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Naval Doctrine Publication 4

NAVAL LOGISTICS

(Final Draft Revision)

September 1999

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Introduction

U.S. military power is a reflection of our ability to equip, train, and deploy our forces. Without adequate military hardware and other logistic support, well-trained sailors and marines cannot accomplish their mission. Whether it is providing supplies, services, and infrastructure, conducting thorough planning with effective organizations, logisticians are the professionals who provide this service. Naval Doctrine Publication (NDP) 4, Naval Logistics provides the foundation on how the naval service provides this support.

In an era of decreased force levels and infrastructure, our naval forces remain the most independent and flexible instruments of national policy. With their ability to operate from the sea, the naval services provide both peacetime as well as contingency options to our military leaders. Robust and responsive logistics support are critical to operate from this environment. Naval Logistics explains how support for these operations is planned and accomplished and discusses the systems that move forces to the fight and sustain them there. This capstone publication focuses on the fundamental principles guiding our logistics operations. Other publications in the Navy, Marine Corps, and joint libraries provide added detail and perspective on specific areas of naval logistics including supply, maintenance, transportation, engineering, and health services and are listed in the back of this publication.

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CHAPTER ONE

THE NATURE AND FUNDAMENTALS OF NAVAL LOGISTICS

Introduction

Naval forces are among the most responsive, flexible, powerful, and independent tools of national policy. U. S. naval forces contribute decisively to global leadership. Through power projection and presence, our naval forces support our national interests abroad. A strong naval team capable of deterrence and contingency operations at sea, from the sea, and in operations other than war is essential to this effort. Key to the strength of this team is logistics support, provided by trained personnel within an intricate network of materiel, facilities, transportation, technical support and information. Naval logistics builds and sustains our forces, in readiness and in action

As detailed in NDP 1, Naval Warfare, effective naval logistics enables us to carry out the Navy and Marine Corps' assigned roles. It supports our ability to conduct continuous forward presence, peacetime engagement, deterrence operations, and timely crisis response from the challenging maritime and littoral environment. Through our logistic systems, Navy and Marine Corps striking power is always available, and always sustainable through an established support system. An extensive defense distribution system comprised of military bases at home and abroad, combat logistics force ships, and expeditionary support forces including airlift and sealift, as well as resources from sister services, host nations, and commercial contractors provide the means for this deployment power.

Sustained forward deployment of naval forces also allows our nation to pursue regional coalition-building and collective security efforts. Thus naval logistics forces must be able to provide and receive support within a variety of organizational structures. Consequently, engagement in Joint and multinational logistics efforts are increasingly critical to support mutual readiness and capability, enhancing the efficiency and effectiveness of our combat operations.

Naval logistics operations are conducted much the same in peace as they are in war, differing mainly in the magnitude of the requirements placed on logistics systems and the level and types of threat to which these systems are exposed. A viable, accessible, and ready reserve of trained personnel and effective equipment, and reliable sources of war materiel, must back active logistics forces. These resources must also include agreements and understandings that permit the sharing of logistics resources between other Services, other nations, and the private sector of all engaged nations.

To participate in and benefit from effective naval logistics, supported and supporting commanders need to understand the mission, scope, and different levels of logistic support. In addition, one needs to understand the functional areas, the process elements, the guiding principles, and the conceptual background driving the current evolution of naval logistics.

The Mission of Naval Logistics

The mission of naval logistics is to provide and sustain the operational readiness of our naval forces, and to support the operational readiness of other forces as directed. In peace, operational readiness enables our naval forces to accomplish a wide variety of missions--independently or in conjunction with other services, agencies, allies, or coalition partners. In war, this same operational readiness is the root of warfighting effectiveness; it makes victory possible.

Effective logistics is a force multiplier, allowing the commander to maintain greater masses of power in harm's way for longer periods. This is accomplished through maximum readiness, and responsive maintenance and sustainment. Naval logistics has historically provided the full range of logistics support to naval forces. Additionally, naval logistics forces provide sealift for the projection and sustainment of non-naval forces. Within the Navy and Marine Corps and throughout the Department of Defense, there continues to be pressure to reduce force levels and minimize system costs by rationalizing force constitution, projection and sustainment and around the world. From international and inter-service acquisition programs to joint, multinational and inter-agency operations, cooperative activities have broadened both the resource base and the customer base for the naval logistician. Force is defined as

1 “An aggregation of military personnel, weapon systems, vehicles and necessary support, or combination thereof”, as
2 stated in Joint Publication 1-02, Department of Defense Dictionary of Military and Associated Terms. In today’s
3 environment, “necessary support” refers to contractors, civilian agencies, and other sources of resources which are
4 playing larger and larger roles in both peacetime and contingency operations.
5

6 **The Scope of Logistics**

7 JP 1-02 defines logistics as “*the science of planning and carrying out the movement and maintenance of forces*”.
8 Whether for peacetime operations, war, or military operations other than war, logistics operations are conducted *in*
9 *support of forces*, and are subject to the risks and uncertainties common to military missions. More broadly,
10 logistics encompasses all of the processes, procedures, systems, and activities utilized to acquire, provide, maintain
11 and dispose of end products--equipment, supplies, facilities, services, and trained manpower--for military forces.
12

13 More than most components of military operations, logistics can be expressed mathematically. The quantification of
14 requirements and capabilities demanded by the warfighters allow the logisticians perform precise calculations and
15 useful predictions. Projecting requirements for food or fuel in any operation confidently helps us project the
16 outcome of maneuver or engagement. This predictive capability provides the baseline from which logisticians act in
17 response to changing customers, customer locations and support requirements.
18

19 Creative crisis response is another part of effective logistics; in spite of its scientific basis, logistics is also an art.
20 Increased operating tempo and attrition of logistics capability through natural events, accidents, or enemy action
21 combine to create shortfalls in support. These events reduce the reliability of previous projections, forcing the
22 logistician to constantly monitor and adjust operations. Prediction, anticipation, innovation, and improvisation must
23 be skillfully exercised as operations unfold. Logisticians must apply judgement and perception to the available
24 information to ensure effective decisionmaking.
25

26 **The Levels of Logistics Support**

27 Logistics support is provided at the strategic, operational and tactical levels, and involves interrelated and often
28 overlapping functions and capabilities.
29

- 30
31 • Strategic Logistics encompasses the ability to deploy and sustain forces executing the national military strategy.
32 It involves determination of requirements, personnel and materiel acquisition, management of strategic airlift
33 and sealift, and support of forces in distant theaters of operations. It also includes the role of prepositioned
34 equipment and materiel—both afloat and ashore—and our national ability to maintain the required support
35 levels for the duration of operations. A particular concern at the strategic level is that our industrial bases
36 maintain the capability, capacity, and technology to support timely production of modern weapon systems,
37 support equipment, health services, munitions, stores and command-and-control system components to meet
38 wartime requirements. The greater the scope or duration of anticipated military operations, the greater the
39 impact of continuing effective strategic logistics operations.
40
- 41 • Operational Logistics involves coordinating and providing theater logistics resources to operating forces. It
42 includes support activities to sustain campaigns and major operations within a theater and is the level at which
43 joint logistics responsibilities and arrangements are coordinated. Operational logistics encompasses theater
44 support sites and activities, ashore or afloat, and the theater transportation required to move personnel and
45 materiel to and from supported forces. It also entails management and protection of those assets. It is the
46 bridge that translates strategic logistics capability into tactical logistics support. The Unified combatant
47 commanders and the supporting Service component commanders are the main benefactors of this level of
48 logistics.
49
- 50 • Tactical Logistics focuses on support within and among combat forces. Navy tactical logistics encompasses the
51 logistics support of forces within a battle group or amphibious readiness group and within Navy elements
52 ashore, from both afloat platforms—including combat logistics force (CLF) ships—and shore-based logistics
53 support facilities. Tactical logistics support activities include maintenance, battle-damage repair, engineering,
54 fueling, arming, moving, sustaining, material transshipment, personnel, and health service. Marine Corps
55 tactical logistics, including combat service support, is provided by organized support elements which

complement the organic capabilities of the combat elements.

The Functional Areas of Logistics

Logistics activities at each level of support require a broad range of skills, knowledge and capabilities. These form six major functional areas allowing us to understand, organize and execute logistics. They are supply, maintenance, transportation, engineering, health services, and other logistics services. Applied in appropriate combination, they provide forces with total logistics support. These functional areas are consistent throughout the armed services, and provide a common fabric of logistics organization that facilitates joint operations. Below are brief synopsis of these respective functional areas of logistics.

- **Supply** provides materiel and services for our forces. The supply function includes design, procurement, contracting, receipt, safe storage, inventory control, issuance, retrograde, and disposal of end items including repairables and consumables. The defense supply system which includes the Navy and Marine Corps supply systems, equips and sustains our military forces during all phases of preparation and employment. The defense supply system manages several million different items, which are grouped into ten classes of supply for management purposes. The classes of supply are listed in Figure 1-1.

SUPPLY CLASSIFICATIONS		
CLASSES AND SUBCLASSES OF SUPPLY		PRIMARY INTEGRATED MATERIAL MANAGER
CLASS I SUBSISTENCE	A - NONPERISHABLE C - COMBIBERATIONS R - REFRIGERATED S - OTHER NONREFRIGERATED W - WATER	DLA (DPSC)
CLASS II CLOTHING, INDIVIDUAL EQUIPMENT, TOOLS, ADMIN SUPPLIES	A - AIR B - GROUND SUPPORT MATERIAL E - GENERAL SUPPLIES F - CLOTHING G - ELECTRONICS M - WEAPONS I - INDUSTRIAL SUPPLIES	DLA GSA
CLASS III PETROLEUM, OILS, LUBRICANT	A - POL FOR AIRCRAFT W - POL FOR SURFACE VEHICLE P - PACKAGED POL	DLA (DFSC) DLA (DSC Richmond)
CLASS IV CONSTRUCTION MATERIALS	A - CONSTRUCTION B - BARRIER	DLA (DSC Philadelphia)
CLASS V AMMUNITION	A - AIR DELIVERY W - GROUND	Special Management (See NWP 4 - 10)
CLASS VI PERSONAL DEMAND ITEMS		Outside Procurement (See NWP 4 - 09)
CLASS VII MAJOR END ITEMS, RACKS, PYLONS, TRACKED VEHICLES, ETC.	A - AIR B - GROUND SUPPORT MATERIAL D - ADMIN VEHICLES G - ELECTRONICS J - RACKS, ADAPTERS, PYLONS K - TACTICAL VEHICLES L - MISSILES M - WEAPONS N - SPECIAL WEAPONS X - AIRCRAFT ENGINES	SYSCOMS
CLASS VIII MEDICAL MATERIALS	A - MEDICAL MATERIEL B - BLOOD / FLUIDS	DLA (DPSC Philadelphia)
CLASS IX REPAIR PARTS	A - AIR B - GROUND SUPPORT MATERIAL D - ADMIN VEHICLES G - ELECTRONICS K - TACTICAL VEHICLES L - MISSILES M - WEAPONS N - SPECIAL WEAPONS T - INDUSTRIAL MATERIALS X - AIRCRAFT ENGINES	DLA NAVICP
CLASS X MATERIAL FOR NONMILITARY PROGRAMS		None, not managed by DOD

Figure 1-1

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4 Additional supply support is derived from sources such as other defense and federal agencies, Navy
5 hardware systems commands, local contracts and purchases, common-user support from other services or
6 allied supply agencies, and host nation support.
7

- 8 • **Maintenance** entails all actions necessary to preserve, repair, and ensure continued operation and effectiveness
9 of systems (e.g., ships and aircraft), components and equipment. It includes the policy, organization and
10 activities related to the maintenance of equipment, afloat and ashore. The Marine Corps identifies eight
11 functions of maintenance: inspection and classification; servicing, adjusting and tuning; repair; modification;
12 rebuilding and overhaul; reclamation; recovery and evacuation. Maintenance strategies, standards of
13 performance for preventative and corrective maintenance, technical engineering support and battle-damage
14 repair are important components of the maintenance function. Conservation, reutilization, and disposal are also
15 important to the economical and environmentally sound support of forces. While maintenance is primarily
16 involved in the sustainment process, the collection, analysis and reporting of materiel maintenance data is
17 critical to effective acquisition. Maintenance is conducted at three levels--organizational, intermediate and
18 depot.
19
- 20 • **Organizational maintenance** consists of unit-level inspections, cleaning, servicing, lubricating, adjusting,
21 and minor repairs. It is the responsibility of the unit to which the equipment is assigned, and is generally
22 performed by ship's company, naval air squadron, or Marine Corps and shorebased Navy unit personnel
23 without outside assistance.
24
- 25 • **Intermediate maintenance** is normally beyond the capabilities of the using unit, but is not extensive as to
26 require major industrial facilities or equipment. It involves calibration, repair or replacement of damaged
27 or unserviceable parts, components, or assemblies; emergency manufacture of unavailable parts; and
28 technical assistance to unit maintenance personnel. It is the responsibility of maintenance activities
29 designated to provide direct support to the units assigned the equipment. In naval logistics, tenders and
30 larger combatant ships provide intermediate-level maintenance. Within the battle force, intermediate
31 maintenance is provided through the battle force intermediate maintenance activity (BFIMA). The BFIMA
32 consists of the carrier's or amphibious assault ship's aircraft intermediate maintenance department (AIMD),
33 the engineering departments of all the ships, and the electronics maintenance officers and skilled
34 technicians in or embarked in the ships. Intermediate maintenance is also available through fleet or
35 contractor facilities ashore such as ship intermediate maintenance activities (SIMAs), specialized elements
36 of the Marine air-ground task force (MAGTF), and designated joint or combined intermediate maintenance
37 facilities. Intermediate maintenance provides a forward source of repair support that allows the supported
38 force to maintain or recover mission capability within the theater of operations.
39
- 40 • **Depot maintenance** involves major overhaul or a complete rebuild of parts, assemblies, subassemblies,
41 and end-items, and may support organizational or intermediate maintenance by providing technical
42 assistance. This maintenance is provided by shipyards, ship-repair facilities, aviation depots, in-service
43 engineering centers, naval warfare centers, weapons stations, Marine Corps multi-commodity maintenance
44 centers, and civilian contractors.
45
- 46 • **Transportation** provides for the movement of units, personnel, equipment, and supplies. This function
47 includes deployment and redeployment of supported and supporting forces, the transportation of sustainment
48 resources, movement of forces and resources to ports of embarkation, and inter-theater intra-operations. The
49 transportation system operates at every level of logistics and provides for the movement of casualties, mail, and
50 other critical services as well. The Marine Corps also identifies embarkation, landing support, motor transport,
51 port and terminal operations, air delivery, material handling equipment, and freight or passenger transportation
52 as functions of transportation. Further delineation of the levels of transportation include:
53
- 54 • **Strategic Transportation** encompasses the movement of resources to the theater of operations. Navy

1 ships and their embarked forces including naval air squadrons and detachments and Marine Corps
2 expeditionary units are initially self-deploying. These sustainment resources accompany these forces
3 onboard organic resources or via Combat Logistic Force (CLF) ships. In other cases, naval operating and
4 support forces must be transported to and from theater. These situations can include Marine forces; Navy
5 shore-based logistics forces; security, small boat, and special operating force units, and other elements of
6 shore-based squadrons. Methods to deploy these units are via strategic common-user land, sea, and air
7 transportation is provided through the U.S. Transportation Command (USTRANSCOM), utilizing the
8 assets of the Military Sealift Command (MSC), the Air Mobility Command (AMC), and the Military
9 Traffic Management Command (MTMC). These commands use both military and civilian assets as
10 available and appropriate. The Navy's Military Sealift Command (MSC) provides the DOD strategic
11 heavy lift which supports the Marine Corps Maritime Preposition Force Program and the U.S. Army's
12 needs.
13

- 14 • **Operational Transportation** . This transportation is the bridge between the strategic lift provider and the
15 operating forces. CLF ships, and Navy vertical onboard delivery (VOD) helicopters and carrier onboard
16 delivery (COD) aircraft, provide transportation to and from afloat forces. These resources may be
17 augmented or replaced by other-national military or commercial assets during combined operations. For
18 shore-based forces, transportation support can also be provided by tactical transport aircraft and heavy lift
19 helicopters.
20

- 21 • **Tactical Transportation**. Within the battle group, most tactical transportation is via ship's organic
22 aircraft. Assigned helicopters shuttle personnel, sustainment, mail, and other materiel from sites and
23 support ships, and within the battle force. Tactical transportation also allows battle group commanders to
24 share resources and capabilities to enhance the overall readiness of the force. Ashore, sites and forces
25 utilize organic vehicles or aircraft for tactical movements. Within the Marine Expeditionary Force the
26 Transportation Support Battalion of the Force Service Support Group provides tactical transportation.
27

- 28 • **Engineering** provides construction, damage repairs, combat engineering and facilities maintenance ashore,
29 executed by Navy, Marine Corps and other Service engineer units; and civilian contractors. Marine Corps
30 engineers are found in the Combat Engineer Battalion (CEB) of the Division, the Marine Wing Support
31 Squadrons (MWSS) of the Marine Aircraft Wing (MAW), and the Engineer Support Battalion (ESB) of the
32 Force Service Support Group. Marine Corps division engineers conduct combat engineering operations
33 supporting mobility, countermobility, and survivability in forward areas. The MWSS provides the MAW basic
34 engineering services organic to expeditionary airfield support. Finally, the ESB provides general engineering
35 support to all elements of the Marine Expeditionary Force. This includes engineer reconnaissance, horizontal
36 and vertical construction, facilities maintenance, demolition and obstacle removal, and explosive ordinance
37 disposal. On the Navy side, the Naval Construction Force (NCF) units, known as "SeaBees", complement
38 Marine Corps engineer capabilities providing extensive technical and manpower resources in constructing
39 advance bases, upgrading supply routes, developing aviation support facilities, and providing battle damage
40 repair. Additionally, via the Navy Component Commander, these units provide ship to shore support, pier
41 construction and repair, well-drilling, fleet hospital erection, water and fuel storage and distribution, electrical
42 power generation, and utilities maintenance for naval and other forces ashore. Navy civil engineers, both
43 military and civilian, through the Naval Facilities Engineering Command (NAVFAC), also provide planning,
44 engineering, facility contracting, real estate acquisition and environmental support to the Navy or Joint Force
45 Commander. In both cases, the Navy engineer units benefit from the use of advanced base functional
46 components (ABFC) in meeting the commanders needs. Increasingly, engineer requirements are supported
47 through joint, combined, contracted, or host nation engineering organizations.
48

- 49 • **Health Services** support (HSS) the health of naval personnel and their families. This support includes medical
50 and dental materiel, facilities and services in both combat and non-combat situations. In contingency
51 operations, these services are provided through organic assets including hospital corpsmen, shipboard sick bays,
52 medical and dental battalions of the Marine Corps FSSG, fleet hospitals, hospital ships, and other fixed
53 outpatient and inpatient facilities including other-service, contract, or host nation facilities. The functions of
54 health services are health maintenance, casualty collection, casualty treatment, temporary casualty holding and
55 evacuation, emergency and routine health care, monitoring the health, sanitation and medical readiness of

1 deploying forces; medical service record maintenance, and maintaining mass casualty plans. Additionally, it
2 includes training personnel in first aid; maintaining medical intelligence files; implementing preventive
3 medicine measures; disposing of medical wastes; and ensuring combat readiness of deployed and deployable
4 health care personnel. HSS also maintain cognizance over the supply of medical and dental materiel and blood
5 and blood products.

- 6
- 7 • **Other Logistic Services** are required to provide administrative and personnel support to achieve maximum
8 operational capability of a force. This support extends to those areas of personnel support, quality of life, and
9 morale issues that help define the combat effectiveness of the individual. Other logistic services include
10 billeting; disbursing; exchange services; food services; legal services; morale, welfare and recreation; mortuary
11 affairs; and postal services. The services listed here are in accordance with Navy logistics doctrine. While all
12 are provided for naval personnel, the Marine Corps recognizes separate organic, command support services
13 inherent in any organization (like billeting and personnel administration) and those services which come under
14 CSS, provided by organizations resident in the FSSG. Marine Corps services provided under CSS include
15 disbursing, postal, legal, security support, exchange, civil affairs, mortuary affairs, and food services.
16
- 17 • **Billeting** provides short- or long-term housing for military and civilian personnel. Inherent in shipboard
18 assignment, billeting support is a critical issue for shore-based and transient personnel. While Marine
19 Corps and certain shore-based Navy forces are self-sufficient in field billeting, expeditionary deployment
20 of shore-based squadrons and support forces can create serious billeting deficiencies. Often, these must be
21 met through contracting or host nation support if adequate infrastructure exists abroad. Satisfactory
22 billeting resources is crucial for the high morale of our combat forces.
23
- 24 • **Disbursing** pays naval force obligations, including personnel and logistics support. Local contracting and
25 small purchases can be critical to effective logistics support during deployments; timely and correct
26 discharge of the resulting debts ensures continued access to support. Also, expeditionary force members
27 may be required to subsist or draw specific services off the local economy and adequate disbursing support
28 under such circumstances is vital. In the absence of existing or deployed disbursing capability, emergency
29 support may be requested from other forces in theater.
30
- 31 • **Exchange Services** provide basic goods and services at savings to military personnel and their families via
32 Navy Exchange and Marine Corps Exchange activities. Afloat ships' stores provide personal necessities as
33 well as laundry, dry cleaning, vending, and barber facilities. For naval forces afloat and ashore, access to
34 these services are important to morale and personnel health .
35
- 36 • **Food Services** furnish meals to naval personnel. Food services refer to the local storage, breakout,
37 preparation, and serving of food, with its associated sanitation and accounting requirements. Food service
38 is tactical support; resupply in response to food service operation requisitions is a supply function,
39 accomplished at the strategic and operational levels. Local purchases or local contracts for food service
40 operations may blur this distinction. Food service capabilities are organic to ships, bases, and some
41 expeditionary Navy shore-based units. Other shore-based Navy forces are not self-supporting, and must be
42 subsisted off other forces or the local economy. When initial food facilities are unavailable, naval forces
43 rely on meals-ready-to-eat (MRE) and other similar rations until such facilities can be established.
44
- 45 • **Legal Services** provide legal assistance in direct support of individuals, or in support of operating force
46 planning, contracting and operations. Increasing participation in multinational operations means a more
47 complicated legal environment for both individuals and organizations. Prompt and effective legal advice or
48 action can enhance the efficiency of the operating forces. Via the Naval Legal Service Command, service
49 members are afforded basic legal support regarding personal issues. In addition, this office augments
50 support normally provided by staff judge advocates.
51
- 52 • **Morale, Welfare and Recreation** offers sports, community, youth, and other recreational programs, as
53 well as opportunities for travel, relaxation, education and cultural enrichment for the service member. The
54 application of naval force in presence and force projection roles leads to long and sometimes arduous

1 deployments for sailors and marines. Important to morale and retention of a quality force, MWR activities
2 are critical to the deployed force Commander. Quality efforts to provide relief from separation, monotony
3 and anxiety are effective force multipliers, contributing to both the mental and physical readiness of the
4 deployed military unit.
5

- 6 • **Mortuary Affairs** provide final care services for the service member's family. It includes search,
7 recovery, identification, and disposition for the remains and personal effects of deceased members.
8 Mortuary affairs are a Service responsibility, and the unit is responsible for initial recovery and
9 identification. In the United States, and during peacetime overseas, the Navy and Marine Corps conduct all
10 mortuary affairs for their members. As it entails a recovery, staging, transportation, and tracking and
11 custody process, mortuary affairs is identified as a supply activity. During contingencies operations, the
12 Army is the responsible agent for mortuary affairs overseas, and maintains special mortuary and graves
13 registration units for this purpose. Initial recovery and identification, and delivery to a central Army
14 collection point, remain Service responsibilities.
15
- 16 • **Postal Services** provide a range of critical support services. The most recognized value of postal services
17 has been to maintain the tenuous thread of personal contact between the deployed member and his family
18 and friends. This is particularly true in forward areas and at sea, where electronic means may be in short
19 supply or may be curtailed for security purposes. Mail is also the most effective way to transmit personal
20 parcels, providing physical demonstrations of the ties between the member and the home front. Mail also
21 serves major support functions for the operating force. Fleet CINCs assign area mail routing coordinators
22 and establish Fleet Mail Centers to control the consolidation and dispatch of mail in theater. Expeditionary
23 Mobile Mail Centers may be drawn from the Naval Reserve to operate in theater, and postal personnel are
24 often attached to other expeditionary logistics units transferring mail at advanced logistics support sites
25 (ALSSs) and forward logistics sites (FLSs). Individual units ensure effective mail distribution by providing
26 current mail routing instruction (MRI) messages.
27

28 These six logistics functional areas combine and integrate to provide total logistic support. Planning and execution
29 of responsive, sustainable support requires balancing the functional areas to provide the right support at the right
30 time and place. The appropriate balance and level of support flows through various activities, channels, modes, and
31 nodes to the end user. Regardless of the type of support or the specific means of delivery, logistics support across
32 the full range of functional areas is provided through a series of elements.
33

34 **Process Elements**

35
36 The activities of the logistics process may be reduced to four general elements--acquisition, distribution,
37 sustainment, and disposition. Every logistics action may be expressed in terms of its contribution to one or more of
38 these elements. These four elements, summarized in Figure 1-3, make up our overall logistics process.
39

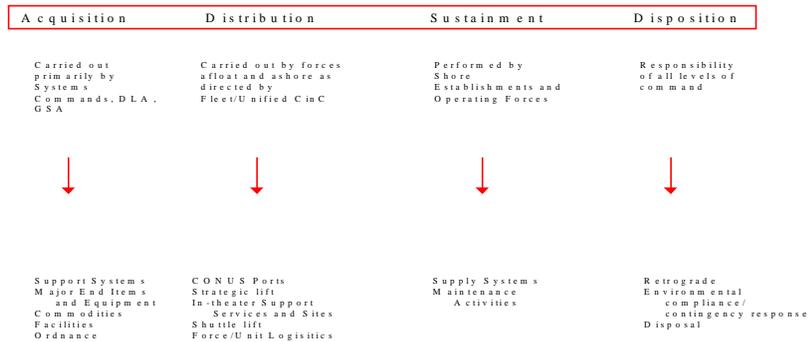


Figure 1-3

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Acquisition. The capability of the naval forces rests on the investment in operational readiness. The principal acquisition organizations are the Navy and Marine Corps systems commands (Naval Sea Systems Command, Naval Air Systems Command, Space and Naval Warfare Systems Command, Marine Corps Systems Command, Naval Supply Systems Comman, Marine Corps Material Command, the Marine Corps Logistics Bases Command, Naval Medical Logistics Command, and the Naval Facilities Engineering Command), the Defense Logistics Agency, and the General Services Administration. These organizations are responsible for procuring, producing, or constructing commodities, facilities, ordnance, and major weapon systems and end items. The Systems Commands are also responsible for life cycle management through a comprehensive systems support program known as Integrated Logistics Support (ILS). This program includes technical data, supply support, facilities, personnel, packaging, storage, handling and transportability, training and training support, maintenance planning, and design interface.

Forward operations, geographically removed from much of the formal acquisition process, often demand time-sensitive reactions to support requirements. Local contracting can often support these requirements and reduce demand on the CONUS industrial base and may significantly reduce transportation requirements, while simultaneously reducing response time. NAVSUP coordinates the Navy Contingency Contracting Program through the Navy Regional Contracting Centers (NRCCs). The NRCCs provide a global network of field offices and deployable contracting capability. NRCC contracting support may be augmented or supplemented by deploying additional reserve or other contracting support to theater. Additionally, DLA Contingency Support (DCST) Contract Administration Teams and Fuels Management Teams can deploy to support CINC contracting needs. Within the engineering realm, NAVFAC administers the Construction Capabilities (CONCAP) contract, and also provides for the Navy timely real estate acquisition authority.

Distribution. Distribution refers to the processes used to get materiel, services and personnel to the supported forces. It includes overall management, inventory control, and integration of information. Initiatives such as Direct Vendor Delivery have broadened the definition by moving distribution of selected items to the civilian sector. Increasingly, the logistics planner may incorporate non-military options into his mix of scarce distribution resources. Transportation decisions also depend upon what is being moved, its origin and destination, the lift assets available, and the urgency assigned. The transportation mode is based largely on the weight, size, urgency, and special handling requirements of the shipment. Airlift is normally reserved for passengers and high priority mail and cargo. Because a large proportion of naval operating forces are self-deploying, embarked on Navy ships, forward-deployed, or prepositioned, distribution considerations during initial deployment are largely the concern of shore-based forces. Responsive distribution of sustainment is a monumental concern for all naval forces. High speed operational maneuver across broad areas of ocean; flexible reassignment of afloat units between task forces or groups; and operational movement of units in and out of theater (as in escort forces and shuttle ships) demand flexible distribution. Rapid embarkation and debarkation of Marine Corps forces, aircraft, staffs, and other units also challenge the distribution system by shifting customer locations. The naval logistician must be adept at hitting constantly moving targets with critical sustainment, carefully monitoring ship and unit movements to anticipate the strategic and operational channels and modes most likely to put the support at the right place and time

1
2 **Sustainment.** Sustainment is the provision of personnel, logistics, and other support required to maintain
3 operations. This provision normally takes place at the operational level, where services and supplies processed
4 through the distribution system actually reach the supported force. The term sustainment is also applied to specific
5 materiel; in this usage, "sustainment" means those items planned or processed through the logistics system to fuel
6 the sustainment element. Planners use this distinction to separate resupply from forces in deployment planning.
7 When national leaders call on naval forces, they expect both responsiveness and staying power. Forward deployed
8 naval forces carry with them initial sustainment stocks. Proper sustainment allows forces to remain on station as
9 long as needed. Establishing and maintaining this reliable flow of materiel and services to operating forces is
10 accomplished through the operation and management of logistics support activities. Sustainability depends on the
11 effective participation of all providers across the functional areas of logistics.
12

13 **Disposition.** Disposition is the handling, stowage, retrograde, and disposal of materiel and resources released or
14 returned by forces. Logistics economy, attainability and sustainability are all dependent on the careful husbanding
15 of limited resources. Similarly, efficient processing and shipment of excess materiel replenishes stocks available to
16 other theaters, and can reduce the theater "footprint" needed for unessential stocks.
17

18 Disposition includes cleanup of environmental and other damage incident to operations. Minimizing environmental
19 damage requires responsible and conscientious action at all levels. Naval commanders must also act to protect the
20 environment during all phases of an operation. Noise, air and water pollution, waste disposal, hazardous materiel
21 storage, and accidental discharge are examples where environmental damages potentially can occur. All military
22 forces are required to protect the environment to the extent operationally feasible through applicable DOD, local,
23 national and international environmental laws and regulations. The Navy, through the Supervisor of Salvage, has a
24 spill-response capability including systems, equipment, materiel, and personnel. Working together with the Coast
25 Guard who has primary responsibility for oil-pollution response, the Navy is committed to support cleanup actions
26 in response to major oil and hazardous substance spills, accidental releases, and environmental terrorism.
27

28 **Principles of Logistics**

29
30 Naval logistics--provided at the strategic, operational and tactical levels; organized within the six major functional
31 areas; and accomplished through application of the logistics process--is guided by a set of overarching principles.
32 Each plan, action, organization, report, procedure, and piece of equipment may be defined and measured in terms of
33 these principles. Each logistics decision is guided by the application of these principles. They are applicable to all
34 military logistics, and provide the common foundation of joint and naval logistics doctrine. Both the operational
35 commander, who needs to know the effective limits of the available logistics support, and the logistics planner, who
36 has to ensure that all the essential elements of the logistics system are incorporated, must understand these
37 principles. These principles of logistics include responsiveness, simplicity, flexibility, economy, attainability,
38 sustainability, and survivability. See Figure 1-4
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Figure 1-4

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Responsiveness. *Providing the right support at the right time and at the right place.* This is the most important principle of logistics, because it addresses the effectiveness of the logistics effort, and in war an ineffective effort leads to defeat. Ensuring that adequate logistics resources are responsive to operational needs should be the focus of logistics planning. Such planning requires clear guidance from the commander to his planners. It also requires clear communication between operational commanders and those who are responsible for providing logistics support. The operational commander's concept of operations must be thoroughly familiar to the supporting elements to ensure responsive, integrated support. Responsiveness is a product of logistics discipline, and commanders and logisticians who consistently overestimate their requirements--in quantity or priority--risk slowing the system's ability to respond.

Simplicity. *Avoiding unnecessary complexity in preparing, planning and conducting logistics operations.* Providing logistics support is not simple, but plans that rely on basic systems and standardized procedures usually have the best chance for success. The operational commander can simplify the logistics task by maintaining cognizance of the available logistics capabilities, communicating clear priorities, and establishing support requirements based on current and accurate data.

Flexibility. *Adapting logistics support to changing conditions.* The dynamics of military operations are such that change is both inevitable and rapid. Logistics must be flexible enough to support changing missions; evolving concepts of operations; and shifting tactical, operational, and strategic conditions. A thorough understanding of the commander's intent enables logistics planners to support the fluid requirements of naval operations. In striving for flexibility, the logistics commander considers such factors as alternative planning, anticipation, reserve capabilities, and redundancy. The task organization of shore-based support tailored from advanced base functional components is an example of flexible logistics response to anticipated operational requirements.

Economy. *Effective employment of logistics support assets.* Logistics assets are allocated on the basis of availability and the commander's objectives. Effective employment requires the operational commander to decide which resources must be committed and which should be kept in reserve. Additionally, the commander may need to allocate limited resources to support conflicting requirements. The prioritization of requirements in the face of limited forces, materiel, and lift capability is a key factor in determining the logistics feasibility of a plan. Common-user materiel, facilities and services may be sourced through joint, combined, or commercial providers at significant savings in transportation, stocks and facilities. While certain redundancies may be necessary to responsiveness and survivability, the reduction in logistics "footprint" compounds savings by negating the requirement to support and protect larger logistics operations.

Attainability. *The ability to acquire the minimum essential logistics support to begin operations.* The difference between this minimum essential level of support and the commander's desired level of support determines the level

1 of risk inherent in the operation from a logistics viewpoint. The accurate determination of the minimum
2 requirements, and the time it will take to reach that level given the available resources, allows the commander to
3 determine the earliest possible date for the commencement of operations. The principle of attainability allows the
4 commander to pursue a higher level of logistics confidence, but an operation undertaken without meeting the
5 minimum needs determined under this principle is, by definition, destined to fail.

6
7 **Sustainability.** *Ensuring adequate logistics support for the duration of the operation.* Sustaining forces in an
8 operation of undetermined duration and uncertain intensity is a tremendous challenge. Forces may operate with a
9 diminished level of support for some time, but every means must be taken to maintain minimum essential support at
10 all times. Sustainability derives from effective planning; accurate projections of requirements; careful application of
11 the principles of economy, responsiveness, and flexibility to provide required support; and successful protection and
12 maintenance of the lines of communication. Additionally, sustainability is dependent on discipline within the
13 operating forces when establishing requirements and expending limited resources.

14
15 **Survivability.** *Ensuring the functional effectiveness of the logistics infrastructure in spite of degradation and*
16 *damage.* Logistics forces, sites, transportation modes, lines of communication, and industrial centers are all high-
17 value targets that must be protected. Logistics ships, aircraft, vehicles and bases may be vulnerable to direct attack
18 by enemy forces or terrorists. Similarly, these assets and the systems that utilize them are subject to disruption by
19 natural disaster, weather, communications failures, civil disobedience, contract and labor disputes, legal challenges,
20 and the political decisions of other nations. Survivability requires a robust and diverse logistics system capable of
21 sustaining forces in the face of any obstacle. Dispersion of installations and materiel, maintenance of alternate
22 modes of transportation and lines of communication, redundant logistics communication systems, adequate stock
23 levels, reserves of equipment and personnel, phased delivery, and alternate sources of supply can all support
24 survivability. Force reconstitution and replacement, decontamination, reconstruction, re-equipment, repair, or
25 relocation may restore the effectiveness of logistics systems degraded by battle damage or other events.
26 Accordingly, the survivable logistics must include sufficient assets to support its own recovery as well as the
27 operating forces.

28
29 The principles of logistics are always in evidence in a successful operation, but seldom have equal influence. At
30 times the principles make conflicting demands. For instance, total responsiveness and survivability cannot be
31 achieved with maximum economy. The operational commander, supported by his logistics planners, must weigh the
32 relative importance of each principle to the specific operation. By carefully considering each principle in light of
33 prevailing circumstances, the commander is guided toward an effective support plan that will be in consonance with
34 operational requirements and the available logistics resources.

35 36 **The Future of Naval Logistics**

37
38 Any logistics system must maintain a current focus; today's support must be effective; today's operations must be
39 efficient. U.S. naval logistics operations have provided a model of excellence to forces around the world.
40 Maintaining and improving that logistics excellence in changing political and operating environments requires an
41 additional focus—forward.

42
43 Logistics in the early part of the twenty-first Century will be characterized by familiar themes. The systems
44 supported will become more complex. The pace of war will accelerate as more capable forces, supported by better
45 information, maneuver to dominate the battlespace. Battlespace expansion will continue as sensor, communications,
46 command and control, propulsion, weapons, and support systems evolve to permit more dispersed forces to be
47 brought to bear. Economic and political interdependence will bring the interests—and forces—of nations
48 increasingly closer. Combined and joint responses to crises and contingencies of many types will bring wider arrays
49 of forces, agencies, and organizations into the logistics customer base. Logistics systems will meet these challenges
50 through increasingly efficient application of increasingly scarce resources. Logisticians must also leverage
51 technologies to help elevate the effectiveness and the maneuver potential of the operational commander.

52 53 **Conclusion**

54 In order for naval logistics to effectively carry out its mission of providing and sustaining operational readiness, the
55 warfighter needs to share a common understanding of the basic nature and principles governing logistics operations.

1 The levels, functional areas, and process elements identify the macro components that make up the total naval
2 logistics system. The principles that govern naval logistics provide the authoritative framework that governs the
3 formation and employment of logistics forces. Support of the operational mission and the commander's intent is
4 inherent in the principles of responsiveness, flexibility, attainability, sustainability, and survivability. Recognition
5 of the need for efficiency in the application of limited resources is inherent in the principles of simplicity and
6 economy. Properly balanced, these competing interests channel the logistics effort toward success.

CHAPTER TWO

NAVAL LOGISTICS PLANNING

Introduction

The dynamic process of providing logistic support to our operational forces is one characterized by the need to respond to continuous change: e.g., changes in support required because actual usage exceeds expected consumption; changes in user location to keep ahead of enemy moves; changes in quantities needed to replace losses in transit or at the theater depot. A responsive logistic planning system and integral information support allow naval logistics to keep up with these necessary changes to maintain our operational warfighting readiness through uninterrupted logistic support.

Naval logistic planning and information support is designed to answer these questions: What materials, facilities, and services are needed? Who is responsible for providing them? How, when, and where will they be provided? To find answers, we start with sources of logistic planning guidance, then apply a formal process that parallels operational planning procedures. The nature of the situation will determine whether we apply a deliberate or a crisis action planning process. Using one of these processes, we formulate a general plan that covers the organization, procedures, and policies of logistic support groups and the specific directives or instructions detailing the execution of support for a particular operation. Naval logistic information support allows us to keep the plan current, accurate, and adequate by providing data on the status of logistic resources, operational force needs, and the ability to meet those needs. Logistic planning and information support are thus complementary. Information enables a commander to apply his experience and judgment to deviate from existing plans. Similarly, formal planning can organize and prioritize a commander's information needs, allowing him to select the best courses of action and adapt what he knows to the situation.

Logistic Planning

Logistics is the responsibility of the operational commander, who must ensure that his operations and logistic experts integrate their operation and logistic plans. Overall feasibility of these plans will be determined by their ability to generate and move forces and materiel into the theater, then forward to our operating forces.

The complexity of planning would be extremely daunting, but for the fact that both logistic and operations planning are organized processes. Logistic planning is performed in parallel with naval operations planning. Logistic planners identify and resolve support problems early by working concurrently with, and in support of operations planners. All planners must consider the overall support requirements and capabilities. This is accomplished by working back from established objectives, and addressing such issues as adequacy and availability of resources. The result of this process is a logistic concept of operations that parallels the commander's concept of operations, permitting subsequent detailed, tactical-level, support planning. Detailed logistic planning should:

- Earmark significant time-phased support requirements
- Identify transportation requirements to support the movement of personnel, equipment, and supplies
- Outline the capabilities and limitations of ports, including the Logistics-Over-The-Shore¹¹ capability to respond to normal and expanded requirements
- Recognize support methods and procedures required to meet the needs of the sea, air, and land lines of communications
- Coordinate and control movement into the contingency area
- Develop reasonable logistical assumptions
- Define the extent of needed host nation resources

- 1 • Identify the engineering and construction requirements for sustainability
- 2 • Identify the source of funding for logistic support
- 3 • Consider the meteorologic and oceanographic limitations.

4 **Sources of Logistic Planning Guidance**

5 The National Security Strategy, National Military Strategy, Unified Command Plan, and the Joint Strategic
6 Capabilities Plan all form the basis of the theater campaign plan, and, in turn, the logistic support plans. These
7 broad documents--in particular, the Joint Strategic Capabilities Plan, which conveys the Chairman's guidance--
8 contain the basic planning assumptions for developing regional plans. Navy and Marine Corps Capabilities and
9 Mobilization Plans, and the Marine Corps Mobilization Management Plan contain detailed policies and force
10 capabilities and allocation for each logistic functional area.

11 **The Logistics Planning Process**

12 The planning guidance provided by joint, naval, and multinational doctrine forms a sound, consistent, and
13 authoritative foundation for naval planning. Naval logistics planners should be ready to participate in joint and
14 combined operations as partners in the planning process, and as spokespersons for Navy and Marine Corps interests
15 and requirements. The planner who understands joint planning can quickly integrate into Service or multinational
16 planning.

17 **Joint Logistics Planning** is part of the joint operation planning process. Operation planning, conducted
18 simultaneously at the strategic, operational, and tactical levels, provides the framework for employment of military
19 forces to achieve specified objectives during contingencies. Planners provide for five major activities of joint
20 operations. These are mobilization, deployment, employment, sustainment, and redeployment. These activities are
21 components of force projection, which will be discussed in Chapter Four. In addition, planning may be deliberate,
22 addressing potential future requirements; or crisis action, which addresses emergent planning requirements.

23 Operational plans must be adequate, feasible, acceptable, and compliant with joint doctrine. An adequate plan is one
24 that will accomplish the mission, while a feasible plan relies on resources that are actually available when required.
25 An acceptable plan is militarily and politically supportable, and is deemed worth the anticipated cost. Developing
26 such plans in accordance with joint doctrine is the goal of Joint Operation Planning and Execution system (JOPES)
27 deliberate and crisis action planning processes. These are continuing cyclical planning processes that begin when a
28 requirement is identified and continue until it no longer exists.

29 **The Deliberate Planning Process**

30 Deliberate planning prepares for a possible contingency based on the best available information, using forces and
31 resources apportioned by the CJCS in the Joint Strategic Capabilities Plan (JSCP). Most deliberate planning is done
32 in peacetime, based on assumptions regarding the political and military circumstances that may prevail when the
33 plan is implemented. Deliberate planning is highly structured and occurs in regular cycles. It produces an OPLAN
34 or CONPLAN.

35 Logistics planners prepare the staff logistics estimate during the concept development phase of deliberate planning.
36 This provides the commander with the information to support COA selection, and is developed concurrently with
37 the commander's estimate. Logistics also plays a major role in plan development as supported and supporting
38 CINCs determine support requirements and resolve shortfalls. Finally, logistics planners at many levels prepare
39 supporting plans to provide the mobilization, deployment, sustainment, and redeployment of forces and resources in
40 the OPLAN.

41 **Crisis Action Planning**

1 Crisis action planning (CAP) is conducted in rapid response to actual circumstances. Crisis action planning (CAP)
2 follows the general pattern of deliberate planning, but adds flexibility for timely action. If an existing OPLAN is
3 adaptable to the situation, CAP procedures are used to adapt an existing OPLAN to actual conditions or to develop
4 and execute an operation order (OPORD).

6 **Naval Logistics Planning**

8 Most naval planning occurs within the framework of the joint planning process. When Naval forces are assigned,
9 attached, or apportioned to unified or specified commanders, planning is done in support of the commander's intent.
10 Naval planners provide input to the concept development (including the logistics estimate), plan development, and
11 plan review phases. When a combined, joint or naval task force is established, the component commander is
12 directly responsible to the task force commander for development of supporting plans, including the logistics annex.
13 The task force commander may often be Navy or Marine Corps, and may have other Service components providing
14 supporting plans. Common planning processes allow products from each level or component to effectively support
15 the overall plan.

17 For an OPLAN or OPORD, planners for Naval Component Commanders will receive the concept of operations,
18 force apportionment, time-lines, and other pertinent information, and then promulgate the appropriate guidance, and
19 task subordinate and supporting commanders to provide the additional information necessary to the logistics plan.
20 They will also work within the joint planning and execution community (JPEC) to resolve strategic and theater-wide
21 planning issues. The Naval CINC logistics planners review and approve subordinate inputs, incorporate the data
22 and requirements into the Navy plan, and represent the Navy CINC to resolve shortfalls, deconflict issues, and
23 develop comprehensive and feasible logistics annexes to the OPLAN or OPORD. In the event of a Navy OPORD or
24 OPGEN, the Navy CINC planners follow the same basic process, but without a requirement for JPEC refinement.
25 Navy CINC logistics planners often request and receive planning support from subordinate commands and
26 supporting CINCs. Logistics Task Force Atlantic and Logistics Task Force Pacific (LTFLANT/LTFPAC) also
27 provide specific planning support in the sourcing and application of Naval Reserve logistics units and equipment.

29 Planners for the numbered fleets, or other command levels below the component commander, develop detailed
30 logistics requirements. The numbered fleet commander considers the level of supported forces, the timing of their
31 arrival, planned movements, projected optempo and the distance and capabilities of potential support sites and
32 maintenance facilities. Detailed support requirements and shortfalls are determined from these considerations. The
33 CINC then incorporates these results in the final product. The Navy commander at this level--through his logistics
34 staff and planners--may have responsibility for joint logistics coordination within theater, and will be concerned
35 with both Navy and common-user theater stocks and services. Planning and coordination of support sites,
36 contracting, facilities, forces, and equipment for shorebased operations are conducted in detail, as are planning for
37 CLF and COD/VOD support of afloat forces. Numbered fleet or component commanders will task subordinates for
38 appropriate planning data, and may receive logistics planning assistance from supporting commands.

40 Transportation planning assumes a minor role for initial deployment of most ships. While sustainment requirements
41 bring the afloat force into competition for limited strategic transportation assets, the transportation feasibility of
42 ships' movement during the deployment phase of an operation is nearly constant. Initial requirements for every
43 logistics function are transported in--rather than with-- the supported force. Endurance loaded ships may operate for
44 weeks with minimal external support.

46 Naval units at sea must also place planning emphasis on theater infrastructure and lines of communication (LOC)
47 maintenance issues. Theater infrastructure concerns do influence planning with regard to ports and facilities for
48 shorebased support, MPF, AFOE, and LOTS operations; and other strategic sealift discharge. Forces afloat must
49 also be concerned with characteristics of the theater regardless of land or sea. Political and topographical concerns
50 become relevant during projection of power into national waters, airspace, or territories. Where political or other
51 conditions prohibit effective placement of support sites, planners must ensure available logistics force ships can
52 provide support across extended shuttle legs. Conversely, the support of ships at sea is complicated by specific
53 environmental (wind/sea state) impediments to resupply, and broader threat spectrums (including subsurface as well
54 as surface and air). The U.S. Navy excels at underway replenishment (UNREP), but weather, threat, or operating
55 conditions can render UNREP impossible at times. Planners seek to prevent support shortfalls by ensuring

1 necessary support in spite of natural or enemy action.

2
3 Shore-based Naval logistics introduces additional planning requirements. Sites must be identified for the ALSS and
4 FLSs. Capacities, layout, equipment, and competing requirements determine the throughput the sites can
5 accommodate, and the logistics forces necessary to support that throughput. Plans are structured using advance base
6 functional components (ABFCs). These planning tools are functional groupings of personnel, material, facilities,
7 and equipment. Each ABFC has a defined capability, and a list of requirements necessary to its support. Multiple
8 ABFCs are combined to meet the mission requirements of each site, with personnel ABFCs providing the necessary
9 skills being married to equipment/facility ABFCs providing the necessary capabilities. ABFC requirements may be
10 met from units and equipment sets in the Naval Reserve, or from other sources. Navy organic shore based logistics
11 forces are concentrated in the Naval Reserve, and planners must consider the need for early access to reserve units
12 and equipment for every functional area of logistics. Additionally, the plan must provide for sustainment and
13 security of the logistics forces and sites. Many shorebased Navy logistics forces are not fully self-sustaining.

14
15 Logistics planning within the battle group generally addresses near-term operations and emergent requirements. The
16 battle group logistics coordinator and staff will plan and develop OPTASKs promulgating days of supply, logistics
17 staff responsibilities, replenishment priorities, logistics reporting, and coordination of support within the battle group
18 and with the underway replenishment group and shorebased logistics organizations. Existing shorebased logistics
19 commands generally participate in OPLAN development by generating and providing relevant data and/or
20 supporting plans to the Navy component commander. For Navy ships, logistics planning is driven by the direction
21 received in instructions and OPTASKs from each level of command. Supply, Weapons, Medical, and Engineering
22 Officers maintain directed levels of supply, and exercise judgement within prescribed parameters.

23
24 Marine Corps logistics planning reflects the tradition of operations from the sea, focuses on its expeditionary nature.
25 Expeditionary operations ashore generally require establishment of forward bases and creation of a theater logistics
26 system. Expeditionary operations generally involve five phases of action: predeployment, deployment, entry,
27 enabling/decisive actions and redeployment. Planning for predeployment addresses logistics interfaces, FSSG
28 support to the deploying MAGTF, civilian support, mobilization personnel requirements, fiscal authority, facilities,
29 and remain behind equipment. Deployment planning defines deployment support organizations, JOPES validation,
30 deployment modes, movement control organizations, and continuing support from parent bases and stations. Entry
31 planning includes amphibious operations, MPF operations, air contingency MAGTF operations, or any combination
32 of the three. Enabling/decisive planning considers sustainment through lodgement for logistics and other support
33 capabilities, sea basing requirements, the need for the sea echelon, and the potential to transition to sustained
34 operations ashore. Finally, reconstitution planning provides for potential follow on missions and redeployments.

35 36 **Multinational Planning**

37 Economic, military, environmental, and other crises seldom confine themselves to a single nation. The U.S. unified,
38 subunified, or JTF commander normally acts within the U.S. chain of command to prepare both unilateral plans and
39 joint plans in support of treaty or alliance commitments. Within the combined chain of command, the U.S.
40 commander and component commanders coordinate these plans with coalition or alliance plans. The principles
41 guiding operational and logistics planning within international organizations are much the same as those within joint
42 and naval planning, and logistics remains a national responsibility under allied doctrine. However, certain planning
43 considerations gain significance in multinational planning. The following are representative of areas the naval
44 logistics planner must address:

- 45
- 46 • Chains of command proliferate, and lines of authority and responsibility must be understood. This relates to all
47 levels of command. It reflects the need to know not just command and control organizations, but also
48 responsibilities for functional and site operations. Equally important is advance agreement on procedures for
49 adjudicating conflicts that may arise between countries.
 - 50
 - 51 • National security interests must be maintained. Certain information within joint and supporting plans will not
52 be necessary to the planning or execution of the combined operation, and will not be releasable to allies or
53 coalition members. The scope and level of information to be released will be in accordance with CJCS
54 instructions.
 - 55

- 1 • Planning and reporting requirements, methods, and formats must be determined. This is frequently established
2 in allied doctrine, but may vary in different operations. Planners must recognize and incorporate these
3 requirements in planning logistics command and control.
4
- 5 • Logistics interoperability must be addressed. While logistics is a national responsibility, the principles of
6 economy and simplicity require cooperative agreements. These agreements allow more efficient use of
7 resources and minimize the logistics footprint in theater. Differences in areas like health services or food
8 service between the support acceptable by one nation, and available from other nations may be completely
9 irreconcilable. While issues such as processing standards, sanitation practices, and water or fuel quality provide
10 common examples of this problem, other considerations can be just as critical; common or shared support of
11 combined forces can be extremely difficult when cultural or religious beliefs impact sustainment.
12

13 **NATO Logistics Support**

14 Planning takes place within the NATO Operational Planning Process (OPP, and produces detailed logistics Annexes
15 to the NATO OPLAN and OPORDER. Within NATO maritime forces, specific logistics planning may be
16 promulgated through OPTASKs. NATO planning process and products bear great similarity to the U.S.
17 equivalents. A primary difference is the need for continuous national consultation and international coordination
18 during planning. Memorandum of Understanding (MOU), bilateral agreements, joint Host Nation Support
19 Agreements (HNSAs), Status of Forces Agreements (SOFAs), funding, transfers of authority, national contributions,
20 NATO-owned equipment, and other questions must be addressed. The principal source of unity of effort,
21 consensus, and economy is a series of Logistics Planning Conferences involving NATO Commanders and nations.
22 These conferences result in logistics procedures and a command and control architecture to be employed in the
23 operation.
24

25 **Conclusion**

26 Planning operations at the Service, joint, or multinational level requires tremendous amounts of data. For logistics
27 planning, this data involves every aspect of an operation that may affect distribution and sustainment. Analysis at
28 every level of logistics, for each element, within each function, must be thorough and accurate. Incorporating every
29 consideration from the strength of the enemy to the location of a reserve unit in the middle of the U.S. is an almost
30 incomprehensible task. Effective planning depends on the rapid accumulation and processing of data into
31 information which can support the operational commander in making the right decision. To this end, sophisticated
32 information systems link operations and support planners at every level to each other and to the information they
33 need. Naval and joint planners rely on JOPES and supporting systems identified in the next chapter to produce
34 feasible plans and TPFDLs.
35

36 Logistics planning extends from the deckplates to the National Command Authorities, and to international alliances
37 and organizations. Attention at every level assures consideration of factors ranging from the operating needs of the
38 forces to the limits of the industrial base. At higher organizational levels planning becomes more complex, yet more
39 productive; economies and capabilities shared within and between units, forces, services, and nations afford the
40 warfighter increasing access to responsive, flexible support. Feasibility is enhanced as joint and combined assets
41 address common needs. Disciplined planning efforts draw each advantage from cooperative support, thereby
42 minimizing waste and redundancy. At execution, the products of logistics planning multiply the effectiveness of
43 the force and the confidence of the combatant commander.

CHAPTER THREE

LOGISTICS COMMAND AND CONTROL, AND INFORMATION SYSTEMS

Introduction

Naval commanders monitor and direct forces through command and control (C2) systems. C2 systems are bolstered by information systems offering reliable data and the organizational and analytical tools to manipulate that data in support of effective decision making. The command and control and information systems used to monitor and direct naval forces and operations, including naval logistics forces and operations, function under national authority and within a joint command and control system to permit effective coordination and employment of forces.

Additionally, naval forces may be assigned to combined forces. In this mode, naval command and control systems connect to allied systems, and naval information systems share with allied systems that information necessary to combined operations, consistent with U.S. security considerations. Effective logistics support requires commanders at every level of supported and supporting forces to understand the organization and associated information systems of naval, joint, and combined forces.

Development of joint command and control, and information systems is progressing rapidly. Commonality and interoperability have assumed a higher priority than ever before. Advances in C2 have been made possible by advances in information and communications technology, and divergent approaches to command and control are drawn closer by computer processing power and electronic media. Advances in C2 extend to command and control of naval logistics (Log C2), and supporting information systems.

The National Command Authorities (NCA) controls the operating forces through designated commanders in chief exercising combatant command (COCOM) of assigned forces. COCOM is vested in geographic and functional unified (all Service) commands with broad continuing missions. Two additional levels of joint force commands are subordinate unified commands and the joint task force (JTF). The JTF is the "workhorse" organization for joint response to an emergent crisis with a specific limited objective.

Naval Service Organizations

Although forces may be assigned or reassigned between unified CINCs, they remain permanently organized within the Services. The Secretary of the Navy (SECNAV) exercises authority, direction, and control of those Navy and Marine Corps forces *not specifically assigned to combatant commanders*. The SECNAV directs and controls naval forces through the Chief of Naval Operations and the Commandant of the Marine Corps. The Department of the Navy organizes, trains, equips, and provides forces for the combatant commanders, and maintains administrative control (ADCON) of those forces. Administrative control is exercised through the commander of the cognizant Navy or Marine Corps component command.

The CNO is the senior military officer of the Department of the Navy, and is a member of the Joint Chiefs of Staff. Forces and assets under his administrative control include Navy operating forces and the Navy shore establishment. Navy component commanders working under the unified CINCs report administratively to the CNO. In this chain of command, they train and equip the operating forces. These commanders include the major fleets--the Atlantic Fleet (CINCLANTFLT) and the Pacific Fleet (CINCPACFLT)-- and the commanders of U.S. Naval Forces Europe (CINCUSNAVEUR) and U.S. Naval Forces Central Command (COMUSNAVCENT). Also included are commanders of the Naval Reserve Force (CNRF), the Operational Test & Evaluation Forces (OPTEVFOR), the Naval Special Warfare Command (SPECWAR), and the Military Sealift Command (COMSC).

Operating Force Organization

Operationally, Navy geographic component commanders report to the Unified CINCs for their areas and command Navy operating forces and activities within their geographic areas. These operating forces are organized in numbered fleets. The Commanders of the Third Fleet and Seventh Fleet report to CINCPACFLT, while Commander, Second Fleet reports to CINCLANTFLT. Additionally, Commander, Sixth Fleet reports to CINCUSNAVEUR, and Commander, Fifth Fleet reports to COMUSNAVCENT. As units enter an area of responsibility for a specific Navy CINC, they CHOP (change of operational control) to the appropriate numbered fleet. Within the fleet, forces are further organized into task forces (TF), task groups (TG), task units (TU), and task elements (TE) as appropriate. These organizations may be naval, joint, or combined. In joint or combined task

1 operations, the senior naval commander may be the combatant commander or may serve as component commander
2 to the task organization.

3
4 For the Marine Corps, the Commandant of the Marine Corps is the senior Marine Corps Officer and holds the
5 similar position of responsibility as the CNO does. Operationally, Marine Corps Operating Forces are assigned to
6 combatant commands through the Marine Corps component commanders. The Marine Corps operational
7 organization is focused on the Marine Air Ground Task Force (MAGTF). Each MAGTF contains a Command
8 Element (CE), a Ground Combat Element (GCE), an Aviation Combat Element (ACE), and a Combat Service
9 Support Element (CSSE). There are three basic types of MAGTF:

- 10 • The Marine Expeditionary Force (MEF), consisting of a command element, and at least one Marine division
11 (MARDIV), a Marine aircraft wing (MAW) and a force service support group (FSSG). Any of the three MEFs
12 may deploy minus portions of its structure, or plus units from other MEFs, Services, or the Reserve.
13
- 14 • The Marine Expeditionary Unit (MEU) is the standard forward-deployed organization, routinely found in an
15 Amphibious Ready Group (ARG). The MEU normally includes a command element; a reinforced infantry
16 battalion with artillery, engineer, reconnaissance, armor, and assault amphibian units; a reinforced squadron
17 with transport, utility, and attack helicopters; a detachment of vertical/short takeoff and landing fixed-wing
18 attack aircraft; and a task organized combat service support element.
19
- 20 • The Special Purpose MAGTF (SPMAGTF) maybe formed with narrowly focused capabilities chosen for a
21 specific mission. Normally, the SPMAGTF will be at or below the size of a MEU.
22

23 **Naval Logistics System Organization**

24
25
26 Naval logistics forces fall within the same overall command and control structure as operating forces. Forces in
27 theater are assigned to the operational control (OPCON) of the supported CINC. The logistics organizations,
28 systems, and forces are both components and customers of the overall logistics system. Regardless of location or
29 employment, all logistics forces rely on supply and transportation systems to distribute their own support and to fuel
30 the support they provide. Joint, naval, and multinational organizations often co-exist and interact to provide
31 effective theater logistics command and control.
32

33 **Theater Logistics Command and Control**

34
35 Logistics command and control in theater is the responsibility of the combatant commander, while logistics support
36 is a Service responsibility. The combatant commander normally accomplishes control of naval logistics operations
37 through the naval component commander. Dependent on the size and nature of operations and assigned forces, there
38 may be either Navy (NAVFOR) or Marine Corps (MARFOR) component commanders, or both. Also, a Joint Force
39 commander may designate joint task forces (JTFs) sourced entirely from a single Service, or from functional
40 components of several Services. Naval organization for effective logistics support is predicated on the nature of the
41 forces supported, and may be tailored to specific theaters and operations.
42

43 The joint force commander (JFC) will determine his appropriate log C2 organization based on the mission, operating
44 environment, and assigned assets. This organization will manage common-user and cross-Service logistics, monitor
45 and report logistics operations and capabilities, advise the combatant commander on logistics matters, and represent
46 the command to external logistics organizations. Regardless of what specific form the organization takes, it will
47 generally constitute or include a Logistics Readiness Center (LRC). The logistics staff will focus its monitoring,
48 advising, and internal and external coordinating activities within this center. While the joint logistics C2 structure
49 may take many forms, most can be categorized within three primary models:
50

- 51 • Augmented log organization, represented in Figure 3-1, utilizes the existing J4 organization as the theater Log
52 C2 organization. This logistics staff, augmented as necessary by the relevant Services and Agencies personnel,
53 extends its role beyond the internal staff logistics functions to provide coordination and tasking for joint force
54 logistics.

Augmented J4 LOG C2 Organization

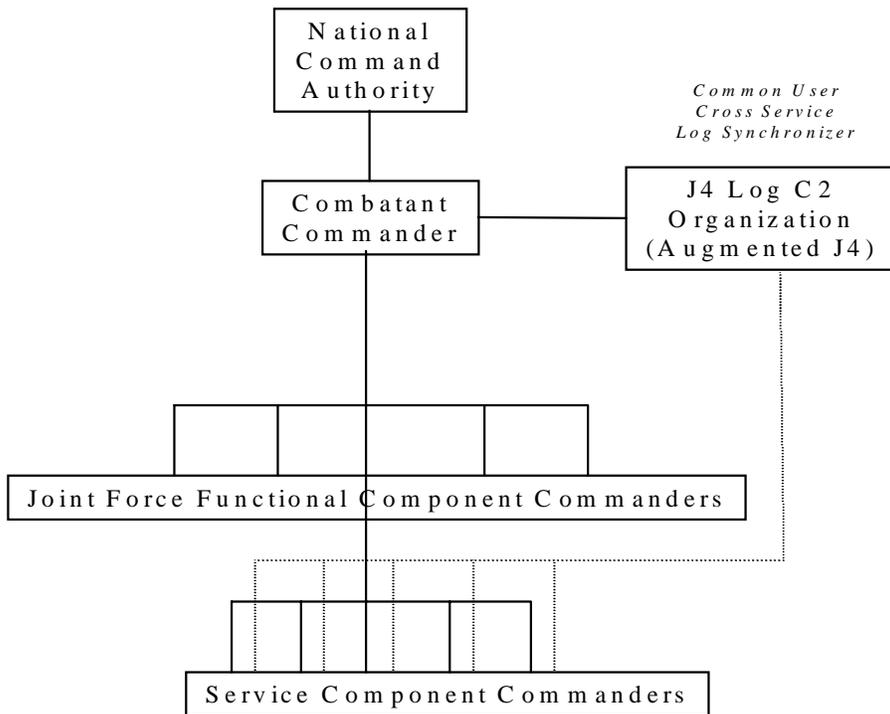


Figure 3 - 1

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- In a second organizational form, shown in Figure 3-2, a separate J4 focuses mainly on internal logistics, and a Log C2 tasking and coordinating position is created on the CINC's staff. Jointly staffed by the Services and Agencies, this organization can be activated and expanded as dictated by mission requirements.

D o m i n a n t S e r v i c e L O G C 2 O r g a n i z a t i o n

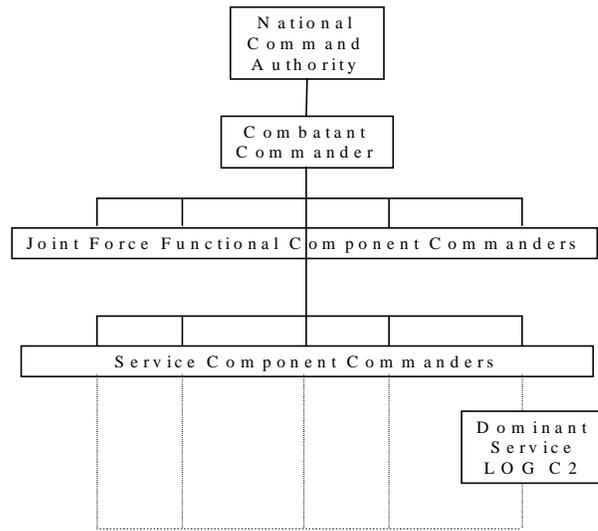


Figure 3 - 3

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For missions or areas where one Service represents the majority of the capabilities or requirements, the combatant commander may organize Log C2 by tasking the predominant involved Service’s logistic agency with managing and coordinating joint requirements. Service and Agency liaison will be provided to represent component requirements. An example of this organization is depicted in Figure 3-3.

J o i n t L o g i s t i c s S t a n d a l o n e C 2 O r g a n i z a t i o n

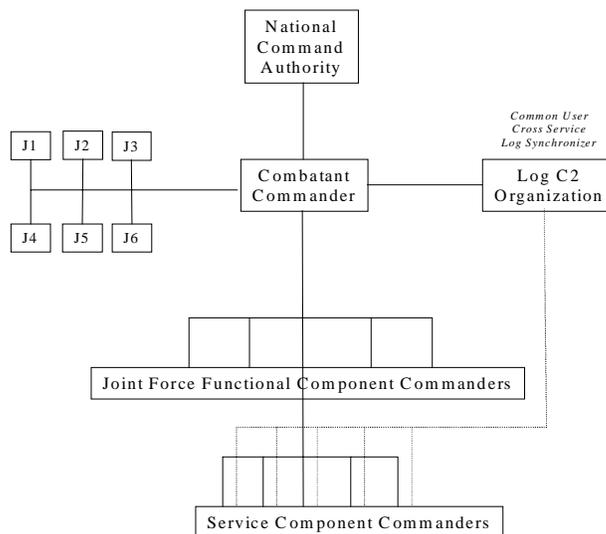


Figure 3 - 2

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Naval Theater Logistics Command and Control

Naval Log C2 organization for forces afloat is often supported across multiple lines of communication from sites both within and without the operating area. These sites may be under control of different numbered fleet commanders. The forces afloat can also move in and out of the CINC's area of responsibility (AOR), drawing sustainment from changing CINCs as they transit the ocean. Shorebased forces in theater have different support requirements than forces afloat, and in some theaters may fall under different service Log C2 organizations. Certain Navy forces ashore may be reassigned between Navy and Marine Corps (or other-Service) control, shifting support responsibilities. Finally, Marine Corps forces afloat shift substantial support requirements from Navy to Marine Corps logistics organizations when they go ashore. These challenges demand very flexible, but very well defined, Log C2. Like the unified CINC, the Navy fleet CINC has the three similar options for Log C2 organization.

The logistics forces of each numbered fleet overseas are organized into a standing task force. The commanders of these task forces act as the principal logistics agent for the Fleet Commander. They control assigned CLF shuttle ships; plan resupply of ordnance, fuel, and repair parts; and plan and manage theater ship repairs in military and commercial yards. In some cases, the numbered fleet logistics task force commander may be "dual-hatted" on the CINC staff. In other cases, the Navy Component Commander may control logistics forces that are not assigned to a numbered fleet.

Logistics Command and Control Ashore

Navy expeditionary shorebased logistics forces include those assigned to the Navy component commander and those assigned to the Marine Corps forces. Navy expeditionary shorebased logistics forces not assigned to Marine Corps forces will normally be incorporated into logistics sites in theater. Commanders of these sites will report to the Navy component commander through the NCC's logistics C2 organization. Sites under NCC operational control include the Advance Logistics Support Site (ALSS) and Forward Logistics Site (FLS) central to Navy theater distribution. While an ALSS or FLS will include airfields and seaports, Navy logistics forces will normally be tenants at these facilities, and will control only those forces and facilities specifically belonging to or given over to the Navy. Potential command and control options for terminal operations include:

- Existing U.S. bases with common-user port and terminal operations under AMC (air) or MTMC (sea).
- Existing U.S. bases operating common-user terminals under AMC or MTMC within port facilities under host nation civil or military control.
- Existing U.S. bases with port and/or terminal operations under Service control.
- Expeditionary common-user terminals under AMC or MTMC control, normally located in ports operated and controlled by host nation civil or military authority. This could include ports operated under combined commands.
- Expeditionary Service terminals located in ports under host nation authority. For Navy terminal operations, these are generally constituted from appropriate ABFCs to provide terminal operations and related support. This could include expeditionary terminals under combined control within host nation ports.
- Foreign civil or military ports without U.S. terminal operations, with or without an ongoing U.S. liaison presence. This circumstance most often occurs when a ship or unit requires delivery to a port where U.S. forces do not normally operate.

Operations conducted in the absence of ocean terminals include MPF operations, amphibious operations, and

1 Logistics Over The Shore (LOTS)/Joint LOTS (JLOTS). MPF operations will be conducted through ports when
2 available, but the organizational foundation of the operations remains the same. MPF operations require an arrival
3 airfield for MPF offload personnel, personnel in supported units, and some equipment. At the seaport or beach, the
4 Naval Beach Group (NBG) commander becomes commander of the Naval Support Element and directs cargo
5 offload operations. During amphibious operations, the NBG supports the landing. A landing force support party
6 (LFSP) is task organized from the NBG and other Navy organizations to provide initial combat service support. In
7 JLOTS, the Joint Force Commander (JFC) will designate a JLOTS commander. Naval responsibilities will be as
8 defined by joint doctrine and the JLOTS commander and, and are generally influenced by the Service composition
9 of the forces and sustainment being throughput.

10
11 Navy logistics forces including medical battalions, dental battalions, medical logistics companies, construction
12 battalions also support MAGTF operations. These forces operate under Marine Corps theater logistics organization.
13 Marine Corps theater logistics C2 centers on the Marine Logistics Command (MLC). The COMMARFOR may
14 establish a MLC to facilitate RSOI and provide operational logistics to Marine forces. MLC is a task organization
15 option, not a permanent organization. A FSSG may be assigned the resources and responsibility for MLC functions,
16 based on the operational situation, geography, C2 (for both tactical operations and logistics), and infrastructure
17 requirements. During deliberate planning the MLC supports the identification, preparation, and submission of host
18 nation support, interservice support, intertheater, and intratheater requirements for the Marine Service component.
19 The FSSG designated as the MLC deploys early to support arrival, assembly, and initial CSS missions to the MEF
20 until its own CSSE can be established. The MLC then conducts general support and interfaces with other theater
21 logistic agencies.

22
23 Marine Corps command and control of non-aviation logistics in the MAGTF is through the Combat Service Support
24 Element (CSSE) which may be a Force Service Support Group or subordinate element. All organizations in the
25 MAGTF have logistics capability – when that capability requires augmentation, the CSSE provides combat service
26 support. The CSSE commander takes direction from the MAGTF commander. The Assistant Chief of Staff,
27 Logistics (AC/S G-4) has staff cognizance for logistics, and identifies logistics requirements and coordinates
28 support. As the MAGTF and its CSSE are task organized, the CSSE commander may use various C2 options. The
29 FSSG commander may form a subordinate CSS Detachment (CSSD), centralizing control by giving the unit a
30 general support mission, decentralizing control by giving the unit a direct support mission, or attaching the CSSD
31 to the supported unit. The Assistant Chief of Staff, Aviation Logistics Department (AC/S ALD) coordinates aviation
32 maintenance, aviation ordnance, aviation supply, and avionics for the MAGTF's ACE with the Marine Aviation
33 Logistics Squadron (MALS). The ACE also possesses organic ground logistics capability in the Marine Wing
34 Support Group (MWSG). The commander of the MAGTF may realign tasking and responsibilities between the
35 CSSE and the MWSG to maximize overall effectiveness.

36 37 **Logistics Command and Control Afloat**

38 The commander of the afloat forces will exercise control of logistics through a Fleet Logistics Coordinator (FLC),
39 Task Force Logistics Coordinator (TFLC), or Task Group Logistics Coordinator (TGLC). Guidance and direction
40 for Navy logistics operations derives from the general operations order (OPGEN) promulgated by the Navy
41 operational commander to set general policies and procedures. An Operations Order (OPORD) may be issued at
42 various command levels to provide direction for specific operations. More specific guidance is provided by a series
43 of OPORD appendixes or operations tasks (OPTASKs)

44 45 **Multinational Theater Logistics Command and Control**

46
47 Command and control of logistics during combined operations is similar to joint command and control. Command
48 and control of multinational logistics operations requires the commander and staff to be aware of the parallel
49 national organizations involved, and to foster good relationships with national representatives at appropriate points
50 within those "stovepipes". A few of the major complicating factors in multinational operations follow:

- 51
52 • Combined operations can greatly multiply the overlapping organizations. As an example, defense of the
53 Korean peninsula is entrusted to Service components reporting to a Joint commander (CINCUSFK) working
54 within a Republic of Korea/U.S. (CINCROKUS) bilateral alliance that coexists with the United Nations
55 Command (CINCUNC).

- 1 • Sovereign nations will not always give Multinational Force Commanders (MNFCs) operational command of
2 their forces. When operational control is given, it may be accompanied by restrictive conditions that severely
3 limit the commander's flexibility in employing the forces. This extends to logistics forces; OPCON may be
4 extended to the MNFC, or limited directive authority may be granted.
- 5 • When OPCON over forces is granted, it does not automatically extend to logistics resources. Multinational
6 operations do not provide directive authority over logistics unless specifically granted. Specified commanders
7 within NATO are granted logistics redistribution authority to meet critical operational needs, but this is severely
8 qualified.
- 9 • Forces are generally committed to multinational operations because of a community of interest; the military
10 objectives of the force align substantially with the political objectives of the participants. Sovereign authority
11 over forces, even those OPCON to the MNFC, supercedes any other.

12
13 The diversity of coalition or alliance members can be further complicated by the introduction of non-member
14 nations into alliance operations. Ad hoc coalitions in response to emergent crises bring no C2 organization with
15 them. It is assumed that when the U.S. is the coalition leader and dominant participant, U.S. Joint or Service C2
16 organizations will prevail, but even willing coalition partners may sometimes lack the logistics robustness,
17 interoperability, technology, or discipline to allow easy integration.

18 **NATO Organization**

19
20 There has been substantial success in developing combined command and control doctrine and procedures. NATO
21 is the premier example of combined C2 for alliances involving many nations. As a standing organization that
22 includes numerous members and operates in multiple theaters and multiple types of mission, NATO reflects most of
23 the challenges inherent in development of formal C2 for combined operations. NATO relies on a civil/military
24 structure. Each member nation sends permanent ambassadors to the civil forums, and military representatives to the
25 Military Committee. The highest civil forum is the North Atlantic Council (NAC). The Military Committee (MC),
26 which is one of several committees established under the authority of the NAC, is the highest military authority in
27 NATO. NATO's upper level military structure is depicted in the NATO Logistics Handbook.

28
29
30 Forces assigned to NATO are task organized. Operational control passes to the Combined Joint Task Force (CJTF),
31 but the United States does not relinquish command of its forces. The OPCON of forces does not entail control of
32 logistics, which must be specified. When a CJTF is formed, the CJ4 is responsible for logistics coordination.

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NATO Multinational Maritime Force (MNMF) doctrine requires member host nations to establish and operate necessary ALSSs or FLSs. Afloat support refers to logistics support ships providing sustainment, medical services, and repair support to MNMF ships underway or at anchor. Ashore support involves necessary sites, facilities, and forces to provide logistics support to the MNMF.

Command and Control of Afloat Support to the Multinational Maritime Force

Component forces may establish Multinational Logistics Centres or Commands (MNLCS). The MNLCS for shorebased support of maritime operations is established as a command because of the requirement to command

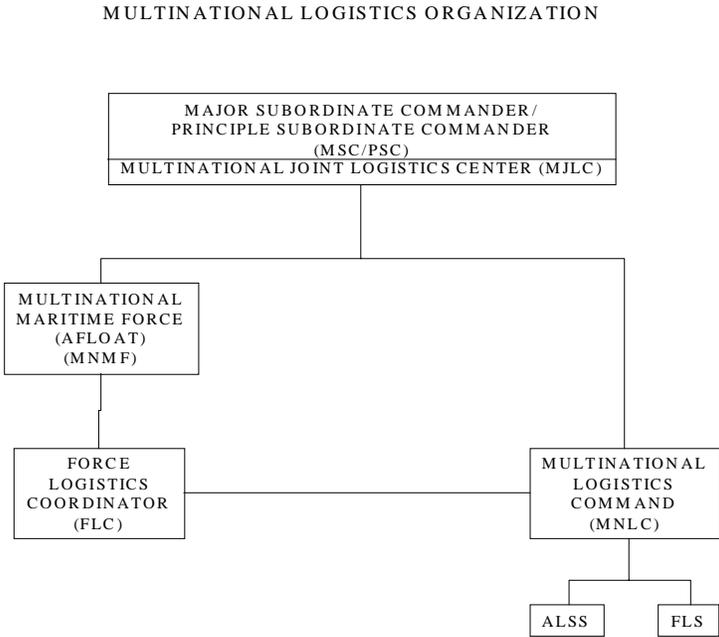


Figure 3-4

13 subordinate sites. This command relationship is reflected in Figure 3-4. Land or air MNLCS are established as
14 centers, and are limited to coordinating authority.
15

MNMF Afloat Logistic Support Organization

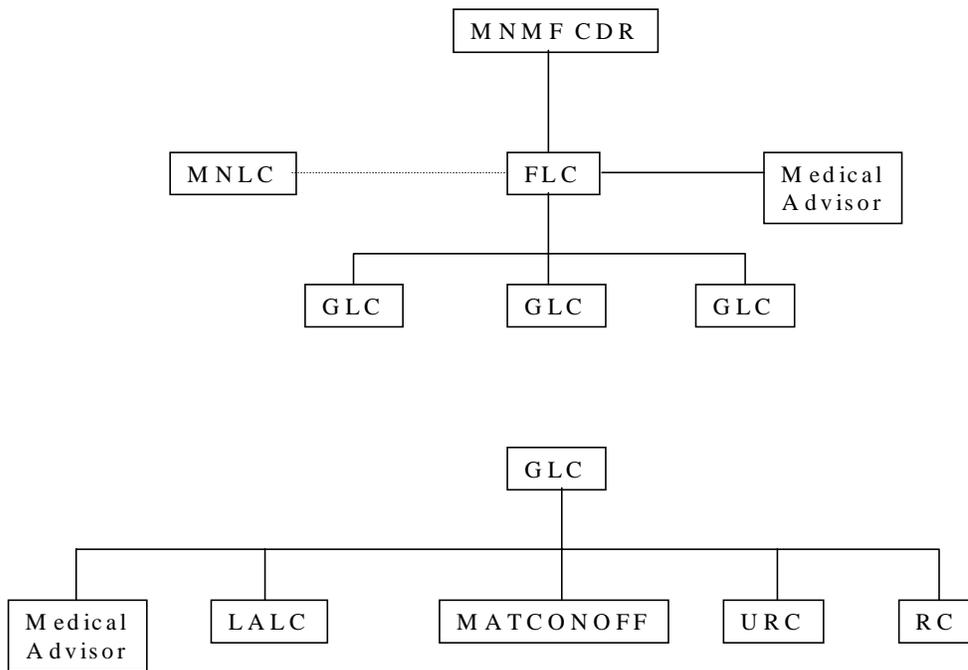


Figure 3-5

1 Command and control of afloat support to the NATO MNMF is similar to U.S. Navy practices. The MNMF
 2 Commander assigns a Force or Group Logistics Coordinator (FLC/GLC) to ensure logistics readiness. The U.S.
 3 Navy commander within the MNMF will assign a Logistics Coordinator (LC) to provide coordination with the
 4 FLC/GLC. The Force Logistics Coordinator plans and executes MNMF afloat logistics policy, monitors inventory,
 5 and controls movement of sustainment to and within the task force or task group. The FLC is the Commander's
 6 direct liaison to the MNLC for shorebased support. The NATO afloat logistics command structure is pictured in
 7 Figure 3-5.

8
9

10 Command and Control of Shorebased Support to the Multinational Maritime Force

11 Consistent with agreement between NATO Military Authorities and involved nations, the Multinational Logistics
 12 Commander (MNLC) controls and coordinates assigned shorebased logistics support forces. These include assets of
 13 the ALSS, FLSs, theater airlift, VOD, and shuttle tankers. The MNLC will normally report to the NATO
 14 commander exercising OPCON of the Multinational Maritime Force. Shorebased theater distribution within NATO
 15 is very similar to the hub and spoke system operated by the U.S. Navy, but when an ALSS or FLS is established
 16 within a member nation, the commander of that site will be drawn from that nation. This facilitates cooperation and
 17 communication between NATO sites and the host nation, and often allows NATO to rely on existing capabilities
 18 with minimal startup delay.

19

20 Logistics Information Systems

21 Logistics command and control depend on the identification and communication of planned and actual support

1 requirements, and the identification and application of logistics assets to meet those requirements. Conceptually, the
2 quality of asset management determines whether scarce logistics resources can "stretch" to provide effective
3 support. The commander, planner, or logistician is constrained by the accuracy and timeliness of available data.
4 Such data is only useful when collected, analyzed, and refined into relevant information. Information systems
5 enable every element, and support each principle, of logistics. Information technologies have changed the way naval
6 logisticians do business by fostering more efficient application of limited logistics resources. Increased emphasis on
7 interoperability of equipment and standardization of procedures has allowed naval commanders and logisticians to
8 lend to and gain from joint, other Service and multinational logistics capabilities. The combined impact of the
9 various systems in place and coming into service provide our naval forces with definitive advantages in planning,
10 command and control, and operation of our logistics system.

11 **Global Command and Control System (GCCS) and Other Primary Joint and Naval Logistics Information** 12 **Systems**

14 Global Command and Control System (GCCS) is the primary comprehensive automated command, control,
15 communications, computers, and intelligence (C4I) system. It provides a world -wide network of military and
16 commercial systems supporting information exchanges between the NCA, combatant commanders, and component
17 commanders. Over 100 other major logistics information systems are in use by the Armed Forces, but as
18 standardization continues, more systems feed common databases. Thus, while many systems are not "part of"
19 GCCS, their data is available through GCCS. GCCS is the C2 migration system to bring Service systems together;
20 in this sense, all legacy and migration systems that support or access the common data bases are "part of" GCCS.
21 Many systems play some part in joint and naval logistics. Naval distribution is supported by numerous information
22 and communication systems, offering management of inventories, movement, requirements, and other aspects of
23 supply and transportation. These systems enhance distribution at every level of operations. Various systems at
24 DLA, Service, and commercial locations provide the backbone of CONUS logistics, and support global distribution.
25 Functionally specialized systems support disbursing, engineering, medical, repair, ordnance, fuel, and other
26 operations. Together, these systems form an increasingly integrated network of information and decision support
27 focused on effective logistics. NATO utilizes the Allied Command and Control Information System (ACCIS) for
28 this job.

30 **Conclusion**

31 Adequate information about the availability and location of support--together with information on the physical and
32 operational environment constraining distribution or execution of that support. It follows that by squeezing the
33 most support from the available assets, effective command and control can positively influence overall efficiency of
34 the logistics system. Likewise, a warfighter with truly reliable information on his logistics support can achieve the
35 required level of confidence at a lower level of supply. Excess stocks and requisitions can be avoided. Thus,
36 logistics information is both an enabler and a product of Log C2. Naval logisticians will always depend on
37 command and control, and the associated information systems to achieve maximum support from minimum
38 resources facilitate effective decision-making.

CHAPTER FOUR

NAVAL THEATER DISTRIBUTION

Introduction

Expeditionary naval forces provide mission capabilities that can quickly reach and maintain station anywhere on the oceans, littorals, and airways. Exceptional mobility and sustainability mark the unique role of naval forces.

Supply, engineering, transportation, maintenance, health services, and other services facilitate this readiness and thus the effectiveness. A sound distribution system incorporating supply and transportation systems is critical for this sustainability.

The Distribution Components of the Defense Supply System

The greatest volume of materiel support is generated within the continental United States (CONUS) through the defense supply system. This network of agency and service organizations includes the Defense Logistics Agency (DLA), the General Services Administration (GSA), Service supply systems, and miscellaneous DOD agencies. Primary naval components of this network are the Naval Supply Systems Command (NAVSUP), Marine Corps Material Command (MARCORMATCOM), and the Naval Medical Logistics Command (NAVMED LOGCOM).

Within the defense supply system, Integrated Materiel Managers (IMMs) are designated as the single point for acquisition and management of each item. This reduces redundancy and waste, and encourages economies of scale. DLA is the IMM for most items consumed by the Services. Exceptions generally fall into the areas of ordnance, major end items (ships, aircraft, and major equipment), repairables, cryptological material, and items with special circumstances dictating Service management.

Logistics support of operating forces is a Service responsibility, and each service maintains supply systems tailored to organic requirements. These systems are network components of the defense supply system. For the naval services, the primary supply systems are the Navy supply system and the Marine Corps supply system.

The Navy Supply System

The Navy supply system consists of the Naval Supply Systems Command (NAVSUP), other naval organizations providing supply support, and organic supply capabilities of the operating forces. CINCPACFLT and CINCLANTFLT determine requisitioning channels for fleet units. These channels are coordinated with NAVSUP shore station channels, and are changed to reflect operational and distribution requirements.

NAVSUP conducts overall supply system management through an inventory control point (ICP) and Fleet and Industrial Supply Centers (FISCs), and has responsibility for supply, disbursing, food services, postal services, and exchange services, as well as materiel transportation management. NAVSUP provides supply support to Navy forces, coordinates Navy participation in the defense supply system, establishes Navy supply methods and procedures, and provides certain contracting support. NAVSUP is organized functionally, with the following major components.

- Navy Inventory Control Point (NAVICP)
- Fleet and Industrial Supply Centers (FISC)
- Fleet Materiel Support Office (FMSO)
- Naval Transportation Support Center (NAVTRANS).
- Navy Petroleum Office (NAVPEOFF)
- Naval Ordnance Logistics Management Center (NOLMC)
- Navy Field Contracting Service (NFCS)

Other naval organizations providing significant supply support include:

- NAVMEDLOGCOM is the Navy and Marine Corps subject matter expert for medical materiel, and procures all medical and dental equipment, services, and supplies for naval forces.
- NAVFAC provides initial outfitting of chemical, biological, and radiological defense (CBR-D) material and equipment to overseas shore installations, and Naval Construction Force (NCF) and Naval Beach Group (NBG) units.
- SPAWAR Systems Center-Chesapeake provides software support for the fleet logistics programs that automate

1 supply, inventory control, maintenance, and financial management. Supply organizations at the transportation
2 nodes receive, stage, account for, and ship items of supply.

3
4 Organic supply departments provide the heart of tactical supply, determining requirements, requisitioning,
5 receiving, stocking, and issuing parts and supplies aboard ships or within units. From initial requirement and
6 requisition to final issue for consumption, the supply department drives distribution on the end user's behalf.

7 8 **The Marine Corps Supply System**

9 The Marine Corps Material Command has responsibility for life cycle management. Under MARCORMATCOM,
10 the Commander, Marine Corps Logistics Bases provides Service-level supply and maintenance support for
11 Marine-unique items. Marine Corps Logistics Base (MCLB) Albany is the Marine Corps single inventory control
12 point (ICP), and is technical director for the Marine Corps Unified Materiel Management System (MUMMS), the
13 wholesale level system which includes direct support stock control (DSSC) outlets at Marine Corps activities.
14 The Marine Corps supply system also includes the out-of-stores element, which includes consumables. Fixed-
15 point supply system management units operate intermediate stockpoints and process requisitions generated by the
16 retail/consumer level maintenance and supply system, Asset Tracking and Logistics and Supply System (ATLAS)
17 the Supply Battalion of the Force Service Support Group (FSSG) operates these stockpoints, and provides the
18 primary source of supply for the Marine Expeditionary Force (MEF). The Navy provides support for Navy-
19 furnished materiel, ammunition, and equipment through cognizant SYSCOMs.

20 21 **The Defense Transportation System**

22 The Defense Transportation System (DTS) provides global transportation. The DTS includes military and
23 commercial assets, systems, and services of the Department of Defense, including those contracted or controlled
24 by DoD. The DTS does not include service-unique assets or those assigned to a theater. The Commander in Chief
25 of the U.S. Transportation Command (TRANSCOM) is the unified commander designated as the DOD single
26 manager for common-user transportation. TRANSCOM manages military transportation through three component
27 commands: Air Mobility Command (AMC), Military Traffic Management Command (MTMC) and Military
28 Sealift Command (MSC). In addition to their roles as component commands of USTRANSCOM, these are major
29 commands of the Air Force, Army, and Navy respectively. Assets controlled or operated by USTRANSCOM
30 components include a wide range of military, domestic commercial and foreign commercial. The ability to
31 readily access commercial capacity for continuing operations and surge requirements permits economical
32 deployment of a responsive and flexible transportation system.

33
34 As the naval component of USTRANSCOM, MSC operates the Strategic Sealift Force to provide surge and
35 sustainment shipping, and prepositioning. Common-user sealift ships including two 1,000-bed hospital ships are
36 part of this command and operate in reduced operating status, and can be activated on five days to full status.
37 MSC responsibilities include negotiation and procurement of sealift ships, and activation and oversight of RRF
38 ships (in coordination with MARAD). MSC also schedules DOD ocean transportation, coordinates required ship
39 services with port authorities, and maintains availability and status data on MSC-controlled ships. MSC supports
40 joint deployments with Prepositioning Afloat Ships, stocked with materiel and supplies for all Services. Army
41 rapid deployment requirements are addressed by the MSC Large Medium Speed Roll-on/Roll-off (LMSR) ships
42 and Fast Sealift Ships (FSS).

43
44 In addition to USTRANSCOM components, the DTS includes other government agencies that manage or
45 administer civil transportation assets include:

- 46
47 • MARAD supports and oversees the U.S. Merchant Marine. In addition it owns and manages the Ready
48 Reserve Force (RRF) ships. These ships are available for activation and employment in strategic sealift
49 operations. RRF ships in active service are under the operational control of the Military Sealift Command.
50 MARAD also requisitions ocean shipping and coordinates activities with the NATO Defense Shipping
51 Authority for allocation of NATO sealift assets to meet U.S. requirements during a NATO contingency.
52
- 53 • The Coast Guard provides safety and security of shipping, waterways, harbors, and ports. The USCG has
54 civil law enforcement authority to ensure water safety, navigational safety, and vessel inspections, maintains
55 aids to navigation, and licenses merchant mariners. The USCG is unique in that it is a military service; upon

1 declaration of war or presidential direction, operational control of the Coast Guard transfers from DOT to the
2 Navy.

3 4 **The Naval Transportation System**

5
6 Naval organic transportation assets are concentrated in sealift and airlift assets and with minimal land
7 transportations assets. NAVSUP controls and oversees Navy materiel transportation through the Naval
8 Transportation Support Center (NAVTRANS). This center provides Navy shippers with management guidance,
9 provides Navy overseas air cargo terminal (NOACT) and air terminal units, serves as the Navy shipper service
10 representative to other transportation components, provides airlift/sealift cargo requirement forecasts, and controls
11 the Navy's Service-wide Transportation account.

12
13 The Chief of Naval Operations (CNO) and the Commandant of the Marine Corps (CMC) set policy for organic
14 airlift. Navy organic transportation resources are heavily concentrated in the Naval Reserve, and the CNO has
15 designated the Commander, Naval Air Reserve Force as executive agent for organic logistics aircraft. Limited
16 aircraft are under the scheduling and administrative control of a variety of major Navy and Marine Corps
17 claimants, providing direct support for major commands. Organic airlift assets provide a range of peacetime
18 support in CONUS and overseas, but they are provided specifically to meet approved emergency or wartime
19 requirements for organic support. All Navy and Marine Corps transport aircraft fall into the category of
20 Operational Support Airlift (OSA). The Joint Operational Support Airlift Center (JOSAC) uses data supplied
21 through the Joint Air Logistics Information System (JALIS) to schedule theater support aircraft, including some
22 Navy and Marine Corps assets. OSA includes operational support aircraft (such as those assigned to the major
23 claimants), Navy-Unique Fleet Essential Aircraft (NUFEA), COD/VOD aircraft, Marine Corps helicopter and
24 refueling aircraft operating in support of landing forces, and other miscellaneous aircraft. NUFEA and COD/VOD
25 aircraft are assigned to Fleet CINCs to provide theater airlift support. Such support is not intended to replace
26 common-user airlift; it is to provide specific support of fleet operations. Most commonly, fixed-wing medium
27 transport aircraft will operate between the ALSS and FLSs, supporting the COD/VOD operations from those sites
28 to the fleet at sea. NUFEA aircraft also support deployment, redeployment, and sustainment of shorebased naval
29 forces.

30
31 CLF ships provide strategic transportation during initial deployment, and are capable of providing additional
32 emergency strategic lift. Similarly, hospital ships and prepositioning ships act as defense stockpoints, strategic
33 transporters, theater transporters, and combat service support providers. With these various assets, a full range of
34 strategic and theater distribution functions is possible with limited or no theater shorebased support. While
35 forward basing, fixed or expeditionary, is critical to support maneuver and provide economy of operations and
36 throughput capacity, Naval forces afloat are able to maintain station anywhere.

37 38 **The Logistics Pipeline**

39 The flow of logistics support to the operating forces has often been depicted as a flow through a pipeline
40 channeling support from sources (most commonly CONUS-based acquisition), through nodes (bases, stock points,
41 sites, etc.), to the end user (forces). This pipeline is illustrated in Figure 4-1. Personnel and materiel flow into
42 seaports and airports of embarkation (SPOE/APOE) via strategic lift. This strategic phase of distribution ends at
43 the aerial port or seaport of debarkation (APOD/SPOD) in theater. Reception, staging, onward movement, and
44 integration of forces (RSOI) commences at these nodes. Theater distribution entails both operational and tactical
45 logistics. Once at the end user, logistic resources unless expended must reenter the logistics pipeline in the reverse
46 flow during redeployment, disposal, or other retrograde actions.

1
2 Acquisition decisions traditionally limited overseas purchases. Overseas purchases for afloat forces normally

Naval Logistics Pipelines

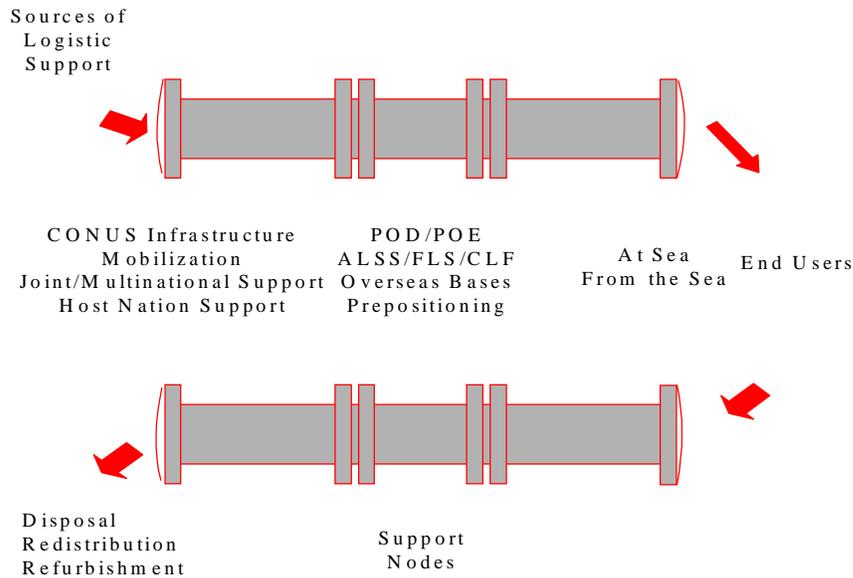


Figure 4-1

3 included consumable supplies and port and intermediate maintenance services. Planners and operational
4 commanders now place greater emphasis on the use of host nation, allied, coalition partner, or other foreign
5 support. Civilian contractors--domestic and foreign--directly provide support previously accomplished by the
6 services.

7
8 Transportation modes for the pipeline are selected based of mission need, capability, transportation priority,
9 regulatory restrictions, and available capacity. Regulatory restrictions include transportation and storage issues
10 such as hazardous material regulations, and security and custody issues such as registered mail regulations.
11 Strategic transportation choices include a range of military and commercial options, both foreign and domestic. The
12 combatant commander's options for operational (theater) lift extend across services, modes, allied services, and
13 host nation or other nation capabilities.

14
15 Selection of the service support provider at point of issue in theater is straightforward for the of Naval forces
16 afloat, but vary significantly for shorebased forces. Tactical service support is normally under Service control.
17 The majority of common-user items will be requisitioned by an organic supply organization for issue within the
18 operating unit. However, shore based naval forces may utilize common-user, other- Service, combined, contract,
19 host or other-nation, or small purchase options to effect tactical delivery of a commodity or service.

20
21 Disposition requires a reversal of the flow through the network and involves the same considerations and
22 participants as during sourcing the resources. Collection services, modes and nodes of redistribution, and disposal
23 services form a near-mirror-image of the acquisition, distribution, and sustainment elements. Disposal activities
24 include survey and local destruction, environmental cleanup, consignment to local disposal sites, transfer to allies,
25 coalition partners, non-governmental organizations, or private voluntary organizations, and redeployment. With

1 multiple options at each step in the process, the logistics network provides the combatant commander, planner, and
2 logistician with a complex decision matrix. Any number of sources may be matched to varying transportation
3 modes and nodes at successive points enroute to multiple tactical users. The overall goal of the logistics network is
4 to deploy forces and sustainment in the accomplishment of assigned missions.

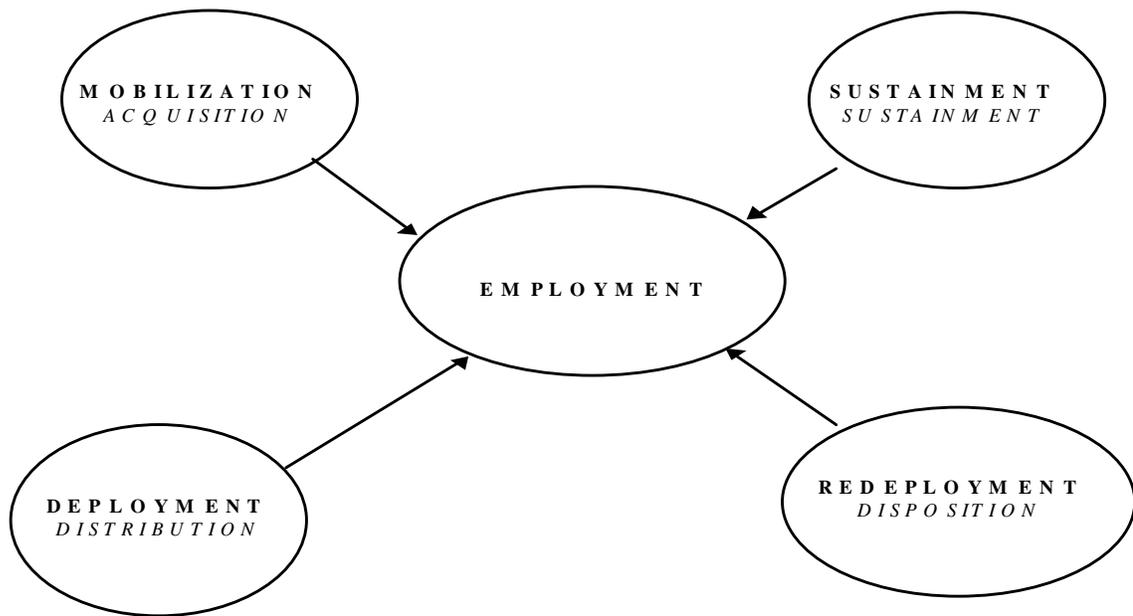
5
6 **Force Projection**

7 Force Projection is the doctrine under which U.S. armed forces are employed in overseas missions. Joint doctrine
8 identifies five activities in force projection. They are Mobilization, Deployment, Employment, Sustainment, and
9 Redeployment. These generally parallel the four logistics process elements that support and enable the
10 employment of forces. Figure 4-3 depicts these parallels. Deployment and redeployment are of greatest direct
11 interest to the operational commander or logistician in theater. Mobilization--concerned with the acquisition,
12 assembly, and organization of assets--is primarily a strategic activity that the operational commander will be able
13 to influence only in indirect or incidental manners. Sustainment is received at the tactical level out of services and
14 supplies distributed to the end user.

15
16 **Strategic Distribution and Force Projection**

17 Strategic distribution is the movement of forces, materiel, and personnel to the theater of operations. In force
18 projection doctrine, deployment is the movement of forces and their sustainment from point of origin to an end

FORCE PROJECTION
AND
THE LOGISTICS PROCESS



Logistic Process elements in support of Force Projection Activities
Figure 4 - 2

1 user in a specific operational area. Deployment takes place in four phases.
2

- 3 • The first phase is predeployment activities that begin at the point of origin, and include planning and
4 preparations required to prepare units and materiel for deployment. For deployments requiring strategic
5 movement, this normally means movement of materiel or forces to a seaport or airport, and preparation for
6 loading. In the continental United States, MTMC will coordinate commercial movement requirements with
7 Service transportation authorities. Substantial Navy and Marine Corps forces including reserves and war
8 reserves will deploy through this phase. For OPLAN execution, the POE for each movement of sustainment
9 or forces is designated in the TPFDL.
- 10 • The second phase is the movement from the POE in CONUS or elsewhere to the theater POD is the strategic
11 transportation phase of deployment. Most Navy operating forces are self-deploying, as are the War Reserve
12 Material (WRM) and ships of the Maritime Prepositioning Force. Shore based naval forces and sustainment
13 requiring strategic movement will rely on the defense transportation system (DTS) for this phase. Normally,
14 movement from the POE to the POD involves sealift or airlift, but movement of materiel and forces between
15 theaters can be by land or inland waterway. TPFDD development and refinement in the planning process is
16 critical to apportioning available lift. Materiel, forces, and personnel are loaded at the POE in accordance
17 with established transportation priorities, and load and storage limitations. When the strategic lift arrives at
18 the theater POD and is downloaded, strategic movement is complete and the final phase known as Reception,
19 Staging, Onward movement, and Integration (RSOI) begins.
20
- 21 • The third phase, theater distribution, commences when forces or sustainment arrive at a POD. This "arrival"
22 can occur administratively when war reserve materiel (WRM) prepositioned ashore in theater is broken out.
23 For terminals with significant throughput for naval forces, the Navy and/or Marine Corps will normally assign
24 appropriate liaison or forces to ensure accurate identification and rapid handling of their respective resources.
25 At aerial ports, this will often entail establishment of a Navy Overseas Air Cargo Terminal (NOACT) sized
26 and configured to the projected throughput with appropriate terminal operation capabilities present. The
27 MSC will establish offices at ocean terminals to support MSC controlled ships and operations. The Navy
28 Cargo Handling and Port Group (NAVCHAPGRU), Cargo Handling Battalions (CHBs) and other
29 expeditionary units may be assigned to support port operations. Common-user SPOD operations will
30 normally be under the MTMC control, and will be operated by Army, civilian, host nation, joint, combined, or
31 Navy forces.
- 32 • Receipt, staging, and onward movement (RSOI) is the final phase of the deployment process in force
33 projection. RSOI of Navy and Marine Corps forces and sustainment may occur through service, joint, or
34 combined organizations. The relevance of RSOI is more evident for forces ashore than for forces afloat or
35 items of supply. All deploying forces and sustainment are subject to this sub-process of force deployment,
36 and may undergo varying forms or degrees of these steps:
 - 37 • Reception is receiving and accounting for components of force and sustainment at the theater POD.
38 Reception includes reporting of receipt that updates in-transit visibility.
 - 39 • Staging involves the assembly of personnel, equipment, and supplies and preparation for onward
40 movement. For Navy shorebased forces this entails "marrying up" with unit equipment shipped
41 separately or drawn from WRM, and task organization of forces for projected employment. In MPF
42 operations, it involves the merging of Marines and the NCF with their offloaded equipment and
43 supplies.
 - 44 • Onward movement is the theater movement of forces and supplies toward their final destination.
45 This includes self-transport by Marine and supporting Navy forces, organic delivery through the
46 Navy hub and spoke system or consignment to joint or combined delivery modes.
 - 47 • Integration includes the remaining steps necessary to make the forces or sustainment ready for
48 employment. Forces report to their operational commander in the operating area and establish
49 required Service, joint, or combined communications and reporting processes. Forces "plug in" to
50 non-organic (Service, common-user, cross Service, host nation, or commercial) service support
51 providers as appropriate.

52 53 **The Hub and Spoke Concept of Navy Theater Distribution** 54

1 Navy theater distribution is accomplished through a hub and spoke system. Non-self-deploying forces
2 transit this system on their way to employment, and all Navy forces receive sustainment through this
3 system.

4

5 **Primary Hubs Ashore – The Advanced Logistics Support Site**

6

7 The primary theater distribution hub is called an Advanced Logistics Support Site (ALSS). The ALSS
8 centers on the availability of an aerial port and seaport in relative proximity. An ALSS normally possesses
9 the capabilities to receive, store, consolidate, and transfer the full range of required support for forward-
10 deployed Navy forces. An ALSS is stood up at military or civilian sites using a mix of active and reserve
11 units augmented by contract and host nation support. These units cover required logistics functions, as well
12 as administration and support of the ALSS itself. Tenders and hospital ships can also augment an ALSS.
13 Onward movement from the ALSS may be via organic or contracted local delivery; organic, common-user,
14 or combined theater airlift; CLF shuttle ship; common-user or combined ground transportation; customer
15 pickup; carrier onboard delivery (COD); or organic, contracted, or allied vertical onboard delivery (VOD).

Hub and Spoke Distribution

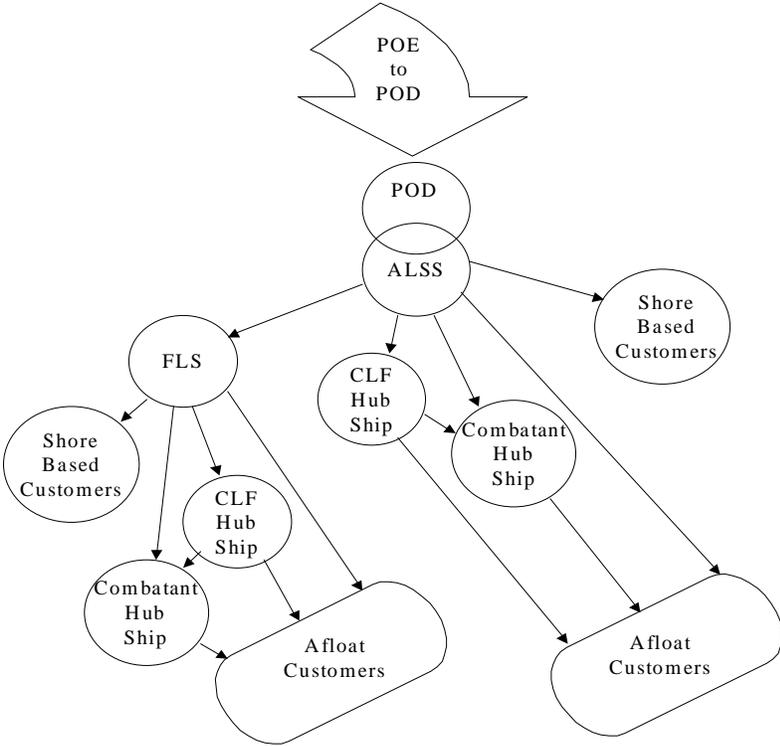


Figure 4-4

16 This movement is directed to the next transshipment point or to the end user.

17

18 **Secondary Hubs Ashore – The Forward Logistics Site**

19 The final transshipment point ashore in theater is the Forward Logistics Site (FLS). A FLS is usually closer
20 to the operating forces than the ALSS, and capabilities may range from very austere to nearly as capable as
21 an ALSS. Navy expeditionary logistics units and equipment, host nation, and contracted resources are task
22 organized and assigned based on established and anticipated support requirements. FLSs normally include
23 both a seaport and airport, but may have only one or the other when appropriate to the support requirement
24 or site availability. While most logistics flow is from the ALSS to the FLS, FLSs may receive direct
25 shipments into the theater in response to operational emergencies. FLSs are expeditionary and are

1 established, moved, and disestablished readily in response to movement of the supported forces.

2
3 The final spoke in distribution can be via CLF ship to afloat forces by local issue within the ALSS/FLS, or
4 by surface delivery from the ALSS or FLS for nearby customers and ships in port. Similarly, customer
5 pickup--usually by ship's organic helicopters or by shore based customers--may complete operational
6 distribution. For forces at sea, distribution may proceed through direct delivery or through an afloat hub.
7 Navy COD aircraft provide direct links from the closest FLS or ALSS to carriers at sea. COD is usually
8 reserved for the highest priority passengers, mail, and cargo (PMC). Weight, size and cube are strictly
9 limited on COD aircraft, so both the volume and nature of support via COD is very restricted. COD
10 overhauls are often cancelled due to offensive and defensive operations or training, weather conditions, or
11 other more urgent requirements of the carrier or battle group.

12
13 VOD aircraft offer another option for direct delivery of high priority PMC from the FLS or ALSS so ships
14 with adequate helicopter facilities. VOD has commonly been accomplished by Navy heavy helicopters,
15 but other-Service, allied, and commercial aircraft have proven capable of operating to and from Navy ships
16 with proper aircraft and crew certification and standardization of procedures. Considerations in VOD are
17 generally similar to those involved with COD. Range limitations of COD/VOD aircraft are driving forces
18 in the placement of FLSs. Introduction of V/STOL capabilities promise to significantly increase speed and
19 range in some future VOD operations.

20 21 **Hubs and Spokes Afloat – Replenishment at Sea**

22 To accomplish effective support at sea, the Navy establishes hubs afloat. These hubs carry or receive
23 passengers, mail, and cargo (PMC) for transfer to other ships at sea. Replenishment at sea, primarily
24 through underway replenishment (UNREP), is done by moving materiel across rigging between two ships
25 (CONREP) or by military or commercial helicopter (VERTREP).

26
27 The primary hub for UNREP is the CLF ship. These ships are configured and equipped for cargo transfer
28 to other ships underway. Other military or commercial vessels can be pressed into service by embarking
29 cargo afloat rig teams (CARTs) to provide and operate temporary rigging for limited ship-to-ship transfers.
30 Primary CLF ships involved in UNREP of supplies today are the T-AFS and the T-AOE. The types and
31 functions of ships designed for UNREP are in Figure 4-5. CLF hub ships primarily receive materiel in port
32 at the FLS, ALSS, or other supply point. The T-AFS is stocked to a specific plan--called a fleet issue load
33 list (FILL)--for issue to requisitioning ships. In addition, the CLF ship will pick up freight for ships it will
34 be replenishing. Dependent on operations, materiel availability, and logistics replenishment (LOGREP)
35 schedules, the T-AFS may also receive materiel from other CLF ships at sea. AOE's load petroleum
36 products at defense fuel supply points (DFSPs) at the FLS, ALSS, or other locations in or near the theater.
37 AOE's at sea also receive transfers from other oilers; this is termed consolidation (CONSOL).

Hub and Spoke Distribution

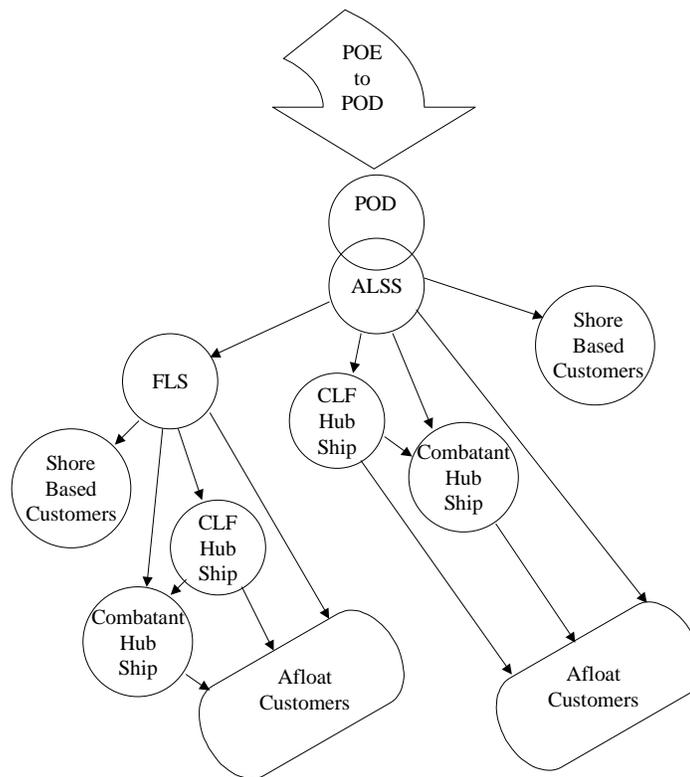


Figure 4-5

1
2 Combatant ships also serve as hub ships for specific support. Many ships cannot accept COD aircraft or
3 heavy VOD aircraft. Delivery of high priority air-transportable PMC to these ships may be via COD/VOD
4 to a carrier or VOD to another large-deck air capable ship (LHD/LHA). For VOD delivery, a CLF ship in
5 company will normally perform as hub ship when available. When a CLF ship is not available, or when
6 most of the VOD delivery is destined for the large deck combatant, the combatant will normally accept
7 delivery of items for ships in company, with final transfer to be subject to operational considerations.
8

9 **Tactical Distribution within the Battle Group**

10
11 Delivery to the final hub ends the operational level of theater distribution. Afloat units link directly to the
12 supply system; they are individual customers that requisition directly, maintaining their own inventories
13 and operating budgets. While different types and classes of ships have widely differing capabilities, basic
14 combat service support is organic--self-contained and self-deploying with the ship; larger ships enjoy
15 organic logistics capabilities ranging up to some intermediate level maintenance. Consolidated Shipboard
16 Allowance Lists (COSALs), Aviation Consolidated Allowance Lists (AVCALs), and carefully developed
17 and tested planning factors for endurance loading allow the efficiency of supply planning necessitated by
18 finite storage limits. U.S. Navy afloat supply operations permit tailored, focused throughput of precise
19 requirements. This, in turn, allows streamlined distribution featuring reduced logistics footprint in theater,
20 minimal intermediate inventories, and negligible movement of superfluous supply to forward areas.
21

22 CLF ships within a battle force or battle group conduct tactical distribution during replenishment at sea, and
23 other hub ships distribute PMC to ships in company as possible. Logistics replenishment (LOGREP)
24 cycles are determined by the operational commander in response to operational requirements, unit
25 locations, elapsed time since replenishment, and urgency of requirements. By minimizing forward
26 inventories and shorebased infrastructure, and providing the means to rapidly move sustainment to and
27 between units in direct response to precise requirements, Navy tactical distribution and shipboard supply
28 have predicted and practiced the future direction of joint logistics.
29

30 **Tactical Distribution Ashore**

1
2 Naval forces ashore rely on a combination of unit-organic, Navy fixed base, Navy Expeditionary Logistics
3 Support Force, contract, common-user, host nation, cross-Service, and multinational sustainment. As most
4 Navy shorebased forces--other than those assigned to Marine Corps forces--will be within the ALSS or
5 FLS, tactical distribution is largely confined to immediate issue or local delivery. Thus, while sourcing of
6 sustainment may be very flexible and innovative, tactical distribution is generally simple and direct.
7 Exceptions arise in areas where U.S. Navy shorebased operations are not in proximity to adequate support.
8 An example is the remote and austere FLS with very limited organic capability; tactical distribution of
9 support as basic as haircuts can require periodic movement of support either down the operational
10 distribution channels from the ALSS or back from supported forces. It is not uncommon for afloat forces
11 to provide critical tactical support of remote FLSs. Such distribution is accomplished through local
12 coordination between the FLS and either the ALSS or the afloat forces. The Naval Construction Force, the
13 medical force, and other Navy forces assigned to support Marine Corps units derive tactical distribution
14 through Marine Corps channels.

15
16 Marine Corps tactical distribution ashore is accomplished through organic unit capabilities and units of the
17 Combat Service Support Element (CSSE) of the MAGTF. The Marine Corps identifies tactical logistics as
18 the tactical-level execution of logistics functions by either CSS units or unit organic actions. The Marine
19 Corps consider combat service support as intermediate support provided to units lacking organic capability.
20 Marine Corps practice differentiates distribution to the unit as being either "unit" or "supply point"
21 distribution. Simply put, this identifies whether the distribution system is responsible for delivery to the
22 unit, or the unit is responsible for pickup at the supply point. Though seemingly a minor distinction, the
23 selection between these two sources of tactical delivery has serious consequences for the transportation
24 assets of both the supported unit and the CSS element.

25 26 **Naval Theater Distribution in Multinational Operations**

27
28 NATO has developed distribution procedures and policies allowing combined support. NATO naval
29 operational logistics similar to that of the U.S. and readily understood by U.S. naval logisticians. The
30 information given above on hub and spoke theater distribution ashore and within the battle group generally
31 applies to NATO maritime logistics operations.

32
33 The principles and policies of NATO establish logistics support as a collective responsibility, effected by
34 the cooperation of the nations and the transfer of sufficient authority over logistics resources to enable
35 effective employment and sustainment of forces. Implicit in this is an understanding that transfer of
36 authority, or even transfer of a repair part, is voluntary and may be prevented or limited by national laws
37 and interests. Nations are not required to solely use the multinational logistics organization. They may rely
38 solely on national channels if available. In any case, provision of materiel support is a national
39 responsibility, and supply items are requisitioned through national channels. For nations utilizing the
40 multinational distribution channel, delivery to the ALSS remains a national responsibility. For U.S. forces,
41 this translates to strategic distribution. National supply systems inform the Multinational Logistics
42 Commander (MNL) of all PMC enroute. Once forces or materiel reach the ALSS, receipt, staging, and
43 onward movement are the responsibility of the MNL organization.

44
45 Host nation and multinational agreements for specific support will often result in substantial savings in
46 distribution. Shared resources and shortened transportation legs made possible by these agreements allow a
47 distribution system that is at once more responsive and more economical. Increasing commonality and
48 interoperability of multinational supported and supporting forces continue to enhance this trend.
49 Distribution through the multinational system economically offers the certainty of support necessary to
50 mission accomplishment.

51 52 **Conclusion**

53
54 Our Naval, joint, and multinational supply and transportation systems provide distribution services to U.S.
55 naval forces around the world sustaining both operating and support forces. Well-defined and well-

1 established acquisition systems fill the strategic pipeline with the wherewithal of military operations on and
2 from the sea. The CONUS supply system and the strategic transportation system respond to crisis by
3 focusing their efforts on rapid achievement of attainability and sustainability.

4
5 Theater distribution operations can be complicated by a variety of factors: the competing requirements of
6 other Services within the joint force; the political atmosphere of the host nation; as well as the potential
7 needs of allied or coalition partners. For the storekeeper aboard ship, the customer remains constant and
8 co-located. For the air cargo specialist at the FLS, the ship keeps moving. For the air cargo specialist at
9 the ALSS, the FLS that serves the ship keeps changing, and even the FLSs themselves may move!

10
11 Unlike the CONUS and shipboard systems at each end of the pipeline, the theater distribution system may
12 not pre-exist. It may form around existing theater structures, or stand up from scratch. It may incorporate
13 existing bases, but will probably be expeditionary. It will be manned by forces drawn from some
14 combination of active, reserve, joint, combined, and civilian sources. It will deploy quickly and commence
15 operations with a mix of facilities and equipment drawn from many sources Theater distribution to naval
16 forces works because highly mobile and forward-focused Navy and Marine Corps forces have the backing
17 of a deliberate, responsive and robust infrastructure which operates under proven procedures to provide
18 responsive support under all conditions.

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CHAPTER 5 THE FUTURE OF NAVAL LOGISTICS

Introduction

The basic nature of naval logistics has changed little over the years. The underlying principles of logistics are timeless and the process necessary to acquire and provide cruise missiles and gas turbines to the fleet are not different from those used to acquire and provide cannon balls and sails two hundred years ago. However, the complexity and impact of naval logistics have grown in response to changes in the complexity of supported forces and the expansion of roles and missions. This complexity and criticality is rooted in four ongoing patterns:

- **Complexity of the systems.** Modern forces cannot be renewed or subsisted locally. Intricate platforms and systems require specialized technical support. With operations dependent on fewer and more expensive deployed systems requiring more sophisticated support, the logistician is challenged to sustain each vital system on line via dependable and readily deployable resources.
- **Increased velocity of war.** New communications technologies have speeded the flow of information to the combatant commander. Advanced surveillance and weapons systems also contribute to the flow of information and the potential speed of reaction. The promise of this increase in velocity relies on the commander to be able to receive, integrate, and evaluate information quickly and accurately, and to make sound, timely decisions based on the information. The urgency of this process stems from the need to achieve battlespace dominance, and to respond quickly to similar capabilities on the other side. This pattern of information acceleration compresses the time available for logistics planning and response.
- **Larger geographical areas of operations.** Not only are operations conducted far from home, but the same technologies that shrink the world are expanding the battlespace. Just decades ago, decisive sea battles were fought in areas too small to contain a single battle group today. Targeting data that was once confined to line of sight is now generated globally. The naval logistician finds his customers dispersed and active over great areas, quickly and frequently shifting intentions, requirements, and locations in response to unfolding situations. Secure and accurate means of communication and transportation are a must.
- **Expanding mission requirements.** Additional types of missions and forces must be supported. The increased focus on military operations other than war signals a requirement for logistics support of varying customers and missions not traditionally military in nature. Simultaneously, new emphasis on joint, interagency, and multinational operations demands increasing cooperation, interoperability, and greater logistics flexibility in response to divergent requirements, sources, systems and procedures.

These four patterns are not new; they have played a role in the evolution of naval logistics doctrine and practice for centuries. Naval planners, operators, and logisticians must continuously improve doctrine, systems, and procedures to maintain effective support within resource constraints. Operational commitments demand a focus on the effectiveness of force. Budgetary restrictions and other limitations on available assets demand a focus on the principles of economy and simplicity. Balancing these competing demands to produce leaner logistics systems delivering better support requires the attention of participants at all levels of the supported and supporting forces. Some of the most significant changes in logistics support requirements may come from change in the nature of the supported force. Reduced demand results from reducing the size and requirements of the supported force, and the size and requirements of the supporting force. If the supported force can be made smaller, if it can project its power to a greater range, and if it can operate with less requirement for sustainment, reliable logistics support can be achieved more economically. Continuous improvement programs are bringing significant reductions in support requirements. Examples of areas subject to continuing improvement include the following:

- Increased force lethality allowing the combatant commander to deliver required combat capability from a smaller force level.

- 1 • Increased survivability achieved through active and passive defense and force protection allows the
2 commander to reduce losses reducing future sustainment requirements.
- 3 • Increased systems range may reduce force levels by permitting engagement at longer distances
4 allowing smaller combat support and combat service support footprints ashore, with attendant savings
5 in both force protection requirements and logistics support activity up the logistics pipeline.
- 6 • Weight and volume reductions permitting the same level of lethality, protection, detection, mobility,
7 and communication from smaller, lighter systems.
- 8 • Improved maintenance cycles allow sustained operations with reduced requirements for repair parts,
9 lubricants, maintenance supplies, etc.
- 10 • Less reliance of naval resources as combined and joint operations become more and more common in
11 our military engagement activities.
- 12 • Increased commonality and interoperability between the Services and combined forces allows overall
13 force levels to be reduced by eliminating redundancies in systems and support.
- 14 • Improved information access allows the commander the greater economy of force by permitting better
15 and more timely command and control decisions.
- 16 • Use of effective force tailoring in deploying naval forces will reduce the traditional logistics footprint.
17 Via containerized equipment, superfluous resources can be mitigated.

18
19 Reduced demand through these potential improvements and reductions of the supported force are made
20 during the acquisition process and will benefit both the supported and supporting forces. For example,
21 extended maintenance cycles on vehicles used in both combat and support roles increase the efficiency and
22 reduce the internal support requirements of logistics forces. Additional logistics system improvements are
23 developed to foster increased efficiency allowing a given level of logistics assets to sustain combat forces
24 at higher optempo.
25

26 Every element of logistics, at every level and in every functional area, is a candidate for constant
27 refinement. Improvements in preventive medicine and treatment may reduce the requirements to transport
28 replacement personnel forward and casualties back. Streamlined and automated systems may reduce the
29 number of personnel deployed forward to provide disbursing, legal, billeting, and other services; each such
30 reduction lessens the number of personnel sustained forward. Advanced engineering products and systems
31 can allow smaller engineering units to do construction and infrastructure maintenance faster and better.
32 Improvements in diagnostic and repair systems and procedures allow fewer technicians to keep more
33 systems online. In addition to the functional areas, continuing cooperative alignment and standardization
34 of joint and allied logistics systems will facilitate improved logistic capabilities to be shared in combined
35 operations. A variety of naval, joint, and allied initiatives recognize the opportunities inherent in doctrinal,
36 procedural, and technical improvements; these initiatives set the focus and direction of naval logistics for
37 first part of the twenty-first century. Guiding many of these initiatives is Joint Vision 2010.
38

39 **Joint Vision 2010**

40
41 Joint Vision 2010 (JV 2010) establishes Focused Logistics as one of four principal operational concepts of
42 future warfighting, as shown in Figure 5-1. Focused Logistics was established as an equal partner with
43 Dominant Maneuver, Precision Engagement, and Full Dimensional Protection in establishing Full
44 Spectrum Dominance of the battlespace. The realities of Dominant Maneuver, Precision Engagement, and
45 Full Dimensional Protection offer both opportunities and challenges for the logistician. Each will require
46 new standards of information availability and processing; much of this information will enable Focused
47 Logistics.

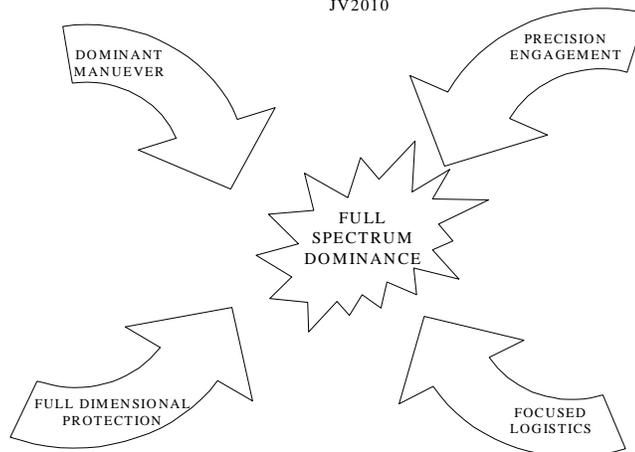
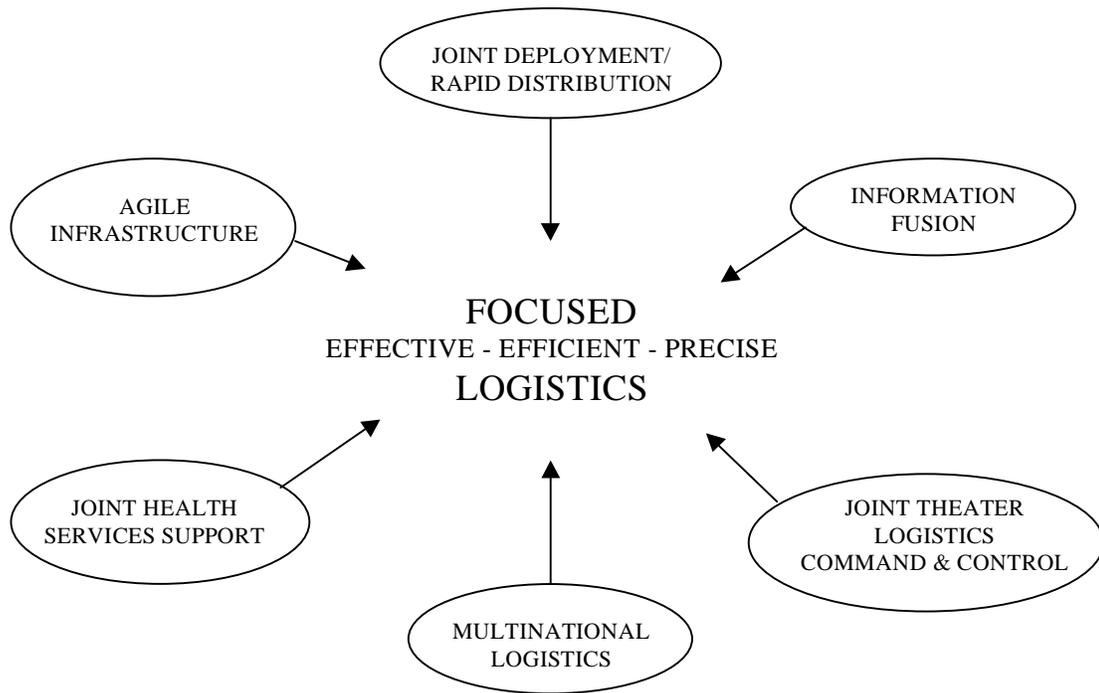


Figure 5-1

1
2 Dominant Maneuver calls for synchronization of dispersed forces in sustained operations. Logistics
3 customers will be spread out over broader areas, and may move more often and more rapidly. The
4 logistician must seek ways to disperse functional capabilities and increase transportation capabilities. This
5 ability may also result in more forces being based at greater distances, from the sea base to the objective.
6 Precision Engagement will marry systems designed to locate, target, attack, and assess with greater
7 accuracy and certainty. Precision Engagement will substitute knowledge for ammunition. Logistics efforts
8 will focus on smaller quantities of smarter ordnance delivered to dispersed forces precisely where and when
9 needed. However, savings garnered from lower expenditure rates may be offset due to increased cost of
10 advanced munitions and systems, and the complexity of systems and sensors. Precision Engagement will
11 heavily rely on advances on information technology. Full-Dimensional Protection will control the
12 battlespace to ensure freedom of action and provide multi-layered defense of forces and facilities.
13 Information superiority and interoperability will allow joint contributions to active and passive defenses.
14 Reductions in support force and infrastructure attrition will enable confidence in the survivability of the
15 logistics pipeline, allowing less redundancy and excess stocks. Focused Logistics will integrate
16 information, logistics, and transportation technologies to provide efficient logistics support and effective
17 crisis response. It will provide tailored logistics at all levels of operations. By tracking and shifting assets
18 as required, Focused Logistics will put the right support at the right place and time. This vision mirrors the
19 traditional Navy and Marine Corps logistics operations.
20

21 **FOCUSED LOGISTICS**

22 Focused Logistics includes six tenets, as depicted in Figure 5-2. These are Joint Theater Logistics, Joint
23 Deployment/Rapid Distribution, Information Fusion, Multinational Logistics, Joint Health Services
24 Support, and Agile Infrastructure. These tenets combine to provide responsive support at any level and in
25 any type of military operation, with reduced logistics response times, inventories, costs, infrastructure, and
26 shortfalls.



THE TENANTS OF FOCUSED LOGISTICS

Figure 5-2

1
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6
7

• **Joint Theater Logistics Concepts**

Synchronization and sharing of Service logistics capabilities can reduce the logistics presence required to support joint operations. Joint Theater Logistics C2 is one alternative offered to provide clear lines of authority by assigning responsibility for logistics support in joint operations to a single entity. It would utilize common information to prioritize and allocate scarce resources, eliminate redundant capabilities and stocks, and coordinate common-user and cross-Service support. Implicit in this organizational alternative is

1 a requirement for extensive integration of Service support systems and processes; full implementation of
2 this concept will require changes in Service systems, and major advances in commonality and
3 interoperability.

4
5 • **Joint Deployment/Rapid Distribution**

6 Joint Deployment/Rapid Distribution is the process of moving forces to the operational area and providing
7 them with accelerated delivery of logistics support. This requires improved transportation and information
8 networks; visibility and accessibility will squeeze maximum support from limited assets. Navy and Marine
9 Corps doctrine will continue to emphasize the unique characteristics and contributions of operations on and
10 from the sea, and Navy and Marine forces may sometimes forego specific process steps, but the steps and
11 claimants in the Service deployment processes are recognizable and definable in joint terms. It will focus
12 at the strategic level on continuing improvements in core sealift and airlift capabilities, enroute
13 infrastructure agreements and upgrades, and increased utilization of commercial delivery.

14
15 Among rapid distribution initiatives affecting naval logistics are the ongoing procurement of large medium
16 speed roll-on/rolloff (LMSR) ships for the Strategic Sealift Fleet and expansion of commercial sealift
17 mobilization programs. Also, JLOTS initiatives will improve logistics support of shorebased forces in the
18 absence of adequate port capacity. Advanced causeway and crane systems, lighterage, and other
19 improvements, are currently programmed and being developed to increase throughput in sea states three.

20
21 • **Information Fusion**

22 Information fusion will accomplish universal access to appropriate information through the Global Combat
23 Support System (GCSS). GCSS will provide near-real-time logistics C2 and a common support picture
24 through shared data and applications. The situational awareness and access to assets implied by network-
25 centricity will extend to the logistics arena and ensure that reload and repair are as responsive and flexible
26 as the operational maneuver they support. Eventually, third-party logistics will be integrated into GCSS.
27 Such enablers as Automated Identification Technology, Joint Total Asset Visibility, In-Transit Visibility,
28 and Joint Decision Support Tools are in varying stages of deployment and development, and already impact
29 logistics operations.

30
31 • **Multinational Logistics**

32 Continuing evolution of support relationships between the U.S. and allies and coalition partners will yield
33 stronger regional contacts, more effective multinational operations, and equitable distribution of logistics
34 tasking and responsibility. Through multinational logistics initiatives, Focused Logistics will extend to
35 combined operations many of the benefits currently derived from jointness. Efforts toward increased
36 logistics cooperation amongst our allies are concentrated in four areas, common operational framework,
37 expansion of bilateral agreements, interoperability through technology sharing, and leveraging the
38 capabilities of multinational partnerships.

39
40 **Joint Health Services Support**

41 Focused Logistics directs a joint health service support strategy (JHSS) supporting Force Projection with
42 essential care in theater, robust aeromedical evacuation, and definitive care in CONUS. This care is
43 oriented to ensure a healthy and fit force, to prevent casualties, and to administer effective casualty care and
44 management. This enhances the warfighter's capability by providing and sustaining a healthy, mission-
45 ready force on line, and by reducing lift requirements for deployment of replacements and disposition of
46 casualties.

47
48
49 **Agile Infrastructure**

50 Agile infrastructure will improve joint logistics policies, structures, and functional processes to permit
51 maximum economical application of these options. The result will be reduced logistics forces, equipment,
52 supplies, and facilities--all achieved with the overriding objective of maintaining effective support. The
53 actions necessary to reengineer infrastructure and achieve more economical logistics support will rely on
54 outsourcing requirements where practical and effective, instituting commercial business practices,
55 improved engineering and maintenance support, enhanced inventory management, and increased

1 prepositioning and war reserves.

3 **Naval Logistics Concepts**

4 The Navy and Marine Corps have developed concepts designed to support military operations through a
5 wide range of options. These will be increasingly expeditionary, forward positioned, sustainable,
6 maneuverable, and streamlined. Many components of Focused Logistics are already impacting naval
7 logistics operations. Current and projected initiatives are expanding electronic connectivity, real time
8 access to the common operating picture, and a current global inventory of logistics assets and activity. The
9 concepts of precision, information, transformation, and partnership focus naval logistics development
10 within the framework of Focused Logistics.

12 **Precision**

13 Precision is the watchword in the theater environment of the future. The right support must reach the
14 customer when and where needed. Inventories must carry the needed items only. Logistics response time
15 will decrease as inventories become more visible and management systems become more responsive.
16 Depots must be sized and located to support the Naval force without waste. Regionalization and
17 consolidation process for depot and intermediate maintenance is already underway, and contractors and
18 manufacturers will contribute through initiatives such as Life Cycle Support. Precision requires emphasis
19 on joint operations and integration, with additional focus on the deliberate planning process to accurately
20 determine and represent naval requirements and theater capabilities. Management of stocks, including
21 WRM, must address sourcing, transportation, and positioning to maximize availability to naval or other
22 supported forces.

24 Extensive and flexible sealift support must be available to place precise support where and when it is
25 required. A distribution system relying on velocity to replace depth of stocks cannot afford a less-than-
26 responsive transportation element. Strategic sealift enhancement through continuing addition of LMSR
27 ships, and initiatives to ensure a successful National Defense Features program for the U.S. merchant fleet
28 will support joint strategic sealift requirements. A follow-on Combat Logistics Force and naval integration
29 into joint theater distribution will provide more efficient and faster distribution to the afloat forces.
30 Enhanced logistics support of Marine Corps forces in the seabase will address improved support of
31 operations from the sea.

33 Munitions management, including inventory reduction, revised positioning and storage, enhanced visibility,
34 and uniform environmental protection will bring increased precision, economy, and efficiency. Modular
35 organization of Fleet Hospitals, Naval Mobile Construction Battalions, Cargo Handling Battalions, Navy
36 Overseas Air Cargo Terminals, and other expeditionary shorebased forces will allow precision responses to
37 support requirements in the theater. The initiative for Fleet Hospital detachments responds directly to the
38 Joint Health Services Support Strategy for mobile distribution of essential care delivery.

40 Marine Corps Precision Logistics initiatives will measure logistics response times and repair cycle times
41 for analysis and reduction, adapt commercial business practices to logistics operations, and improve Marine
42 Corps logistics distribution and information systems. The Marine Corps Logistics Command will address
43 Marine Corps connectivity to theater distribution systems, improving access to precise support through
44 joint, common-user and cross-Service capabilities.

46 **Information**

47 No single aspect of logistics has received more attention in the joint and multinational arenas than
48 information. It is almost impossible to discuss any aspect of current or future operations without
49 addressing the enabling power of information technology. Information will help identify and locate
50 inventory, but it does not substitute for availability, delivery, or decision making. The Naval Logistics
51 Information Strategic Plan has been promulgated to streamline logistics processes, reduce life cycle costs,
52 and create synergy of data.

54 Naval logistics information systems will be reengineered and reorganized to reduce costs and cycle times.
55 Outdated processes will be changed or eliminated to increase efficiency. Enhanced asset visibility

1 programs will join with regionalization and inventory-sharing programs to minimize inventory
2 requirements. New programs, such as Initial Requirements Determination/Readiness Based Sparing, will
3 revolutionize parts planning and management. Advanced diagnostic and training systems will be employed
4 to ensure the system and the operators or maintainers are at peak performance. New concepts like the
5 Configuration Management Information System will provide more current and accurate systems data for
6 each major systems installation.

7
8 Information technologies of several types will be integrated toward an objective of seamless logistics.
9 Proven "Smart Ship" enhancements will be incorporated in new construction and refit, and "Smart Ship"
10 initiatives will be applied to new areas. Systems such as Continuous Acquisition and Life Cycle Support
11 System (CALC) and Integrated Condition Assessment System (ICAS) will be tied to acquisition and
12 maintenance to explore opportunities for reduced life cycle costs. Naval distribution systems will be
13 integrated with GCCS and GCSS to bring the Navy and Marine Corps into full partnership in joint force
14 deployments.

15 16 **Transformation**

17 To effect change, the Navy and Marine Corps will reevaluate materiel, maintenance, and facilities
18 management with the specific goal of identifying additional opportunities for outsourcing, consolidation, or
19 regionalization. Express delivery services, Prime Vendor and Direct Vendor Delivery, common-user and
20 cross-Service logistics, multinational support, and contingency contracting reflect the ongoing
21 transformation of naval logistics. Tomorrow's naval logistics distribution system will be characterized by a
22 concentration of expeditionary military logistics capabilities in theater, and a concentration of economical,
23 capable private sector capabilities in support.

24 25 **Partnership**

26 Partnership focuses on integration of naval forces as good citizens. The global partnerships required to
27 achieve theater success address both military and non-military issues. Key objectives of these partnerships
28 include effective stewardship of our environment and human resources. Partnership involves every logistics
29 function in timely environmental cleanup and comprehensive pollution prevention programs. It requires
30 engineer support of environmental protection in facility and systems planning, integrated plans to protect
31 the natural and cultural resources of naval installations, implementation of hazardous material control and
32 management (HMC&M) at major bases, and inclusion of energy and environmental conservation factors in
33 facility planning.

34 35 **Seabased Logistics**

36 Navy and Marine Corps operational concepts such as "Forward...from the Sea" and "Operational
37 Maneuver from the Sea" require bold departures in sustainment options. "Seabased Logistics" is a
38 conceptual framework envisioning support of expeditionary Navy and Marine Corps shore-based forces
39 from the seabase. The five primary tenets characterize Seabased Logistics:

- 40 • **Primacy of the sea base**- over the horizon, reduced or eliminated footprint.
- 41 • **Reduced demand** – seabased support, technology improvement, lighter force ashore.
- 42 • **In-stride sustainment** – network-based, automated logistics for maneuver units.
- 43 • **Adaptive response & joint operations** – expanded missions, joint support.
- 44 • **Force closure & reconstitution at sea** – building and restoring combat power.

45
46 The full promise of Seabased Logistics is subject to development of new platforms and equipment, and
47 solution of various problems in ship-to-objective logistics, selective offload, strategic logistics interface,
48 seabased intermediate maintenance, and joint interoperability. While near-term realization of limited
49 seabasing may be feasible, full implementation is many years away.

50 51 52 **Concept Development**

53 The benefit inherent in the above initiatives will be developed and verified through a process of concept
54 development, experimentation and wargaming, and implementation. As an example, Joint logistics
55 developments are pursued through the logistics wargames. The Navy Warfare Development Command

1 (NWDC) supports logistics initiatives through concept development, experimentation in its Fleet Battle
2 Experiment series, and promulgation of validated doctrine through the Naval Doctrine and Naval Warfare
3 Publication series. The Marine Corps Combat Development Command (MCCDC) performs a similar role
4 through its Marine Corps Warfighting Lab (MCWL), leading to the Marine Corps Doctrine and Warfare
5 Publication series. These and other Joint and Service efforts direct development and implementation of
6 capable, feasible, and doctrinally sound advances in logistics systems and practices.

7
8 **Conclusion**

9 The way forward for naval logistics will proceed through many concepts, evaluations, experiments, and
10 changes to tactics, techniques, procedures, and doctrine. Precision, Information, Transformation, and
11 Partnership will support implementation of Focused Logistics. U.S. naval forces will go on doing what
12 they have always done--go anywhere, at any time, against any odds to provide certain, flexible, responsive,
13 seabased execution of our national will. Through all of this, the principles of logistics will guide the
14 planning, command and control, and execution of logistics support.

15
16 As new technology races ahead, the Naval logistics forces are challenged to capture the benefits of
17 technology, embrace it, tie into concepts and experiments, and if it makes sense, put it into our doctrinal
18 publications. As the world order continues to shift, our military missions will change. Through all of this
19 and more, professionals of our naval services will continue to search for the next new way to make naval
20 logistics more responsive, simple, flexible, economical, attainable, sustainable, and survivable.

21

GLOSSARY

The following term definitions are provided for use with this publication. For terms not listed here, the reader is directed to refer to either Joint Publication 1-02, Department of Defense Dictionary of Military and Associated Terms or Naval Warfare Publication 1-02, Naval Supplement to the DoD Dictionary of Military and Associated Terms.

A

advanced logistics support site (ALSS). An overseas location used as the primary transshipment point in the theater of operations for logistic support. An advanced logistics support site possesses full capabilities for storage, consolidation, and transfer of supplies and for support of forward-deployed units (including replacement units) during major contingency and wartime periods. Advanced logistic support sites, with port and airfield facilities in close proximity, are located within the theater of operations but not near the main battle areas, and must possess the throughput capacity required to accommodate incoming and outgoing inter-theater airlift and sealift. When fully activated, the advanced logistic support site should consist of facilities and services provided by the host nation, augmented by support personnel located in the theater of operations, or both.

advanced traceability and control (ATAC). A closed-loop, transportation hub and spoke operation for the collection and consolidation of Depot Level Repairables which are received from Fleet customers and technically screened for repair, stowage, or disposal and then shipped to the appropriate site.

air combat element (ACE). See Marine air-ground task force.

alert order. 1. A crisis-action planning directive from the Secretary of Defense, issued by the Chairman of the Joint Chiefs of Staff, that provides essential guidance for planning and directs the initiation of execution planning for the selected course of action authorized by the Secretary of Defense. 2. A planning directive that provides essential planning guidance and directs the initiation of execution planning after the directing authority approves a military course of action. An alert order does not authorize execution of the approved course of action.

automatic identification technology (AIT). AIT is the family of technologies that allow the collection and entry of data into computers without manual keyboard entry.

Aviation Consolidated Allowance List (AVCAL). A document that lists the items and quantities of aeronautical material authorized to be stocked by an aircraft carrier/MALS to support the maintenance and operations of assigned or embarked aircraft. It is tailored for each aircraft carrier/MALS; LPH/LHA and the items listed are selected for all ARRs/ALs that apply to the assigned or embarked aircraft.

B

battle force intermediate maintenance activity (BFIMA). Consists of maintenance beyond that of the capability of the using unit, but not so extensive to require major industrial facilities or equipment. It is normally provided by a tender or a larger combatant ship such as aircraft carrier (CVNs) or amphibious assault ships (LHA/LHDs) within the battle force.

Battle Force Logistics Coordinator (BFLC). Person designated by the battle force commander to coordinate all logistics within the battle force.

Battle Group Logistics Coordinator (BGLC). Person designated by the battle group commander to coordinate all logistics within the battle group.

BI-Major NATO Commander (BI-MNC). NATO consists of two Major NATO Commanders. They are the Supreme Allied Commander, Atlantic (SACLANT) and the Supreme Allied Commander, Europe

1 (SACEUR).

2
3 **C**

4
5 **Cargo Afloat Rig Team (CART).** NAVELSF units that embark aboard military and commercial vessels
6 to provide and operate temporary rigging for limited ship-to-ship transfers.

7
8 **Cargo Handling Battalion (CHB).** See Navy Cargo Handling Battalion.

9
10 **combat logistics force (CLF).** Ships whose purpose is to relieve deployed fleet units from direct
11 dependency on shore bases for supply support. To accomplish this, the CLF provides items of known
12 military essentially and those in greatest demand by deployed fleet units.

13
14 **connected replenishment (CONREP).** A method used by ships to replenish from other ships via high line.
15 Cargo, personnel, and fuel hoses are transferred by use of high tension wires.

16
17 **construction capability (CONCAP).** CONCAP is an extension of the Naval Construction Force. It is a
18 civilian contractor that is used to provide augmentation in the theater of operations. The services can vary
19 from providing a variety of professional civil engineering functions and oversight to that of actual
20 construction activities. Contracts are usually established prior to a contingency and allow for a smaller
21 military footprint in theater.

22
23 **Coordinated Shipboard Allowance List (COSAL).** A basic and unique guide for determining the items
24 and quantities which should be stocked by the Supply Department to support the equipment installed
25 onboard. This list can also be used to define the basis for which an item is stocked by the ship. It also
26 contains nomenclature and nameplate data on equipment and identification data for repair parts.

27
28 **D**

29
30 **Defense Automatic Addressing System (DAAS).** A real time random access digital computer system
31 which utilizes the Automatic Digital Network (AUTODIN) switching centers of the Defense
32 Communications System to receive and automatically retransmit MILSTRIP messages to the proper
33 addresses.

34
35 **Defense Logistics Agency (DLA).** A supply support organization assigned management responsibility and
36 control of items in common use by all military services. About 60% of the line items in the integrated
37 Navy Supply System are managed by DLA. These items are identified by a 9 in the first position of the
38 cognizance symbol.

39
40 **Defense Reutilization and Marketing Service (DRMS).** This activity will match the receipt reported by
41 the Defense Reutilization and Marketing Office (DRMO) with the shipment status card (DI AS3), reported
42 by the shipping activity.

43
44 **defense supply system:** The Defense Supply System is not a formal organization, but rather a network of
45 unique service and agency supply resources linked together to provide mutual supply support for operating
46 forces worldwide. This system is composed of the individual military service supply organizations, the
47 Defense Logistics Agency (DLA), other DoD agencies including the Defense Special Weapons Agency
48 and the National Imagery and Mapping Agency, and other federal organizations such as the General
49 Services Administration (GSA).

50
51
52 **F**

53
54 **Federal Logistics Information System (FLIS).** Formerly the Defense Integrated Data System.
55 Maintained by the Defense Logistics Services Center (DLSC), the FLIS has simplified and unified the

1 central item data bank for items of supply and furthered the integration of many aspects of the military
2 supply systems. FLIS is shared among all Federal users. FLIS data is vital to the creation and maintenance
3 of many logistic products used daily by Navy and Marine Corps operating forces, including allowance lists,
4 cross reference aids and supply management data.

5
6 **Fleet and Industrial Supply Center (FISC).** Command organizations which furnish supply support to
7 fleet units, shore activities, and overseas bases established in their mission. They are under the
8 management of the Commander, Naval Supply Systems Command (NAVSUP).

9
10 **Fleet Issue Load List (FILL).** Consolidated listing of material to be carried onboard combat stores ships
11 for the support of operating afloat forces to ensure maximum fleet readiness. It is based on actual past
12 demands of those items most commonly requested by the fleet units.

13
14 **Fleet Logistics Coordinator (FLC).** Person designated by the fleet commander to coordinate all logistics
15 within the fleet.

16
17 **Fleet Material Support Office (FMSO).** Located in Mechanicsburg, PA, FMSO is responsible for
18 maintaining demand data and load list changes, performing Inventory Control Point (ICP) functions, and
19 designing shore-based inventory control systems.

20
21 **forward logistics site (FLS).** An overseas location, with port and airfield facilities nearby, which provides
22 logistic support to naval forces within the theater of operations during major contingency and wartime
23 periods. FLSs may be located in close proximity to main battle areas to permit forward staging of services,
24 throughput of high priority cargo, advanced maintenance, and battle damage repair. FLSs are linked to in-
25 theater Advanced Logistic Support Sites (ALSSs) by theater airlift and sealift, but may also serve as
26 transshipment points for inter-theater movement of high-priority cargo into areas of direct combat. In
27 providing logistic support, FLS capabilities may range from very austere to near those of an Advanced
28 Logistic Support Site. Also called FLS. See also Naval Advanced Logistic Support Site.

29 30 G

31
32 **General Services Administration (GSA).** Responsible for the cataloging and inventory control of 9Q
33 cognizance material or nonmilitary items in general use by both military and civilian agencies within the
34 U.S. Government. Examples of 9Q items include general use office supplies, hand tools and cleaning
35 supplies.

36
37 **Global Combat Support System (GCSS).** Under development, GCSS promises universal secure access
38 to logistics information, with interoperability across combat support and C2 functions. Designed to reliably
39 provide the warfighter with one picture of combat support available across one net to any authorized user
40 on any computer, GCSS will make possible near real time C2 of the logistics pipeline. GCSS will rely on
41 many sources of logistics information to paint an accurate picture of logistics flow.

42 43 H

44
45 **hazardous material (HM).** HM is a substance or material that is capable of posing an unreasonable risk to
46 health, safety, property or the environment. HM is defined in OPNAVINST 4110.2 series, *Hazardous*
47 *Material Control and Management*.

48
49 **hazardous waste (HW).** HM that is no longer usable for its intended purpose and must be (legally)
50 discarded.

51 52 I

53
54 **interim supply support (ISS).** ISS is the process of providing spare repair parts through the prime
55 hardware manufacturer during the period between fleet introduction and the time Navy/Defense Supply

1 System can fully provide organic support for the system.

2
3 **interservice support agreement (ISSA).** An ISSA is a formal, legal, and binding funding document that
4 specifies actions and responsibilities to be performed by the Service provider and the receiver.

5
6 **L**

7
8 **Local Air Logistics Coordinator (LALC).** The LALC is assigned to coordinate logistics helicopter
9 operations, scheduling overheads and communicating with ships to ensure maximum utilization of limited
10 lift opportunities.

11
12 **Logistics Civilian Augmentation Program (LOGCAP).** Army contract program that allows for
13 substitution or supplementation of military logistics forces by commercial service support.

14
15 **Logistics Coordinator (LC).** Person designated with the fleet, battle force or battle group to coordinate all
16 logistics for the respective units.

17
18 **Logistics Applications of Automated Marking And Reading Symbols (LOGMARS).** A system used
19 by SUADPS-RT activities to record incoming transactions by reading bar-code symbols. The receipts are
20 then processed to requisition and/or material files via batch processing.

21
22 **logistics readiness center (LRC).** This organization is the logistics staff that supports the combatant
23 commander with command and control of logistic support. This staff will manage common-user and cross-
24 Service logistics, monitor and report logistics operations and capabilities, advise the combatant commander
25 on logistics matters, and represent the command to external logistics organizations.

26
27 **logistics replenishment (LOGREP).** a. Logistics replenishment is the resupply of units within the battle
28 group or battle force. The schedule is determined by the operational commander in response to operational
29 requirements, unit locations, elapsed time since last replenishment, and urgency of requirements. Ships
30 submit requirements in advance to allow for proper planning and effective utilization of logistics ships. b.
31 NATO information system, Logistics Reporting System (LOGREP) that supports information exchange in
32 NATO logistics reporting. Provides peacetime updates to LOGBASE, and supports ADAMS and
33 ACROSS.

34
35 **M**

36
37 **Maintenance and Material Management System (3M).** A maintenance tracking system that ties in
38 supply with maintenance. It tracks the repairs needed and coordinates preventative maintenance and
39 repairs with supplies. It also sets up schedules for preventive maintenance and needed repairs.

40
41 **Maintenance Data System (MDS).** A basic element of the 3M program designed to provide a means of
42 recording maintenance actions in substantial detail, so that a great variety of information may be retrieved
43 concerning maintenance requirements and equipment performance. In addition to recording maintenance
44 actions performed, the system provides data concerning the initial discovery of the malfunction, how
45 equipment malfunctioned, how many man-hours were expended, which equipment was involved, what
46 repair parts and materials were used, what delays were incurred, the reasons for delay, and the technical
47 specialty or rating which performed the maintenance.

48
49 **mandatory turn-in repairable (MTR).** An item that is required to be turned in to a collection point or
50 DOP for repair when a replacement part is ordered. The repair part is then returned to the supply stock
51 system.

52
53
54 **memorandum of agreement (MOA).** An MOA is an “action officer precise” document that details the
55 same actions and responsibilities as an ISSA, but is not considered a funding document.

1
2 **memorandum of understanding (MOU).** An MOU is a document which specifies actions and
3 responsibilities to be performed by the provider and receiver but only in general terms. An MOU should be
4 backed by an ISSA.

5
6 **Military Standard (MILSTD).** A prescribed engineering method or related practice which, when
7 referenced in a contract, becomes a mandatory procedure for suppliers to follow in furnishing material to
8 the military. An example is MIL-STD-100 (Engineering Drawing Practices).

9
10 **Military Standard Billing Systems (MILSBILLS).** Exchange of billing information for supply system
11 transactions is accomplished by MILSBILLS.

12
13 **Military Supply and Transportation Evaluation Procedures (MILSTEP).** Collection of data to
14 measure supply system performance is accomplished by MILSTEP. MILSTEP is one of the primary tools
15 used to measure Logistics Response Time.

16
17 **Military Standard Transaction Reporting and Accounting Procedures (MILSTRAP).** Enlarges upon
18 MILSTRIP by extending uniform communicating procedures, codes, forms, and formats for the
19 transmission of items and financial data between the management, stock control, and storage elements of
20 the military services and Defense Logistics Agency distribution systems.

21
22 **Military Standard Requisitioning and Issue Procedures (MILSTRIP).** A uniform procedure
23 established by the Department of Defense for use within the Department of Defense to govern requisition
24 and issue of materiel within standardized priorities.

25
26 **Multinational Joint logistics Center or Commander (MJLC).** In the NATO military structure, this
27 organization assumes the responsibility for detailed planning and execution. The MJLC will contain
28 internal coordination centers for the major logistics functions.

29
30 **Multinational Logistics Centre or Commander (MNLCC).** MNLCC's are established by component forces
31 within the NATO military structure if there is limited existing support. Land and air MNLCCs are
32 established as centers, and are limited to coordinating authority. However, maritime MNLCC's are
33 established as commands.

34
35 **N**

36
37 **Naval Supply Systems Command (NAVSUPSYSCOM).** Provides for and meets those material support
38 requirements of the Department of the Navy within the assigned material support responsibility of the
39 Naval Supply Systems Command. They provide supply management with policies, methods, and staff
40 assistance to the Assistant Secretary of the Navy.

41
42 **Naval Transportation Support Center (NAVTRANSUPCEN or NAVTRANS).** Provides worldwide
43 transportation and physical distribution services for U.S. Navy afloat and ashore activities and manages the
44 Servicewide Transportation (SWT) accounts for Navy transportation.

45
46 **Navy Expeditionary Logistics Support Force (NAVELSF).** A Naval Reserve command organized and
47 staffed to provide a wide range of supply and transportation support critical for peacetime support, crisis
48 response, humanitarian, and combat service support missions.

49
50 **Navy Overseas Air Cargo Terminal (NOACT).** A Navy unit tasked with establishing and operating an
51 overseas air cargo terminal in an expeditionary environment.

52
53 **O**

54
55 **operational general message (OPGEN).** Maritime unique formatted messages used by both the U.S.

1 Navy and NATO to promulgate general matters of policy, instructions, and common aspects of operations,
2 but also may include detailed instructions for warfare responsibilities.

3
4 **operational task (OPTASK).** Maritime unique formatted messages used by both the U.S. Navy and
5 NATO to provide detailed information for specific aspects within individual areas of warfare and for
6 tasking of resources. This includes logistics and may be issued at all levels above the unit and may be
7 Navy-wide, focused on a particular theater or battle group.

8
9 **operating target (OPTAR).** An estimate of the money required by an operating ship, staff, squadron, or
10 other unit to perform the task and function assigned.

11 12 **P**

13
14 **Planned Maintenance System (PMS).** Identifies planned maintenance to be performed on equipment,
15 procedures to be followed, and tools, parts, materials, and test equipment required to perform planned
16 maintenance.

17 18 **R**

19
20 **Repair Coordinator (RC).** The RC assigns attached repair capabilities. Initial reliance is on ship's or
21 aircraft squadron's organic repair assets; when this is insufficient, the RC coordinates with the Logistics
22 Coordinator to accomplish off-ship repair. Actual transfer of maintenance assets or repairables between
23 ships is directed by MATCONOFF.

24
25 **retrograde.** Any movement of material from the forward theater which is being returned to rear supply or
26 maintenance echelons.

27 28 **S**

29
30 **sea lines of communication (SLOC).** See "lines of communication".

31
32 **Shipboard Non-Tactical ADP Program (SNAP).** A system designed to replace manual efforts, through
33 automation, in the areas of supply, OPTAR accounting, maintenance management, and administration.
34 SNAP I is the Honeywell DPS-6 computer equipment normally installed on large ships, SIMA's, and
35 Marine Aircraft Groups. SNAP II is general purpose, commercial equipment normally installed on small
36 surface ships and submarines.

37
38 **Shipboard Uniform Automated Data Processing System-Real Time (SUADPS-RT).** Refers to the
39 entire group of supply and financial computer programs utilizing the SNAP I system.

40 41 **T**

42
43 **Task Force Logistics Coordinator (TFLC).** Person designated by the task force commander to coordinate
44 all logistics within the task force.

45 46 **U**

47
48 **Underway Replenishment Coordinator (URC).** The URC monitors commodity levels within the battle
49 group and on board CLF ships in company or enroute. When potential problems are identified, the URC
50 notifies the BFLC/BGLC with recommended solutions. In the event commodity shortages are anticipated,
51 the URC is responsible for allocation of available inventories. The URC coordinates loading and
52 prioritization of products with the ALSS and recommends replenishment at sea (RAS) schedules to the
53 BFLC/BGLC. While the supply officer is generally tasked with hazardous material and waste management
54 on board, the URC coordinates the transfer of these materials to designated shuttle ships. It should be
55 noted that the URC does not control actual UNREP operations; the Commanding Officer of the

1 replenishment ship is the Officer in Tactical Command (OTC) during transfer.

2
3 **Uniform Materiel Movement and Issue Priority System (UMMIPS).** Incremental time standards for
4 requisition, issue, and movement of materiel for DoD. The time standards apply to all transportation modes
5 in peace and war and vary according to the priority and ultimate destination of the shipment. See DOD
6 Directive 4410.6, Chapter 5, Part F.

7
8
9 **unit identification code (UIC).** A five digit code assigned by the Navy Accounting and Finance Center
10 (NAFC-624), Washington, DC, to identify a specific Navy activity for supply and accounting purposes.
11 Unit identification codes and related information are listed in the Navy Comptroller Manual, Volume 2,
12 Chapter 5. The unit identification code is normally preceded by a one digit service designator code R, V,
13 or N, as appropriate.

14
15 **United States naval forces.** All forces and reserve components of the U.S. Navy and U.S. Marine Corps,
16 and the U.S. Coast Guard when operating as a part of the Navy.

17
18 **W**

19
20 **war reserves.** Stocks of materiel amassed in peacetime to meet the increase in military requirements
21 consequent upon an outbreak of war. War reserves are intended to provide the interim support essential to
22 sustain operations until resupply can be effected.

23
24 **war reserve stock(s).** That portion of total materiel assets which is designated to satisfy the war reserve
25 materiel requirement.

1 **LIST OF ACRONYMS/ABBREVIATIONS**

2
3 **The following acronym definitions are provided for use with this publication. For terms not listed**
4 **here, the reader is directed to refer to either Joint Publication 1-02, Department of Defense**
5 **Dictionary of Military and Associated Terms or Naval Warfare Publication 1-02, Naval Supplement**
6 **to the DoD Dictionary of Military and Associated Terms.**

7
8 **A**

9
10 **ACROSS.** ACE Resources Optimization Software System (NATO?).
11 **ACCIS.** Allied Command and Control Information System.
12 **ACLANT.** Allied Command Atlantic.
13 **ADAMS.** Allied Deployment and Movement system (NATO?).
14 **ADP.** automated data processing.
15 **AFCAP.** air force capability (proposed).
16 **AHQ.** ad hoc query (proposed).
17 **AIT.** automatic identification technology.
18 **ALSS.** naval advanced logistic support site.
19 **AMS.** Asset Management System (proposed).
20 **ATAC.** advanced traceability and control.

21
22
23 **B**

24
25 **BFIMA.** battle force intermediate maintenance activity.
26 **BFLC.** battle force logistics coordinator.
27 **BI-MNC.** BI- Major NATO Commander
28 **BUMED.** Bureau of Medicine and Surgery.

29
30 **C**

31
32 **CALS.** continuous acquisition and life cycle support system (proposed).
33 **CART.** cargo afloat rig team.
34 **CHRIMP.** consolidated hazardous material reutilization and inventory management program.
35 **CINCROKUS.** Commander in Chief, Republic of Korea/U.S. Forces
36 **CINCUNC.** Commander in Chief, United Nations Command.
37 **CLF.** combat logistics force.
38 **CMC.** Commandant of the Marine Corps.
39 **CNFJ.** Commander, U.S. Naval Forces Japan.CNFK. Commander, U.S. Naval Forces Korea.
40 **CNO.** Chief of Naval Operations.
41 **CNRF.** Commander, Naval Reserve Forces.
42 **COA.** course of action.
43 **COCOM.** combatant command.
44 **COM.** combat ordnance manager (proposed).
45 **COMMARCORLOGBASES.** Marine Corps Logistic Bases Command.
46 **COMMZ.** communications zone.
47 **COMNAVAIRLANT.** Commander, Naval Air Force, Atlantic.
48 **COMNAVAIRPAC.** Commander, Naval Air Force, Pacific.
49 **COMNAVSURFLANT.** Commander, Naval Surface Force, Atlantic.
50 **COMNAVSURFPAC.** Commander, Naval Surface Force, Pacific.
51 **COMSC.** Commander, Military Sealift Command.
52 **COMSERVGRU TWO.** Commander, Service Group Two (proposed).
53 **COMSERVGRU THREE.** Commander, Service Group Three (proposed).
54 **COMSUBLANT.** Commander, Submarine Force, Atlantic.
55 **COMSUBPAC.** Commander, Submarine Force, Pacific.

1 **COMUSNAVCENT.** Commander in Chief, Naval Forces Central Command.
2 **CONCAP.** construction capability.
3 **CONPLAN.** operation plan in concept format.
4 **CONSOL.** consolidation (proposed).
5 **CONUS.** continental United States.
6 **COP.** common operational picture (proposed).
7 **COSAL.** coordinated shipboard allowance list.
8 **CRAF.** civil reserve air fleet.
9 **CSS.** combat service support.
10 **CSSE.** combat service support element.

11
12 **D**

13
14 **2D.** two dimensional.
15 **DAAS.** defense automatic addressing system.
16 **DCST.** Defense Logistic Agency contingency support team.
17 **DDD.** Defense Distribution Depot (proposed).
18 **DESC.** Defense Energy Support Center.
19 **DFSP.** Defense Fuel Support Point.
20 **DISMS.** defense integrated subsistence management system.
21 **DISREP.** discrepancy in shipment report.
22 **DLA.** Defense Logistics Agency.
23 **DLR.** depot-level repairable.
24 **DOD.** Department of Defense.
25 **DOT.** Department of Transportation.
26 **DPG.** Defense Planning Guide.
27 **DRMS.** Defense Reutilization and Marketing Service.
28 **DSC.** defense supply center.
29 **DSSC.** Direct Support Stock Control.
30 **DTS.** defense transportation system.
31 **DVD.** direct vendor delivery.

32
33 **E**

34
35 **ELIST.** Enhanced Logistics Intratheater Support Tool (Proposed).
36 **ELSF.** expeditionary logistics support force.
37 **EMCON.** emission control.

38
39 **F**

40
41 **FAA.** Federal Aviation Administration.
42 **FAPES.** Force Augmentation Planning and Execution System.
43 **FHA.** Federal Highway Administration.
44 **FILL.** fleet issue load list.
45 **FLC.** fleet logistics coordinator (proposed).
46 **FLIS.** federal logistics information system.
47 **FLS.** naval forward logistic site.
48 **FLSR.** forward logistic support representative.
49 **FMC.** field mail center.
50 **FMSO.** Fleet Material Support Office.
51 **FOU.** fuel operating unit.
52 **FRA.** Federal Railroad Administration.
53 **FRAS.** fuel resource and allocation system (proposed)
54 **FSSG.** force service support group.
55

1 **G**
2
3 **GCE.** ground combat element.
4 **GCCS.** Global Combat Support System (proposed).
5 **GDSS.** Global Decision Support System.
6 **GLC.** group logistics coordinator (proposed).
7 **GSA.** General Services Administration.
8 **GSORTS.** Global Status of Resources and Training.
9 **GTN.** Global Transportation Network.
10
11 **H**
12
13 **HAZMAT.** hazardous material
14 **HNS.** host nation support.
15
16 **I**
17
18 **IC3.** integrated command, control and communications.
19 **ICAS.** integrated condition assessment system (proposed).
20 **ICP.** inventory control point.
21 **ILS.** integrated logistic support.
22 **IMM.** integrated materiel management/manager.
23 **IMS.** international military staff.
24 **ITV.** in-transit visibility.
25
26 **J**
27
28 **JCS.** Joint Chiefs of Staff.
29 **JEL.** Joint Electronic Library.
30 **JEPES.** Joint Engineer Planning and Execution System.
31 **JET.** JOPEs editing tool (proposed).
32 **JFACC.** joint force air component commander.
33 **JFAST.** Joint Feasibility Analysis System for Transportation.
34 **JFC.** joint force commander.
35 **JFLCC.** joint force land component commander.
36 **JFMCC.** joint force maritime component commander.
37 **JFSOCC.** joint force special operations component commander.
38 **JHSS.** joint health service support (proposed).
39 **JLOTS.** joint logistics over-the-shore.
40 **JOPEs.** Joint Operation Planning and Execution System.
41 **JPEC.** Joint Operation Planning and Execution System.
42 **JSCP.** Joint Strategic Capabilities Plan.
43 **JTAV.** joint total asset visibility (proposed).
44 **JTF.** joint task force.
45 **JWFC.** Joint Warfighting Center.
46
47 **L**
48
49 **LALC.** local air logistic coordinator.
50 **LANTFLT.** Atlantic Fleet (proposed).
51 **LC.** logistic coordinator.
52 **LFSP.** landing force support party.
53 **LMSR.** large, medium speed roll-on/roll-off.
54 **LOC.** line of communications.
55 **LOG.** logistics.

1 **LOGCAP.** logistics capability; Logistics Civilian Augmentation Program.
2 **LOGBASE.** NATO logistics database program
3 **LOGREP.** logistic replenishment; Logistics Reporting System.
4 **LOGSAFE.** logistic sustainment analysis and feasibility estimator.
5 **LOTS.** logistics over-the-shore.
6 **LRC.** logistics readiness center.
7
8 **M**
9
10 **MAGTF.** Marine air-ground task force.
11 **MARAD.** Maritime Administration.
12 **MARDIV.** Marine Division.
13 **MARFOR.** Marine Corps forces.
14 **MARFORSYSCOM.** Marine Corps Systems Command
15 **MAT.** medical analysis tool.
16 **MATCONOFF.** material control office.
17 **MAW.** marine air wing.
18 military committee.
19 **MCLBC.** Marine Corps logistics base command.
20 **MDS.** maintenance data system.
21 **MEDAC.** Medical Assistance Coordinator (proposed).
22 **MEF.** Marine expeditionary force.
23
24 **METT-T.** mission, enemy, terrain and weather, troops and support available, time available.
25 **MHSS.** military health service support (proposed).
26 **Micro-SNAP.** Micro-Shipboard Non-Tactical Automated Data Processing System.
27 **MILSBILLS.** military standard billing system.
28 **MILSTAMP.** military standard transportation and movement procedures.
29 **MILSTRAP.** military standard transaction reporting and accounting procedures.
30 **MILSTRIP.** military standard requisitioning and issue procedure.
31 **MJLC.** Multinational Joint Logistic Centre.
32 **MNC.** major NATO commander.
33 **MNFC.** Multinational Force Commander (proposed).
34 **MNMF.** Multinational maritime force (proposed).
35 **MOOTW.** military operations other than war.
36 **MPF.** maritime pre-positioning force.
37 **MPS.** maritime prepositioning ship.
38 **MRE.** meal, ready to eat.
39 **MSC.** Military Sealift Command.
40 **MSR.** main supply route.
41 **MTMC.** Military Traffic Management Command.
42 **MUMMS.** Marine Corps Unified Material Management System.
43
44 **N**
45
46 **NAC.** North Atlantic Council.
47 **NATO.** North Atlantic Treaty Organization.
48 **NAVAIRSYSCOM.** Naval Air Systems Command (Also called NAVAIR).
49 **NAVFACENCOM.** Naval Facilities Engineering Command (Also called NAVFAC).
50 **NAVFOR.** Navy Forces.
51 **NAVMASSO.** Navy Management Systems Support Office.
52 **NAVMEDLOGCOM.** Naval Medical Logistics Command.
53 **NAVPETOFF.** Navy Petroleum Office.
54 **NAVSEASYSCOM.** Naval Sea Systems Command (Also called NAVSEA).
55 **NAVSUPSYSCOM.** Naval Supply Systems Command (Also called NAVSUP).

1 **NAVTRANSSUPCEN.** Naval Transportation Support Center.
2 **NBG.** naval beach group.
3 **NCA.** National Command Authorities.
4 **NCC.** navy component commander.
5 **NCCP.** Navy Contingency Contracting Program.
6 **NEO.** non-combatant evacuation operation.
7 **NETF.** NATO Expanded Task Force.
8 **NFAF.** naval fleet auxiliary force.
9 **NFCS.** navy field contracting system.
10 **NOACT.** Navy overseas air cargo terminal.
11 **NPG.** Nuclear Planning Group (proposed).
12 **NRCC.** navy regional contracting center.
13 **NSE.** navy support element.
14 **NSN.** national stock number.
15 **NTF.** NATO Task Force.
16 **NTG.** NATO Task Group.
17 **NUFEA.** navy unique fleet essential aircraft (proposed).
18
19 **O**
20
21 **OCONUS.** outside the continental United States.
22 **OMC.** optical memory cards (proposed).
23 **OPCON.** operational control.
24 **OPDS.** offshore petroleum discharge system.
25 **OPLAN.** operation plan.
26 **OPORD.** operational order.
27 **OPTAR.** operating target.
28 **OPTASK.** operational task.
29 **OPTEMPO.** operating tempo.
30 **OTC.** officer in tactical command.
31 **OSA.** operational support airlift (proposed).
32
33 **P**
34
35 **PACFLT.** Pacific Fleet (proposed).
36 **PHIBCB.** amphibious construction battalion.
37 **PICA.** primary inventory control activity.
38 **PMC.** passenger/mail/cargo.
39 **POD.** point of debarkation/discharge or proof of delivery
40 **POE.** point of embarkation; point of entry.
41 **POL.** petroleum, oils and lubricants.
42 **PSC.** principal subordinate command.
43
44 **R**
45
46 **RC.** repair coordinator.
47 **RDA.** Requirements Development and Analysis (proposed).
48 **RDD.** required delivery date (at destination).
49 **RFI.** request for information.
50 **RRF.** ready reserve fleet.
51 **RSOI.** reception, staging, onward movement and integration (proposed).
52
53 **S**
54
55 **S&M.** Scheduling and Movement (proposed).

1 **SAAM.** special assignment airlift mission.
2 **SACEUR.** Supreme Allied Command, Europe.
3 **SACLANT.** Supreme Allied Command, Atlantic.
4 **SALTS.** streamlined automated logistics transmission system.
5 **SECDEF.** Secretary of Defense.
6 **SECNAV.** Secretary of the Navy.
7 **SFM.** supply and financial management.
8 **SIGMA.** shore intermediate maintenance activity.
9 **SLOC.** sea line of communication.
10 **SMU.** Supply system management units.
11 **SNAP.** shipboard non-tactical ADP program.
12 **SOF.** special operation forces.
13 **SOFA.** status-of-forces agreement.
14 **SOP.** standing operating procedure.
15 **SPAWAR.** Space and Naval Warfare Systems Command.
16 **SPECWAR.** Naval Special Warfare Command (proposed).
17 **SPMAGTF.** Special Purpose Marine Air Ground Task Force (proposed).
18 **SPOD.** sea port of debarkation.
19 **SPOE.** sea port of embarkation.
20 **SUADPS.** shipboard uniform automated data processing system.
21 **SYSCOM.** systems command.

22
23 **T**

24
25 **T-AFS.** combat stores ship (MSC).
26 **T-ATF.** fleet ocean tug (MSC).
27 **T-AVB.** aviation logistics support ship.
28 **TC-AIMS II.** Transportation Coordinator's Automated Information for Movement System II.
29 **TAMS.** Transportation Analysis, Modeling and Simulation.
30 **TARGET.** Theater Analysis and Replanning Graphical Execution Toolkit (proposed).
31 **TAV.** total asset visibility (proposed).
32 **TF.** task force.
33 **TFLC.** Task Force Logistics Coordinator (proposed).
34 **TG.** task group.
35 **TPEDIT.** TPFDD Edit (proposed).
36 **TPFDD.** time-phased force and deployment data.
37 **TPFDL.** time-phased force and deployment list.
38 **TYCOM.** type commander.

39
40 **U**

41
42 **UMMIPS.** uniform material movement and issue priority system.
43 **UN.** United Nations.
44 **UNREP.** underway replenishment.
45 **URC.** Underway Replenishment Coordinator (proposed).
46 **URG.** underway replenishment group.
47 **USACOM.** United States Atlantic Command.
48 **USCENTCOM.** United States Central Command.
49 **USCG.** United States Coast Guard.
50 **USCINCTRANS.** Commander in Chief, United States Transportation Command.
51 **USEUCOM.** United States European Command.
52 **USNAVCENT.** United States Naval Forces, United States Central Command.
53 **USPACOM.** United States Pacific Command.
54 **USSOCOM.** United States Special Operations Command.
55 **USSOUTHCOM.** United States Southern Command.

1 **USSPACECOM.** United States Space Command.
2 **USSTRATCOM.** United States Strategic Command.
3 **USTRANSCOM.** United States Transportation Command.
4
5 **V**
6
7 **V/STOL.** vertical/short takeoff and landing.
8 **VERTREP.** vertical replenishment.
9 **VC.** Fleet Composite Squadron
10 **VISA.** Voluntary Intermodal Sealift Agreement.
11 **VOD.** vertical onboard delivery.
12 **VR.** Fleet Logistic Support Squadron
13 **VRC,** Fleet Logistic Support Squadron, Carrier Onboard Delivery (COD)
14
15 **W**
16
17 **WRM.** war reserve materiel.
18
19

1 **SUGGESTED FOLLOW-ON READING**

2
3 The naval professional wanting additional information on logistics operations and related topics may have
4 interests varying from a direct requirement for assistance conducting this day's operations, to an esoteric
5 interest in the foundations of logistics theory. This section is organized to simplify the search by separating
6 the listings into general areas. The most important area for direct application of logistic doctrine are the
7 extensive Navy Warfare Publication (NWP) and United States Marine Corps Warfighting Publication
8 libraries. These resources offers one or more substantive volumes in each of the functional areas of
9 logistics, and expands on doctrine with more detailed discussions of organizational, technical, and
10 procedural matters. Of most direct concern here is the NWP-4 and MWCP-4 series of logistics
11 publications which ovide excellent guidance for the conduct of Naval logistics operations, and include
12 substantial information common to naval logistics operations. Readers are reminded that these libraries
13 are a living resource; various publications within the library will be under development or revision at any
14 point. This process is necessary to maintain currency of the information presented. In addition, the
15 numbering and naming of some publications may change. The simplest way to view these publications are
16 via the respective websites of the Navy Warfare Development Command (www.nwdc.navy.mil) and the
17 Marine Corps Combat Development Command (www.mccdc.quantico.marine.mil)
18 .

19
20 Also listed in the suggested reading are representative Joint, and Allied publications rich in doctrinal or
21 operational information. The NATO publications are particularly interesting to anyone involved in naval
22 logistics. The list offered is not comprehensive, but is intended to indicate the scope of available
23 information on doctrine and practices governing naval, joint and combined logistics operations. Joint and
24 combined operations constitute such a major portion of all military operations today that every naval
25 professional will find a direct need to understand and operate in the joint and combined environments. The
26 current joint publications listed here, and some service publications, may be accessed online from the Joint
27 Electronic Library at <http://www.dtic.mil/doctrine>. This library is also available from the Joint Warfighting
28 Center on CD-ROM.

29
30 Finally, for those naval professionals wanting to further their understanding of logistics history and theory,
31 a brief selection of relevant titles is offered. These include topics on military and naval theory and
32 operations, logistics theory and history, developing doctrine, and command and control. They are not
33 expected to assist the operational commander, planner, or logistician in the daily discharge of duty; they
34 offer a few of the many possible opportunities to broaden the perspectives from which we approach our
35 duties.

36
37 Navy Publications

38 Naval Doctrine Publication 1, Naval Warfare

39
40 Naval Warfare Publication 3-02.14, The Naval Beach Group

41
42 Naval Warfare Publication 3-02.21, MSC Support of Amphibious OPS

43
44 Naval Warfare Publication 3-02.3, Maritime Prepositioning Force (MPF) Operations

45
46 Naval Naval Warfare Publication 4-01, Naval Transportation

47
48 Naval Warfare Publication 4-01.1, Navy Expeditionary Shore-Based Logistics Support and RSOI

49
50 Naval Warfare Publication 4-01.4, Underway Replenishment

51
52 Naval Warfare Publication 4-02, Naval Force Medical Protection

53
54 Naval Warfare Publication 4-02.1, Navy Health Services Support Logistics
55

1 Naval warfare Publication 4-02.2, Patient Movement
2
3 Naval Warfare Publication 4-02.3, Naval HSS Doctrine for Operations other than War
4
5 Naval Warfare Publication 4-02.4, Fleet Hospitals
6
7 Naval Warfare Publication 4-02.5, USMC Health Service Support Operations
8
9 Naval Warfare Publication 4-02.6, T-AH Operations
10
11 Naval Warfare Publication 4-02.7, Combat Stress Control
12
13 Naval Warfare Publication 4-04, Naval Civil Engineering Operations
14
15 Naval Warfare Publication 4-04.1, Seabee Operations in the MAGTF
16
17 Naval Warfare Publication 4-04.2, Navy Civil Engineer Operations for Component Commanders
18
19 Naval Warfare Publication 4-07, Naval Maintenance
20
21 Naval Warfare Publication 4-08, Naval Supply Operations
22
23 Naval Warfare Publication 4-09, Other Logistics Services, Part I – VIII
24
25 Naval Warfare Publication 4-10, Naval Conventional Ordnance Management
26
27 Naval Warfare Publication 4-11, Environmental Protection
28
29 Naval Doctrine Publication 5, Naval Planning
30
31 Naval Warfare Publication 5-01, Navy Operational Plans
32
33 Naval Doctrine Publication 6, Naval Command and Control
34
35 Naval Warfare Publication 6-00.1, Command and Control
36
37
38 Marine Corps Publications
39
40 Marine Corps Doctrine Publication 4, Logistics
41
42 Marine Corps Warfare Publication 4-1, Logistics Operations
43
44 Marine Corps Warfare Publication 4-11, Tactical Level Logistics
45
46 Marine Corps Warfare Publication 4-11.1, Health Services Support Operations
47
48 Marine Corps Warfare Publication 4-11.2, Patient Movement
49
50 Marine Corps Warfare Publication 4-11.3, Transportation Operations
51
52 Marine Corps Warfare Publication 4-11.4, Maintenance Operations
53
54 Marine Corps Warfare Publication 4-11.7, MAGTF Supply Operations
55

1 Marine Corps Warfare Publication 4-11.8, Services
2
3 Marine Corps Warfare Publication 4-12, Operational Level Logistics
4
5 Marine Corps Warfare Publication 4-13, Strategic Level Logistics
6
7 Marine Corps Doctrine Publication 5, Planning
8
9 Marine Corps Doctrine Publication 6, Command and Control
10
11
12 Joint Publications
13
14 Joint Publication 3-07, Joint Doctrine for Military Operations Other Than War
15
16 Joint Publication 3-17, Joint Tactics, Techniques, and Procedures for Theater Airlift Operations
17
18 Joint Publication 3-34, Joint Engineer Doctrine
19
20 Joint Publication 3-35, Joint Deployment and Redeployment Doctrine
21
22 Joint Publication 4-0, Joint Doctrine for Logistics Support of Joint Operations
23
24 Joint Publication 4-01, Joint Doctrine for the Defense Transportation System
25
26 Joint Publication 4-01.1, Joint Tactics, Techniques, and Procedures for Airlift Support to Joint Operations
27
28 Joint Publication 4-01.2, Joint Tactics, Techniques, and Procedures for Sealift Support to Joint Operations
29
30 Joint Publication 4-01.3, Joint Tactics, Techniques, and Procedures for Movement Control
31
32 Joint Publication 4.01.4, Joint Theater Distribution
33
34 Joint Publication 4-01.5, Joint Tactics, Techniques, and Procedures for Water Terminal Operations
35
36 Joint Publication 4-01.6, Joint Tactics, Techniques, and Procedures for Joint Logistics Over the Shore
37
38 Joint Publication 4-01.7, Joint Tactics, Techniques, and Procedures for Use of Intermodal Containers in
39 Joint Operations
40
41 Joint Publication 4-01.8, Joint Reception, Staging, Onward Movement, and Integration (JRSOI)
42
43 Joint Publication 4-01.9, Global Distribution
44
45 Joint Publication 4-02, Joint Doctrine for Health Service Support in Joint Operations
46
47 Joint Publication 4-02.1, Joint Tactics, Techniques, and Procedures for Health Service Logistics Support in
48 Joint Operations
49
50 Joint Publication 4-02.2, Joint Tactics, Techniques, and Procedures for Patient Movement in Joint
51 Operations
52
53 Joint Publication 4-03, Joint Bulk Petroleum Doctrine
54
55 Joint Publication 4-04, Joint Doctrine for Civil Engineering Support

1
2 Joint Publication 4-05, Joint Mobilization Planning Doctrine
3
4 Joint Publication 4-05.1, Joint Tactics, Techniques, and Procedures for Manpower Mobilization and
5 Demobilization Operations: Reserve Component Callup
6
7 Joint Publication 4-06, Joint Tactics, Techniques, and Procedures for Mortuary Affairs in Joint Operations
8
9 Joint Publication 4-07, Joint Tactics, Techniques, and Procedures for Common User Logistics during Joint
10 Operations
11
12 Joint Publication 4-08, Joint Doctrine for Logistic Support of Multinational Operations
13
14 Joint Publication 5-0, Joint Doctrine for Planning Joint Operations
15
16 Joint Publication 5-00.2, Joint Task Force (JTF) Planning Guidance and Procedures
17
18
19 Allied Publications
20
21 Allied Joint Publication-4, Allied Joint Logistic Doctrine
22
23 Allied Logistics Publication – 11, Multinational Maritime Force Logistics
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