# MCDP 4

# Logistics



# **U.S. Marine Corps**

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#### FOREWORD

This doctrinal publication focuses on logistics. It describes the theory and philosophy of military logistics as practiced by the United States Marine Corps. It provides Marines a conceptual framework for understanding how logistics is an essential aspect of every military operation. The Marine Corps' view of logistics is based on our common understanding of the nature of war, our role in the joint force, and our warfighting philosophy as described in Marine Corps Doctrinal Publication (MCDP) 1, *Warfighting*.

This publication is a revision of the 1997 version of MCDP 4, *Logistics*. It places the time-tested, combat-proven principles outlined in the previous version in an updated warfighting context. As General A. M. Gray wrote, "like war itself, our approach to warfighting must evolve."<sup>1</sup>

This publication describes the role of logistics in a globally contested environment, within multiple domains, across the competition continuum. Marines must be able to operate when logistics is contested, which requires us to consider logistics opportunities and limitations in both force and operational planning. Professionals across all Marine Corps occupational fields must find innovative ways to move and sustain forces, experiment with alternative support methods, and train to conduct logistics in realistic conditions as cohesive units. Increasingly persistent and global threats reinforce the need to leverage strategic- and operational-level logistics to support Marines. This publication is intended for all Marines. Logistics is a part of every military activity. Therefore, all Marines benefit by understanding the nature, theories, and design of the logistics enterprise. The more Marines understand how their needs are met by a complex network of systems and relationships, the better they will be at creating realistic plans, generating requirements, and using the network to build, position, and sustain the force. This understanding also helps develop support plans that shape and extend the endurance, reach, and survivability of Marine Corps forces.

This publication has a similar construct to MCDP 1, *Warfighting*. It is not intended to be a reference manual. It is designed to be read from cover to cover, and to be immediately applicable. This publication does not address specific techniques or procedures we should adopt. Rather, it provides broad guidance in the form of ideas, with historical lessons and realistic fictional illustrations intended to stimulate thinking and encourage additional learning. Reading, studying, and debating this publication with fellow Marines will enhance understanding about the essential role logistics holds in our ability to meet any warfighting challenge.

DAVID H. BERGER General, U.S. Marine Corps Commandant of the Marine Corps

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#### Scenario—The Great Pacific War

Major Rodriguez was jolted out of a sound sleep at 0400 by the crash of incoming long-range missiles at the local airport. The missiles had been launched by an adversary vessel in the Pacific. Her task-organized teams had been preparing for this attack for the past seven months in the far reaches of a Pacific archipelago, setting conditions for the introduction of Marine forces to support fleet and joint force reconnaissance and counterreconnaissance operations. It appeared the conflict had begun and more Marines would soon be on their way to the area. Major Rodriquez and the team were ready.

One of the missiles created a massive crater in the local airfield. Efforts to harden the airfield minimized and contained damage, but did not prevent it. Fortunately, on-call engineers with airfield repair capabilities were safely positioned miles away from the airfield, covered with advanced camouflage netting that prevents visual and electromagnetic detection. The repair team raced to fix the crater; open runway repairs can be easily detected by satellite. However, the team had practiced these repairs, and the latest repair compounds have greatly reduced necessary exposure time, so they were soon back under cover.

Simultaneously, Major Rodriguez sent an autonomous unmanned aircraft system (UAS) to locate the enemy vessel in the area. The UAS, which was equipped with sensors that collect data, also carried supplies between the islands where Marines were dispersed. The UAS took off, and the data collected was shared with the joint force command. The command incorporated the UAS data with an automatic, machine-learning-driven calculation to distinguish between hostile and friendly vessels.

A hostile vessel in the area was automatically targeted from the multiple launch rocket system (MLRS) located on an island closeby. Coincidently, the missile that struck the hostile vessel had been delivered to the MLRS unit by the same UAS that provided the targeting data.

Suddenly, the UAS lost signal. The UAS had been detected and neutralized by an enemy satellite, which had automatically tracked the drone and administered a high-powered, directedenergy weapon. Major Rodriguez wasn't worried—she had many more UASs in reserve.

Meanwhile, an allied fighter jet was running out of fuel and needed to make an emergency landing and, because of the shared allied logistics network, the joint force command was able to divert the jet to the recently repaired airfield. The joint force command could see that Major Rodriguez's unit was ready to provide fuel and ordnance to the friendly fighter. Bulk fuel was "hidden in plain sight" by anchoring its 2,000-gallon fuel pods on the littoral floor in an adjacent island bay. The same eight engineers who fixed the runway pumped the fuel and hung the ordnance. Master Sergeant Kelly later told the team this kind of thing would have taken at least 25 Marines back when he was a lance corporal—Lance Corporal Davis didn't believe him. The fighter jet was soon refueled, rearmed, and sent back out to destroy another target identified by South Korea's sensors.

Scenario

As Major Rodriguez's team returned to its expeditionary base camp, they were hit by an enemy cyber attack that disrupted the team's ability to communicate with higher headquarters. Major Rodriguez immediately launched five solar powered drones that provided uninterrupted connectivity to higher, adjacent, and subordinate units in the local operating area.

In the background, pre-planned logistics packages began making their way to units located on different islands via manned and autonomous air, sea, and sub-sea modes of conveyance. These packages were developed based on predictive algorithms, thus maximizing lift and distribution. State-of-the-art naval and joint integrated logistics command and control systems provided accurate real-time visibility on the location of logistics units, supply stockage and consumption levels, and supported unit requirements. The fusion of training, education, and technology provided Major Rodriquez and her team needed capabilities and capacity to operate in a high threat environment.

# Chapter 1. The Nature of Logistics

"As we select our forces and plan our operations...we must understand how logistics can impact on [sic] our concepts of operation...Commanders must base all their concepts of operations on what they know they can do logistically."<sup>2</sup>

—A. M. Gray, Jr

*"Logistics is the bridge between our national economy and the operations of our combat forces."*<sup>3</sup>

-H. E. Eccles

"I believe logistics, as a warfighting function, is the pacing function. Not one of, it's actually THE. We can have the best force, postured perfectly, with this magnificent JADC2 on top of it...If they're able to contest and really choke us off logistically, they'll take us to our knees. We can't let that happen."<sup>4</sup>

-D. H. Berger

Logistics is the engine of strategy. Strategy is the adoption, alignment, and the balancing of ends, ways, and means to achieve objectives in a contested and competitive environment. When conducted properly, formulating strategy refines objectives and provides clarity to resource requirements. Logistics provides the materiel means to execute a nation's strategy.

Logistics is a complex undertaking that requires an in-depth appreciation of its inherent characteristics, elements, and relationship to warfighting. Marines with a firm grasp of what logistics fundamentally is and entails are prepared to support operations across the competition continuum.

### WHAT IS LOGISTICS?

Logistics is the aspect of military operations that deals with the procurement, transportation, and maintenance of military materiel, facilities, and personnel. It provides for the physical needs of a force. During execution, logistics obtains and positions resources when and where needed. As an art and science, logistics encompasses a wide range of actions, activities, and interdependent relationships. Any activity that transports a military force from one place to another, provides the force with the physical means of waging war, and regenerates combat power for subsequent employment is within the realm of logistics. These actions enable a strategy, of which logistics is a critical and inseparable part.<sup>5</sup>

Logistics is the bridge that connects a nation's economy to its warfighting forces<sup>6</sup> and provides the means to convert national resources into combat power. Logistics transforms people, natural resources, and industrial capacity into units, weapons, equipment, and supplies. It is the art and science of sustaining military forces and projecting that power at the right time and