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## PeaceTrees Vietnam's UXO Clearance Training Mission to Quang Tri Province

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It's funny how some things just seem to fall together.

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About a month and a half ago, John Boyden approached me at UXBs Maui technical office and said "I want to talk with you about the work you've done in Humanitarian Demining".

John informed me that the president of UXB International, Dr. Richmond Dugger, had offered to help out an NGO called PeaceTrees Vietnam with their efforts to clear land mines and unexploded ordnance (UXO) in the former demilitarized zone between what was North & South Vietnam. We would conduct a training course for the Vietnamese with UXB International covering the wages and airfare of two senior Explosive Ordnance Disposal (EOD) employees, and donate five Shonstedt ferrous ordnance detectors.

In my previous career as a Master Sergeant in the US Army's EOD field, I had spoken to and exchanged various emails with Dr. Dugger on humanitarian demining issues and knew that he was very committed to helping. This verified that it was not just idle talk; the trip wasn't going to be cheap, and it was not the first one that he had agreed to support. John had been to Quang Tri with PTVN twice before.

I learned that PeaceTrees is very active with the Vietnamese Government and the James Madison University humanitarian demining information center (HDIC) on the Mine and UXO awareness program. They had also received private funding to assist with a clearance project in the Quang Tri province. What they wanted was someone who knew mine clearance by international standards, and who also knew deep search UXO clearance that could combine both the standards and the techniques, and teach it.

John had heard that I'd been heavily involved with the humanitarian demining community for some time and was wondering if I was interested in joining him as part of this mission.

"Sounds like a nice bit of work, when do we leave?"

We left soon enough, and were very warmly greeted at Hanoi airport by PeaceTrees Director, Martha Hathaway. The detectors however, were confiscated, pending official approval from the authorities!

Fortunately, we had some time to get things straightened out in Hanoi before we left for Quang Tri. That was the plan, anyway.

Hanoi is best described as a huge mass of activity, with a gazillion moped defying anything that could pass for a traffic law thrown in for good measure. Even though I had spent over 20 years training for combat with the US Army, have been sent on various missions or full fledged deployments to five different war zones, and served as team leader on more EOD incidents then I can count, I was still not prepared for the ultimate test of ones constitution:



Team Cyclo of Hanoi



R.Hess in Cyclo

It's sort of like a rick-shaw, except its propelled from the rear by a bicycle-like assembly. This means two things

1. The driver is not out in front and is not worried about being the first one to get crushed, so he is not motivated to veer towards safety or common sense.
2. The passenger gets a spectacular view of things he has never seen before, like the bumpers of on-coming traffic at eye level.

John seemed very calm and totally at home, snapping pictures during the entire ride while my eyes became the size of dinner plates. Knowing John was a retired Lieutenant Commander in the Navy EOD field, I was beginning to wonder if maybe he'd had a tank full of the wrong air mixture during one of his past diving missions.



What on-coming traffic looks like when you are part of the front bumper

After a few days of meetings with government officials and on-going discussions with Vietnamese customs concerning the donated detectors, we finally made our way down to Dong Ha deciding to fight the detector issue from that area.

Quang Tri province is a very scenic rural area with Dong Ha serving as the county seat. It's a fairly quiet and extremely friendly town, which is still recovering from the war. Its population is about 500,000 and seems to mainly exist on farming or merchandising. Don't worry about learning to say "hello" in Vietnamese, just walk around the block when the school children are being let out and you'll find that it's one word of English they learn at a very young age. Just be prepared to say it about every third step.

## The Situation

This region was also the recipient of many major battles during the US/Vietnamese war. The US Forces often used cluster bombs during those battles, plus a wide range of shoulder fired weapons and artillery. Though land mines were deployed around some of the US bases as defensive perimeters, these are not the major killers here.

The biggest threat is the left over cluster bomblets (bombies as the locals call them) and the 40mm rifle grenades that failed to function (referred to as M79s, which is actually a weapon that fires the grenade).

Cluster bombing is a very devastating technique developed by the Germans during WWII, who used it extensively in their battles. Even during it's first use, the remaining bomblets created a severe UXO hazard that still can be found in some of the former battlefields of Europe.

They are deployed by a few different means. Aircraft can use a wing mounted dispenser which spray the munitions out the back, or they can drop amiable dispensers which look similar to a standard bombs, except they split open at a pre-determined height to spread its payload. Additionally, certain types of rockets and artillery are also design to carry sub-munitions. The end result is the same: some type of carrier spreads a large amount of small munitions over a wide area, which detonate either on impact, shortly after impact, or when they are disturbed. Due to their design and weight, sub-munitions can sometimes penetrate to a depth of one to two feet, if dropped in muddy or freshly tilled soil.

This puts the smaller ones beyond the reach of many older mine detectors, but within reach of the buffalo plows commonly used here.

The 40mm grenade is best described as the Infantries hand-held artillery and is fired either from a shotgun type weapon (the M-79), or by an attachment that rides underneath the M-16



rifle (the M-203). Due to its low velocity, the round tends to tumble after traveling beyond 300 meters. To counter this, it incorporates a fuze that, in theory, will detonate the round regardless of how it lands. This is called an "all-way acting" fuze, it's extremely sensitive, and makes the 40mm grenade one of the most hazardous UXO known.



BLU 36(Bomb, Live, Unit), or "Bombies" as they are called by the locals



A live 40mm grenade surrounded by a group of Bombies.  
The worst of both situations.

## The Training

On the first meeting with the group I was to train, I was very impressed with their excellent attitude and eagerness to learn. These men wanted to be here and wanted to know more about how to do this job safer. In all: a very good group of students, which

always makes for a good training session.

What was less than impressive was the equipment that the men had to work with.

Budgets and economies being what they are in Vietnam, there is no money to properly outfit their forces with up to date detectors or protective equipment. The type of UXO techniques I would be teaching involve working the area after it has been cleared of mines, so protective equipment is not generally used. The reason being is that armored vests and helmets offer virtually no protection against the types of munitions that are normally found at sub-surface levels.

However, I now firmly believe that this area of Vietnam falls into a different category. The threat of sub-munitions at 1 to 2 feet below the surface is not a normal situation, and the men are going to need some decent frontal protection once they start digging.

The detection equipment was a goulash of hand-me-downs that had been collected over who knows how long. It consisted of

1. Two old Foerster mine detectors, which still function very well (good points for Foersters durability)
2. One US model MD-M (Mine Detector-Metal, which was phased out even before I joined the Army) that was in extremely poor shape.
3. A talking Garrett metal detector designed for beach combing (Pleeeeeease make that thing shut-up!).
4. Two Russian Ferrous ordnance locators that had not worked for probably a decade.



Vietnamese mine clearance team with original equipment

Getting this equipment to serve our purpose will definitely be interesting. The Shonstedts will work fine for the UXO portion, but before these men start doing full fledged mine clearance they'll need some decent, and up to date one-piece mine detectors.

Part of a good mine and UXO clearance program is having a consistent detection capability to work with. You must know what depth your equipment is able to reach compared to what you are trying to find, so you can make an honest statement about how deep the search was when it comes time to submit a hand over document. This normally means using one type of detection equipment across the board, or conducting the clearance in two separate, organized phases if you're trying to "look" down past 20 cm.



Day one of the classroom training with Mr. Hue translating a site organization plan

The men actually learned very quickly and, as initially expected, were eager to use the new techniques. The main focus was on site organization & search patterns, reporting, marking systems, digging techniques, safety distances when working and digging, protective works, and disposal procedures. With only four actual days of training, this was going to be tight, especially without the deep search detectors on hand and using a translator to get everything across to the men.

We were extremely fortunate to get Mr. Hue as our assigned translator. His past experience translating for another NGO conducting mine clearance in the area gave him an edge on the technical terms. There's no doubt in my mind, I would have been up the creek without him.

On day two of the training John notified me that the detectors were going to be released, however one of us had to drive up to Hanoi with the government reps to pick them up (12 hour drive each way). He volunteered himself to do the trip, was leaving in the next 30 minutes, and would hopefully return prior to day four.

It occurred to me as they left; if the detectors were not released the last thing I would want to be was one of the government reps spending the next 12 hours with Big John driving back to Dong Ha!

On the afternoon of day three, John called to say that they have the detectors in their possession, were on their way down, and would arrive at about 3:00 in the morning. True to his word, on the morning of day four, I had all five detectors waiting outside my room.





J. Boyden with the Government representatives liberating the donated detectors

The design of these detectors makes them extremely easy to teach and work with. The increased search capability was immediately noticeable to the men: The Shonstedts found metal in the "metal-free" test pad that had been established with the mine detectors. The shrapnel was simply beyond the reach of the equipment they were using.



R. Hess conducting training and testing with Shonstedt Detectors

We spent the rest of the day getting accustomed to the new detectors and adjusting our search patterns to ensure complete area coverage using this system. The students quickly became very fond of these detectors, as did their

administration when they stopped in for a spur of the moment inspection.

The training was now a success. Funny how some things just seem to fall together.



A final group picture in front of the new Danaan Perry Mine Awareness Center

With our mission finally accomplished, we said our good byes and made our way back to Hanoi. Fortunately, we had time to enjoy lunch at Quoc Trieus restaurant, which specializes in preparing and serving large venomous snakes right before your eyes (uuuhhh!), and John was even nice enough to treat me to a 2 ½ hour ride around Hanoi with our cyclo buddies (AAAAHHHH!!!).

If you are wondering: "is all the time and effort that PeaceTrees and UXB went through to make this happen really worth the trouble?"

We like to think it is.

Now I'm just waiting to see if I'll get a chance to go back.



Children with a Safer Future



