Finding More than Honey with Bees

Buried within the USD46 billion appropriations bill for the U.S. Department of Defense’s fiscal 2007 budget is $5 million for a new military tracking system—honey bees. The project would train honey bees for a variety of military and commercial uses, including finding landmines and other explosives.

Researchers at the University of Montana and Montana State University claim the bees can be monitored via a laser-tracking system. With further development, the bees may be able to detect more than just landmines and buried explosives—researchers believe the bees may also be capable of finding methamphetamine labs, dead bodies and other hard-to-detect items.

Still, the primary focus of the honey-bee experimentation is on the discovery of explosives because bees are very attuned to the scent of TNT and similar materials. Recognizing the acute sensitivity of honey bees to different molecular compounds, scientists have studied the bees’ reaction to the scent of food and, through a Pavlovian technique, trained the bees to react positively toward the scent of dangerous materials. Funding for honey-bee programs is difficult to secure, and the technology still is not in a marketable form.

News Brief

The Aftermath of War

The recent conflict between Hezbollah and Israel resulted in many civilian victims, and though the fighting has ended, the problems are nowhere near over for the civilians of Lebanon whose country is littered with cluster bombbites. This article explains the effects of the conflict on Lebanese civilians and describes how organizations are trying to eradicate the cluster-submunitions problem and provide aid to affected civilians.

by Katie FitzGerald [Mine Action Information Center]

A ver 34 days of fighting between Israel and the Hezbollah militia in southern Lebanon, the United Nations Security Council adopted Resolution 1701 on August 11, 2006, which was aimed at ending hostilities, and a ceasefire entered into force August 14. Despite only a month of fighting, the conflict greatly disrupted the normal lives of many Lebanese due to the damage to their homes and fields, and the remaining unexploded ordnance—mainly cluster submunitions—that littered the ground. The conflict killed over 1,500 people, many of whom were Lebanese civilians, and displaced approximately 900,000 Lebanese and 300,000 Israelis.

The Victims

Many of the victims of this conflict were civilians in Lebanon and Israel. As artillery and missiles were fired by both Hezbollah and Israel, approximately one-quarter of the Israelis killed by Hezbollah and the majority of the Lebanese killed by Israeli forces are reported to have been civilians.

Little information is available on UXO in Israel, but it is clear that the estimated 1.8 million cluster bombs (containing over 1.2 million cluster bomblets) fired into Lebanon have devastated the local infrastructure. Along with houses and fields destroyed, hospitals, schools, bridges, roads, factories, airports and main sewers were also demolished. Particularly affected areas were southern Lebanon, Beirut and the Bekaa Valley. The northern part of Israel was most affected by Hezbollah attacks, which sometimes consisted of 150 rockets fired per day.

It has been reported Israeli used cluster munitions primarily deployed by artillery projectiles, followed by Multiple Launch Rocket Systems and a lesser number of aerial cluster bombs. MLRS in particular are believed by many to be highly to be lethal and inaccurate. They are capable of firing a high volume of mostly unguided munitions. The rockets are designed to burst into submunitions at a planned altitude in order to blanket the enemy army and personnel on the ground with smaller explosive rounds. The cluster rounds that fail to detonate—believed by the United Nations to be up to 40 percent for some munitions fired by the Israeli Defense Forces in Lebanon—remain on the ground as unexploded submunitions. In addition to the cluster submunitions, an estimated 15,300 items of unexploded ordnance—including air-dropped bombs of 500 to 2,000 pounds (220 to 900 kilograms), ground- and naval-launched artillery rounds and air-delivered rockets—now litter the ground in southern Lebanon.

In an August 30 Reuters AlertNet article, Sophie Jaquesen, a United Nations High Commissioner for Refugees representative in Lebanon, said the organization’s top priority following the conflict was the safe return of the approximately one million Lebanese who fled the month-long war. Though U.N. Lebanon Army and nongovernmental clearance teams immediately started removing bomblets and other UXO, the United Nations and the government of Lebanon have remained seriously concerned about the danger residents could encounter. At the time of writing, the United Nations Mine Action Coordination Centre of Southern Lebanon assessed approximately 85 percent of southern Lebanon for cluster-bomb strikes, and it is estimated that up to one million...
unexploded cluster submunitions may be on the ground.8 That, however, has not stopped many Lebanese from returning to their homes.

As soon as the ceasefire went into effect on August 14, slightly more than half of the 900,000 displaced Lebanese residents packed up their belongings and headed home to find access to their homes and farming fields blocked by UXOs, most frequently by bomblets from cluster bombs.9

According to Andy Gleeson, Program Manager in Lebanon for Mines Advisory Group, residents moved back to their villages for two reasons: 1. They wanted to assess the damage and prepare to return the remainder of their property, so they lived in their front yard if required or a back yard or operation. 2. Hezbollah handed out US$5,835 per lost house to pay for 12 months’ rent after the government paid US$35,835 per lost house.

“If you are not home, you miss out on the payments,” said Gleeson.6

Children in Danger

As of October 8, 2006, 770 cluster-bomb-strike locations had been identified in the south, while in Lebanon, there were 320 affected communities with each community having around 300 to 350 items of UXO scattered around in some areas and more in other areas.10 As of October 15, 2006, there were 20 reported fatalities and 120 reported injuries from all types of unexploded ordnance in Lebanon. Children accounted for four of the fatalities and 38 of the injuries, according to UNMACC-SL.11

As families return home, UXO has posed a major problem to children, who sometimes mistake unexploded bomblets for toys. The United Nations Mine Action Service and the United Nations High Commissions for Refugees have partnered to provide mine-awareness training for children from villages near Tyre, where they have encountered cluster bombs and UXO. These are the same places of the kinds of UXO scattered around Lebanon and Gaza, in particular, especially for children who are innocent, who want to play and are totally unaware that small little items can be so harmful.9 Dalia Fattan, UNMACC–SL’s Media and Information Officer, commented: “Children are not immune to UXO.”

In addition to the dangers of UXO, upon return, children have faced the threat of disease, due to a lack of chemicals and dust, which have polluted the air, causing serious health issues.

Who is Helping? Since the conflict ended, the main goal of the United Nations and other international organizations is to work towards making southern Lebanon clear of clusters submunitions and to provide humanitarian assistance in reconstruction and recovery. UNMACC–SL, and the National Demining Office are coordinating clearance efforts which have so far resulted in 45,000 cluster bombs being cleared and destroyed. Clear, exploitable ordnance disposal and information-gathering are being carried out in part by the Lebanese Army, the United Nations Interim Force in Lebanon, Mines Advisory Group, BACTEC and the Swedish Rescue Service Agency. Lebanon is also now food-secure and its commercial sector has rebounded sooner than expected.5

World Food Programme. WFP has reached more than 700,000 people since it started its emergency operation in July, targeting approximately 350,000 of the most affected people in Lebanon, the majority of them in southern Lebanon.12 In all, WFP has distributed more than 7,250 metric tons (7,991 U.S. tons) of food (an estimated 400,000 monthly rations) and helped the government of Lebanon import 12,300 metric tons (13,558 U.S. tons) of wheat during the blockade period.13 The WFP also assisted the United Nations in transporting relief supplies such as fuel, Detroit, winter 2006 | journal of mine action

Cluster Munitions and ERW in Lebanon

The recent 34-day conflict between the Lebanese armed faction Hezbollah and Israel from July 12 to August 14, 2006, saw extensive use of surface-launched munitions and air-dropped high explosive munitions (to a lesser degree), resulting in wartime casualties for military and civilian actors in both Lebanon and Israel. Since the ceasefire agreement, international post-conflict attention has become focused on Lebanon due to the large number of explosive remnants of war left behind after the conflict. In particular, cluster munitions are proving problematic for post-conflict reconstruction activities in Lebanon due to their apparent high failure rate1 and the potential threat they pose to returning civilians, aid workers and military personnel. This article examines cluster munitions and the impact of their presence in Lebanon.

by Daniëlle Ressler and Elizabeth Wise [Mine Action Information Center ]

E arly cluster munitions were used in World War II and were later deployed extensively by U.S. forces in Southeast Asia during the American/Vietnam War. Billions of cluster munitions were dropped on Laos, Cambodia, and Vietnam.9 Most of these cluster munitions used in the 2006 conflict between Hezbollah and Israel were of the type developed in the 1980s for military use but had since been relegated to roles as weapons for air strikes against guerrillas, terrorists, and drug traffickers.14

Cluster munitions can be dropped from the air, as seen here being dropped from a B-52 bomber, or launched from the ground as shown in the video below. Since the 2006 conflict between Hezbollah and Israel.

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