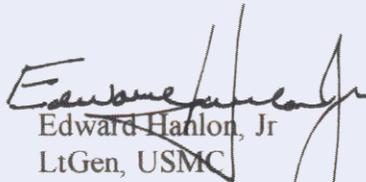




Enhanced Networked Seabasing

Enhanced Networked Seabasing is an innovative operational concept that will enable naval and joint forces to meet the challenges of the future -- the challenges posed by adaptive adversaries, maturing technologies, and anti-access strategies. Supporting both the Navy's Sea Power 21 and the Marine Corps Strategy 21 visions, Enhanced Networked Seabasing lends additional conceptual depth to Sea Basing as described in the Naval Operating Concept for Joint Operations. Essentially, it describes the further transfer of functions traditionally performed on land to the sea-based environ, expanding the warfighting capabilities of expeditionary naval forces.

Enhanced Networked Seabasing provides our Nation and its Regional Combatant Commanders unprecedented versatility and flexibility. Further, it exploits the freedom of the high seas to conduct operational maneuver, relatively unconstrained by political and diplomatic restrictions, for rapid deployment and immediate employment. It will be a key to national success in a dynamic international security environment, permitting the ability to meet and, when necessary, defeat our adversaries in the 21st century.


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“The presence of American forces overseas is one of the most profound symbols of the U.S. commitments to allies and friends. Through our willingness to use force in our own defense and in defense of others, the United States demonstrates its resolve to maintain a balance of power that favors freedom. To contend with uncertainty and to meet the many security challenges we face, the United States will require bases and stations within and beyond Western Europe and Northeast Asia, as well as temporary access arrangements for the long-distance deployment of U.S. forces.” The National Security Strategy of the United States of America, September 2002

I. Introduction

The past decade has foreshadowed a future strategic environment that will demand the United States improve its ability to rapidly project and sustain power in places where adversaries will attempt to restrict or deny access. The United States' ability to influence events ashore is contingent upon its capacity to rapidly close, effectively employ, and sustain a persistent military force from the sea. Naval forces must be able to counter regional area denial strategies and asymmetric attacks at any point along strategic lines of communication. The declining number of overseas bases, and the risks associated with a policy of relying on uncertain degrees of host nation support to meet our needs, mandates that the naval services provide the nation with the ability to project and sustain multi-dimensional power from the sea.

The sea offers strategic, operational, and tactical mobility to those who control it. Within this context, naval forces are ideally suited to exploit this advantage to assure access for joint and multinational operations. Sea control is critical to achieving access and defending the force by presenting JFCs with strategic options and operational advantages that naval forces are positioned to exploit. Sea basing capitalizes on the freedom of action achieved through sea control, and is vital to this nation's ability to fully exploit its unprecedented and unequalled military strength in support of an over-arching national security strategy.

The two primary approaches by which sea basing can contribute to joint operations are static and dynamic. Static sea basing is more about basing and logistics than operations. It seeks to maximize the assembly of personnel, equipment and supplies for further projection ashore, and is primarily an alternative to fixed strategic points of debarkation ashore. Dynamic sea basing is predicated on operational maneuver, and seeks to place the adversary in a dilemma through the conduct of distributed, dispersed operations. It is much more than logistics; it is command and control, persistent ISR, fires, maneuver, and force protection as well. This dynamic, adaptive capability mitigates the need for land bases, particularly in the early stages of an operation. Dynamic sea basing, as described in this concept, best supports the Navy and Marine Corps contribution to joint operations. An enhanced networked sea base will provide the transformational capabilities that expand the naval services' abilities to preclude and counter the actions of increasingly creative, adaptive and lethal adversaries.

II. Background

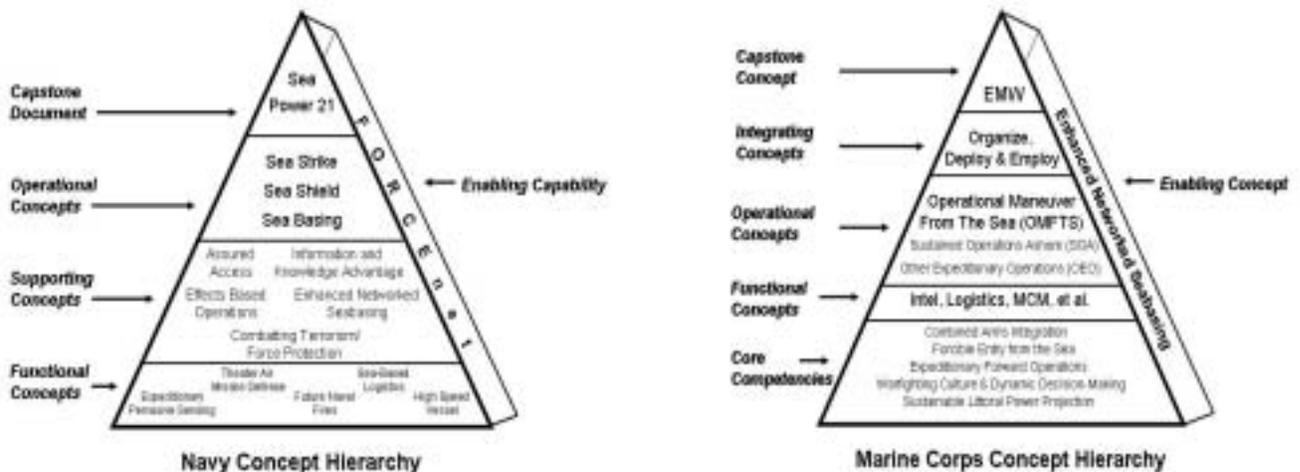
Sea basing has a historical lineage as both a concept and a capability. Today's sea base can be best described as an evolved collection of capabilities and platforms afloat

that have been independently developed, fielded, and matured over time. It provides naval forces with the ability to project power using air, surface, sub-surface and Marine Air-Ground Task Force (MAGTF) assets.

Future sea basing, however, will capitalize on an unprecedented integration of warfighting functions¹ at sea, projecting multi-dimensional power ashore, and sustaining enhanced capabilities both at the sea base itself and among those forces conducting military operations ashore. The enhanced networked sea base will integrate disparate assets into one coherent force, enabled by FORCEnet, while significantly increasing the ability to project, support and sustain forces throughout the battlespace. Enhanced Networked Seabasing (ENSeabasing) provides the conceptual framework for future operations.

Enhanced Networked Seabasing is defined as: “The integrated capabilities resident in a family of systems and assets afloat that maximizes the projection of all dimensional naval power both at sea and ashore. It is a quantum leap forward in naval power projection capabilities through phased at-sea arrival and assembly, selective offload, and reconstitution at sea using a netted dispersed force, enabled by FORCEnet, which facilitates joint operations across the range of military operations.”

ENSeabasing describes how the Navy-Marine Corps team will enable the projection, protection, and sustainment of multi-dimensional naval power. This document establishes the conceptual link between the enduring role of self-sustaining forward-deployed naval forces and the emerging requirement to achieve full spectrum dominance. ENSeabasing is crucial to the execution of the operational concepts that underpin Service capstone documents, *Expeditionary Maneuver Warfare* and *Sea Power 21*. The integration of emerging technologies and new operational concepts provides naval forces increased capabilities to counter area denial strategies, assure access and influence events throughout the battlespace.²



ENSeabasing includes four distinct advantages for the JFC - physical freedom of movement, freedom of action, reduced vulnerability from attack, and increased agility for forces. ENSeabasing provides naval expeditionary forces the necessary degree of

¹ Maneuver, Command and Control, Intelligence, Fires, Logistics, Force Protection (see Annex A)

² The hierarchies are service specific and link to the Naval Operating Concept (NOC) for Joint Operations

strategic and operational flexibility to rapidly project power ashore and provide theater wide influence from sovereign naval platforms. Sea basing will generate an exponential increase in response capability by greatly compressing deployment times and expanding the operational reach of naval forces. The enhanced networked sea base provides an assured advanced base from which select joint forces (e.g., Special Operations Forces (SOF)) may conduct multi-dimensional operations. The sea base provides the foundation for the full range of command and control, fires, maneuver, intelligence, logistics, force protection, and aviation functions essential to successful execution of naval and joint operations. In this way, ENSeabasing contributes to joint access, advanced force operations, and the arrival of follow-on joint and multinational forces.

III. Enhanced Networked Seabasing - The Concept

Creating an enhanced networked sea base will transform U.S. naval forces. More than just a collection of platforms, ENSeabasing is a new way of projecting, operating and sustaining expeditionary naval forces to support and enhance the enduring missions of the naval services: sea control, deterrence, forward presence, and power projection. The enhanced networked sea base will integrate joint command and control, Amphibious Forces, Expeditionary Strike Groups (ESGs), Carrier Strike Groups (CSGs), Maritime Prepositioning Forces, Combat Logistics Forces, emerging high-speed intra-theater lift,³ and lighterage technologies and will do so for future naval force constructs. Like the synergy achieved through the use of combined arms, ENSeabasing will integrate the many technical improvements in naval warfighting systems and networked naval forces – both current and future.

ENSeabasing enables forward deterrence and assures access from the sea without dependence on static land bases, ports or airfields in the Joint Operations Area (JOA). This integrated, enhanced networked sea base provides all-dimensional protection through the Navy's command of the seas. The level of effort required to achieve and maintain sea control is significant, but pales in comparison to the challenges facing the JFC in establishing and maintaining all-dimensional protection at fixed ports and airfields against an adversary determined to deny access.

Through forward presence, the inherent mobility of sea-based platforms, and multi-dimensional force closure (air, land and sea), naval forces operating from the enhanced networked sea base give the JFC an on-scene, credible response capability during the early stages of a crisis. The deterrent value of these sea-based forces, integrated with other elements of the joint force (e.g. SOF), helps to preclude escalation of a crisis. Further, the enhanced networked sea base will enable the rapid introduction of follow-on joint/multinational assets through seizing critical infrastructure or by striking targets that can affect points of debarkation.

Operating forward, from a sovereign sea base, permits naval forces access to the world's littorals. Often the very presence of these forces will preclude crisis and mitigate an adversary's ability to employ anti-access strategies. However, naval forces will always maintain the ability to conduct forcible entry operations in an anti-access environment. Through sea control, local air superiority, missile defense capabilities, and

³ At times the Maritime Prepositioning Force, Combat Logistics Force and high speed intra-theater lift may combine to form a Maritime Prepositioning Group (MPG).

the forcible entry capability of the MAGTF, naval forces assure access for joint/multinational forces.

Sea based operations, as envisioned in this concept, provide JFCs with an unprecedented degree of operational versatility and tactical flexibility by combining arms from under, on and over the sea to create and exploit opportunities. ENSeabasing capitalizes on the maneuver space afforded by the sea, and on the improved decision support capabilities enabled by linked sensors, shooters, and command-and-control nodes. Sea-based assets are dispersed and project power, deliver fires, maneuver forces, and maintain Command and Control, Communications, Computer, Intelligence, Surveillance, and Reconnaissance (C4ISR) in a complementary, integrated manner. Networked sensors and weapons combine to support the commander's ability to control the tempo of operations and the effects of firepower. The increased mobility afforded by surface and aviation platforms, combined with the increased range and lethality of naval aviation, ground, surface, and sub-surface fires, provides an exponential increase in power projection ashore across an unprecedented depth and breadth of the battlespace. Forces employed ashore from the enhanced networked sea base conducting *Ship to Objective Maneuver* (STOM) focus on operational objectives, obviating the need for securing a force beachhead lodgment. Surprise, initiative, and increased tempo of operations are the principal gains of “not stopping at the beach.” Eliminating operational pauses associated with a build up ashore reduces an adversary’s time to react while increasing naval force agility.

ENSeabasing supports all warfighting functions.⁴ Maintaining the bulk of functional services at sea lightens the load of maneuver forces and achieves maximum maneuverability throughout the littoral and beyond. Command and control, intelligence, naval fires, and sustainment remain principally at sea, fully networked, and under the force protection afforded through the integration of the combined capabilities of current and future naval platforms. The sea base, sustained by a worldwide logistics information and distribution system, receives continuous support through strategic pipelines, yielding a persistence only naval forces can provide.

Sea basing increases the options available to naval and joint force commanders and complicates the choices faced by our adversaries. Control of the sea provides the ability to establish a dynamic sovereign base, creating a maneuverable, scalable, forcible-entry capability for use by the Joint Force Commander. Naval forces operating from this sea base will seize and maintain the initiative while pressuring adversaries, keeping them off balance and foreclosing their options. The sea base assures U.S. access and limits the ability of any adversary to counter that access.

IV. Enhanced Capabilities

A wide range of supporting functions will be provided from dispersed, mobile platforms that constitute the enhanced networked sea base. The qualitative improvements that distinguish ENSeabasing from current capabilities include:

- Integrated Naval Power Projection
- Network Centric C4ISR

⁴ Annex A lists initial capabilities of the warfighting functions for the development of future CONOPS.

- Rapid Force Closure
- Phased At-Sea Arrival and Assembly
- Selective Offload
- Persistence and Sustainment
- Reconstitution At Sea

INTEGRATED NAVAL POWER PROJECTION includes offensive and defensive fires and maneuver generated by fully networked, forward deployed forces and assets. Sea based operations incorporate, protect and sustain all aspects of multi-dimensional naval power projection, from space to the ocean floor, from blue water to the littorals and beyond. Integrating these assets and functions within the enhanced networked sea base will yield an exponential increase in power projection. The inherent mobility and combat power resident within the sea base increases the options available to the JFC, and minimizes the impact of any denial of previously required land bases within the JOA. Integrated naval power projection includes the ability to mass and disperse naval, joint, and multinational military force and deliver it ashore to influence, deter, contain, or defeat an adversary.

Expeditionary naval forces will project coordinated precision and volume fires and maneuver forces throughout the battlespace. The networked grid of sensors and weapons will put supporting fires capabilities at the disposal of the maneuver force, and allocate the most timely and appropriate weapon(s) to the target.

Organic air and missile defense-capable platforms provide continuous defense of the sea base while maximizing the employment of these multi-mission assets in other warfare areas. By keeping missile defense and the preponderance of supporting fires at sea, the commander is freed of the requirement to commit transportation assets to move supporting fire capabilities ashore, to establish a base of operations and logistics support, and to provide forces to protect the base of operations. Air and missile defense capabilities can also be projected ashore to protect joint and multinational forces, friendly populations and infrastructure.

NETWORK CENTRIC C4ISR applications migrate into a single naval command and control system supporting mutual functions and operations throughout the battlespace. By virtue of the expansive area in which naval forces operate, this command and control capability, integrated into the joint C2 architecture, extends throughout the littorals, from the seabed to space, and applies to forces at sea and deployed from the sea. Command and control systems will be in place, supporting naval forces from the point of departure to their objectives and throughout subsequent operations. These C2 systems will facilitate coordinated actions by dispersed forces and assets that enable decision making at the lowest level to increase operational tempo. The sea-based command and control system, in concert with the overarching FORCEnet concept, will support the functions of a Joint Task Force headquarters.

Naval forces operating forward maintain an integrated ISR picture, combining national, theater and organic sensors. Should a crisis develop, the forward sea-based force quickly establishes an expanded picture extending throughout the battlespace. FORCEnet will enable coordinated battlespace ISR tasking, processing, exploitation, dissemination and multi-sensor fusion capabilities to develop a common operating picture for both targeting and maneuver decision making.

Sea based operations will support **RAPID FORCE CLOSURE**. Leveraging the current competency in the forward deployment of sustainable, combat-ready forces, an initial naval response to a crisis will consist of the Expeditionary Strike Group and the Carrier Strike Group. When required, this initial naval response is combined with future maritime prepositioning platforms, the Marine Expeditionary Brigade (MEB), and the Combat Logistics Force. These forces will close the JOA by multi-dimensional means, supported en-route by networked command and control systems with advanced collaborative planning and rehearsal simulation technologies.

As the Maritime Prepositioning Force moves to the objective area, the capabilities resident within the future platforms of the Maritime Prepositioning Squadrons facilitate **PHASED AT-SEA ARRIVAL AND ASSEMBLY**. These capabilities will assure easy access to all equipment for inspection, maintenance, testing, and selective reconfiguration of tactical loads, resulting in a compressed Reception, Staging, Onward Movement & Integration (RSO&I) of forces into the JOA. The ability to move directly to the sea base assures rapid deployment of a MEB-sized force, without the need for JOA host nation facilities ashore. These flow-in forces will arrive at locations en-route to the objective area via strategic lift and self-deployment, then move directly to the sea base via intra-theater assets, such as high-speed surface vessels or tilt-rotor aircraft. The ability to conduct phased at-sea arrival and assembly will make a force up to MEB size available for immediate employment worldwide in as little as seven days.

Unlike current ships, future sea-based platforms will provide for **SELECTIVE OFFLOAD** of specific forces, equipment and supplies. This characteristic allows the commander to tailor forces for specific missions. Regardless of whether the mission is a logistics intensive humanitarian relief operation or a large-scale ship-to-objective-maneuver in a major contingency, selective offload optimizes force packaging for employment.

Selective offload also contributes to increased MAGTF operational tempo. The ability to assemble sustainment packages tailored to the needs of the requesting commander, and then deliver those tailored packages directly to units will decrease time, and the associated equipment and manpower ashore required to integrate that sustainment into operations. By optimizing the “support tail” and delivering the exact sustainment required in an easily distributable configuration, the commander will increase speed, mobility, and maneuverability while decreasing or eliminating operational pauses.

The naval qualities of **PERSISTENCE AND SUSTAINMENT** provide for the staying power and flexibility of the enhanced networked sea base. Naval platforms with their embarked forces are persistent; they can remain on-station, where needed, for extended periods of time. The sustainment of the naval force goes hand in glove with persistence. ENSeabasing effectively puts the “teeth” ashore and keeps the “tail” at sea. This is a fundamental shift from the past 75 years of doctrine, which directed the rapid build up of command, combat and logistical mass ashore. Rather, we will selectively maneuver combat power ashore. The preponderance of headquarters, aviation and service support activities will remain afloat, reducing the logistics and force protection requirements ashore, while improving the agility and flexibility of the force. At-sea maneuverability, coupled with advanced at-sea transfer technologies and techniques, will ensure increased force readiness over time.

Sea-based logistics is not just about sustaining a ground force from the sea. It is about sustaining the enhanced networked sea base through an increasingly anticipatory

and responsive logistics system, projecting naval power and supporting naval and select joint/multinational forces. The sea base is sustained through the interface with Advanced Bases (ABs) and strategic logistics pipelines. Sea based logistics contributes to making *Operational Maneuver from the Sea* and *Ship-to-Objective Maneuver* operational realities. The logistics demand of forces ashore is reduced through a combination of streamlining what is taken ashore, improving efficiency in vehicles and equipment, remotely monitoring equipment, ensuring total visibility of logistics assets (both supplies and transportation) and requirements, and leaving certain functions at sea. The logistics “footprint” ashore will be reduced as many of the functions traditionally accomplished in a secure rear area on land - such as command and control, air defense and fire support, aviation support, and logistics - remain based at sea. Under the protective umbrella achieved in ENSeabasing, logistics and other supporting functions will operate from dispersed locations, thereby contributing to the tactical flexibility and operational tempo desired in a non-contiguous battlespace.

RECONSTITUTION AT SEA enables rapid reemployment of the naval force to exploit opportunities and conduct subsequent operations. Once units are recovered to the sea base, on-board logistics capabilities enable the restoration of those units’ readiness levels for further employment. Advancements in maintenance, storage, distribution, and information technology will speed the process. Rapid reconstitution of naval combat power will provide the JFC with great flexibility to deal with emerging situations. While being replenished, forces may be simultaneously task-organized for new missions, and operationally repositioned and redirected by the JFC toward new objectives in the area of operations. At-sea reconstitution optimizes the Navy and Marine Corps force for operational employment as an exploitation force.

V. Conclusion

The concept of ENSeabasing describes the capabilities required to bring tailored forces to bear, when and where needed, across the full range of military operations. These capabilities are key enablers for future joint operations. ENSeabasing is a paradigm shift, a fusion of naval concepts. It is the future of expeditionary basing, naval power projection, and assured access, distinguishing naval forces' uniqueness while complementing the capabilities of other joint forces.

More than just an alternative to current capabilities, operations conducted from a networked sea base may well become the *preferred* method for national crisis response in the 21st century. Naval forces will be strategically and operationally agile, projecting power from a fully networked sea base while operating within the security derived from the Navy’s command of the sea. The enhanced networked sea base will provide national decision makers with unprecedented versatility because naval forces can exploit the freedom of the high seas, relatively unconstrained by political or diplomatic restrictions, for rapid force closure and immediate employment. Navy and Marine Corps warfighting capabilities, thoroughly integrated across all sea based systems and assets, will provide our Nation and its Regional Combatant Commanders the means necessary to fight and win the conflicts of the 21st century.

Annex A

This list of capabilities, organized by warfighting functions, serves as a starting point for ENSeabasing functional Concept of Operations (CONOPs) and roadmapping efforts.

1. Maneuver

- a. Rapidly deploy/employ expeditionary, scalable combat-ready forces world-wide via air, land, and sea to gain a positional and temporal advantage
- b. Conduct expeditionary operations from extended ranges with highly versatile and survivable organic and supporting sea/air/land mobility assets
- c. Seamlessly transition from maneuvering at sea to maneuvering ashore and vice-versa
- d. Conduct arrival/assembly and RSOI operations at the sea base
- e. Provide air and missile defense against emerging threats that can be projected over forces or areas of interest ashore
- f. Conduct littoral and blue-water undersea warfare
- g. Detect, identify, track and engage/interdict high numbers of surface vessels in high clutter environments⁵
- h. Conduct Mine Countermeasure (MCM) operations, including detection, avoidance, neutralization, breaching and clearance of mines
- i. Operate in a Chemical, Biological and Radiological (CBR) environment
- j. Conduct precision navigation in the littoral environment

2. Command & Control

- a. Navy and Marine Corps C2 applications, to the maximum extent feasible, become integrated Naval C2 systems within FORCEnet to support mutual functions
- b. Dynamically manage and assign bandwidth for maximum effectiveness
- c. Provide the ability to direct Naval, Joint, and Multinational operations
- d. Ensure interoperability with appropriate joint and national assets
- e. Link sensors, shooters, and command nodes with an open-architecture, integrated information grid
- f. Display and transmit information in near real time, developing a tactical and operational picture based on a shared, common data set
- g. Provide shipboard-capable C2 architecture capable of seamlessly operating throughout the battlespace, to include ashore and afloat
- h. Provide immediate reach-back capability to theater and national assets
- i. Conduct collaborative preparation, planning, and virtual rehearsal while underway

3. Intelligence & Battlespace Awareness

- a. Manage all-source intelligence gathered through continuous, layered ISR

⁵ A high clutter environment is one with large numbers of contacts, complicated by geographic and environmental factors, making it difficult to distinguish between friendly, neutral and hostile.

- b. Collect, process, and disseminate relevant information in near real time to support fire and maneuver at all levels of military operations
- c. Exploit national, theater, and multinational assets to support joint planning and operations
- d. Conduct surveillance and reconnaissance to support planning and operations
- e. Fuse and display sensor data into an integrated, near-real-time common operating picture
- f. Rapidly process data into knowledge through user-friendly displays, tools and decision aids with full joint interoperability
- g. Operate in an environment where sensors/navigation systems are degraded/denied
- h. Conduct integrated Information Operations (IO)

4. Integrated Fires

- a. Identify and engage time-sensitive, mobile and Hardened and Buried Targets (HDBT)
- b. Provide munitions with selectable yields
- c. Conduct immediate Combat Identification (CID)
- d. Provide and direct accurate, lethal, networked, responsive all-weather sea based fires throughout the battlespace
- e. Maintain the capability to deliver non-lethal and unconventional fires
- f. Provide mobile air, land, and sea-based fire support systems to support STOM
- g. Provide sufficient volume-fire capabilities for maneuver forces

5. Logistics & Sustainment

- a. Leverage worldwide distribution systems and industrial base
- b. Provide a sea basing capability to build, project, and sustain naval and joint power
- c. Reduce the logistics footprint ashore through sea-based support, reduction of consumables like fuel and water, and development of alternative ordnance variants that are smaller, lighter, while maintaining lethality
- d. Identify commonality of equipment, supplies and materiel to increase joint force interoperability.
- e. Provide automated, interoperable information management, asset visibility, selective offload, and materiel end-user delivery systems to support in-stride sustainment
- f. Provide rapid force closure and reconstitution capabilities at sea
- g. Sustain the sea base and forces operating ashore during decentralized/distributed operations
- h. Integrate logistics information into the common data set on which tactical and operational pictures are based
- i. Reduce the impact of weather/sea-states on air and sea operations to/from the sea base.
- j. Provide cargo/container handling capability to transfer containerized cargo from merchant shipping to sea based platforms and advanced lighterage
- k. Provide a heavy underway replenishment (UNREP) capability between all ships in the sea base, to include the ability to conduct at-sea reload and cross-deck

- of munitions
- l. Support naval operations from tailorable, selectable maritime preposition force assets
 - m. Provide medical capacity, to include medical evacuation to/from/at sea, to reduce medical footprint ashore

6. Protect the Force

- a. Establish protective measures to mitigate the risks and effects of terrorist attacks
- b. Establish capabilities to detect and protect against CBR agents.
- c. Establish capabilities to decontaminate personnel and equipment at the sea base
- d. Provide information assurance - both network security and the integrity of the information passing through the network
- e. Provide platform/vehicle design features that enhance survivability
- f. Develop all-dimensional protection of the sea base