## **Feature Articles**

## Walking in minefields

The SGR report 'Soldiers in the Laboratory' prompted Steve Wright to consider the real-life legacy of military involvement in science and engineering. Here he describes an eye-opening trip that showed him just what that means.

Each innovation in weaponry breeds a vast network of consequences, which become entwined with the future fates of mainly ordinary people, including children. While the influence of military funding on our research establishments is being exposed, it can still be difficult in our roles as scientists, researchers, engineers and technicians removed from the zones of conflict, to imagine what the effects of our work actually are. If those with military connections could fully conceive their ethical responsibilities and the implications for the innocents affected, they might need more than Horlicks to sleep at night ...

A particular moment of reflection for me came with the news that the Israelis used 30-year old cluster munitions in last year's conflict in the Lebanon. Some of these weapons failed to explode, leaving war remnants with enough explosive power to turn kids' limbs to offal. I was struck by the hypocrisy of governments who crow about the 'war on terror' while supplying such horrendous weapons. Landmine Action documented the damaging legacy of these weapons and their ongoing effects on innocent Lebanese in their report, 'Foreseeable Harm'.1

Meanwhile, de-mining teams from the Manchesterbased NGO Mines Advisory Group (MAG) took on the practical side of the problem. By the end of 2006, MAG teams had cleared more than 11,000 items of unexploded ordnance, making safe nearly 1.8 million m<sup>2</sup> of land. This continued through the winter snows into early 2007.

Humanitarian de-mining is inch-by-inch work that is essential for the recovery of local communities: the legacy of past wars imposes a terrible economic and human burden on prospects for future development, as evidenced by the munition-infested lands of Vietnam, Cambodia and Laos.

Last year, I was privileged to witness the MAG demining teams in action in Vietnam and Cambodia. where more bombs were dropped than were dropped by all sides in World War Two. Meeting the men and women who de-mine is a humbling but uplifting experience. Their job is literally to heal the land and make it fit for human inhabitation and agriculture once more.



De-mining teams from the Mines Advisory Group work very carefully

Field research has a new meaning here; get it wrong and your legs are gone. Yet I saw de-miners clear paddy fields, knee deep in water, slowly, methodically sweeping and marking.

In Vietnam, MAG's work clearing unexploded ordnance (UXO) and cluster munitions returned land for schools, houses and cultivation. In Tatrach Commune, the headmaster of Botrach High School No.2 thanked MAG for de-mining their sports field. Over tea, he said the school had 1.680 pupils, of whom 13-15% go on to university.

In Dong Ha, I saw MAG locate and blow up bombs in a villager's garden. First one bomb, then another, feet away. I saw the effects of historical, so-called BLU strikes across an entire valley. These are essentially the live explosive remnants of cluster bomb submunitions dropped four decades ago. On one side, JCBs were digging tens of feet down to hunt for the sub-munitions: across the other side of the valley another MAG team, with an ambulance and medical backup on standby, marked out with paint the cluster munitions that remained on the surface. The soil here is laterite and the bomblets of over forty years ago have not sunk - they lie waiting for the unwary.

In Lochninh, there were scenes straight out of the film *Flying Daggers*: haunting tree-scapes and every so often a mausoleum. The Vietnamese have the right to bury their families where they wish and people meticulously care for the remains of their ancestors. We found an entire graveyard relocated in the wake of redevelopment following mine clearance to build an airport on previously mined land.

In Cambodia, MAG clears anti-personnel land mines, which remain live and primed. They are always destroyed in situ. The team humoured me by laying explosive charges around a collected set of unexploded ordnance and letting me press the button to blow them to pieces. It was a welcome catharsis from the tension of being out in the field, yet I was reminded that the de-miners do this work day in day out. They also train dog teams to sniff out the explosives, which have their own canine supervisor who checks that the other dogs have performed the location process efficiently!

MAG provides community education on the dangers of UXO, which here is literally a matter of life or death. Near the Thai border, I met a one-eyed child, his body mauled by shrapnel from an explosion that killed his friend, while they were searching for scrap metal.

MAG welcomes community support for their work and donations. They run various imaginative initiatives, including transforming minefields into football pitches and organising fundraising bike rides. Their web site details the possibilities.<sup>2</sup> Whether it inspires you to get involved, or to think again about getting the military out of science, it's worth a look.

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17

## References

1. Nash, T (2006). Foreseeable harm. The use and impact of cluster munitions in Lebanon: 2006. Landmine Action. http://www.landmineaction.org/resources/ ForeseeableHarmfinal pdf 2. http://www.mag.org.uk/