Smith: Marine Corps Looking for Air Defense 'Sweet Spot'



U.S. Marine Corps Sgt. Tyler Roup, left, and Cpl. Connor Reddy, both with Marine Medium Tiltrotor Squadron (VMM) 165 (Reinforced), 11th Marine Expeditionary Unit, sit in a Light Marine Air Defense Integrated System (L-MADIS) and watch for unmanned aerial systems while an MH-60S Sea Hawk with Helicopter Sea Combat Squadron (HSC) 21 takes off from the flight deck of the amphibious assault ship USS Essex (LHD 2) during a simulated strait transit, March 29. *U.S. MARINE CORPS / Sgt. Jennessa Davey*

ARLINGTON, Va. — The U.S. Marine Corps is trying to solve the challenge of providing air defense for its future anti-ship cruise-missile forces that will be helping the U.S. Navy to maintain sea control in a contested expeditionary environment.

"Those forces that are distributed to launch anti-ship missiles, to sense what is going on, to pass data, have to be protected from air threats," said Lt. Gen. Eric Smith, deputy commandant For Combat Development and Integration, testifying June 8 before the Seapower subcommittee of the Senate Armed Services Committee on the proposed fiscal 2022 budget, noting that the Marine forces "haven't had a real air threat since World War II.

"Our challenge is: we have to be highly mobile," Smith said. "If we're not internally, organically transportable, by our C-130s, our CH-53s, our [MV-22] Ospreys, our L-class Navy ships, and the future Light Amphibious Warship, then we lose value to the combatant commander. So, the balance for us is the range of [an anti-air] missile system and the size. When you start getting into a missile system that is, let's just say, beyond 13 feet, that's a challenge."

Smith said the Corps currently is “spending money on our MADIS [Marine Air Defense Integrated System] and on GBAD – Ground-Based Air Defense, trying to find the sweet spot, sir, between range, lethality and mobility. That is a wicked problem for us to solve and we have not yet solved it.”

The four major GBAD programs being developed or deployed by the Corps are:

MRIC – Medium-Range Interceptor Capability
MADIS – Marine Air Defense Integrated System
L-MADIS – Light Marine Air Defense Integrated System
Advanced MANPADS/Stinger

The MRIC is likely to be a vehicle-mounted missile system with a 360-degree fire-control radar to handle aircraft and cruise missiles at medium ranges.

“MADIS is the only system that has brought something down against a hostile threat,” Smith said. “We acknowledged that it had good effect against Iranian drones. That system is highly capable, but we need longer ranges in the expanse of the Pacific. There comes a point when the system size limits what you can carry and obviously the size of the missile system you can carry limits the range.”

The MADIS is mounted on a pair of Joint Light Tactical Vehicles, one with a turret launcher for four Stinger missiles and a 30mm cannon, as well as an optical sensor and shoulder-fired Stingers. The second vehicle is equipped with an RPS-42 360-degree radar, a 7.62mm M134 minigun, and electro-optic/infrared sensors, as well as shoulder-fired Stingers. On both vehicles is the Modi II dismounted electronic countermeasures system, which can be used to disrupt enemy drones, communications, and radio-controlled improvised explosive devices.

The L-MADIS is a counter-UAS electronic attack system mounted on a Polaris MRZR all-terrain vehicle. It features a 360-

degree radar, a direct-fire capability, radio frequency jammers and electro-optic/infrared sensors. The L-MADIS is credited with downing an Iranian drone that flew in the close vicinity of the amphibious assault ship USS Boxer in July 2019.

Smith said he recently met with a couple of industry partners on how to extend that range or put a different missile system onto the Stinger-equipped MADIS.

“So, we are struggling through that conundrum right now with our Navy partners and with our industry partners,” Smith said. “But we are committed to protecting those forces and then being able to do something in a more offensive manner for that combatant commander to break air formations.”