

CLUSTER BOMBS AND LANDMINES IN KOSOVO



**EXPLOSIVE
REMNANTS OF WAR**





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Front cover photo: G. Diffidenti
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Original: English

MINES - ARMS UNIT

August 2000
Revised June 2001

Produced with environment-friendly materials

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ACKNOWLEDGMENTS

ACKNOWLEDGMENTS

This report was written by Stuart Maslen, a consultant and former advisor to the ICRC's Mines-Arms Unit, based on field visits to Kosovo in the winter and spring of 2000 and on information provided by the ICRC delegation in Kosovo. To Mr. Maslen we extend our greatest appreciation. Acknowledgment should also be made of all those who contributed to field research in the province and of the special contributions of Johan Sohlberg, Nora Demiri and Florent Mehmeti of ICRC Pristina/Prishtine; all the ICRC Mine Awareness Officers in Kosovo; John Flanagan, Head of the United Nations Mine Action Coordination Centre, Pristina/Prishtine; Captain Andy Klee, Head of Explosive Ordnance Disposal, Multinational Brigade Centre and Sean Moorhouse, Halo Trust, Pristina/Prishtine. This does not imply that they are in any way responsible for the information, conclusions or recommendations of this report.

Notes

When referring to place names in Kosovo both the English name (adapted from the Serbian) and the Albanian variants are given, although the province is always referred to, as it is known internationally, as Kosovo.

In order to protect victims of unexploded ordnance and mine incidents from unwanted intrusions, details on the identities of individuals and specific locations of incidents are not provided.

GLOSSARY OF ACRONYMS

ACRONYMS

CBU	Cluster bomb units
CIMIC	Civil Military Cooperation Centre (of KFOR)
FRY	Federal Republic of Yugoslavia
ICRC	International Committee of the Red Cross
IMSMA	Information Management System for Mine Action
KFOR	Kosovo Force
KLA	Kosovo Liberation Army
MAG	Mines Advisory Group
NATO	North Atlantic Treaty Organization
NGO	Non-governmental organization
NPA	Norwegian People's Aid
RAF	Royal Air Force
SHAPE	Supreme Headquarters Allied Powers Europe
UNICEF	United Nations Children's Fund
UNMACC	United Nations Mine Action Coordination Centre
UNMIK	United Nations Interim Administration Mission in Kosovo
UXO	Unexploded ordnance
VVAF	Vietnam Veterans of America Foundation

1. INTRODUCTION

INTRODUCTION

Virtually all armed conflicts in modern times have left problems of explosive ordnance in their wake. Unexploded artillery shells, bombs, landmines, grenades, booby traps and even missiles often remain after the end of hostilities for national authorities and local civilian populations to deal with. In many instances these munitions remain for decades and inflict severe human, social and economic costs. Between 1945 and 1981, for example, the armed forces of Poland cleared an estimated 88 million pieces of unexploded ordnance left from the Second World War. During that same period an estimated 4,094 civilians were killed and another 8,774 injured as a result of the unexploded ordnance (UXO) left in the national territory. Even today, many European countries continue to clear land contaminated by World War II munitions.

Since the Second World War the vast majority of armed conflicts have occurred in poorer countries lacking the ability to ensure clearance of unexploded ordnance. The same period has witnessed a rapid proliferation of sophisticated weapons and, increasingly, the means to deliver munitions in huge numbers and over great distances. The Indochina wars of the 1950's, 60s and 70's left massive amounts of unexploded ordnance in countries of the region, giving rise to some early attempts to address the problem of "explosive remnants of war" in the context of the United Nations. In Laos alone some 9 million unexploded munitions are estimated to have killed or injured approximately 11,000 persons since 1975.

Conflicts of the past twenty years have been accompanied by a steady spread of the problems caused by unexploded munitions and, in particular, of cluster bomb submunitions which can rapidly be delivered by the thousands, tens of thousands or even millions. The list of recent conflicts in which submunitions were used includes Afghanistan, Bosnia-Herzegovina, Eritrea-Ethiopia, the Falkland Islands (Malvinas), the Gulf War, the Russian Federation (Chechnya) and, most recently, Kosovo.

The choice of Kosovo as the focus of the present study is neither because the situation there is unique nor because the region is that most severely affected by unexploded ordnance. Rather, Kosovo has been chosen because of the high degree of access afforded to the International Committee of the Red Cross (ICRC), the United Nations and other organizations concerned with the aftermath of the conflict in all parts of the province. This access has enabled such organizations to provide a high level of reliable documentation of the problems faced by both the civilian population and by mine/UXO clearance and awareness programs. The international conflict over Kosovo is also notable for the fact that, although lasting only eleven weeks (24 March to 10 June 1999), the conflict left behind a severe problem of unexploded remnants of war which will take years to address. It is hoped that the lessons learned from this work in Kosovo can be applied both for preventive purposes and to make mine/UXO action programs more effective in the future.



Photo: G. Diffidenti

Signs warning of the presence of landmines and unexploded cluster bomblets in a wooded area near the provincial capital of Kosovo, Pristina/Prishtine.

INTRODUCTION

Even before refugees began returning to Kosovo in June 1999 the ICRC was deeply involved in providing food, medical assistance and “mine awareness” education, aimed at reducing the risk of death and injury, to Kosovo refugees outside the province. With the end of hostilities in June 1999 these efforts were rapidly expanded to the civilian population inside Kosovo. It was clear, however, that the risks faced by the population were from a wide variety of munitions in addition to landmines. A significant and widespread threat was posed by other “explosive remnants of war” including unexploded cluster bomblets (submunitions) and other unexploded ordnance – which were taking as heavy a toll on civilians as were landmines.

This report provides an overview of the use and effects of mines, cluster bombs and other ordnance on the civilian population of Kosovo. Reports on the post-conflict effects of unexploded munitions are taken primarily from the ICRC’s extensive mine and unexploded ordnance awareness program in the province and from reports provided to the UN Mine Action Coordination Centre in Kosovo by other humanitarian organizations. The contents provide a comprehensive review of the human costs of explosive remnants of war in Kosovo during the one-year period from June 1999 through May 2000.

Although the ICRC is aware that civilian casualties in armed conflicts are regrettably not always avoidable, it believes that a large proportion of the deaths and injuries from explosive remnants of war in the post-conflict context is both predictable and preventable. This report is aimed at launching a dialogue among governments, humanitarian agencies, the military, the mine clearance community and other interested organizations on how a dramatic reduction in the level of death and injury from the explosive remnants of war can be achieved. The ICRC’s own preliminary conclusions and recommendations in this regards are presented at the end.



Photo: G. Diffidenti

An ICRC Mine Awareness Officer in Kosovo shows children from the province some of the consequences of being an amputee.

2. THE IMPACT OF CLUSTER BOMBS¹ IN KOSOVO

CLUSTER BOMBS

The role of cluster bombs in the conflict

CLUSTER STRIKES IN KOSOVO



Source: UNMACC

A cluster bomb is a metal canister that is dropped from an aircraft. At a pre-set altitude or after a specific time delay, the canister opens and ejects many dozens or hundreds of bomblets into the air. These bomblets then fall to the ground, sometimes with the help of a parachute, where they are meant to explode upon impact. The bomblets used in Kosovo are intended to destroy both tanks and armoured vehicles as well as to attack surrounding troops. Unfortunately, a significant proportion of the bomblets fail to explode on impact and can be easily detonated, leaving a serious hazard to civilians after the end of hostilities.

NATO forces made extensive use of cluster bombs during the conflict in Kosovo, beginning in early April 1999. NATO has confirmed that, in total, 1,392 cluster bombs containing 289,536 bomblets were targeted against 333 strike sites inside Kosovo.² Of these, the overwhelming majority were BL 755 and CBU-87B cluster bombs; an unknown, but probably small, number of Rockeye IIs were used during the conflict.³ In addition, there are unconfirmed reports that the Yugoslav army used a small number of BL 755 cluster bombs against KLA forces.⁴ It is also reported that some cluster bombs were dropped in border areas of Albania.

A single BL 755 cluster bomb, a munition first developed in the 1960s, contains 147 bomblets, each reportedly capable of penetrating 25 centimetres of armour with its shaped metal charge [see photo] which is propelled forward upon the detonation of the bomblet. At the same time, the bomblet's coiled casing shatters into 2,000 pre-shaped fragments which are scattered over a radius of some 30–40 metres and are designed to be effective against troops and non-armoured targets.⁵



Photo: G. DiIfranti

The metal cone inside the RBL 755 cluster bomblet is forcibly inverted by the explosive located behind it and transformed into a molten slug capable of penetrating a tank's armour plating.

¹ Cluster bombs are air-delivered canisters containing large numbers of submunitions or bomblets. For the purposes of this report a distinction is made between the unopened canisters containing the bomblets that are dropped from an aircraft (referred to as cluster bombs) and the individual bomblets once they have been dispersed from their canister (referred to as cluster bomblets).

² See "NATO-dropped Cluster Munitions", NATO document presented to the UN Mine Action Coordination Centre (UNMACC), undated but 1999; see also UNMIK, "Mine Action Coordination Centre Comprehensive Update and Plan for the Year 2000, Update as of 5 November 1999", UNMACC, Pristina/Pristine, November 1999.

³ NATO did not initially include "Rockeye" cluster bomblets on the list of munitions reported to the UN as having been used during the conflict.

⁴ See Speech of Brigadier General Daniel P. Leaf to NATO Press Conference, Brussels, 19 April 1999.

⁵ See for instance JALW, Issue No. 31, November 1998.

THE IMPACT OF CLUSTER BOMBS IN KOSOVO

KOSOVO

Photo: J. Sahlberg



The shell of the BLU-97, which is bright yellow in appearance, has been involved in many of the incidents in which civilians have been killed or injured.

The CBU-87B "Combined Effects Munition" contains 202 BLU-97 bomblets in each canister,⁶ which are ejected at a pre-set altitude. The BLU-97 has three destructive capabilities, thereby justifying its designation as a combined-effects munition. The primary charge is a shaped metal cone that, upon detonation of the bomblet, is converted into a molten slug to penetrate armoured vehicles or tanks. Like the BL 755 bomblet, the body of the BLU-97 fragments into scores of metal shards to kill or maim personnel or disable trucks over a radius of tens of metres. The third destructive element is an incendiary ring made of the metal zirconium, which can start fires if petrol or diesel are located in the vicinity.⁷

The fusing system of the BL 755 and the BLU-97 make them both extremely sensitive. Both should detonate by virtue of their primary "piezoelectric" detonating system. When a set of piezoelectric crystals are crushed by impact of the bomblet on a hard surface they send a charge to the detonator, which causes the bomblet to explode. In addition, the BLU-97 has a secondary "all-ways acting" (ie. multidirectional) fusing system based on a ball-bearing placed between two strikers.⁸

Photo: G. Diffidenti



This fuel tank located near Pristina/Prishtine airport was reportedly attacked by cluster bombs during the conflict.

The military advantage of cluster bombs over other conventional gravity ordnance is that they destroy targets over a wide area.⁹ This is considered of particular value when attacking a column or concentration of tanks, armoured vehicles, or military trucks. In addition, the Pentagon has noted their military value against oil-refining facilities and airports.¹⁰

⁶ CBU stands for "Cluster Bomb Unit"; BLU stands for "Bomb Live Unit".

⁷ See for instance *JALW*, Issue No. 28, November 1997.

⁸ Information provided by Mark Hurlston, Bactech, Pristina/Prishtine, 7 April 2000.

⁹ See for instance "The Use of Cluster Munitions", Australian Non Paper, in ICRC, *Expert Meeting on Certain Weapons Systems and on Implementation Mechanisms in International Law, Geneva, 30 May-1 June 1994*, ICRC, Geneva, July 1994. The wide area of damage is potentially, though, an increased danger from a humanitarian perspective.

¹⁰ Pentagon spokesman Kenneth Bacon, as reported by Voice of America, 22 June 1999.

CASUALTIES

Post-conflict casualties

A major threat to human life is the large number of unexploded bomblets that remain behind long after the conflict has ended. A Canadian military engineer involved in the clearance operation declared that cluster bomblets are “not technically a landmine but they do the same job when they’re sitting on the ground... They’ve been the biggest hazard.”¹¹ The US Special Representative for Humanitarian Demining, Ambassador Donald Steinberg, also acknowledged that mines and unexploded ordnance had made Kosovo among the world’s most dangerous real estate.¹²



Photo: G. Diffidenti

A BLU-97 canister lies half-hidden in the grass. The slightest touch could be enough to cause it to explode.

The exact number of these duds or blinds, as unexploded bomblets are referred to, is not known, although NATO itself estimated that 10 per cent of those it dropped inside Kosovo – that is, roughly 30,000 out of 289,536 bomblets – would not go off, leaving a major and difficult clearance task for the mine clearers, and a lethal hazard for the civilian population.¹³ A KFOR explosive ordnance disposal specialist asserted informally that in his experience the failure rate for cluster bomblets found in Kosovo had varied between 3 and 26 per cent per canister, with the average failure rate falling between 10 and 15 per cent overall.¹⁴ As at the end of May 2000, 4,069 unexploded bomblets had been cleared under UN auspices.¹⁵

The failure of bomblets to detonate is attributed to a number of factors. First, soft ground or vegetation can lead to a higher failure rate as the nose detonation fusing, designed to explode against hard targets, does not function on impact with less resistant material such as soft undergrowth. In Kosovo, Yugoslav forces tended to use vegetation for cover against the risk of NATO bombings and were subjected to attack in such settings. In addition, the NATO bombing campaign was conducted against a background of rainy weather, which inevitably made the ground softer. Secondly, bomblets,

particularly the high-technology variants deployed in Kosovo, can fail to arm properly after being dispersed due to technical malfunctions. Thirdly, in the case of the BLU-97s, the parachutes that deploy to stabilize their descent can become caught up in the trees before the bomblets land.

The risk of collateral damage using any gravity ordnance logically increases the higher the altitude.¹⁶ Cluster bombs which open in mid-air at a pre-set height or after a pre-set time delay to jettison the bomblets, will increase that risk if there is any malfunction in the delivery mechanism. Thus, the sites of cluster bomb strikes given by NATO to the UNMACC in Kosovo did not necessarily correspond to the reality on the ground. Many cluster bomblets were found a kilometre or more away from the target indicated.¹⁷

CIVILIANS

¹¹ Burnett, T., “An evil harvest, ‘All around are mines’, Kosovo’s legacy: Serbian landmines and NATO cluster bomblets”, *Toronto Sun*, 5 December 1999.

¹² Cited in Dickey, C., “Seeds of carnage”, *op. cit.*

¹³ Information included in report to UNMACC on the quantities of cluster bombs dropped inside Kosovo.

¹⁴ Discussion of 10 February 2000 with KFOR explosive ordnance disposal specialist. This figure is used formally also in the KFOR mine awareness briefings.

¹⁵ UNMIK, Kosovo Mine Action Coordination Centre Monthly Summaries, 1 June 1999-31 May 2000, UNMACC, Pristina/Prishtine, June 2000. This accounts for cluster bomblets cleared by UNMACC-accredited mine clearance organizations. These figures do not include KFOR clearance totals which have not been released.

¹⁶ Thus, for instance, according to reported comments by a Pentagon spokesman, because of the reduced accuracy of gravity ordnance, “everything around [the target] ... should be military, too, somewhere where there are no civilians”. Becker, E., “B-52’s carry less accurate gravity bombs”, *New York Times*, 30 April 1999.

¹⁷ See UNMIK, *UNMIK Mine Action Programme, Operational Plan for Consolidation Phase, Mine/UXO Clearance*, OP10, UNMIK, Pristina/Prishtine, 13 December 1999, p. 3. Information provided by John Flanagan, 8 April 2000. Other mine clearers suggested that cluster bomblets had sometimes landed up to 2-3 kilometres away from their intended point of strike.

WARRANTY

There have also been concerns about the age of some of the cluster bombs used by NATO since a number of US CBU-87 canisters were warranted only until 1997. Some mine clearance personnel have found canisters, the warranties of which expired in the mid-1980s. On the other hand, the likelihood that use after these expiry dates would affect the failure rate is discounted by some experts, who point out that annual inspections are carried out on the munitions to ensure they are functioning correctly.

None of the cluster bomblets used in Kosovo is known to have incorporated self-destruction mechanisms in its manufacture, even though the cost in comparative terms of this would have been fairly negligible, and would have significantly increased post-conflict protection for the civilian population. In a meeting on weapons systems and the implementation of international law, convened by the ICRC in 1994 in Geneva, the Australian representative submitted a Non Paper (an informal document not binding on his government) which recommended that the 1980 Convention on Certain Conventional Weapons be amended by imposing a requirement for a self-destruction feature to be incorporated in the fusing of all cluster bomblets.¹⁸ Unfortunately, this suggestion did not find its way to become binding international law in the first Review Conference of the Convention, which ended in May 1996.

In a much earlier effort to address this issue, the UN General Assembly also endorsed the recommendations of a report to the UN Environment Programme on explosive remnants of conventional war in its resolution 38/162 of 19 December 1983. The recommendations proposed, *inter alia*, that "high explosives should be designed to have built-in mechanisms that render the munitions harmless in due course"¹⁹ and that "the important issues of responsibility for damage and compensation should not be minimized or neglected."²⁰

Whatever the precise failure rate, cluster bomblets are, along with anti-personnel mines, the leading cause of mine/UXO-related injury or death in Kosovo. Cluster bomblets and anti-personnel mines accounted for 73% of the 280 incidents individually recorded by the ICRC between 1 June 1999 to 31 May, 2000, with each type of ordnance responsible for 102 deaths or injuries or just over 36% each. In addition, as compared to those killed or injured by anti-personnel mines, those injured or killed by cluster bomblets were 4.9 times as likely to be under age 14.²¹ Incidents involving cluster munitions were also much more likely than landmines to result in death or injury to several people.

¹⁸ See "The Use of Cluster Munitions", Australian Non Paper, in ICRC, *Expert Meeting on Certain Weapons Systems and on Implementation Mechanisms in International Law*, *op. cit.*, p. 70.

¹⁹ The report, prepared by a group of eight international experts, forms part of UN General Assembly Doc. A/38/383 (19 October 1983), pp. 6-28.

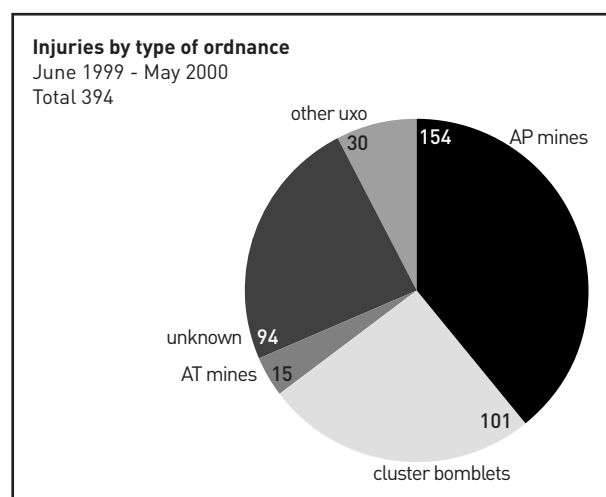
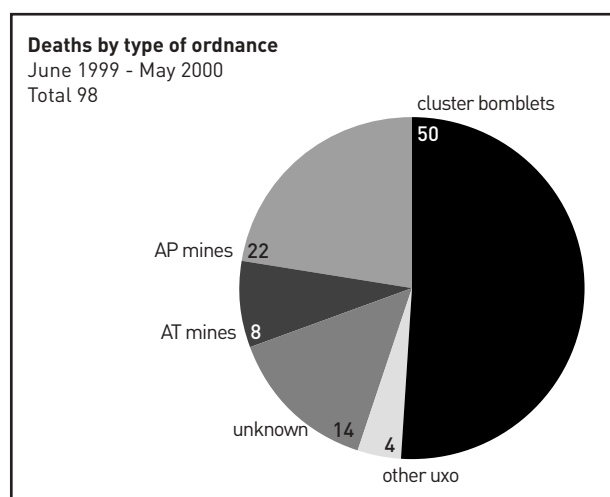
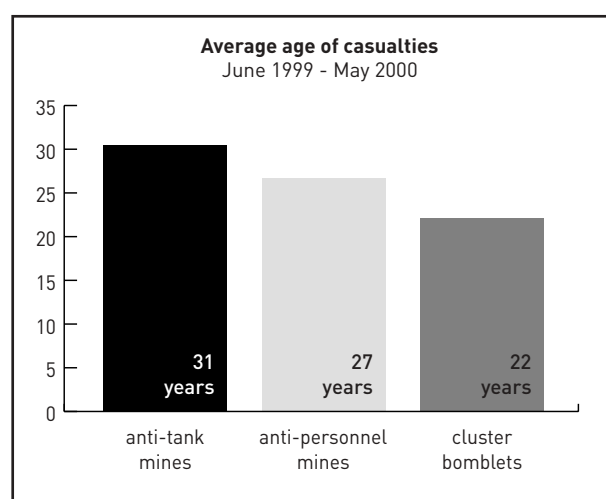
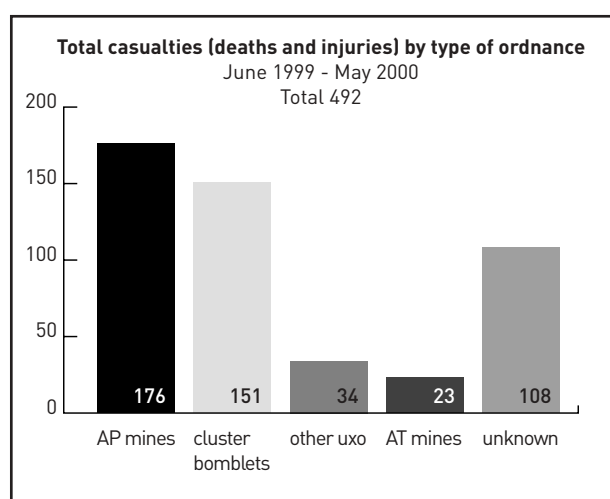
²⁰ *Ibid.*

²¹ Information provided by Dr David Meddings, Epidemiologist, Unit of the Chief Medical Officer, ICRC, Geneva. The 95% confidence interval is (2.3, 10.3).

THE IMPACT OF CLUSTER BOMBS IN KOSOVO

CASUALTIES

The tables and charts below put the ICRC casualty data, cited above, in the context of the broader pool of data collected by UNMACC²² and indicate total numbers of persons killed or injured by "remnants of war" in the year ending on 31 May 2000. The charts illustrate the casualty levels for all UXO, death and injury by type of ordnance and average age by type of ordnance. The pattern of death and injury described by ICRC data is also confirmed in this broader data set which identifies cluster bomblets as the type of ordnance whose victims are lowest in average age. In fact, the effects of cluster bomblets are probably even more severe than indicated in these data as the category "other UXO" most likely contains a number of cluster bomblet deaths and injuries. Unless positively confirmed, an incident was not ascribed to a cluster bomblet.



²²Casualty data from UNMIK, Mine Action Coordination Centre, Monthly Summaries, 1 June 1999-31 May 2000, Pristina/Prishtine, June 2000 and e-mail correspondence from UNMACC to the ICRC, 21 June 2000.

THE IMPACT OF CLUSTER BOMBS IN KOSOVO

CHILDREN

Intentional tampering, by both adults and children, is one of the most widespread causes of death and injury from cluster bomblets, despite the efforts of a plethora of mine-awareness education programmes in the province. An all-too-typical incident involving children and cluster bomblets occurred on 11 March 2000 between two villages south of Kosovska Mitrovi/Mitrovice. Eight children aged between 10 and 16 years went to a nearby hilltop to visit the site where a KLA soldier had been

killed. The hilltop was allegedly used by the Yugoslav army and Serbian police during the conflict and had been targeted with a cluster bomb strike. The area was not marked as dangerous, despite previous reports of cluster bomblets in the area.

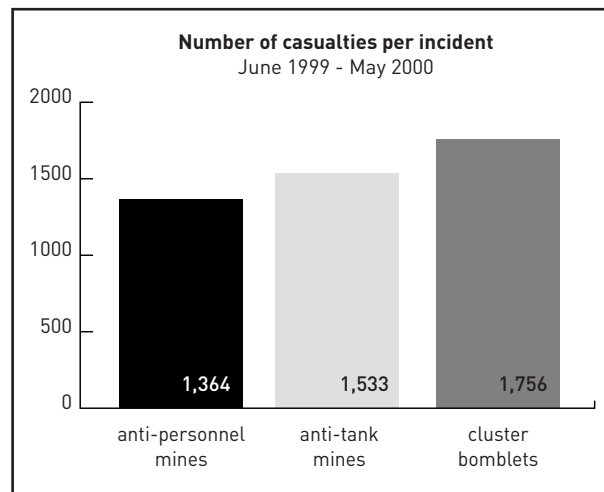


Photo: G. Diffidenti

The children found two unexploded BLU-97s, and two of the elder children started to play with them. One of these, a 16-year-old, claimed to have hit a bomblet on the ground a number of times without it having exploded, despite being reportedly warned by the others not to do so. He then threw it to one of the other friends whereupon it exploded in mid-air, killing one 12-year-old boy and seriously injuring his ten-year-old brother. The family of these two children had only returned to the province a few months previously from Switzerland, where they had lived for nine years. Thanks

This family lost one young boy to a cluster bomblet. His brother, who was severely injured in the same incident, was to undergo surgery in Switzerland to save his sight.

to the generosity of a Swiss teacher and the Swiss government, the injured brother left Pristina/Prishtine airport on the morning of 6 April for Bern, where he was due to undergo an emergency operation to save the sight in one of his eyes. The six other children were also injured, though not seriously.



THE IMPACT OF CLUSTER BOMBS IN KOSOVO

CASUALTIES

On 24 September 1999, in Vitina/Viti municipality, two 12-year-old boys were injured by a cluster bomblet while playing with it. One underwent an above-knee amputation and lost the toes of his left foot, the other had fragmentation injuries to his chest and back. The same month, in a village

nearby, four children were killed and two other individuals – one a 21-year-old adult, the other a child – were injured by a BLU-97 that the children had been hitting with a stick.

In July 1999, in a village in the south-west of the province, a number of former KLA soldiers found four yellow cluster bomblets with a white butterfly attached. One of the soldiers tried to open one of the bomblets with a knife when it exploded, killing three people, including one of the soldiers, and injuring seven others. The eight-year-old Albanian boy pictured here was one of the survivors. He had been watching from a horse-driven cart a few metres away. He spent seven weeks in hospital recovering from injuries to his legs, back and stomach. Although visibly limping, he said that the injuries did not hurt.²³

On 22 May 2000, three more children fell victim to a cluster bomblet. A seven-year-old child was

killed and two other children were seriously injured when one set off the device near a busy road in central Kosovo.²⁴ A Polish KFOR medical team cared for the injured children at the scene. Both surviving children were transported to the hospital in Urosevac/Ferizaj. One child was suffering from a leg wound, the other from a head wound. The child with the head wound was evacuated to Pristina/Prishtine hospital for emergency treatment, but was not expected to survive.²⁵



Photo: S. Maslen

An eight-year-old victim of a cluster bomblet near the scene of the explosion in July 1999. He is recovering well from his injuries.

INJURIES

²³ Interview with injured boy and villagers, 31 March 2000.

²⁴ "Kosovo child killed, two wounded by year-old NATO bomb", *Agence France Presse*, Pristina/Prishtine, 22 May 2000.

²⁵ "Commander deeply concerned by children's death and injuries", *KFOR Press Update*, Pristina/Prishtine, 22 May 2000.

IMPACT

The socio-economic impact of cluster bombs

In keeping with their classification as area weapons,²⁶ unexploded cluster bomblets affect a significant area of land and render the use of such land dangerous. Each cluster bomb leaves a footprint of bomblets, the size and shape of the footprint depending on a number of factors, including the height at which the bomb canister opens and the speed and angle of the aircraft dropping the canister. Generally, though, each bomb can be expected to leave a footprint in the shape of an ellipse and the size of several hundred metres. This wide area contamination has obvious environmental consequences as the entire area must be painstakingly cleared, including below the ground, as a number of bomblets penetrate below the surface up to a depth of 50 centimetres.

Although unexploded cluster bomblets spread over many areas within Kosovo, the total area of affected land is not yet known as additional impact areas are still being discovered. There are a number of fields, forests and vineyards which cannot be used as a result of bomblet contamination. The European Union, for instance, which is funding the rehabilitation of vineyards to help kick-start the economy in the province, has requested the urgent clearance of bomblets from a variety of areas (although a number of mine clearers do not consider this economic motivation the highest priority).

In a village near Prizren/Prizren, a known, but only partly marked, cluster-strike area is on the site of a cherry orchard. Indeed, visitors to the area at the end of March 2000 saw considerable evidence of a cluster bomb strike.²⁷ KFOR had warned of the dangers but the company that owned the orchard was telling workers to report for duty to start pruning the trees. According to the local ICRC mine-awareness officers, a young man had already been killed in the orchard, and his father was trying, unsuccessfully,

to persuade the workers not to turn up for work. Economic pressures may well lead to further casualties being inflicted in the orchard.

In summary, where there are bomblets lying on the surface they present an imminent risk to life but a risk many will accept based on the necessities of economics or survival. Where they have penetrated sub-surface, they present a major threat primarily to a farmer working the land, who may hit a bomblet and detonate it. For this reason, a number of clearance specialists would prefer to conduct surface clearance initially, mark the site and then return later to clear below the ground.



Photo: G. Diffidenti

A sub-surface RBL 755 cluster bomblet unearthed by battle area clearance specialists in a wooded area near the provincial capital. As always with these devices, it was subsequently blown up *in situ*.

BOMBLETS

²⁶See for instance Press conference given by NATO spokesman Jamie Shea and SHAPE spokesman Major General Walter Jertz, Brussels, 7 May 1999, <<http://www.nato.int>>.

²⁷Personal visit by author.

CLEARANCE

It is important to note that the impact of the use of cluster bombs has not been limited to land. A total of 235 bombs,²⁸ including cluster bombs, were dumped in the Adriatic by NATO planes returning from bombing raids.²⁹ Following an incident in May 1999,³⁰ when a cluster bomblet was caught in the nets of Italian fishermen, injuring three of them,³¹ NATO promised to clear the area.³² In July 1999, three Royal Navy ships were scanning the seabed for bombs using sonar. Each time a bomb was located an unmanned submarine was sent down to detonate the device.³³ Total clearance is not considered feasible, however, as some of the cluster canisters had opened, spraying hundreds of bomblets across the sea floor.³⁴

In the Solway Firth, in the UK, the cost of rendering safe 12 live cluster bombs dropped during a Royal Air Force training exercise for Kosovo was estimated at £250,000 (approx. US\$ 375,000).³⁵ The UK Ministry of Defence decided to encase the bombs in concrete rather than to remove them from the seabed.³⁶

Clearance of cluster bomblets: a unique challenge

It is widely agreed that the clearance of cluster bomblets, at least those used by NATO in Kosovo, is among the most difficult of explosive ordnance disposal tasks. The following are some of the main reasons why:

- The fusing system in a cluster bomblet is very sensitive. Bomblets have been known to detonate as a result of a change in the outside temperature.
- Because cluster bomblets can be extremely unstable they cannot be defused but must always be blown up *in situ*.
- Mechanical mine-clearance techniques cannot be used to clear cluster bomblets as the bomblets could destroy the machine.
- Upon impact with the ground, cluster bomblets may penetrate the soil to a depth of 50 cm. Explosive ordnance disposal experts must then locate each bomblet, excavate the earth by the side of it without touching, and then lay a detonating charge.
- Dogs cannot be used to detect hidden or buried cluster bomblets because their noses might touch a bomblet — and the slightest touch can be enough to cause an explosion.
- It is potentially dangerous to use standard electromagnetic mine detectors to detect buried bomblets as their electromagnetic pulse may inadvertently set off the munition.
- Cluster-bomblet clearance cannot take place in certain weather conditions, since a gust of wind may be enough to cause a bomblet to explode.

²⁸BBC, "UK sweeping up stray bombs", *BBC News*, <<http://www.bbc.co.uk>>, 30 July 1999.

²⁹See for instance Owen, R., "NATO jets dump bombs off Venice", *The Times*, 15 May 1999; "Adriatic cleared of unexploded NATO bombs", *Sky World News*, <<http://www.skynews.co.uk/skynews/world>>, 29 July 1999.

³⁰See also Becker, E., "Allies defend use of cluster bombs in airstrikes", *op. cit.*

³¹Owen, R., "NATO jets dump bombs off Venice", *op. cit.*; Ble-Richard, M., "Pêcheurs italiens au chômage pour cause de mer explosive", *Le Monde*, 18 May 1999. See also Kennedy, F., "Venetian trawlers net NATO bombs", *The Independent*, 15 May 1999.

³²BBC, "UK sweeping up stray bombs", *op. cit.*

³³*Ibid.*

³⁴*Ibid.*

³⁵BBC, "Protest over cost of cluster bomb work", *BBC News*, <<http://www.bbc.co.uk>>, 24 December 1999.

³⁶*Ibid.*

3. THE IMPACT OF LANDMINES AND UXO³⁷ IN KOSOVO

LANDMINES

The use of landmines

Both anti-tank and anti-personnel landmines were used during the conflict in Kosovo. Mines were used by the Yugoslav Army, Serbian police, Serbian paramilitaries, and by the KLA.³⁸ Many of the anti-personnel mines had minimum metal content, making detection more difficult, and were laid by the Yugoslav Army in fixed pattern minefields along the borders with Albania and the Former Yugoslav Republic of Macedonia, hoping to prevent KLA infiltration, as well as inside Kosovo to defend military positions.³⁹ Mines were also laid more randomly in nuisance minefields intended to harass opponents. According to the UN, the Yugoslav Army seemed to adhere quite carefully to military doctrine, and the use of mines was generally recorded in some form.⁴⁰ The KLA used mines sparingly, possibly because their soldiers often operated on foot and carrying large quantities of mines is simply not practical. It is reported that in a number of instances landmines (and on occasion booby traps) have been found around schools and houses, in gardens and on agricultural land.^{41,42}

Photo: G. Diffidenti



A typical blast anti-tank mine found in Kosovo.

Photo: J. Sohlberg



A typical blast anti-personnel mine found in Kosovo. Fragmentation and bounding fragmentation anti-personnel mines have also been found in the province.

NATO did not use landmines during the conflict although the United States was reportedly ready to deploy the CBU-89 Gator “scatterable” mine system, which contains a mix of anti-tank and anti-personnel mines,⁴³ and had declared that it reserved the right to use landmines.⁴⁴

Although the total number of landmines used in the conflict is not known, the UNMACC reported, as at 31 May 2000, a total of 7,232 mines cleared in the preceding year (3,448 anti-personnel and 3,784 anti-tank).⁴⁵

³⁷References here are to UXO other than unexploded cluster bomblets.

³⁸See International Campaign to Ban Landmines, *Landmine Monitor Report 1999, Toward a Mine-Free World*, Human Rights Watch, Washington DC, April 1999, pp. 830-832; BBC, “‘Widespread’ use of landmines”, *BBC News*, <<http://www.bbc.co.uk/world>>, 21 June 1999; “Mines to plague province for years”, *South China Morning Post*, 14 June 1999.

³⁹See for instance Mines Advisory Group, *Kosovo, Report*, MAG, Manchester, November 1999, p. 2.

⁴⁰Information provided by John Flanagan, head of the UN Mine Action Coordination Centre, Pristina/Prishtine, 8 February 2000. According to one commentator, “towards the close of the millennium, Belgrade is the acknowledged master of contemporary landmine warfare”. Venter, A.J., “Killing fields of Kosovo: harvesting mines in the Balkans”, *Soldier of Fortune*, November 1999, pp. 41 - 42.

⁴¹Mines Advisory Group, *Kosovo, op. cit.*, p. 2. This type of indiscriminate mining is euphemistically called “nuisance mining”. See for instance Halo Trust, *Consolidated Minefield Survey Results Kosovo*, Report, Pristina/Prishtine, 28 August 1999, p. 3.

⁴²These booby traps typically used grenades rigged to explode when a tripwire was pulled. See for instance “UNMACC, UNMACC Threat Assessment Factsheet No. 2”, UNMACC, Pristina/Prishtine, undated, pp. 1-2; see also UNMACC, “UNMACC Threat Assessment Factsheet No. 1” UNMACC, Pristina/Prishtine, undated.

⁴³See for instance Bender, B., “New anti-armour weapon should debut over Serbia”, in *Jane’s Defence Weekly Headlines*, Washington D.C., 7 April 1999; Human Rights Watch, *Ticking Time Bombs – NATO’s Use of Cluster Munitions in Yugoslavia*, Human Rights Watch, Report, Vol. 11, No. 6 (D), New York, May 1999, p. 7; “NATO is testing its latest weapons in Yugoslavia”, *Itar-Tass*, Moscow, 8 April 1999.

⁴⁴Statement by Kenneth Bacon, US Department of Defense. See Edwards, S., “Landmine-removal cash diverted to research, activists say”, *National Post*, 21 May 1999.

⁴⁵UNMIK, *Kosovo Mine Action Coordination Centre Monthly Summaries*, 1 June 1999 - 31 May 2000, UNMACC, Pristina/Prishtine, April 2000, p. 5.

IMPACT

The size of the minefields varies enormously, although generally the minefields laid at lower elevations are larger than those on the higher border territory.⁴⁶ These included both blast and fragmentation anti-personnel mines (omni-directional, directional and bounding) as well as blast anti-tank mines.⁴⁷

Following the end of hostilities, mines and booby traps have reportedly been found around sites under investigation for possible war crimes.⁴⁸ In one instance, two grenades were rigged with a tripwire to serve as an improvised explosive device on an approach route to an alleged mass grave site near a town in the centre of the Kosovo.⁴⁹ British forensic scientists working on behalf of the International Criminal Tribunal for the former Yugoslavia were extremely fortunate not to have been killed or seriously injured while engaged in an initial investigation of the allegations of war crimes. Although they stepped on the tripwire as they passed along a path leading to the site, it had sagged under the summer heat and the pressure of their footfalls was not enough to remove the firing pin.

Even more than a year after the end of the conflict, landmines and improvised explosive devices continued to be used in Kosovo by unknown parties.⁵⁰ According to the UNMACC: "The intended target for these devices has yet to be ascertained and at this stage is unclear, however it is safe to say that various factions within Kosovo intend to continue using both anti-personnel and anti-tank mines in the future."⁵¹ On 22 March 2000, KFOR soldiers found explosives on a road bridge north of Kosovska Mitrovi/Mitrovica, a few hours after an explosion destroyed a nearby railway viaduct.⁵² A timing device was connected to TNT charges as a booster for the bulk charge of 27 anti-tank mines, which were placed against the abutments.⁵³ On 14 April 2000, it was reported that US peace-keeping troops had launched a surprise raid near the town of 20 Kacanik/Kacanik in south-eastern Kosovo, and had seized a variety of illegally-held landmines.⁵⁴

On 15 June 2000 UNMIK head Bernard Kouchner cancelled a mine-awareness demonstration in Pristina/Prishtine to go to the site of the second mine incident that month apparently involving the new use of anti-vehicle mines on roadways. Four people were killed and four injured in these two incidents, apparently meant to intimidate or to destabilize the area.⁵⁵

⁴⁶UNMACC, "UNMACC Threat Factsheet No. 1", *op. cit.*

⁴⁷For a listing of mines and unexploded ordnance found in Kosovo see *ibid.*

⁴⁸See for instance BBC, "'Widespread' use of landmines", *op. cit.*

⁴⁹For details of the alleged war crimes see for instance Sweeney, J., "Little Krushe's darkest day", *The Observer*, 4 April 1999.

⁵⁰UNMACC, "UNMACC Threat Factsheet No. 5" UNMACC, Pristina/Prishtine, undated. Information confirmed by John Flanagan, head of UNMACC, 7 April 2000. Flanagan noted that access to landmines in Kosovo was "not a major problem".

⁵¹UNMACC, "UNMACC Threat Factsheet No. 5", *op. cit.*

⁵²Office of the DSRSG for Humanitarian Affairs, *Kosovo Humanitarian Update*, Issue No. 24, Pristina/Prishtine, 24 March 2000, p. 1.

⁵³UNMACC, "UNMACC Threat Factsheet No. 5", *op. cit.*

⁵⁴"US troops seize Kosovo weapons", *Associated Press*, Washington, 14 April 2000.

⁵⁵"Kosovo mine blast kills two Serbs", *Reuters*, 15 June 2000 and "UN envoy condemns attack on Kosovo Serbs", UNMIK press release, Pristina/Prishtine, 16 June 2000.

LANDMINES

The impact of landmines and UXO on civilians

Photo: ICRC



Refugees and the internally displaced are often at greatest risk of being killed or injured by landmines.

Photo: G. Diffidenti



A mine amputee stands beside his dog, also an amputee, amid the ruins of his house.

Given the use of landmines by a variety of parties in the conflict with access to significant stocks, it was inevitable that the weapons would take a toll on civilians both during and after the conflict. Refugees and the internally displaced were initially at greatest danger both when leaving and later returning to Kosovo, whether on foot or in a vehicle. In April 1999, five Albanians, including three children, were killed when their car hit a landmine in the no-man's land between a Serbian checkpoint and the Albanian border.⁵⁶ The same month, five Kosovo refugees were killed and seven others injured, two seriously, as they tried to enter the Former Yugoslav Republic of Macedonia illegally.⁵⁷ In the summer of 1999, as ethnic Albanian refugees flooded back to the province, the number of victims increased significantly, with more than 20 people being injured in one three-day period in June.⁵⁸

Mine victims in Kosovo are typically adult males. One such victim, seen here with his dog, which is also an amputee, was injured a week before the end of the conflict. He was coming back with his uncle to visit his house from the forest close by, where he had been hiding. On the way, he stepped on an anti-personnel mine, badly injuring his left leg, burning the skin of his right leg and spraying fragments onto his upper body. His uncle, who was not injured, brought him to the village, found a horse and cart, and took him to a nearby village from where relatives brought him to a small hospital. There he received first aid and a blood transfusion before being transported by ambulance to Kosovoska Mitrovi/Mitrovice.

At the hospital in Kosovoska Mitrovi/Mitrovice he was asked to sign a document authorizing the amputation of his entire left leg, but he refused, hoping for an amputation lower down the leg. He was later taken to Pristina/Prishtine hospital where, the very same day NATO troops entered Kosovo, Serb doctors at the hospital surgical unit amputated his leg. He spent six weeks at the hospital before being released. He returned to his village, where he stayed in a tent as his house had been destroyed during the war. Three months later, following a course of physiotherapy in Pristina/Prishtine, he was fitted with a temporary prosthesis at the artificial limb-fitting centre in the provincial capital. He is still wearing the same prosthesis, which he uses most of the time although it is painful when he puts weight on his artificial leg. He claims to be doing the exercises regularly that he learnt at the artificial limb-fitting centre.

Every ten days, a specialist expatriate from the Vietnam Veterans of America Foundation (VVAf) visits the family, bringing milk for the child. They also receive wheat, flour and oil from the UN, and are thankful for it, but the man says it is not enough to live on. He used to be a farmer but cannot work under current circumstances. He owns about four hectares of land, most of which is not mined. A neighbour kindly planted wheat for him on half a hectare of his land, using seeds given out as humanitarian aid. The remaining three and a half hectares are currently lying fallow. He hoped that the situation would change once he received his permanent prosthesis, which was due to be fitted on 28 April 2000. He was concerned, as the date had already been put back several times and his leg had had to be re-measured.

He feels bitter as a result of his injuries. He said that if he had been an old man, maybe he would not feel so bad, but he was young, only 33, and should be supporting his family.

⁵⁶BBC, "Mine kills five refugees", *BBC News*, <<http://www.bbc.co.uk/world>>, 18 April 1999.

⁵⁷"At least five refugees killed as mine explodes in Yugoslavia", *Agence France Presse Internationale*, 28 April 1999.

⁵⁸BBC, "More refugees injured by mines", *BBC News*, <<http://www.bbc.co.uk/world>>, 19 June 1999.

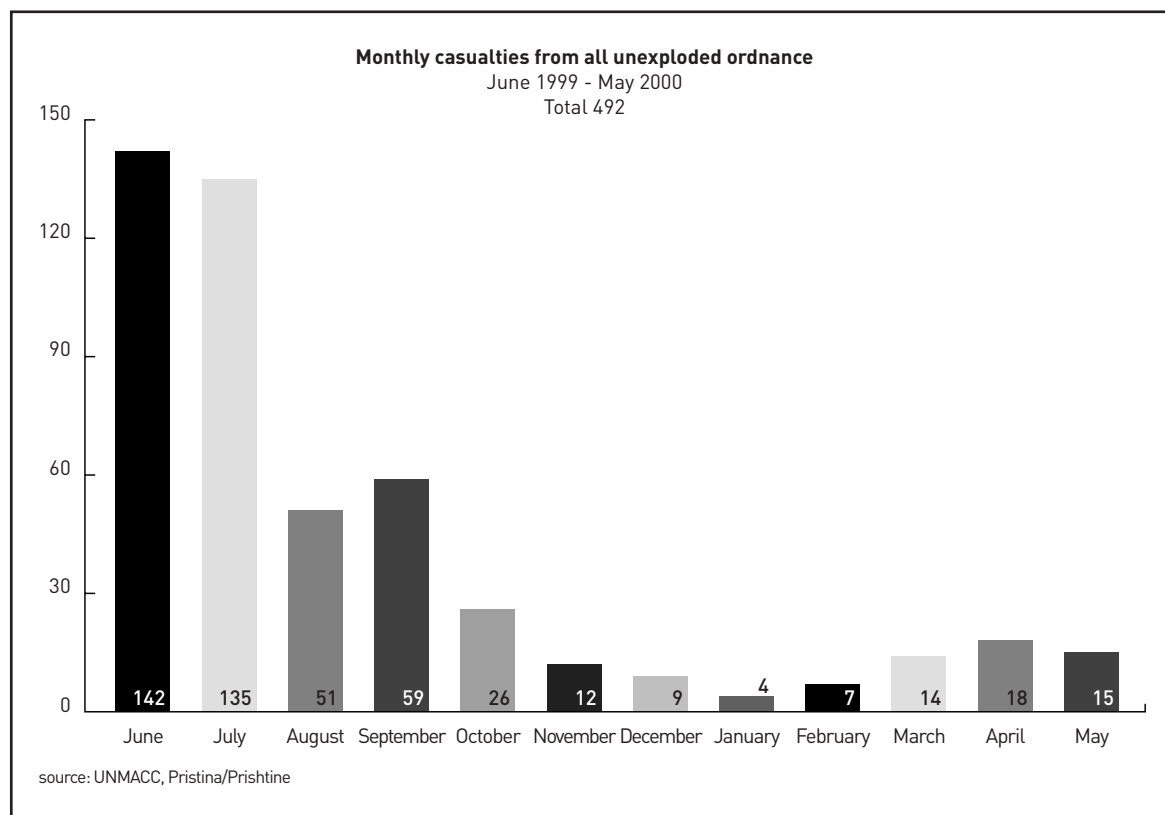
VICTIMS

THE IMPACT OF LANDMINES AND UXO IN KOSOVO

IMPACT

Subsequently, the number of deaths and injuries due to mines and UXO dropped somewhat in August 1999 before once again increasing in September as people went looking for firewood, food and water.⁵⁹ Indeed, the delivery of firewood by a number of organizations, including the International Organization for Migration and CARE, on behalf of the UN High Commissioner for Refugees may have reduced the number of casualties, even though the objective was to assist vulnerable families and not specifically to prevent mine or UXO injuries. Most of the wood, however, was procured within Kosovo itself, suggesting that many wooded areas were free of mine or UXO contamination.⁶⁰

According to the UNMACC database, between June 1999 and the end of May 2000, landmines, cluster bomblets and UXO struck at least 492 victims, of whom 98 died and 394 were injured. The vast majority of the victims were male, 32 were female, and for the remainder, sex was not recorded.⁶¹ After a sharp decrease in mine and UXO incidents during the winter of 1999-2000, the spring melting of the snows brought an increase once again in the number of victims, as communities ventured out into dangerous areas in search of food or wood, or, in the case of children, a place to play.



⁵⁹Information contained in UNMIK, *Kosovo Mine Action Coordination Centre Monthly Summaries, 1 June 1999 - 31 January 2000*, UNMACC, Pristina/Prishtine, 8 February 2000, p. 9, and in discussion with John Flanagan, head of UNMACC, 8 February 2000.

⁶⁰Discussion with the ICRC Relief Coordinator, Pristina/Prishtine, 9 February 2000.

⁶¹The database was the result of an information-collection programme, with the ICRC as the lead agency, in which the ICRC and UNMACC cooperate in processing and analysing data, with the World Health Organization serving as an adviser. UNMIK, *Kosovo Mine Action Coordination Centre Monthly Summaries, 1 June 1999 - 31 May 2000*, UNMACC, Pristina/Prishtine, April 2000, p. 11. The data that left sex unspecified were collected not by the ICRC but directly by KFOR units upon entry into Kosovo; their data normally do not contain details such as name, age, sex, details of the incident, and injury pattern. The ICRC is currently following up on cases of this kind.

THE IMPACT OF LANDMINES AND UXO IN KOSOVO

LANDMINES

Border communities were particularly affected by the threat of landmines. Already impoverished before the conflict, their predicament was further aggravated by the loss of cattle and the prevalence of mined areas in and around the villages. One border municipality south of Prizren/Prizren had registered 16 anti-personnel mine victims in separate incidents going back to March 1999. The victims were overwhelmingly male adults, who were aware that the area was dangerous, but people were often forced by economic necessity to search for firewood which they sold for income to survive.⁶² Thus, risk-taking behaviour sometimes continued in many areas, often in full consciousness of the dangers.

The border village was in some respects typical of the threat to life and livelihood caused by mines and UXO. Prior to the conflict, it was well known throughout Kosovo as an excellent potato-growing area. Villagers reported that during the conflict mines had been laid along roads and in the fields as well as in a number of houses. The head of the village knew of three mine incidents in which four people had been injured, including two victims who required amputations.

The villagers expressed serious concern that despite the severity of the mine threat, their food aid was due to be reduced. They felt that without such assistance they would be forced to cultivate suspect areas, despite the obvious dangers. It was admitted, though, that one of the villagers had been caught selling relief aid in one of the towns at the foot of the mountains. A commercial mine-clearance organization had reportedly cleared landmines from a number of sites around the village in 1999, but had then left. Following alleged concerns about the quality of the clearance, another commercial mine-clearance organization had been sent to check the work that had been done.

There were also dangers for Albanians living on the other side of the border. In one incident in early March 2000, two Albanian women, one 57 years of age, the other 60, were collecting firewood. One stepped on an anti-personnel mine, and when the other came to help, she too stepped on an anti-personnel mine. They were evacuated within an hour to a military field hospital, where both were surgically amputated below the knee.



Photo: G. Diffidenti

This man stepped on an anti-personnel mine not far from his house. His stump had turned red and he was having problems with his prosthesis.



Photo: G. Diffidenti

Deminers conduct "quality assurance" (to make sure mine clearance has been done properly) in a village in the mountains along the border with the Former Yugoslav Republic of Macedonia.

⁶²Information supplied by local ICRC Mine Awareness Officer.

THREAT

DANGEROUS



This 60-year-old woman was living next to a suspected mined area. When interviewed, she stated that not only did she know she was entering a dangerous area but that she would actually be fortunate to step on a mine. She explained that her husband had been killed and her son executed during the war and that she was now tired of life. She claimed that the family was not able to survive on the food aid provided.

In late April 2000, two mine-clearance operators joined the ranks of the mine-injured in Kosovo. The mine clearers, both working for Norwegian People's Aid, were injured in separate incidents. One of them stepped on a blast anti-personnel mine while conducting a mine survey on Friday 14 April. He received serious injuries to his right leg resulting in his leg being surgically amputated below the knee at the KFOR hospital in Pristina/Prishtine. It is estimated that he will require two to three months of treatment. A week later, while conducting demining operations in support of UNMACC's investigation into the accident, a second mine clearer stepped on a blast anti-personnel mine, received minor injuries to his toes and superficial blast injuries to his face. No surgical treatment was required and he is now recovering at home in Sweden.⁶³

The socio-economic impact of landmines and UXO

According to an April 2000 report of the UNMACC in Pristina/Prishtine, 361 square kilometres, or 3% of Kosovo's total land mass, was then affected by landmines, cluster munitions and other UXO.⁶⁴ Of this, 4% of agricultural land, and 5% of so-called social space,⁶⁵ were mine- (or UXO-) affected. By 30 November 2000, UNMACC had reported clearing 49% of all mine/UXO affected areas.⁶⁶

Beyond direct casualties, the most significant impact of landmines in Kosovo was on the water system and its indirect consequences for the population's health. Some 75% of the Kosovo population live in villages, and many were still without access to clean water in the spring of 2000. Although the clearance of small arms ammunition that had been dumped in a number of wells around the province proved a relatively straightforward task, clearing the urban water sources located in the border areas infested with landmines was a more serious obstacle to rehabilitating the water system.⁶⁷ The German Red Cross had to give up plans to repair the pipeline between the reservoir and the 12,000 inhabitants of the town of Stimlje/Shtime because of the presence of mines. Likewise, an American Red Cross project to supply water to 35,000 people spread across a number of villages in the Vitina/Viti region could not go ahead because the area between the river intake and the reservoir was mined and access was possible only by foot.⁶⁸

In some areas, landmines are blocking access to oxidized water pipes that urgently need to be replaced in order to prevent diarrhoea and other water-borne diseases. Clearance of the areas around these pipes has not been accorded high priority in Kosovo. Some of those deprived of water have taken to sinking their own wells close to their homes, but these wells can be too near septic tanks (because of the fear of mines laid around houses) and risk causing dysentery and hepatitis.⁶⁹

⁶³ E-mail correspondence from Christian Ruge, Norwegian People's Aid, 25 April 2000.

⁶⁴ UNMIK, *Kosovo Mine Action Coordination Centre Monthly Summaries, 1 June 1999 - 31 March 2000, op. cit.*, p. 4.

⁶⁵ Defined by the Survey Action Centre/UNMACC as an area within a 500-metre radius of any town, village or settlement, and 200 metres either side of a road or track.

⁶⁶ UNMIK, *Kosovo Mine Action Coordination Centre Monthly Summaries, 1 June 1999 - 31 March 2000, op. cit.*, p. 4. and, 1 June 1999-30 November 2000, *op. cit.*, p.5.

⁶⁷ Information provided by ICRC Water and Sanitation Coordinator, Pristina/Prishtine, 10 February 2000.

⁶⁸ *Ibid.*

⁶⁹ Information provided by Dr Fariborz Livardjani, a specialist in environmental toxicology who conducted a study of the direct impact on the public health system of the conflict in Kosovo for the ICRC, Geneva, 19 February 2000.

LANDMINES

On the other hand, it appears that the delivery of relief was not severely affected by landmines or UXO. In May and June 1999 relief organizations were forced to use only hard-surface roads until KFOR had declared the others clear of mines. Many agencies took advantage of what access they had to hand out mine-awareness pamphlets and provided warning posters for display in the villages.⁷⁰

Landmines also impeded and endangered the planting of crops,⁷¹ although it appeared that the danger was just one more problem among many.⁷² According to John Flanagan, the head of the UN Mine Action Coordination Centre in Kosovo: "The effect on agriculture is sizeable but hard to quantify." It is known that over two-thirds of known minefields affect access to farmland, and nuisance mines were scattered on paths and agricultural roads in rural districts.⁷³

A report prepared for the World Food Programme in November 1999 stated that:

One other residual effect of the conflict is that of mines and unexploded ordnance, which pose a significant problem in certain areas, particularly the municipalities of [Podujevo/]Podujeve (where some areas have been left unharvested due to the mine risk), [Kacanik/]Kacanik (where access to some forest areas is restricted by heavy mining along the border with [the Former Yugoslav Republic of] Macedonia and [Dakovica/]Gjakove (where there is extensive mining along the Albanian border and its associated access routes).⁷⁴

Agricultural activities often continued despite the risk. In July 1999 one farmer was killed and another injured when their tractor struck a mine in a field north of Podujevo/Podujeve.⁷⁵ The ICRC, however, reported that all the agricultural products supplied to farmers had been used although many cattle had been killed by landmines and UXO.⁷⁶ Mine-clearance experts working for Halo Trust in the villages of central Kosovo found on a number of occasions that cattle had been injured by anti-personnel mines.⁷⁷ ICRC mine-awareness teams working in the east of the province reported that animals grazing in the heavily-mined border areas would detonate a mine every two or three days.⁷⁸



Photo: G. Diffidenti

A deminer surveys a school affected by landmines and unexploded cluster bomblets.

Schools were also affected by mines and UXO, or suspected of being so affected, as they were used as Yugoslav army and Serbian police bases. This resulted in a systematic checking of school premises prior to the opening of the new school year in September 1999, which took up a great deal of mine-clearance resources.⁷⁹ At one such school, which was the scene of fighting during the conflict, there have been seven mine incidents since June 1999, five involving people and two involving cattle. Two villagers were injured while using a short cut through the fields surrounding the school, two others were injured while trying to demine, and the fifth victim was a 13-year-old boy.

The area around the school mentioned above has been the object of clearance operations by Action by Churches Together (ACT) since mid-September 1999. So far, using 40 mine clearers, ACT has cleared 370 anti-personnel blast mines, 78 fragmentation mines, and five anti-tank mines. Since the beginning of 2000, it has also cleared 48 BLU-97 cluster bomblets. The local ACT demining team leader thought that a further four to four and a half months would be needed to successfully clear the site of all mines and UXO. It was planned that the school would then be rebuilt by Save the Children (it had previously been a primary and secondary school with 618 pupils).

⁷⁰ Discussion with the ICRC Relief Coordinator, Pristina/Prishtine, 9 February 2000.

⁷¹ See "Kosovo recovery plan to include privatisation", *Financial Times*, 28 September 1999; also Burnett, T., "An evil harvest", *op. cit.*

⁷² See for instance Lawrence, M., *Food Economy Assessment of Kosovo Province, July - September 1999*, Final Report, World Food Programme, Rome, 14 November 1999. Thus, for instance, many cattle had been killed or stolen, many factories destroyed, and homes urgently needed to be rebuilt.

⁷³ Cited in Hope, K., "Kosovo Farmers reap a bitter harvest from scorched earth: with cereal production in the region at 35% of normal levels, the battle in the fields goes on", *Financial Times*, 21 October 1999.

⁷⁴ Lawrence, M., *Food Economy Assessment of Kosovo Province, July - September 1999*, *op. cit.*, p. 11.

⁷⁵ KFOR, Civil Military Cooperation Centre (CIMIC) Security Brief, 12 July 1999.

⁷⁶ Discussion with the ICRC Relief Coordinator, Pristina/Prishtine, 9 February 2000.

⁷⁷ BBC, "Widespread use of landmines", *op.cit.* See also Burnett, T., "An evil harvest", *op. cit.*

⁷⁸ Discussion with the ICRC Mine Awareness Officers, Pristina/Prishtine, 11 February 2000.

⁷⁹ Information provided by John Flanagan, head of UNMACC, 8 February 2000.

IMPACT

The impact of landmines on peace-keeping

Following the end of the conflict, KFOR soldiers were also at risk of landmine injuries. In June 1999, three French soldiers were wounded when their light armoured vehicle set off an anti-tank mine on a road near the north Kosovo town of Kosovska Mitrovi/Mitrovice.⁸⁰ In late September 1999, a German reconnaissance patrol unwittingly entered a minefield and two anti-personnel mines exploded. Two soldiers were seriously injured, one losing a foot, and two others received minor injuries. They were evacuated to a German field hospital.⁸¹

In October 1999, a KFOR vehicle patrol operating in Multinational Brigade East detonated an anti-personnel mine and then came under small arms fire. They returned fire and withdrew to their camp at Kosovska Kamen/Kamenice, procured a second vehicle and returned to the area. Here the second vehicle lost a wheel to another anti-personnel mine.⁸²

There were also reports of freshly-laid anti-tank mines being used against Russian peace-keepers operating in the east of the province.⁸³ Two Russian peace-keepers were injured in late December 1999 when a landmine exploded under the vehicle in which they were travelling near the eastern town of Kosovska Kamen/Kamenice. Both soldiers suffered shrapnel wounds.⁸⁴ The same month, a US soldier was killed when his Humvee vehicle drove over double-stacked anti-tank mines in the region of Kosovska Kamen/Kamenice. He was the first US soldier to die in hostile action in Kosovo. The road had been used regularly and was believed to be free of mines.⁸⁵



Photo: J. Sohlberg

British EOD experts serving with KFOR practise a minefield extraction of a wounded person.

⁸⁰ BBC, "More refugees injured by mines", *op. cit.*

⁸¹ KFOR, Civil Military Cooperation Centre (CIMIC) Security Brief, 23 September 1999.

⁸² KFOR, Civil Military Cooperation Centre (CIMIC) Security Brief, 1 October 1999.

⁸³ Information provided by John Flanagan, head of UNMACC, 7 April 2000.

⁸⁴ "Soldiers injured in Kosovo landmine blast", *Reuters wire release*, Pristina/Prishtine, 30 December 1999.

⁸⁵ See Myers, S.L., "Landmine kills G.I. in Kosovo, and US wonders who laid it", *New York Times*, 17 December 1999; *Agence France Presse*, "US soldier killed in mine explosion in Kosovo", *AFP wire release*, Pristina/Prishtine, 16 December 1999; *Associated Press*, "US soldier killed in land mine blast", *AP wire release*, Pristina/Prishtine, 16 December 1999.

4. MINE ACTION AND UXO CLEARANCE IN KOSOVO

DEFINITION

Definition and coordination

CLUSTER AND MINED AREAS IN KOSOVO



According to the United Nations, mine action includes “all the activities geared towards addressing the problems faced by populations as a result of landmine contamination... Its ... aim ... is to recreate an environment in which people can live safely, in which economic, health and social development can occur free from the constraints imposed by landmine contamination, and in which victims’ needs are addressed.” In fact mine action also addresses all forms of UXO and includes four core components: 1) mine and UXO survey, mapping, marking and clearance; 2) mine and UXO awareness education; 3) mine and UXO victim assistance; and 4) mine-ban advocacy.⁸⁶ Primary responsibility within the United Nations for coordinating all UN mine action activities falls to the UN Mine Action Service, which is located within the UN’s Department of Peacekeeping Operations.

In Kosovo, mine action and UXO clearance is coordinated by the UNMACC,⁸⁷ which in turn falls under the aegis of the UNMIK.⁸⁸ Coordination remains essential given that more than 20 separate organizations have been involved in mine action and UXO clearance in Kosovo, including more than a dozen demining organizations,⁸⁹ most operating under bilateral rather than contracts. In early 2000 the UNMACC employed seven international staff, 20 local staff and 10 staff seconded by other organizations. It holds core assets, such as mechanical mine-clearance equipment (mine crushers, flails, rollers and vegetation cutters) and mine detection dogs, to support some of the smaller mine-clearance organizations working in the province.⁹⁰

In a context that is probably unique among mine-clearance operations internationally, the UNMACC in Pristina/Prishtine is able to assign tasks directly to accredited organizations, even though the majority of them are operating under bilateral not UN contracts. This power has been used effectively to minimize duplication of effort, a major risk with so many actors involved. Indeed, although no system is ever perfect, the level of coordination of mine clearance in Kosovo is probably among the best in the world.

According to John Flanagan, head of the UNMACC, 2000 is the make-or-break year for mine action in Kosovo, particularly demining and UXO clearance. Speaking in March 2000, as 26 clearance operations got back into full swing following the winter lull, he remained optimistic that targets would be achieved, especially as regards landmines in the interior of the province. In 2001, the priority will then be to clear border minefields and remote cluster-bomb strike areas.⁹¹ He believed it feasible to clear priority areas of both UXO and landmines within three years given that the infrastructure in Kosovo could support mechanical methods of mine clearance and dogs for mine detection tasks. Funding support was considered to be good so far.⁹²

Priority was being given to clearing suspected mined areas or areas containing UXO close to civilian habitations. As noted previously, clearance in the summer of 1999 focussed on schools to allow pupils to resume classes in September at the beginning of the new school year. This tied up a great deal of resources which from early 2000 could be employed for other pressing priorities.

⁸⁶ See for instance the UN Mine Action Service website, <<http://www.un.org>>.

⁸⁷ See for instance UNMIK, *Kosovo Mine Action Coordination Centre Monthly Summaries, 1 June 1999 - 31 January 2000*, *op. cit.*, p. 2.

⁸⁸ Following the adoption of UN Security Council resolution 1244 (1999), UNMIK took over responsibility from KFOR for the management and coordination of humanitarian mine clearance operations in Kosovo. See UNMIK, *UNMIK Mine Action Programme, Operational Plan for Consolidation Phase, Mine/UXO Clearance*, *op. cit.*

⁸⁹ UNMACC, “UNMACC Threat Factsheet No. 1”, *op. cit.* See also UNMIK, *UNMIK Mine Action Programme, Operational Plan for Consolidation Phase, Mine/UXO Clearance*, *op. cit.*

⁹⁰ Discussion with John Flanagan, 8 February 2000.

⁹¹ Remarks made in discussion in Pristina/Prishtine, 7 April 2000.

⁹² Remarks made in discussion in Pristina/Prishtine, 8 February 2000.

MINE ACTION

The UNMACC has five teams devoted to quality assurance for mine and UXO clearance, each comprising one expatriate and two locals. The responsibility of the teams is to monitor clearance operations from beginning to end to ensure that they conform to humanitarian standards. The quality-assurance process does not, however, conduct post-completion checks to make absolutely sure that clearance has been completely effective, nor does it check to see whether cleared land is being effectively used.⁹³

Information management

Information management is the cement that holds mine action and UXO clearance together, ensuring that priorities are set – and met – according to verifiable criteria. The UNMACC stores information on minefields, cluster bomb strike sites, and mine incidents and accidents⁹⁴ on the Information Management System for Mine Action (IMSMA) database.⁹⁵ Kosovo is the first place where the IMSMA database, which was developed by the Geneva International Centre for Humanitarian Demining, has been used operationally.

Perhaps as a result, the database has suffered from a number of handicaps. The system as a whole was not considered user-friendly by a number of organizations. Computer hardware did not seem powerful enough to cope with the demands of the database. Moreover, a substantial amount of data, especially those provided by KFOR, were unverified and no apparent editing of data was carried out prior to initial entry into the IMSMA. Since October 1999, the UNMACC has been undertaking a data-cleaning process with the IMSMA database, with ICRC field staff doing extensive follow-up on incomplete incident records handed in during the emergency phase.⁹⁶ Yet despite these “teething troubles” with the system, the head of UNMACC felt that it had been an effective tool in planning and managing mine action and UXO clearance in the province.

Mine and UXO survey and marking

To establish a baseline for the extent of the mine and UXO contamination, Halo Trust, a UK-based humanitarian demining NGO, was contracted by the UK’s Department for International Development to undertake an initial survey of Kosovo in the summer of 1999.⁹⁷ This survey, entitled Consolidated Minefield Survey Results Kosovo, found that many areas of Kosovo, particularly in the south-west, were heavily mined, whereas other areas, particularly the north of the province, were relatively unaffected. Whereas UXO of Yugoslav origin was relatively scarce, the threat to the civilian population in Kosovo from NATO UXO was widespread.⁹⁸

The Halo Trust survey provided the newly-established United Nations Mine Action Coordination Centre in Pristina/Prishtine with a good idea of the extent of the threat from mines and UXO, and facilitated a decision not to create additional and unnecessary indigenous demining capacity.⁹⁹ On the other hand, it did not provide socio-economic data that could have been used subsequently to set priorities for mine-marking and clearance tasks.



Photo: J. Sohlberg

An unofficial sign warning of the presence of mines.

⁹³ Remarks by John Flanagan, Pristina/Prishtine, 7 April 2000.

⁹⁴ A mine accident is defined by the UNMACC as an incident occurring as a mine-clearance operator is in the process of carrying out a professional task, such as conducting a mine survey, clearing mines, etc.

⁹⁵ See for instance UNMIK, *Kosovo Mine Action Coordination Centre Monthly Summaries, 1 June 1999 - 31 March 2000*, op. cit., p. 2.

⁹⁶ UNMIK, *Kosovo Mine Action Coordination Centre Monthly Summaries, 1 June 1999 - 31 March 2000*, op. cit., p. 3.

⁹⁷ The initial Kosovo minefield survey was conducted from 13 June to 24 August 1999 using six survey teams.

⁹⁸ See Halo Trust, *Consolidated Minefield Survey Results Kosovo*, Report, op. cit.

⁹⁹ This is because it is believed that the province can be totally cleared of mines and UXO within only three years. A long-term indigenous capacity is therefore not required. Information provided by John Flanagan, head of UNMACC, 8 February 2000.

LANDMINES

The UNMACC has found relatively little minefield marking, especially in the higher border regions. However, several of the minefields in the lower-lying regions of the province have been marked in a fairly conventional manner using a barbed-wire perimeter fence and hand-painted signs. Where unmarked minefields have become known to the local population, the latter have, in some cases, marked them as a warning to others using a variety of means including plastic bottles or metal tins

hanging from string and forming a perimeter fence, animal skulls stuck on poles,¹⁰⁰ and in one case parts of a cluster bomb dispenser suspended from telephone wires.¹⁰¹

UNMACC noted, however, that the mine signs initially produced for KFOR had inadvertently had the word MINES printed on both sides of the sign, leading to possible confusion as to which side of the minefield a person was standing. To prevent accidental injuries, demining organizations have painted over the writing on one side of the sign.¹⁰² Another problem was that the KFOR sign has Cyrillic Serb lettering; when used in Albanian areas, the signs tended to be defaced or removed.

Mine clearance

Under the terms of the Military Technical Agreement signed by KFOR and the governments of the FRY and the Republic of Serbia (see Annex A), the Yugoslav army were obliged to hand over all their minefield maps.¹⁰³ In June 1999, the Pentagon complained that the Serbs had done little to show peace-keeping troops where they had laid mines,¹⁰⁴ but subsequently a total of 624 minefield maps were provided to the UNMACC in Pristina/Prishtine.¹⁰⁵ This represented a quarter of the roughly 2,500 dangerous areas.¹⁰⁶ Although the quality of the grid referencing was variable, once the area had been identified and located, clearance was certainly made easier.¹⁰⁷

Indeed, John Flanagan, head of UNMACC, said that the Yugoslav army had been cooperative with clearance work and continued to have regular meetings with KFOR.¹⁰⁸ He noted that Yugoslav soldiers would be tasked to undertake clearance of mined areas along the border of Kosovo with Serbia under the supervision of KFOR.¹⁰⁹ The Yugoslav army had even expressed a wish to return to Kosovo to conduct mine clearance. As a consequence, they were given copies of the UN Standard Operating Procedures for humanitarian mine clearance.¹¹⁰



Photo: G. Diffidenti

One of a number of mine warning signs that have been defaced because they contain Cyrillic Serb lettering and were placed in an ethnic Albanian area.

CLEARANCE

¹⁰⁰Information provided by ICRC Mine Awareness Officers, 11 February 2000.

¹⁰¹UNMACC, "UNMACC Threat Factsheet No. 1", *op. cit.*

¹⁰²Information contained in "UNMACC, UNMACC Threat Factsheet No. 1", *op. cit.* According to the UNMACC, demining organizations working in Kosovo mark their clearance sites in a conventional manner, to UN humanitarian standards, though with slightly different marking media.

¹⁰³Under Article II(2), the FRY agreed to mark and clear minefields, booby traps and obstacles and to clear all lines of communication by removing all mines, demolitions, booby traps, obstacles and charges as they withdrew. They were also to mark all sides of all minefields. Under Article III (2) (a) within two days of KFOR entering Kosovo, the State governmental authorities of the FRY and the Republic of Serbia were to furnish detailed records, positions and descriptions of all mines, unexploded ordnance, explosive devices, demolitions, obstacles, booby traps, wire entanglement, physical or military hazards to the safe movement of any personnel in Kosovo laid by FRY Forces. See Annex A for the relevant articles of the agreement, or NATO's website for a full copy of the Military Technical Agreement: <<http://www.nato.int/Kosovo>>.

¹⁰⁴Pentagon Spokesman Kenneth Bacon reported on *Voice of America*, 22 June 1999.

¹⁰⁵Discussion with John Flanagan, head of UNMACC, on 8 February 2000. See also UNMIK, *UNMIK Mine Action Programme, Operational Plan for Consolidation Phase, Mine/UXO Clearance, op. cit.*, p. 2.

¹⁰⁶See for instance UNMACC, "UNMACC Threat Factsheet No. 1", *op. cit.*

¹⁰⁷Discussion with John Flanagan, head of UNMACC, on 8 February 2000.

¹⁰⁸Discussion with John Flanagan, head of UNMACC, on 7 April 2000.

¹⁰⁹Remarks reported on *Voice of America*, 11 September 1999.

¹¹⁰Discussion with John Flanagan, head of UNMACC, on 7 April 2000.

MINE ACTION

Following the end of the conflict, the KLA stated that, in accordance with the Military Technical Agreement, they had removed all the landmines they laid. The quality of the work, however, was extremely uneven,¹¹¹ and there were even suspicions that a number of former Albanian soldiers were keeping mines for possible future use.¹¹² Moreover, the KLA did not make maps of where they laid mines, so if the soldier who used them had been killed, that information died with him. According to one KFOR officer, Captain Michael Lawthorne: "It is often hard to say who has laid the mines, the KLA or the Serbs. Even with the co-operation of the KLA it is hard to know where the mines are."¹¹³

CLEARED MINEFIELDS IN KOSOVO



Source: UNMACC

There was also evidence of Kosovo Albanian civilians becoming involved in ad hoc demining.¹¹⁴ Mine clearance experts working for Halo Trust came across one instance of a man having thrown 29 stones at a mine until it exploded, injuring his nephew, who lost a leg as a result.¹¹⁵ ICRC mine-awareness teams heard of a number of instances of farmers burning their land in the hope of detonating or at least uncovering any mines or UXO contaminating their fields.¹¹⁶ There was also a report of a local Kosovo Albanian who boasted of having removed more than 100 mines, claiming that he could sell them on the black market for about \$100 each.¹¹⁷ In a small village on the border with Albania, the village head claimed that the villagers had cleared 600 stake mines, and he brought out a small quantity of tripwire as evidence.

Most mine clearance in Kosovo, though, is carried out by humanitarian NGOs and commercial demining companies. **As at 31 May 2000, the UNMACC reported the clearance by organizations operating under its auspices of 3,448 anti-personnel mines and 3,784 anti-tank mines.**¹¹⁸ These figures do not, however, include mine clearance undertaken by KFOR. In November 1999, the UK Secretary of State for Defence stated in a written Parliamentary answer that all minefield or UXO sites presenting an immediate threat to life had been marked in the UK-led sector of Kosovo, and that KFOR as a whole had cleared 4,400 Serbian anti-personnel mines and 2,300 anti-tank mines.¹¹⁹ Combined clearance efforts represented, as at 31 May 2000, a total of 4.5 square kilometres cleared.¹²⁰ As at the end of February 2000, 776 schools and 16,111 houses had been rendered or certified safe for use across the province.¹²¹

Mine-clearance teams included a team of ethnic Albanian "housewives" working under the auspices of the Norwegian People's Aid. The women, who come mostly from Pec/Peje in the north-west of the province, were led by a Bosnian Muslim, and were said by Boerge Hoeknes, the Norwegian People's Aid project manager, to be the first all-female mine clearance team in the world. Moreover, in a traditional society in which few women previously worked outside the home, the women's clearance team raises a few eyebrows. According to one of the recruits, however, "women are better than men, they're more precise and careful."¹²²

¹¹¹ See for instance Halo Trust, *Consolidated Minefield Survey Results Kosovo, Report, op. cit.*, p. 4.

¹¹² Burnett, T., "An evil harvest", *op. cit.*

¹¹³ "Kosovo/NATO cluster bombs still causing death", *The Independent*, 5 September 1999.

¹¹⁴ See for instance Gomm, P., "Tens of thousands seek shelter in Kosovo's booby-trapped cities", *The Independent*, 4 November 1999.

¹¹⁵ BBC, "Widespread use of landmines", *op. cit.*

¹¹⁶ Discussion with ICRC Mine Awareness Officers, Pristina/Prishtine, 11 February 1999.

¹¹⁷ Burnett, T., "An evil harvest", *op. cit.*

¹¹⁸ UNMIK, *Mine Action Coordination Centre, Monthly Summaries, 1 June 1999 - 31 May 2000*, Pristina/Prishtine, June 2000, p.5.

¹¹⁹ House of Commons Hansard Written Answers for 5 November 1999.

¹²⁰ UNMIK, *Mine Action Coordination Centre Monthly Summaries, 1 June 1999 - 31 May 2000, op.cit.*, p.5.

¹²¹ UNMIK, *Kosovo Mine Action Coordination Centre Monthly Summaries, 1 June 1999 - 31 January 2000, op. cit.*, p. 4.

¹²² Strauss, J., "Housewives join first all-women mine-clearing team in Kosovo", *Daily Telegraph*, 17 November 1999.

CLEARANCE

Clearance of cluster bomblets and other unexploded munitions



Photo: G. Diffidenti

An unexploded cluster bomblet lies unsuspecting in the grass.

Whatever the failure rate for cluster bomblets and other ordnance, the problem in Kosovo remains substantial. Thus, UNHCR, giving evidence to the House of Commons International Development Committee, declared: "People in Kosovo are in danger not just because of mines laid by the Yugoslav army but from unexploded ordnance dropped on their country by NATO. There is an issue about whether there is a legal and moral obligation to clear that ordnance completely."¹²³

NATO has not yet accepted responsibility for clearing its unexploded bomblets, perhaps fearful of the precedent that it would set,¹²⁴ despite having a wealth of clearance assets at its disposal. The official mandate for KFOR clearance was limited to support to KFOR's mission and removal of an immediate danger to civilians. A bomb-disposal team sergeant declared to the BBC: "We are only called to actual sites that concern KFOR troops, so we are not in the business of humanitarian cleaning, there are non-government[al] organizations that come here to do that."¹²⁵

This stance was heavily criticized by humanitarian organizations.¹²⁶ A representative of Médecins sans frontières declared that NATO "should collect what they dropped here, because we find aircraft bombs and cluster bombs nearly every day. For the demining organizations it is too much, and NATO dropped them so they should collect them as well."¹²⁷ Even the head of Kosovo's UNMACC stated that NATO "should assume responsibility for cleaning it up. They are doing work to restore essential services, but this doesn't necessarily extend to bomb cleaning activities."¹²⁸

But there were certain problems when NATO did clear mines and UXO. According to UNMACC, their approach tended to be "too military" – randomly picking at mines and bomblets¹²⁹ without necessarily marking the entire site and reporting clearance systematically to the UN.¹³⁰ Tragically, on 21 June 1999, shortly after the end of the conflict, in the grounds of a school in a town south-west of Pristina/Prishtine, two Gurkhas¹³¹ who were clearing cluster bomblets away from a school were killed along with two members of the KLA when one of the bomblets detonated, causing sympathetic detonation of several others.¹³² The Gurkhas were the first NATO troops to die inside Kosovo.¹³³

NATO did provide the UNMACC with the coordinates for the 333 intended cluster bomb strike sites, which helped the demining teams to trace some of the unexploded bomblets.¹³⁴ However, not all the coordinates corresponded to the actual strike sites, and it was difficult to search through the undergrowth for signs of the deadly munitions.¹³⁵ Given the complexity of the clearance task, the UN Mission in Kosovo wrote directly to NATO in April 2000 requesting more detailed information on the strike sites, including the angle, direction and speed of the aircraft dropping the cluster bombs, and asking the organization to provide aerial photographs where they were available. Additional information was sent by NATO to UNMACC in May 2000.¹³⁶

¹²³ Kosovars still being maimed by Nato bombs", *Scotland on Sunday*, 21 November 1999.

¹²⁴ See for instance Steele, J., "Death lurks in the fields", *The Guardian*, 14 March 2000.

¹²⁵ BBC, "No clear-up of Nato cluster bombs", *BBC News*, <<http://www.bbc.co.uk/world>>, 13 August 1999.

¹²⁶ See also "Safety is NATO's business: they mustn't try to heap it on others", Editorial, *The Guardian*, 23 June 1999.

¹²⁷ BBC, "No clear-up of Nato cluster bombs", *BBC News*, <<http://www.bbc.co.uk/world>>, 13 August 1999.

¹²⁸ Johnston, L., et al., "We did this", *The Express*, 6 August 1999.

¹²⁹ This has the effect of disturbing the pattern (in the case of mines) or the footprint (in the case of cluster bombs).

¹³⁰ Information provided by John Flanagan, 7 April 2000.

¹³¹ The Gurkhas are members of a special Nepalese regiment within the British armed forces and have been serving within KFOR.

¹³² Butcher, T., "Two Gurkhas killed by unexploded NATO bombs", *Daily Telegraph*, 22 June 1999. The report referred to villagers' claims that the surrounding fields were full of cluster bomblets that had failed to explode and that the villagers had been bringing them to the school, which had been disused for a year, over the previous week. See also Farrell, S. and Evans, M., "Gurkhas killed by NATO bombs", *The Times*, 22 June 1999.

¹³³ *Ibid.*

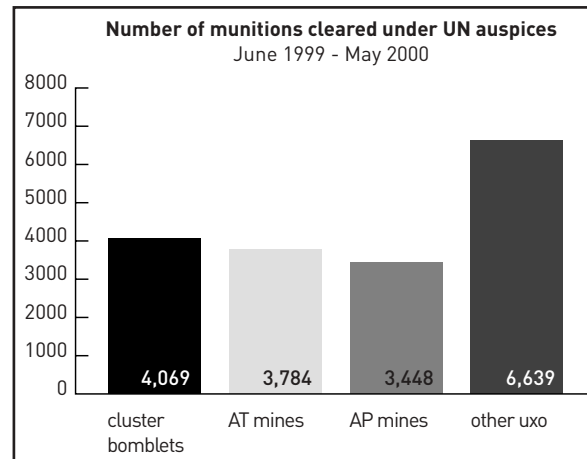
¹³⁴ "NATO bombs still killing Kosovans", *The Times*, 18 August 1999.

¹³⁵ *Ibid.*

¹³⁶ See for instance Gall, C., "UN aide in Kosovo faults NATO on unexploded bombs", *New York Times*, 23 May 2000.

CLEARANCE

As at 31 May 2000, organizations operating under the auspices of the UNMACC had reported the clearance of 4,069 cluster bomblets and 6,639 other items of UXO.¹³⁷ Once again, these figures do not include bomblets or other UXO cleared by NATO, although KFOR's Multinational Brigade Centre's explosive ordnance-disposal specialist, Captain Andy Klee, reported in February 2000 that 2,126 cluster bomblets had been cleared by KFOR within the sector, just one of five in the province.¹³⁸



It is widely agreed that the destruction of cluster bomblets is among the most delicate and dangerous of all clearance tasks. According to John Flanagan, one of the lessons of Kosovo is that bomblets should not be treated as generic ordnance. Mine clearers tend to agree. One stated that he treated cluster bomblets with "kid gloves, 100%".¹³⁹



A battle area clearance expert testing his "fluxgate magnetometer" detector before beginning to search for unexploded cluster bomblets.

In an accident on 13 January 2000, a mine-clearance team working for Help U.D.T., a demining NGO, were conducting a survey of a cluster-bomb strike in the Pec/Peje area in the north-west of the province. The team arrived at a village and were shown a number of BLU-97 bomblets that were in and around a field bordered by a track. The team leader was being shown the location of the munitions by a local boy who led the team leader up the track that bordered the field.

In order to give the team leader a better view of the munition, the boy pulled the wooden fence to one side. As he did so, the bomblet detonated, slightly injuring both the boy and the mine clearer. It is believed that the bomblet's parachute had frozen to the fence post during the onset of winter, and the slight movement of the fence pulled the parachute which in turn detonated the bomblet. All safety procedures were followed, and serious injuries were only avoided by the frozen ground absorbing the blast.¹⁴⁰

As a result of the sensitivity of their fusing mechanisms clearance specialists insist that cluster bomblets should never be removed for destruction, nor should an attempt be made to defuse them – they must always be destroyed individually *in situ*.¹⁴¹ Initiation of destruction is done at a distance of several hundred metres, for such is the potential reach of the fragments.

In contrast to mine-affected areas, mechanical clearance is impossible because of the destructive power of cluster bomblets, which could damage or even destroy the machines. Similarly, dogs cannot be used as their noses might touch the devices and thereby possibly trigger detonation. Moreover, for safety reasons, standard electromagnetic mine detectors are not appropriate to locate the bomblets, since the electromagnetic pulse could potentially cause the bomblet with its piezoelectric fuse to explode. On the other hand, the high metal content of a cluster bomblet eases localization by the correct detection equipment, a "fluxgate magnetometer".

¹³⁷UNMIK, *Kosovo Mine Action Coordination Centre Monthly Summaries, 1 June 1999 - 31 May 2000*, op. cit., p. 5 and, for total UXO cleared, e-mail from UNMACC to the ICRC, 26 June 2000.

¹³⁸Discussion with Captain Andy Klee, Multinational Brigade Centre, 9 February 2000.

¹³⁹Remarks by Sean Moorhouse, Survey Officer for the Halo Trust, Pristina/Prishtine.

¹⁴⁰Incident reported in UNMACC, "UNMACC Threat Factsheet No. 3", UNMACC, Pristina/Prishtine, 28 January 2000.

¹⁴¹See for instance Human Rights Watch, *Ticking Time Bombs – NATO's Use of Cluster Munitions in Yugoslavia*, op. cit., p. 3. For the appropriate destruction procedure see for example Mines Advisory Group, Kosovo, Report, op. cit., p. 15.

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Weather is also a factor in clearance operations, as wind can blow through the parachutes of the BLU-97s, which disturbs the bomblets, and rain causes mist to form on the required protective visors. Even blocking sunlight from shining on a cluster bomblet is discouraged, as the resulting change in temperature might cause detonation.¹⁴² A mine-awareness poster prepared for KFOR by the US warns that a soldier transmitting a report of a cluster bomblet should only do so when he or she is at least 100 metres away from the bomblet (in case the radio signal might itself cause the bomblet to explode). And the return of leaves to the trees in the spring is not welcome to all, as it may hide the presence of bomblets above the ground.

The task of clearance is further exacerbated by the tendency of cluster bombs to drift away from the intended drop zone. NATO provided point target data to the UNMACC in Pristina/Prishtine – but the actual point of impact of the bomblets in the province is sometimes 2-3 kilometres away from the intended target. This inaccuracy requires the commitment of even more survey resources to identify and mark affected areas.

Given the knowledge and skills required, mine-clearance organizations were not asked to clear bomblets in Kosovo, the task being given to two specialist organizations, Bactech¹⁴³ and European Landmine Solutions.

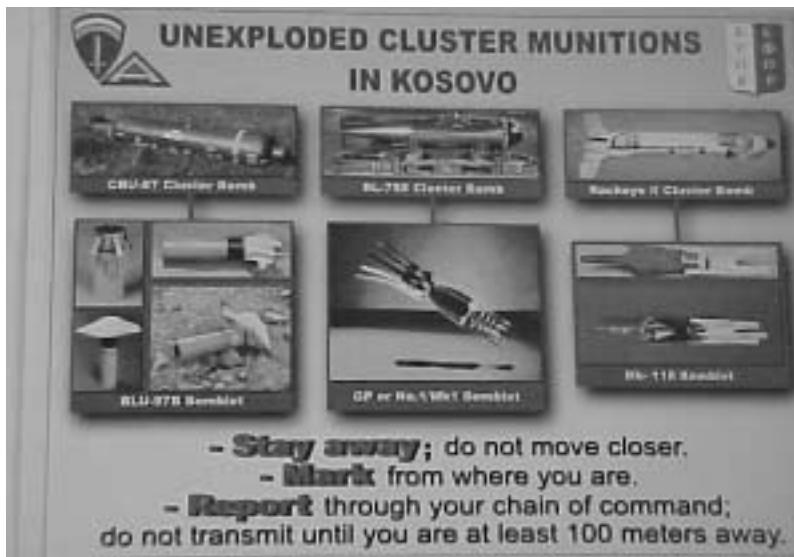


Photo: S. Maslen

KFOR mine information poster.

RULES

¹⁴²According to Halo Trust, a number of cluster bomblets detonated by themselves in the summer sun. Discussion with Sean Moorhouse in Pristina/Prishtine, 8 February 2000. A number of other mine clearers, though, did not think that such detonations were likely.

¹⁴³The company's full name is Battle Area Clearance and Training Equipment Consultants.

EDUCATION

Mine and UXO awareness education

Mine awareness is an information and educational process seeking to instil safe behaviour in communities and individuals at risk. In the Kosovo context, it was first conducted by both the ICRC and UNICEF for Kosovo Albanians in refugee camps in neighbouring Albania and the Former Yugoslav Republic of Macedonia. Together, the ICRC and UNICEF trained 75 staff from the International Organization for Migration, who served as escorts to the returning refugees. Unfortunately, despite these combined efforts, dozens of returnees were killed or injured while going back to the province.

Once the refugees had returned to Kosovo, a detailed needs assessment was conducted of those who were most at risk from mines and UXO. The assessment was carried out jointly by the ICRC, the Mines Advisory Group and UNICEF in three villages where mine/UXO accidents had occurred in each of the five regions across the province.¹⁴⁴ It found that high-risk behaviour in Kosovo included handling or playing with mines or UXO, amateur demining, knowingly walking in unsafe areas, and playing in unknown and unsafe areas.

A substantial number of NGOs initiated mine-awareness programmes in Kosovo 31 March 2000, more than a dozen organizations, including KFOR, were involved in mine-awareness education in one way or another.¹⁴⁵ By the end of January 2000, the UNMACC recorded that mine-awareness activities had taken place in more than 35 per cent of the highest-risk areas and a similar percentage in the medium-risk areas, as determined by the UNMACC.¹⁴⁶ As with other aspects of mine action, their activities are coordinated by the UNMACC in Pristina/Prishtine.¹⁴⁷

The largest mine-awareness programme is being undertaken by the ICRC, using local mine-awareness officers present in all but one of the province's districts. The ICRC's community-based mine-awareness programme was initiated with the training of 12 locally-recruited mine-awareness officers. The programme begins with a one-day visit to targeted villages. Information as to where the mine/UXO problem is, and how it affects the lives of the people in their daily routine and through their seasonal activities, is gathered from the communities through discussions and interviews.

A map is drawn by the villagers showing the suspected and confirmed mine/UXO areas. From this map discussions are held to develop a safer village plan. The focus is on behaviour change, identifying high-risk behaviour and looking at alternatives. The community is then divided into adults and children, and mine-awareness programmes are carried out with each of the groups according to the needs which have been identified through the discussions. The schools in each of the targeted villages have been systematically visited and interactive activities, such as role plays, games or songs, performed with the children.



Photo: G. Diffidenti

Children participating in an ICRC mine-awareness session.

¹⁴⁴Kosovo Mine/UXO Awareness Education Task Force, *Mine/UXO Awareness Education Needs Assessment for Kosovo*, conducted August 1999, Pristina/Prishtine, undated but 2000.

¹⁴⁵Adventist Development and Relief Agency (ADRA), Caritas, Children's Aid Direct, Danish Church Aid/Action by Churches Together (DCA/ACT), Defence Service Limited (DSL) (DSL is coordinating mine action including mine awareness in Multinational Brigade South but is not involved in implementing mine awareness), Halo Trust, the ICRC, InterSOS, Islamic Relief Worldwide (IRW), the Mines Advisory Group (MAG), the Mines Awareness Trust (MAT), Mine Tech, the Norwegian People's Aid (NPA), and the Vietnam Veterans of America Foundation (VVAFA). See for instance UNMIK, *Kosovo Mine Action Coordination Centre Monthly Summaries, 1 June 1999 - 31 March 2000, op. cit.*, p. 7.

¹⁴⁶UNMIK, *Kosovo Mine Action Coordination Centre Monthly Summaries, 1 June 1999 - 31 March 2000, op. cit.*, p. 6.

¹⁴⁷Mine awareness, like other mine action programs in Kosovo, is coordinated by the UNMACC, which requires all implementing organizations to follow its Best Practice Guidelines for Mine/UXO Awareness Activities, based on the *International Guidelines for Mine and Unexploded Ordnance Awareness Education* developed by UNICEF on behalf of the United Nations system.

AWARENESS

During these visits the community identifies a volunteer who will be trained as their mine-awareness representative. This person will be able to continue developing and monitoring the safer village plan as well as mine-awareness activities according to the specific needs within the village. The mine-awareness teams act as the interface between the affected communities and the clearance organizations by providing information which will enable them to set priorities in allocating their resources to meet the clearance and marking needs of the communities. All clearance or marking requests forwarded to the ICRC mine-awareness teams by the affected communities are passed on to the UNMACC and copies of those requests are handed out at regional level to the clearance organizations concerned.



Photo: G. Diffident

An ICRC mine-awareness officer shows examples of typical minefield warning signs.

a list of villages in need of wood in order to prevent people from going into mined forests. This list has been forwarded to agencies presently carrying out wood distribution so that these villages can be given priority status.

As at the end of May 2000, ICRC mine-awareness officers had visited 410 of the most affected villages. They will continue until all affected villages have been visited. This is an ongoing process, as monthly follow-ups – through the community volunteers – are being set up and will last for as long as the mine or UXO threat exists.

In addition, all KFOR soldiers are supposed to receive mine-awareness training at least once a month during their time in Kosovo.¹⁴⁸ Each Multinational Brigade headquarters has its own office responsible for coordinating mine-awareness training within its sector, which also trains UN, ICRC and NGO staff in mine-awareness upon request. Standard two-hour courses are provided, although civilian police and UN police receive a slightly different briefing in accordance with their different responsibilities. The two basic messages are: “Stay in the safe areas” and “Do not touch!”¹⁴⁹

¹⁴⁸ According to a Swedish officer working in the Multinational Brigade Centre, most incidents occur in the first or the last month of the tour of duty because in the first month soldiers don't know how to act, and in the last month they are overconfident that they do know how to act.

¹⁴⁹ Information provided by the Mine Awareness Office of the Multinational Brigade Centre, Pristina/Prishtine, 8 February 2000. See also UNMIK, *Kosovo Mine Action Coordination Centre Monthly Summaries, 1 June 1999 - 31 March 2000, op. cit.*, p. 6.

ASSISTANCE

Mine and UXO victim assistance

In Kosovo, unlike many other war-affected regions of the world, the ICRC is not involved in evacuating medical casualties, as this is already being done by many NGOs and therefore additional expertise and resources are not needed. Instead, the ICRC is concentrating on training doctors and nurses in hospital management and supplying blood to the blood banks in Kosovo through the central blood bank in Pristina/Prishtine. KFOR has been persuaded to donate blood for the local population.¹⁵⁰

The rehabilitation needs of the survivors of a mine or UXO blast tend to differ depending on the cause of the injuries. A blast anti-personnel mine (usually laid under the ground) invariably makes amputation necessary of the foot or leg of the person who detonates it. Other munitions, including cluster bomblets, frequently inflict fragmentation injuries on any person caught within the radius of the blast, and can be more or less severe.

The UNMACC regretted the lack of specific expertise in victim assistance within its headquarters in Pristina/Prishtine. John Flanagan felt that the body should treat the issue in the same way as it treated mine clearance and mine awareness: by developing a strategic plan, analysing available data, coordinating the various actors concerned and the broad range of activities to be carried out. He also regretted the lack of sufficient funding for this often-neglected branch of mine action.¹⁵¹

By February 2000, Handicap International, which is committing resources and training to providing physical rehabilitation to those in need,¹⁵² had registered a total of 482 amputees in Kosovo (by no means all are mine amputees). Of these, 73% are adult males, 16% are adult females and the remainder are children.¹⁵³

There is only one artificial limb-fitting centre in Kosovo, located in the provincial capital, Pristina/Prishtine. As there existed no operational capacity for ortho-prosthetic manufacture following the end of the conflict, one of Handicap International's primary tasks has been to work with local staff to renovate the centre situated in Pristina/Prishtine's main hospital.¹⁵⁴ One of the major challenges in ensuring the provision of assistance to the war-disabled is the training of physiotherapists in physical rehabilitation techniques.¹⁵⁵

By February 2000, 154 patients had been fitted with either a temporary or a permanent prosthesis.¹⁵⁶ Of these, 34% were amputees as a result of disease, 30% were mine victims (though this term also encompassed cluster bomblets and other UXO), 19% had amputations resulting from trauma (e.g. traffic accidents, but which might also include war-related trauma), 14% suffered amputations during the war (from a shooting, grenade, or direct bombing), and 3% were born without a leg or legs.¹⁵⁷



Photo: G. Diffidenti

Amputees go through extensive physical rehabilitation before they can effectively use an artificial limb.

¹⁵⁰Discussion with ICRC Medical Coordinator, Pristina/Prishtine, 10 February 2000.

¹⁵¹Interview with John Flanagan, 7 April 2000.

¹⁵²UNMIK Health/World Health Organization has mandated Handicap International to be the agency responsible for physical rehabilitation programmes in Kosovo. Handicap International, *Synthesis Report of Operation*, HI, Pristina/Prishtine, January 2000, p. 6.

¹⁵³Handicap International, *Activity Report on the Activities of the National Orthoprosthetic Workshop*, Period August 1999 - February 2000, HI, Pristina/Prishtine, undated.

¹⁵⁴Handicap International, *Synthesis Report of Operation*, *op. cit.*, p. 7.

¹⁵⁵Remarks by Handicap International Pristina/Prishtine and Vietnam Veterans of America Foundation (VVA) Pristina/Prishtine, 9 February 2000. VVA was planning to hire an expatriate physiotherapist in March 2000.

¹⁵⁶A temporary prosthesis, made with aluminum joints, is fitted while the stump is prepared to receive a permanent prosthesis.

¹⁵⁷Information provided by Driton Ukmata, Head of Division, Handicap International Pristina/Prishtine, 29 March 2000. See also Handicap International, *Activity Report on the Activities of the National Orthoprosthetic Workshop*, *op. cit.*

VICTIMS

Sadly, it does not appear that Serb amputees are able to receive a prosthesis at the Pristina/Prishtine centre in the current political climate. Two Roma were brought to the rehabilitation centre and this caused problems with the Albanian staff. A number of amputees also complained about the delay in receiving their prostheses. One of these, a 52-year-old man from a village near Pristina/Prishtine, had been informed in writing that his permanent prosthesis would be fitted in January 2000, yet by April he was still waiting for further news.¹⁵⁸ He had been injured some months before, picking strawberries in a minefield.

In addition, the VVAF, which is leading efforts to reintegrate the war-disabled in Kosovo, has found that there is generally poor knowledge of the availability of existing services. In their community outreach work, the VVAF has found that most child amputees both have and are wearing a prosthesis, but that most adults have but are not wearing theirs. Follow-up is needed to convince adult amputees to wear their prostheses, even though – in the case of temporary prostheses especially – they may not fit well.¹⁵⁹

A widespread culture of social-welfare dependency compounds this problem. The war-disabled appear generally to be pitied. VVAF remarked that there is no equivalent word for handicapped in Albanian, only a word meaning unable.¹⁶⁰ Thus, for example, in their home visits, the VVAF often find amputees sitting idly on the sofa, convinced that this is all they can do. Children generally do better in rehabilitation but they are often held back by parents and/or the school. In one illustrative case, a war-injured child decided to go to school, despite having shrapnel in his head and suffering from regular black-outs, but his teachers told him to stay at home until he felt better. In another family, a 15-year-old wheelchair-bound child could not write, because it was assumed by his parents that he would not be able to because of his physical injuries. To counter some of the problems, Oxfam is conducting advocacy with and on behalf of the disabled.¹⁶¹

It is too early to talk of effective social reintegration of mine and UXO victims in Kosovo. Given the context of very high unemployment, income-generation projects are unlikely to be particularly successful in the immediate future in the cities, although subsequently vocational training for micro-enterprises may be undertaken.¹⁶² In the near future, giving the war-disabled the chance to meet and talk to one another – to share experiences and knowledge – would certainly be valuable. The VVAF is planning to support a local disability organization, Handikos, in outreach programmes, including home visits and psycho-social assistance, beginning in March 2000. Handikos was operating before the conflict broke out but is desperately in need of training and financial assistance.¹⁶³

TRAINING

¹⁵⁸Information provided in personal interview.

¹⁵⁹Information provided by VVAF, Pristina/Prishtine, 9 February 2000.

¹⁶⁰*Ibid.*

¹⁶¹*Ibid.*

¹⁶²Information provided by VVAF, Pristina/Prishtine, 9 February 2000.

¹⁶³Handicap International is also continuing to support Handikos. See Handicap International, *Synthesis Report of Operation*, *op. cit.*, p. 11.

5. CLUSTER BOMBS AND LANDMINES UNDER INTERNATIONAL LAW

RULES

The use of all weapons in armed conflict is governed by the rules of international humanitarian law, also known as the law of armed conflict. Many of these rules have become part of customary international law and are thus binding on all combatants, whether from States or opposition movements. The relevant customary rules include the following:

- (1) The right of the parties to the conflict to choose methods or means of warfare is not unlimited. Thus, parties to a conflict may not use weapons that are unlawful under applicable international humanitarian law, and all weapons must be used in accordance with the existing rules.
- (2) Parties to a conflict must always distinguish between civilians and combatants. This means that civilians may not be attacked, and indiscriminate attacks and the use of indiscriminate weapons are prohibited.

According to Additional Protocol I of 8 June 1977, which applies in international armed conflicts, indiscriminate attacks are: (a) those which are not directed at a specific military objective; (b) those which employ a method or means of combat which cannot be directed at a specific military objective; or (c) those which employ a method or means of combat the effects of which cannot be limited as required by the Protocol; and consequently, in each such case, are of a nature to strike military objectives and civilians or civilian objects without distinction.¹⁶⁴ In addition, indiscriminate attacks are those which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated.¹⁶⁵

- (3) It is forbidden to use weapons which are of a nature to cause unnecessary suffering or inflict superfluous injury.¹⁶⁶ Thus, the use of weapons that are of a nature to render death inevitable or to inflict more severe injury than that necessary to take a soldier out of action is prohibited.
- (4) Parties to a conflict must take all feasible precautions in the choice of weapons and methods of attack to avoid and in any event minimize incidental loss of civilian life, injury to civilians and damage to civilian objects. Furthermore, unless circumstances do not permit, effective advance warning must be given of attacks which may affect the civilian population.¹⁶⁷

¹⁶⁴ Article 51.4, Protocol I of 8 June 1977 additional to the Geneva Conventions of 12 August 1949.

¹⁶⁵ Article 51.5, Protocol I of 8 June 1977 additional to the Geneva Conventions of 12 August 1949.

¹⁶⁶ Article 35.2, Protocol I of 8 June 1977 additional to the Geneva Conventions of 12 August 1949.

¹⁶⁷ Article 57.2(a)(iii) and (c), Protocol I of 8 June 1977 additional to the Geneva Conventions of 12 August 1949.

CLUSTER BOMBS

Cluster bombs

The use of cluster bombs is not specifically restricted by international treaty. However, in 1974, 13 States proposed a prohibition on anti-personnel cluster bombs at the Diplomatic Conference on the Reaffirmation and Development of International Humanitarian Law.¹⁶⁸ Although the effects of unexploded cluster bomblets are in some respects analogous to the effects of anti-personnel mines, they do not fall within the definition of an anti-personnel mine contained in the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-personnel Mines and on their Destruction, or of that contained in Protocol II of the 1980 UN Convention on Certain Conventional Weapons (as amended in 1996).

Landmines

In addition to the general rules, the use of mines is restricted by international treaty. The primary legal instrument governing anti-personnel mines is the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-personnel Mines and on their Destruction. As its name suggests, the Convention prohibits the use of all anti-personnel mines but does not regulate the use of anti-tank or anti-vehicle mines unless they are fitted with anti-handling devices that can be set off by an unintentional act.¹⁶⁹ The Federal Republic of Yugoslavia is neither party to, nor has signed, the Convention, although the Yugoslav army has reportedly requested copies of the Convention.¹⁷⁰ All NATO States other than the United States and Turkey have adhered to this instrument.

The FRY is, however, party¹⁷¹ to the 1980 UN Convention on Certain Conventional Weapons, including the original version of its Protocol II which specifically restricts the use of all landmines, including anti-vehicle and anti-personnel mines. This Protocol requires that:

- Mines and booby traps be directed only against military objectives. Indiscriminate use of mines and booby traps is prohibited and all feasible precautions must be taken to protect civilians.
- Remotely-delivered mines may not be used unless their location is accurately recorded or each one is fitted with an effective self-destruct or self-neutralizing mechanism.
- Records must be kept of the location of planned minefields, and the parties to the conflict should also endeavour to keep records of the location of other minefields laid during the hostilities.
- At the end of the hostilities, the parties must try to reach agreement, both among themselves and with other States and organizations, on taking the necessary measures to clear minefields.

RESTRICTIONS

¹⁶⁸The full conference title is "Diplomatic Conference on the Reaffirmation and Development of International Humanitarian Law Applicable to Armed Conflicts". The proposal in Article II of a Working Paper (CDDH/IV/201) submitted by Algeria, Austria, Egypt, Lebanon, Mali, Mauritania, Mexico, Norway, Sudan, Sweden, Switzerland, Venezuela, and Yugoslavia was "Anti-personnel cluster warheads or other devices with many bomblets which act through the ejection of a great number of small calibre-fragments or pellets are prohibited for use."

¹⁶⁹For a layman's overview of the provisions of the Convention see the ICRC's *Banning Anti-Personnel Mines, The Ottawa Treaty Explained*, ICRC, Geneva, 1998.

¹⁷⁰Information provided by John Flanagan, head of UNMACC, 7 April 2000.

¹⁷¹As successor State to the Socialist Federal Republic of Yugoslavia.

6. CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

In the year following the end of the armed conflict between NATO and the Federal Republic of Yugoslavia unexploded remnants of war have taken a heavy toll on the civilian population of Kosovo. **Unexploded cluster bomblets, landmines and other ordnance are known to have killed or injured nearly 500 persons**, which corresponds to an annual rate of approximately 31 casualties per 100,000 population. The comparable rate for a heavily mine-affected region in northwest Cambodia (during a period without an influx of refugees) was 61 casualties per 100,000.

Among the 492 casualties reported to the UNMACC database – based largely on ICRC data collection – **cluster bomblets and anti-personnel mines were the leading cause of death and injury with approximately one-third of total casualties resulting from each weapon**. “Other UXO”, some of which may in fact be cluster bomblets or anti-personnel mines, represent a significant proportion (27 to 35%) of casualties.

Cluster bombs

The use of cluster bombs, as witnessed in Kosovo and other conflict zones, can create serious humanitarian problems. **During the conflict, their potential to cause incidental civilian casualties is predictably higher than for many other types of ordnance** because of the wide areas affected by each strike. The use of such area weapons may also invite less accurate targeting of military objects. The conflict over Kosovo has demonstrated that the use of cluster bombs in or around towns or cities can have tragic consequences which should be prevented by the adoption of new restrictions on the use of such submunitions.

Based on conservative NATO estimates, **it can be assumed that around 30,000 unexploded bomblets remained after the conflict**, of which less than a third are known to have been cleared in the following year. In the 12 months since the end of the conflict some 150 persons have been killed or injured by cluster bomblets, a result which is both regrettable and avoidable. **Unlike anti-personnel mines, incidents involving cluster munitions usually result in death or injury to several people**.

Children appear to be disproportionately at risk of death or injury from these devices, despite the considerable efforts to raise awareness of the danger. **As compared to those killed or injured by anti-personnel mines, those injured or killed by cluster munitions were 4.9 times as likely to be under age 14.**¹⁷² This may be due to the fact that such submunitions are often brightly coloured, lying on the ground, and assumed to be duds.

The clearance and destruction of cluster bomblets is considered to be even more dangerous and painstaking than mine clearance. As a result of the sensitivity of their fusing mechanisms, the slightest touch can cause them to detonate. Unlike anti-personnel mines, they cannot be cleared mechanically or located using dogs. They cannot be defused, but must always be destroyed *in situ*. Indeed, the dangers inherent in their clearance place them in a category of their own. Clearance organizations and the population at risk have not been provided with sufficient information on the location and nature of these devices.

Given the well documented tendency of cluster bombs used in previous conflicts to have a high failure rate, those who use such weapons should accept the primary responsibility for their clearance. In this case it is recommended that KFOR's policy only to clear mines and UXO that threaten the success of its mission or pose an immediate danger to civilians should be revised and broadened as a matter of urgency.

¹⁷²Information provided by Dr. David Meddings, Epidemiologist, Unit of the Chief Medical Officer, ICRC, Geneva. The 95% confidence interval is (2.3, 10.3).

RECOMMENDATIONS

Recommendations

1. The use of cluster bombs and other types of submunitions against military objectives in populated areas should be prohibited, as is currently the case with incendiary weapons (another weapon causing area-wide effects) under Protocol III of the 1980 UN Convention on Certain Conventional Weapons. This would reinforce respect for the prohibition of indiscriminate attacks contained in Additional Protocol I of 1977.
2. Responsibility for the clearance of all unexploded ordnance should be assigned to those who have used them, as is currently the case for landmines under the terms of amended Protocol II (Article 10) of the 1980 UN Convention on Certain Conventional Weapons.
3. All necessary technical information concerning the location, dangers, detection and destruction of cluster bombs and other munitions should be made available to the United Nations and demining bodies immediately after the end of hostilities.
4. Warning of the threat posed by explosive “remnants of war” should be provided to the civilian population immediately after their use in a given area, as is the case for remotely-delivered landmines in the original and amended versions of Protocol II (Articles 5 and 8 respectively) of the 1980 Convention on Certain Conventional Weapons.
5. In order to reduce the risk to civilians in future conflicts, cluster bomblets and other submunitions should be fitted with mechanisms which will ensure their self-destruction immediately after the device fails to explode upon impact as designed.
6. The use of cluster bomblets should be suspended until an international agreement on their use and clearance has been achieved.

Landmines

A substantial number of anti-vehicle and anti-personnel landmines were used during the conflict in Kosovo, especially by the Yugoslav Army, which generally appears to have laid mines according to traditional military doctrine. Serbian police and Serbian paramilitaries also used landmines on a small scale. Some were found in and around civilian objects, such as houses and schools, although the numbers involved were lower than had been feared. The KLA used a limited number of landmines. NATO refrained from using landmines in the conflict, although the United States reserved the right to do so.

The majority of mine amputees are adult males – although most amputees in Kosovo are not mine victims. It appears likely that the needs of amputees in Kosovo can be met through development of skills and capacity, if adequate funding is provided. A specific obstacle to rehabilitation is the limited access, particularly for Serb amputees, to rehabilitation centres.

CONCLUSIONS

The impact of landmines upon agriculture in some areas of the province is widespread and persistent. Moreover, when remote villages, particularly in the mountains, are affected by landmines their impact is magnified by the ongoing reductions in humanitarian aid. Regrettably, it appears that the existence and severity of mined areas in and around a community has not been adequately taken into account when decisions are taken on the provision of humanitarian assistance, particularly food aid.

Recommendations

1. In considering the amount of humanitarian assistance to be provided to individuals and communities, the severity of the landmine or UXO threat should be fully taken into account.
2. Adequate assistance, including funding, should be provided for the rehabilitation of all war-disabled. Such assistance should be made available to all victims on the basis of need, irrespective of their ethnic backgrounds.
3. Advocacy efforts should continue to encourage States which have not yet done so to adhere to the Convention on the Prohibition of Anti-personnel Mines and on their Destruction. Similarly, States which are not yet parties to Protocol II of the 1980 Convention on Certain Conventional Weapons (as amended in 1996), which regulates, among other things, the use of anti-vehicle mines, booby traps and similar devices, should be encouraged to adhere to this instrument.
4. Efforts to collect and destroy landmines and other unexploded munitions should be intensified and adequate funding provided until the province is cleared of such "remnants of war".

AGREEMENT

**Excerpts from the Military Technical Agreement
Between the International Security Force ("KFOR") and the
Governments of the Federal Republic of Yugoslavia and the
Republic of Serbia****Article II: Cessation of Hostilities**

1. The FRY Forces shall immediately, upon entry into force (EIF) of this Agreement, refrain from committing any hostile or provocative acts of any type against any person in Kosovo and will order armed forces to cease all such activities. They shall not encourage, organise or support hostile or provocative demonstrations.
2. Phased Withdrawal of FRY Forces (ground): The FRY agrees to a phased withdrawal of all FRY Forces from Kosovo to locations in Serbia outside Kosovo. FRY Forces will mark and clear minefields, booby traps and obstacles. As they withdraw, FRY Forces will clear all lines of communication by removing all mines, demolitions, booby traps, obstacles and charges. They will also mark all sides of all minefields. International security forces' (KFOR) entry and deployment into Kosovo will be synchronized.

Article III: Notifications

1. This agreement and written orders requiring compliance will be immediately communicated to all FRY forces.
2. By EIF +2 days, the State governmental authorities of the FRY and the Republic of Serbia shall furnish the following specific information regarding the status of all FRY Forces:
 - (a) Detailed records, positions and descriptions of all mines, unexploded ordnance, explosive devices, demolitions, obstacles, booby traps, wire entanglement, physical or military hazards to the safe movement of any personnel in Kosovo laid by FRY Forces.
 - (b) Any further information of a military or security nature about FRY Forces in the territory of Kosovo and the GSZ and ASZ requested by the international security force ("KFOR") commander.

Article VI: Entry Into Force

This agreement shall enter into force upon signature.

[signed on 9 June 1999]

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The International Committee of the Red Cross (ICRC) is an impartial, neutral and independent organization whose exclusively humanitarian mission is to protect the lives and dignity of victims of war and internal violence and to provide them with assistance.

It directs and coordinates the international relief activities conducted by the Movement in situations of conflict. It also endeavours to prevent suffering by promoting and strengthening humanitarian law and universal humanitarian principles.

Established in 1863, the ICRC is at the origin of the International Red Cross and Red Crescent Movement.

MISSION STATEMENT

CLUSTER BOMBS AND
LANDMINES IN KOSOVO

EXPLOSIVE REMNANTS OF WAR

