

VIETNAM LAOS CAMBODIA



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'GLOWING BACTERIA' OFFERS HOPE FOR SAFE DETECTION OF LANDMINES

The need for safe and efficient technologies for detecting buried landmines and unexploded ordnance is a humanitarian issue of immense global proportions.

About half a million people around the world are suffering from mine-inflicted injuries, and each year an additional 15 to 20 thousand more people are injured or killed by these devices. More than 100 million such devices are still buried in over 70 countries.

The major technical challenge in clearing minefields is detecting the mines. The technologies used today are not much different from those used in World War II, requiring detection teams to risk life and limb by physically entering the minefields. Clearly, there is a critical need for an efficient solution for the remote detection of buried landmines and unexploded ordnance.

(Phys.org -April 2017).

VIETNAM The Vietnamese government estimates that around 14 million tonnes of ordnance, nearly three times that used by the Allies in the second World War, was dropped on



Vietnam between 1959 and 1975. Between 10% and 30% of it failed to detonate and, according to recent official figures, explosions caused by buried bombs and mines claimed around 105,000 civilian victims between 1975 and 2007. In total, the Vietnamese government estimates that around 15% of the total surface area of the country is contaminated by unexploded ordnance. What that means for the families in its many farming communities is that a war they did nothing to start and knew little about has never really ended.

LAOS In 1962 Laos was drawn into the Vietnam War, even though it was internationally declared a neutral state,

and between 1964 and 1973 America dropped over two million tons of bombs on Laos, the equivalent of one plane load of bombs every 8 minutes for 9 years. This made Laos the most heavily bombed country in the history of warfare, and much of this ordnance is still undetected.

CAMBODIA Cambodia has a major problem with landmines, especially in rural areas. The legacy of three decades of war has taken

a severe toll on the Cambodians. It has some 40,000 amputees, which is one of the highest rates in the world, and The Cambodian Mine Action Centre estimates that there may be as many as four to six million mines and other pieces of unexploded ordnance in Cambodia.

Many organizations and brave people are working tirelessly to disarm and remove these mines, one of whom is Aki Ra, an ex-Cambodian soldier, who has a landmine museum in Siem Reap. However, he expects that it will take at least 50 more years before Cambodia is cleared, or at least cleared to an acceptable level, as complete clearance can never be guaranteed.



Hopefully, in the not too distant future the detection of landmines may become easier by the use of new technology, as reported in the Guardian in April 2017.

A team of researchers at an Israeli university has successfully tested a technology using fluorescent bacteria and lasers that could become a safer system for detecting buried landmines. Mine clearance work is typically dangerous, labour-intensive and costly.

The team at Jerusalem's Hebrew University has tested mine detection using bacteria genetically modified to give off a fluorescent signal when mines – often made out of plastic – are close, and which can then be detected with a laser.

Reporting the findings in the journal

Nature Biotechnology, the researchers say their approach relies on tiny amounts of vapour given off by the explosives in the mines.

It was recognised that some plants reacted to those vapours, and the research used modified bacteria that essentially glow in contact with the explosive vapour. Encased in polymer beads scattered on the suspected minefield, that fluorescence is then detected by a laser system that researchers suggest could be mounted on vehicles – including drones.

The system has been successfully tested in a field of real landmines, scanning the ground at a rate of around 18cm per second – a speed the researchers hope to increase.

The team, led by Prof. Shimshon Belkin, is not the first to develop bacteria that glow in the presence of explosive vapour – similar findings were reported by a team at Edinburgh University in 2009 – but it appears to be the first to have developed a potentially functioning detection system using the technology.

“Our field data show that engineered biosensors may be useful in a landmine detection system,” said Prof Belkin, who headed the experiment. However, the technology would need to be developed further still, he added.

“For this to be possible, several challenges need to be overcome, such as enhancing the sensitivity and stability of the sensor bacteria, improving scanning speeds to cover large areas, and making the scanning apparatus more compact so it can be used on board a light unmanned aircraft or drone.”

The university said in a statement: “This appears to be the first demonstration of a functional standoff landmine detection system.”*

For the rural and farming communities of Vietnam, Laos and Cambodia, and indeed world-wide, these challenges cannot be overcome soon enough, and so prevent more devastating injuries and deaths to innocent civilians.

Mary Lidgard
Honorary Secretary

* The Guardian 13 April 2017

TRADITIONAL MIDWIVES' MEDICAL KITS

Bulletin 186, which was circulated to our supporters in May 2016, featured an article about the medical kits which are given by the Highland Education Development Organisation (HEDO) to the trainee midwives at the completion of their course. The kits include a paediatric stethoscope, medical scissors, a sphygmomanometer, dressings and other equipment necessary for the safe delivery of babies at home, all contained in a strong and durable leather bag.

When HEDO prepares the budget for a traditional midwife training course, they include the cost of the medical kits in

their estimates, and although the equipment is purchased in bulk, over £2,000 for 100 kits is a substantial part of the total cost of the course.

MSAVLC has been funding HEDO's Traditional Midwives' training courses now for fourteen years, and in that time many hundreds of traditional midwives have been trained in modern methods for the safe delivery of babies in their local community clinics, in homes and occasionally in the fields of highland rural Vietnam. So, when we reported on the successful completion of the course in Da Bac District, Hoa Binh Province, held in March 2016, the Trustees decided to ask our supporters for their help in

funding the cost of the medical kits. We asked supporters if they would send a donation of £20, which would offset the cost to the charity of one medical kit. (It is worth noting that due to this year's decline in the value of the pound, the cost for each kit has now risen to £24!) As a way of saying thank you to those people who donated the cost of a medical kit, I promised that their names would be read out at the opening ceremony of the next midwives' training course. Thankfully our supporters responded in a positive way and we were able to send HEDO over £1,000 which had been specifically raised for the purchase of midwives medical bags.



The 2017 Midwives' Training Course was held in Chiem Hoa District which is in Tuyen Quang Province. The province forms part of Vietnam's Northern Highlands. Apart from Tuyen Quang City, it is a rugged mountainous area, with a population of over a million. Chiem Hoa District is one of the more remote and disadvantaged districts; it has eighteen different minority ethnic groups who live in the small towns and villages inter-connected by poorly-maintained roads and paths. The district has a population of 126,000 people spread over 376 villages and hamlets, many in upland areas where travelling is difficult and hazardous, particularly during the rainy season. Most people in Chiem Hoa live mainly off the land, and agrarian practices are poorly developed. Average income per head is about \$370 USD per year, with 45% of households being classed as poor. Economic activity is

under-developed and education levels are low.

The healthcare provision in Chiem Hoa is similar to the rest of the Northern Highlands. There is one district hospital with four doctors and ten assistant doctors; but there are only four trained midwives to take care of a total of 30,000 women of reproductive age, and up to 10,000 pregnancies per year. Half of the pregnant mothers are not able to attend their local clinics for regular check-ups and about half give birth at home. Thus it is essential that the local midwife, whether a healthcare worker, a mother or a grandmother, is trained in safe childbirth practices and has the correct medical equipment. HEDO's ten-day traditional midwife training course gives them the skills and the equipment for that role.

We had hoped that on our Monitoring and Evaluation visit to Vietnam this

spring that we would be able to attend the opening ceremony of the Chiem Hoa Midwives Training Course and present the trainee midwives with their medical kits.

Unfortunately, due to illness, that was not possible. However, our friend the Director of HEDO, Professor Trinh Ngoc Trinh was able to present the kits on our behalf, and HEDO's able translator, Mr Le Duc Khai relayed our messages to the trainees. He read out the names of all of the supporters who had purchased the medical kits, which included a number of our regular and most loyal supporters, some members of the medical profession, some new supporters, and notably, the Rolls Royce (Coventry) branch on the Unite Union.

On behalf of the midwives of Chiem Hoa, I would like to thank you all most sincerely for your generosity.

Peter Lidgard

CONGRATULATIONS!

Our sincere thanks and congratulations this month go to Dr Andrew Moncrief and the Frampton Fundraisers who have recently raised over £3,000 for the Victims of Agent Orange.

When Andrew first contacted the charity, we thought that he was a member of a serious cycling group, because he said that he was planning to

undertake an endurance bicycle ride from Bristol to Exeter and back in a day! (a total of 200 miles). However, it turns out that Frampton Fundraisers are not serious cyclists at all, they are just a group of friends who wanted to raise money to help the victims of Agent Orange.

Andrew had found our website on the internet and discovered that MSAVLC is

one of the few charities which directly helps Agent Orange victims, through our projects run by the Vietnam Association for Victims of Agent Orange (VAVA), Hoa Binh Peace Village in Saigon, and Thanh Xuan Peace Village in Hanoi.

The Frampton Fundraisers, who usually raise funds for charities by organizing sheep racing (seriously!) or the 'World Elver Eating Contest', in

Frampton on Severn, Gloucestershire, wanted to try to raise £3,000 through a sponsored endurance ride for the victims of Agent Orange.

Throughout the spring of 2017 Andrew and his friends trained on their bicycles and lobbied their friends and relations for sponsorship for the ride. On

Saturday 17th June, one of the hottest days of the year, this group of seven cyclists set off from Bristol.

After stopping off for a break in Exeter, they all returned to Bristol that evening. What an achievement!

Just after he had completed the ride, Andrew said: "We are pleased with our achievement, but particularly that we have raised, almost, our target amount. I am quietly confident that we shall in fact exceed it, by the time the donation page is closed."

The Trustees and supporters of MSAVLC congratulate the Frampton Fundraisers most sincerely for their efforts in the saddle, and in finding sponsors who supported them.

Further donations can be sent to; John Firth, Honorary Treasurer MSAVLC, 1 Hillside, Tregunnel Park, NEWQUAY, Cornwall TR7 2AJ and marked "Cycle Ride".

At their next meeting the Trustees of MSAVLC hope to discuss with VAVA the best way of spending the funds raised by Andrew and his friends.



DAUGHTERS OF CAMBODIA

In Cambodia, one of the poorest nations in the world, the sexual exploitation of women and children is a thriving business, especially in the capital Phnom Penh. There, Daughters of Cambodia works to help young women and men escape the horrors of the sex trade and start sustainable new lives for themselves.

Unfortunately, in our June Newsletter from Daughters, we learned the shocking story of two little girls aged 4 and 8 who were raped in the red-light slum in which Daughters works. There, many children wander around unsupervised, despite it being very, very dangerous. Many Cambodian parents who live in this slum do not have a concept of the need to supervise their children and keep them safe.

The 8-year-old's mother beat her as a result of the rape, and the parents refused the safety strategies that Daughters tried to put into place for their daughter. It was discovered that she had been raped 6 times previously over the last 4 years. The parents knew the perpetrator, a gang member who lives in the same community, but refused to press charges out of fear of repercussions. The 4-year-old's parents delayed getting her medical treatment, and she developed a severe STD infection. This still has not been treated as they refuse to take her for treatment, despite the fact that Daughters would pay for it and provide transportation.

We can only hope that with Daughters' persistent intervention, education and compassion, these little

girls may be helped and similar occurrences be prevented.

With your help MSAVLC will continue to support the vital work that is done by Daughters of Cambodia in these deprived and dangerous areas.

*Mary Lidgard
Honorary Secretary*

THE BULLETIN

The MSAVLC Bulletin is sent quarterly to all our supporters.

If you no longer want to receive the Bulletin please inform:

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