

TERMS OF REFERENCE

Lightening the Load NRAC Summer Study 2007

Objectives:

The objectives of this study are to assess the elements of the combat load carried by today's Marine; identify the primary weight and volume contributors; identify and evaluate technology initiatives; and consider changes in operations, logistics, and training to reduce this burden without having an unacceptable impact on combat effectiveness, safety, or tactics.

Background:

The load carried by today's Marine is too heavy and has sizable volume. In addition to weapons, ammunition, water, food, and other essentials, Marines are equipped with the most advanced equipment (protective body armor, sensors, communications, and location devices) available. While this equipment provides more effective combat capabilities and facilitates dispersed operations, it does not come without penalty. Current asymmetric adversaries are not similarly burdened. The load carried by Marines negatively impacts their combat efficiency, causes fatigue, reduces agility and immediate response capabilities, and has other undesirable effects.

It is desired that this study identify and evaluate as many of the factors that contribute to the load carried by today's Marines in combat and the options that could be considered to reduce this burden, thereby providing greater agility and flexibility for those directly engaged in the fight.

Specific Taskings:

1. Review current loads, identify the major weight and volume components, and determine which are dictated by mission / tactics / environment / sustainability / survivability / doctrine.
2. Identify and evaluate S&T initiatives (US and allies) that are being or could be pursued to lighten the load. These should include, but not be limited to, new materials, weapons, protective body armor, and ergonomic development of load bearing equipment. Explore opportunities to combine/ integrate equipment components or reduce the quantities of items carried. Identify those items that should be accelerated.
3. Discuss to the extent possible changes to logistics re-supply concepts (including robotic mules and others), that would contribute to lightening the individual combat load. As appropriate comment on how tactics, training and operational procedures might reduce the load burden.
4. Review bio-engineering / human effects studies for today's standards at maximum load based on a set number of conditions. Utilize this as the baseline for the end state of all taskings listed above.