

NRAC Ship-to-Warfighter Logistics for Small Unit Operations
Terms of Reference - Specific Tasking

- Identify resupply requirements and unique challenges of SUO
- Review existing technologies for fast, precise delivery and distribution
- Recommend new technologies or innovative use of existing technologies to have an impact
- Specifically address medical, medevac and CBW needs

In March 1997, NRAC was charged with an assessment of the DON logistics support for SUOs. The general study objective called for a technology assessment related to logistics initiatives to support emerging field concepts dominated by SUOs. The Panel also was asked to specifically address medical, medevac, and chemical/biological warfare (CBW) needs.

For the purpose of this study, the Panel looked at a range of issues surrounding the resupply of small units, including natural environment (desert, jungle, urban), levels of technology maturity, and the methods of resupply. Combat casualty care was addressed with and without the availability of medevac.

The specific Terms of Reference for the NRAC Summer Study Panel on Ship-to-Warfighter Logistics for SUOs are included here in their entirety.

**Terms of Reference for NRAC Panel on
Ship-to-Warfighter Logistics for Small Unit Operations**

General Objective: Identify future science and technology opportunities, and assess technologies associated with current DON logistics initiatives in order to resupply forward-deployed SUOs with food, ammunition, water, fuel, batteries, medical supplies, etc., with minimum footprint and exposure time, and maintain communications for a period of several days to several weeks.

Background: For most of the 20th century the usefulness of seabased logistics has been limited by the voracious appetite of modern landing forces for such items as fuel, large caliber ammunition, and

aviation ordnance. In the future, the United States is likely to face a number of very different threats to its security, interests, and way of life. Many of these threats will originate from within the littorals (those areas along the coastline), forming the basis for operational concepts embodied in Naval doctrine such as "From The Sea" and "Operational Maneuver From The Sea," and some new operational concepts such as those exemplified in the DON Extended Littoral Battlefield ACTD, or USMC "Sea Dragon."

Improvements in the precision of long-range weapons, greater reliance on sea-based fire support, departure from traditional expeditionary landing operations, greater maneuver potential and effectiveness of small units, and possibly less reliance on mechanized armor, promises to significantly alter the manner in which supply facilities are established ashore. Emphasis will be on speed, reduced footprint, and, in some cases, covert resupply.

Specific Tasking:

- a. Provide a matrix of resupply requirements and unique challenges for SUOs, ranging from MEU needs to support of small team(s) based on natural environment, communications, types of supplies and rates of consumption.
- b. Review existing technologies applicable to fast, precision delivery and distribution of supplies (e.g., GPS, Remotely Piloted Vehicle (RPV)/UAV, parafoils, and information/communication).
- c. Recommend new technologies and innovative use of existing technologies that affect resupply needs or consumption (e.g., alternate fuel sources, solar or alternate source battery charging and power generation, and remote diagnostics) rates.
- d. Specifically address disease prevention, mitigation, and medevac needs and approaches, including recommendations for chemical/biological warning and prophylaxis.

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