

CSBA: Layered Defense, Mix of Weapons Needed to Fend Off “Salvo” Attacks

WASHINGTON – Despite decades of investing in missile systems to defend the homeland and forward-deployed forces, the military is not prepared to protect its overseas bases against the “salvo” attacks with multiple types of precision weapons that Russia and China could throw at them.

“Despite these investments, the U.S. military still lacks the ability to defeat large numbers of ballistic missiles, cruise missiles, unmanned aircraft and other emerging guided weapons threats. Indeed, tangible progress toward fielding high-capacity air and missile defenses has been, to date, barely noticeable,” the Center for Strategic and Budgetary Assessment (CSBA) said in a new study released Nov. 14.

That dangerous condition has to change because the U.S. military must be able to operate forward to reassure and defend its allies and partners, which puts its airfields, seaports and land bases in the western Pacific and Europe within range of swarms of Russian and Chinese guided munitions, many of which are relatively cheap, the CSBA report warned.

Attempting to counter those “salvo” attacks with the current defensive missile systems, such as the Army’s land-based Patriot and Terminal High Altitude Area Defense (THAAD) and the Navy’s Aegis Weapon System/Standard Missile, is impractical due to the limited numbers and high cost per shot of those kinetic weapons, the report said.

The CSBA study shows “that salvo attacks cannot be defeated by kinetic weapons alone,” said Mark Gunzinger, co-author of the report with Carl Rehberg.

Both are retired Air Force colonels with years of additional service in Pentagon offices.

Instead, they recommend a layered defense using a mix of kinetic and non-kinetic weapons with an emphasis on high-energy solid-state lasers and high-powered microwave devices, which can produce virtually unlimited shots at a tiny fraction of the cost per shot of defensive missiles.

Because those directed-energy weapons have relatively short effective range, the study recommended they be put on manned and unmanned aircraft in the outer defensive ring, along with ground-to-air and air-to-air missiles. They also would be part of the close-in defenses and, because they are comparatively mobile, could be a valuable part of the Marine Corps' and Air Force's plans to distribute their forces over a number of smaller expeditionary bases to complicate the enemy's strike planning and reduce the risk of a debilitating strike.

Those weapons would be particularly useful against unmanned aerial vehicles, cruise missiles and smaller air-launched munitions, they said.

That focus on directed-energy systems was echoed by Michael Griffin, the undersecretary of defense for research and engineering, in a Nov. 13 speech. Griffin said "usable" laser weapons could be fielded "in no more than a few years," although lasers powerful enough for ballistic missile defense would take longer.

Effectively defending forward bases would require an integrated, extended-range network of sensors, which would include space-based assets, manned and unmanned aircraft and forward-deployed Navy warships. It also would require an integrated command and control (C2) network to link the early warning and defensive systems.

The CSBA authors suggested that in the Pacific the C2 network could be built around the already operational Naval Integrated

Fire Control-Counter Air system.

Although the Navy's growing fleet of missile-defense capable cruisers and destroyers could be part of the defensive shield for forward-based facilities, Gunzinger said tying down those warships for that purpose would not be a good use of those multimission, mobile platforms.