons through a combination of new tactics and technologies such as: over-the-horizon operations; improved shipboard defenses; greater connector range, speed and agility; improved mine countermeasures, and highly responsive counter-fire—especially for the immediate suppression of threats. Information operations, to include deception, psychological operations, and the non-kinetic neutralization of potential adversaries’ command and control systems, will likely be required.

A hostile environment is one in which hostile forces have control as well as the intent and capability to effectively oppose or react to the operations a unit intends to conduct. The most challenging power projection mission in a hostile environment is an amphibious assault to enable the introduction and sustainment of large-scale follow-on forces.
While other power projection operations in an uncertain or hostile environment, such as strikes and amphibious raids may be more likely, amphibious assaults conducted to open a major operation will require the full range of naval, joint, and interagency capabilities necessary to establish local sea control and project power ashore. Three major, overlapping tasks provide a useful conceptual framework in this regard:

**Gaining and Maintaining Operational Access**

Although a large number of countries possess military capabilities that will generate varying degrees of uncertainty regarding operational access, only a few have the capability to present a comprehensive anti-access defense-in-depth. There are, however, several scenarios—vital to U.S. national interests—in which a potential adversary might seek to curtail our freedom of action through the threatened or actual employment of robust anti-access capabilities. Some of these pose a serious danger impossible to ignore. The effectiveness of widely proliferated first generation anti-ship cruise missiles (ASCMs) can be reduced through over-the-horizon operations that minimize an adversary’s ability to acquire and track targets. While the number of countries currently possessing the latest generation of longer range, higher speed, and more lethal ASCMs is limited, it is highly likely that over time such weapons will become more widely proliferated. Furthermore, the use of ships and aircraft as ASCM launch platforms will allow adversaries to extend the range at which they can challenge operational access. If successful, the development of anti-ship ballistic missiles (ASBM)s will pose a more significant threat to access. Adversaries may also attempt to neutralize U.S. intelligence, command and control, and weapons capabilities by attacking information systems and networks, including the satellites that enable them. We can also expect adversaries to exploit low cost non-technical means to sever or weaken our logistics sustainment, and will need to protect our forces at sea and ashore in order to ensure sustained combat capability.

The various military challenges to gaining and maintaining operational access described above—and others yet to be envisioned—may not be present in every power projection operation. The full range of current and potential threats must, however, be identified to develop the means of countering them. Gaining and maintaining access will require a
comprehensive joint force solution, including air, space, cyberspace, special operations, and U.S. Government civilian agency capabilities—both lethal and non-lethal. Marines contribute to that joint solution by providing the ability to conduct **naval maneuver**. Naval maneuver involves fighting at and from the sea to project and sustain ready-to-fight combat forces or conduct strikes on a hostile or potentially hostile shore, and may be conducted from strategic distances. Littoral maneuver is a critical subset of naval maneuver.

The establishment of local sea control, which permits the use of the sea as maneuver space, is the essential pre-condition for successful power projection. Forward postured U.S. naval forces, reinforced when necessary by others aggregated from different locations, will gain and maintain access. This will involve application of integrated air and missile defense, undersea warfare, surface warfare, and mine warfare tasks, as well as extensive strike operations to defeat anti-access and area denial challenges. In several potential scenarios an important element of gaining access will be neutralization of advanced anti-ship cruise missiles prior to surface forces coming within their range.

Armed with a combination of manned and unmanned aircraft, carriers will play a major role in deterring conflict and projecting power far into the foreseeable future. Aircraft carriers are normally deployed in strike groups. CSGs will continue to include surface combatants to conduct sea control tasks, and may include submarines to conduct sea control and power projection tasks. Surface combatants also provide a complementary aviation strike capability in the form of helicopters carrying air-to-surface missiles. Amphibious assault ships with rotary and fixed-wing attack aircraft also provide a strike capability complementary to that provided by aircraft carriers.

Appropriate capacity of continuous, high-volume naval surface fires in support of strike and over-the-horizon amphibious operations will be required for many scenarios. Current shipboard gun systems must be complemented by airpower and missiles to degrade adversary defenses from a safe distance and to support the initial phases of an amphibious assault when organic artillery is not yet ashore. Additionally, the robust land attack missile advantage of our surface combatants and submarines will be employed as required.
Advanced target acquisition capabilities, exploiting a combination of space-based and locally deployable intelligence, surveillance, and reconnaissance (ISR) systems, has improved target designation and combat efficiency. Naval platforms will continue to deploy networked and interoperable ISR capabilities to support local, regional and global operations, and will be complemented by enhanced reach-back capabilities. These capabilities will likely include a complementary mix of air, surface, and underwater manned and unmanned platforms with multi-spectral capability as well as highly trained reconnaissance and surveillance teams, and the craft that transport them—to obtain information that only a human can provide. Additionally, all-weather, obscured visibility target designation capabilities will ensure increased levels of precision fires.

Weapon system enhancements will continue to be focused on improving range, precision, speed of delivery, and penetrating power. Future enhancements to naval surface fires may include hypersonic precision ordnance and loitering munitions. Aviation strike capabilities will benefit from advanced networks and unmanned systems, and development of a longer-range, low-observable aircraft, including a vertical/short takeoff and landing variant. Missile enhancements will include greater speed, range and precision capabilities to attack time-sensitive targets and minimize collateral damage. Additionally, we will continue to expand a portfolio of electronic warfare and computer network attack options.

**Conducting Littoral Maneuver**

*Littoral maneuver* is the ability to transition ready-to-fight combat forces from the sea to the shore in order to achieve a position of advantage over the enemy. It may be employed: directly against an objective, including inland objectives, to accomplish the mission singly; to seize infrastructure or lodgments which will enable the arrival of follow-on forces; or to pose a continuous coastal threat which causes an adversary to dissipate his forces. Littoral maneuver is enabled by the ability of naval forces to establish moving umbrellas of domain superiority around the various distributed elements of the landing force. MEBs will normally provide the landing force building blocks for larger
contingencies and major operations. When combined, two MEB assault echelons constitute the assault echelon of a MEF.

Weather, geography, mission purpose, and the nature of the operating environment will all combine to create a unique set of seaward and landward littoral maneuver challenges for every power projection operation. Military challenges may include enemy aircraft, air defenses, submarines, surface combatants, fast-attack craft (including suicide boats), improvised explosive devices and mines (in the sea and vary shallow water, as well as on land), and a collection of weapons often referred to as G-RAMM: guided rockets, artillery, mortars and missiles. In addition to counter-attacks by conventional maneuver forces, littoral maneuver may also be subject to attack by irregular forces employing a variety of simple and sophisticated weapons.

To offset these threats, especially widely proliferated first-generation ASCM, assault echelons will normally commence littoral maneuver from amphibious ships positioned—at least initially—over-the-horizon. This will maximize the range from and minimize the ISR available to the adversary. Naval forces use complementary, high-speed vertical and surface means in support of over-the-horizon littoral maneuver. The desire to provide a mix of vertical and surface means is well founded. Operational experience has repeatedly demonstrated that the rapid projection of combat power ashore is the key to successful littoral maneuver. Experience and analysis have shown that the fastest method of doing so is through a combination of vertical and surface means.¹⁹ These complementary means also provide flexibility in negating threats unique to a given operation. For example, during Operation UNITED SHIELD in 1995, a landing force was projected ashore to support the amphibious withdrawal of United Nations forces from Somalia using an all-surface approach in order to offset a significant surface-to-air missile threat.

¹⁹ The second-fastest method of building up combat power is by using surface lift only. An amphibious operation conducted exclusively with vertical lift provides the slowest means of building combat power. The all-vertical lift option is therefore primarily suited for small-scale, long-range but short duration operations.
Additionally, the enhanced MAGTF operations initiative is pursuing capability and capacity refinements that will improve the self-sufficiency of smaller units so that they can operate over greater ranges and for extended duration, as well as increasing their ability to land from a wider variety of ships. It also includes the ability to conduct larger-scale operations by transitioning numerous maneuver units ashore via multiple, distributed points—versus establishing a single, contiguous beachhead—in order to avoid established defenses, natural obstacles, and the presentation of a concentrated, lucrative target.

By keeping its command, aviation, and logistics elements afloat to the maximum extent possible, the MAGTF will further reduce vulnerabilities ashore while retaining a high degree of mobility and dexterity. This approach will provide multiple options for employment of the ground combat element within the joint or multinational force commander’s scheme of maneuver. Included among those options is the ability to re-embark the ground combat element to conduct further amphibious operations aimed at outflanking an adversary, cutting enemy supply lines, or simply outpacing overland movement.

Sustained littoral operations may also include the employment of coastal and riverine forces. Depending upon the environment and the mission, these forces may operate as independent units or be task-organized with amphibious and strike forces to ensure an integrated, combined-arms approach to littoral operations. Embarkation of Marines, Coast Guardsmen, or Navy Maritime Expeditionary Security Force personnel aboard littoral combatants may provide additional force employment options. This organizational flexibility provides additional fire, maneuver and sustainment options within the larger context of a joint or multinational campaign.

Littoral operations are frequently conducted in underdeveloped areas of the world and in austere theaters. Expeditionary forces must be able to sustain initial operations independent of local infrastructure, securing the maritime environment and providing the essential supplies and services necessary to keep the force sustained and equipped to conduct the ROMO. Leveraging the benefits of seabasing, integrated naval logistics
and a complementary mix of vertical and surface connectors will support and sustain all elements of the force afloat and ashore.

**Enabling the Arrival of Joint or Multinational Forces**

Naval forces may be tasked with enabling the rapid build-up of joint or multinational forces in the objective area. Inasmuch as the finite number of amphibious ships will be committed to the assault echelons conducting littoral maneuver, the arrival of follow-on forces will be accomplished primarily through *naval movement*. Naval movement involves military sealift and merchant vessels transporting vehicles, equipment, and supplies in volume over strategic distances for offload at a port or expeditionary facility. Naval movement is normally employed in concert with the movement of personnel by strategic airlift. Maritime pre-positioning forces, which are composed of one or more maritime pre-positioning ship squadrons, a Navy support element, and a MAGTF fly-in echelon, exemplify the combination of naval movement and strategic airlift. Maritime pre-position forces play a crucial role in rapidly reinforcing the assault echelons in order to bring the full capabilities of the MEF into action. This approach merges the weight and volume advantages of sealift with the speed of airlift. However, unlike naval maneuver, which projects units in ready-to-fight condition, naval movement and strategic airlift are dependent upon secure infrastructure ashore to deliver disaggregated elements which must go through a process of reception, staging, onward movement, and integration before units can be employed. Naval movement and strategic airlift must therefore be enabled by amphibious or airborne forces either seizing existing infrastructure intact or securing a lodgment for the establishment of expeditionary facilities.

The seizure of existing ports and airfields intact is not always possible. Adversaries recognize their value and may concentrate defensive capabilities around these facilities. They may also disable or destroy key infrastructure to prevent its use. Even a successful seizure might cause combat damage. In some cases infrastructure may not be available, or a joint force commander may intentionally avoid established ports and airfields—at least initially—in order to make his scheme of maneuver less predictable. Naval forces must therefore be capable of mine countermeasures operations, explosive ordnance disposal, and
construction engineering in order to conduct rapid repair of existing facilities or to build expeditionary facilities. Naval cargo handlers, combat logisticians, and maritime security forces will also be required to facilitate the introduction of follow-on forces and other resources.

The dependence upon secure infrastructure ashore may be alleviated to a degree through select enhancements to maritime pre-positioning and other forms of military sealift. Providing the ability to conduct selective offload and at-sea transfer of personnel and equipment from sealift platforms to amphibious ships or directly to air and surface craft capable of ship-to-shore delivery would enable a more sea-based approach. Current high-speed intra-theater connectors are capable of offloading onto austere facilities in a secure area. Increased use of expeditionary causeway systems or development of connectors may further exploit that characteristic to reduce reliance on existing infrastructure, as would the development of future connectors capable of offload near-shore or on the beach.

**Naval Expeditionary Logistics**

Naval forces are among the most responsive, flexible, powerful and independent tools of national policy, and robust expeditionary logistics support is a critical enabler across all naval missions. Effective naval logistics supports continuous forward presence, peacetime engagement, deterrence, and timely crisis response from the challenging maritime and littoral environment. In peace, naval logistics enables our forces to accomplish a wide variety of missions—individually or in conjunction with other Services, agencies, allies, or coalition partners. In war, it is essential to combat effectiveness.

The ability to sustain forces—whether globally dispersed or aggregated to project power—is accomplished through an extensive defense distribution system comprised of military bases at home and abroad; expeditionary enabling and support forces; joint capabilities; host and partner nations; and private vendors. Built around the Combat Logistics Force ships and support ships operated by the Military Sealift Command, naval expeditionary logistics provides an end-to-end supply chain capable of continuously providing parts, supplies, and equipment from the continental United States, or intermediate advanced bases, directly to
naval forces at sea. With these assets, a full range of logistics distribution functions are possible even when shore-based support is limited or nonexistent. The ability to conduct logistics functions afloat enables naval forces to maintain station anywhere. The Navy and Marine Corps will further improve support and sustainment of forward operations by moving beyond logistic interoperability toward Naval Logistics Integration (NLI). NLI will enhance our ability to provide sea-based support to naval as well as joint and multinational forces operating at sea or ashore.

**Command and Control Enhancements**

Given the anticipated complexity, tempo, and distributed nature of future power projection operations, naval forces will require the technical capability and command relationship flexibility to support an increased level of coordination and integration among all elements of the force. Naval forces will require the ability to collect, process, and disseminate relevant information in near real time to support distributed fire and maneuver at the operational and tactical levels. This will require that ISR sensors, processing systems and associated communication systems are fully interoperable and scalable to the particular mission. Platforms will be networked to allow for increased decentralization. Planning will be distributed using en route mission planning software and leveraging reach-back to non-deployable organizations for subject matter expertise. Given the distances from which they will be employed, naval forces will require collaborative planning, rehearsal, execution and assessment tools. Additionally, landing forces and support craft will require beyond-line-of-sight, over-the-horizon, and on-the-move systems capable of operating in a degraded communications environment.

These operational capabilities will be incorporated into the continued development of the Navy’s Maritime Operations Centers (MOC)\(^\text{20}\) and

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\(\text{20. MOCs are functionally-organized staffs that use standardized processes and a globally networked architecture to support Navy commanders’ assigned operational level command and control responsibilities, either as a Service component commander, joint force maritime component commander (JFMCC) or as a commander, joint task force (CJTF). MOCs also allow commanders to track items of interest in the maritime domain as they cross geographic combatant command boundaries, which are largely located at sea.}\]
Marine Corps command and control nodes. Included among these initiatives will be development of improved command and control capabilities both afloat and ashore. The aggregate of C2 enhancements will incorporate manning and protection for network, intelligence, and decision aid architectures. Standardized task forces will provide strike, expeditionary and landing force training and process improvements, which support decentralized control and execution while enhancing joint coordination.

In many operating environments, however, this level of connectivity may not be possible, as emerging anti-satellite weapons, jamming technologies and precision strike may damage or degrade our network infrastructure. To allow effective power projection in the face of these challenges, the Naval Service must develop procedures to operate with only line-of-sight communications or no communications, while establishing more resilient networks that rely on distributed and redundant nodes; in space, the atmosphere and on the surface. This resilient network will also require improved command and control capabilities afloat to execute missions and control naval and air forces without the benefit of reach-back to out-of-theater organizations.

**Conclusion**

The ability to project and sustain power ashore is the basis of our combat credibility. Enhancing our ability to counter more widely proliferated and sophisticated anti-access/area denial threats will be a key factor in allowing the United States to not only win but to deter future conflicts.