

Reclaiming the Community One Bomb at a Time: The View From Indochina

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All Photographs by Ted Lieverman



Ending a war is like stopping a heavy truck. Even when you slam on the brakes, the mass and inertia of the conflict takes a very long time to halt; the violence might end but the effects can reverberate through decades and generations. German units still find and defuse bombs in Germany dropped during World War II;¹ French deminers regularly collect and destroy artillery shells on the Western Front from World War I, over a hundred years ago.² During the active phase of a war, many of the shells and bombs hurled by armies on both sides fail to explode upon impact; many land mines are never tripped. Later they are forgotten in the forests or jungles, covered by vegetation or shifting soil, washed away by rain

or floods - or sometimes they just sit there in plain sight. They linger for years or decades, waiting for children or unsuspecting villagers, scrap metal scavengers, or construction workers to wander by.



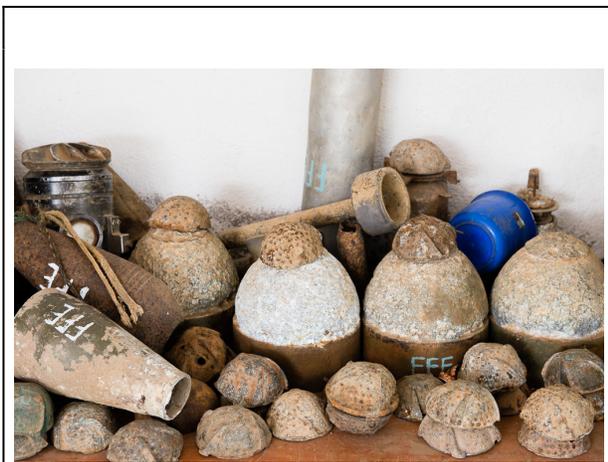
The latest edition of *Landmine Monitor* records that between 1999 and 2017 alone, over 120,000 people were killed or wounded by land mines and Unexploded Ordnance (UXOs) left over from conflicts — a tally recognized as significantly less than the actual number of casualties, many of which are never reported.

The *Monitor* estimates that the all-time total number of casualties from land mines and UXOs exceeds 500,000. About eighty percent of those casualties are civilians; about half are children.³ The millions of land mines and UXOs left over from various wars range from large naval and artillery shells to 750-lb bombs to mortar shells, grenades and aircraft cannon ammunition.

A major concern of the demining operations is the presence of cluster munitions, small explosive munitions, often called submunitions, bomblets or "bombis," that are delivered to the battlefield in large canisters or shells called cluster bomb units that open in the air and disperse the bomblets over a large area. A CBU-24, for example, was a canister dropped by U.S. aircraft during the Vietnam War that contained as many as 670 submunitions (or bomblets) known as BLU-26, small round metal balls of thin metal, filled with explosives and steel pellets, with a lethal range of 40 feet.

or construction. The question is, how best to find and remove these lethal war souvenirs?

Over the last five years, I've been travelling to different countries to photograph the work of two non-governmental organizations (NGOs), Project RENEW ("Restoring the Environment and Neutralizing the Effects of the War") and Norwegian People's Aid (NPA), that specialize in reclaiming land from actual or potential destruction by mines, bombs and mortar rounds and artillery shells. Much of my time was spent in Vietnam, Cambodia and Laos in 2014, hiking with teams of deminers through jungle, up hills, across old plantations, and rattling around in Land Cruisers down atrocious roads. In preparing this piece for publication, I contacted the program managers for the three countries and the headquarters of NPA's Humanitarian Disarmament Division based in Oslo to update my notes. What follows is a report, mostly in images, of the local people across Indochina that do the hard, sometimes dangerous work of reclaiming their countries.



Sekong, Lao PDR, 2014 - Behind its regional headquarters in Sekong, NPA keeps a number of cluster bomb units (also known as "bombis") discovered and rendered safe by deminers.

Millions of acres of land, suspected of contamination, are sealed off from agriculture



Map of Indochina

NPA is one of the major organizations in the world clearing mines and UXOs, but it is different from many other demining groups. Private corporations, staffed by military veterans, are often hired by countries or big property owners to parachute in, clean up a town or plantation and move on to the next job. Some NGOs bring in experts who complete the work but then depart, leaving the local community unprepared to tackle the ongoing problem themselves. Military veterans from the U.S. and other western countries who have EOD (Explosive Ordnance Disposal) experience generally prefer to work for those organizations because they pay so much better than NPA.



Thua Thien Hue Province, Vietnam, 2014 - Members of an EOD team carry away a large artillery shell discovered in a remote area in the province. It will be detonated later at a site used for safe disposal of ordnance.

Founded by Norway’s labor unions in 1939, NPA by contrast is “built on [the unions’] same values: unity, solidarity and human dignity.” It currently works in some 32 countries, not just to provide aid and technical assistance, but to “improve people’s living conditions and to create a more just society, undertaking political advocacy and practical supportive work.” NPA focuses on three programmatic areas: humanitarian disarmament, development cooperation, and aiding refugees. In addition, it provides first aid and rescue services for Norway. NPA’s 2017 annual expenses were more than 1.027 billion krone (USD \$113,900,000), of which 414,903,000 krone went to humanitarian disarmament projects (USD \$46,000,000).⁴

Most of the funds for NPA’s humanitarian disarmament operations come from Norway’s Ministry of Foreign Affairs and the U.S. Department of State.⁵ Additional funds come from the German Federal Foreign Office, the Dutch Ministry of Foreign Affairs, the Government of Japan, the European Commission, the UK Department of

International Development, and a host of other governments and NGOs around the world.⁶

To this end, NPA's Humanitarian Disarmament work is more than just clearing away mines and UXOs; it includes "both operational and advocacy work which aim to reduce and prevent harm to civilians from the impacts of weapons and ammunition, and where civil society plays a critical role."⁷ NPA engages in political action and advocacy to ban the use of land mines, cluster munitions and nuclear weapons. It supports efforts to monitor and enforce the 1997 Mine Ban Treaty and the 2010 Convention on Cluster Munitions. NPA promotes best safety and security practices for stockpiling armaments. It provides community awareness and education on the dangers of weapons.

NPA currently engages in Humanitarian Disarmament work, including locating and clearing of mines and munitions, in 21 countries and has completed assignments in another 23 nations. Outside of the main headquarters in Oslo, the overwhelming number of employees are local residents from the affected countries - 1,600 versus about 50 expats. NPA trains local staff to high technical standards; provides local staff with living wages, medical benefits and educational opportunities; teaches them English, how to drive, and how to use computers; creates strong partnerships with affected governments; builds capacity for local staff to take over managing the work; and actively recruits women and national minorities to participate equally in the projects. At the NPA projects in host countries, there are very few Norwegians or other western expats; as quickly as practicable, the management, administration and actual demining work is handed over to the local community.

Clearing a country of all land mines and UXOs is slow, expensive, time-consuming and probably impossible in many countries, which is why so much land in war-torn countries remains unused. NPA has helped pioneer the more modern approach called Land Release, which marries technology, training and information systems to determine which parcels of land show no evidence of contamination and thus can be released for residential or commercial use without dragging metal detectors through every square meter of the country. The exact protocol may be different from country to country; it varies based on whether the main contaminants are land mines, cluster munitions or assorted UXOs, and is constantly being upgraded and adjusted based on new experience, equipment and techniques.⁸ Basically, there are three steps in the process, which begins when NPA is given a contract by the national mine action agency to secure a particular township, farm, or defined area. First, the NPA conducts a nontechnical survey to isolate suspected hazardous areas, using such tools as army maps from the national military and former adversaries showing where land mines were placed, interviews with former combatants on both sides, records of aircraft bombing missions and after-action reports on where the ordnance was directed or released, community meetings to alert residents about the need to report any found ordnance, interviews with community residents as well as random tips from local people, and other anecdotal evidence.

Land Release - "Let it Go"



Attapeu Province, Lao PDR, 2014 - Laotians who live near the village of Mixai attend a community meeting to hear a presentation about the dangers of cluster munitions and other UXOs and to report to NPA whether any of them have seen explosives in the village. NPA relies on tips from local residents to locate mines and UXOs and plan their search efforts.

The results of a nontechnical survey are analyzed using GPS maps and computer modeling; areas which show no sign of contamination can be released for public or private use, while evidence of suspected hazardous areas will lead to a technical survey. Using GPS and computerized maps, NPA sends out trained deminers with metal detectors. They will sweep 25 square meter boxes to locate any metal, then carefully excavate the ground to see what is there. Generally the signal comes from harmless metal fragments, but sometimes it comes from a bomb, a mortar round, an artillery shell, or land mine. In many locations, NPA has shifted to using highly trained detection dogs which can search much faster than human deminers, with near-perfect accuracy. NPA is now using small commercially available drones as well.



Ratanakiri Province, Cambodia, 2014 - The leader of an NPA technical survey team uses her tablet computer to record a bomblet her team has found with the precise location derived from her GPS tracker.

If the deminers find any mine or ordnance, its GPS coordinates are entered into the team's computer mapping application, and the square is coded red. At the end of the survey, the office will again use computer modeling to help decide which portions of the surveyed land can be released for public or private usage, and which portions are confirmed hazardous areas which need to be part of a thorough clearance effort.



Thua Thien Hue Province, Vietnam, 2014 - A technical survey team travels by boat to Ona Island.

The final stage is the Battle Area Clearance (BAC), the systematic clearance of every square meter of the confirmed hazardous area using human deminers, detection dogs and drones. It is not unusual for survey work to be performed by one NGO and the clearance operations assigned to a different company or NGO. Discovered mines and UXOs are disposed of by EOD teams detonating them in a safe area with TNT. Sometimes the UXOs have to be destroyed on site rather than risk a detonation in transit; then the roads are blocked, team members warn the community via bullhorns, and unsuspecting water buffalo are led away from the danger zone before the explosives are triggered. Depending on the location of the ordnance, it can mean shutting down a national highway for an hour or more while the UXO is readied for destruction.



Quang Tri Province, Vietnam, 2013 - A member of the BAC team of Project RENEW uses a sensitive metal detector to investigate a suspected explosive from the war with the U.S. The item turned out to be only a metal fragment.

When a targeted area of land is finally released, the expectation is that the government or an NGO will still be available to quickly respond if a stray UXO is found. This is, after all, what still takes place in many countries that went through World Wars I and II. In addition, NPA does community education about the dangers of UXOs; in Quang Tri, Project RENEW also gives out a hotline number to call if someone finds munitions in the community.

Most of the deminers I travelled with in Indochina were relatively young (early to mid-20s) and did not personally experience the Vietnam War which ended in 1975, or even the Vietnamese campaign to oust the Khmer Rouge from Cambodia in the period 1978-1989. On site, they were disciplined, focused, and professional. The team leaders were authentic leaders who commanded the attention and obedience of the deminers. They all worked through extremely hot weather - I remember days as hot as 108 degrees Fahrenheit when they were out in a field for up to 8 hours.

And as well trained as the deminers are, the work always has the potential for danger. According to *Landmine and Cluster Munitions Monitor*, more than 1,800 de-miners have been killed or injured while undertaking operations to ensure the safety of civilian populations just during the period 1999 to 2017.⁹ In 2016, NPA alone lost two team leaders in field accidents; both of them had been guides for me during my earlier visits to their confirmed hazardous areas that were being cleared, one in Bosnia, Aldin Selimovic, and one in Vietnam, Ngo Thien Khiet (who worked with NPA and RENEW); another deminer was injured in the same accident with Khiet.¹⁰ Between 1994 and 2016, NPA experienced 99 casualties due to demining accidents, of which 15 were fatalities.; RENEW had just the two injuries¹¹



Quang Tri Province, Vietnam, 2013 - Battle Area Clearance (BAC)) Team leader Ngo Thien Khiet of Project RENEW assembles his team in the field before they begin the day's work. In May 2016, Khiet was killed by an accidental UXO explosion in a hazardous area.



Ban Lung, Ratanakiri Province, Cambodia, 2014 - Early in the morning, the two NPA all-female EOD and survey teams deployed in Ratanakiri Province in Northeast Cambodia line up at the NPA compound for the day's briefing before being driven to their mission.

Cambodia - The All-Female Bomb Squads

Cambodia is highly contaminated due to the U.S. bombing campaign during the period 1969-1973, the U.S. invasion of Cambodia in 1970, the fighting between the pro-U.S. government of Cambodia and the Khmer Rouge during the period 1970-1975, and the occupation by the Vietnamese army which lasted from 1978 to 1989. Mine Action Review estimates that 738 square kilometers are contaminated with cluster munitions alone,¹² and a further 941 square kilometers are contaminated by landmines laid in the 1980s primarily along the border with Thailand.¹³ It is estimated that between 1979 and 2017, Cambodia suffered more than 64,720 casualties due to land mines and UXOs.¹⁴

Jan Erik Stoa had an idea: hire only women for his bomb squads. To outsiders, this might not seem like an obvious decision for Stoa, an 11-year veteran of the Norwegian Army who served as a “peacekeeper” in places where peace was in short supply: Bosnia during the Balkans War, Kosovo during the next phase of the Balkans War, Mogadishu right after the infamous “Blackhawk Down” battle. He joined NPA in 2002, with postings in Angola, Sri Lanka, Lebanon, Ethiopia, Georgia and Jordan; in 2014, he was NPA’s Program Manager for Humanitarian Disarmament in Cambodia.

Stoa believed that women would be more reliable and meticulous than men, and that all-female teams would help fulfill another of NPA’s goals - to empower women and provide greater opportunities for their social and economic advancement. In fact, Stoa had tried the same thing elsewhere. He wanted to show the government authorities that women could do this work; his proposal was met by an astonished Cambodian government official exclaiming, “But that’s discrimination!” Stoa went ahead anyway, creating two female teams

for Ratanakiri Province in the northeast part of the country, 580 km northeast of Phnom Penh – a nine and a half hour drive in 2014 over atrocious roads. (Actually, the teams had three male employees: a driver, a medic, and the computer data specialist.)

still but travel to different places. She said others see the NPA women in uniform doing demolitions and admire the women as strong: the community had not seen women do this kind of work before. She wanted to stay in NPA “forever.”



Ban Lung, Ratanakiri Province, Cambodia, 2014 - An NPA deminer supervises a group of new recruits performing a first aid drill in the field behind the NPA compound.

The teams were trained to safely locate and destroy UXOs and operations commenced with female team leaders. Sem Leakhena is now 30 years old and has been with NPA for more than 6 years. She got interested in NPA after seeing her father work with the Cambodian Mine Action Center, the government’s agency for demining. She wanted to work for NPA because it employed women for this work; she thought women could do what men do and found it to be true. She said she knows about different types of UXOs and she can do demolitions. NPA taught her to drive and speak English. Originally from Battambang, she studied finance and graduated university. When I met her in 2014, she said she enjoyed her work, “Yes, I like so much.” She was not scared of explosions – they’ve trained for the work. She liked being in Ratanakiri where they don’t stay



Ratanakiri Province, Cambodia, 2014 - Sem Leakhena, a team leader for one of the EOD teams, uses electrical tape to shape the TNT charge that her team will use to destroy a small cluster bomblet found outside a village.

The other team leader, Dul Sovann was from Siem Reap and learned of NPA from radio and from other villagers. Originally she was scared, but she trained and learned. She came to NPA the same time as Leakhena and they worked together. She said that safety is first, but she liked blowing things up. Sovann left NPA in

2016. Leakhena is now a Cluster Munitions Remnants Survey Team Leader.

In addition to the full-time staff, NPA in 2014 had 15 candidates that trained with them every day, vying for one of four openings for permanent employment. Tang Kachrab was one of those candidates when I met her in 2014. She came from a small village in Ratanakiri Province where NPA did work; she attended a meeting and learned about the organization. She decided she wanted to help clear mines in Cambodia. Before that, she worked on the family farm and assisted women in the community, helping children with disabilities. When she was 12 years old, the Khmer Rouge made her and other children carry ammunition and rockets 5-10 kilometers into the forest by foot. If she refused, she said, the Khmer Rouge would harm her parents - she saved their lives. During that period, she saw people injured by bombs; she helped give them first aid and carry them in a hammock. Shortly after I left, she was hired by NPA for a full-time position; on her first day, she found two bomblets. In 2019, she's still with NPA.

for them. Shortly after this photo was taken, she was hired as a full-time employee.

In fact, women were at least part of every team I travelled with in Indochina in 2014. Five years after I visited, Stoa is now NPA's country director in Vietnam. He still believes his idea was the correct one and works "FANTASTIC." Stoa instituted all-female teams in other countries as well - Lebanon, South Sudan and Tajikistan.¹⁵ In 2015, Nguyen Thi Dieu Linh, a 32 year-old woman, took over as Operations Manager at Project RENEW in Quang Tri Province, in charge of a staff of 160.¹⁶ There are also all-female teams at Project RENEW in Quang Tri Province, Vietnam. Stoa says that segregated teams are not a goal in themselves, but a way of demonstrating to government officials that women are more than equal to the work.¹⁷ Other NPA country programs have preferred to have teams with a diversity of gender, ethnicity and language. Starting next year, NPA-Vietnam will have four female and four male teams. NPA says it is working to achieve gender equality on its survey and clearance teams throughout the world.¹⁸



Ban Lung, Ratanakiri Province, Cambodia, 2014 - Tang Kachrab, then a candidate for employment at NPA, cleans her metal detector after an EOD operation. As a child, the Khmer Rouge made her carry weapons and ammunition

All Dogs Speak Norwegian

One of the most valuable assets used by NPA for discovery of explosives are the dogs -Belgian Shepherd Malinois dogs bred, raised and trained by NPA at their Global Training Center (GTC) in Vogosca village near Sarajevo, Bosnia. After experimenting, NPA concluded that the Malinois are more active than German shepherds and more adaptable, with fewer health issues and hip and leg injuries. Training begins when the puppies are 4 weeks old, and they train 4-6 hours per day. They learn to smell every portion of a row the length of a search quadrant; if they smell any explosive, they lower their hind legs and freeze in position

over the target. The dogs work far faster than humans with a metal detector, and with much greater accuracy. Although the dogs are used all over the world, they are trained to understand and obey commands in the Norwegian language. Currently NPA operates dogs in six countries, including Cambodia. NPA started training its own dogs at the GTC in 1999 and has never had a dog-related accident. (NPA also trains dogs for the Norwegian and Bosnian armies.)



Vogosca, Bosnia and Herzegovina, 2014 - a trainer puts one of the Belgian Shepherd Malinois through its paces in a field at NPA's Global Training Center, just outside Sarajevo.

NPA is now working with Special Detection Dogs in Cambodia and Bosnia. Instead of being controlled on a lead, they roam freely over a designated area, guided by their handlers who are safely out of the hazardous zone. The dogs wear light-weight harnesses that include a camera, a microphone, a speaker, a wireless connection, and battery in a pocket on the underside. The handlers communicate with the dogs through either a laptop or a smart phone.

In May 2016, NPA opened a dog breeding and training facility in Siem Reap, Cambodia, giving the dogs training tailored to the contamination

issues present in Southeast Asia.¹⁹ They are in the process of moving the Siem Reap training to Ratanakiri. And yes, the dogs all respond to commands in Norwegian.

Laos - Cruising the Ho Chi Minh Trail

Laos, known formally as the Lao People's Democratic Republic (Lao PDR), is considered the most heavily contaminated nation as a result of bombs and cluster munitions used by the United States to disrupt the movement of arms and material along the Ho Chi Minh Trail from North Vietnam through Laos into South Vietnam. The U.S. dropped over two million tons of bombs on Laos from 1964 to 1973 - including over 270 million cluster bombs - altogether more tonnage than was dropped by the U.S. on Germany and Japan combined in World War II.²⁰ According to NPA, up to 30% of the munitions dropped failed to detonate.²¹ Apart from direct victims of the bombs during the war, Laos has identified over 50,000 casualties from mines and ERWs, of which more than 29,000 were killed during the period 1964-2017.²²

Many of the parcels of land where NPA teams work are far away from villages or in rugged terrain (such as the sides of mountains or steep hills). To minimize travel time and expenses, the teams will camp near the work areas for 22 days, then have eight days of leave. I'm told that the young deminers like it: they bond, play sports in the field, and save most of their salary. Many save most of their food allowance as well. Most of the NPA staff in Laos are in their early twenties - the work is difficult and requires stamina. NPA offers the staff drivers education (I was told that part of the impetus came when one staffer hit a water buffalo).



Attapeu Province, Lao PDR, 2014 - Chanthavong, known as Teng, a field administrator with NPA-Lao PDR, signs in with the medic at a work site on a plantation near Phiavong Village which is being surveyed for cluster munitions and any other unexploded ordnance from the Indochina War. Every person entering an NPA search site must sign in with his/her name, organization, and blood type.

Cambodia and Vietnam - and a day or so at the regional office in Sekong. And a lot of time in 4-wheel drive vehicles on some truly awful roads.

My companion for the trip to Salavan Province was Phonesai Silavan, known as “Bob,” one of the national technical advisors. Bob came from a village in the Xieng Khoeng province, near the Plain of Jars in the northern part of the country. As a boy, he ploughed the land and planted rice; he says he was something of a gangster around his village. He survived two separate explosions of bomblets that went off near him: once when he was just playing, and later when he was trying to dismantle one for the ball bearings. His grandmother took him to the local Buddhist temple to stay for at least 15 days and learn how to avoid trouble; he stayed for 13 years. In 1988, at age 16, he became a novice in the Temple. He and the other boys would wake at 4 AM, pray 30-60 minutes, go begging for alms in the village, do chores, then engage in religious study with school in the afternoon. He wore a saffron robe and shaved his head and eyebrows. He left the temple in 2003 to attend college, majoring in English and the humanities. After college, he worked as a tour guide for a year, then joined MAG (formerly known as the Mines Advisory Group) as an interpreter, later receiving technical training. He left MAG in 2013 and joined NPA. Bob was friendly, diligent, spoke English well with an Australian accent, and cursed like a sailor. I’m told that he is now working for a different organization locating UXOs in Laos.

For my week in Laos, the local office made sure I saw a little of everything. Two and a half days at different work sites in Attapeu Province, two and a half at different work sites in Salavan Province (also spelled Saravane), including a morning observing EOD operations along what used to be the Ho Chi Minh Trail - really a complex of roads running through Laos,



Salavan Province, Lao PDR, 2014 - Phonsai Silavan, known as “Bob,” at a technical survey site. Bob joined NPA in 2013 as a National Technical Advisor.

One morning we left the paved highway to follow a wide dirt road into higher elevations. Outside Ton Sa village, an EOD team was going to destroy numerous bombs, bomblets and many rounds of fighter plane ammunition that had been discovered near the old Ho Chi Minh Trail. On the way to the demolition site, we stopped to look at a U.S. 500-pound bomb that failed to detonate when dropped by a bomber during the war, lying peacefully in a forest near the road; it was a little rusty but completely intact. I took a photo and quietly moved away. There were plenty of bomb craters along the way.

The team executed three controlled explosions: one by TNT wired to a manual detonator; one by TNT with a wireless detonator; and one by C-4, a malleable and stable plasticized explosive often used by militaries. Boom, boom, boom - loud cracking noises, plumes of smoke, everything destroyed. Very satisfying.

NPA now fields 24 Cluster Munitions Remnants Survey teams and 9 Battle Area Clearance teams in four southern provinces in Lao PDR.

Vietnam - The Smell of TNT in the Morning

Vietnam is also one of the most heavily contaminated areas in the world; in addition to unexploded heavy bombs and artillery shells, it is estimated that the U.S. dropped over 400,000 tons of cluster bombs during the period 1965-1973.²³ A ten-year impact survey concluded that more than 61,000 square kilometers of Vietnam were affected by UXOs.²⁴ Between the end of the war in 1975 and 2018, there have been over 105,000 casualties attributed to landmines and UXOs.²⁵ Project RENEW has recorded 8,516 mine/UXO casualties (including 3,422 people killed) between 1975 and 2015 in Quang Tri Province alone.²⁶

Dong Ha is a small city bordered on the north by the Cua Viet River in Quang Tri Province, about 18 kilometers south of the 17th Parallel, the official dividing line between North and South Vietnam during the period 1954 to 1975. During the Vietnam War (what we call the Vietnam War and the Vietnamese call the American War), Dong Ha was part of a heavily contested battle zone that saw constant fighting and bombing. During the 1972 Spring Offensive by the North Vietnamese army, a battle to stop the North Vietnamese from crossing the river bridge at Dong Ha has become a part of U.S. Marine legend. By the end of the war, the province was in shambles.

In 2012, I had dinner in Hanoi with Chuck Searcy, an American veteran who now lives in Vietnam. Searcy's experience in military intelligence during his service turned him against the war and prompted his work over many years to alleviate some of the damage caused to Vietnam by the war.²⁷ He told me about Project RENEW, a joint project of the Quang Tri Province government and the Vietnam Veterans Memorial Fund to search for and eliminate UXOs.²⁸ Searcy arranged for me to return the following year and photograph

Project RENEW's work. NPA is a major partner of RENEW and, in addition to supporting the work in Quang Tri, also works in Thua Thien Hue Province further south. I came back to Vietnam in 2014 to spend a week near the ancient city of Hue and photograph NPA's work there.



Quang Tri Province, Vietnam, 2013 - A Project RENEW EOD team digs a shallow trench to contain a controlled demolition of an artillery shell.

On both trips, I spent several work days with RENEW and NPA's National Technical Advisor, Bui Trong Hong. During the Vietnam War, Hong served as an EOD specialist with the North Vietnamese army and spent a harrowing time under the American saturation bombing during the 1972 North Vietnamese Spring Offensive. He says he was surprised to survive the war; of 10 friends from his commune who went to war, only three came home alive. After 30 years he retired from the army as a colonel; now he trains EOD team leaders on setting explosives for disposal and supervising the controlled demolitions.²⁹ He was also diligent in keeping me safe while at clearance and demolition sites.



Thua Thien Hue Province, Vietnam, 2014 - Members of an EOD team go over the protocol for the day's task: using TNT charges to detonate and render harmless several shells, bombs and cluster munitions found by the survey teams in the Province. Preparing red warning flags is Bui Trong Hong, a former EOD specialist with the North Vietnamese Army who survived the war and retired as a colonel, now a technical advisor to Project RENEW and NPA.

On both trips I witnessed several controlled demolitions of recovered UXOs. The last one I watched took place in the early morning at a controlled demolition site - a large empty area outside of Hue, covered with sand and some occasional brush. Tran Hong Phuong was the EOD team leader, supervised by Col. Hong. After the briefing of all team members, Phuong started pulling the ordnance from the temporary storage container and carrying the munitions to the detonation spot. There would be two detonations that day, one for high explosives and one for munitions containing white phosphorous. The team dug shallow ditches and Phuong, with Hong watching, meticulously laid out a pattern of munitions and TNT explosives; the trick is to use enough TNT to destroy the explosives and fuses in the munitions without using too much. Phuong then positioned pink sand bags over the ditches to

tamp the explosions.



Thua Thien Hue Province, Vietnam, 2014 - EOD Team Leader Tran Hong Phuong plants the ordnance to be destroyed, along with the TNT charges that will be tamped with the pink sandbags. Col. Hong (R) watches Phuong and offers advice on proper placement of the explosives and the amount to be used.

Phuong, Col. Hong and I retreated to a small bunker, trailing the detonator cord, some 250 meters away while several team members with bullhorns walked in all four directions to announce that an explosion was about to take place. Then a countdown over the bullhorn, a switch turned, and a very large explosion of high explosives erupted. Another countdown, and an even bigger cloud of smoke and debris burst forth, colored by the ignited white phosphorous and bits of shredded pink sand bags.



Quang Tri Province, Vietnam, 2013 - A controlled demolition conducted by an EOD team from Project RENEW.

Even at this early hour, the heat was oppressive, made more so by the white sand concentrating the heat. I didn't check the temperature, but it was hot enough that the stitching on the sole of one of my work boots melted, and the sole started flapping up and down like a clown's shoe. Col. Hong chuckled and put the boot back together by wrapping it with electrical tape used to connect the detonators to the TNT.

When the smoke cleared, Phuong took one of the metal detectors out to the ditches to inspect their work and insure that all explosive material was safely destroyed. By 10 AM, the day's demolition work was done, and the team drove to a nearby café where, over Red Bull, they played spirited games of checkers.



Thua Thien Hue Province, Vietnam, 2014 - After completing the day's ordnance destruction, they go for nonalcoholic drinks at a local café and play checkers.

Over the last four years, NPA has revised its strategy and is working jointly with MAG to survey and clear Quang Tri Province with funding by the U.S. Department of State. Phuong and Tung are still team leaders. And war veteran Col. Hong is still active as a Technical Advisor to Project RENEW, an organization started by American veterans of the same war in cooperation with the Vietnamese provincial leadership, together repairing a community to create the conditions for a better life for all. Concerning the late Ngo Thien Khiet, who died in an explosion in May 2016, his eldest son, Ngo Thien Hoang, started work on a nontechnical survey team for RENEW in September 2016. Hoang's wife joined a technical survey team in March 2018.



Quang Tri Province, Vietnam, 2013 - EOD Team leader Le Xuan Tung of Project RENEW assembles his team in the field before canvassing a small village inquiring about any possible UXOs nearby.

Conclusion

Most articles about the dangers of mines and UXOs focus on the civilian victims- and rightly so. But following a group of young people in uniform as they lug giant 45 year-old bombs suspended between them is a good reminder that an important part of the UXO story is often overlooked - the people who remove the munitions, why they do it, and how they accomplish it. NPA's work is important because it doesn't just reclaim the land from the dangers of injury; it rebuilds civil society by making local citizens the agents of that change, making them leaders in their communities, with the skills and experience to help make civil society function. In teaching by example the importance of working together to accomplish difficult goals, NPA puts into practice the organization's slogan, "Solidarity in Action."



Quang Tri Province, Vietnam, 2013 - One of Project RENEW's ambulances. All field teams of Project RENEW and NPA are accompanied by a medic and an ambulance.

Ted Lieverman is an independent documentary photographer and writer in Philadelphia, working on issues of work, social justice and post-conflict communities. Some of his work is available [here](#).

Notes

¹ See, e.g., A. Higginbotham, "There Are Still Thousands of Tons of Unexploded Bombs in Germany, Left Over From World War II," *Smithsonian Magazine*, Jan, 2016, available [online](#); J.W. Phippen, "50,000 Evacuate Hanover While Unexploded WWII Bombs are Disabled," *The Atlantic*, May 6, 2017, available [online](#). The same is true throughout Europe. "Barcelona's popular beach evacuated over bomb," BBC News, Aug. 26, 2019, available [online](#); "Unexploded bombs: How common are they?" BBC News, Feb. 14, 2018, available [online](#). See D. Webster, *Aftermath: The Remnants of War* (1996).

² *Aftermath*.

³ *Landmine Monitor*, (2018), available [online](#).

⁴ NPA, *Solidarity in Action, Annual Report 2017*; available [online](#).

⁵ The United States government actually contributes significant funds to weapons and munitions removal around the world, much of it channeled through various NGOs. The State Department work is largely conducted through its Bureau of Political-Military Affairs, Office of Weapons Removal and Abatement. Its latest annual report, *To Walk the Earth in Safety*, describes its work in some detail, available [online](#). The Department of Defense also contributes funds to support demining around the world. For a description of the work of the Vietnam Veterans Memorial Fund and other U.S.-based NGOs in Vietnam, see T. Lieverman, "Good Boom," *Vietnam Magazine*, 44 (Feb. 2014), available [online](#).

⁶ NPA, *Annual Report 2017*.

⁷ [NPA website](#).

⁸ See NPA, "Efficient Land Release can remove the threat of antipersonnel mines in ten years," a video available [online](#); NPA, *Cluster Munition Remnants*, available [online](#). The latest international standard for land release, IMAS 7.11 amend. 4, created through the United Nations, is available [online](#).

⁹ *Landmine Monitor 2017* records 1,750 casualties through 2016; The 2018 report added 60 more through 2017, available [online](#).

¹⁰ G. Black, "The Vietnam War is Still Killing People," *The New Yorker* (May 20, 2016); available [online](#); emails with RENEW staff.

¹¹ Information supplied by NPA and RENEW.

¹² Mine Action Review, "Cambodia, Clearing Cluster Munition Remnants 2019," available [online](#).

¹³ Mine Action Review, "Cambodia, Clearing the Mines 2018," available [online](#).

¹⁴ *Landmine Monitor 2018*, available [online](#).

¹⁵ See "'I feel like I've saved a life;' the women clearing Lebanon of cluster bombs," *The Guardian*, Aug. 12, 2011.

¹⁶ "Young woman leads bomb-hunting team," *Viet Nam News*, available [online](#).

¹⁷ Emails with Jan Erik Stoa.

¹⁸ Mine Action Review, "Vietnam, Clearing Cluster Munition Remnants 2019," available [online](#).

¹⁹ [NPA website](#).

²⁰ Mine Action Review, "Lao PDR: Clearing Cluster Munition Remnants 2019," available [online](#); Congressional Research Service, "War Legacy Issues in Southeast Asia," p. 8, available [online](#).

²¹ [NPA website](#).

²² *Landmine Monitor 2018*, available [online](#).

²³ Mine Action Review, "Vietnam, Clearing Cluster Munitions Remnants 2019," available [online](#).

²⁴ *Landmine Monitor 2018*, available [online](#).

²⁵ *Landmine Monitor 2018*, available [online](#).

²⁶ *Landmine Monitor 2019*, available [online](#).

²⁷ Interview with Chuck Searcy; see also J. Stevenson, *Hard Men Humble*, pp 99-113 (2002).

²⁸ For more information about the history of Project RENEW, see T. Lieverman, "Good Boom."

²⁹ See "Good Boom;" also see interview on the [website of Project RENEW](#).