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# Providing IMAS Training to Local Military Forces and Mitigating Long-Term ERW Risks in VIETNAM

by Allan Vosburgh [ Golden West Humanitarian Foundation ]

**R**esidual risk from unexploded ordnance (UXO) is a by-product of all modern conflicts. Developed by the Geneva International Centre for Humanitarian Demining (GICHD), the Management of Residual Explosive Remnants of War (MORE) program seeks to characterize risk and carefully examine the factors involved in reducing long-term risks from munitions.<sup>1</sup> MORE looks at many factors, including the impacts of time on munitions, explosives, and fuzing systems. Other critical considerations are the resources available to manage residual UXO and best practices from former conflict areas used to successfully overcome the risk reduction challenges. In Vietnam, the Golden West Humanitarian Foundation (Golden West) conducts a program training the Vietnamese Provincial Military Command (PMC) to conduct explosive ordnance disposal (EOD) to international standards with the goal of building long-term capacity.

One constant of modern conflict is that explosive remnants of war (ERW) are pervasive and enduring. World War I-era ERW is recovered daily from the fields of Belgium and France. World War II-era bombs still shake London decades after the Blitz ended. Golden West and others still recover United States and Japanese bombs from Pacific Islands more than 70 years after the war ended.

Conflict in Vietnam ended in 1979, but the impact of years of war remain. The international community has worked hard to conduct clearance of ERW, but long-term risk in Vietnam is a reality. Despite the Quảng Trị provincial goal of clearing all priority UXO sites by 2025,<sup>2</sup> UXO will exist in Vietnam for a very long time. While the frequency of UXO reporting will likely decrease as time passes, building a permanent capability to quickly and safely respond to these reports is critical to future public safety.

One important component of the MORE program is a long-term aging study of munitions that looks at how time impacts risk via the degradation of explosives, propellants, and fuzes.<sup>3</sup> Recently, Golden West worked with Vietnamese provincial officials (including the Quảng Trị Provincial Military Command), the Vietnam National Mine Action Centre (VNMAC), GICHD, and FENIX Insight Ltd., to conduct analysis of munitions collected in Quảng Trị Province. Golden West facilitated cutting of the munitions, enabling detailed analysis by experts



Quảng Trị PMC EOD Operations Center.  
*All images courtesy of Golden West Humanitarian Foundation.*

from FENIX Insight Ltd. and Vietnam's Institute of Propellants and Explosives in Hanoi.

As noted by GICHD's MORE program, proactive ERW clearance (large-scale survey and clearance) eventually gives way to a reactive process involving responses to individual incidents. Post-conflict responses by the international community provide significant capability during the proactive phase of ERW remediation. Once an active transition to a reactive phase begins, clearance opportunities begin to fall off, numbers reflecting land cleared and UXO recovered plummet, and donor interest inevitably evaporates. When this happens,



Quảng Trị PMC EOD response vehicle.



Quảng Trị PMC EOD ammunition storage container.

large foreign-funded clearance organizations may become economically unsustainable and ERW infrastructure must be reduced. According to the GICHD, this reduction has been in proportion to the residual risk remaining, and the challenge is to provide a proportional response. National capacity has to be sustainable, and building capability with the PMC local forces is one possible solution to that challenge.

During the transitional period, risk to the populace remains high, but national level assets to respond to this risk are limited. Having international support available made it possible for the Ministry of National Defense and VNMAC to address other priorities and delay the development of national-level UXO programs. The ability to generate the skills necessary to provide EOD response teams at the provincial, district, commune, and village levels is essential. Community outreach is best done by the provinces and conducted by the enduring local forces who are an integral part of the provincial community.

Golden West concentrates on building capacity in order to enable enduring Vietnamese institutions to accept the challenge of transitioning from proactive to reactive responses (as predicted by MORE).

With support from the Office of Weapons Removal and Abatement in the U.S. State Department's Bureau of Political-Military Affairs (PM/WRA), Golden West promotes training to international standards and contributes technologies that are appropriate for Vietnamese requirements.<sup>4</sup> Our partners in this effort are the Quảng Trị Provincial People's Committee, Department of Foreign Affairs (DOFA), the Quảng Trị Mine Action Centre (QTMAC), and the Quảng Trị PMC. All of these enduring institutions have worked hard and shown exceptional vision and confidence to make the PMC EOD program in Quảng Trị a success and a potential model for other provinces in Vietnam.

The PMC of Quảng Trị is a key partner in this program. Responsive to provincial leaders for defense, disaster assistance, and economic development, the PMC is also an important element of the People's Army of Vietnam. In this role, the PMC is a component of Vietnam's 4th Military Regional Headquarters in Vinh.<sup>5</sup> PMC EOD teams are an intrinsic part of their communities, playing a major role in disaster relief during flooding and major storm events. Relations with the community are strong and we have witnessed many instances where local residents approach PMC EOD teams during an incident, reporting additional, previously unknown UXO.

When Golden West first engaged Quảng Trị's PMC, their teams were unorganized, under-utilized, poorly-equipped, had no reliable dedicated transportation, and had ineffective field medical support. Most of all, the PMC was not often tasked by QTMAC or the provincial authorities because they were perceived as not being as well trained, equipped, or available for responses as the international HMA organizations working in the province. That perception has undergone a marked change since 2016 when Golden West first partnered with the PMC.

Golden West provides IMAS EOD Level 1-3 training for Quang Tri's PMC. The program goals are to substantially improve PMC EOD technical skills, improve documentation of UXO recovered, destroyed, and reported to QTMAC, improve detection training and tools, better field medical support to PMC EOD forces, and improve PMC's relationships with both QTMAC and other international non-government organizations (INGOs) working in Quảng Trị Province. Since the project began, Golden West has trained fifty-three EOD personnel: thirty-seven IMAS EOD Level 1 technicians, as well as eleven IMAS EOD Level 2 and five IMAS EOD Level 3 supervisors. Not all of these operators are still on the team, because some have been transferred to the QTMAC to conduct important quality control functions. By the end of 2019, Golden West plans to conduct an additional two classes of ten district-level PMC personnel for an IMAS Level 1-based munitions identification class for a total of twenty students. These additional personnel will enable PMC engineers in the districts to provide better UXO reporting to the PMC EOD team, making inputs to the QTMAC and tasking of EOD responses more effective. Golden West also plans to conduct an IMAS EOD Level 3 class in Quảng Trị Province before the end of 2019. This will be the first IMAS EOD Level 3 training conducted in Vietnam.



The PMC has fully embraced IMAS-based EOD training in Quảng Trị Province. Golden West maintains high standards for all its training and achieving certification is not easy. In addition to three weeks of formal training that incorporates both classroom instruction and practical field exercises, Golden West requires a mentoring period prior to certification. During mentoring, which can last up to one year, experienced technical advisors (TAs) observe students in the field during actual EOD incidents, reinforcing their skills and ensuring application of their IMAS training. During mentoring, TAs provide continuing sustainment training and conduct ad hoc classes on recovered munitions. Golden West also encourages PMC leaders to conduct their own classes, gaining experience conducting training and providing sustainable, formal instruction skills.

Golden West has worked hard to improve the PMC's capacity to conduct high-quality detection operations. In addition to providing the PMC's EOD teams with modern detection equipment, Golden West's Ph.D. geophysicist helped construct a small test and calibration area to ensure those detectors are operating properly. Through these efforts, the Quảng Trị PMC has become highly skilled in the use of detection equipment employed during emergency responses and battle area clearances.

The PMCs needed help improving field medical capabilities for their EOD Teams. With PM/WRA support, Golden West provided all new field medical kits for the medics supporting PMC EOD teams and arranged for training for their field medical personnel, stressing urgent treatment for injuries related to UXO operations. PMC EOD personnel also receive "field medical" classes as part of their regular sustainment training. Golden West attempts to leverage other outside medical experts at every opportunity to enhance the skills of PMC field medics. These include training by the Vietnamese Red Cross and opportunities for training by U.S. military medics as part of the Department of Defense's HMA cooperation with VNMAC.

QTMAC has evolved in coordination with the Provincial People's Committee. Unlike neighboring provinces where the PMCs manage UXO responses without a dedicated mine action center, QTMAC coordinates all emergency responses or requests for EOD support from the Quảng Trị community. The volume of QTMAC tasks for PMC responses has increased dramatically as PMC capabilities improve. Since the start of 2019, PMC EOD teams have responded to over 400 emergency response requests from QTMAC.

Quảng Trị's PMC EOD Program has changed substantially since beginning work with Golden West in 2016. When Golden West first engaged the Quảng Trị PMC, they were organized much like all the other fifty-eight provinces in Vietnam with PMCs.<sup>6</sup> The experienced EOD technicians were scattered among the ten district-level areas, and each was responsible for conducting ERW operations in their assigned areas, often using untrained military personnel borrowed from PMC engineers. Insufficient training, equipment, field medical support, and dedicated transportation limited their value to the QTMAC. Largely due to a lack of confidence in PMC skills and capability to respond, the QTMAC did not often call on them for EOD support.



PMC EOD range at Cam Lo.



M117 bomb incident.

Golden West encouraged the PMC to appeal to Vietnam's 4th Military Region Headquarters in Vinh, requesting a change in how their EOD personnel were organized; this resulted in the creation of a standing, five-person EOD team (four IMAS-qualified EOD operators and one field medic), available for emergency response twenty-four hours a day. Vietnam's 4th Military Region Headquarters approved this change at the end of 2018.

The first test of the new concept occurred over the 2018–2019 Christmas and Tết (Vietnamese New Year) holiday periods, when other INGO teams are unavailable for response. The QTMAC was concerned that there would be no emergency response capability for the province during these periods, but Lieutenant Colonel Hung, Quang Tri's PMC Engineer Commander, and his EOD teams stepped up and provided full-time EOD coverage. Not only was the PMC able to respond to multiple emergency incidents, but they were able to reduce their overall response time to twelve hours from the previous standard of twenty-four hours.

The PMC EOD response team obtained a building on a PMC installation in Đông Hà and, with Golden West help, refurbished it as an EOD team headquarters and operations center. Housing the response team 24/7 during their tour of duty and securing the team's response equipment, this building has telephone utilities and

internet service, and is linked to the QTMAC, enabling short notice responses and much improved incident reporting.

A major shortfall preventing effective PMC EOD responses has been a lack of permanently assigned vehicles for use during operations. Late in 2018, Golden West leased a dedicated EOD response vehicle for the PMC, and the teams use it regularly, responding to more than forty emergency responses per month, most of these tasked by the QTMAC. Additionally, PMC leadership provided the PMC EOD organization a five-ton truck. Quảng Trị's DOFA also recently provided another EOD response vehicle to keep the response teams mobile when the leased vehicle is no longer available.

Golden West was concerned that UXO collected by the PMC EOD team was being stored dangerously close to the EOD operations center. Golden West also found that the EOD team's working explosives were stored in an inhabited building on a PMC installation. With Golden West assistance, the PMC obtained improved UXO and explosives storage, increasing safety and reducing the risk of theft or explosive accidents. Risk mitigating storage is also being established at the PMC's new Cam Lộ range. This storage consists of modified shipping containers, properly sited on concrete pads and secured to safely store recovered UXO until it can be destroyed.

This year, the PMC was assigned a permanent 400-acre range located in Cam Lộ District,<sup>7</sup> with part of it dedicated to EOD training and demilitarization. The PMC requested Golden West assistance to help make this range into a training and demilitarization facility. In addition to assisting with basic infrastructure and explosive storage, Golden West is helping to build specialized demolition pits for phosphorus-filled munitions and recommending construction of detection training and test lanes to foster more technical detection expertise.<sup>8</sup>

Golden West's project with Quảng Trị's PMC is designed to make PMC EOD teams self-sufficient and capable of accepting the challenge of long-term ERW risk management. Enhanced PMC skills give provincial officials more confidence in PMC capabilities so they provide better support and equipment to the PMC, making them even more capable. Integration of Golden West's train-the-trainer and mentoring approach provides a means for the PMC to continue developing IMAS-qualified EOD operators long after Golden West's U.S. Department of State-funded project is complete.

As articulated by the GICHD, the important elements of managing residual ERW risk include the development of indigenous capacities and capabilities. The availability of EOD skills, assets, and the scale of that availability are key parts of the MORE context. Some MORE risk controls rely heavily upon the availability of suitably-skilled EOD response assets in sufficient quantities. As the implementers of IMAS-based EOD capacity building programs for the Quảng Trị PMC, Golden West is helping to make MORE a reality in Quảng Trị Province by increasing those EOD capacities and capabilities and assisting the PMC with building a future workforce that will be ready to assume the challenges of mitigating the long-term risks of residual ERW.

Vietnam's long journey to recovery from decades of war must focus on finding a local solution to the long-term residual risks of UXO and other ERW. Our colleagues in Quảng Trị Province recognize that the problems of managing long-term risk are theirs to solve. They know that the international presence, available to respond to individual UXO incidents, cannot be sustained forever. In response, provincial authorities have stepped up their efforts to find meaningful solutions to these challenges. The PMC's EOD forces are an intrinsic component of the province's defense planning. They are a national asset and an important part of the People's Army for national level defense, but they also respond to the provincial government and assist in solving provincial challenges.

This model seems to have value when we look at other nations with comparable ERW challenges. Golden West's training program is not an immediate solution, but does create a path to future capabilities. The difficult technical skills required to safely and effectively respond to a wide range of EOD challenges are not created overnight. The costs to build these skills are substantial, but not when considered in light of the overall costs to maintain a large international effort. Investing in a future capability for self-help and national management of an ERW program seems to make sense when viewed as part of a continuum, with acute, large-scale requirements for urgent clearance of battle areas on one end, and the chronic, regular discovery of residual ERW on the other. It is up to national authorities to determine what mix of civilian, NGO, contractor, and military support works best for their situation. Vietnam has been moving in a positive direction for a number of years and has made great progress in reducing deaths and injuries from ERW. They seem to be poised on the edge of the transition from proactive clearances to reactive responses. Golden West believes the international community would do well to promote this effort to provide Vietnam with professional, highly-qualified EOD forces for future requirements. Quảng Trị Province is showing the rest of Vietnam a way to move ahead and prepare for the future. Whether the rest of Vietnam's provinces will follow their example remains to be seen. ©

*See endnotes page 59*

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Allan Vosburgh has been the Chief Executive Officer of the Golden West Humanitarian Foundation since 2016. Vosburgh is a retired U.S. Army Colonel and former U.S. Army Master Explosive Ordnance Disposal (EOD) technician with over forty years of experience in munitions stockpile management, explosive safety, EOD, munitions testing, weapons of mass destruction, training, technology assessments, and humanitarian mine action (HMA). Before retiring from the Army in 2005, Vosburgh served in the Office of the Assistant Secretary of Defense (Special Operations and Low-Intensity Conflict) in the Pentagon, where he provided oversight of EOD, HMA technology, and Special Operations Ammunition.