

Foreseeable harm

The use and impact of cluster munitions in Lebanon: 2006



Report by: Thomas Nash

This report is based on field research conducted in Lebanon between 6 – 11 September 2006 by Thomas Nash and Simon Conway.

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Thanks to the staff of the MACC SL, Habbouba Aoun and Claire Chavet for their assistance during field work and contributions and corrections to the report.

Cover photograph by Simon Conway © Landmine Action

Research and publication funded by:

The Government of Ireland, Department of Foreign Affairs

The Government of Norway, Ministry of Foreign Affairs

The Diana, Princess of Wales Memorial Fund.

OXFAM GB

The views expressed in this report do not necessarily represent those of the organisations and governments that funded this work

Published in October 2006 by Landmine Action, 89 Albert Embankment, London SE1 7TP
www.landmineaction.org

Clarifications or corrections from all interested parties are most welcome.

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British Library Cataloguing in Publication Data.

A catalogue record of this report is available from the British Library.

ISBN-10: 0-9551923-3-1

ISBN-13: 978-0-9551923-3-3

Landmine Action is a company limited by guarantee. Registered in England and Wales no. 3895803.

Design and print Calverts 020 7739 1474

“Reports of the Israeli army using cluster munitions is an obvious propaganda of Hezbollah and other organizations who do not know what is actually going on.”

Arkady Milman Ambassador of Israel to the Russian Federation, 26 July 2006¹

“We try to minimize their use. We only use them in designated areas that have been closed even by Hezbollah itself.”

Major General Benny Gantz Commander of Israel’s ground forces, 26 July 2006²

“In the last 72 hours we fired all the munitions we had, all at the same spot, we didn’t even alter the direction of the gun. Friends of mine in the battalion told me they also fired everything in the last three days – ordinary shells, clusters, whatever they had.”

Anonymous Israeli reservist in an artillery battalion, quoted in *Haaretz* daily newspaper, Israel, 8 September 2006³

“What we did was insane and monstrous, we covered entire towns in cluster bombs.”

Head of an IDF rocket unit posted in Lebanon during the war, quoted in *Haaretz* daily newspaper, Israel, 12 September 2006⁴

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1.0 Executive summary and key findings

Israel's use of cluster munitions in southern Lebanon during July and August 2006 caused civilian casualties during attacks and contaminated densely populated areas with a deadly legacy of unexploded duds that continue to kill and injure civilians on a daily basis and impede efforts to rebuild lives and livelihoods in the wake of conflict.

During the conflict humanitarian organisations appealed to Israel not to use cluster munitions and appealed to the international community to put pressure on Israel to stop using them. Such appeals went unheeded. For forty years – from Laos to Lebanon – cluster munitions have caused unnecessary suffering both at the time of attacks and for years afterwards. Lebanon was already contaminated with unexploded duds from previous Israeli incursions in 1978 and 1983. Key user states such as Israel, the U.K., the U.S. and Russia claim that cluster munitions are legal. If that is the case then the consistent pattern of civilian harm caused by these weapons, of which the casualty toll in Lebanon is only the most recent example, make it clear that international law is inadequate. A new law is urgently needed.

Two months after the ceasefire of 14 August 2006, the contamination caused by cluster munitions was still exacting a daily toll in south Lebanon. Over this period an average of between 3 and 4 civilians had been killed or injured by unexploded submunitions every day – some 35% of these casualties were children. Civilian casualties will continue to rise as more and more people return to sift through the cluster munition infested rubble.

Livelihoods have been destroyed, and desperately needed relief and rehabilitation has been impeded. Throughout southern Lebanon large areas of agricultural land are contaminated by failed but still potentially lethal 'submunitions'. In many affected areas farmers have not been able to safely harvest what was left of this summer's tobacco, wheat and fruit; late yielding crops such as olives will remain too dangerous to harvest by November and winter crops will be lost because farmers will be unable to plough their contaminated land to plant their grains and vegetables. Water and power supplies have been blocked and schools, roads, houses and gardens were still littered with unexploded submunitions when the field research for this report was undertaken one month after the ceasefire.

In only one month, the UN identified 519 individual cluster munition strike areas in south Lebanon. Hundreds more strikes were identified by Lebanese Armed Forces. The majority of these strikes were targeted in and around towns and villages. For returning populations already devastated by war each of the strike sites now functions much like a minefield. Two weeks after the ceasefire, as appreciation of the extent of this contamination started to develop, the UN Under-Secretary-General for Humanitarian Affairs and Emergency Relief Coordinator, Jan Egeland, described the use of cluster munitions by Israel as "shocking" and "to me completely immoral," estimating that 100,000 unexploded submunitions remained.⁵ Three weeks later the UN Mine Action Coordination Centre in South Lebanon revised that estimate suggesting that the number of unexploded submunitions may be as high as 1 million.⁶

UNIFIL observer reports suggest that 90 percent of the cluster munitions were fired in the last 72 hours of the conflict.⁷ Israeli soldiers have stated that over 1,800 cluster rockets containing 1.2 million submunitions were fired during this three day period. The total number of submunitions used will be much higher when the quantities of artillery launched and aerial delivered cluster munitions are taken into account. One Israeli commander described the cluster munition attacks as "insane and monstrous."⁸ In only one month after the ceasefire bomb disposal teams had destroyed over 25,000 submunitions. Three days of indiscriminate cluster munition use have left a deadly legacy in southern Lebanon that will take years to clear up.

In the course of these attacks, Israel appears to have (again) violated a 1976 secret agreement that placed restrictions on the country's use of certain U.S.-supplied cluster munitions.⁹ The repeated violations of this agreement since the 1970s highlight the complete inadequacy of such bilateral assurance as a basis for civilian protection from these weapons. Despite such repeated breaches, the U.S. agreed a license worth \$615,496 for the sale of 1,300 M26 cluster rockets to Israel in 2005.¹⁰ Israel requested expedited delivery of these rockets during the war in Lebanon, but (at the time of writing) the U.S. State Department was still considering the situation.¹¹ The repeated failure of such bilateral agreements to prevent civilian harm indicates the need for states to develop an international arms trade treaty.

Most importantly, the harm caused by cluster munitions in Lebanon demands further consideration regarding use, production and transfers of these weapons – indeed in some states the situation in Lebanon has already precipitated further political engagement on this issue.¹²

At different times, some 30 states have already expressed explicit concerns regarding cluster munitions.¹³ However, a significant number of states have also maintained that using modern submunitions like the Israeli manufactured M85 will prevent a reoccurrence of post-conflict problems associated with these weapons. Countries that stockpile Israeli M85s, such as the UK, Argentina, Austria, Finland, Germany, Greece, India, Italy, Romania, Switzerland and the U.S. should note that these submunitions are contaminating the towns and villages of southern Lebanon alongside all of the other types deployed. Claims that such modern submunitions are a solution to the 'problem' of cluster munitions do not stand up against the evidence of the Lebanon conflict.

Over the past 40 years cluster munitions have caused a consistent pattern of humanitarian harm during and after conflicts. The humanitarian suffering caused in Lebanon again underlines the urgency for states to stop the use of cluster munitions and work for binding legal prohibitions on the use, production, stockpiling and transfer of these weapons.

Key findings

Patterns of use

- Israel used cluster munitions extensively in south Lebanon during July and August 2006 with particularly heavy use in the 72 hours prior to the ceasefire.
- Israel employed surface-delivered cluster munitions, including 1,800 U.S.-supplied cluster rockets and an unknown number of U.S. and Israeli-manufactured 155mm artillery projectiles. U.S.-supplied Vietnam-era air-dropped cluster bombs were also used.
- Approximately 60% of Israeli cluster strikes hit built up areas. As of 5 September 2006, cluster munition strike sites were recorded in 90 towns and villages.
- Although warnings were delivered, significant numbers of people including the elderly and infirm remained behind and some were killed and injured.
- Cluster munitions do not appear to have had any significant impact toward the military aims stated by Israel during the war. The massive and widespread use of cluster munitions across south Lebanon does not seem to accord with any recognisable legitimate military strategy.

Impact

- During the conflict cluster munitions caused deaths and injuries amongst civilians who were unable or unwilling to evacuate their homes.
- Very large quantities of unexploded submunition contamination have been created, including contamination from those submunitions fitted with self-destruct mechanisms.
- Significant numbers of civilians have been killed and injured by unexploded submunitions at an average of 3–4 casualties per day during the first month since the ceasefire. Approximately 35% of the casualties from unexploded submunitions have been children.
- 97 percent of all casualties from unexploded ordnance and mines since the ceasefire have been caused by cluster munitions.
- One month after the ceasefire, unexploded cluster munitions were identified as one of the most significant threats to civilian life in southern Lebanon.
- Residential areas across south Lebanon have been densely contaminated with large numbers of unexploded submunitions.
- Submunition duds have endangered returning populations and prevented some Lebanese people from returning home. Cluster munitions have hindered relief efforts and will impede work to rehabilitate communities.
- Unexploded cluster munitions are affecting the areas of south Lebanon that are already subject to the highest levels of poverty.
- Cluster munitions have seriously affected livelihoods by blocking water supplies, disrupting work to restore power lines and preventing excavation of rubble and reconstruction efforts.
- Unexploded cluster munitions have prevented or endangered the harvest of remaining tobacco, olive, wheat and fruit crops and will prevent or endanger the replanting of winter grain and vegetable crops.

Conclusions regarding the causes of civilian harm

- Cluster munitions are an inherently problematic weapon for two primary reasons: their wide area effects mean they kill and injure civilians when used in or near populated areas, and the weapon leaves large numbers of unexploded submunitions that act like *de facto* landmines long after conflicts. Both of these problems were demonstrated in Lebanon in 2006.
- Israel's apparent failure to adhere to key tenets of international humanitarian law such as the rules of distinction, the rule against indiscriminate attacks and the rule of proportionality in attacks with cluster munitions exacerbated the immediate and post-conflict suffering caused by these weapons.
- The use of cluster munitions in or near areas of civilian population caused unnecessary civilian casualties during attacks.
- The use of these weapons, including those fitted with self-destruct mechanisms, created extremely large quantities of unexploded ordnance contamination in houses, throughout towns and villages, on agricultural land and around key points of infrastructure. This dense contamination has been a significant cause of unnecessary civilian death and injury in the immediate post-conflict period.

Underpinning these conclusions, we note the following:

- The failure of the Government of Israel to stop cluster munition use in response to appeals from humanitarian organisations that these weapons would cause unnecessary civilian casualties.
- The failure of Governments such as the U.K. and the U.S. to reinforce such appeals. Recent U.K. and U.S. use of cluster munitions has served to develop the rhetoric that these are ‘legal weapons’ as a sufficient response to criticism of the excessive harm that they cause.
- The failure of states to act in international fora such as the Convention on Certain Conventional Weapons (CCW) despite ongoing appeals from humanitarian organisations that these weapons need to be specifically addressed and despite consistent evidence regarding the problems associated with these weapons.
- The repeated failure of long-standing bilateral agreements aimed at curbing Israel’s use of certain U.S. manufactured cluster munitions. This failure of bilateral end-use agreements to prevent humanitarian harm from cluster munitions highlights the need for a broader binding international instrument on arms transfers and the proposed international arms trade treaty (ATT) would provide such an international mechanism.
- The inadequacy of current international humanitarian law as a mechanism for effectively controlling the impact of cluster munitions. This inadequacy has been repeatedly demonstrated. An international instrument placing prohibitions on the use, production, stockpiling and transfer of cluster munitions is urgently needed.

GLOSSARY OF COMMON ACRONYMS

APM	Anti-personnel mines
ATT	Arms trade treaty
BLU	Bomb Live Unit
CBU	Cluster Bomb Unit
CMC	Cluster Munition Coalition
CCW	Convention on Certain Conventional Weapons
ERW	Explosive remnants of war
IDF	Israeli Defence Force
IHL	International humanitarian law
IGOs	Inter-governmental organisations
MLRS	Multiple Launch Rocket System
NGOs	Non-governmental organisations
OCHA	United Nations Office for Coordination of Humanitarian Affairs
UNIFIL	United Nations Interim Force In Lebanon
UNMACC SL	United Nations Mine Action Coordination Centre South Lebanon
UNMAS	United Nations Mine Action Service
UXO	Unexploded ordnance

2.0 Use of cluster munitions during the conflict

- Israel used cluster munitions extensively in south Lebanon with particularly heavy use in the 72 hours prior to the ceasefire.
- Israel employed surface-delivered cluster munitions, including 1,800 U.S.-supplied cluster rockets and an unknown number of U.S. and Israeli-manufactured 155mm artillery projectiles. U.S.-supplied Vietnam-era air-dropped cluster bombs were also used.
- Some 60 percent of cluster strikes were in or around villages or towns. Although warnings were delivered, significant numbers of people including the elderly and infirm remained behind.
- Certain U.S.-manufactured and supplied cluster munitions are likely to have been used by Israel in contravention of restrictions placed upon their use by the U.S. in 1976. As a result the U.S. Department of State is reportedly investigating Israeli use of cluster munitions during the war.
- Cluster munitions do not appear to have had any significant impact towards achieving the military aims stated by Israel during the war. The massive and widespread use of cluster munitions across south Lebanon does not seem to accord with any recognisable legitimate military strategy.

Types of submunitions used during the conflict

According to publicly available information, Israel's stockpile of cluster munitions contains three types of U.S.-manufactured cluster munitions and one type of Israeli-manufactured cluster munition (though a number of variants have been noted within that 'type'). One type of cluster submunition found in southern Lebanon is thought to be a Chinese manufactured MZD2.¹⁴ The origin and circumstances of use of the Chinese MZD2 submunitions are not fully known at the time of writing. However the MZD2 submunitions found during field research in early September were located in an area that had been bombarded with cluster munitions by Israel during the last 72 hours of the conflict and the MZD2 submunitions were found in a pattern consistent with other Israeli-fired cluster munitions found in the same location.

Artillery

M483A1 155MM PROJECTILE	
Contains	64 M42 and 24 M46 submunitions
Delivered by	artillery cannon
Range	23–28 km
Produced by	Alliant Techsystems, U.S.
Israeli stock	unknown.
Stockpiled by	Bahrain, Canada, Greece, Israel, Jordan, Morocco, Pakistan, S. Korea, Turkey, U.S.



All photos of submunitions in this section by Simon Conway © Landmine Action 2006

M395 & M396 155MM PROJECTILE

Contains 63 or 49 M85 submunitions

NB: There are at least two different types of M85 submunition found unexploded in Lebanon. One is a copy of the M42 and M46 submunitions and one has an added self-destruct mechanism with 'fail safe' position during the arming sequence.



Delivered by artillery cannon

Range 23–36 km

Produced by Israeli Military Industries (IMI) Israel

Israeli stock Precise number unknown. IMI has produced over 60 million M85 submunitions.

Stockpiled by Argentina, Austria, Denmark, Finland, Germany, Greece, India, Italy, Israel, Norway, Romania, Switzerland, U.K., U.S.

Rockets

M26 ROCKET

Contains 644 M77 submunitions

Delivered by Multiple Launch Rocket System (MLRS).
A typical MLRS volley releases 6 rockets.

Range 32 to 38 km

Produced by Lockheed Martin, U.S.

Israeli stock unknown

Stockpiled by Bahrain, France, Germany, Greece, Israel, Italy, Japan, S. Korea, Turkey, U.K., U.S



(PROBABLY) NORINCO 122MM ROCKET

Contains unknown number of MZD2 submunitions

Delivered by unknown

Range unknown

Produced by NORINCO, China

Israeli stock unknown

Stockpiled by China, other stockpilers unknown



Air-dropped bombs

CBU 58B BOMB

Contains	650 BLU 63 submunitions
Delivered by	air-dropped CBU 58B bombs
Range	dependent on aircraft
Produced by	Lockheed Martin / Lanson, U.S.
Israeli stock	unknown
Stockpiled by	Israel, Morocco, Saudi Arabia



Photo courtesy of Mines Advisory Group (MAG) 2006

This CBU 58B cluster bomb found near Nabatiyeh has displayed complete failure. Presumably after failing to open properly during delivery virtually none of the submunitions have dispersed, armed or exploded. The 1-year U.S. warranty for the cluster bomb was also visible on the side of the container, having expired in July 1974.

Extent and timing of cluster munition use

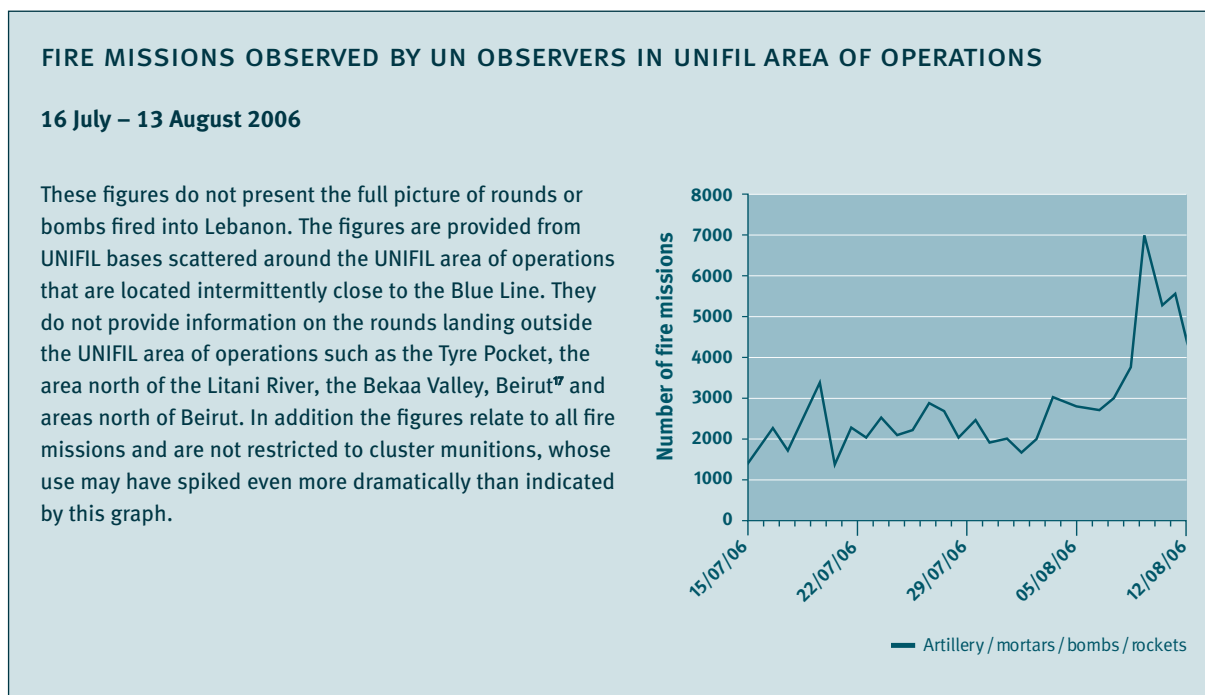
Israel used cluster munitions extensively in south Lebanon with particularly heavy use in the 72 hours prior to the ceasefire. There was a very significant increase in the intensity of the overall bombardment in the final 72 hours. The UN's humanitarian coordinator for Lebanon, David Shearer noted:

“In the beginning of the war, too, there were reports on the use of cluster bombs but only a few. In the three last days, a tremendous amount of them were fired. It's also hard to know where they were aimed. The dispersion of the bombs is so wide that even if the original target were outside a populated area, many bombs fell amid the houses.”¹⁵

An Israeli reservist soldier interviewed by the Tel Aviv-based newspaper Haaretz gave a description of the bombardment they undertook 72 hours before the ceasefire:

“In the last 72 hours we fired all the munitions we had, all at the same spot, we didn’t even alter the direction of the gun. Friends of mine in the battalion told me they also fired everything in the last three days – ordinary shells, clusters, whatever they had.”¹⁶

Situation reports from UNIFIL observers during the conflict also indicate a marked increase in artillery and rocket fire over the last 72 hours of the conflict. Whilst an average of 2,000 fire missions were recorded each day during the conflict, this increased to approximately 6,000 per day in the last three days before the ceasefire.



While the exact number of cluster munitions fired had not been released at the time of writing, an Israeli MLRS unit commander was quoted in the Haaretz newspaper as saying that Israeli forces had used 1,800 M26 rockets, containing 1.2 million M77 submunitions. This number does not include the artillery cluster munitions or air-dropped cluster bombs used. Further details of the use of cluster munitions during the final 72 hours prior to the ceasefire have emerged from the same IDF MLRS unit commander as quoted in Haaretz:

According to the commander, in order to compensate for the rockets’ imprecision, the order was to ‘flood’ the area with them. “We have no option of striking an isolated target, and the commanders know this very well,” he said. He also stated that the reserve soldiers were surprised by the use of MLRS rockets, because during their regular army service, they were told these are the IDF’s ‘judgment day weapons’ and intended for use in a full-scale war.

The commander also said that at least in one case, they were asked to fire cluster rockets toward ‘a village’s outskirts’ in the early morning: “They told us that this is a good time because people are coming out of the mosques and the rockets would deter them.” In other cases, they fired the rockets at a range of less than 15 kilometres, even though the manufacturer’s guidelines state that firing at this range considerably increases the number of duds. The commander further related that during IDF training exercises hardly any live rockets are fired, for fear that they would leave duds behind and fill the IDF’s firing grounds with mines.¹⁸

3.0 Use in populated areas and impact during attacks

- Some 60 percent of cluster strikes were in or around villages or towns.
- Although warnings were given, significant numbers of people including the elderly and infirm remained behind and some were killed and injured.

Simon Conway © Landmine Action 2006



This artillery launched M42 submunition was one of hundreds found in and around Maryam Shahin's house in Yaroun.



Chinese manufactured MZD2 submunition found near Beit Yahoun

Thomas Nash © CMC 2006

Translation:

To the inhabitants of the villages south of the Litani river.

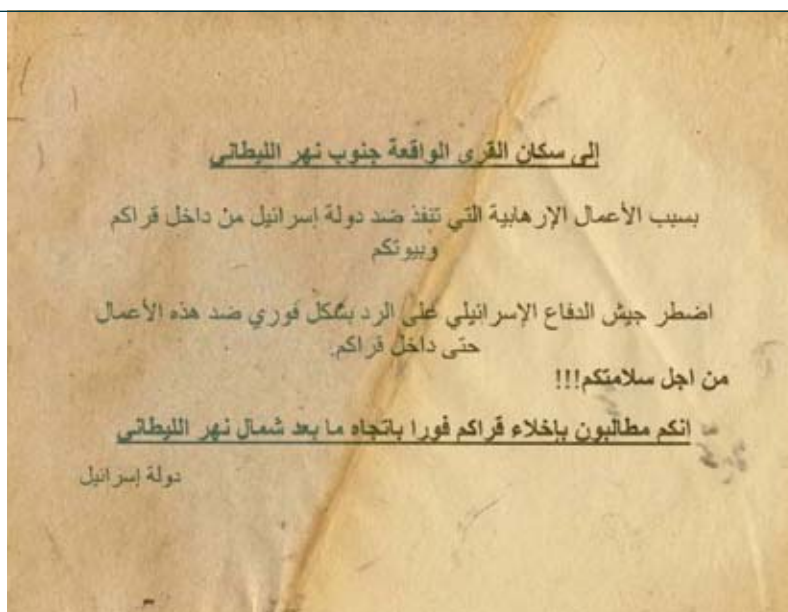
Concerning the terrorist activities that are taking place from your villages and from your houses.

The Israeli Defense Forces are forced to respond immediately to these activities, even inside villages.

For your security!!!

We ask you to evacuate your villages immediately and move north of the Litani.

State of Israel

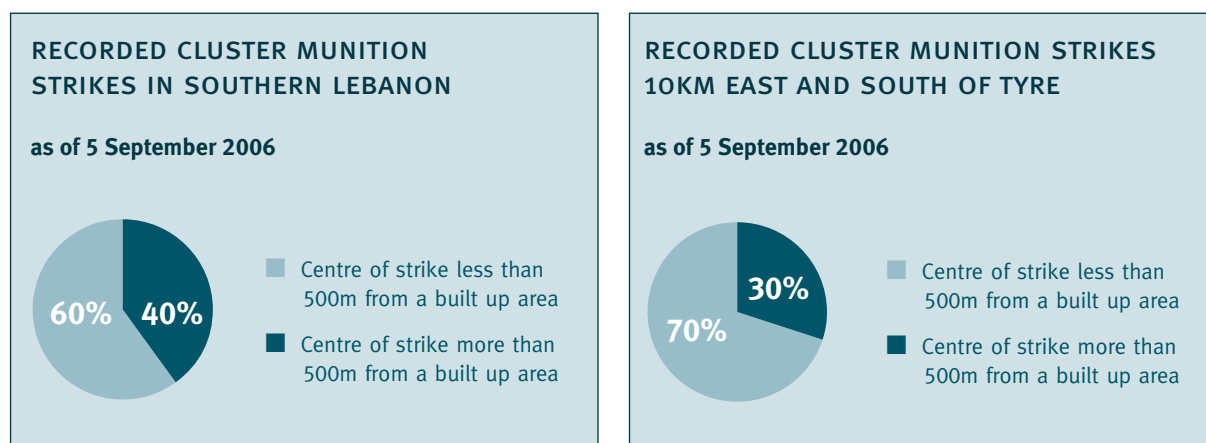


Israeli warning leaflet, scanned from the original found in Beit Yahoun, 8 September 2006

While most of the civilian population evacuated after Israel dropped leaflets warning people to leave their homes and move north, it was common for one member of a family to remain behind throughout the war. In some cases this was because they were elderly or infirm, did not have a vehicle or could not afford the passage. A powerful reason for many though, particularly the older generation, was an unwillingness to abandon their homes and their land for fear of having them occupied by Israel. According to a letter from Human Rights Watch to the U.S. government written during the war:

“Despite Israeli warnings to evacuate, an estimated 100,000 civilians remain in southern Lebanon because of infirmity, inability to afford exorbitant taxi fares to leave, or fear of becoming another roadside casualty of Israeli attacks. Israel’s persistent failure to recognize this reality – indeed, its government’s repeated denial of it – leaves its promise to use cluster munitions only in non-civilian areas unreliable.”¹⁹

UNMACC SL records of cluster strikes as of 5 September indicated that at least 90 towns and villages in southern Lebanon were hit by cluster munitions during the conflict. Once complete records of cluster munition strikes in southern Lebanon have been compiled the number of towns and villages hit is likely to rise still further.²⁰



Further analysis of the map of cluster strikes recorded by UNMACC SL indicates that 60% of all recorded cluster strikes fell within 500 metres of a built up area. In the densely populated area 10km south and east of Tyre known as the Tyre pocket, this percentage rises to 70%.²¹

Cluster munitions were used sporadically throughout the conflict, with Human Rights Watch reporting that a cluster strike on the village of Blida on July 19 killed one civilian and injured 12 more, including seven children.

“According to eyewitnesses and survivors of the attack interviewed by Human Rights Watch, Israel fired several artillery-fired cluster munitions at Blida around 3 p.m. on July 19. The witnesses described how the artillery shells dropped hundreds of cluster submunitions on the village. They clearly described the submunitions as smaller projectiles that emerged from their larger shells.

The cluster attack killed 60-year-old Maryam Ibrahim inside her home. At least two submunitions from the attack entered the basement that the Ali family was using as a shelter, wounding 12 persons, including seven children. Ahmed Ali, a 45-year-old taxi driver and head of the family, lost both legs from injuries caused by the cluster munitions. Five of his children were wounded: Mira, 16; Fatima, 12; ‘Ali, 10; Aya, 3; and `Ola, 1. His wife Akram Ibrahim, 35, and his mother-in-law `Ola Musa, 80, were also wounded. Four relatives, all German-Lebanese dual nationals sheltering with the family, were wounded as well: Mohammed Ibrahim, 45; his wife Fatima, 40; and their children ‘Ali, 16, and Rula, 13.”²²

Field research in early September determined further casualties in at least two villages during cluster munition strikes at the end of the conflict as the case studies below illustrate.²³The true extent of civilian harm from cluster munitions during the conflict may never be fully documented, but civilian casualties have been recorded amongst those residents that did not leave their homes before the intense bombardment commenced in the last 72 hours before the ceasefire.

Case study: Yaroun



Photos: Simon Conway © Landmine Action 2006

Yaroun is a town of 3,500 inhabitants located on the 'Blue Line' that separates Lebanon from Israel. The town was heavily bombed throughout the conflict and like most of the towns and villages of south Lebanon it was subject to intense cluster munition bombardment during the last three days of the war. Residents conducted clearance after the ceasefire, but three weeks later no formal clearance work had been undertaken in the town.

There are reports of at least 4 civilians killed during the bombardment in Yaroun: Rana Farhad, 3, her sister Zahara Farhad, 6 and their elderly grandparents.²⁴ Abu Nazir stayed in Yaroun throughout the conflict because he did not want to leave his land and his home.



"I stayed in my house during the war, during the 34 days. I did not want to leave because I am the owner of my house, not the Israelis, not anyone else so I decided to stay. Before the ceasefire the bombings got worse, there was much heavier bombardment. When I went outside after the bombing stopped, I saw many cluster munitions all around."

Abu Nazir, 68, retiree, Yaroun

M42 and M46 cluster munitions in a fig orchard behind Jamil Shahin's house in Yaroun. His yearly fig crop is going to waste with fruit splitting on trees and rotting on the ground because the orchard is densely contaminated with unexploded cluster munitions, some partially buried in the soft soil.





“I must tell you that for the last 25 days my brain was shut down, like a computer. I stayed here during the fighting and evacuated four people myself. One old lady was missing a foot and I helped to take her to Tibnine.

Then they started to fire the cluster bombs, in the last days of the war. One old man, Haj Hassan Hakim, was killed when the cluster bombs fell because he was too old to walk and there was no vehicle to evacuate him.

On the day of the ceasefire I walked through the cluster bombs to his house and I found him inside. His house was hit three days before the ceasefire but by the time I got to him he had bled to death.”

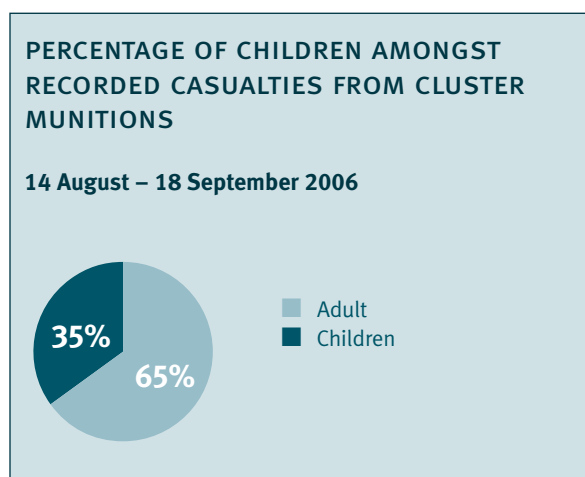
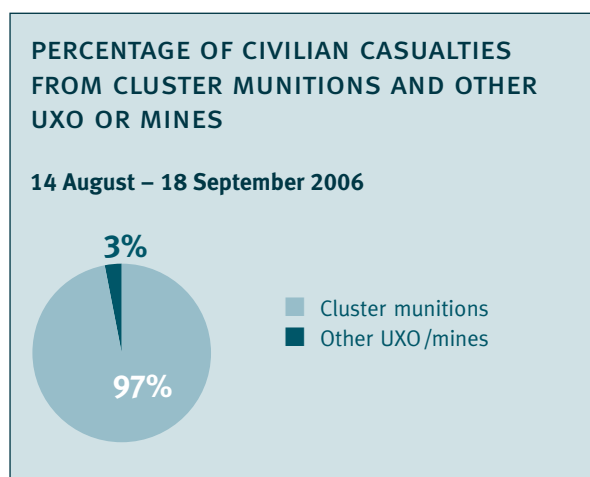
Ali Zein Eddin, 43, builder, Beit Yahoun

4.0 Post conflict impact

- Very large quantities of unexploded submunition contamination have been created, including contamination from those submunitions fitted with self-destruct mechanisms.
- Significant numbers of civilians have been killed and injured by unexploded submunitions at an average of 3–4 casualties per day during the first month since the ceasefire. Approximately 35% of the casualties from unexploded submunitions have been children.
- 97 percent of all casualties from unexploded ordnance and mines since the ceasefire have been caused by cluster munitions.
- One month after the ceasefire, unexploded cluster munitions were identified as one of the most significant threats to civilian life in southern Lebanon.
- Residential areas across south Lebanon have been densely contaminated with large numbers of unexploded submunitions.
- Submunition duds have endangered returning populations and prevented some Lebanese people from returning home. Cluster munitions have hindered relief efforts and will impede work to rehabilitate communities.
- Unexploded cluster munitions are affecting the areas of south Lebanon that are already subject to the highest levels of poverty.
- Unexploded cluster munitions have prevented or endangered the harvest of remaining tobacco, olive, wheat and fruit crops and will prevent or endanger the replanting of winter grain and vegetable crops.
- Cluster munitions have seriously affected livelihoods by blocking water supplies, disrupting work to restore power lines and preventing excavation of rubble and reconstruction efforts.

Post conflict casualties from cluster munitions

In the first month after the ceasefire the UN recorded 83 civilian casualties directly attributable to cluster munitions. Other recorded casualties may have been caused by cluster munitions but the information was uncertain. Still more people may have had accidents without this information being recorded into the UN system. Injuries included amputations of hands and limbs, puncture wounds, burns, and fragmentation wounds.



Data taken from UN MACC SL records, provided to researchers on 19 September 2006.

Approximately 35 percent of these casualties have been children.²⁵ Many children from southern Lebanon sought refuge with family members in Saida, Beirut and other parts of the country during the conflict. As more and more children return to their homes in south Lebanon, the proportion of child casualties may rise.

In addition 5 Lebanese Armed Forces EOD operators have been killed while dealing with unexploded cluster munitions.

Jabel Amel Hospital, Tyre 8 September 2006

Ali Ahmed Mansour, 17 and Kasim Mohamed Sharour, 16 are from the village of Qabrikha near Toulin where they work in their father's shop. After the ceasefire they had started work again and life at the shop was getting back to normal. On Thursday 7 September at 8.30 in the morning the two boys were riding a motorcycle from Qabrikha to pick up supplies in Tibnine when they drove over a cluster submunition.



“I was driving the motorbike along and Ali was on the back. I don't know what happened but something exploded and we were thrown from the motorbike. I had injuries from the explosion and also from the crash when I hit the ground. Ali was also hurt when he hit the ground, his shoulder is broken now.”

Kasim Mohamed Sharour, 16, Qabrikha



“I have had to close the shop again after only opening it last week. The boys cannot work there and I have to be with them here in the hospital. Now at a time when I need to make money more than ever, I have had to close my shop again. I don’t know how I will survive.”

Ahmed Mansour, Father of Ali Ahmed Mansour and shopkeeper, Qabrikha

Deir Qanoun Al Ras Ein

9 September 2006

The village of Deir Qanoun Al Ras Ein is surrounded by tobacco fields and fruit trees on the side of a hill. The Hussein family returned to their house on the edge of a broad wadi (a river bed) two days after the ceasefire. Residents undertook clearance themselves in the days after the ceasefire to make roads and houses safe, but cluster munitions remain in gardens and agricultural fields.

Hassan Hemadi, 12, was weeding in the garden two weeks after the ceasefire when he picked up a submunition that was lying on the ground. His sisters and brothers remember hearing the accident happen.

Hassan was taken to the Priory Hospital in Birmingham, UK with the assistance of the humanitarian organisation Islamic Relief. He has a serious injury in his stomach and may have fragments still lodged in his bowel. He has also lost four fingers from his right hand. Specialists at the hospital in Birmingham will remove any remaining cluster munition fragments from his bowel, treat the amputation of his fingers and attempt to reconstruct his hand, possibly by grafting on one of his toes.

“My brother was in the garden when we heard an explosion. He ran up the stairs holding his bleeding hand and his belly which was open.”

Fatimah Hemadi, 19, Deir Qanoun Al Ras Ein



Photo: Simon Conway © Landmine Action 2006

“I was watering the garden and picking weeds and I saw a metal object. I did not know what it was and so I picked it up. I did not know that it was dangerous, I started playing with the ribbon on the end, twirling it around. Then I don’t know what happened, it exploded. Now I have lost the fingers on my hand”

Hassan Hemadi, 12, Saida Hospital

A table of civilian casualties from cluster munitions, mines and other unexploded ordnance in the month subsequent to the 14 August ceasefire is provided at Annex A.

An Amnesty International mission to Lebanon gathered additional testimonies of people injured by post-conflict unexploded ordnance. Again, cluster munitions came to the fore as the most widespread and lethal contaminants.

Six-year-old 'Abbas Yusef Shibli described to Amnesty International delegates how a cluster bomb exploded as he tried to pick it up in the village of Blida on 26 August. Speaking from a hospital bed, Abbas said he was playing with three friends when he tried to pick up what looked like a "perfume bottle". Abbas suffered a ruptured colon, ruptured gall bladder, perforated lung and torn medial nerve and has so far undergone two blood transfusions. His three playmates were also injured, but discharged after two days.

In the next room, Mahmud Yaqub, a 38-year-old shepherd, lay with his leg in plaster having had it shattered when he stepped on a cluster bomb. Mahmud said he'd lost four of his 21 goats during the Israeli attacks as they were unable to get to water. He was rarely able to take them outside during the fighting and now, since the ceasefire, cluster bombs litter the hillsides which are their normal pasture.

19-year-old Hussein Qaduh, a student in accounting at the Beirut Islamic Technical Institute, was severely injured by a cluster bomb on 28 August in the southern Lebanese village of Soutaniye as he walked along a path in the village next to a football field. When Amnesty International delegates visited the area the next day, they found it was littered with unexploded cluster munitions, some of them a few inches from the path, where the blood was still visible on the ground. Hussein underwent extensive surgery for haemorrhaging in the intestines and liver. This was stopped but bleeding continued in the brain. His prognosis was described as extremely critical.²⁶

RISK EDUCATION AND ASSISTANCE TO SURVIVORS

In the aftermath of the 34-day conflict the medical services in Lebanon were already stretched. In southern Lebanon the need for medical services was particularly acute. Local organisations and associations provided much needed support to prevent accidents and to provide assistance to survivors of cluster munition accidents and their families.

Habbouba Aoun runs the Landmine Resource Center (LMRC) in Beirut, an organisation based in the Faculty of Health Sciences of the University of Balamand. Teams from the LMRC began mobilising on the day of the ceasefire to ensure the provision of emergency risk education to children and to returning populations and to assess the needs of survivors from cluster munition accidents. As well as running risk reduction education events and workshops throughout Lebanon, the LMRC, member of the National Committees of Mine Risk Education and of Landmine Victim Assistance, helps in capacity building of a number of locally based



Photo: Thomas Nash © CMC

Habbouba Aoun explaining the dangers of unexploded of cluster munitions and other ERW,

Impact on returning populations and relief and rehabilitation efforts

The UN's humanitarian coordinator for Lebanon in the post-conflict period, David Shearer, noted soon after the ceasefire that cluster munitions were one of the main obstacles to rehabilitation in southern Lebanon.

“We'll finish fixing the water and electricity within two weeks, but it will be 12 or even 15 months before we make southern Lebanon a safe area. Right now the residents are afraid to return to their homes. The farmers are afraid to return to the fields.”

David Shearer, UN Humanitarian Coordinator for Lebanon²⁷

Similarly, Arjun Jain, of the United Nations High Commissioner for Refugees noted with regard to cluster munitions that “this is clearly the biggest threat to civilian life especially south of the Litani river.”²⁸ Oxfam's programme coordinator for southern Lebanon noted that the rehabilitation efforts would be seriously endangered by the presence of unexploded submunitions.

“It's shocking to see the situation. As people were massively displaced during the conflict they were not caught by the effects of the weapons during the war. But as they return to their homes they will feel the consequences of cluster munitions. It is going to really hinder the rehabilitation process, I don't know how we're going to deal with it. If we do not have access because of unexploded cluster munitions our work will be very difficult.”

One NGO Programme Coordinator²⁹

Other relief NGOs have noted the increased need for rehabilitation services stemming from the use of cluster munitions, as this press release from International Medical Corps illustrates:

International Medical Corps is actively addressing one of the most difficult aspects of post-war Lebanon: the increased use of cluster bombs and the toll that they're taking on the country's water supply. The ubiquitous

organisations active in southern Lebanon. One of these organisations is the Vision Association for Development, Rehabilitation and Care.

Dr Nasser Abou Ltief is the director of Vision Association. He worked with the LMRC and other organisations to provide an emergency response after the ceasefire:

“The first priority is prevention through education and awareness. So we provide documents explaining the risks to returning populations. We provided training sessions in schools and municipalities for residents to learn first aid and to undertake risk reduction education themselves in their own communities.”

NGOs in Lebanon, members of the National Committee on Victim Assistance are now helping to deal with the short and medium term needs of survivors. The injuries range from burns, fragmentation wounds, stomach and bowel wounds, amputation of limbs and extremities, blindness and brain damage. A number of recent cluster munition

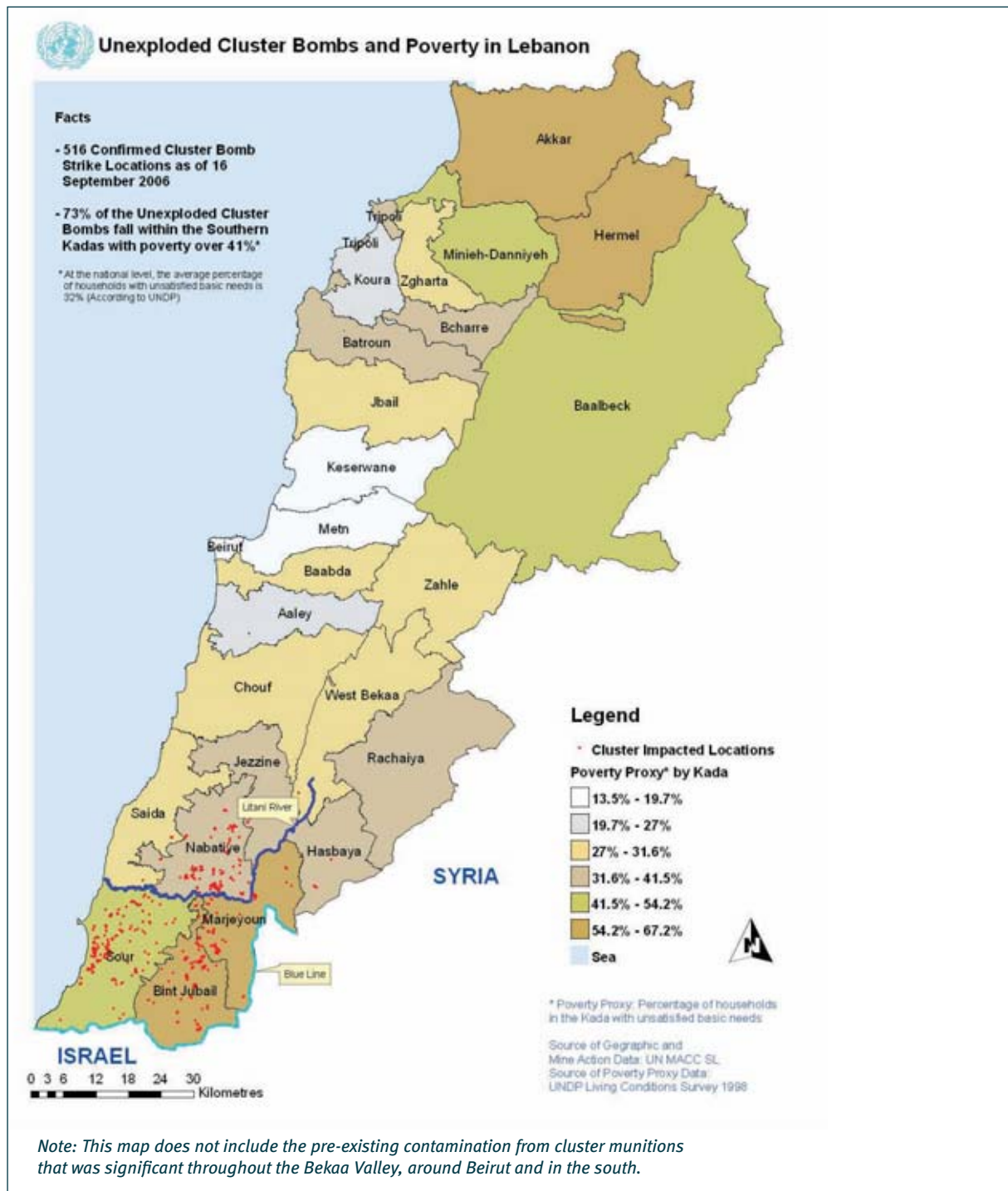
victims remain in a coma. The Committee is providing survivors with prostheses, wheelchairs and other materials they need. These services are provided for free and where possible patients with severe injuries are being sent abroad for specialist treatment. Psychological care for survivors and their families is a priority now in Lebanon.

“When I meet the families of the victims, they are destroyed. Cluster bomb survivors are not only injured or amputated but they also suffer psychologically and professionally. We provide the families of these survivors with books, equipment and techniques so that they can help their injured family members readjust to their disabilities.”

black plastic water tanks on rooftops all over southern Lebanon are especially vulnerable to cluster bomb shrapnel. When these tanks are punctured, residents have no way of storing water at their homes.³⁰

Much of southern Lebanon was damaged or destroyed during the conflict and existing poverty is now being exacerbated because cluster munition contamination is blocking livelihood activities. Equally the disruption to relief and rehabilitation efforts in south Lebanon will be felt more acutely given the already high levels of poverty in the areas affected by cluster munitions. According to the UN Office for Coordination of Humanitarian Affairs (OCHA):

“In these areas damaged and destroyed by Israeli attacks are now the highest concentrations of unexploded cluster bombs, ensuring that the impact of the Israeli attacks will be felt for years to come.”³¹



Impact on livelihoods

One month after the ceasefire, water supplies were blocked, power could not be restored to many towns and villages and schools, roads, houses and gardens were still littered with cluster munition duds. Farmers could not safely harvest what was left of their tobacco, wheat and fruit; late yielding crops such as olives will most likely remain too dangerous to harvest by November and winter crops were likely to be lost because farmers would be unable to plough their cluster munition contaminated land to plant their grains and vegetables. The following case study from the town of Majdal Selem provides an illustration of the types of livelihood impacts cluster munitions are having in south Lebanon.

Case study: Majdal Selem, 6–8 September 2006



Photo: Simon Conway © Landmine Action 2006

The view from the roof of Majdal Selem primary school shows widespread destruction throughout the town. Much of the rubble is contaminated with unexploded cluster munitions.

Majdal Selem is a town of 9,000 residents located on a plateau 25km east of Tyre with deep wadis to the south and east. The town is surrounded by olive groves, orchards and wheat fields. Most of the residents left after the Israelis dropped leaflets in the final week of the war warning the inhabitants to leave. In the final 72 hours of the conflict the town and the area several kilometres to the north and south of it were subject to intense bombardment with cluster munitions.

The first residents began returning to their homes on the day of the ceasefire but the majority did not return until Lebanese Armed Forces (LAF) and Mines Advisory Group (MAG) teams had undertaken emergency survey, marking and clearance to remove the hundreds of cluster munitions blocking the roads and preventing access to homes. Three weeks after the ceasefire the town was without power and water, the primary school and people's houses and gardens remained affected by cluster munitions. There were five reported casualties from unexploded submunitions in the first month after the ceasefire.

“Cluster munitions? When they fail to get a certain area then they bombard it with cluster munitions. And when they bombard a certain area with cluster munitions you can be sure that they will not go there. They will not put cluster munitions in front of their troops. They throw cluster munitions in towns and villages just to get revenge.”

Ghaleb Elmaaz, 47, Farmer, Majdal Selem

Cluster munitions in houses

Photos: Simon Conway © Landmine Action 2006



Left an M42 submunition inside a house in southern Majdal Selem.

Right an M42 submunition on top of the Elmaaz family home in central Majdal Selem.

Returning residents in Majdal Selem have found submunitions in their houses, on their roofs and in their gardens. Three weeks after the ceasefire many submunitions remained inside their houses.

Ghaleb Elmaaz is one of Majdal Selem's farmers, cultivating fields of tobacco and olive and fruit trees. He described his return to the village on Tuesday 15th August:

“Cluster munitions were everywhere on the street, in the gardens and even now after people came to destroy them I still have many in the orchard. So, after I saw them all around my house I went up onto the roof to check and I found the cluster munition sitting there. We cannot go back to normal until the whole place is cleared, but we have nowhere else to live.”

To save the Elmaaz home, a specialist from one of the bomb disposal teams working in south Lebanon will have to fix the fuze of the submunition so that it can be moved and destroyed safely elsewhere.

Photo: Simon Conway © Landmine Action 2006



An M42 submunition on the side of the road in southern Majdal Selem.

At the southern end of the village there is a pair of damaged houses that were briefly occupied by Israeli paratroopers during the conflict. Residents will not come back to retrieve their belongings until the cluster munitions have been cleared from the buildings and the surrounding olive groves. Mohamed Zahwi, a 22-year-old engineer explained the dangers of the unexploded submunitions:

“Here on the road you can see them more easily. But behind in the field it is hard to see them, they are the same colour as the ground. The biggest number of the submunitions is in the field.”

Water supply

In the centre of Majdal Selem, there is a large municipal reservoir that serves as the principal water source for the town. The reservoir has been dry since the war and after the conflict had ended it could not be refilled or prepared for use until the unexploded cluster munitions inside it had been cleared.

Another nearby water source for the town, Wadi Al Qaisyeh was also contaminated by cluster munitions. At the time of writing the residents of Majdal Selem were relying on plastic water tanks that only arrived in the town three weeks after ceasefire.



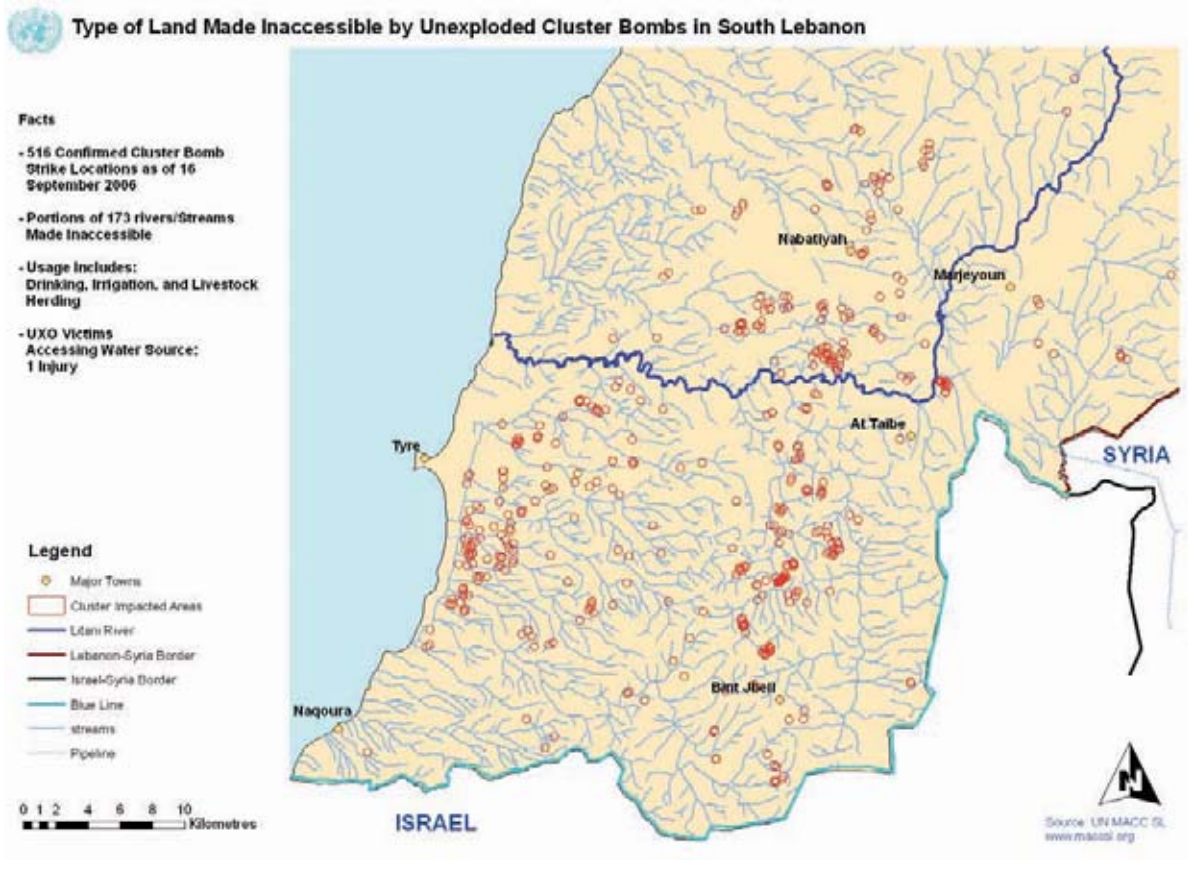
An M77 submunition at the edge of Wadi Al Qaisyeh, the primary water source for Majdal Selem and other surrounding villages. Over a dozen submunitions remained in the vicinity of the Wadi three weeks after the ceasefire although emergency clearance had already been conducted to allow access to the construction site.

WATER RESOURCES THROUGHOUT SOUTHERN LEBANON

Majdal Semel is one example of the widespread disruption to water supplies caused by the presence of unexploded cluster munitions throughout southern Lebanon. According to OCHA:

“Water resources have also been contaminated. The banks and streambeds of 173 streams and rivers in South Lebanon are littered with unexploded cluster bombs putting shepherds and farmers irrigating their fields are at risk.”³²

The following map shows the extent of cluster munition contamination in and around water supplies. Water is already a scarce resource in south Lebanon and the amount of land made inaccessible by unexploded cluster munitions will impact heavily on the poorest areas of the country that rely on agriculture for an income.



Majdal Selem Primary School

The primary school in Majdal Selem was significantly damaged during heavy bombardment with cluster munitions and other weapons during the final days of the war. The town had been mostly abandoned after the 48 hour warning to leave came down from Israel. Hussain Rahal is the supervisor of the school and Rafik Zahwe is one of the teachers. They came back on 15th August to inspect the school after spending the war as displaced people in Saida and Beirut.

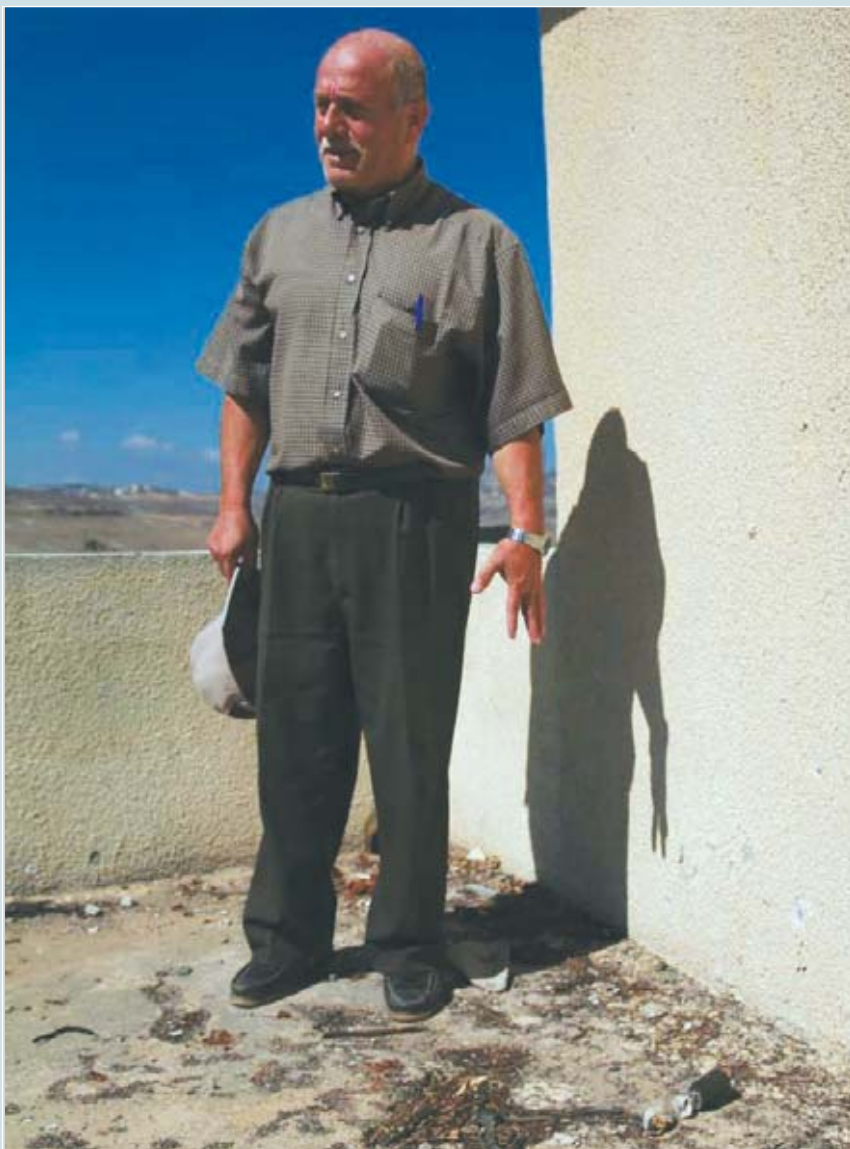


Photo: Simon Conway © Landmine Action 2006

Hussein Rahal, supervisor of Majdal Selem Primary School points to a submunition on the roof of his school.

“The windows, roofs, walls, blackboards, even the desks have been destroyed. In the village on the main road there were a lot of cluster munitions, which have now been cleared from the road. But they have not cleared the cluster munition that we found on the roof of the school on the first day we came back. They say this was a Hezbollah basement but there were no resistance fighters here.

We are waiting for someone to come and clear it before the children can return. You can hear, while we have been walking around the school there have been many explosions from the army clearing cluster munitions nearby. Now it is time for the school to open and we are already late.”

Hussein Rahal, 50, Supervisor of Majdal Selem Primary School

The whole town has been affected, but the school is a clear priority and one month after the ceasefire it still had a submunition on the roof. Clearing up the school so that it can open and allow the pupils to return in September is a major concern to the school's supervisor. In one of the corners of the school damaged UNICEF provided desks are stacked in a pile. The building has suffered major structural damage during the bombing and may not be fit to house the returning pupils. Parts of the building continue to fall as a result of passing traffic.

"We will try our best to rehabilitate the school. We will not allow this school and our education to be stopped."

Ali Abdul Muhsen Herz

Photos: Simon Conway © Landmine Action 2006



Ali Abdul Muhsen Herz is a 26-year-old motor mechanic from Majdal Selem. He returned to his house on Monday 14th August, the day of the ceasefire.

"I was surprised to see my house standing. So I walked in a rush to get back and see my house. I had to leave my car because there was no driveway, it was full of rubble. I kicked something and it exploded, I didn't know what it was, I think it exploded some distance away from me. There was a pool of blood where I had fallen and my trousers and my shirt were full of holes like a net. One of the fragments came through my cheek and hit my tooth."

After the accident Ali was taken to get first aid in Tibnine and then to the hospital in Tyre where he spent 20 days recovering. He returned home four days later and began working the same week because he had had no income since the beginning of the war.

"I have only just started clearing the rubble up from my garage, but I do not think I will be able to work properly. I cannot use my right leg properly and I cannot squat down to look underneath cars. One of my ribs is broken and another one is cracked. The fragments are still there. I still feel pain in my knee and I cannot walk properly. The government hospital cannot provide me with any treatment after the emergency care. Nobody is helping me with my medicines, I am not insured, I need to win the lottery to be able to feed myself. If you work you eat, if you don't work you don't eat."

Ali Abdul Muhsen Herz, 26, motor mechanic, Majdal Selem

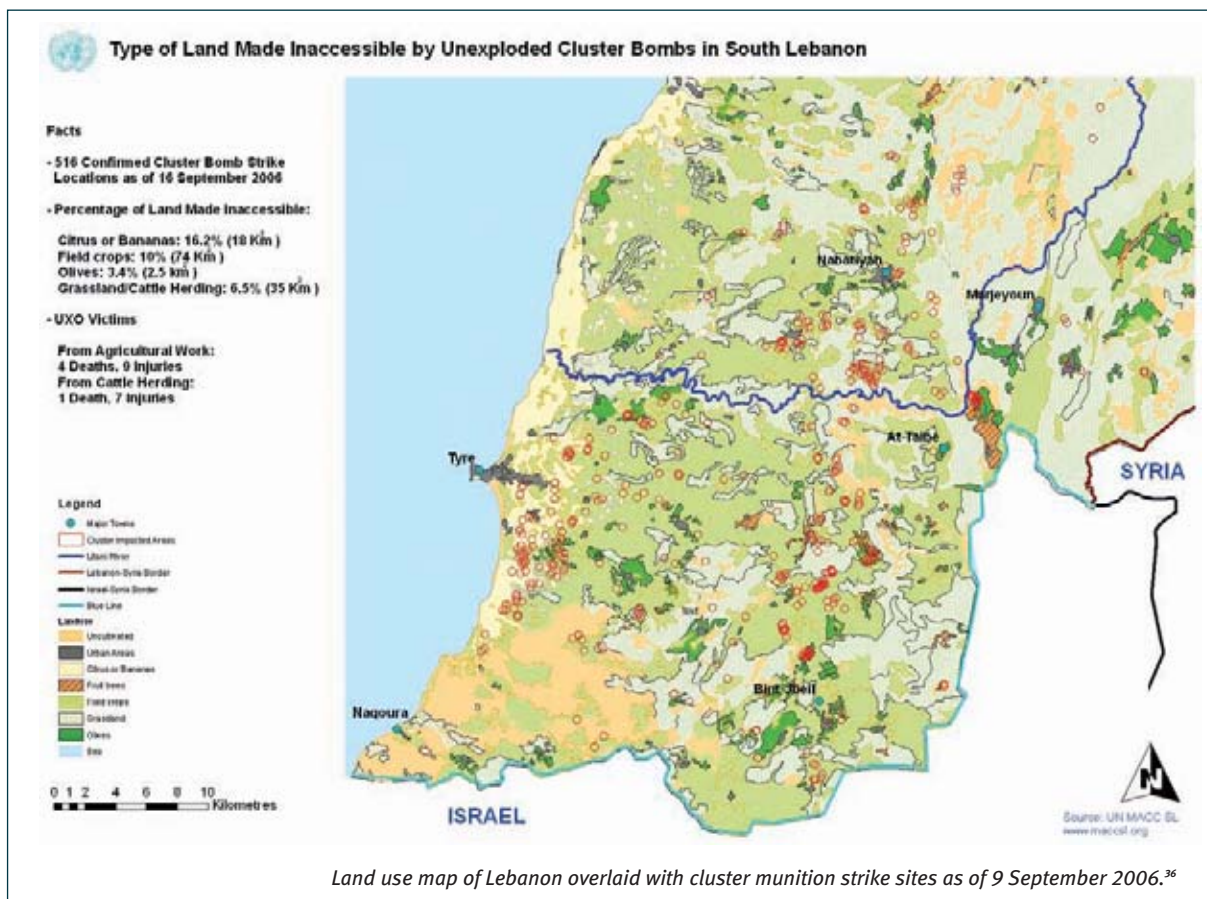
Impact on agriculture

The economy of south Lebanon relies substantially on agriculture. According to the UN Food and Agriculture Organisation (FAO), agriculture makes up 7% of Lebanon's GDP, employing 9% of the working population:

“The South and Nabatiyyeh covers over 62,262 hectares representing 20% of the total cultivated area in Lebanon and the number of holdings amounts to 61,000 representing around 30% of the total.”³³

It has been estimated that 70% of families rely on agriculture for their primary source of income in southern Lebanon.³⁴ Olives, banana and citrus fruits, wheat and tobacco are the major crops in southern Lebanon. The land use map below indicates that all of these crops have been heavily hit by cluster munition strikes, leaving dense contamination from unexploded ordnance. Unexploded cluster submunitions are preventing or endangering the harvest of these remaining crops.

“A major concern and danger are the UXOs mainly cluster bombs, still to be found on the agricultural land in the south. There are tens of thousands of these bombs and since they cannot be removed, the Lebanese Army is exploding them.”³⁵



“Tobacco plantations occupy 9400 hectares of land in the south, with an average production of 11,000 tonnes per year. The Government has a monopoly on tobacco export and processing. Tobacco farmers sell their production to the Government which exports part of it and processes the rest. The damages to tobacco production due to the military operations are estimated to be between 60–70%.”³⁷

The impact of the war and the use of cluster munitions on tobacco farming in the south have been substantial. Moreover, because land will likely not be cleared in time for the first autumn rains, the ordnance contamination will prevent the harvest of late yielding crops such as olives and the replanting of winter grain and vegetable crops such as lentils and chickpeas. The UK newspaper, The Financial Times, highlighted the economic impact of cluster munition contamination in a report of 6 September 2006:

“It is still possible to see bunches of tobacco leaves hanging from beams in porches and garages, but some farmers say that is what was picked before the war. Many are too scared to check whether or not unexploded bombs lie among their fields.”³⁸

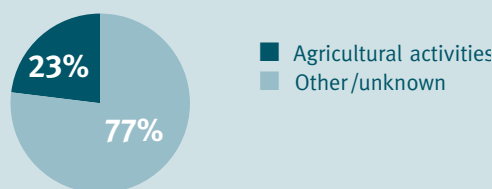
Photo courtesy of Swedish Rescue Services Agency 2006



An M42 submunition found in a bunch of tobacco after being gathered unwittingly during harvest activities.

PERCENTAGE OF CLUSTER MUNITION CASUALTIES ENGAGED IN AGRICULTURAL WORK AT THE TIME OF THE INCIDENT

14 August – 18 September 2006



“Many farmers say they will lose 60% or more of their harvest, pointing in the direction of plants with sickly, yellowish-brown leaves drooping in the hot sun. For Mr Thini, who says he will only produce 200kg from a crop that would normally yield 1,200kg, it means a loss of nearly \$10,000, and no employment for 7 pickers. He would normally harvest his 40 olive trees in November, but is worried unexploded ordnance will still be littering the land.”³⁹

Faced with a choice of letting their crops rot or risking their lives to harvest what is remaining, many farmers are choosing to risk their lives out of economic necessity. This has resulted in significant casualties amongst people undertaking agricultural activities, specifically herding livestock or working the land. Of the 93 civilian casualties recorded between 14 August and 18 September 2006, 21 were engaged in agricultural activities according to UN OCHA.⁴⁰

Case study: Touline

6 September 2006



Photo: Simon Conway © Landmine Action 2006

“Everyday when we come to pick the little tobacco that is left we find new cluster munitions. This stops us from harvesting. We have lost our season.”

Fatimah Hussein, 37, Farmer, Touline

Touline is a village of 350 people located on a ridge at the edge of a small plateau of agricultural land planted with tobacco and olives. The village and surrounding areas were subject to heavy cluster munition bombardment during the last 72 hours of the conflict.

Reluctant to abandon their land and their property, many of the residents remained in the village even after Israel dropped leaflets warning them to move north.

Some that wished to leave were unable to because they had no vehicles and the hilly terrain made it difficult to evacuate the area. As residents began returning after the ceasefire Lebanese Army (LAF) and Mines Advisory Group (MAG) teams began emergency survey, marking and clearance to make roads and houses safe so that more people could come home. Three weeks after the ceasefire, the agricultural fields beyond the roads and houses remained dangerous.

Fatimah Hussein, 37 and her sister Safia Hussein, 23, live in the village of Touline. The Hussein family has been living off tobacco and olive cultivation for decades. Now their olive groves and tobacco crops are infested with hundreds of unexploded cluster munitions. Three days of cluster bombardment have destroyed their livelihoods.

As a result of the warning leaflets, many families in south Lebanon sought refuge in Saida or Beirut. Frequently though, one family member remained in the homes throughout the conflict to stay with their land.

Safia remained in Touline during the cluster munition strikes at the end of the war and had to ration her food and other supplies after the ceasefire because cluster munition contamination made gathering food and water too dangerous.

“It was horrible for us, during the war we used to go out and gather drinking water from the well and people from nearby would also go and get food for us. But after the cluster bombardment I could not go outside for three days because the bomblets were everywhere.

We had no water for one and a half days until Hezbollah came to clear so we could get access to water and food. Then after Hezbollah the Army came to continue clearing roads and houses. But you see we still have so many bomblets here in our fields.”

Safia Hussein, 23, Nursing student, Touline

There were no reports of civilian casualties in the village during the strikes, but Safia recalls her fear while the cluster munitions were falling:

“When they were firing the cluster bombs I felt like the house would drop, many bomblets burst through the wall and came into the house and I started to panic. The attacks lasted for one and a half hours and then they cooled down for one hour and then they started again.

I heard the sound of each cluster bomb shell for five minutes, like popcorn. We never saw any military activity in this area. We were the targets, the civilians.”

Safia Hussein, 23, Nursing student, Touline



Photo: Simon Conway © Landmine Action 2006

Having lost all but 10% of her tobacco and olive crops, Fatimah Hussein does not know what she will do to support her family over the next year.

“We have lost our tobacco season and our olive season. We have been harvesting tobacco and growing olives from this land for our whole lives. Now because of the war and the cluster munitions we have lost our season.”

Fatimah Hussein, 37, Farmer, Touline

While the cluster munitions have been cleared from inside their house, they still pose a threat to the Hussein family’s livelihood as they do to the agricultural economy throughout south Lebanon. Safia is training to be a nurse at college but she has had to take leave from her studies in order to help her mother pick what little remains of the tobacco crop. Her younger brothers are too young to understand the threat from the unexploded submunitions so they are not allowed to help pick the remaining crop. So Safia must abandon her studies for the time being.



Safia Hussein has abandoned her studies because her brother and sister cannot help with the dangerous harvest because they are too young to understand the danger of the unexploded cluster munitions.

From their 4,000 square metres of tobacco fields and olive groves they could usually expect to harvest \$8,000 worth of agricultural produce.

“This is not even 10% of what we normally have drying from our crop at this time of year. This is nothing.”

Fatimah Hussein, 37, Farmer, Toulina

The Hussein family also risk losing their income for the next year if the cluster munitions cannot be cleared in time for them to turn the earth and replant for the winter grain crop. Normally at this stage of the year they would have harvested and would be ploughing the land in expectation of the first rains when they would plough the land again. Then they would begin planting the winter crop of lentils, chickpeas or wheat.

“Because of these cluster munitions we cannot harvest what is left of the summer crop, we cannot plough our land and we cannot plant our seeds for the winter. We have lost this year’s income and unless the cluster munitions are cleared this month we are going to lose our income for another year.”

Fatimah Hussein, 37, Farmer, Toulina

RESPONDING TO THE THREAT: EXPLOSIVE ORDNANCE DISPOSAL

Responding to this contamination – in an effort to stop casualties and then to return land and resources to productive use – requires substantial humanitarian resources. Despite the best efforts of implementing agencies and coordinating bodies such a response will inevitably be too late for some people.

The UN Mine Action Coordination Centre for South Lebanon (UNMACC SL) began responding to the ordnance contamination from cluster munitions on the day of the ceasefire, visiting cluster strike sites and plotting these locations to facilitate clearance by ordnance disposal teams. The Lebanese Armed Forces also began disposing of cluster munitions in their areas of operation on the day of the ceasefire. The UN-coordinated response is organised into three phases:

- emergency survey, marking and clearance on roads and in houses and key infrastructure such as hospitals;
- systematic surface clearance of recorded cluster strike sites; and finally
- systematic sub-surface clearance of cluster strike sites.

As of 2 September, Mines Advisory Group (MAG) had 4 explosive ordnance disposal teams operating in southern Lebanon and Swedish Rescue Services Agency had 1 team. MAG has since sent additional technical survey teams and BACTEC has also sent survey and clearance teams.

“Horrible things have happened in south Lebanon. It is a real crime to use cluster munitions like this, a real crime. In all my time as a deminer I have never seen anything like this. The spread of cluster bombs in residential areas is terrible. We cannot even get to some areas to clear yet because we have to focus on the roads and the villages and the houses and gardens.”

Colonel Fakheer, NDO representative, UNMACC SL⁴¹

Lebanese Armed Forces have had five people killed and four injured during ordnance disposal operations since the ceasefire.⁴²

5.0 Conclusions regarding the causes of civilian harm

- **Cluster munitions are an inherently problematic weapon for two primary reasons: their wide area effects mean they kill and injure civilians when used in or near populated areas, and the weapon leaves large numbers of unexploded submunitions that act like *de facto* landmines long after conflicts. Both of these problems were demonstrated in Lebanon in 2006.**
- **Israel's apparent failure to adhere to key tenets of international humanitarian law such as the rules of distinction, the rule against indiscriminate attacks and the rule of proportionality in attacks with cluster munitions exacerbated the immediate and post-conflict suffering caused by these weapons.**
- **The use of cluster munitions in or near areas of civilian population caused unnecessary civilian casualties during attacks.**
- **The use of these weapons, including those fitted with self-destruct mechanisms, created extremely large quantities of unexploded ordnance contamination in houses, throughout towns and villages, on agricultural land and around key points of infrastructure. This dense contamination has been a significant cause of unnecessary civilian death and injury in the immediate post-conflict period.**

Underpinning these conclusions, we note the following:

- **The failure of the Government of Israel to stop cluster munition use in response to appeals from humanitarian organisations that these weapons would cause unnecessary civilian casualties.**
- **The failure of Governments such as the UK and the U.S. to reinforce such appeals.** Recent UK and US use of cluster munitions has served to develop the rhetoric that these are 'legal weapons' as a sufficient response to criticism of the excessive harm that they cause.
- **The failure of states to act in international fora such as the Convention on Certain Conventional Weapons (CCW) despite ongoing appeals from humanitarian organisations that these weapons need to be specifically addressed and despite consistent evidence regarding the problems associated with these weapons.**
- **The repeated failure of long-standing bilateral agreements aimed at curbing Israel's use of certain U.S. manufactured cluster munitions.** This failure of bilateral end-use agreements to prevent humanitarian harm from cluster munitions highlights the need for a broader binding international instrument on arms transfers and the proposed international arms trade treaty (ATT) would provide such an international mechanism.
- **The inadequacy of current international humanitarian law as a mechanism for effectively controlling the impact of cluster munitions.** This inadequacy has been repeatedly demonstrated. An international instrument placing prohibitions on the use, production, stockpiling and transfer of cluster munitions is urgently needed.

The previous sections have documented the ways in which the use of cluster munitions in Lebanon has affected the civilian population, both during and after attacks. The following section will examine some of the reasons why this civilian harm arose from the use of cluster munitions.

Nature of the weapon

Cluster munitions are an inherently problematic weapon for two primary reasons:

1. Their wide area effects mean that they kill and injure civilians when used in or near populated areas.
2. The weapon leaves large numbers of unexploded submunitions that act like *de facto* landmines long after conflicts.

Both of these problems have been highlighted consistently throughout the history of cluster munition use. Both humanitarian problems have been documented again during the recent use of cluster munitions in Lebanon. The wide area effects of the weapon caused civilian casualties amongst those residents of southern Lebanon that either decided to stay in their homes or had no choice but to stay in their homes. The post-conflict effects from south Lebanon have already been substantial and both the number of direct casualties and the costs to agriculture, infrastructure and rehabilitation are all continuing to grow.

Failure to adhere to IHL (including the use of cluster munitions in or near areas of civilian population).

The civilian harm from cluster munitions has probably been exacerbated by a failure to adhere to key rules of international humanitarian law. International humanitarian law requires armed forces to distinguish between civilians and military targets.⁴³ The rule against indiscriminate attacks and the rule of proportionality prohibit attacks against legitimate military targets if the targets are located in civilian areas and the damage to civilians that might be expected from the attack is greater than the direct military advantage anticipated.⁴⁴

In general the use of cluster munitions poses serious problems under these rules. The ICRC has noted that:

“[...] cluster munitions raise serious concerns under a number of fundamental IHL rules. Their wide area effects and the influence of wind, altitude of release and airspeed on free falling submunitions make them an immediate danger to civilians at the time of the attack. The large numbers of submunitions which fail to explode as intended extend the dangers to civilians and humanitarian organizations long after the end of active hostilities. Few conventional weapons have such characteristics and raise such concerns.”⁴⁵

In the specific case of the recent conflict in Lebanon, Israeli civil society groups have asserted that Israel’s use of cluster munitions in the last 72 hours of the conflict can be seen as constituting an indiscriminate attack:

“The dropping of cluster bombs in built-up areas, in complete disregard for the danger they pose to the lives of innocent civilians, seems to meet the basic requirement for committing a crime that involves deliberate killing or deliberate harming of civilians.”⁴⁶

The massive and widespread use in civilian areas most likely constitutes a breach of the positive obligation enshrined in customary international law to discriminate between civilians and military targets.⁴⁷

There are other obligations under the rule of proportionality that relate to the use of cluster munitions during the conflict. Although no clear agreement exists on this point, an increasing number of states and international lawyers now assert that when balancing the proportionality of an attack, users of explosive ordnance must take into account the foreseeable long-term effects of unexploded ordnance at the time of the attack.⁴⁸ Given the known failure rates of the BLU 63, M42, M46, M77 and even to some extent the M85 submunitions and the large numbers in which the weapons were used, it was foreseeable to those who authorised their use during the last 72 hours of the conflict that large numbers of submunitions would remain unexploded after these attacks. The post-conflict effects of these unexploded submunitions have already been significant.

Professor Timothy McCormack noted in a report summarising responses to a questionnaire on international humanitarian law undertaken by States Parties to the Convention on Certain Conventional Weapons (CCW) that:

“If cluster munitions were only deployed against military targets far removed from civilian areas there would be no argument about their relationship to the prohibition on indiscriminate attacks. The fact that such use is theoretically possible will lead some States to continue to argue forcefully that these weapons are not prohibited under existing principles [sic. rules] of IHL and should not be subject to a specific treaty ban. Unfortunately the hypothetical exclusive use of cluster munitions against ‘purely’ military targets is simply not the reality and many cluster munitions have been used in recent conflicts against military targets in close physical proximity to civilian residential areas.”⁴⁹

Clearly the recent use of cluster munitions in populated areas of southern Lebanon reinforces the conclusion that “hypothetical exclusive use of cluster munitions against ‘purely’ military targets is simply not the reality.” Professor McCormack went on to suggest that:

“[...] if, following the adoption of Protocol V, the [explosive remnants of war] problem only increases in severity and in its threat to civilian populations affected by armed conflict, many in the international community will argue for a more specific and substantive response — including, perhaps, a treaty ban on cluster munitions. The onus is on user States to demonstrate that such weapons can be used consistently with the binding obligations of IHL.”⁵⁰

The serious humanitarian harm resulting from the recent use of cluster munitions by Israel provides the most recent example in a consistent pattern. Israel’s insistence that its use of these weapons was in accordance with international standards simply reinforces the requirement for specific controls over these weapons. If these problems are the result of legitimate use of the weapons then the law is clearly inadequate. If these problems have resulted solely from the illegitimate use of the weapons then the existing legal framework is not working to effectively constrain state practice before excessive civilian harm is incurred.

“When I arrived in Kosovo after the NATO bombing I remember noticing the Serbs leaving through Pristina giving a message to NATO that the bombing had been rather ineffectual.

When I arrived here in Lebanon after the war I noted again with dismay that cluster munitions seem to have been most effective against unarmed civilian populations and are used more as a weapon of terror than as a weapon of military supremacy.

Frankly they are outmoded, outdated and a product of the cold war that has no moral relevance in the 21st century. They continue to kill and injure long after the conflict is over and should therefore be banned.”

Harry Leefe, Senior Liaison Officer, UNHCR, Beirut⁵¹

“They had no strategy in this war. They didn’t know what to do, where to start, where to end. They killed themselves. They killed their soldiers. They killed civilians. It’s a mess. They really messed everything up.”

Ghaleb Elmaaz, 40, farmer, Majdal Selem

The inadequacy of failure rate policies to prevent civilian harm in Lebanon

As we have noted, the use of these cluster munitions (including those fitted with self-destruct mechanisms) created extremely large quantities of unexploded ordnance contamination. The very large quantities of unexploded submunitions contaminating wide areas of southern Lebanon again raises serious doubts about claims that this problem can be avoided by attention to the ‘failure rates’ of individual submunitions. Despite Israel using a number of modern submunitions the same problems of extensive post-conflict contamination have clearly arisen.

Over recent years, manufacturers of cluster munitions have claimed low failure rates for their more modern variants and states have tended to accept these claims despite alternative evidence gathered by humanitarian organisations. A significant number of governments have set national policies on the basis of these manufacturers’ claims. Such policies designate some cluster munitions as acceptable and some unacceptable on the basis of the percentage ‘failure rate’ of their submunitions.

Preliminary data from south Lebanon indicates that all five types of submunitions used, including M85 submunitions equipped with a self-destruction mechanism, left large quantities of unexploded ordnance.⁵²

A realistic estimate of the overall failure rate may only be determined once all submunitions are cleared and information is made available by Israel on the numbers of cluster munitions used. Even then this estimate will not necessarily reflect the actual failure rate because unreported clearance makes the full picture difficult to determine. However, based on the numbers of strikes sites located and the numbers of submunitions being found during the rapid response phase of clearance, the UN Mine Action Coordination Centre for South Lebanon has estimated that on the basis of a possible overall failure rate of 40%, one million submunitions may remain unexploded throughout south Lebanon.⁵³ That such a high failure rate is being used as a basis for working estimates regarding the problem being addressed is a testament to the sheer scale of the contamination as perceived by those charged with tackling it on the ground.



Photos: Simon Conway © Landmine Action 2006

CCW PROTOCOL V ON EXPLOSIVE REMNANTS OF WAR AND THE USE OF CLUSTER MUNITIONS IN LEBANON

While it had not yet entered into force at the time of writing, Protocol V to the Convention on Certain Conventional Weapons (CCW), on explosive remnants of war (ERW) provides an additional framework for evaluating the problems raised by the use of cluster munitions in southern Lebanon in 2006. Article 4 of the 2003 Protocol to the CCW stipulates that parties to a conflict should provide information on the general location of areas targeted with explosive ordnance as well as the number and types of explosive ordnance used and the location of known and probable unexploded ordnance (UXO).

At the time of writing this information had not been provided to the relevant organisations engaged in clearance activities in south Lebanon. Article 8 of the protocol stipulates that all countries in a position to do so shall provide assistance to deal with the problems of unexploded ordnance. Having adopted the Protocol along with all other states party to the CCW in 2003, Israel is obligated not take any actions that would be against the spirit of this agreement. Thus at the very least Israel should act in accordance with these two fundamental articles of the Protocol on ERW by providing information on the locations of areas targeted with cluster munitions and, if it is in a position to do so by providing assistance to deal with the problems arising from unexploded ordnance in Lebanon.

“What we’d like is the number of shells that were fired in and the actual coordinates so we can go in and short-circuit what we’re doing now and go and find those munitions straight away. But that has not happened yet”⁵⁴
David Shearer, UN Humanitarian Co-ordinator for Lebanon

Left Five unexploded M85 submunitions were found on the surface next to the 155mm shell (also pictured).

This represents an approximate 10% minimum failure from a weapon system that user states claim has a less than 2% failure rate. Clearance operators have also noted that similar numbers of M85 submunitions fitted with self-destruct and self neutralise mechanisms and other submunitions not fitted with such mechanisms have been found in cluster munition strike sites. The submunitions pictured here are fitted with self-destruct mechanisms.

Below In this tobacco field in Touline there were at least 20 submunitions located near the 155mm container projectile, indicating 25% failure from this one canister.



Underpinning these conclusions regarding the causes of civilian harm, we note the following:

Failure of states to act on the consistent warnings provided by humanitarian organisations

The excessive impact of cluster munitions on civilians in Lebanon was wholly predictable. Over a 40 year period the use of cluster munitions has produced consistent documented evidence of unnecessary civilian harm.⁵⁵ During the 2006 conflict, member organisations of the international Cluster Munition Coalition (CMC) appealed to the Government of Israel not to use these weapons⁵⁶ and appealed to other states (such as the U.S. and U.K.) to exert influence on Israel against the use of these weapons.⁵⁷ Such appeals went unheeded. Indeed, states like the U.S. and the U.K., through their extensive recent use of these weapons in Kosovo, Afghanistan and Iraq, have helped to develop the rhetoric that these are ‘legal weapons’ as a sufficient response to criticism of the excessive harm that they cause.

More broadly, the failure of states to act in international fora such as the UN Convention on Certain Conventional Weapons (CCW) despite ongoing appeals from humanitarian organisations that these weapons need to be specifically addressed and despite consistent evidence regarding the problems associated with these weapons further facilitated the problems now faced by the civilian population in Lebanon.

The reason for highlighting these points is to emphasise that the use and impact of cluster munitions in Israel was not solely the responsibility of the Israeli Government. It also reflects a broader failure by the international community to develop norms regarding cluster munition use that recognise either the foreseeable civilian harm or popular abhorrence associated with these weapons.

Failure to adhere to bilateral agreements

On 25th August 2006, the front page of the New York Times reported that a US State Department inquiry had been opened into Israel’s use of U.S. cluster munitions.⁵⁸ The grounds for such an inquiry were that certain U.S.-supplied cluster munitions were likely used in contravention of restrictions set down by the U.S. when these weapons were sold.

The transfer of cluster munitions from the U.S. to Israel in the 1970s was governed by a confidential letter of 1976 that applied specific restrictions on the circumstances when these weapons could be used. Landmine Action reported on the existence of this agreement, and previous breaches of its provisions, in its 2005 report *Cluster munitions in Lebanon*. The existence of this letter was acknowledged after concerns were raised in Congress over civilian casualties from the use of cluster munitions in the 1978 and 1982 offensives in Lebanon. As Landmine Action reported in 2005, the U.S. administration at the time was clearly reluctant to discuss the terms of this agreement in public as can be seen from transcripts of the U.S. Congress House Committee on Foreign Affairs (1982):⁵⁹

Mr. Hamilton: I have a letter, Mr. Cluverius, that is from the Department of State, dated May 1978. It is an unclassified letter in which at that time Israeli Minister of Defense Weizman stated that “he was not aware of Israel’s commitment to the United States regarding the use of CBU’s that had he known it he would have approached the matter differently; and that, and I quote, “arrangements have been made to prevent such incidents in the future. Have such arrangements been made?”

Mr. Cluverius: I believe we would have to go into closed session to discuss those arrangements. [...]

Mr. Hamilton: You are not willing to say that there was a violation of the agreement. Let me quote further from this 1978 letter, if I may: “The United States requested and has received a reaffirmation of Israel’s acceptance of stipulations and conditions on the use of CBU’s. This reaffirmation is in the form of a classified agreement concluded by an exchange of notes dated April 10 and 11, 1978.” You have already acknowledged publicly in a letter written to me 4 years ago that there is such an agreement. Why would you refuse to admit the existence of the agreement today? [...]

Mr. Cluverius: Mr. Chairman I was not aware of that unclassified letter. I was under the impression, until you read it, that all of those arrangements, including the correspondence, were classified. Yes: there are such arrangements.

Although the contents of the letter have not been made public, three media sources provide some indication of the type of restrictions the letter may have imposed on Israeli use of these U.S.-supplied cluster munitions:

“Israel was to use the munitions “only for defensive purposes, against fortified military targets, and only if attacked by two or more ‘Arab states.’”⁶⁰

“Under the accord, cluster bombs could only be used against the regular armed forces of ‘one or more Arab countries’ who were engaged in a war with Israel similar to the 1967 conflict when the Israelis faced Egypt, Syria and Jordan and to Israel’s 1973 war with Egypt and Syria, the officials said. [...] ‘Some have interpreted this to mean a two-front war,’ one official said.”⁶¹

“[...] but the use of cluster bombs is subject to additional restrictions laid down in classified documents signed by U.S. and Israeli officials in the late 1970s. The provisions prohibit use of the bombs except against “regular forces of a sovereign nation” and in “special wartime conditions,” according to the administration and congressional officials familiar with the documents. “Special wartime conditions” is defined in an attachment to the documents as being conditions equal to or exceeding the level of conflict during the 1967 and 1973 wars, when Israel was being attacked by two or more nations.”⁶²

This agreement can be seen as an acknowledgement by the U.S. that cluster munitions are a weapon of specific concern that required special restrictions. When Israel was ruled by the U.S. to have breached the terms of this agreement in 1982, the Reagan administration banned further sale of these specific weapons to Israel – a ban that was subsequently lifted in 1988.⁶³



Press coverage from 1982 highlighting the US Government response to Israeli cluster munition use.



The warranty on this CBU58B cluster bomb found near Nabatiyeh reads:

“This item warrantied for 1 year. Warranty terminates 7-2-74.”

Through its use of old stocks of U.S. supplied cluster munitions in 2006 it would appear very likely that Israel has once again breached the terms under which these weapons were sold. In the meantime the U.S. Department of State has reportedly held up a shipment of M26 rockets containing M77 submunitions requested by Israel during the war.

“We have heard the allegations that these munitions were used, and we are seeking more information.”

Gonzalo Gallegos, State Department spokesman, 24 August 2006⁶⁴

Landmine Action concluded in its 2005 report on cluster munitions in Lebanon that Israel’s 1978 and 1982 violations of the secret bilateral agreement governing use of U.S-supplied cluster munitions demonstrated the inadequacy of such limited restrictions to ensure adequate protection for civilians in practice:

“That Israel was twice held by the U.S. to have used cluster munitions in breach of its restrictions suggests that stronger mechanisms would be needed in order to protect civilians effectively. In this case the U.S. banned further provision of cluster munitions to Israel.

The failure of the CCW so far to address the specific problems associated with cluster munitions, coupled with the example Lebanon provides of the failure of bilateral restrictions, suggests that a prohibition regime, developed outside the framework of the CCW, would offer the best protection to civilians both during and after conflict.”⁶⁵

The further widespread and indiscriminate use of cluster munitions by Israel in the 2006 conflict again underlines the failure of these limited restrictions to actually result in civilian protection.

Cluster munitions pose clear and specific humanitarian concerns and must be dealt with under a specific new international instrument that will not only prevent transfers but will also establish certain prohibitions on the use, stockpiling and production of cluster munitions. However the development of an international arms trade treaty (ATT) could be an important additional international mechanism to extend the principles of such a treaty more broadly and help stop the further proliferation, transfer and use of cluster munitions.

The failure of bilateral end use agreements between Israel and the U.S. to provide adequate protection to civilians clearly highlights the need for a broader international instrument on arms transfers and the ATT would provide such an international mechanism. The proposed ATT was due for discussion at the UN General Assembly in October 2006 and for subsequent negotiation over the next few years. The ATT would try to ensure that weapons systems such as cluster munitions, components, technology and delivery systems are not transferred where there is a clear risk that they would be used in violation of international humanitarian and human rights law.

If specific international treaty prohibitions or restrictions were developed on cluster munitions, the ATT would help strengthen such commitments. An ATT should contain specific express prohibitions on certain weapon types that are indiscriminate and cannot distinguish between civilians and combatants or specific weapons types covered by other treaties or instruments that signatory states are bound by.

Current international humanitarian law is inadequate as a mechanism for effectively controlling the impact of cluster munitions.

An international instrument including prohibitions on the use, production, stockpiling and transfer of cluster munitions is urgently needed. Given the further clear evidence in Lebanon regarding the particularly problematic nature of these weapons it can no longer be acceptable for user states to hide behind thin assertions that these weapons are 'legal'. If cluster munitions are 'legal' it is only because the international community has failed to take the necessary action and render them illegal. If the international community has a genuine commitment to the protection of civilians from the effects of conflict such action must be undertaken.

Annex A Table of civilian casualties from UXO and mines as of 12 September 2006

Serial	Date	Name	Location	Sex	Adult / child	Age	Killed / Injured	Cause	Remarks
1	14-Aug-06	Mohamad Amacha	Ansar	Male	Adult	46 years	Death	Cluster Bombs	according to <i>Al-Nahar</i> newspaper
2	14-Aug-06	Hadi Hattab	Habboush	Male	Child	13 years	Death	Cluster Bombs	
3	14-Aug-06	Yossef Ibrahim Khalil	Yohmer	Male	Adult	26 years	Death	Cluster Bombs	
4	14-Aug-06	Moussa Hattab	Habboush	Male	Adult	33 years	Death	Cluster Bombs	
5	15-Aug-06	Ali Khalil Turkieh	Western Zawtar	Male	Child	16 years	Death	Cluster Bombs	
6	17-Aug-06	Ahmad Hadi Mahdy	Wadi Hamoul	Male	Adult	30 years	Death	Cluster Bombs	
7	17-Aug-06	Ali Hassan AL Meligy	Wadi Hamoul	Male	Adult	23 years	Death	Cluster Bombs	
8	19-Aug-06	Ali Abou Eid	Ain Baal	Male	Adult	40 years	Death	Cluster Bombs	
9	23-Aug-06	Hussein Sabra	Majdal Selem	Male	Adult	25 years	Death	Cluster Bombs	
10	27-Sep-06	Mohamad Hassan Sultan	Suwany	Male	Child	–	Death	–	
11	14-Aug-06	Ibrahim Hussein Hattab	Habboush	Male	Adult	28 years	Injured	Cluster Bombs	
12	14-Aug-06	Ali Hussein Hattab	Habboush	Male	Adult	46 years	Injured	Cluster Bombs	
13	14-Aug-06	Hanna Ali hattab	Habboush	Female	Adult	46 years	Injured	Cluster Bombs	
14	14-Aug-06	Mohamad Hassan Hattab	Habboush	Male	Child	16 years	Injured	Cluster Bombs	
15	14-Aug-06	Salima Hammoud Barakat	Habboush	Female	Adult	56 years	Injured	Cluster Bombs	
16	14-Aug-06	Mohammad Nakhli	Kfar Joaz	Male	Adult	36 years	Injured	Cluster Bombs	Traumatic Amputation in leg
17	14-Aug-06	Elias Mohamad Siklawi	Deir Kanoun Ras al ein	Male	Child	14 years	Injured	Cluster Bombs	
18	15-Aug-06	Hassan Ibrahim al Haj Hassan	A Sma'eia	Male	Child	11 years	Injured	Cluster Bombs	
19	15-Aug-06	Hussein Ali Rizk	Kfar Roummane	Male	Adult	40 years	Injured	Cluster Bombs	
20	15-Aug-06	Souzan Ahmad Hamoud	Kaakaayet al Jesser	Female	Child	15 years	Injured	Cluster Bombs	
21	16-Aug-06	Hussein Mohammad Tormos	Talousa	Male	Adult	25 years	Injured	Cluster Bombs	
22	16-Aug-06	Ali Abed Al Mohsein Heriz	Majdal Selem	Male	Adult	25 years	Injured	Cluster Bombs	
23	16-Aug-06	Mohamad Jamil Melhem	Maydoun Al srrei	Male	Adult	74 years	Injured	Cluster Bombs	
24	16-Aug-06	Hassan Taheya	Ayta Al Chaab	Male	Child	10 years	Injured	Cluster Bombs	
25	16-Aug-06	Marwa Ali Merhi	Ayta Al Chaab	Female	Child	12 years	Injured	Cluster Bombs	
26	17-Aug-06	Mohammad Atwi	Safad Al Batikh	Male	Adult	30 years	Injured	Cluster Bombs	
27	17-Aug-06	Sikna Mohamad Merhi	Ayta Al Chaab	Female	Child	12 years	Injured	Cluster Bombs	
28	17-Aug-06	Hassan Hussein Tehini	Ayta Al Chaab	Male	Child	11 years	Injured	Cluster Bombs	

Serial	Date	Name	Location	Sex	Adult / child	Age	Killed / Injured	Cause	Remarks
29	18-Aug-06	Ahmad Abdalla Shkair	Zawtar Al Gharbia	Male	Adult	36 years	Injured	Cluster Bombs	
30	18-Aug-06	Mohamad Darwish	Zawtar Al Gharbia	Male	Adult	25 years	Injured	Cluster Bombs	
31	18-Aug-06	Ali Cheakh	Shakra	Male	Child	15 years	Injured	Cluster Bombs	
32	18-Aug-06	Mostafa Deeb	Shakra	Male	Adult	20 years	Injured	Cluster Bombs	
33	18-Aug-06	Seham Mohamaed Deeb	Shakra	Female	Adult	44 years	Injured	Cluster Bombs	
34	18-Aug-06	Mostafa Nabil Al cheikh Ali	Maroun Ar Ras	Male	Child	11 years	Injured	Cluster Bombs	
35	18-Aug-06	Ali Nabil Al cheikh Ali	Maroun Ar Ras	Male	Adult	19 years	Injured	Cluster Bombs	
36	19-Aug-06	Hussein Ali Kiki	Ain Baal	Male	Adult	30 years	Injured	Cluster Bombs	
37	19-Aug-06	Ali Fares Moussa	Tibnin	Male	Adult	32 years	Injured	Cluster Bombs	
38	19-Aug-06	Amein Yaghi	Zawtar Al Gharbia	Male	Adult	24 years	Injured	Cluster Bombs	
39	21-Aug-06	Yasser Salim Dawoud	Deir Kanoun Al Nahour	Male	Adult	22 years	Injured	Cluster Bombs	
40	21-Aug-06	Fayez Mohamad Ali Zayat	Deir Kanoun Al Nahour	Male	Adult	28 years	Injured	Cluster Bombs	
41	21-Aug-06	Ahmad Sherry	Majdal Selem	Male	Adult	22 years	Injured	Cluster Bombs	
42	22-Aug-06	Hassan Yaghi	Zawtar Al Gharbia	Male	Adult	32 years	Injured	Cluster Bombs	
43	22-Aug-06	Ali Mohamad Shalhoub	Qana	Male	Child	16 years	Injured	Cluster Bombs	
44	22-Aug-06	Hasan Ibrahim El Haj Hassan	Rashidia	Male	Child	10 years	Injured	Cluster Bombs	
45	23-Aug-06	Fadel Mahmoud Alaa adeen	Majdal Selem	Male	Adult	69 years	Injured	Cluster Bombs	
46	23-Aug-06	Ramadan Al Ajami	Maaroub	Male	Child	17 years	Injured	Cluster Bombs	
47	24-Aug-06	Hussein Mohammad Zein	Ma'raka	Male	Adult	35 years	Injured	Cluster Bombs	
48	25-Aug-06	Sliman Youssef Kdouh	Yater	Male	Adult	38 years	Injured	Cluster Bombs	
49	26-Aug-06	Ahmad Mohamad Shibly	Blida	Male	Child	7 years	Injured	Cluster Bombs	according to <i>Al-Nahar</i> newspaper
50	26-Aug-06	Ali Hussein Hassan	Blida	Male	Child	11 years	Injured	Cluster Bombs	according to <i>Al-Nahar</i> newspaper
51	26-Aug-06	Sahar Hussein Hassan	Blida	Female	Child	9 years	Injured	Cluster Bombs	according to <i>Al-Nahar</i> newspaper
52	26-Aug-06	Abbas Youssef Abbas	Blida	Male	Child	5 years	Injured	Cluster Bombs	according to <i>Al-Nahar</i> newspaper
53	26-Aug-06	Mohamad Hussein Yacoub	Houla	Male	Adult	35 years	Injured	Cluster Bombs	

Serial	Date	Name	Location	Sex	Adult / child	Age	Killed / Injured	Cause	Remarks
54	27-Aug-06	Mohamad Hassan Melhem	Majdal Selem	Male	Adult	36 years	Injured	Cluster Bombs	
55	27-Aug-06	Hassan Hemadi	Deir Qanoun RasAl Ein	Male	Child	12 years	Injured	Cluster Bombs	Traumatic Amputation for 4 fingers on right hand
56	28-Aug-06	Hussein Ali Kdouh	Sultaniya	Male	Child	18 years	Injured	Cluster Bombs	
57	30-Aug-06	Aliya Hussein Hayek	Atchit	Female	Adult	26 years	Injured	Cluster Bombs	Traumatic Amputation of fingers on her left hand
58	30-Aug-06	Nazmieh Hussein Hayek	Atchit	Female	Adult	35 years	Injured	Cluster Bombs	
59	30-Aug-06	Mahmoud Mohamad Chalhoub	Qana	Male	Child	10 years	Injured	Cluster Bombs	
60	31-Aug-06	Hussein Mohamad Nasser	Ain Baal	Male	Adult	46 years	Injured	Cluster Bombs	
61	1-Sep-06	Fadel Said Hayek	Atchit	Male	Adult	26 years	Injured	Cluster Bombs	
62	1-Sep-06	Hassan Hamied kourani	Yater	Male	Adult	20 years	Injured	Cluster Bombs	
63	1-Sep-06	Hassan Jamil Ibrahim	Ayta Al Jabal	Male	Adult	40 years	Injured	Cluster Bombs	
64	2-Sep-06	Ta'an Hassan Atwi	Kawnin	Male	Adult	36 years	Injured	Cluster Bombs	
65	2-Sep-06	Nbhan Mahmoud Nour	Bet Tardeba & Bazouria	Male	Adult	21 years	Injured	Cluster Bombs	
66	2-Sep-06	Moussa Kassem	Bet Tardeba & Bazouria	Male	Child	17 years	Injured	Cluster Bombs	
67	2-Sep-06	Mohamad Abed Alsalam	Bet Tardeba & Bazouria	Male	Child	18 years	Injured	Cluster Bombs	
68	5-Sep-06	Ali Ousama Jomaa	Houmin Al Fawka	Male	Child	12 years	Injured	Cluster Bombs	Traumatic Amputation for 4 fingers on right hand
69	5-Sep-06	Hassan Ali Al Laham	Srifa	Male	Child	18 years	Injured	Cluster Bombs	
70	6-Sep-06	Hussein Ma'an Bzieh	Zebqien	Male	Child	15 years	Burned	Incinerary Device	
71	6-Sep-06	Ali Ma'an Bzieh	Zebqien	Male	Child	16 years	Burned	Incinerary Device	
72	8-Sep-06	Issa Ahmad Rady	Bazouria	Male	Adult	35 years	Injured	Cluster Bombs	
73	6-Sep-06	Ali Bakri	Zawtar Al Gharbia	Male	Child	15 years	Injured	Cluster Bombs	
74	8-Sep-06	Nasser Hussein Haider	Arab Salem	Male	Adult	45 years	Injured	Cluster Bombs	
75	8-Sep-06	Hussein Nasser Haider	Arab Salem	Male	Child	11 years	Injured	Cluster Bombs	
76	8-Sep-06	Abbas Hassan Fakhri	Jwaya	Male	Child	15 years	Injured	Cluster Bombs	
77	9-Sep-06	Hussein Ali Ahmad	Yohmer	Male	Adult	70 years	Injured	Cluster Bombs	
78	9-Sep-06	Saleh Ramez Krachet	Izziyah	Male	Adult	50 years	Injured	Cluster Bombs	
79	11-Sep-06	Ali Ahmad Faour	Bazouria	Male	Adult	24 years	Injured	Cluster Bombs	
80	11-Sep-06	Ali Awad Al Nomireh	Bazouria	Male	Adult	41 years	Injured	Cluster Bombs	
81	11-Sep-06	Mohamad Ali Bzieh	Zebqien	Male	Adult	55 years	Injured	Cluster Bombs	

Serial	Date	Name	Location	Sex	Adult / child	Age	Killed / Injured	Cause	Remarks
82	11-Sep-06	Mohamad Fadel Hassaan	Reshiknanay	Male	Adult	22 years	Injured	Cluster Bombs	
83	12-Sep-06	Abed Al karim Hassan Labam	Tardebba	Male	Adult	37 years	Injured	Cluster Bombs	
84	12-Sep-06	Ibrahim Ali Meselmani	Chayteieh	Male	Child	16 years	Injured	Cluster Bombs	
85	12-Sep-06	Hussein Ali Banjak	Chayteieh	Male	Child	15 years	Injured	Cluster Bombs	
86	13-Sep-06	Shadi Said Aoun	Chayteieh	Male	Adult	24 years	Injured	Cluster Bombs	
87	14-Sep-06	Youssef Ali Morad	Kaakaayet al Jesser	Male	Child	18 years	Injured	Cluster Bombs	
88	14-Sep-06	Ali Houssein Morad	Kaakaayet al Jesser	Male	Adult	19 years	Injured	Cluster Bombs	
89	15-Sep-06	Adham Ali Najdi	Srifa	Male	Adult	20 years	Injured	Cluster Bombs	
90	15-Sep-06	Ahmad Adel Sabah	Nabatiyeh	Male	Adult	47 years	Injured	Cluster Bombs	
91	16-Sep-06	Hecham Abedallah Maky	Mhrouna	Male	Adult	27 years	Injured	Cluster Bombs	
92	18-Sep-06	Redwan Ghandour	Nabatiyeh	Male	Adult	33 years	Injured	Cluster Bombs	
93	18-Sep-06	Faten Ali Ahmad	Nabatiyeh	Female	Adult	33 years	Injured	Cluster Bombs	
94	19-Sep-06	Salah Khalil Damergy	Bazouria	Male	Adult	37 years	Injured	Cluster Bombs	
95	21-Sep-06	Hussein Ali Mdaihly	Kfar Roummane	Male	Child	9 years	Injured	Cluster Bombs	
96	23-Sep-06	Mohamad Said Hamid Srour	Ayta Al Shaab	Male	Adult	25 years	Injured	Cluster Bombs	
97	23-Sep-06	Yossef Younis Srour	Ayta Al Shaab	Male	Adult	23 years	Injured	Cluster Bombs	
98	24-Sep-06	Fahad Mohamad Hejazy	Kafra	Male	Child	12 years	Injured	Cluster Bombs	
99	27-Sep-06	Abass Ahmad Sultan	Suwany	Male	Child	13 years	Injured	Cluster Bombs	
100	27-Sep-06	Nazha Mohamad Salama	Kaakaayet al Jesser	Female	Adult	37 years	Injured	Cluster Bombs	
101	27-Sep-06	Hussein Ahmad Sultan	Suwany	Male	Child	10 years	Injured	Cluster Bombs	
102	27-Sep-06	Hassan Mohamad Ziat	Tardebba	Male	Adult	41 years	Injured	Cluster Bombs	
103	27-Sep-06	Ali Hamoud	Suwany	Male	Adult	30 years	Injured	Cluster Bombs	
104	27-Sep-06	Housam Riad Hamoud	Suwany	Male	Adult	32 years	Injured	Cluster Bombs	

Data on casualties provided by UNMACC SL, 29 September 2006

Endnotes

- 1 MosNews, 26 July 2006, available at: www.mosnews.com/news/2006/07/26/clustermunition.shtml

- 2 Craig S. Smith and Helene Cooper, The New York Times, "Cease-fire talks stall as fighting rages on," cited in the International Herald Tribune, available at: www.iht.com/articles/2006/07/27/africa/web.0727lebanon.php

- 3 Meron Rappaport, "What lies beneath," Haaretz, 8 September 2006, available at: www.haaretz.com/hasen/spages/760246.html

- 4 Meron Rappaport, "IDF commander: We fired more than a million cluster bombs in Lebanon," 12 September 2006, Haaretz, available at: www.haaretz.com/hasen/spages/761781.html#resp

- 5 Jan Egeland, quoted in BBC World News, Wednesday 30 August 2006.

- 6 Briefing by Chris Clark, Programme Manager, UNMACC SL, Presentation in Geneva, Tuesday 19 September 2006.

- 7 Data is taken from a compilation of UNIFIL observer reports provided to researchers by UNMACC SL on 12 September 2006.

- 8 Meron Rappaport, "IDF commander: We fired more than a million cluster bombs in Lebanon," Haaretz, 12 September 2006, available at: www.haaretz.com/hasen/spages/761781.html#resp

- 9 For extensive discussion of this agreement see Landmine Action (2006) Cluster munitions in Lebanon, Landmine Action, London.

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