

Chapter 11

Preserving Logistical Support for Deployed Battle Groups in Hostile Environments: A Decentralized Approach

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ABSTRACT

The U.S. Navy's at-sea replenishment system is a mobile supply line designed to support the deployed carrier task force (CTF)/cruiser/destroyer (CRUDES) surface action group (SAG) and forward deployed units while at sea. In the Pacific, the main component of the mobile supply line, the combat logistics force (CLF) ship, has become a possible target with the development of the anti-ship ballistic missile. With the ability to target and disable a CLF, an enemy can now disable a deployed CTF/CRUDES fleet by eliminating its required resources. With the goal of preserving the CLF's capabilities to perform its mission while avoiding ASBM threat, the authors consider the possibility of utilizing a "mini-CLF" to shuttle fuel between CLFs operating in a safe environment and warships operating in a threat zone. The authors perform two analyses: they (1) analyze the feasibility of using the Littoral combat ship/joint high-speed vessel, reconfigured as a shuttle to transport resources, and (2) analyze requirements for development of a new class of ships to support the CTF/CRUDES SAG while deployed in the Pacific.

INTRODUCTION

As the U.S. military and its leaders continue to evaluate how to ensure that the United States has a superior force, and to preserve or regain our military advantages, the Navy has identified a possible roadmap to its future.

In the words of Rowden, Gumataotao, and Fanta (2015, p. 18), “of Chief of Naval Operations Admiral Jonathan Greenert’s three tenets, ‘Warfighting First’ is at the top, and that is no accident.” With senior military officers such as Vice Admiral Rowden and Rear Admirals Gumataotao and Fanta publishing concepts like “distributed lethality” as the way to employ our naval assets in the future, we must give attention to how to support this distributed mode of operations. “For more power in more places, the Navy should increase the offensive might of the surface force and employ ships in dispersed formations known as ‘hunter-killer surface action groups’” (Rowden, Gumataotao, & Fanta, 2015, p. 18).

The concept of “distributed logistics” to support such “distributed lethality” is already being addressed by students at the Naval Postgraduate School in Monterey, CA. As identified by LCDR Ellis in a paper for the Joint Campaign Analysis class, Legacy logistics solutions are ill-suited for supporting a large fleet of small units operating in an Anti-Access, Area Denial (A2AD) region (Ellis, 2013). A Distributed Logistics concept is proposed, serving as a hybrid of traditional established logistics bases (ELBs) and Combat Logistics Force (CLF) routes, augmented with a network of small and temporary Expeditionary Support Bases (ESBs). These ESBs are supplied with the Combat Support Shuttles (CSSs), which could be new ships, or a potential use for existing platforms such as the Littoral Combat Ship (LCS) or Joint High Speed Vessel (JHSV) (Ellis, 2013).

BACKGROUND

The U.S. Navy’s at-sea replenishment system is a mobile supply line designed to support the deployed Carrier Task Force (CTF)/Cruiser/Destroyer (CRUDES) Surface Action Group (SAG) and forward deployed units while at sea. In the 7th Fleet area of responsibility (AOR) the main component of the mobile supply line, the CLF ship, has become a possible target with the development of the Dong-Feng-21D (DF-21D), a Chinese-developed anti-ship ballistic missile (ASBM). With the claimed ability to target and disable our current CLF fleet with a DF-21D, if within range, an enemy can now disable a deployed CTF/CRUDES SAG by eliminating its required replenished resources, rendering it combat ineffective and more vulnerable to attack. With the goal of preserving the CLF’s ability to perform its mission while not subjecting it to an ASBM threat, this chapter considers the possibility of utilizing a “mini-CLF” to shuttle fuel between CLFs operating in a safe environment and warships operating in a threat zone. This study: (1) analyzes the feasibility of using existing assets such as LCS/JHSV, reconfigured as shuttles to transport underway replenishment requirements from the CLFs to the CTF/CRUDES SAG while deployed in the Western Pacific, and; (2) analyzes requirements for development of a new class of ships to support the CTF/CRUDES SAG while deployed in the Western Pacific. Examination of a shuttle’s performance and ability to support the deployed CTF/CRUDES SAG is based solely on the potential for a shuttle to connect with and transfer commodities from a port or CLF outside of the threat area to the deployed CTF/CRUDES SAG in the assigned AOR.

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