



Non-Lethal: Worse than Lethal?

by *Peter Almond*

Peter Almond is a freelance writer on defence issues. Here he considers the potential of non-lethal weapons in non-warfighting operations, particularly for use by the dismounted soldier, and why authorities are reluctant to use them.

When 'victory' was declared by US forces in Iraq in late April 2003, US Marines switched into peacekeeping mode and were issued with rubber bullets and pepper sprays, expecting little worse than occasional crowd control and riots.

By June they were back in war mode, forced to deal with increasing numbers of snipers, car bombs and rocket-propelled grenades with M50 machine guns, artillery and air strikes. The baton rounds and sprays were returned to storage.

So much, then, for non-lethal weapons in 21st-century conflict?

Perhaps so, except for a gnawing concern that, in spite of great advances in precision weaponry, the high lethality of modern weapons in situations other than all-out war actually creates more enemies than it destroys. Arguably, the robust responses of the US military to threats and attacks in Iraq over the last 18 months have encouraged more Iraqis to take up arms against the coalition in revenge for the deaths or injuries of mothers, fathers, uncles or sons, whether in direct response to attacks, or by accidental strikes.

Certainly, the latest US intelligence estimate of the numbers of Iraqi insurgents has been revised upwards from 5000–7000 to 10,000–12,000 and, with active supporters included, to some 20,000. In the meantime, one new estimate of Iraqi deaths since the end of the invasion stands at about 100,000. US

and coalition officials say that they regret the loss of life, but that they have had no choice and that the security situation in Iraq is being brought under control. They have had to use lethal means because non-lethal doesn't work.

Non-Lethal Weapons in Warfighting

'The US military view is that they tried with non-lethal but failed', says John Pike, director of GlobalSecurity.org in Washington. 'The initial assessment was for crowd control. But Iraq is not a crowd-control situation. It's a battlefield. A Marine who gets shot at by a sniper just wants to kill him, not shoot a rubber bullet at him.'

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The problem for all forces, says Pike, is that the band of effectiveness between lethal and non-lethal fire is 'kind of narrow', as the Russians tragically discovered in the Moscow theatre siege in October 2002. Instead of their knock-out gas disabling all inside, it killed some 90 of the 750 captives, along with 50 of the terrorists because, reportedly, the gas was wrongly mixed.

That gas is alleged to share similarities with the American Advanced Riot Control Agent Device (ARCAD), which was designed in the early 1990s but cancelled because of the Chemical Weapons Convention (CWC), which came into effect in 1997. In June 2004, a watchdog group called The Sunshine

Project claimed to have discovered, through Freedom of Information Act requests to the Pentagon, that ARCAD had been revived through America's new Joint Non-Lethal Weapons Directorate, run by the US Marine Corps. The gas, according to The Sunshine Project, is a caltivate agent that disables people for a while, but allows them to recover quickly.

On the face of it, that is exactly what the marines need to deal with hostile crowds or snipers holed up in a building, rather than order up artillery fire as a patrolling squad, caught in an ambush, did in northern Babil province in October 2004 – several private houses were destroyed.

The Department of Defense declines to comment on whether ARCAD has been revived. As a signatory to the CWC, it should not use riot-control agents in a theatre of war, but is prepared to do so if it is required in a civil disorder situation under civil law. Exactly what Iraq has been for the last 18 months, therefore, may be more a matter for lawyers than for soldiers.

The same law applies to the UK, a fellow CWC signatory nation, but according to a Ministry of Defence (MoD) spokesman British troops would not use riot-control agents in armed conflict, nor would they use them if asked to do so on behalf of another country. Despite reports that British troops would refuse to fight alongside allied soldiers who were prepared to use chemical agents – riot control or not – the MoD spokesman said they would ask the foreign troops not to use them under the CWC.

Non-Lethal Systems in Hostile Crowd Control

If not disabling gases, or sometimes

lethal rubber bullets or water cannon, then what else is there that troops can use to quell hostile crowds or armed insurgents outside the traditional short range of non-lethal weapons?

The Israeli Defence Force, which Palestinians have long complained keeps the fires of hatred burning by using conventional weapons against civilians, has come up with several new non-lethal weapons for use in the West Bank and Seam Zone around it.

One acoustic system, dubbed The Shout (Hatseaka), is designed to incapacitate crowds at a range of 100m without causing permanent physical damage. It is described as an 'acoustic cannon' that is installed on an armoured Sufa light-utility vehicle that produces a high-intensity sound along a very narrow beam, reportedly enabling selected individuals to be targeted without affecting others. An operator inside the vehicle uses a slaved video camera to direct the sound at them. According to *Jane's Defence Weekly*, The Shout could also be used by naval platforms for stopping suspected terrorist vessels without the need for live fire.

Another Israeli non-lethal weapon under trial is a stink bomb that gives off a synthetic odour like a skunk and can stay on clothes for up to five years. The aim is to use it to replace rubber bullets as an alternative way of breaking up protests and stone-throwing confrontations.

A third device is a new tank shell made of fibreglass that explodes above a crowd with a stunning noise designed to disperse potential rioters. Designed after eight Palestinians were killed and dozens wounded – including children – when a mob was struck by conventional tankfire during IDF operations in Rafa, Gaza Strip, last May, the shell is made by Israeli Military Industries, which has long made stun and flash grenades.

But this is nothing compared to the considerable sums going into a new type of non-lethal directed energy weapon being designed for the US military. Based on Raytheon's Active Denial System (ADS) it fits on to a Hummer vehicle and projects a millimetre-wave beam of energy that produces an intolerable heating sensation on the skin. The intention is to repel an individual without causing injury or long-term side effects.

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An Advanced Concept Technology Demonstrator, dubbed System One, is being worked up to demonstrate its 'shoot and scoot' capability and to test its effectiveness in winds and dust. Generating about 100kW of power, it should be effective beyond the range of small arms fire. An air force project aims to develop a larger and more powerful airborne version that could be operated by a C-130 aircraft in the next decade, according to *Jane's Defence Weekly*.

The US Navy version is designed to be used by ships entering harbour or restricted waterways to protect them against small craft whose crews may or may not be friendly. The USS Cole was badly damaged, and 17 crewmen killed, when a small boat blew up alongside it in Yemen in October 2000. 'We'd rather be safe than sorry, and we don't want to kill or maim some innocent person and start World War Three', says one US Navy official, who declined to be identified. 'Better to zap someone and have him get up unharmed than kill him and find out he's simply trying to sell you oranges.'

Non-lethal weapons have already played a significant role in warfighting as part of increasing 'effects-based' policies that aim to seize objectives and allow their continued post-war use

rather than destroying and rebuilding them. In the US inventory, but only sparingly used in the two Iraq wars, is the so-called Blackout bomb, which breaks apart to release a confetti of carbon filaments to short-circuit electric power lines.

Another, more secret non-lethal weapon is the so-called E-bomb, designed to send out a massive electromagnetic pulse to knock out computers, radios and TVs. One is believed to have been used to knock out Iraqi state TV in Baghdad – and Saddam Hussein's propaganda – on one of the first nights of the Iraq war in March 2003.

Reluctance to Use Non-Lethal Weapons

So far, however, the allied militaries have shown a degree of reluctance to use these new non-lethal weapons partly, military sources say, because they are unfamiliar with them and partly because they do not want to be held responsible for unpredictable consequences that may violate some new international convention such as the CWC.

There are also concerns over whether human rights conventions will be breached if innocent bystanders are injured by some powerful anti-crowd acoustic or heat-inducing beam. Partly as a result, a spokesman for Britain's MoD said the Department has no funded plans for any development of non-lethal technologies. 'We have an open mind on new technologies, but no funded plans', he said.

So, the British Army's operational doctrine essentially goes as far as baton rounds and then stops. The Army is a firm believer in training. 'You train to use a weapon only when you have to,' said one senior army officer. 'Technology only takes you so far. The rest is training to achieve your objective in the most effective and least damaging way possible.' ■