

An EABO After-Action Report

What we may expect

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The following is a narrative version of fictional personal journal excerpts from a ground-based anti-ship missile commander who completed an expeditionary advanced base operations (EABO) assignment sometime in the future while somewhere in the Indo-Pacific Command (INDO-PACOM) area of responsibility (AOR). Some editing was done to comply with security requirements and for readability purposes. The purpose of this narrative account is not to present *the way EABO will or should* be conducted, but rather *A way EABO may* be conducted. Also, this narrative is not the product of one person's imagination, but rather a compilation of thoughts and ideas gathered over time from a collection of active duty and retired Marines, government civilians and contractors, industry representa-

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tives, and academics who are intimately familiar with EABO. The hope is that this narrative will contribute to the ongoing open discussions about EABO and help facilitate the transformation of the Commandant's vision for force design into an operational reality.

After-Action Report

I received orders to deploy [my firing battery] to EAB Zeus as part of a persistent ground-based naval force in an active integrated maritime defense-in-depth in order to deny adversary ac-

cess to the adjacent strait and to report on adversary maritime activities in the littoral areas surrounding the strait. I was told prior to deployment that EAB Zeus was established in virtually ideal circumstances with respect to mission, terrain, diplomatic relations (e.g., access agreements, etc.), host-nation support, and host-nation civil and military capabilities. These circumstances resulted in Zeus being more robust and capable than the other EABs in the AOR that did not have the same "perfect storm" of circumstances during our deployment.

As the two sea planes/flying boats transporting [us] approached EAB Zeus, the EAB headquarters (HQ) provided an updated landing/rendezvous point and time to the sea plane/flying boat flight leader in keeping with the EAB's rotating incoming sea plane schedule. When the sea planes/flying boats eventually landed and came to a halt, we realized we were nestled in a lagoon. Within minutes, a couple of contracted small barges pulled alongside the sea planes/flying boats to shuttle us ashore. Exoskeleton-clad personnel quickly offloaded our gear and equipment into awaiting vehicles that moved everything to our designated marshaling area.

Once our gear and equipment were properly staged, [our leadership team] was greeted by the EAB's assigned "guide detachment" commander, SSgt Jones, and his host-nation security force leader, Patrol Sergeant Miguel. They escorted us to the nearby "processing station," where we met the EAB Zeus commander, Navy CAPT Butkus (from the Navy Expeditionary Combat Command), and where pre-coordinated administrative and logistical details were



UAVs were launched, recovered, and refueled. (Photo by Cpl Emmanuel Necoecha.)

negotiated with the host-nation and local authorities before being eventually presented to [our unit]. Afterward, a combination of local and tactical vehicles took us to our initial assigned sector. From the Fleet/Joint Force Maritime Component Commander FragO (fragmentary order) I received on the secure tablet I signed for from the EAB communications shop, I learned our assigned sector contained four pre-surveyed positions and another six un-surveyed positions.

Once we arrived at our initial assigned sector, SSgt Jones' detachment unloaded the prepositioned equipment, and we performed operational checks before we officially signed for all the gear. Meanwhile, Patrol Sergeant Miguel and his troops established their initial security posts throughout our assigned sector. Once we had established positive communications with the EAB HQ and were comfortable with our security, communications, and support arrangements, SSgt Jones' detachment departed, and we began mission planning in accordance with the naval commander's FragO.

We requested, and the EAB provided, a squad of Marines to set up and run hydrogen forward arming and refueling points (FARPs) to inflate a half-dozen stratospheric HALO (high altitude, low

observable) balloons and begin continuous UAV (unmanned aerial vehicle) launch and refueling operations. The balloons provided networked communications, navigation, and reconnaissance over and adjacent to our assigned sector for five days, just in case satellite coverage was lost. With rapid refueling of Group 1, 2, and 3 UAS with hydrogen gas, we had our own organic concentric rings of surface reconnaissance, queuing, and targeting support.

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Our Marines and Sailors quickly preferred the hydrogen tactical vehicles' easier-to-operate-and-maintain engines compared to the diesel and gasoline vehicles they were used to (they complained more weren't available!). The hydrogen powertrains allowed the troops to stay much more aware of their surroundings while operating the vehicles by eliminating the noise of engine idling. The hydrogen powertrains also quadrupled the time between refueling evolutions and eliminated the exhaust

plumes that made it so easy to spot the old diesel-fueled vehicles, so our unit did not draw any unwanted attention (including from the many fishing boats constantly offshore).

As we persisted indefinitely forward in support of our mission(s), we were amazed at how the EAB effectively solved the vast majority of our personal and small unit battery and power requirements. The troops quickly adapted to the routine of every few hours squeezing a tube of aluminum paste and pouring some cistern water into their personal microreactor, which powered their entire kits, including the power-hungry visual augmentation system. Whenever we ran low on energy, a resupply UAV air-dropped a crate of more aluminum paste tubes to keep us powered.

I learned that a sergeant assigned to the EAB, with ties to the local community, convinced a local boy and his buddies to scavenge soda and beer cans from around the island for money. The boys tossed those cans in the hopper of the EAB's aluminum reactor to keep it quietly powering the EAB's electronic equipment and the expeditionary water purifying system. Whenever our prepositioned unit and individual water purifying systems needed augmentation, it was morale boosting to know the EAB was always ready with fresh water. Unlike previous deployments, none of our troops suffered stomach problems from drinking contaminated water.

When one of our Marines broke his leg, the EAB's pre-coordinated medical services enabled that Marine to recuperate at the EAB HQ manning radio watch—and we got a replacement Marine from the EAB to man our internal radio watch. The EAB maintained robust external communications links, and the EAB coordinated our host-nation security forces that kept us from having to directly interface with the locals, who were also selling us food. When our tactical vehicles required major maintenance, the EAB provided the contact teams, who used downloaded vehicle-specific “YouTube-like” videos on their secure tablets to help them make repairs quickly, and the EAB provided replacement vehicles when needed. The EAB also 3D printed a



Pre-coordinated medical services ensured rapid evac and care for our injured Marine. (Photo by LCpl Alison Dostie.)

lot of the replacement parts needed for a lot of our equipment and weapons. Our admin and logistics vehicles were frequently Ford F-150s that had a local maintenance contract coordinated by the small EAB contracting section.

The EAB constantly collected its “own force signature” and monitored our unit’s signature. A week after we arrived, we learned our EMS [electromagnetic spectrum] signature had compromised the mobile shower unit and that we needed better light discipline. The EAB also emphasized deception activities. A week before last month’s EAB exercise, the EAB deception officer coordinated use of “dummy” EMS simulators in support of our rotational firing points plan, and informed [our leadership team] of the other supporting deception efforts. We learned our exercise live fires diverted adversary attention away from the simultaneous clandestine unmanned underwater vehicle (UUV) activities at the old commercial port on the other side of the island.

When we fired until “Winchester” at last month’s week-long, adversary-focused, scenario-driven, live fire EAB “sink-exercise” (where two decommissioned allied/partner vessels were sunk), I was surprised how fast the EAB commander mobilized all forward assets to get us re-supplied (we were the main effort). I later learned that the rapid resupply was only possible thanks to the disposable, ultra-long-endurance UUVs deployed autonomously all the way from Guam and Hawaii. [Our leadership team] knew the EAB was similarly supporting two other firing batteries, three Navy USV [unmanned surface vehicle] flotillas, several Navy barges to refuel and refit UUV squadrons, and two USMC UAV squadrons. When the sea plane/flying boat delivered replacement parts and personnel, the EAB did the receiving and sorting and made sure people, parts, and mail all got physically delivered to all operating units. After one of our troops got in trouble with local law enforcement, we learned the EAB maintained a small, but busy, brig—in accordance with the Status of Forces Agreement signed upon the approval for establishment of the EAB a few months before our deployment.



Resupply was conducted using extra long endurance underwater unmanned vehicles not the familiar night of heliborne restart. (Photo by Sgt Adam Dublinske.)

According to national intelligence sources and open-source social media reports and postings, our six months of EAB Zeus operations, with its mix of overt and covert activities, had definitely captured the attention and imagination of the entire region. At a minimum, EAB Zeus, with all its hosted capabilities, had certainly surprised the regional adversaries and had been very well-received by our regional allies and partners. In combination with concurrent and on-going diplomatic and economic efforts, this whole-of-government approach to the region seems to have led to a cut-back on the regional adversaries’ all-too-frequent malign activities and a corresponding toning down of the belligerent rhetoric among the region’s nations.

Some key insights from our EABO experience include but are not limited to:

- Our ground-based anti-ship fires were a perfect example of an EAB hosting stand-off capabilities (extending ships’/stand-off forces’ ship killing ranges) and demonstrated the operational effectiveness of the symbiotic/complementary relationship of stand-in engagements (e.g., unmanned/minimally-manned platforms, short-range torpedoes, missile boats, etc.) and stand-off engagements.

- The EAB was like the naval commander’s unsinkable ship with tailorable operationally-relevant capabilities (e.g., anti-ship missiles; intelligence, surveillance, reconnaissance, and targeting; limited aviation support [mostly UASs]; unmanned platforms “mother ship”; surface and sub-surface magazine and maintenance enhancements; etc.) supported by an organic, internal, and protected posture/infrastructure.
- Our unit’s constant moving, displacing, and low signature (physical, technical, administrative) made us hard to find, which equaled being hard to target, which increased our survivability, and meant extra work and greater uncertainty in the adversaries’ decision-making calculus.
- EABs are not equal nor identical—each one faces its own unique and dynamic challenges attempting to optimize efficiency without compromising resiliency.

