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Explosive remnants of war and mines other than anti-personnel mines

Global survey 2003 – 2004



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No political recognition should be inferred from the inclusion here of independent reports on disputed territories, or of the analysis of disputed territories grouped together with other states.

Key terms

This report focuses on two specific types of post-conflict contamination, ERW and MOTAPM. The terminology used is linked to discussions within the UN Convention on Conventional Weapons (CCW):

Explosive Remnants of War (ERW)

A broad term for explosive ordnance (such as mortar bombs, grenades, cluster submunitions and air-dropped bombs) which have not exploded and are left as a hazard in the post-conflict environment. This results from ordnance being fired but failing to explode (unexploded ordnance – UXO) or from ordnance stores being abandoned during the fighting (abandoned explosive ordnance – AXO).

Mines Other Than Anti-Personnel Mines (MOTAPM)

The term has not been formally defined within the CCW but, within that forum, it is generally taken to mean anti-vehicle mines (AVMs).

There is more detailed discussion of these key terms, and the items to which they refer, within the introductory sections of the report.

List of common acronyms

AXO	Abandoned ordnance	MDD	mine detection dog
BAC	Battlefield area clearance	MRE	mine risk education
BiH	Bosnia and Herzegovina	NGO	non-governmental organisation
CBU	cluster bomb unit	NPA	Norwegian People's Aid
CMAA	Cambodian Mine Action and Victim Assistance Authority	NSA	Non state actors
CROMAC	Croatian Mine Action Centre	OAS	Organization of American States
CCW	Convention on Certain Conventional Weapons (1980)	OCHA	United Nations Office for the Coordination of Humanitarian Affairs
EOD	explosive ordnance disposal	OSCE	Organization for Security and Co-operation in Europe
EU	European Union	PADCA	OAS Mine Clearing Programme for Central America
FSD	Fondation Suisse de Deminage (Swiss Demining Foundation)	RPG	Rocket-propelled grenade
GGE	Group of Governmental Experts	SAC	Survey Action Center
GICHD	Geneva International Centre for Humanitarian Demining	SALW	Small Arms and Light Weapons
HALO Trust	Hazardous Areas Life-Support Organization	SFOR	Stabilisation Force (Bosnia and Herzegovina)
HI	Handicap International	UN	United Nations
HRW	Human Rights Watch	UNDP	United Nations Development Programme
ICBL	International Campaign to Ban Landmines	UNHCR	Office of the United Nations High Commissioner's Office for Refugees
ICRC	International Committee of the Red Cross	UNICEF	United Nations Children's Fund
IDP	internally displaced person	UNMAS	United Nations Mine Action Service
IED	improvised explosive device	UNOPS	United Nations Office for Project Services
IMAS	International Mine Action Standards	UNTAC	United Nations Transitional Authority in Cambodia
IMSMA	Information Management System for Mine Action	UXO	unexploded ordnance
KFOR	Kosovo Protection Force	UXO LAO	Lao National Unexploded Ordnance Programme
MAC	Mine Action Centre	VVAF	Vietnam Veterans of America Foundation
MACC	Mine Action Coordination Centre	WFP	World Food Programme
MAG	Mines Advisory Group	WHO	World Health Organization



Foreword

The last decade has seen significant developments in both the preventative and remedial structures for reducing the post-conflict impact of war on civilians. Under the Ottawa Anti-Personnel Mine Ban Treaty a large number of countries have outlawed the use of anti-personnel mines. Protocol V to the Convention on Conventional Weapons, sets out a legal framework for tackling the humanitarian impact of abandoned and unexploded ordnance (explosive remnants of war). Backed by generous support from donor nations, the development of the “mine action sector” has seen an improved international capacity to find and eradicate both mines and ordnance. There remain, however, key areas of outstanding need.

This report examines the impact of explosive remnants of war (ERW) and mines other than anti-personnel mines (MOTAPM) on civilian populations internationally. It is made up of 88 summary reports on individual countries or disputed territories affected by these contaminants. The report serves as a contribution towards further understanding of the problems these forms of post-conflict contamination cause, and of the mechanisms available for mitigating these problems.

Drawing on the findings of this and other research, Landmine Action, Actiongroup Landmine.de and Mines Action Canada continue to advocate for improved preventative measures and remedial responses to protect civilians in the aftermath of conflict. Cluster munitions and MOTAPM both cause predictable problems for civilian populations either during or after conflict. More broadly, remedial responses to long-term ERW contamination can be further developed if the problem of ordnance is seen in the wider contexts of security sector reform, community safety and poverty.

Protocol V of the Convention on Conventional Weapons, if adopted and implemented, presents a valuable basis for dealing with existing ordnance contamination and reducing problematic future contamination from ERW. However, in the interests of civilian protection, further action is required. Landmine Action, Actiongroup Landmine.de and Mines Action Canada will continue to advocate for the development and implementation of the strongest possible measures to address these problems. It is hoped that this report will serve as a useful contribution to the knowledge and understanding that underpins this common endeavour.



General introduction

Background to this report

Explosive Remnants of War (ERW) and Mines Other Than Anti-Personnel Mines (MOTAPM) present some level of hazardous contamination in almost all post-conflict environments. As distinct from anti-personnel mines (APMs), these forms of contamination are not covered by the Ottawa Anti-Personnel Mine Ban Treaty¹ and although reported on they are not a specific focus of the 'Landmine Monitor'² reports published annually by the International Campaign to Ban Landmines. This global survey assesses the impact of ERW and MOTAPM contamination on civilian populations and on processes of post-conflict recovery world-wide.

This report is part of an ongoing effort by non-governmental organisations and international organisations to support discussions on the post-conflict impact of mines and ordnance within international humanitarian law in general and within the UN Convention on Conventional Weapons (CCW)³ in particular. The Second Review Conference to the CCW in December 2001 established an open-ended Group of Governmental Experts (GGE) with separate coordinators to address the issues of ERW and MOTAPM. In 2003, an additional Protocol (Protocol V) was agreed within the CCW that contains obligations regarding record-keeping, retention and transmission of information regarding ordnance use as well as obligations on the post-conflict clearance, removal and destruction of ERW.

This report serves as a contribution towards further understanding of the problems post-conflict contamination by conventional weapons cause and of the mechanisms available for mitigating these problems. Such mechanisms generally take two forms:

- Preventative measures that aim to address predictable post-conflict threats through controls on the use of certain weapons, through the establishment of certain technical requirements for particular weapons or through obligations regarding record keeping about the use of weapons.
- Remedial measures that work to address problems of post-conflict contamination after they have been incurred. These generally include clearance operations (to find and destroy explosive hazards), risk education (to warn populations of the danger) and survivor assistance (in the form of medical care and social and economic rehabilitation for people who have suffered accidents.) As noted above, Protocol V to the CCW contains obligations for State Parties to undertake such remedial measures as marking, clearance and destruction of ordnance as soon as feasible after the cessation of hostilities.

Practical operations in affected countries to address the post-conflict impact of ERW and MOTAPM are generally seen as falling into the sector of 'mine action'. This sector developed rapidly in the 1990s in response to growing awareness of the post-conflict problems caused by anti-personnel mines. Although anti-personnel mines have had the highest profile, ERW and MOTAPM have been addressed within mine action programmes from the inception of the sector. This report also provides material for better understanding the mine action sector and suggests key issues for the development of that sector with respect to ERW and MOTAPM.

Structure, methodology and limitations of the data

General findings and conclusions with respect to ERW and MOTAPM are presented in two separate sections at the beginning of the report. The bulk of the document is then made up of 88 country and 'disputed territory' reports. In some sections, countries and disputed territories are covered together for ease of representation.

Researchers

The project employed 31 researchers, mostly from affected regions, to gather information on regional blocks of affected countries or disputed territories. The researchers were each supported and managed by one of three coordinators who worked on the project for Landmine Action, Actiongroup Landmine.de and Mines Action Canada.

Timeframe

The research was conducted with a focus on data available for a 12-month period from July 2003 to June 2004. However, efforts have been made to put this data into a broader context and the focus varies slightly between different countries depending on the available data.

Limitations of the data

This project focussed on the collection and collation of existing data. Key data sources were government bodies, non-governmental organisations and media sources. The project is based on desk research and interviews rather than first hand analysis in the fields. As a result, reports on different countries reflect the quality and availability of data in those areas.

There are significant deficiencies in current casualty data-gathering mechanisms in many countries. The most effective systems seem to be in those countries which

have been subject to significant external mine action assistance, including the establishment of IMSMA⁴ or similar systems. Other countries which may have strong data systems are those with relatively strong state institutions. Full assessments of ERW or MOTAPM problems have not taken place in several post-conflict countries due to a lack of security and limited access to areas outside the main centres.

The lack of discrimination between anti-personnel mines, ERW and MOTAPM was a common problem with existing reporting. Due to the strength of the international focus on anti-personnel mines, APMs have come to dominate the language of post-conflict contamination. For example, in many countries accidents were reported as resulting from 'mines' where the context would make unexploded ordnance seem a more likely cause.

Alternatively, existing data sources may report areas 'blocked' due to mines and ordnance contamination as if these items contribute to land denial in equal measure.

This presents the risk of over-stating the area affected by anti-personnel mines (by including also all areas where only ERW may be present) thus making the APM problem seem much more difficult to address than perhaps it really is. Alternatively, such conflation of data can lead to over-stating the impact of ERW. APM and ERW impacts are different and require different responses. Local people will often find ways to work around ERW contamination in a way that they cannot with APMs. As we have noted already, available data may report areas 'blocked' by APMs and ERW when closer analysis from the field suggests complete land denial from ERW to be the exception rather than the norm.⁵

During the course of the research, the Landmine Monitor proved very helpful in identifying sources of useful information. The Landmine Monitor also proved helpful in identifying gaps in existing data and supported the conclusion that much of the existing information does not disaggregate between mines and ERW.

- 1 It should be noted that certain types of MOTAPM may be considered to be banned by the Ottawa Anti-Personnel Mine Ban Treaty if their fuses are sensitive to inadvertent detonation by a person. This has consistently been the position of the International Campaign to Ban Landmines and the International Committee of the Red Cross (ICRC). More recently a joint discussion paper recommends states "recognize and implement the ICRC's clear statements that (anti-vehicle) mines with person-activated fuses must be considered as anti-personnel mines and are prohibited under the Ottawa Treaty" (see Actiongroup Landmine.de, MAG and The Uniting Church in Australia Justice and International Mission Unit, "Anti-vehicle mines: Discussion paper," 2004.)
- 2 The Landmine Monitor Reports (1999-2004) published by Human Rights Watch and the International Campaign to Ban Landmines, online at <http://www.icbl.org/lm/> hereafter referred to as Landmine Monitor.
- 3 The Convention on Prohibitions and Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects is often referred to as the Convention on Conventional Weapons, or CCW. The CCW is an international instrument that regulates the use of weapons such as landmines, booby-traps and similar devices in conflict. It is distinct from the antipersonnel mine-ban treaty (CCW, 2004.)
- 4 The Information Management System for Mine Action.
- 5 Cluster munitions generate ERW in a manner that appears more likely to lead to land denial. This is discussed further later in the introduction.



Key findings: explosive remnants of war

Introduction

ERW, as examined in this report, means explosive ordnance that is left in the post-conflict environment. It does not mean landmines, but includes instead all the other forms of conventional explosive weaponry – mortar bombs, rockets, grenades, artillery shells and air-dropped bombs, for example. ERW, as a term, is now formalised in the UN CCW Protocol V as ‘unexploded ordnance and abandoned explosive ordnance’ where these in turn are defined as follows:

unexploded ordnance (UXO)

is ‘[...] explosive ordnance that has been primed, fused, armed, or otherwise prepared for use and used in an armed conflict and that may have been fired, dropped, launched or projected and should have exploded but failed to do so.’

abandoned explosive ordnance (AXO)

is ‘[...] explosive ordnance that has not been used during a conflict, and has been left behind unprotected or dumped by a party to an armed conflict, and which is no longer under control of the party that left it behind or dumped it. Abandoned explosive ordnance may or may not have been primed, fused, armed or otherwise prepared for use.’

UXO comes into existence when an item of explosive ordnance is used (fired or dropped for example, depending on the type of ordnance) but fails to detonate. All types of ordnance are subject to failure and possible reasons for a failure to detonate are numerous. Items of UXO may be found lying on the ground (surface UXO) or buried beneath the ground (sub-surface UXO). The subsequent likelihood of an item of UXO detonating will depend on the specific reasons why it failed to explode as intended, any damage sustained in its use, the extent of subsequent corrosion or degradation of components, and on the specific arming and fusing mechanisms of the device. Some items of UXO are incapable of detonation while others may be sensitive to small amounts of movement.

Abandoned explosive ordnance, if it has been stored in appropriate conditions, may be rather more predictable. If such items have been primed for use and then abandoned, or stored in inappropriate conditions,⁶ then the potential for accidental detonation increases. Even explosive ordnance in its original (new) condition can be subject to accidental detonation if it is mishandled. For any item in which the explosive chain remains intact, the way in which people interact with it will play an important role in whether or not it detonates.

Widespread and enduring contamination

Wherever there has been fighting with explosive ordnance some level of ERW contamination will be generated and this project identified more than 90 countries or disputed territories that contain some level of ERW contamination. All forms of ordnance are subject to some failure rate which results in a proportion of the weapons fired being left as UXO in the post-conflict environment. While landmines may only have been used in certain areas of the conflict, or in specific roles, explosive ordnance is likely to have been used wherever fighting took place. This means that subsequent ERW contamination will cover the whole area of the conflict.

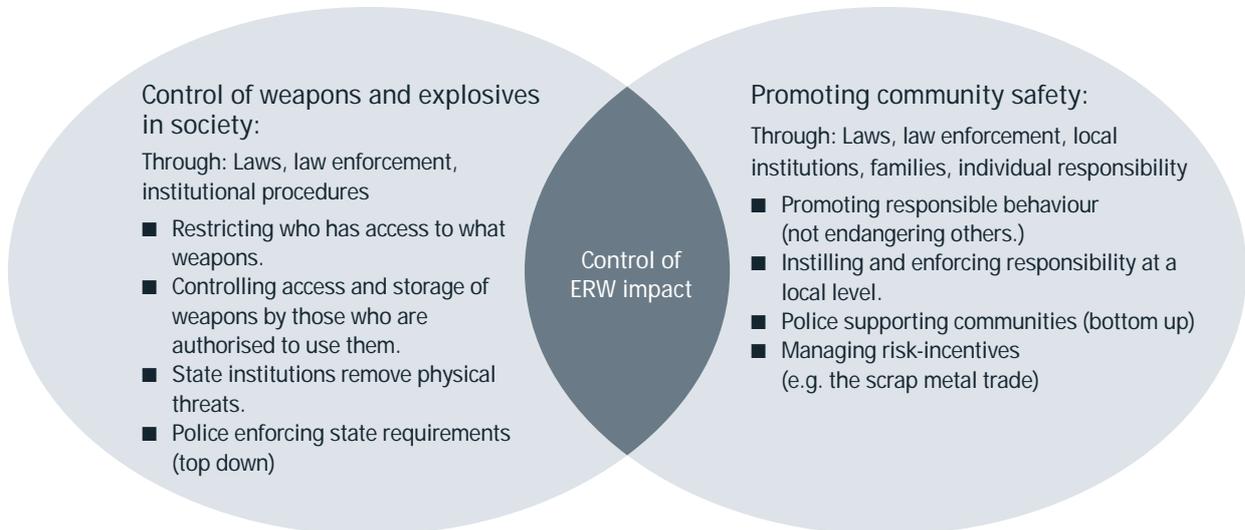
UXO can be found under the ground as well as lying on the surface. Certain ground conditions or types of ordnance can result in contamination down to considerable depths. This means that ordnance may be found or struck when people are digging the ground (for example by farmers or during construction work). Buried ordnance can also be revealed as a result of erosion or soil movement.

Most explosive ordnance is made primarily from metal and explosives. Ordnance is not biodegradable, and although there is likely to be some degradation of components over time, UXO generally presents a persistent threat. Such degradation is also unpredictable and can make the ordnance either more or less sensitive. The widespread nature of UXO contamination, the presence of sub-surface ordnance and the capacity of items of ordnance to pose an enduring threat mean that UXO contamination, at some level, generally perseveres for a long time after the conflict.

In the immediate aftermath of conflict, ordnance contamination may be acute with large quantities scattered in civilian areas presenting a high risk to the local population. Cluster munition contamination can also create acute problems and the sensitivity of unexploded submunitions often make them particularly dangerous for the local population. It is usually difficult for the local population to coexist with such contamination without either accidental exposure to risks or some form of deliberate engagement with the ordnance in an effort to manage the risks they are facing. For these reasons ordnance disposal operations in the immediate wake of conflict are critical for reducing the high level of risk presented by such forms of contamination.

Even after extensive clearance operations, a continued level of residual ordnance contamination is almost always found. For example:

Controlling the impact of ERW – ‘top-down’ and ‘bottom-up’ approaches



- In the Russian Federation, Ukraine and Belarus, hundreds of thousands of items of ordnance from the 1939-45 War are recovered and destroyed annually by state institutions.
- In Kosovo, which saw an extensive humanitarian mine clearance effort, some civilian casualties are still experienced each year as a result of residual ordnance contamination. From the beginning of 2001 to August 2004, over 80 per cent of casualties have been caused by UXO as opposed to mines.

Because the residual hazard posed by ERW to the local population is often less acute than that of landmines the persistence of this threat does not necessarily make it highly problematic: communities can live with a background level of ERW contamination without the same level of social and economic constriction that landmine contamination may cause. On the other hand, rigorously searching for all ERW contamination over the very large areas involved may be prohibitively expensive and time consuming.

For these reasons, states with long-standing ERW contamination generally rely on responsive teams from the police or army who can be deployed to address items that are found and reported by the local population. In such a model, it is a positive function of the army or the police to preserve community safety by undertaking such actions. Controlling the impact of unexploded and abandoned explosive ordnance is at the intersection of two roles that are widely seen as responsibilities of a functioning state: control of weapons within society and safety of the population.

Recognising the long-term, enduring nature of ERW contamination is of primary importance for the development of

appropriate local capacities to manage the ERW threat in countries where external assistance is provided. Whilst ‘mine action’ has often been implemented as a separate sector of activities, this perspective also helps us to see how control of ERW impact should be positioned alongside the control of weapons in society and the broader development of state and community capacities.

Casualties

Whilst the suspected presence of anti-personnel mines often creates complete ‘land denial’ this is significantly less common as a result of ordnance contamination.⁷ Although such wholesale land-denial may be rare, there are reports of broader impacts from ERW – such as delays to the rehabilitation of infrastructure, construction projects being impeded and community resources being made unsafe. ERW contamination also contributes to a general atmosphere of insecurity and fear in many post-conflict communities. However, it is in direct casualties that the primary impact of ERW contamination is to be found.

It is not possible from the currently available casualty data to build a reliable picture of the annual number of casualties incurred worldwide. However, data from different environments allows us to identify common themes regarding how the risks people face are conditioned by social and economic forces.

Casualties result either from accidental or deliberate interaction with items of ordnance. Accidental contact is more likely to result where ordnance is buried beneath the surface or is lodged in vegetation. Unlike anti-personnel mines, ordnance rarely detonates simply from people

walking on land where it is buried; it is more common as a result of vigorous practices such as digging the ground or cutting through vegetation. Most often it is rural populations who bear the greatest risk from ERW contamination. Numerous countries report farmers killed and injured while working their land or tending their animals. However, with ordnance often visible on the surface, or found sub-surface without the item detonating, people often get a choice regarding how they interact with ordnance that they find in their environment.

Deliberate handling

While ERW accidents do occur from people accidentally striking items while farming, or building fires above buried ordnance, a significant proportion of accidents occur because people deliberately interact with ordnance that they find. For example:

- In Iraq, some 30 per cent of casualties (mines and ordnance) in northern-most areas have been attributed to deliberate handling.⁸
- In the Occupied Palestinian Territories, a similar pattern has been identified with nearly 50 per cent of casualties (mines and ordnance) being attributed to deliberate handling of ordnance.
- In Cambodia, some 64 per cent of ERW casualties were attributed to deliberate handling. A further 14 per cent (the second largest category) were bystanders at the time of an accident caused by someone else.

Where formal data-gathering systems exist, such casualties are usually categorised as ‘tampering’. Despite the negative connotations of this term, it should not be assumed that deliberate contact with ordnance is foolish or ignorant. Some of the most common reasons for handling ordnance are:

- To make it possible to farm land;
- To stop children from finding items and having accidents;
- To salvage scrap metal as an economic resource (in some environments salvaging from ordnance in order to obtain explosives for use in fishing, construction or for resale is also reported, although this seems to be less common internationally than salvaging for metal).

People would not choose to handle ordnance if they thought it was definitely going to explode and kill them. It must be acknowledged that people often handle ordnance in the knowledge that it is dangerous but in the expectation that their chosen practices can be undertaken without injury. Large amounts of ordnance are handled by people in affected communities without casualties being incurred.

Although the mine action sector generally seeks to stop people from handling ordnance, many instances of deliberate handling are actually driven by a desire to

increase safety. For example, it may be safer for an adult carefully to move an item than to leave the item to be found by a child. However, other forms of deliberate handling may clearly increase the danger presented by an item of ordnance. For example, bringing live ordnance into a town or village and seeking to dismantle it in front of others may expose a number of people to considerable risk. When analysing such issues, we should note that they are not so much to do with the threat posed by ordnance and are far more to do with the capacity of communities to avoid risk taking and to establish and police local norms of responsible and irresponsible behaviour.

Gender

The most consistent and striking feature of ERW casualty data is the prominence of men and boys as casualties and the low level of accidents experienced by women. Globally ERW consistently kills and injures a greater proportion of men than women. For example:

- In Kosovo, over 90 per cent of casualties over the last three years have been men or boys;
- In Iraq, data from different areas shows some 94 per cent of recent casualties were men or boys;
- In Lebanon, some 94 per cent of casualties over the last four years were men or boys;
- In Afghanistan, 88 per cent of recent ERW casualties were men or boys;
- In Cambodia, 86 per cent of recent casualties were men or boys;
- In Chad, 87 per cent of ERW/mine casualties between 1999 and 2001 were male.
- In Guinea-Bissau, 70 per cent of recent adult victims were men.

This is not to suggest that ERW casualties do not have an impact on women. That men are most commonly the casualties often means that women must take up an extra social and economic burden to support their household.

This data is striking because it suggests strong and prevalent cultural distinctions between men and women are modifying the way in which these groups are exposed to risk. It demands that we pose one fundamental question: if half of the population find it so easy to avoid these accidents, why can accident levels not be dramatically reduced overall?

There are two key factors that we have to consider in relation to this:

- Given the high proportion of accidents caused by deliberate contact, it could be that the high proportion of male casualties results from men being more likely than women to deliberately engage with ordnance; and

- Men may consistently be undertaking economic or other roles which are more likely to result in accidental contact with ordnance.

In-depth research in Cambodia found the former to be most significant in that environment. Far more men than women reported handling live ordnance. That research connected these patterns to interlinked conceptions of bravery, 'technical knowledge' and gender identity.⁹ Given that these issues may be culturally specific it is not possible to generalise on the basis of the Cambodia research. However, the consistency of the prevalence of men among the casualties does suggest common cross-cultural attitudes may condition people's relationship with unexploded ordnance (as a recognised source of risk) in their environment. This gender split forces us to acknowledge that accidents must be driven by social and economic forces rather than resulting simply from the 'hazard' of the ordnance. One of these social forces may be men's acceptance of greater risk in an effort to reduce the risk faced by other sections of the community.

Age

A high proportion of children among ERW casualties is often highlighted. Such assertions can at times be misleading; they may fail to take into account a young age-profile of the overall population (which would increase the likelihood of children being among the casualties), or children's accidents may just be reported more commonly than adults. That said, a number of environments do show that children, in particular young adolescent boys, are particularly prevalent in casualty data. In many ERW-contaminated regions the economic activities of this group, such as herding cattle, require them to travel extensively in their local environment, thus making it more likely that they will encounter ordnance.

This can also be linked to the issues of deliberate handling, although additional motivations may lie behind these behaviours. Social drives can promote the use of risk-taking behaviour to establish peer-group boundaries and as a source of excitement. It is also important not to overlook potential economic motivations involved in children's behaviour. Sale of scrap metal can be a small economic supplement for young. In the wake of the recent conflict in Iraq a number of agencies have noted very high accident rates amongst children and have linked this both to thrill-seeking and scrap metal salvaging.

However, children do also have accidents as a result of ill-informed curiosity – picking up strange objects unaware of the threat they represent. Particularly in the immediate aftermath of a conflict, such accidents are likely. That a gender division is often also found among child casualties is indicative of differences in decision-making between boys and girls about engagement with these items. This in turn suggests a knowledge that risk is involved (although this knowledge may not extend to a

full appreciation of either the means of detonation or the power of explosives).

As we have noted earlier, fear for the safety of their children is commonly cited by adults as a motivation for deliberate handling of ordnance on their part.

The scrap metal trade

The scrap metal trade is a major industry in post-conflict societies. Internationally, salvaging metal (and also explosives) is one of the most commonly reported motivations for people seeking out or engaging with ordnance. From the battlefields of the 1939-45 War to the abandoned ordnance stores of Iraq, salvaging scrap metal is ubiquitous in post-conflict environments. It is an international trade that links impoverished rural communities to international markets.

There have been reports of explosions in furnaces where metal is melted down, and even on board ships carrying scrap metal. However, it is generally at the bottom end of the business that the greatest risks are faced. In Pakistan, for example, scrap from the tribal areas and from Afghanistan (including live ordnance) is brought into the large cities and whole families might be involved in separating out the metal. Elsewhere, it is people in impoverished rural communities who are taking the greatest risks – dismantling or burning ordnance so as to sell the 'safe' metal into the scrap trade. In South-East Asia, rising scrap metal prices have been linked to a perceived increase in accidents over recent years.

In seeing the scrap metal trade as a driving force behind certain types of risk-taking behaviour, we should be careful not to lose sight of how important the economic role of this trade is to communities in the post-conflict environment. Large amounts of safe metal, although derived from ordnance, flows into the scrap metal trade every year. In extreme cases, people may travel long distances searching for live ordnance to collect, render 'safe' and sell – bypassing the available ordnance disposal services of the mine action sector which would leave them with no income. Driven by poverty, such a situation is a rejection of the mine action sector's key responses (education and ordnance disposal). It is an assertion that the risk presented by engagement with the ordnance (in a controlled and deliberate way) is being considered acceptable in the context of the locally available economic options. Such decisions are being made on a daily basis by people in numerous communities worldwide. Where accidents do result from such circumstances it may be more appropriate to consider them as being caused by poverty rather than by the 'threat' posed by ordnance in the environment.

Cluster munitions

Cluster munitions are a weapon system that attacks a target area using multiple 'submunitions' which are

initially fired or dropped encased in a single container. Cluster munition contamination was identified in 17 countries and regions. The proliferation and possible increased use of cluster munitions poses a serious concern for future conflicts.

Issues relating to the recent use of cluster munitions in Kosovo, Afghanistan and Iraq have been well documented elsewhere¹⁰ This research has also highlighted cluster munitions as presenting a particular cause for concern in these areas. For example:

- Of the remaining clearance tasks resulting from the conflict in Kosovo, cluster-submunitions still make up a substantial proportion of the threat. KFOR state that 75 areas of known cluster-munition contamination remain in the region.¹¹ These areas present a particular threat because of the sensitivity of these munitions which can be very easy to detonate by comparison with other types of ordnance. For example, two shepherds were injured in May 2004, and eight of their flock killed, when a sheep kicked a cluster submunition.
- Having been used extensively in the recent invasion of Iraq, cluster munitions constitute a significant ERW threat to Iraqi civilians. This problem is particularly found along the valleys of Iraq's two largest rivers, the Tigris and the Euphrates, where more than 2,200 sites of contamination have been identified.¹²
- Several civilian sites in southern Sudan are contaminated with cluster munitions after strikes by government forces during the 1990s. ERW from these cluster strikes have prevented people cultivating their fields.

Cluster munitions often generate particularly dense patterns of ordnance contamination. In some cases this can result from failures specific not to the individual munitions but to the broader delivery system. Thus one failure in the system (such as dropping a cluster munition canister from too low an altitude) can affect the arming mechanism of all of the submunitions and thus result in a wholesale failure. The resulting footprint of UXO contamination can be particularly problematic for the population in the aftermath of the conflict. A high density of contamination can make it more difficult for people to work around the problem: people perceive the risk of an accident as higher if they must engage with a large number of items, or where the risk of accidental contact is higher. Thus land denial is more likely to result from these forms of dense contamination, resulting in lost agricultural output and increased poverty. In addition, it has been noted elsewhere that cluster munitions often have particularly sensitive fuzes, making them very likely to detonate if disturbed.¹³

Abandoned explosive ordnance (AXO) and firing ranges

Much of the analysis above regarding ERW has focused on unexploded ordnance (UXO) scattered in the post-conflict

environment. This research does, however, highlight a number of specific issues relating to AXO. While AXO strictly refers to ordnance stores that are no longer under the control of parties to a conflict, we note also here a number of problems relating to ineffective ordnance storage and management in times of peace.

AXO problems came in two primary forms:

- Poorly managed ordnance stores (either through lack of procedures or because political change has left a legacy of large ordnance stores in countries without the capacity to manage them); and
- Abandoned ordnance stores.

Problems with storage have caused serious uncontrolled explosions. Such incidents pose a direct threat to life, impose further requirements for explosive ordnance disposal, destroy property and result in a substantial burden on the state. For example in May 2004, in Ukraine, soldiers smoking in an over-stocked ordnance store caused a series of explosions which scattered ordnance over a wide area and was reported to have caused military and civilian financial losses of hundreds of millions of dollars. Such incidents in recent years were also recorded in Ecuador, El Salvador, Guinea, Guinea-Bissau, Honduras, Nigeria, Peru and Thailand.¹⁴

Problems with abandoned ordnance stores have resulted from both recent and historic conflicts. According to the Emergency Mine Action Survey of Iraq, some 43 per cent of dangerous areas identified in the south of Iraq were abandoned ordnance stockpiles. Elsewhere, abandoned ordnance stores on the former 1939-45 War battlefields continue to be found, resulting in sporadic accidents and demanding the attention of state institutions.

Firing ranges

Poorly marked, sporadically used or abandoned firing ranges constitute another particular part of the threat. For example, in Ecuador, Chad, Chile, Kenya, Nicaragua, Namibia, Occupied Palestinian Territories and Panama firing ranges or abandoned firing ranges have been identified as a problem and have resulted in casualties. As a result of casualties on abandoned ranges in Kenya the British Government has recently made compensation payments to victims. While marking areas and providing warnings may reduce the risk of casualties, clearance of ranges at the end of their working life is required in order to provide thorough protection.

Improvised explosive devices (IEDs)

An important additional point of note is the extent to which both MOTAPM and ERW are drawn upon for the creation of IEDs. This has been noted in a number of countries but has been most acute in Iraq where high levels of AXO were left in the wake of the conflict. Some sources estimate that

around 95 per cent of IEDs in Iraq utilised abandoned explosive ordnance left after the recent conflict. In Kandahar, Afghanistan, in July 2004, approximately 10,000 MOTAPM from an unsecured ammunition supply point were destroyed after reports suggested that insurgents were stealing from the store to build IEDs. Such problems were also reported, for example, in Abkhazia, Chechnya, Colombia, Georgia, Kashmir and the Occupied Palestinian Territories. The problem has also been evidenced in Angola where MOTAPM are often used as part of IEDs. The available information suggests that the persistence of ERW and MOTAPM make IED construction easier.

6 See for example GICHD, 2002, *Undesired Explosive Events in Ammunition Storage Areas*, Geneva.

7 We note later that the particularly dense forms of contamination that can result from cluster munition strikes may be more likely to result in land-denial than other forms of ERW contamination.

8 Deliberate handling is generally more common in ordnance accidents than mine accidents (where the items are more likely to be buried and are designed to explode upon the contact or presence of a person) so in this data the proportion of ordnance accidents that could be attributed to deliberate handling would almost certainly be significantly higher than 30 per cent.

9 See R. Moyes, 2004, *Tampering: deliberate handling and use of live ordnance in Cambodia*, HI-B, MAG, NPA, Phnom Penh.

10 Notably Human Rights Watch's reports *Fatally Flawed* (2002) and *Off Target* (2003) and Landmine Action/UK Working Group on Landmines *Cluster bombs: The military effectiveness and impact on civilians of cluster munitions* (2000).

11 Email from Alain Marchal, LTC FR-A KFOR HQ JOC MINE ENV, Kosovo, "Statistics on ERW and mines in Kosovo, 16 June 1999 – 28 July 2004", email received 16 August 2004.

12 Project researcher interview with Dave McCracken, Iraq National Mine Action Authority, 28 June 2004.

13 See Cluster Munition Coalition, 2004, *Dealing with the impact of cluster munitions*, CCW/GGE/IX/WG.1/WP.1.

14 As a further example from Nigeria a huge explosion at the Ammunition Transit Depot near Lagos in 2002 scattered ERW over a wide area. Apart from the immediate death and destruction caused by this incident, it had wide-reaching socio-economic implications, affecting up to 20,000 people.



Key findings: mines other than anti-personnel mines

The term MOTAPM does not have a formal definition but is a cumbersome acronym¹⁵ for anti-vehicle mines (also called anti-tank mines.)¹⁶ Anti-vehicle mines are primarily designed to incapacitate or destroy vehicles and, correspondingly, they generally contain a larger explosive charge than anti-personnel mines. They are commonly used as part of barrier defences or on roads to prevent traffic.

This project identified at least 56 countries or disputed territories that contain some level of MOTAPM contamination. The nature of this contamination varies from low-impact, long-standing historical problems through to severe-impact contamination in areas such as Afghanistan, Angola, Eritrea, Ethiopia and Sudan. Impact is particularly severe where it blocks road access to vulnerable populations. There are no widely applicable mechanisms by which roads can be quickly confirmed as free from the threat of MOTAPM. Thus the suspicion of MOTAPM contamination can render routes too dangerous to use. Where MOTAPM contamination (or fear of contamination) denies humanitarian access it can mean that already vulnerable populations are denied assistance that would provide safe water, alleviate food insecurity and provide basic health. These populations are left still more vulnerable, the process of post-conflict recovery is delayed and the cost of aid implementation is increased.¹⁷ This, ultimately, is of greater significance than the level of casualties resulting directly from MOTAPM accidents.

Thus, where they have been used widely in protracted conflicts, MOTAPM can have a severe impact on the post-conflict capacity of international organisations to deliver aid. This increases the cost of aid and results in some communities being inaccessible, and therefore extremely vulnerable:

- In Sudan, The UN Mine Action Service (UNMAS) notes that they currently have formal reports of 135 locations of suspected contamination on roads – and the World Food Programme (WFP) has highlighted that this increases people's vulnerability to food insecurity. WFP has estimated that the food security of up to two million people is affected by such factors.
- In August 2004, the UN warned that MOTAPM will be a hindrance to the provision of relief supplies and also the resettlement of IDPs in the Darfur region. Subsequently, local and international staff from Save the Children (SCF) were killed in a MOTAPM incident in this area. This was the second such accident suffered by SCF in the year.
- In the Democratic Republic of Congo, NGOs are starting to seek assistance from mine action agencies to advise or verify the status of roads with respect to the MOTAPM threat.

- The on-going constriction of aid and development operations in Angola has been well documented.¹⁸ The overall process of aid delivery in Angola is restricted to the small proportion of roads that are considered safe enough for humanitarian organisations to use them.

Where the locations of these items have not been recorded and where there are no inherent mechanisms within the mines reliably to limit their life, MOTAPM can have a very severe humanitarian impact. MOTAPM do not need to have been used in great numbers in order to have such an impact and long stretches of road can be closed simply by the fear of these mines. Although world-wide they have been used in far lower numbers than anti-personnel mines, the Landmine Monitor 2004 still estimates that some 1 million MOTAPM have been cleared by mine action organisations since 1999.¹⁹

Very few countries that have MOTAPM contamination as a result of conflict (rather than defensive mining of their own borders) have inherited detailed and comprehensive maps and records of MOTAPM use. In part, this emphasises the need for extension and implementation of Amended Protocol II to the CCW (which includes obligations regarding maintenance and hand-over of such records). Most importantly, it emphasises that there is little evidence that record keeping during combat can provide a reliable basis for the protection of civilians. Even where they are kept, records can be lost during fighting as positions are over-run and areas change hands.

MOTAPM can also affect infrastructure projects, even many years after they were laid. For example:

- In Chile, in December 2003, the discovery of MOTAPM from the 1974-75 crisis caused months of delays to work on the enlargement of an airport.
- In Belarus, in October 2003, MOTAPM from the 1939-45 War were uncovered during the construction of a highway. Fourteen mines were recovered in total and, although live, the military engineers reported that they had not previously detonated because they had become buried so deep below the road surface.
- In June 2003, in Western Caprivi in Namibia, a road grader from a private construction company detonated an old anti-tank mine from the war of independence.

This project also found examples of sporadic or nuisance MOTAPM use:

- In Serbia and Montenegro, in February 2003, one policeman was killed and two others injured in an AT mine accident, for which Albanian militants later claimed responsibility.

- In Kenya in 2003, possible MOTAPM incidents in Moyale District, which killed and injured a number of people, were blamed by local people on Ethiopian militias.
- On the Eritrean/Ethiopian border in 2004, a truck hit what was reported to be a newly-laid MOTAPM in the Temporary Security Zone, causing suspension of UN activities in the area.

As we noted at the end of the preceding section on ERW, MOTAPM are also utilised by insurgents in the construction of IEDs and IEDs can sometimes have a similar impact to MOTAPM.

15 The acronym was developed during the preparatory process to the 2nd Review Conference of the CCW with the aim of undermining any interpretation at the CCW or elsewhere that AV mines which function as AP mines are in fact already covered by the Mine Ban Treaty. Although MOTAPM could be considered as a very broad category (see for example GICHD, 2004, *The current detectability status of Mines Other Than Anti-Personnel Mines currently available to States Parties to the Convention on Conventional Weapons*), the accepted usage refers to anti-vehicle mines.

16 Anti-vehicle mines (AVMs) and anti-tank mines (ATMs) are generally synonymous. Although some people may assert a technical distinction between the two in certain circumstances, their different use in this report is reflective of usage in the particular country under study.

17 See ICRC, 2002, *Anti-vehicle mines: effects of humanitarian assistance and civilian populations*, CCW/GGE/II/WP.9; GICHD (2004), *Humanitarian Impact from Mines Other Than Anti-Personnel Mines*, Geneva.

18 See also ICRC, *Statement to the Group of Governmental Experts of the CCW, Delegate-General for Africa*, 8 November 2004; GICHD (2004), *Humanitarian Impact from Mines Other Than Anti-Personnel Mines*, Geneva.

19 Landmine Monitor 2004, online at <http://www.icbl.org/lm/2004/intro/hma>



Country & Territory Reports

Afghanistan

Background

Afghanistan's problem with MOTAPM and ERW results from more than two decades of civil wars and foreign military interventions. MOTAPM were used during the 1979-1989 Soviet occupation and pro-Soviet ruling government. The majority of landmines found in Afghanistan come from this period.²⁰ The mujahideen also used MOTAPM against the Soviets, in the 1992-1996 civil war and during the Taliban era. In 2001 the U.S.-led military coalition used a large number of cluster munitions in the conflict to oust the Taliban regime.

Assessment of the problem

Large areas have been contaminated with unexploded submunitions and other ERW, particularly in northern Kabul, Parwan, Kunduz, Takhar, Kapisa and Faryab.²¹ During the reporting period the insurgents have used MOTAPM and improvised explosive devices (IEDs) to attack government and foreign troops on highways, especially in eastern and southern provinces.²²

During the Coalition war against the Taliban between October 2001 and early 2002 at least 150.6 square kilometres were newly contaminated, located in 25 of the 34 provinces of Afghanistan. According to the Vietnam Veterans of America Foundation, about 60 per cent of the newly contaminated area was attributed to APMs, about 23 per cent to cluster munitions and 1.6 per cent MOTAPM.²³ The size of area contaminated is not however a straightforward indicator of the impact that the contamination will have.

The provinces most at risk from ERW and MOTAPM are Kabul (central Afghanistan), Herat (western Afghanistan), and Kandahar (southern Afghanistan). Other heavily contaminated provinces include Ghazni, Logar, Zabul, Parwan and Nangahar. The southern province of Zabul is considered to be a stronghold of the Taliban,²⁴ and the province of Kandahar has witnessed severe armed clashes between Afghan and U.S. forces and insurgents.²⁵

Throughout the various conflicts many other minefields were neither recorded, marked nor fenced, which means they are unpredictable in size, location and composition.²⁶ More contaminated areas, previously inaccessible due to the ongoing armed conflict and security constraints, continue to be discovered. Also, as more refugees have returned, additional risk areas continue to be reported.

In March 2004, the area contaminated by ERW and mines (both APM and MOTAPM) was estimated at 1,113 sq km.²⁷

Moreover, there have been huge amounts of covert weapons caches discovered around the country that were stockpiled during the anti-Soviet war and the subsequent civil war.²⁸ In July 2004, more than 10,000 AT mines from an unsecured ammunition supply point were destroyed in Kandahar. According to Afghan officials, insurgents were building concealed traps using explosive material from the MOTAPM stolen from that supply point.²⁹

Impact

Afghanistan is an agricultural country, with around 70 per cent of the people working in agriculture-related activities, and there is a considerable demand for land to feed the population and provide livelihoods for returning refugees. Landmines, both APM and MOTAPM, have hampered the access of local communities to agricultural land, as several studies have pointed out.³⁰ Of the 1,113 sq km of contaminated land, 589 sq km are classified as high priority land, which would otherwise be used for irrigation, farming, grazing, as well as transport, commercial activity or other productive purposes.³¹ In terms of impact, the distinction between MOTAPM and APM often remains unclear. Statistical figures by the UN Mine Action Centre for Afghanistan (UNMACA) show that at least 8.6 per cent of the victims of MOTAPM during the reporting period were killed or injured during agricultural activities, such as farming, tending animals or collecting wood.

However, the most severe impact of MOTAPM in Afghanistan is on the roads and the transportation network. As a UN paper has pointed out, mobility and a functioning transportation network is the key issue for any kind of development activity in Afghanistan, particularly as the return process was still under way during the reporting period. In March 2004 alone, more than 40,000 Afghan refugees returned from Pakistan and Iran.³² As no railways exist in Afghanistan, the road network connecting Kabul in the east with Baghlan and Mazar-i-Sharif in the north, Kandahar in the south and Herat in the west, is the backbone of transportation in the country. It has severely deteriorated from war activities, general lack of maintenance and the closure of roads by MOTAPM, which in certain periods has contributed to higher food prices. MOTAPM most severely affect roads, indicated by the fact that most MOTAPM-related casualties during the reporting period happened while travelling (79 per cent). A major achievement during the reporting period was the reopening of the highway between Kabul and Kandahar in December 2003, work on which had begun in late 2002.³³

However, in June 2004, it was reported that use of MOTAPM had increased on the Jalalabad-Konar road in eastern Afghanistan.³⁴

Landmine Action, drawing upon material from the Mine Action Programme for Afghanistan, report that: "Around 14,000 private and public vehicles, worth US\$211 million, have been destroyed by mines. The increase in transport fares and travel time, in order to avoid the risky roads, have resulted in a loss of US\$26 million per year to the Afghan economy."³⁵

Because it is not possible to survey, mark and clear all of the important routes in Afghanistan, the local population and international workers rely on the use of roads that are not safe.³⁶ If the roads are impassable and alternative routes need to be used, travel time and vehicle operation costs significantly increase. A World Bank study has clearly indicated that the clearance of MOTAPM infested roads, together with contaminated irrigation systems and to a lesser degree highly productive agricultural lands, earns the highest return of socio-economic benefits.³⁷

Although the available data is limited, ERW and MOTAPM incidents continue to have a dramatic impact on the Afghan population, although the overall numbers have decreased from their peak levels when there was an average of about 500 victims per month from ERW and mine accidents.³⁸ According to the ICRC, which in 2003 expanded its work into more isolated areas in the north, there was a monthly average of 60 accidents.³⁹ UNMAS estimates that the vast majority of accidents with multiple fatalities are caused by MOTAPM.⁴⁰

The following media reports from the reporting period illustrate the impact of MOTAPM on civilians:

- 28 April 2004: A pickup truck carrying a district administrator hit a suspected MOTAPM in Zabul province, killing two Afghan soldiers, and injuring the official and his driver.⁴¹
- 29 March 2004: Eight civilians were killed when their pickup vehicle hit a MOTAPM planted in the road in the Serkanay District of Konar province. An unspecified number of people were injured in the incident.⁴²
- 21 January 2004: Five civilians were killed and one injured in a MOTAPM explosion in Uruzgan province, in south-central Afghanistan. The mine was reportedly newly-planted.⁴³

In addition, MOTAPM caused a significant number of military casualties during the reporting period.⁴⁴

According to the GICHD, more than half of the ERW and mine-related casualties in Afghanistan have been caused by ERW, such as hand grenades, mortar shells and fuzes.⁴⁵ Cluster munitions have left a particularly dangerous legacy in terms of ERW. After the conflict in 2002, Human Rights Watch (HRW) conducted a study on the specific impact of cluster munitions in Afghanistan. In addition to the indis-

criminate effects of cluster munitions that exploded as intended on impact, HRW found that: "At least 127 casualties have been reported across 11 provinces. The majority of the victims were children. Unexploded cluster bombs also interfered with economic recovery, refugee repatriation, and military operations."⁴⁶ HRW noted that these casualty figures do not include victims who died immediately, meaning there was significant under-reporting of ERW deaths from submunitions.⁴⁷ Shepherd, farmers and children were identified as the most frequent victims of ERW from cluster munitions.⁴⁸

HRW reported that beyond individual casualties, the socio-economic impact of submunitions was severe: "The civilian impact of cluster bombs extends beyond casualties. They interfere with agriculture, which is crucial to Afghanistan's recovery. Many of the bomblets are spread over fields, vineyards, and walled gardens. In a village south of Kandahar, bomblets damaged a building used to dry grapes and littered a pomegranate orchard, in which Human Rights Watch counted about 80 bomblets in a 300-foot (91 metre) radius. (...)The deadly bomblets not only harm returning refugees but also contribute to a cycle of displacement, forcing those who find their villages too dangerous to join Afghanistan's large number of IDPs."⁴⁹

HRW further found that submunitions, like other ERW, were often recovered to be sold as scrap metal at local markets.⁵⁰ In September, five members of a family in the northern city of Pul-i-Khumri were killed in an explosion as they were stripping old ammunition for explosives to sell. Police found a large number of artillery rounds, mines, mortars and hand grenades at the site of the blast.⁵¹

The ICRC, together with its network of 400 health care facilities and direct links with ERW and mine-affected communities, is the main information provider for the national IMSMA database which was established by UNMACA in 2002 and is the most detailed casualty information resource in Afghanistan, making distinctions between different types of munitions (APM, ATM, UXO, cluster munitions, fuzes, booby traps and unknown). Additionally, during 2004 the Mine Clearance Planning Agency (MCPA) with technical support from the Survey Action Center (SAC) was conducting a Landmine Impact Survey (LIS)⁵² drawing partly on the existing data resources.⁵³

In the reporting period, MOTAPM and ERW have caused 501 casualties in 24 out of the 34 Afghan provinces. The highest numbers of casualties from ERW between July 2003 and June 2004 were in Kabul, Herat and Kandahar Provinces. The highest number of MOTAPM casualties were from Herat, Logar, Ghazni and Kandahar Provinces. There were 311 recorded ERW casualties and 70 MOTAPM casualties. The cause of a further 102 casualties was unknown. Within this period cluster bombs were recorded as the cause of only 5 of the overall ERW casualties.⁵⁴

According to the ICRC, in 2003 there were more incidents

from MOTAPM and fewer from cluster munitions by comparison with 2002.⁵⁵ This may be due to the progress in the clearance of cluster bomb strike sites and to increased activity on roads and paths as part of the overall reconstruction process.⁵⁶ At the same time, a study published online in the *British Medical Journal* noted that: "The proportion of injuries due to unexploded ordnance increased from 37% in 1997 to 57% in 2002, and the proportion of injuries due to landmines decreased correspondingly from 57% to 36%."⁵⁷

Efforts to address these problems

Afghanistan has one of the largest mine action programmes in the world. The UN Mine Action Centre for Afghanistan is the body with overall responsibility for planning, coordination and oversight of activities to deal with the mine and ERW problem. UNMACA collaborates with the Afghan Department of Disaster Preparedness/Department of Mine Clearance. A gradual transfer of mine action responsibility from the UN to Afghan authorities was taking place during the reporting period, with the objective of establishing a nationally-run mine action programme. To this end, the Afghan Foreign Ministry has established a Mine Action Consultative Group (MACG) to ensure the effective coordination of mine action and development of a national mine action policy.⁵⁸

To initiate the planning process required for the transfer of responsibility of the MAPA from the UN to the Afghan Government, the MACG established a Mine Action Task Force (MATF) on 26 February 2004 to make recommendations to the MACG on the creation of a national mine action structure.⁵⁹

UNMACA, together with UNICEF, has responsibility for coordination of mine risk education (MRE) implementation. There are 10 agencies working in the field of MRE.⁶⁰

The main agencies working on ERW and mine clearance are the Afghan Technical Consultants (ATC), the Agency for Rehabilitation & Energy Conservation (AREA), the Danish Demining Group (DDG), the Demining Agency for Afghanistan (DAFA), the HALO Trust, the Mine Detection and Dog Center (MDC), Organization for Mine Clearance and Afghan Rehabilitation (OMAR), Mine Clearance Planning Agency (MCPA), the Monitoring, Evaluation and Training Agency (META) and RONCO Consulting Corporation.⁶¹

In 2003, clearance activities were hampered by security constraints. After a series of attacks in May 2003, UN clearance staff were forced to temporarily halt activities along parts of the Kabul-Kandahar road and later suspended all clearance activity in 10 provinces of southern and south-western Afghanistan, and along the Kabul-Jalalabad road.⁶² According to *Landmine Monitor*, a total of 59.5 million square metres of former battlefield areas were cleared, with 5,259 MOTAPM, 12,804 cluster bomblets and over one million other items of ERW destroyed.⁶³

Landmine surveys are an ongoing process in Afghanistan. Apart from the above-mentioned LIS, in the past there were several other surveys: in 1990 the first Afghanistan Mines Survey was conducted by Mines Advisory Group, in 1993 a Level One General Impact Survey followed and is regularly updated, and technical surveys are undertaken as required.⁶⁴ In 2003, technical surveys were carried out on 29.2 million square metres of mined land and 45.7 million square meters of former battlefields.⁶⁵

Legislation

Afghanistan acceded to the Ottawa Convention on 11 September 2002, which entered into force on 1 March 2003. It also signed the CCW on 10 April 1981, but has not acceded to any of the protocols.

- 20 The most common types of AV mines found in Afghanistan are the Russian TM-46 and TM-57, Italian TC-6 and Pakistani P2, see: Kimberly Kim, "A Profile of Afghanistan", *Journal of Mine Action*, Issue 8.1, June 2004, p. 64.
- 21 Mine Action Programme for Afghanistan, National Operational Work Plan for 2004/05, March 2004, p.1.
- 22 See e.g. "Land Mine Explosion In Afghanistan Damages Supply Truck", *Dow Jones International News*, 17 March 2004.
- 23 Source: Vietnam Veterans of America Foundation, *Landmines, War, and Victim Dynamics. Contamination Assessment of Afghanistan*, November 2003, p. 14.
- 24 United Nations Mine Action Service, "United Nations Halts Demining Along Key Route in Afghanistan After Attacks on Staff and Vehicles", 8 May 2003, http://www.mineaction.org/countries/_refdocs.cfm?doc_ID=1178&country_id=850, accessed 21 September 2004.
- 25 "Security officers discover large quantity of weapons in Afghan south", *BBC Monitoring Central Asia* (source: Voice of the Islamic Republic of Iran), 25 July 2003.
- 26 United Nations Mine Action Service, *Field Report Afghanistan*, 14 March 2003, p. 1.
- 27 Mine Action Programme for Afghanistan, National Operational Work Plan for 2004/05, March 2004, p.2.
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- 30 William A. Byrd and Bjorn Gildestad, *The Socio-Economic Impact of Mine Action in Afghanistan: A Cost-Benefit Analysis*, World Bank and Nordic Consulting Group, 10 December 2001, p. 22.
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- 34 "Afghan drivers complain of increased mining of main road in east", BBC Monitoring South Asia, 21 June 2004.
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- 37 William A. Byrd and Bjorn Gildestad, *The Socio-Economic Impact of Mine Action in Afghanistan: A Cost-Benefit Analysis*, World Bank and Nordic Consulting Group, 10 December 2001, pp. 42-43.
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- 39 ICRC, Annual Report 2003, p. 135.
- 40 Field Report Afghanistan, by a former Technical Adviser of the Mine Action Programme in Afghanistan for the UNMAS, Working Group on Mines Other Than Anti-Personnel Mines, CCW/GGE/IV/WG.2/WP.3, 14 March 2003, p. 2.
- 41 "Two Afghan soldiers killed in land mine explosion in southern Afghanistan", Associated Press, 28 April 2004.
- 42 "Mine explosion reportedly kills eight people in eastern Afghan Konar Province", Hindokosh News Agency, 29 March 2004.
- 43 "4 men arrested over planned attacks in southern Afghanistan", Agence France Presse, 21 January 2004.
- 44 See for example: "Five Afghan soldiers killed in blast in south", Reuters, 23 June 2004; "Taliban claim killing five Afghan police in landmine blast", Agence France Presse, 24 June 2004; Maria Cramer, "Landmine kills N.H. soldier army captain was with special forces unit in Afghanistan", The Boston Globe, 1 June 2004; "Cape Coral soldier one of three to die in Afghanistan", Associated Press, 1 June 2004; Matthew Fisher and Mike Blanchfield, "Canadian victims of landmine blast were deliberately targeted", CanWest News Service, 8 October 2003; Matthew Fisher, "Canadians beef up patrols with armoured vehicles: Level of danger has increased, commander says", CanWest News Service, 12 October 2003; "Four policemen killed, six injured in land mine explosion in Afghanistan", Associated Press, 17 November 2004.
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- 54 Information provided by Abdul Ghafar Mohibzada (UNMACA), email 22 August 2004.
- 55 ICRC, Annual Report 2003, p. 135.
- 56 Mine Action Programme for Afghanistan, National Operational Work Plan for 2004/05, March 2004, p.1.
- 57 Oleg O Bilukha and Muireann Brennan, "Injuries and deaths caused by unexploded ordnance in Afghanistan: review of surveillance data, 1997-2002," *British Medical Journal* online, 7 January 2005, at <http://bmj.bmjournals.com/cgi/content/full/330/7483/127>.
- 58 United Nations Mine Action Programme for Afghanistan, Annual Report 2002, p. 3f.
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- 60 United Nations Mine Action Programme for Afghanistan, 1 April 2004 to 31 March 2005, p. 5.
- 61 Kimberly Kim, "A Profile of Afghanistan," *Journal of Mine Action*, Issue 8.1, June 2004, p. 66.
- 62 Kimberly Kim, "A Profile of Afghanistan," *Journal of Mine Action*, Issue 8.1, June 2004, p. 65.
- 63 Email from Patrick Fruchet, UNMACA, 30 September 2004, reported in *Landmine Monitor* 2004, <http://www.icbl.org/lm/2004/afghanistan>, accessed 24 November 2004.
- 64 A general survey obtains general information about the extent of contamination and the nature of the threat, while technical surveys gather precise technical and geographical information on contaminated land and mark areas, see Ministry of Foreign Affairs/Mine Action Programme for Afghanistan, Project Document for Mine and UXO Survey, AFG/03635, p. 2.
- 65 *Landmine Monitor* 2004, <http://www.icbl.org/lm/2004/afghanistan>, accessed 24 November 2004.

Albania

Background

The existing ERW and MOTAPM problem in Albania is a result of two events; civil unrest in 1997 and the Kosovo conflict in 1999.

During civil unrest and looting in early 1997 mines and other weaponry were stolen from military storage sites. Explosions in 15 ammunition depots looted during this period killed 21 civilians and contaminated surrounding areas with ERW: these areas became known as "hot spots". The quantities of ERW contaminating these areas are unknown. It is estimated that 600,000 mines of various types were looted during the civil disorder.⁶⁶

The 1999 Kosovo conflict led to the Albanian border area being contaminated by unexploded cluster submunitions and ERW of Serbian, Kosovo Liberation Army (KLA), and NATO origin, mainly in the north of the country in the districts of Tropojë, Has, and Kukës.⁶⁷ Reports also indicate that mines are located in the Barjam Curri District on the border with Montenegro, and other unrecorded minefields were emplaced in border regions during the Cold War by past regimes⁶⁸.

Assessment of the problem

Contamination is reported along some 120 kilometres of border up to 400 metres into Albania, as well as in some

isolated areas contaminated by ERW up to 20 kilometres beyond the border area.⁶⁹ The 2003 Article 7 report provides details of each contaminated area.⁷⁰ These areas are mainly forest, agricultural and grazing areas, containing villages and frequently used routes for travel over the border – both legal and illegal – into Kosovo. Officials of the Albanian Mine Action Executive (AMAE) have described ERW as posing not only a physical threat, but also having “a major impact on the already harsh lives of those who live in the affected areas ... Nearly 120,000 people, mostly living in abject poverty, whose livelihood depends on farming, herding, gathering firewood and other subsistence activities and also obtaining essential supplies across the border, are profoundly affected by the presence of mines and UXO.”⁷¹ A further serious concern is the effect of ERW on integrated border management in the region. It is virtually impossible to control the Albanian side of the border with Kosovo because of AP, MOTAPM and ERW contamination.⁷² This has implications for EU border integrity as smugglers of drugs, asylum seekers/economic migrants and women for the EU sex industry are believed to enter Albania via these routes before crossing from Albania to Italy.

The threat in Albania includes AT mines laid by Former Yugoslav Republic (FYR) forces, UXO and submunitions from FYR rocket artillery, and NATO cluster munition strikes.⁷³ An added complication is that no records of minefields are available.⁷⁴

The following submunitions have been found among broader ordnance contamination in Albania: KB-1/KB-2, Mk118, BLU 97 and BL 755.⁷⁵ MOTAPM identified include TMM-1, TMD2, TMN, TMA1, TMA2, TMA3, TMA-5 and TMRP6 and are of Yugoslav manufacture. MOTAPM and general ERW is considered less of a problem than that posed by anti-personnel mines and cluster bombs. Other ERW is not considered to be a major problem, although ammunition and small-calibre weaponry taken from the army in 1997 and often stored in households in north-east Albania is of concern and a potential threat to the civilian population – especially children.⁷⁶

Albania's 2003 Article 7 Report under the Mine Ban Treaty indicates that of a total suspect area of 4,599,262 sq m 53 per cent was considered mine affected, 34 per cent ERW affected and the remaining 13 per cent were thought to have mixed contamination.⁷⁷

According to the Albanian Mine Action Executive website, in 2003, 142 items of ERW were destroyed along with 1,814 APs.⁷⁸ However, in the same period, the International Trust Fund (ITF) states that the two clearance organizations operational during the period – the Swiss Foundation for Mine Action (FSD) and Danish Church Aid (DCA) – cleared 1,737 mines and 112 items of ERW. The difference may result from clearance activity by the Albanian Armed Forces or from weaknesses in the AMAE reporting system. As of October 2004, according to AMAE, it is believed a total of 33 cluster munition strikes remain to be cleared.⁷⁹

Impact

A record of landmine and UXO incidents in the border areas is maintained by the AMAE in Tirana. The number of people killed or injured by mines and UXO in the so-called “hot spots” in other parts of Albania since 1997 is not known as these areas do not fall within the mandate of the AMAE.⁸⁰

Between 1999 and June 2004, AMAE records indicated that a total of 207 AP, MOTAPM, ERW incidents resulted in 269 casualties (34 deaths and 235 injured) including the deaths of six children. Some 10 per cent were military or police, 8 per cent were deminers, the remaining 82 per cent were civilians.⁸¹ Of these civilian casualties, some 116 deaths and 47 injuries were known to have resulted from MOTAPM, ERW and cluster munitions.⁸²

In 2002, seven mine/ERW casualties were reported in north-eastern Albania. Two Albanian farmers were killed in an ERW (BLU 97 cluster bomb) explosion while grazing cattle on the Kosovo side of the border. Four casualties resulting from mines and UXO were reported in 2003.

In 2004, two ERW and MOTAPM incidents resulted in a total of six deaths and 18 injuries. On 15 May 2004, two boys and two adults were killed in a MOTAPM incident while gathering herbs in Kukes province. This was followed on 24 May 2004 by an incident during a classroom-based training session for HI deminers during which a NATO KB1 cluster munition exploded – killing two and injuring 18.

Since 1999, approximately 90 per cent of ERW and MOTAPM casualties have been men.⁸³ A survey undertaken in August 2002⁸⁴ appears to show that 70 per cent of those living in or near contaminated areas knowingly entered mine/ERW areas. Of those surveyed, 70 per cent said that they had an economic need to enter affected areas – 25 per cent to get to work, 24.5 per cent to graze animals, 12 per cent to collect firewood, 4 per cent to collect winter animal feed, 3 per cent to collect items for selling at market, and nearly 2 per cent to go to school.

The AP, MOTAPM and ERW problem has also had an impact on infrastructure development. For example, the UNDP technical adviser states that “in 2002, 88,379 sq m. had to be cleared by Danish Church Aid-Action by Churches Together (DCA-ACT) and the Swiss Foundation for Mine Action (FSD) for the construction of a critical road. The impact of mine contamination on the social environment should not be underestimated. Some water sources in north-east Albania are still blocked by mined areas. The entire Albania/Kosovo border, prime land for eco-tourism development, is a wasteland because of mines and UXO.”⁸⁵

Efforts to address these problems

The Albanian Government appears to recognise the social and economic impact of ERW and mines. The Albanian Armed Forces started clearing the so-called “hot spots” in 1998 and is still in the process of mopping up the last remnants of that

problem. After the Kosovo crisis in 1999, the Albanian Government responded swiftly in conducting rapid surface clearance, which is credited with significantly reducing civilian casualties. However, this was not done according to International Mine Action Standards (IMAS) and all the areas have had to be recleared. Shortly after the reclearing, the AAF conducted a Level One Survey, which indicated that most of the border area was still contaminated.⁸⁶

In order to adequately coordinate mine action, an inter-ministerial body – the Albanian Mine Action Committee (AMAC) – was formed in October 1999 and is the overall executive and policy making body for mine action. Additionally an operational body – the Albanian Mine Action Executive (AMAE) – was established to carry out the mine action programme under direction of the AMAC, and principally to coordinate all mine action activities, accredit mine action activities, collect and collate mine/UXO statistics, and investigate all mine-related incidents and accidents.

In September 2000, a UNDP-funded mission assessed the capacities and needs in Albania. The AMAC was described as having “virtually faded out over time” while the AMAE had “neither the capacity nor capability of addressing any

of the mine action processes expected of a ‘Mine Action Centre’ ... Dedicated and assured funding is non-existent. In effect the major result of the AMAE since its inception has been to fund its own continued existence. No funds have been available for the technical and operational control of mine action activities, particularly mine clearance.”⁸⁷

Resulting from this assessment, a two-year UNDP capacity-building programme commenced in April 2002, funded by UNDP, the International Trust Fund and the UK Department for International Development (DfID).⁸⁸

During 2001, three mine clearance organizations operated in Albania: HELP International, the Swiss Federation for Mine Action (FSD) and RONCO.⁸⁹ RONCO activity in Albania ceased on 20 October 2001. HELP also ceased activity in late 2001. In 2002-2003, Danish Church Aid (DCA-ACT) and FSD were operational.⁹⁰ However, as of October 2004, FSD was no longer working in Albania.

Legislation

Albania has ratified and signed the Ottawa Convention. Albania has also signed Amended Protocol II to the CCW.

66 As reported by Ismet Miftari, the chief of Albanian EOD in *Landmine Monitor* 2001 p. 597. It is not clear if this estimate has been confirmed by subsequent events.

67 Article 7 Report, submitted on 3 April 2002, dated 10 January 2002, covering calendar year 2001.

68 US Department of State ; *To Walk the Earth in Safety: The United States Commitment to Humanitarian Demining* September 2002 <http://www.state.gov/t/pm/rls/rpt/walkearth/2002/14875.htm>

69 Email from Franz Baer, Technical Adviser to AMAE, 12 October 2004.

70 Email from Franz Baer, Technical Adviser to AMAE, 12 October 2004.

71 AMAE, “Update on Albanian Mine Action Programme”, 5 May 2003, pp. 1-3.

72 Article 7 report submitted 30 April 2003.

73 In September 2000, Deputy Defence Minister and Head of AMAC Marko Bello stated that Albanian explosive ordnance disposal teams had “been involved in clearing sixteen areas, 125 hectares and destroying some 2,700 cluster bombs” from the Kosovo crisis. Since then most identified cluster strike areas have been addressed.

74 Article 7 report submitted 30 April 2003, p. 20.

75 Items listed in Article 7 report 2002 and 2003 and identified on AMAE website, and additionally in email from Franz Baer, 12 October 2004.

76 Email from Franz Baer, Technical Adviser to AMAE, 12 October 2004.

77 Article 7 report submitted 30 April 2003.

78 AMAE website accessed 6 10 04. <http://www.amae.org.al/>

79 Email from Franz Baer, Technical Adviser to AMAE, 12 October 2004.

80 AMAE website accessed 6 10 04. <http://www.amae.org.al/>

81 Email from Franz Baer, Technical Adviser to AMAE, 12 October 2004.

82 Email from Franz Baer, Technical Adviser to AMAE, 12 October 2004.

83 Jab Swart, “The Albanian Mine Action Programme”, in *Journal of Mine Action*, Vol.7 .2, accessed 13 September 2004. <http://maic.jmu.edu/journal/7.2/focus/swart/swart.htm>

84 Undertaken by AMAE and Care International.

85 Jab Swart, “The Albanian Mine Action Programme”, *Journal of Mine Action*, Vol. 7.2 accessed 13 September 2004. <http://maic.jmu.edu/journal/7.2/focus/swart/swart.htm>

86 Jab Swart, “The Albanian Mine Action Programme”, *Journal of Mine Action*, Vol. 7.2 accessed 13 September 2004. <http://maic.jmu.edu/journal/7.2/focus/swart/swart.htm>

87 “Mine Action in Albania”, Government of Albania and UNDP, reference ALB/02/001 (undated), pp. 8-9.

88 Jab Swart, “The Albanian Mine Action Programme”, *Journal of Mine Action*, Vol. 7.2 accessed 13 September 2004. <http://maic.jmu.edu/journal/7.2/focus/swart/swart.htm>

89 Annual Report 2001, International Trust Fund for Demining and Victim Assistance, p. 16, and “Operation Summary,” Swiss Federation for Mine Action, December 2001.

90 International Trust Fund (ITF) Annual Report 2003, p. 36 accessed on 13 October 2004, <http://www.itf-fund.si/docdir/ITF2003web.pdf>

Algeria

Background

Three major conflicts have left Algeria with a significant ERW and AV and AP problem. The 1939-45 War's North Africa campaign, the war of independence from 1954 to 1962 and on-going internal conflict between the government and armed non-state actors (NSAs) have all led to ERW and mine contamination. The two main defensive lines from the war of independence – the Morice line in the east (1957-1958) and the Challe line in the west (1958-1959) – are still heavily contaminated by ERW and mines. Fighting during this war took place throughout the country with the most intense battles in the capital and major cities. The ongoing conflict between the government and armed NSAs began in the early 1990s and is concentrated in the north of the country.⁹¹ Armed NSAs make extensive use of IEDs, but a wide range of weapons was used in the previous conflicts.⁹²

Assessment of the problem

ERW/MOTAPM affected areas in Algeria include the eastern border area with Tunisia, including the Morice line stretching from the city of Annaba to Negrine, and the Challe line from the city of Oum Tboul to Souk-Ahras; the western border area includes both the Morice and the Challe lines stretching from Marsat Ben M'hidi to Beacher.⁹³ There is concern in the north of the country regarding the presence of IEDs used by armed NSAs.⁹⁴ No in-depth assessments of the ERW or mine situation have taken place in Algeria. There is no official estimate for the numbers of ERW and MOTAPM or for the number of affected communities. Algeria estimates the land affected by ERW, MOTAPM and AP mines to be 5,676 hectares; 3,036 hectares in the eastern border area and 2,640 hectares in the western border area.⁹⁵

Impact

There are no national or regional statistics on people killed or injured by ERW/MOTAPM and there is no official or unofficial database for either ERW or mine victims. In 2002, there were at least 44 casualties from what were reported in the national and international media as mine incidents.⁹⁶ It is unclear

whether these incidents were caused by AV mines, IEDs, ERW or AP mines. Livelihood activities have not been seriously affected because ERW and MOTAPM are generally located in remote areas. An official from the Algerian Ministry of Defense reported that ERW and MOTAPM affect the implementation of development projects in ERW/mine contaminated areas, but the official was unable to provide further details.⁹⁷ In July 2003, two soldiers died after stepping on an explosive item near Timgad, in the district of Batna. It is unclear exactly what kind of device caused the blast, but authorities blamed the Salafist Group for Preaching and Combat, which commonly uses IEDs.⁹⁸

Efforts to address these problems

The Algerian Army is responsible for clearing or destroying ERW and MOTAPM, but no statistics are available on the number of items cleared or on strategies for ERW and mine clearance.⁹⁹ According to the government, demining operations over the past 25 years have resulted in the clearance of 7,819,120 AP mines. A total of 50,006 hectares have been cleared, but 58 per cent of the ERW/mine contaminated land remains affected.¹⁰⁰ It is highly likely that ERW and MOTAPM were amongst the items cleared during these operations, but there are no statistics available on the precise numbers of ERW and MOTAPM. Algeria has established an inter-ministerial committee to deal with ERW and mine issues, but it has not yet commenced work. Stockpile destruction is considered by the government as the highest priority for mine action in Algeria.

Legislation

Algeria is a State Party to the 1997 Ottawa Convention, but it is not a State Party to the CCW. Algeria made no statements regarding ERW or MOTAPM in 2004. Algeria issued law number 97-06, enacted on 21 January 1997, on war material, arms and munitions, and Executive Order Number 98-96 of 18 March 1998 implementing Law 97-06, which prohibits the possession of explosives and includes penal sanctions for offences.

91 Interview with Colonel Hocein Gharabie of the Algerian Army, Geneva, 25 June 2004.

92 Interview with Colonel Hocein Gharabie of the Algerian Army, Geneva, 25 June 2004; Human Rights report of the U.S. State Department, www.state.gov/g/drl/hrrpt/2002/18272.htm section 1, and 2003 report, section 1.

93 Algeria article 7 report, April 2003, pp. 2, 3.

94 Algeria article 7 report, April 2003, p. 3.

95 Algeria article 7 report, April 2003, p. 2.

96 Newspaper reports from AP, PANA and EL Watan, cited by Landmine Monitor 2003, p. 76.

97 Interview with Colonel Hocein Gharabie of the Algerian Army, Geneva, 25 June 2004.

98 "Terrorists kill six in Batna", PANA (Algiers), 9 July 2003.

99 Interview with Colonel Hocein Gharabie of the Algerian Army, Geneva, 25 June 2004.

100 Statement by Algeria before the Standing Committee on Mine Clearance, Mine Risk Education, and Mine Action Technologies, Geneva, 21 June 2004.

Angola

Background

The 30 years of war in Angola from 1961 to 2002 between government forces and the National Union for the Total Independence of Angola (UNITA) have left an estimated six million MOTAPM and AP mines and countless ERW scattered throughout the country.¹⁰¹ A cease-fire agreement on 4 April 2002 between the government and UNITA has returned relative stability to the country, and the Angolan Government is effectively in control of all regions, except the disputed enclave of Cabinda.

Assessment of the problem

Anti-personnel mines and MOTAPM were used by all sides in the conflict. As is detailed in a country report by Mines Advisory Group (MAG), they were used in “conventional minefields around areas of strategic importance such as towns, bridges, airports and power stations. All sides mined water sources, fruit plantations, paths and even shady areas under trees where troops were likely to rest. Mines were also used to depopulate certain areas by creating fear and instability.”¹⁰²

Warring factions often planted MOTAPM without recording their location, marking or fencing them.¹⁰³ As a result, vast areas throughout the country remain inaccessible due to MOTAPM or suspected MOTAPM contamination on roads.¹⁰⁴ A practice particularly prevalent in Angola was to “reinforce” mines: enhancing a mine’s explosive power by adding additional mines or items of ERW underneath it. Anti-personnel mines would be laid on top of anti-tank mines for example. In an extreme case of “reinforcing”, a 500kg aircraft bomb was buried in a road and connected to a simple pressure switch.¹⁰⁵ Such examples illustrate how MOTAPM or ERW can be utilised or reused in other improvised explosive devices (IEDs).

ERW is also widespread in Angola, primarily land surface ammunition but also including some air-dropped ordnance. It does not seem that cluster munitions were widely used in Angola. However, RBK 250-275 cluster munition casings have been found.¹⁰⁶ ERW can be found in all areas where fighting took place.

A survey implemented from 1996 to 1998, estimated that approximately 35 per cent of Angola’s 1,254,000 sq km surface area was suspected to be contaminated with mines and ERW.¹⁰⁷ The figures are not always disaggregated to indicate MOTAPM, ERW and anti-personnel mines. According to official statistics, around 3,000 people in 15 of 18 provinces have been killed or injured due to mines/ERW since 1998.¹⁰⁸ Over the last five years, more than 10 per cent were killed or injured due to devices other than mines.¹⁰⁹ People between the ages of 19 and 35 represented almost 50 per cent of all casualties reported.

The problem is the most acute in Kuando Kubango, Benguela, Bié, Huambo, Malange, Huila and Moxico provinces, areas where population movements following returns and resettlement have resulted in increased incidents.¹¹⁰ As of 30 March 2004, the national demining institute estimates that there are 4,000 minefields in the country.¹¹¹ According to estimates, 75 per cent of the population is considered to be at risk of mines and ERW.¹¹²

In Angola, the focus of contamination assessment efforts has been on mines. Data on ERW is mainly derived from specific clearance operations by NGOs such as the HALO Trust and MAG. The widespread availability of ordnance remaining following the end of the conflict in Angola has been reportedly fuelling sporadic incidents of personal retribution. There were three confirmed cases in which private citizens planted mines or other explosives to target others for personal revenge in December 2003, but no one was killed or seriously injured in these incidents.¹¹³

Impact

According to the Landmine Monitor, the number of mine incidents dramatically increased during 2002 and early 2003, particularly incidents involving MOTAPM.¹¹⁴ All casualty and incident figures in Angola must be seen as only suggestive of the problem because the size of country and the problems of access make comprehensive data gathering very difficult.

In 2003 there were 40 incidents with MOTAPM (132 casualties), 36 incidents with anti-personnel mines (36 casualties), and 15 incidents with UXO (34 casualties).¹¹⁵ There is a significantly higher incidence of MOTAPM accidents in the wet season (roughly from October to March). The GICHD have presented the following suggestions as to the background to this:

- “During the dry season, the baked hard soil hinders the transfer of pressure onto the mines, and good driving conditions make it easier for vehicles to stay on the well-used tracks of the road.”
- “During the wet season, pressure is transferred more easily onto the mines. Rains may also wash away topsoil, bringing more deeply buried mines closer to the surface.”
- “When vehicles get stuck on the road, other vehicles drive onto the more dangerous road margins or verges in order to get around them.”
- “These seasonal variations result in a changeable situation. Roads may be subject to considerable traffic for a while, only for an incident to occur and force a reconsideration of the safety of the route.”¹¹⁶

Since November 2003, examples of incidents taken from wire reports include the following:

- A vehicle taking a group of internally displaced people to their homeland hit a landmine in Malange, killing 10 and injuring 30. The incident occurred near Kambaxi, 70 km north of Malange city, about 350 km west of Luanda, as the vehicle was travelling in convoy to a resettlement site.¹¹⁷
- On 30 October 2003, one civilian was killed and another wounded following a MOTAPM explosion on the road from Katchiungo village to Tchinhama commune, in the east region of Huambo. The landmine exploded after being ignited by a Volvo lorry. Local authorities said this was an old landmine emerging from the soil due to the frequent rains in the days before.¹¹⁸
- On 11 November 2003, four people died and three more were injured when a truck ran over a suspected anti-tank mine in the Benguela province.¹¹⁹
- 4 December 2003: 14 people aboard a truck were injured in a landmine explosion in central Angola, a radio station reported. The blast occurred while the truck was travelling from Cunje to Cunhinga in the central province of Bié, as it went off the road to avoid roadworks: 13 of the injured were in critical condition.¹²⁰
- On 12 December 2003, six staff members of the humanitarian agency CARE International were killed when a tractor and trailer they were riding drove over a landmine, detonating it.¹²¹
- On 27 January 2004, in Bié a truck contracted by WFP detonated a mine, wounding two people.¹²²
- In January 2004 alone, there were 19 mine accidents.¹²³ This was more than usual, which can be attributed to seasonal rains and a wider circulation of traffic throughout the country.¹²⁴
- At least 27 people died and 41 were injured in landmine accidents in the first semester of this year in Bié province.¹²⁵ According to Angop, the accidents took place at Kuito, Andulo and other places in the province. According to the report, during the same period, 446 explosive devices were destroyed, four minefields identified and 19 others cleared.
- In August 2004, six people were killed at Chaminga, Kuito-Kuanavale district, Kuando-Kubango province, when their vehicle drove over an anti-tank landmine. Among the victims were the deputy administrators of Mavinga district, Bemvindo de Almeida Cambinda, and of Kutuilo commune (Mavinga), Joaquim Domingos Mucanda.¹²⁶

When such accidents are investigated by clearance organizations, it is usually discovered that the MOTAPM involved had been in the ground for many years rather than being the result of new mine laying.¹²⁷ However, rumours regarding accidents being the product of new mine laying have both

resulted from and contributed to local political tensions in the post-conflict period.¹²⁸

The national infrastructure is significantly affected by MOTAPM, blocking access in all 18 provinces to various degrees, preventing distribution of humanitarian aid and denying freedom of movement to thousands of internally displaced people and other civilians.¹²⁹ In October 2003, a truck carrying 38 tons of humanitarian aid was partially destroyed by a MOTAPM explosion in Benguela province.¹³⁰ The problem of restricted humanitarian access has been greatly impeding the social and economic recovery of Angola, in addition to the casualties incurred in such accidents.

The presence of MOTAPM along the roads is hampering the return of Angolan refugees from neighbouring countries. The return of about 450,000 Angolans, of whom 220,000 were coming from DR Congo, Zambia and Namibia, was foreseen by the end of 2004. A further one million IDPs remain displaced, awaiting resettlement.¹³¹ MOTAPM contamination has a direct impact on their return and reintegration. An UNMAS report of 2003 stated that "many of the IDPs and refugees spontaneously returning became victims while using MOTAPM-contaminated roads. Thus, UNHCR was forced to delay organized repatriation of refugees because roads could not be used before they were cleared."¹³² In September 2004, a UNHCR spokesman reported that "Angolan roads are in bad condition, bridges are broken and there are problems with landmines" and that two air routes had to be opened for areas not accessible by road.¹³³

MOTAPM hamper the efforts of humanitarian organisations to reach communities and provide assistance.¹³⁴ In 2003, two million Angolans required food assistance to survive; even more people needed medical support.¹³⁵ Media reports have suggested that in Huambo province, at least 140,000 people have been cut off from essential food and medical aid as a result of MOTAPM on the roads.¹³⁶ Humanitarian assistance convoys are only allowed to use roads that the United Nations Security Coordinator (UNSECCORD) has declared open. With a large number of roads closed due to the actual or suspected presence of MOTAPM, this means that large areas in Angola are still cut off from humanitarian and development aid.¹³⁷ The GICHD has presented detailed examples of how MOTAPM contamination has denied vulnerable communities such essential services as clean water, sanitation, health centres and food rations. Their analysis also highlights how MOTAPM contamination increases the cost of aid delivery overall, resulting in fewer beneficiaries for the money being spent.¹³⁸

MOTAPM contamination also has a direct impact on infrastructure development projects, such as road construction, because construction companies cannot send personnel into MOTAPM-affected areas.¹³⁹ In June 2004, it was reported that in the south-west province of Huila mine contamination had delayed reconstruction projects on key roads for five months.¹⁴⁰ The presence of MOTAPM has an impact on rural development, which is seen by the Angolan Government and the UN as a high priority.¹⁴¹

The impact of ERW seems significantly less severe than that of MOTAPM in this environment. That said, ERW casualties are reported on an ongoing basis.

Efforts to address these problems

A Landmine Impact Survey (LIS) began in December 2002 conducted by five NGOs: Norwegian Peoples' Aid (NPA), HALO Trust, MAG, Inter SOS and the Santa Barbara Foundation.¹⁴² All information from the existing database, the new data collected in the survey and all other sources of new information are to be consolidated into the IMSMA format.¹⁴³

Efforts are now in place to establish a full national mine action programme, mostly generated by international agencies. The National Inter-Sectoral Commission for Demining and Humanitarian Assistance (CNIDAH) became operational in 2003, acting as the overall national mine action planning agency.¹⁴⁴ CNIDAH plans to develop a detailed national mine action plan within two years, with technical assistance provided by the SAC, and using the results of the LIS.¹⁴⁵

International non-governmental organisations, national humanitarian demining teams, commercial companies and components of the Angolan armed forces continue to be involved in the mine clearance and explosive ordnance disposal operations. There is a growing focus on the development of techniques that break the constraints that suspected MOTAPM contamination imposes on humanitarian access. The HALO Trust have been utilising a Road Threat Reduction System to cover roads suspected as presenting a threat. Norwegian People's Aid and Dan Church Aid have also been developing specific systems aimed at countering the MOTAPM threat.

Legislation

Angola signed the Ottawa Convention on 4 December 1997 and ratified it on 5 July 2002. It has not signed or ratified the 1980 Convention on Certain Conventional Weapons (CCW, its original Protocol II or its amended Protocol II.

- 101 UNDP Crisis Prevention & Recovery, Country Programmes – Angola, <http://www.undp.org/bcpr/mineaction/countries/angola.htm>
- 102 Mines Advisory Group, "Angola", March 2000.
- 103 UNMAS presentation to the GGE of the States Parties to the CCW, "Field Report on Angola", CCW/GGE/VI/WG.2/WP.11, 21 November 2003, p.1. and see also GICHD, "Humanitarian Impact from Mines Other Than Anti-Personnel Mines", Geneva, 2004.
- 104 UNMAS presentation to the GGE of the States Parties to the CCW, "Field Report on Angola", CCW/GGE/VI/WG.2/WP.11, 21 November 2003, p.1.
- 105 Mines Advisory Group, "Angola", March 2000, p.3.
- 106 Richard Moyes (Landmine Action UK), "Note on cluster munitions in Angola", 13 November 2004.
- 107 Interview with Rogério Neves e Castro and Christian Larssen, Angola Mine Action Programme, 10 September 2004.
- 108 Angola: Mine/UXO Awareness – towards safer communities, ICRC 26 September 2003, <http://www.icrc.org/Web/eng/siteeng0.nsf/iwplList204/C28091E2128F7516C1256D5D0029474F> According to different sources, all eighteen provinces of Angola are thought to be affected by mines and UXO, although in various degree, as the provinces are not homogenous in size or population demographics. Interview with Rogério Neves e Castro and Christian Larssen, Angola Mine Action Programme, 10 September 2004.
- 109 Angola: Mine/UXO Awareness – towards safer communities, ICRC 26 September 2003, <http://www.icrc.org/Web/eng/siteeng0.nsf/iwplList204/C28091E2128F7516C1256D5D0029474F>
- 110 S/2003/158 Report of the Secretary-General on the United Nations Mission in Angola, 7 Feb 2003.
- 111 "Mines Might End in the Forthcoming 10 years – UNICEF", Luanda: Angola Press Agency, 30 March 2004 <http://allafrica.com/stories/200403300522.html>
- 112 Neuma Grobbelaar, Mine Action in Southern Africa: Instrument of Development? (Johannesburg: SAIIA, 2003) p.10.
- 113 "Landmines used in private vendettas", (Johannesburg: IRIN News, 30 January 2004), <http://www.irinnews.org/report.asp?ReportID=39235>
- 114 Based upon interviews conducted with seven mine action NGOs, three UN agencies and the ICRC in February and March 2003, see Landmine Monitor 2003, p. 79; cf. Landmine Monitor 2004, p. 122.
- 115 "Incidentes com minas/UXO em 2003", compilation of incident data based upon records by various demining organisations in Angola compiled by UNSECOORD.
- 116 Geneva International Centre for Humanitarian Demining (GICHD), "Humanitarian Impact from Mines other than Anti-Personnel Mines", 2004, p.20.
- 117 "Landmine kills 10 displaced in Angola", Xinhua News Agency, 12 September 2003.
- 118 "Landmine Blast Kills And Destroys Lorry," Angola Press Agency, 31 October 2003.
- 119 "Mine destroys truck in Angola, killing four", Luanda: Xinhua News Agency, 12 November 2003.
- 120 "Fourteen injured in landmine explosion in Angola", Agence France Presse, 4 December 2003.
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Azerbaijan and Nagorno Karabakh

Azerbaijan and Nagorno Karabakh are grouped together in this report for reasons of convenience of representation. No political meaning should be attributed to this grouping.

Background

Azerbaijan's problem with ERW and MOTAPM is largely a result of conflict with Armenia from 1988 to 1994 over Nagorno-Karabakh, an autonomous region in the south-west of Azerbaijan. In 1988, the Supreme Soviet of Nagorno-Karabakh voted to secede from Azerbaijan and join Armenia, sparking an armed conflict which intensified as the central power of the Soviet Union waned. The region declared independence as the Nagorno-Karabakh Republic (NKR) in 1991. A ceasefire agreement was signed in 1994 and since then NKR has presented itself as an autonomous republic linked to Armenia. NKR has not been recognised by the UN.

Roughly 20 per cent of the land area of Azerbaijan was depopulated, and all the settlements in Nagorno-Karabakh and the surrounding regions were damaged to a varying degree by the war. Significant quantities of ERW and MOTAPM from the 1988-94 conflict remain in the area. Tensions remain high along the border region, and small-scale skirmishes occur periodically between Azerbaijani and Karabakh Armenian soldiers.¹⁴⁶

Other sources of ERW and MOTAPM in Azerbaijan are munitions dumps and unexploded ordnance left over from Soviet military bases. The explosion of a large Soviet munitions warehouse in Aghstafa district in 1991 was a source of significant contamination in the surrounding area.

Assessment of the problem

In 2002 and 2003, the Azerbaijan National Agency for Mine Action (ANAMA) conducted a survey of post-conflict contamination in Azerbaijan-controlled territory.¹⁴⁷ The results showed that the regions in western Azerbaijan were the most heavily contaminated. An analysis of incident

reports and clearance records suggests that ERW and MOTAPM form a major component of this threat.

A summary of devices destroyed by ANAMA teams from July 2000 to June 2004 in six regions of Azerbaijan shows that UXO accounts for the majority in all regions. Within this period the teams destroyed a total of 5,824 items of UXO, 110 anti-personnel mines and 58 MOTAPM. Thus UXO accounts for 97 per cent of all devices destroyed.¹⁴⁸

The governmental structure of Nagorno-Karabakh appears to have no agency designated as responsible for mine and ERW issues.¹⁴⁹ Within the region of Nagorno-Karabakh, the HALO Trust is lead agency for the collection and dissemination of information on landmines and UXO. HALO currently has two survey teams operating in Nagorno-Karabakh.¹⁵⁰ Both the HALO Trust and ANAMA¹⁵¹ estimate that large areas remain contaminated with ERW and MOTAPM.¹⁵² Based on one media report of device clearance in 2003, which stated that 192 APMs, 165 MOTAPMs and 12,943 UXO items were destroyed¹⁵³, it appears that ERW and MOTAPM are still a significant part of the total explosive device problem within Nagorno-Karabakh. The area along the eastern border of the Nagorno-Karabakh region saw the most active combat during the war, and is therefore the area most affected by ERW and MOTAPM.¹⁵⁴ The single worst affected area now under Armenian control is Martakert, which changed hands several times during the conflict.¹⁵⁵

Aghstafa district in north-western Azerbaijan became highly contaminated by UXO due to the 1991 explosion of the Soviet munitions warehouse at Saloglu.¹⁵⁶ This warehouse, consisting of 138 bunkers, was the largest Soviet ammunition storage facility in the Transcaucasus region. Additional UXO contamination in the same district is the result of military training exercises in the 1970s. The 2002/3 Landmine Impact Survey identified 182 "suspected hazard areas" affected by UXO in Aghstafa district, most of them the result of the Saloglu warehouse explosion and the remainder the result of military training. Other places in Azerbaijan

affected by ordnance and munitions from former Soviet military facilities include 12 urban and suburban sites in Lenkeran, Jalilabad and Hajigabul districts, and in Ganja city.

Impact

The following incidents that occurred between 1 July 2003 and 30 June 2004 are reported on the ANAMA website¹⁵⁷:

- On 26 July 2003, a 30-year-old man was injured when a hand grenade exploded in his yard in Fizuli district.
- On 3 August 2003, a 51-year-old man was injured when his tractor struck an anti-tank mine in Gadabey district. He was ploughing in a marked minefield.
- On 18 September, a 17-year-old boy herding livestock on horseback was killed when his horse stepped on an anti-tank mine in Agjebedi district.
- On 19 September 2003, a 12-year-old boy and a 16-year-old boy were injured by a UXO explosion in Agjebedi district.
- On 19 February 2004, a 57-year-old man was killed and a 55-year-old man was injured when they were trying to make a machine spare part from an item of UXO in Aghstafa district.
- On 30 March 2004, a 44-year-old man was killed when his tractor ran over an anti-tank mine in Aghdam district. Three other men riding in a trailer pulled by the tractor were seriously injured.
- On 24 April 2004, a 34-year-old man was killed and a 37-year-old man was injured, when their truck drove over an anti-tank mine in Aghdam district.
- On 1 June 2004, a 24-year-old man was injured during agricultural activities in a former vineyard, when a truck drove over an anti-tank mine in Terter district.
- On 26 June 2004, a 60-year-old man was injured when a combine harvester drove over an anti-tank mine in Fizuli district.

According to ANAMA data a total of 958 people have been injured and 339 killed by mines and ordnance from 1990 to June 2004. The great majority (83 per cent) were male adults, 15 per cent were children and only 2 per cent were women.

During the reporting period of 1 July 2003 to 30 June 2004, a total of 12 mine/UXO incidents were reported in Azerbaijan.¹⁵⁸ Of these, two were caused by UXO and 10 by landmines (no breakdown was available between APM and MOTAPM – although the examples above serve to highlight the high prominence of MOTAPM incidents). These 12 incidents killed 22 people and injured a further 22. Twenty-three of the victims were civilians, of whom 14 were injured and nine were killed.

The Landmine Impact Survey conducted in Azerbaijan in 2002-3 found that 52 people had fallen victim to landmines

and UXO during the 24-month period preceding the survey.¹⁵⁹ All but two victims were male. Most of the victims were agricultural workers. Very significantly, 29 per cent of the victims said they were deliberately handling the device before the incident occurred.

Casualties occurring in Armenia-oriented Nagorno-Karabakh have been recorded by the HALO Trust. From 1995 to August 2004, about 60 people have been killed in mine or UXO accidents in Nagorno-Karabakh.¹⁶⁰ About 190 people have been injured. AP mines caused 42 per cent, UXO 30 per cent, and MOTAPM 28 per cent of these accidents. From 1 July 2003 to 30 June 2004, 26 people were injured and 12 people died in accidents involving mines and UXO.¹⁶¹ These casualties resulted from 22 incidents, of which 12 involved MOTAPM, six involved APM and four involved UXO. One of the recent MOTAPM accidents occurred on 14 March 2004 near Nor Karmravan settlement in the Martakart region.¹⁶² Three civilians died and six were wounded when the mini-van they were riding in struck an anti-tank mine.

Beyond the statistics of mine/ERW-related casualties lies the more pervasive socio-economic impact of the ERW and MOTAPM threat. The Nagorno-Karabakh conflict took place principally on fertile agricultural land, much of which cannot now be cultivated due to the mine and ERW threat. An agricultural ministry official of the self-declared NKR has estimated that about 30 per cent of the republic's arable land is in potentially contaminated regions, including the most fertile areas in the lowlands and foothills.¹⁶³

The 2002-3 Landmine Impact Survey in Azerbaijan identified 480 communities in 18 districts affected by landmines or UXO.¹⁶⁴ A total of 970 suspected hazard areas (SHAs) were identified within these 480 communities. Of the 970 SHAs identified, 63 per cent were contaminated by UXO only, 4 per cent by AT mines and UXO, and 3 per cent were contaminated by AT mines only. Thus ERW and MOTAPM are solely responsible for 70 per cent of the suspected contaminated sites in Azerbaijan. Only 2 per cent of the sites are contaminated by AP mines only, and the remaining 28 per cent of the sites are contaminated by various combinations of AT mines, AP mines and UXO.

In Azerbaijan, the most common socio-economic impact reportedly caused by landmines and UXO is blocked access to pasture land¹⁶⁵ – reported in 72 per cent of affected communities. Aghstafa district, which suffers primarily from UXO contamination, reported pasture land the most frequently as a blocked resource.

Efforts to address these problems

Within Azerbaijan, ANAMA is the lead agency for monitoring and coordinating all aspects of mine action. This agency is supported by UNDP, and funded by a variety of national and multi-national donors.¹⁶⁶ In cooperation with local and international organizations, ANAMA coordinates and conducts information surveys, mine risk education, mine and UXO

clearance, and victim assistance programmes. Physical clearance of mines and UXO is undertaken by two national NGOs, Dayag and IEPF, under contract from ANAMA.¹⁶⁷ From 1 July 2003 to 30 June 2004, deminers in Azerbaijan found and destroyed five anti-tank mines, 20 anti-personnel mines and 2,717 pieces of UXO.¹⁶⁸

No government agency appears to coordinate mine action within the region of Nagorno-Karabakh. The HALO Trust has created a Mine Action Centre (MAC) in Nagorno-Karabakh to collect and disseminate information on mines and UXO.¹⁶⁹ From 2000 to August 2004, the HALO Trust in Nagorno-Karabakh had found and destroyed 2,485 anti-personnel mines, 1,167 anti-tank mines and 9,504 pieces of UXO.¹⁷⁰ The HALO Trust deploys three mobile explosive ordnance disposal teams that clear hundreds of UXO items each month. HALO Trust also conducts mine risk education for high-risk groups including shepherds, tractor and combine harvester drivers, and scrap metal collectors.¹⁷¹

Legislation

Neither the Azerbaijani nor the Armenian Government has acceded to the Mine Ban Treaty or the CCW. Nagorno-Karabakh is not an internationally recognised state and its administration is not eligible to ratify international weapons conventions. Political leaders of both Azerbaijan¹⁷² and Armenia¹⁷³ have stated that they would sign a mine ban treaty only after a formal peace agreement is established. Azerbaijan and Armenia simultaneously acceded to the Council of Europe in 2001, thereby committed themselves to using only peaceful means for the settlement of the Nagorno-Karabakh conflict.¹⁷⁴

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- 149 Landmine Monitor 2003, <http://www.icbl.org/lm/2003/nagorno-karabakh.html>, accessed 26 March 2004.
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- 153 "Large scale demining carried out in Karabakh in first four months of 2003", *Arminfo Business Bulletin* (Yerevan), 11 June 2003, reported in Landmine Monitor 2003, <http://www.icbl.org/lm/2003/nagorno-karabakh.html>, accessed 26 March 2004.
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- 165 Landmine Impact Report, Republic of Azerbaijan, 2003.
- 166 "Azerbaijan Mine Action Agency reports to donors on 2003 activities", UNDP, 10 March 2004, <http://www.un-az.org/undp/news/anamdonormet2004.asp>, accessed 12 April 2004.
- 167 "ANAMA 2004", publication.
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- 169 The HALO Trust, <http://www.halotrust.org/nagornokarabakh.html>, accessed 12 April 2004.
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- 171 Email to R. Sathre and I. Grzelishvili, from Ed Rowe, HALO Trust-Nagorno Karabakh, 27 August 2004.
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- 173 Landmine Monitor 2003, <http://www.icbl.org/lm/2003/nagorno-karabakh.html>, accessed 26 March 2004.
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Belarus

Background

Belarus is affected primarily by residual ordnance contamination from the 1939-45 War. An UNMAS assessment report from 2000¹⁷⁵ stated that:

“Belarus was the scene of heavy fighting over a three-year (1941-1944) period, and there remains an unknown number of German and Soviet mines and UXO still scattered about old battlefields. Unexploded ordnance constitutes a more serious threat than landmines, the most dangerous areas being those where trench battles took place. A substantial amount of contamination has been found in the Brest, Gomel, Mogilev, Minsk and Vitebsk regions, with the Vitebsk region being particularly affected. On a field visit to the Doubrovitsa area, it was apparent to the team that some battlefield area clearance operations had previously taken place, most probably by Soviet Army units and German prisoners-of-war in the immediate post-war period. There are, however, no available records [...] of the degree, extent or quality of these clearance operations.”

In addition to UXO remaining from the conflict, firing ranges and ordnance stores present a potential hazard. Former Soviet stockpiles remain in Belarus. With respect to ERW contamination UNMAS stated: “The socio-economic impact on the country as a whole is limited; however, there continues to be a residual threat to local populations. Official statistics record an average of ten victims a year, over the past ten years. The dangerous areas are neither fenced nor marked, and there is little information available to indicate the potential density of contamination.”¹⁷⁶

Assessment of the problem

The majority of the affected areas are agricultural land and forests. Every year (particularly from March to May) soil movement brings items of ordnance to the surface even in areas that have been subject to clearance previously.¹⁷⁷ Some 92 casualties were reported to UNMAS for the period 1990-1999. Of these, nearly 60 per cent were recorded as children.¹⁷⁸

At the 2nd International Ottawa Convention Workshop in Minsk in 2003 there was a discussion about the kind of assistance Belarus may receive, as a State Party to the Ottawa Convention, to better define the scope of the problem as well as to improve mechanisms already in place to address it. Several speakers advised that the 2000 UNMAS Assessment Report highlighted the contamination problem as primarily that of UXO (in line with the experience of many other European nations following the 1914-18 and 1939-45 Wars.)

Local authorities and civil society representatives of the most affected areas of Belarus participated in this

workshop and gave presentations on the ERW situation in their regions. According to these presentations, the most affected area is in Dubrovno district of Vitebsk region. Demining operations were carried out here in 1945-1947 and in 1993-1994. Despite this, in the opinion of the local authorities, there are more than 200,000 mines and items of ordnance left in the soil in the area of some 170 square kilometres.¹⁷⁹

Impact

ERW items may be found in all parts of the country including the capital and major cities. Recently ERW items were found in the centre of Minsk during the construction of the new building of the National Library. Areas which saw fixed wartime frontlines may be contaminated with MOTAPM. MOTAPM are still discovered from Soviet and German minefields that were installed up to 7-10 km away from the frontlines.

According to the latest available reports from the defence ministry,¹⁸⁰ three ERW accidents occurred during the second half of 2003:

- On 4 August 2003, on the grounds of “Dubrovka” firing range near Bobruisk city, a civilian man was injured as a result of the detonation of a 122mm artillery shell. The detonation occurred after the man built a bonfire over the shell.
- On 19 September 2003, in Vitebsk region, one man was killed and another seriously injured after they tried to take apart an artillery shell they had found.
- On 21 September 2003, also in Vitebsk region, two men were injured when a shell detonated as a result of a bonfire they had built.

In October 2003, during renovation of the Brest-Minsk-Moscow highway, workers of the road construction company discovered 14 anti-vehicle mines in Dubrovny region. The mines were extracted and destroyed by teams from the Ministry of Interior. Three more were found the next day, and mortars and hand-grenades were also found in the area around the road. An officer from the Ministry of Interior provided reassurances that, with the anti-vehicle mines buried some 1.5 to 2 metres below the road surface, they were unlikely to detonate.¹⁸¹

All of the 98 casualties reported by the Ministry of Defence in Belarus between 1993 and 2003 have been male. Some 43 per cent were recorded as children and 36 per cent of the total casualties died as a result of their accidents. These casualties have substantially resulted from ERW and MOTAPM accidents rather than anti-personnel mines.¹⁸² Anti-personnel mines do not seem to constitute a significant cause of accidents in recent years.

National and independent mass media cover issues relating to ERW/MOTAPM problem regularly. Most are reports on the discovery and destruction of ERW. Others relate to casualties and illegal ERW/MOTAPM collection for criminal sale (or related criminal cases). A lesser number relate to ERW/MOTAPM safety education and instructions.¹⁸³

People seek to salvage scrap metal and explosives from UXO and AXO in order to generate cash. In September 2004, a news item on Belarus National Television reported that a stockpile of artillery shells and other explosive remnants from the 1939-45 War was discovered in the basement of an apartment building in the city of Grodno. These items had been collected from battlefield areas by a man who planned to extract the explosive content and sell it on the black market.

Efforts to address these problems

The primary responsibility for mine and ERW clearance rests with the Ministry of Defence and Ministry of Internal Affairs. The Ministry of Defence claims to have cleared more than 138,700,000 explosive devices on the territory of 409 square kilometres since 1945.¹⁸⁴

The only pre-planned ordnance clearance work during this period was being undertaken at the Krupenino firing range

in Vitebsk region. This operation was arranged and executed by the Ministry of Defence's Engineering Forces. This work resulted in some 1,748 explosive items being discovered and destroyed.¹⁸⁵

In response to calls from the public in 2003, some 3,601 mines and 6,971 UXO were reported as cleared by the Belarus Ministry of Defence.¹⁸⁶ In addition to this, the Ministry of Interior reported that it cleared 3,428 items of ordnance and 568 mines.¹⁸⁷

The UNMAS assessment mission report of 2000 noted that "the responsive nature of the mechanism currently in place by Belarus authorities to deal with clearance activities seems appropriate, but needs to be strengthened".¹⁸⁸

Legislation

Belarus has acceded to the Ottawa Convention. Belarus is a States Party to the CCW and its original Protocol II on landmines. The parliament of Belarus ratified CCW Amended Protocol II. On 27-28 November 2003 Belarus attended the Fifth Annual Conference of States Parties to the CCW and voted in favour of adoption of Protocol V on Remnants of War.

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- 184 Presentation by Colonel Gennady Pozniak, Ministry of Interior, Second International Ottawa Convention Implementation Workshop, Minsk, 8-9 December 2003.
- 185 Fax report to SCAF/CBL Belarus from Ministry of Defense, 23 July 2004.
- 186 Letter from Belarus Ministry of Defence to SCAF/CBL Belarus, 20 January 2003.
- 187 Presentation by Colonel Gennady Pozniak, Ministry of Interior, Second International Ottawa Convention Implementation Workshop, Minsk, 8-9 December 2003.
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Bosnia and Herzegovina

Background

The 1992-95 conflict in Bosnia and Herzegovina (BiH) involved three main ethnic groups: Bosnian Serbs, Bosnian Moslems and Bosnian Croats. In some areas confrontation lines moved many times, whereas in other areas the lines remained relatively fixed throughout the war. Since many of the forces involved in the conflict were set up largely outside an established formal military system, there is a significant information gap related to MOTAPM and ERW. Landmines were used to protect urban and rural areas and in many cases laid by two or three sides in close proximity. Many minefields (both anti-personnel mines and MOTAPM) were laid without any records, while others were inaccurately recorded. Many paramilitary units, formed on all sides, kept few if any records of minefields or the use of ordnance.

Assessment

The Bosnia and Herzegovina Mine Action Centre (BHMAC) systematic survey (2001-2003) and a mine impact survey (MIS, October 2002-December 2003) have provided significant information on the extent and location of MOTAPM and ERW contamination in Bosnia and Herzegovina.¹⁸⁹ The MIS conclusively identified 128 of the total 148 municipalities as ERW and mine affected, with the following munition types:¹⁹⁰

- 71 per cent of affected communities reported the presence of ERW / UXO;
- 30 per cent of affected communities reported the presence of MOTAPM.¹⁹¹

The Ministry of Defence of Bosnia and Herzegovina has provided BHMAC with all possible minefield records and use of ordnance during the war period. Despite this, BHMAC estimates that 25 per cent of all minefield records are either incomplete or inaccurate.¹⁹² BHMAC also estimates that 50 to 60 per cent of minefields remain unrecorded.¹⁹³

The areas most affected by ERW and MOTAPM are between or adjacent to former frontlines, which currently reflect inter-entity boundaries and zones of separation. Rural areas with relatively small communities in villages or smaller settlements are most at risk. Villages and smaller communities comprise 88 per cent of the 1,366 communities at risk (1,209 communities). Urban areas are also at risk as the war targeted civilian centres such as Sarajevo, which was under siege between 1992 and 1995.¹⁹⁴

One conclusion of the MIS was that smaller communities facing high levels of threat from ERW and mines should have high priority. A high density of population, although a major factor, should not be the overriding consideration. In most high-density populated areas there is more access to mine risk education (MRE) and less of a tendency to enter risk

areas, unlike most rural agricultural communities which need to use their land.¹⁹⁵

The ICRC, which has the most extensive network of mine/ERW incident investigators in BiH, does not make any distinction between accidents caused by anti-personnel mines and MOTAPM. Their database records accidents in four categories: mines (including both anti-personnel mines and MOTAPM), UXO, IED¹⁹⁶ and unknown.¹⁹⁷

The proven presence of MOTAPM, as pointed out by local advisers during the course of the MIS, usually indicated the presence of anti-personnel mines laid within close proximity. People more commonly come to harm as a result of the anti-personnel mines surrounding an anti-tank mine. The presence of the latter was considered as an indicator of heavy contamination by the former.

Impact

The economic conditions in BiH and the resulting lack of employment force many people to find additional or black market sources of income. Gypsies in particular raise money through the sale of scrap metal.¹⁹⁸ Rubbish dumps, rubbish containers and unofficial refuse sites are regular targets for people searching for scrap metal such as copper and aluminum. The following incident illustrates the perceived financial benefit attached to ERW for their metal content:

- A metal worker was killed on 9 June 2004 when he used a cutting tool to disassemble a 155mm Howitzer shell. The man, aged 55, had earlier that day cut 10 similar shell casings into parts at his place of employment, a scrap metal workshop in a populated area of Zenica. A young woman employed in the office received minor wounds from broken glass. The 155mm Howitzer contains 6.6kg of high explosive.¹⁹⁹

The MIS records most of the areas blocked by mine and ordnance contamination as relatively low value resources such as non-agricultural land, pasture, and rain fed cropland. Forests are also contaminated and pose a risk to rural communities that commonly use these areas for such activities as collecting firewood, medicinal plants and charcoal or hunting. At least 50 per cent of affected communities are connected with agriculture and the use of natural resources. In 40 per cent of communities access to infrastructure and resources necessary for basic sustainability is blocked due to mine and ERW contamination.²⁰⁰

In one study conducted during the MIS in the municipality of Kupres, a small rural community illustrated the problem of residents in an agricultural economy. The community was totally abandoned during the war and since the return of 30 families there had been seven fatalities from ERW and mines. As a direct result of economic necessity combined with the constant threat to their community, the

farmers decided to demine three risk areas. One farmer claimed to have cleared 20 MOTAPM.²⁰¹

In 2000, Tramosnica (Tuzla Canton), one of the most productive agricultural areas for cash crops such as tobacco and livestock, was unable to function due to heavy contamination with MOTAPM and anti-personnel mines. The reconstruction of houses had to be suspended because of the contamination. Many residents began to clear the areas around their homes without support or approval of the authorities, as a response to economic pressure and the need to ensure the safety of their families.²⁰²

The MIS concluded that schools, factories, health centres, etc., were not seriously affected.²⁰³ However, UNHCR identified mine and ERW contamination as a major obstacle to the repatriation of refugees and IDPs in BiH, so much so that UNHCR introduced a clearance project as an integral component of its “Community Based Reintegration Assistance to Minority Returns in Bosnia and Herzegovina Programme”.²⁰⁴

Between 1 June 2003 and 30 June 2004, the ICRC recorded 10 accidents involving returnees and IDPs. Two returnees were killed by mines, three injured by mines and two injured by an unknown explosive device. Two IDPs were killed by ERW and one injured by an IED. Accident rates in BiH have fallen considerably but in 2003 there was still an average of four to five accidents per month involving mines (both anti-personnel mines and MOTAPM) and ERW.²⁰⁵

According to UNHCR, no projects have been cancelled as a direct result of MOTAPM and ERW contamination, but the problem continues to affect efforts to “move from reconstruction towards more long-term development efforts”.²⁰⁶ While not referring to the specific impact of MOTAPM or ERW, the UNHCR official said that a “significant amount of land along the inter-entity boundary line continues to be unutilised due to mines and ERW”. Another official stated that no projects have been cancelled due to mine and ERW contamination, but that the UNHCR first confirms that an area is not suspected of mine and ERW contamination before instigating humanitarian projects. “If an area is identified or suspected of mine and ERW contamination, the UNHCR would not be able to instigate support programmes”.²⁰⁷

Efforts to address the problem

The BHMIC is the only body responsible for the supervision and certification of clearance operations in Bosnia and Herzegovina, through its regional offices and quality assurance inspectors.

The MIS recorded 289 professional clearance operations conducted, plus a total of 364 local initiatives. The latter were unsanctioned and carried out by local people.²⁰⁸

SFOR began its “Operation Harvest” in March 1998 to gather illegal unregistered weapons, such as hand grenades, from private houses and illegal weapons caches.

Despite large numbers of weapons and ammunition being disposed of since 1998, it is estimated that a considerable amount of weapons and ordnance remain in private possession.²⁰⁹ In 2003, for example, 45,000 hand grenades were collected. SFOR destroys ammunition, mines, ordnance and other AXO in cooperation with the BiH armed forces at approved demolition sites.²¹⁰

Operation Harvest statistics show that, from January to July 2003, SFOR collected or confiscated some 4,400 small arms, nearly 1.3 million rounds of ammunition, more than 25,000 hand grenades and more than 2,300kg of ordnance.²¹¹

To help the entity armed forces reduce their stocks of unserviceable, unsafe and surplus or obsolete ammunition and AXO – and to reduce the number of ammunition ordnance storage sites in BiH – SFOR initiated “Operation Armadillo” on 7 November 2003.²¹² During its first phase, the Operation disposed of 31,920 MOTAPM, 2,574 anti-personnel mines and 302,832 detonators. Operation Armadillo was ongoing through 2004.²¹³

The main obstacle to clearing BiH of ERW and MOTAPM is a lack of funding for clearance and associated activities. The government’s strategic aim is to eliminate all risk areas of first priority, conduct urgent clearance of the most dangerous areas of second and third priority categories, conduct permanent marking of second priority areas and directional marking of third priority sites.²¹⁴

The United Nations has provided substantial support for mine action in Bosnia and Herzegovina since 1996. The former UNMAC was the predecessor to the current BHMIC and was fundamental to establishing clearance operations in the country.

On 26 February 2004, UNDP and the Ministry of Civil Affairs of Bosnia and Herzegovina, which is responsible for mine action and incorporates the BiH Demining Commission, signed the Integrated Mine Action Programme (IMAP) for BiH.²¹⁵ The IMAP is intended to create a clear link between mine clearance priorities and national long-term economic development, integrating it with UNDP’s institutional capacity building efforts in the area of ERW and mine action. IMAP aims to maximise funding for clearance and accelerate restoration of socio-economic activities in BiH, while consolidating the ERW and mine action structures and their ability to execute long-term mine action planning.²¹⁶

The clearance priority for BiH during 2004 was to return land in mine and ERW contaminated areas to full use, to reduce the contamination’s socio-economic impact and to support the return of refugees and IDPs.²¹⁷

Legislation

On 3 December 1997, Bosnia and Herzegovina signed the Ottawa Convention, ratified it on 8 September 1998, and became a State Party in March 1999.²¹⁸ Bosnia and

Herzegovina is a State Party to the Convention on Certain Conventional Weapons, the Original Protocol II, Protocol III (as of 1 September 1993) and to Protocol IV (as of 11 October 2001). It is also a State Party to Amended Protocol II (as of 7 September 2000).

- 189 Ongoing general survey operations and analysis of mine action results continue to upgrade existing information. The MIS was funded through the International Trust Fund (ITF) by the U.S. State Department, CIDA (Canada) and the European Commission. The Survey Action Center, Washington D.C., selected Handicap International to implement the MIS in conjunction with the BHMIC. Final draft report on the Mine Impact Survey conducted in Bosnia and Herzegovina, October 2002 and December 2003, Handicap International in conjunction with the BHMIC. CD draft version supplied by the Deputy Director (Operations), Mr. Darvin Lisica, during an interview at BHMIC on 25 August 2004.
- 190 Final draft report on the Mine Impact Survey conducted in Bosnia and Herzegovina by Handicap International in conjunction with the BHMIC between October 2002 and December 2003. CD draft version supplied by the Deputy Director (Operations), Mr. Darvin Lisica, during an interview at BHMIC on 25 August 2004.
- 191 The BHMIC, following careful analysis of the MIS findings in comparison with BHMIC systematic survey results, states that the MIS did not identify all impacted areas within communities. BHMIC estimates that only 70.13 per cent of mine/ERW impact within communities was identified, therefore 29.87 per cent lies outside the scope of the MIS. This conclusion is based on analysis of systematic survey and mine action results against the findings of the MIS. "Strategic Analysis of Mine Action in Bosnia and Herzegovina", by Darvin Lisica (Deputy Director (Operations) BHMIC, and David Rowe (UNDP Strategic Adviser to BHMIC), p. 10, final draft, printed in June 2004.
- 192 "Strategic Analysis of Mine Action in Bosnia and Herzegovina", by Darvin Lisica (Deputy Director (Operations) BHMIC, and David Rowe (UNDP Strategic Adviser to BHMIC), p. 7, final draft printed in June 2004.
- 193 Final Draft report on the Mine Impact Survey conducted in Bosnia and Herzegovina by Handicap International in conjunction with the BHMIC between October 2002 and December 2003. CD draft version supplied by the Deputy Director (Operations), Mr. Darvin Lisica, during an interview at BHMIC on 25 August 2004.
- 194 Final Draft report on the Mine Impact Survey conducted in Bosnia and Herzegovina by Handicap International in conjunction with the BHMIC between October 2002 and December 2003.
- 195 Final Draft report on the Mine Impact Survey conducted in Bosnia and Herzegovina by Handicap International in conjunction with the BHMIC between October 2002 and December 2003.
- 196 Covering booby traps, often incorporating anti-tank mines, hand grenades, detonators and explosives.
- 197 Interview with Mustafa Sarajlic, Cooperation Assistant, ICRC Sarajevo, mine victims data section, 24 June 2004.
- 198 Interview with Mustafa Sarajlic, Cooperation Assistant, ICRC Sarajevo, mine victims data section, 24 June 2004.
- 199 "Haubicka granata raskomadala Fikreta Menkovica" (Howitzer grenade being cut up by Fikret Menkovic), Dnevni Avaz, daily Avaz newspaper, 10 June 2004, p. 30.
- 200 Final Draft report on the Mine Impact Survey conducted in Bosnia and Herzegovina by Handicap International in conjunction with the BHMIC between October 2002 and December 2003.
- 201 Final Draft report on the Mine Impact Survey conducted in Bosnia and Herzegovina by Handicap International in conjunction with the BHMIC between October 2002 and December 2003.
- 202 Based upon GIS researcher field visit in Tramosnica in 2000.
- 203 Final Draft report on the Mine Impact Survey conducted in Bosnia and Herzegovina by Handicap International in conjunction with the BHMIC between October 2002 and December 2003.
- 204 Interview with Ljiljana Santic, UNHCR Project Assistant for Protection and Return, and Danjela Torbica, Project Assistant, Protection and Return, Sarajevo, 20 July 2004.
- 205 Interview with Mustafa Sarajlic, Cooperation Assistant, mine victims data section, ICRC Sarajevo, 24 June 2004.
- 206 UNHCR, William Tarpai, email received 30 August 2004.
- 207 Email from Meredoc McMinn, UNHCR field office, Zvornik.
- 208 Final Draft report on the Mine Impact Survey conducted in Bosnia and Herzegovina by Handicap International in conjunction with the BHMIC between October 2002 and December 2003.
- 209 SFOR, <http://www.nato.int/sfor/indexinf/165/p03a/t02p03a.htm>, (first published in SFOR Informer #165, September 2003), 2nd Lieut. Oliver Rolofs, "Comprehensive Destruction of Harvest Weapons", p.2, accessed 16 July 2004.
- 210 SFOR, <http://www.nato.int/sfor/factsheet/harvest/t040202a.htm>, January 2004, SFOR Fact Sheet, "SFOR Operation Harvest", p.1-2, accessed 11 June 2004.
- 211 SFOR, <http://www.nato.int/sfor/indexinf/171/p08a/t02p08a.htm>, (first published in SFOR Informer #171, June 2004), Capt. Steve Hawken, "The Sweet taste of Harvest Success", p.1, accessed 16 July 2004.
- 212 According to Major Matt Richards, SO Countermines, SFOR HQ, Sarajevo, the aim of Operation Armadillo is to reduce Federation military ammunition storage sites (ASS) from 22 to four, and weapon storage sites (WSS) from 21 to 2. The plan in the Republic Srpska is to reduce ASS from 19 to nine and WSS from 18 to eight.
- 213 Email from Karel Bartosik, Landmine Monitor, 18 July 2004: information provided by Major Matt Richards, SO Countermines, SFOR HQ, Sarajevo, on Operation Armadillo.
- 214 BHMIC, http://www.bhmic.org/strateski_plan_eng.htm, "Strategic Plan for Bosnia and Herzegovina by the Year 2010", 2003, p.2, accessed 6 June 2004.
- 215 Interview with Amela Tutnjivic, Project Manager, Mine Action, UNDP, Sarajevo, 19 July 2004.
- 216 Interview with Amela Tutnjivic, Project Manager, Mine Action, UNDP, Sarajevo, 19 July 2004.
- 217 BHMIC, "Bosnia and Herzegovina Mine Action Plan for the Year 2004", p. 6 (2.1.), http://www.bhmic.org/godisniji_plan_eng_2004.htm, accessed 9 June 2004, p.7.
- 218 ICBL – Treaty Update, "Ratification Updates" Landmine Monitor, 13 May 2004, <http://www.icbl.org/ratifications/>, accessed 10 June 2004; ICBL, "Bosnia and Herzegovina & Landmines – The Mine Problem in BiH, how it's being Resolved and Where to Find More Information", article (Author/origin: Media), 30 April 2004, <http://www.icbl.org/news/2004/479.php>, accessed 13 June 2004.

Burundi

Background

MOTAPM and anti-personnel mines have been widely used by the warring parties in many parts of Burundi since an internal conflict began in 1993. Fighting continues in the country, even in areas close to the capital Bujumbura.

Assessment of the problem

Mines and ERW such as grenades, shells, rockets and other devices are a threat to the civilian population in Burundi, particularly to children. According to a UNICEF report, the use of improvised explosive devices (IEDs) consisting of ERW such as grenades is an additional threat. The UNICEF Burundi assessment was a survey conducted between 22 November 2002 and 15 January 2003.²¹⁹ The most affected provinces were Bujumbura Rural, Bubanza, Makamba, Rutana and Ruyigi.²²⁰ According to government and regional officials, one in every three victims of ERW and mines in Burundi comes from Bujumbura Rural, with Isale, Mutimbuzi and, to a lesser extent, Kabezi and Kanyosha being the most at-risk communes.²²¹ Additionally, several sources indicate that there is ERW and mine contamination within a few kilometres of the capital Bujumbura.²²²

Impact

In 2002, there were eight casualties from MOTAPM, and 11 from ERW.²²³ No MOTAPM-related casualties were recorded in 2003 and the first three months of 2004, but there were a number of ERW incidents.²²⁴ In 2003, there were five adult victims in Bujumbura Rural province, one victim in Kayogoro (Makamba province), one victim in Vugizo (Makamba), one victim in Makamba commune (Makamba). There were seven victims in Ruyigi province, and 13 in Giharo commune, Rutana province. Among the 13 victims in Giharo, seven were from unexploded rockets and six from unexploded grenades.²²⁵ Eight of the victims were children. Between January and March 2004, there were four recorded ERW incidents, in Kayogoro (Makamba) and Musongati (Rutana). The two in Makamba were young children.²²⁶ According to UNICEF, grenades are a particular problem and are "found everywhere and sold cheaply in Burundi".²²⁷

The evidence collected in UNICEF's study suggests that deliberate handling of ERW not only involves boys but also men and women who are often unaware of the risks of handling munitions and may not even know that they are handling munitions. In one of these incidents in 2002, an artillery shell caused the death of six people and injured five, in Ruyigi province. Also, in Ruyigi, one of the provinces known to be highly affected, a project to build a school was cancelled due to the presence of ERW and mines, and another location had to be chosen for the project.²²⁸

Some NGOs, such as MSF, and UN agencies in Burundi have fitted their vehicles with an anti-mine protective carpet, an indication that exposure to the danger posed by anti-personnel mines and MOTAPM to aid workers is a prime concern of international organisations.²²⁹ Some organisations have scaled back their operations, abandoning parts of the country which are known or suspected to be contaminated, while others were forced to curtail their operations because of past incidents in which mines hit vehicles of humanitarian organizations.²³⁰ According to the International Rescue Committee, MOTAPM on bush roads are a threat to the conduct of humanitarian work.²³¹

The Lutheran World Federation/Tanganyika Christian Refugee Services (LWF/TCRS) data states that 27 per cent of the 127,000 refugees hosted in the Kibondo camps in Kigoma region of Tanzania are from the mine-affected provinces, and most have not even been exposed to basic risk education.

The head of the UN peacekeeping force in Burundi says the UN has scant knowledge of where the mines are planted, as belligerents did not provide maps indicating locations of where they planted the devices. He said refugees and internally displaced people (IDPs) eager to return to their homes without knowing where the landmines are planted were at big risk.²³²

Efforts to address these problems

No comprehensive assessment of the problem has been undertaken at national or provincial level. UNICEF says that "with few exceptions no real preventive action has been undertaken in the country – neither by the government, nor by the United Nations, nor by the NGOs, nor by the media".²³³

The national army has cleared some areas and destroyed mines, but records of the cleared mines are not known.²³⁴ The process of preparing a national plan for demining and assisting survivors was about to start in July 2004.²³⁵ A mine action centre was established in Burundi to coordinate all activities related to risk education, clearance and documenting of mines incidents.²³⁶ There are also some community-based efforts to help victims, for example in Kayogoro commune, Makamba province.

The Ministry of Public Security is managing a mine risk education project in five provinces, with support from the media and civil society.²³⁷ Data is collected on a regular basis in the five provinces. A more comprehensive data collection system was due to start in the middle of 2004 within the mine action centre.²³⁸

On 3 June 2004, the Swiss Foundation for Mine Action (FSD), announced that it had begun implementing a mine action programme in Burundi. The project was being jointly

undertaken with a local partner, the Independent Centre of Research and Initiative for the Dialogue (ICRID).²³⁹

In January 2004, the former rebel group Forces for the Defence of Democracy (CNDD-FDD) appealed to the Burundian army and the Forces Nationales de Liberation (FNL) rebel faction to stop using landmines. The FDD disclosed that it had previously laid mines in certain parts of the communes of Nyanza Lac, Kayogoro in southern Burundi, and near the border between Burundi and Tanzania in the eastern province of Cankuzo.²⁴⁰ An army spokesman said in January 2004 that the army had stopped using landmines

and suggested that ERW was a significant concern: "Our forces are regularly injured by grenades left behind by the enemy but landmines are very rare."²⁴¹

Legislation

Burundi signed the Ottawa Convention on 3 December 1997 and submitted its ratification instrument to the United Nations on 22 October 2003. Burundi is a State Party to the CCW but not to either Protocol II or Amended Protocol II.

- 219 In the survey four pieces of data were systematically collected about the incidents. They were the exact date of the incident; site of the incident; effects of the incident; and the type of explosive – anti-personnel mine, anti-tank mine, booby trap or UXO. The methodology is described as 'journalistic' as it allowed the compiling of a maximum of information in a short time span (based on formal and informal interviews) on the specific nature of the mine problem in Burundi. The survey used data from a cross section of actors and in various backgrounds. Sources included victims, the general population, IDPs, refugees, government, military authorities, NGOs, hospitals, UN agencies, the International Committee of the Red Cross and the media.
- 220 UNICEF, "Mine Victims in Burundi 2001-2002", 2003.
- 221 UN Integrated Regional Information Networks: "Landmines continue to kill, main every year", 29 August 2003.
- 222 Interview with Jean-Claude Kavumbagu, Managing Editor, Net Press, Bujumbura, 4 July 2004; UNICEF, "Mine Victims in Burundi 2001-2002", 2003.
- 223 UNICEF, "Mine Victims in Burundi 2001-2002", 2003.
- 224 Ministry of Public Safety, Republic of Burundi, "Tableau recapitulatif des donnees sur les victims civiles de mines anti-personnel et UXOs, 2003-Mars 2004", June 2004. According to Landmine Monitor sources in 2003 there were at least 174 civilian ERW and mine casualties in Burundi, but with no further information available on the split between ERW, MOTAPM and APM. Interview with Lucia Casero Villar, Head of Mission, MSF-B, Bujumbura, 22 March 2004, cited in Landmine Monitor 2004, p. 241
- 225 UNICEF, "Mine Victims in Burundi 2001-2002", 2003.
- 226 Ministry of Public Safety, Republic of Burundi, "Tableau recapitulatif des donnees sur les victims civiles de mines antipersonnel et UXOs, 2003-Mars 2004", June 2004.
- 227 UNICEF, "Mine Victims in Burundi 2001-2002", 2003.
- 228 Email interview with Liliane Bigayimpuzi, UN Mine Action coordinator for Burundi, and UNICEF Burundi Landmines officer, 24 July 2004.
- 229 UNICEF, "Mine Victims in Burundi 2001-2002", 2003. However, it should be noted that such blankets generally offer little protection against MOTAPM as opposed to AP mines.
- 230 On 6 December 2002, an anti-tank mine was discovered planted on a road that was to be used the same day by an international NGO. Earlier, on 11 January 1998, in Mutambuzi commune, Rural Bujumbura province, a pickup belonging to an international NGO was hit by an anti-tank mine concealed in a pool of water.
- 231 Email from Sam Sherman, International Rescue Committee, 22 November 2004.
- 232 Panapress, "Landmines blasted 154 Burundians in 2003", 19 July 2004.
- 233 Telephone interview with Liliane Bigayimpuzi, UN Mine Action coordinator for Burundi, and UNICEF Burundi Landmines officer, 11 July 2004; UNICEF, "Mine Victims in Burundi 2001-2002", 2003. The report said there were two local initiatives between UNICEF and the governing authority in Kinama in 2001 where preventive action by word of mouth more or less developed through certain communal administrative and military authorities. UNICEF says the information it received indicated that law enforcement bodies had put in place an efficient awareness system among the population for the detection of anti-tank mines.
- 234 Email interview with Liliane Bigayimpuzi, UN Mine Action coordinator for Burundi, and UNICEF Burundi Landmines officer, 24 July 2004.
- 235 Email interview with Liliane Bigayimpuzi, UN Mine Action coordinator for Burundi, and UNICEF Burundi Landmines officer, 24 July 2004.
- 236 Email interview with Liliane Bigayimpuzi, UN Mine Action coordinator for Burundi, and UNICEF Burundi Landmines officer, 24 July 2004.
- 237 Telephone interview with Charles Ndayiziga, Coordinator, Centre for Prevention of Conflict, Burundi, 7 July 2004
- 238 Telephone interview with Charles Ndayiziga, Coordinator, Centre for Prevention of Conflict, Burundi, 7 July 2004; Email interview with Liliane Bigayimpuzi, UN Mine Action coordinator for Burundi, and UNICEF Burundi Landmines officer, 24 July 2004.
- 239 Fondation Suisse de Déminage, "FSD together with local partner Cirid has started to implement a comprehensive mine action programme in Burundi" 2 June 2004.
- 240 According to the FDD, both MOTAPM and APM continue to kill "up to four people per day" in the most infested southern and eastern regions. This information might be grossly exaggerated, but is at least indicative of the persistent MOTAPM threat in certain areas of Burundi. See IRIN, "Ex-rebel movement in plea over landmine use", 6 January 2004; Panafrikan News Agency, "Landmines threaten Burundian rural dwellers", 6 January 2004.
- 241 IRIN: "Landmines continue to kill, main every year", 29 August 2003.

Cambodia

Background

As a result of 30 years of conflict, Cambodia remains heavily contaminated by UXO, MOTAPM and AP landmines. UXO contamination can be found in every province.²⁴² Injury and death from UXO occur at a rate equivalent to more than one person per day,²⁴³ and UXO has accounted for more than half of all casualties from ERW/mines in the country in recent years.²⁴⁴

After years of continually falling overall casualty figures from remaining ERW and landmines, 2004 saw a reverse of this trend for every month up to May. This increase in casualties was primarily due to an increase in ERW accidents. This was related by a number of sources to increased scrap metal prices acting as an incentive for people to handle ordnance. The increase in casualties in 2004 should also be seen in a broader context. Whilst the overall casualty figures have been declining in recent years this has primarily been due to falling AP mine casualty rates. ERW casualty rates have remained more or less static over recent years and at times have increased. This has provoked questions about how effectively mine action programmes are addressing ERW as a component of the post-conflict threat.²⁴⁵

MOTAPM, APs and general ERW are found predominantly in the west of the country; air-delivered ordnance is found primarily in the east, where an estimated 540,000 tons of high-explosive bombs and cluster munitions were dropped on the Ho Chi Minh Trail and nearby areas by the U.S. Air Force in a 10-year period from 1965-1975.²⁴⁶

Assessment of the problem

All areas of the country are affected (to a greater or lesser extent) and UXO is found in every province.²⁴⁷ Particularly heavy concentrations of aerial ordnance, including cluster submunitions, are found in the eastern provinces.²⁴⁸ However, the majority of recorded UXO casualties come from areas in the west of the country.²⁴⁹ There is a wide range of UXO types: mortars, artillery shells, rifle grenades, recoilless rifle ammunition and rocket-propelled grenades are particularly common. Most air-dropped bombs and cluster munitions are of U.S. origin.²⁵⁰

Clearance personnel state that MOTAPM are most often found in the west of the country.²⁵¹ The most common types of AV mines encountered in the field by CMAC (Cambodian Mine Action Centre) and the HALO Trust are Russian-made TM-46, TM-57 and TM-62.²⁵²

Cambodia completed a National Level 1 Survey in July 2002. This survey incorporated a specialized form for the recording of UXO and cluster submunitions.²⁵³ The Cambodian Mine and UXO Victim Information System (CMVIS) tracks the casualties of mines and UXO nationwide.

According to the Level 1 Survey, some 2,776 villages containing 465,951 families were found to be contaminated by cluster munitions and/or minefields which have adverse socio-economic impact on the community. Another 3,646 villages had minor or "spot" UXO or cluster munition contamination, but at a level where it did not have an adverse socio-economic impact. In total, some 46 per cent of Cambodia's villages suffer some form of contamination problem.²⁵⁴ According to the Level 1 Survey, approximately 4,500 sq km of Cambodia is estimated to be contaminated with mines and/or UXO. This would represent 2.5 per cent of the surface area of the country.²⁵⁵

The local media reports regularly on the problem of explosive remnants of war within the country. During the past five years the *Phnom Penh Post*, an English language fortnightly, has averaged an article on UXO in one in five of its editions.²⁵⁶

Impact

The Cambodian Mine/UXO Victim Information System covers all provinces of the country. Begun as a project of the Mines Advisory Group in 1994, CMVIS has progressively been transferred to the Cambodian Red Cross and Handicap International-Belgium. CMVIS disaggregates data between UXO and mines, making it a strong resource for understanding morbidity from these causes.

Data is gathered by both full-time and volunteer data gatherers. When a village volunteer discovers an incident, they inform a commune or district level officer who has been trained in the use of the CMVIS data form, who then collects the information. CMVIS updates and distributes monthly summaries of casualty figures.

From July 2003 to June 2004, 58 per cent of all casualties recorded by CMVIS were due to UXO. And 83 per cent of all UXO casualties were children (predominantly boys.) The high proportion of boys involved in UXO accidents has been a long-standing feature of the data from Cambodia. Analysis of this data against Cambodian census data has highlighted that it is boys in the 10-14 age group who are disproportionately involved in ordnance accidents.²⁵⁷

Of the UXO-specific casualties, 64 per cent were due to deliberate handling, 14 per cent because it exploded within their vicinity, 7 per cent due to burning of the area, 4 per cent due to other farming practices, and 2 per cent were spectators.²⁵⁸ Of the UXO-specific casualties, 39 per cent took place within the village whilst 33 per cent occurred in forest and farmland areas.²⁵⁹ Approximately 20 per cent of casualties died as a result of their accidents.

Research in 2004 has highlighted key motivations behind people's deliberate handling of ordnance. Often men engage with ordnance to move items off their land (so as to farm) or

to prevent children from finding these items. Such forms of ordnance handling do not commonly result in accidents. Accidents are more common where people are dismantling ordnance in an effort to sell the metal for scrap or to use particular components when fishing with explosives.²⁶⁰

MOTAPM incidents occurred in nine provinces, causing 158 injuries or deaths during an 18-month period.²⁶¹ The majority (65 per cent) of deaths and injuries occurred while the victims were travelling. Due to the explosive impact of MOTAPM, most incidents caused injury or death of multiple persons, with up to seven victims in a single incident. One such incident was reported as follows:²⁶²

- 5 April 2004 – Four people were killed in north-western Cambodia when an open-air truck in which they were travelling detonated an anti-tank mine. “Police said ... their truck ran over an anti-tank mine as they were driving on a path back home from the jungle, where they had been collecting wood.”

It is notable that although Cambodia experiences a significant level of casualties from MOTAPM, this contamination has not resulted in the closure of routes to humanitarian agencies in the same way as the MOTAPM threat has in other countries.

Each month of 2004 until May saw an increase on casualties from the previous year,²⁶³ with a fall after the start of heavy rains in June. This suggests a change in the trend that has seen casualties declining since the late 1990s. The current increase in casualties has been attributed to increased scrap metal prices bringing people into contact with ordnance. Some have suggested that greater availability of cheap metal detectors for use in scrap metal hunting has also promoted higher casualties. Others have argued that a rush to blame detectors is not supported by available evidence and represents a search for simplistic solutions in the face of complex problems.²⁶⁴ One case study regarding boys’ engagement with UXO was as follows:²⁶⁵

lap (aged 12) and his older brother Long (15) found a small pile of ordnance near to their village in Kompong Speu Province. The older brother Long picked up two of the shells and started to carry them back to his house. They wanted to sell the shells to the scrap collector who visited the village every day. They had tried to sell ordnance before, but the scrap collector would not buy it because it was still live. The scrap collector had said he would only buy ordnance that didn’t have a fuse in the end.

At the back of the house lap and Long tried to remove the fuses by twisting them out but they couldn’t get them to move. Long gave up trying and went away. lap came up with another plan. If he burned the ordnance it would explode and he would be able to collect the scrap metal fragments and sell them. He called together a group of friends, five other boys and a girl, who would be interested to help in this plan. They took one of the shells

behind the house and the friends gathered together rubbish into a pile around it to make the fire. None of them had any matches.

lap went and found his sister to ask her for some matches. He told her he was going to cook sugar palm because if he told the truth she would have tried to stop him. They got the rubbish pile burning and lay on the ground nearby waiting for it to explode.

After some time the shell exploded with a huge noise and the children were afraid. But then they cheered “Ho!” because their plan had been successful and they would sell the scrap metal to buy some sweets. Excitement turned to dismay when they realised that the explosion had sent the metal fragments all over the place. They could not find many fragments near to where they were and it looked like their efforts would prove fruitless.

The whole village had been surprised and alarmed by the explosion and people started to come over to find out what had happened. Some soldiers stationed nearby came over to investigate, but they left when the adults said what the children had done. The man from the house next door beat all of the boys. lap’s brother-in-law beat him also and told him he would beat him more if he ever did it again.

lap and most of the other boys say they will not do it again because they are afraid of their relatives hitting them. One small child says that he wishes lap would do it again because it was so exciting: “You get to hide and jump on the ground round at somebody else’s house.” He was afraid when it exploded, but being a little bit afraid is OK. He says he wants to know how much he is afraid. All of the boys agree that it was the bravest and most exciting thing that they had ever done.

Research during 2004 has highlighted the ongoing role of the scrap metal trade in bringing people into contact with unexploded ordnance.²⁶⁶ This research noted the prevalence of the scrap metal trade as an important component of the rural economy and also noted the importance of scrap metal in children’s economic activities. This research was commissioned in an effort to develop mechanisms to reduce the high proportion of casualties resulting from deliberate handling of ordnance. The report findings emphasised the need to develop the role and capacity of the police, for engagement with the scrap metal trade and for programmes that support the development of community-level codes of responsible and irresponsible behaviour.

Efforts to address these problems

Four main clearance bodies are working within the country, under the coordination of the national Cambodian Mine Action and Victim Assistance Agency (CMAA): The Royal Cambodian Armed Forces (RCAF), Cambodian Mine Action Centre, Mines Advisory Group (MAG), and the HALO Trust.

According to figures submitted to the Landmine Monitor, some 1,096 AT mines, 118,307 UXO and 60,626 AP mines were cleared in 2003. The total area reported to have been cleared was 41,746,541 sq m.²⁶⁷ These totals include high figures for clearance reported by RCAF (they claim responsibility for over 58 per cent of the total land cleared.) However, there is little evidence to support the RCAF figures and they are not well integrated into the broader structures of mine action in the country. It is not possible to disaggregate the land cleared only of UXO or MOTAPM since contamination is frequently mixed.

UNDP has supported mine action programmes since 1993. In 2003, UNDP support to the general operations of the Cambodian Mine Action Centre was at US\$ 10.5 million. UNICEF support to a two-year mine risk education programme for children in Cambodia since Jan 2003 was at US\$ 132,000. In October 2002, UNDP and the World Rehabilitation Fund have supported a two-year programme to assist landmine survivors, with a budget of US\$ 260,000.²⁶⁸

The Cambodian Mine Action and Victim Assistance Authority has laid out four broad priorities for their programme in their National Mine Action Strategy: clearance of worst-affected areas (prioritizing areas where access is denied to critical resources); proactive partici-

pation in poverty reduction (to alleviate poverty by providing safe access to productive resources and social services); land prioritization; developing and balancing preventative and curative activities.²⁶⁹

Research in 2004 has asserted that casualties from ERW accidents need to be seen as resulting from broader weaknesses in society – from poverty, the lack of cohesive community structures and the weakness of state institutions. As such, the focus on ordnance disposal as a response to these casualties is diverting attention away from the requirement for programmes to address the more fundamental, underlying causes of people's exposure to risk.²⁷⁰

Legislation

Cambodia ratified the Ottawa Convention in July 1999. Cambodia is also a party to Amended Protocol II to the CCW. Cambodia attended the 2003 meeting of States Party of the CCW, but did not attend the two-week meeting of the Group of Governmental Experts of the CCW (GGE) discussing measures to address the impact of explosive remnants of war (ERW) and anti-vehicle mines (mines other than anti-personnel mines – MOTAPM) in July 2004. Its position on Protocol V on ERW is unknown.²⁷¹

- 242 Email correspondence with Khun Ratana, Cambodian Mine Action Centre, 12 & 13 Aug 2004
- 243 Between July 2003 and June 2004, 522 people were killed or injured by UXO alone. CMVIS Monthly Mine/UXO Victim Report June 2004.
- 244 Between July 2003 and June 2004, 894 people were killed or injured by all types of ordnance, including mines (MOTAPM and AP).
- 245 Richard Moyes, (2004) *Tampering: deliberate handling of live ordnance in Cambodia*, HI-B, MAG, NPA.
- 246 Cambodian National Level 1 Survey, July 2002, quoting from "The History of War in Cambodia and Mine UXO Distribution", by Robert Keeley, March 1999.
- 247 Email correspondence with Khun Ratana, Cambodian Mine Action Centre, 12 & 13 Aug 2004
- 248 Cambodian National Level 1 Survey, July 2002
- 249 Monthly Mine/UXO Victim Report, May 2004, Cambodian Mine/UXO Victim Information System, p. 5.
- 250 Email correspondence with both Halo and CMAC, 10,12 & 13 Aug 2004.
- 251 Email correspondence with Khun Ratana, Cambodian Mine Action Centre, 12 & 13 Aug 2004
- 252 Email correspondence HALO Cambodia 10 Aug 2004, Cambodian Mine Action Centre, 12 & 13 Aug 2004.
- 253 Cambodia National Level 1 Survey, section 2.3 (CDROM version) A slightly modified version of the existing UXO form in use by CMAC was used without further modification throughout the entire survey process.
- 254 Cambodia National Level 1 Survey, section 9.1 (CDROM version).
- 255 The meaning of such estimates of contaminated area is difficult to determine, conditioned as they are by the limitations of survey processes.
- 256 A keyword search for "UXO" in the *Phnom Penh Post* returned 28 different articles over the past five years, or an astonishingly high rate of one article in 20 per cent of the published editions. The *Phnom Penh Post* is the nation's oldest English-language paper and is published twice a month, or 26 issues per year. A keyword search for "landmines" gave a return of three times as many articles.
- 257 Richard Moyes, (2004) *Tampering: deliberate handling of live ordnance in Cambodia*, HI-B, MAG, NPA, p.16
- 258 It is a particular sophistication of the new CMVIS data-gathering form that it seeks to distinguish between "bystanders" and "spectators." Both are injured in accidents initiated by others, however the latter are supposed to be actively watching the process that initiated the accident. Such discrimination is useful, although it may be difficult implement such a discrimination through so broad a data-gathering structure.
- 259 CMVIS Mine/UXO Victim Report May 2004.
- 260 Richard Moyes, (2004) *Tampering: deliberate handling of live ordnance in Cambodia*, HI-B, MAG, NPA.
- 261 Data compiled for the Global Survey by CMVIS for Jan 2003 – May 2004. Victims of anti-vehicle mines were recorded in Kracheh, Banteay Mean Chey, Battambang, Otdar Mean Chey, Krong Pailin, Kampong Cham, Siem Reap, Svay Rieng, Pursat Provinces.
- 262 Actiongroup Landmine.de, MAG and The Uniting Church in Australia Justice and International Mission Unit, "Anti-vehicle mines: Discussion paper," 2004, p.6.
- 263 CMVIS Mine/UXO Victim Report May 2004, p. 3.
- 264 Richard Moyes, (2004) *Tampering: deliberate handling of live ordnance in Cambodia*, HI-B, MAG & NPA, p.85 and elsewhere.
- 265 Richard Moyes, (2004) *Tampering: deliberate handling of live ordnance in Cambodia*, HI-B, MAG, NPA, pp.80-81
- 266 Richard Moyes, (2004) *Tampering: deliberate handling of live ordnance in Cambodia*, HI-B, MAG, NPA.
- 267 Landmine Monitor 2004. There is a significant lack of transparency regarding the figures reported by RCAF.
- 268 United Nations Portfolio of Mine Related Projects 2003, pages 71-79.
- 269 Cambodian Mine Action and Victim Assistance Authority (CMAA), 2002, National Mine Action Strategy.
- 270 Richard Moyes, (2004) *Tampering: deliberate handling of live ordnance in Cambodia*, HI-B, MAG, NPA.
- 271 Email correspondence with CRC members in Geneva for the GGE meeting, July 2004.

Chad

Background

Chad's ERW problem stems from its 1984-87 war with Libya and sustained internal conflict over the last three decades. There is also substantial contamination from military exercises and firing ranges. This has resulted in extensive contamination from ERW and anti-vehicle mines. A Landmine Impact Survey has noted that "pollution by UXO in Chad can be as equally important and dangerous for local communities as landmine pollution."²⁷²

Assessment of the problem

A Landmine Impact Survey (LIS) of Chad, undertaken by the Survey Action Center between December 1999 and May 2001, identified 249 communities affected by ERW and mines; these communities contain a total of 417 separate contaminated areas.²⁷³ ERW and mine-contaminated areas cover a total of 1,081 square kilometres of land and directly endanger the livelihood and safety of at least 284,435 people.²⁷⁴ Most contaminated areas in Chad (269 out of 417) are affected by ERW only and 60 of the 417 with anti-tank mines only.²⁷⁵ A report on clearance operations cited in the Landmine Monitor indicates that between 26 September 2000 and 1 June 2002, 28,781 ERW, 2,112 anti-vehicle mines and 2,228 anti-personnel mines were removed.²⁷⁶

The effects of ERW are predominately felt in rural areas and the departments of Borkou and Emmedi in northern Chad, which constitute more than one-quarter of the country's affected population. The Tibesti region is also among the most heavily contaminated, with both ERW and mines. ERW and MOTAPM contamination is widespread throughout the country.²⁷⁷

Specifically, the regions of Ounianga, Ouddai, Doum, and Aouzou are affected by ERW from battles waged in these areas during the second Libyan occupation of northern Chad from 1984-87.²⁷⁸ The shores of Lake Chad are also contaminated by ERW as a result of the 1983-84 border conflict between Chad and Nigeria.²⁷⁹

The Landmine Impact Survey reported that 25 abandoned ammunition depots are an ongoing risk to surrounding communities. Local people often come into contact with ERW from these depots (which are often open and located in populated areas) either during herding activities or by intentionally collecting ERW for economic reasons – such as foraging for scrap metal or clearing land for productive use – or out of curiosity.²⁸⁰ In addition, six active military firing ranges are reported as constituting a direct threat to 11,045 people in 12 separate communities.²⁸¹

Due to the large extent of ERW contamination in Chad, the Landmine Impact Survey recommended that teams of EOD experts be set up, in addition to the general mine clearance teams.²⁸²

Impact

The Military Hospital in N'djamena registered 54 explosive-related civilian casualties in 2002, but it is unclear how many of these casualties were due to ERW or anti-vehicle mines.²⁸³ A recent UNICEF assessment mission found 11 recent victims of ERW, mainly children.²⁸⁴ ERW and mine contamination has forced changes in access and use of land, presenting a specific obstacle to communities relying on pastoral agriculture.²⁸⁵ The LIS even reported that toxins leached from UXO into the soil have negatively affected livestock.²⁸⁶ The ICRC has reported that ERW and mines contaminate fields and pastures, water sources, housing areas and major roads.²⁸⁷ UXO and AXO (abandoned ordnance) from munitions depots and military firing ranges have also caused significant civilian fatalities and casualties.²⁸⁸

Casualty data indicates that many victims sustain upper body injuries, which suggests that the majority of casualties come from ERW rather than anti-personnel mines, and further suggests that intentional handling of ERW is a common cause of explosive-related casualties. This highlights the need for a comprehensive risk education programme that recognizes existing relationships with ERW and for rapid clearance of ERW "caches".²⁸⁹

Active military firing ranges constitute a particular threat to surrounding communities, with ERW causing at least 19 casualties per year during the Landmine Impact Survey reporting period of December 1999 to May 2001.²⁹⁰ This suggests a lack of security and control over military facilities that pose a threat to civilians.

There are also reports in the Landmine Impact Survey of ERW and mines being placed in wells to block water access by opposing forces. Local people are forced to abandon these wells and this has a significant socio-economic impact on their communities, in particular on the women who must walk much further to collect water.²⁹¹ The U.S. State Department reports that there are "thousands of tons of UXO spread throughout many regions" and that "UXO also blocks nomadic herders from access to water and agricultural land."²⁹²

Efforts to address these problems

In 1998, a National High Commission on Demining was established as part of the Ministry of Economic Promotion and Development in N'djamena with regional offices in Faya Largeau, Fada and Bardai. Chad has also developed a "National Strategic Plan to Fight Mines and UXO: 2002-2015" to be implemented through Annual Action Plans, with the goal of freeing the country of the impact of mines and UXO before the end of 2015. UNDP is building capacity to support mine action in Chad and to develop a

long-term strategic plan. In 2003, a new technical adviser was recruited to work on IMSMA.²⁹³

UNICEF is conducting widespread MRE activities in eastern Chad to educate people about the dangers of ERW and mines: "A three-week MRE campaign in the north-east of Chad started on 29 June 2004. The purpose of the campaign is to sensitize the local communities and newly arrived Sudanese refugees about mines and UXO; train children on the risks caused by mines and UXO; collect new information from refugees and the local population; train trainers in newly established refugee camps; and mobilize the leadership to play a key role in mine risk awareness."²⁹⁴

UNICEF further noted that: "A rapid MRE needs assessment was also conducted in the most affected part of the eastern region where Sudanese refugees are settled. The mission found 11 recent victims of UXO explosions, mainly children. They also discovered polluted places/tracks that were not properly marked. A training workshop was then organized (...) focused on emergency MRE."²⁹⁵

Legislation

Chad has been a State Party to the Ottawa Convention since 1 November 1999 but has not signed the CCW.

272 Landmine Impact Survey, Republic of Chad, p. 23.

273 Landmine Impact Survey, Republic of Chad, p. 7.

274 Landmine Impact Survey, Republic of Chad, pp. 13-19, 37-40.

275 Landmine Impact Survey, Republic of Chad, pp. 44-45, p. 58. The minefields (as opposed to contaminated areas) generally contain a mix of APM and MOTAPM, including some which are booby-trapped, see E-Mine, Country Report Chad, at <http://www.mineaction.org>

276 Landmine Monitor 2002, p.167.

277 Landmine Impact Survey, Republic of Chad, p. 14.

278 Landmine Impact Survey, Republic of Chad, p. 21.

279 Landmine Impact Survey, Republic of Chad, p. 21.

280 Landmine Impact Survey, Republic of Chad, p. 30.

281 Landmine Impact Survey, Republic of Chad, p. 25.

282 Landmine Impact Survey, Republic of Chad, p. 54.

283 Landmine Monitor 2003, p. 157; ICRC Special Report on Mine Action, p. 21.

284 UNICEF update, Mine Action Support Group Newsletter, May 2004.

285 Landmine Impact Survey, Republic of Chad, pp. 15-17.

286 Landmine Impact Survey, Republic of Chad, p.16.

287 ICRC Special Report on Mine Action p. 21.

288 Landmine Impact Survey, Republic of Chad, p. 25.

289 Landmine Impact Survey, Republic of Chad, p. 7.

290 Landmine Impact Survey, Republic of Chad, p. 9.

291 Landmine Impact Survey, Republic of Chad, p. 28.

292 To Walk the Earth in Safety: The U.S. Commitment to Humanitarian Mine Action, Bureau of Political-Military Affairs, U.S. Department of State, August 2004, accessed on 29 November 2004 at: <http://www.state.gov/t/pm/rls/rpt/walkearth/2004/37227.htm>

293 Landmine Monitor 2003, p. 161.

294 UNICEF update, Mine Action Support Group Newsletter, July 2004.

295 UNICEF update, Mine Action Support Group Newsletter, May 2004.

Chechnya

Background

Chechnya is an autonomous republic in the southern part of the Russian Federation, bordering on the state of Georgia. In September 1991, on the eve of the collapse of the Soviet Union, Chechnya declared independence as the Chechen Republic "Ichkeria". In December 1994, the Russian Federation sent troops into Chechnya, but they were unable to establish effective control over the Chechen separatists. A ceasefire agreement was signed in August 1996 and Russian troops were withdrawn by early 1997. Relations remained tense, and in October 1999 Russia sent troops back into Chechnya to re-establish control. Chechen forces evacuated Grozny in February 2000 and the Russian federal forces have been unable to impose order in the mountainous rural areas, thus the conflict continues as a guerrilla war. Fighting continues up to the present, with large amounts of ERW and MOTAPM contamination. Thousands of Chechens are refugees or internally displaced persons.

Assessment of the problem

No in-depth assessment of the overall landmine/UXO contamination has been conducted in Chechnya due to the precarious security situation. Estimates that do exist, however, suggest that Chechnya is highly contaminated, with UXO forming a very significant part of the total problem.²⁹⁶ It has been stated that while Russian federal forces employ mainly anti-personnel mines, Chechen forces employ more anti-tank mines and command-operated improvised explosive devices rather than APMs.²⁹⁷ Russian forces have also used both ground and air launched cluster munitions, which have been identified in other areas as a significant cause of ERW.²⁹⁸

Impact

A database on mine/UXO incidents in Chechnya, based on the Information Management System for Mine Action (IMSMA) format, is being compiled by local NGOs with the support of UNICEF. The IMSMA system was set up in Nazran (in neighbouring Ingushetia) in September 2001 by the GICHD.²⁹⁹ At the same time, data-gathering monitors from Voice of the Mountains (VoM), Minga, Let's Save the Generation and Danish Demining Group received training from GICHD and the Azerbaijan National Agency for Mine Action (ANAMA).³⁰⁰ UNICEF provides the coordination focus for mine action in the North Caucasus.³⁰¹ To build the capacity of local organizations, UNICEF has organized and conducted a series of trainings for the database managers and monitors, using both national and international trainers in data gathering and analysis.

Compiling accurate information on mine/UXO incidents is very difficult in Chechnya due to limited access and the

sensitivity of the subject. Travel in mountainous regions can be difficult, and potentially dangerous due to the possible presence of armed elements. Some data is collected in these regions with the assistance of local administrations and hospitals. Monitors may have to pass several military checkpoints to reach affected areas, and it is not considered safe to travel with incident reports that have specific mine/UXO questions. This means that information has to be recorded in brief form while interviewing the victim, and later the information is elaborated on a standard report form to the VoM. This increases the possibility of errors. In addition, some young people are reported as being reluctant to share exact information on mine/UXO incidents, fearing that such information could jeopardize their own safety.

During the reporting period of 1 July 2003 to 30 June 2004, 144 casualties were registered in the IMSMA database.³⁰² Of these 74 per cent were men. Some 14 per cent of casualties were reported as dying as a result of these accidents. UXO and fuses accounted for 42 per cent of casualties; anti-personnel mines 31 per cent; MOTAPM 11 per cent; booby traps 10 per cent and the remainder were unknown. These proportions are broadly similar to those collected over an extended period of 1995-2004.³⁰³

The casualties' activities at the time of accident are also recorded in the database and this highlights that livelihood activities, such as collecting food and water and tending livestock, are prominent (approximately 43 per cent). Nearly 20 per cent, however, are attributed to deliberate handling of items and another 20 per cent of casualties were bystanders at the time of accidents initiated by others. Incidents tend to increase during the winter as people must travel in contaminated forests to collect firewood, and during the spring due to agricultural activities in contaminated fields.³⁰⁴ Some people have estimated 100,000 hectares of arable land throughout Chechnya requires clearance of explosive devices.³⁰⁵ Collection of UXO devices to sell as scrap metal is an income source for some civilians and has been a cause of casualties.

Information in the IMSMA database does not include military casualties. Media and military sources suggest that more than 1,300 mine incidents involving Russian federal forces occurred in Chechnya from 1999 to March 2003, resulting in 2,500 military casualties.³⁰⁶ A media report has said that at least 10,000 victims in Chechnya, including 4,000 children, are in need of physical therapy, prosthetics, and psychological counselling.³⁰⁷ The proportion of incidents caused specifically by ERW or MOTAPM is not stated in these reports.

Various sources have reported the following incidents specific to ERW and MOTAPM occurring in Chechnya during the reporting period of 1 July 2003 to 30 June 2004:

- On 19 July 2003, at least four Russian government personnel were killed when their bus struck an anti-vehicle mine in the vicinity of Assinovskaya.³⁰⁸
- On 25 February 2004, 10 people died and seven were wounded when a truck struck an anti-tank mine near Alkhazurovo village.³⁰⁹
- On about 11 March 2004, three boys were injured when a shell they found in a ravine exploded, in Urus-Martan.³¹⁰
- On 9 May 2004, at least six people were killed, including the Chechen president, Akhmed Kadyrov, and about 50 people were injured by a bomb made from a 152mm artillery shell, in Grozny.³¹¹

Efforts to address these problems

No humanitarian mine/UXO clearance is currently undertaken in Chechnya due to security concerns.³¹² The HALO Trust had developed a humanitarian demining programme in Chechnya in the late 1990s with more than 150 Chechen staff. HALO ceased their clearance operations in 1999, but state that they will recommence the programme “when the relevant authorities agree to mine clearance once again”.³¹³ Russian forces conduct military

mine clearance as needed to support their military operations. A military spokesperson reportedly stated in May 2003 that approximately 100 explosive devices, 20 of which are landmines, are cleared weekly.³¹⁴

The principal mine actions currently conducted in Chechnya are mine risk education and survivor assistance. The ICRC has mine-awareness activities focused at IDPs and refugees, children and youths.³¹⁵ Community-based risk education is provided in the region by UNICEF, ICRC, and Danish Demining Group.³¹⁶ Survivor assistance programmes are developed and supported by UNICEF, the ICRC, WHO, Handicap International and CARE-Canada. UNICEF is providing prosthetic-orthopaedic and psychosocial assistance to child mine/UXO survivors and women. The World Health Organization is targeting adult male population for prosthetic assistance.

Legislation

The Russian Federation has not acceded to the Ottawa Convention. Russia is a party to the CCW and its original Protocol II, but amended Protocol II has not been ratified.³¹⁷

- 296 UN Office for the Coordination of Humanitarian Affairs, “Consolidated Inter-Agency Appeal 2004 – Chechnya and Neighbouring Republics”, November 2003.
- 297 Tom Dibbs, HALO Trust, 13 May 2003, cited by Kristina Davis, Mine Action Information Centre, “Chechnya: reconstruction amidst the war”, *Journal of Mine Action*, No. 7.2, August 2003, web accessed at <http://maic.jmu.edu/journal/7.2/focus/davis/davis.htm> on 12 July 2004.
- 298 Rae McGrath, “The Military Effectiveness and Impact on Civilians of Cluster Munitions,” p.p. 39-40; Mennonite Central Committee, “Cluster Bomb Photo Gallery”, available at: <http://www.mcc.org/clusterbomb/graphix/photos/clusterbomb/chechnya.html>, accessed 17 December 2004.
- 299 Email to R. Sathre and I. Grdzlishvili, from UNICEF-North Caucasus official, July 2004.
- 300 UNICEF, “Humanitarian assistance in the northern Caucasus, Situation Report No. 83”, 1 February 2004 – 29 February 2004, <http://www.reliefweb.int>, accessed on 12 April 2004.
- 301 Email to R. Sathre and I. Grdzlishvili, from UNICEF-North Caucasus official, July 2004.
- 302 Email to R. Sathre and I. Grdzlishvili, from UNICEF-North Caucasus official, July 2004.
- 303 From an email to R. Sathre and I. Grdzlishvili, from UNICEF-North Caucasus official, 12 July 2004: The total number of casualties recorded in the IMSMA database from September 2001 until July 2004, and related to the period 1995-2004, is 3,341 persons. UXO explosions caused the largest proportion of these, accounting for 35 per cent of the casualties. Anti-personnel mines caused 24 per cent of the casualties, anti-tank mines caused 6 per cent, booby traps caused 4 per cent, and fuses caused 1 per cent of the casualties: 27 per cent were caused by an unknown device or the information was not available. Male victims accounted for 85 per cent of all casualties.
- 304 Email to R. Sathre and I. Grdzlishvili, from UNICEF-North Caucasus official, July 2004.
- 305 Hayden Roberts, “Update: The landmine situation in Chechnya”, *Journal of Mine Action*, No. 6.2, August 2002, web accessed at <http://maic.jmu.edu/journal/6.2/notes/haydenroberts/haydenroberts.htm> on 7 May 2004.
- 306 Landmine Monitor 2003, <http://www.icbl.org/lm/2003/chechnya.html>, accessed 23 March 2004.
- 307 Fred Weir, “Chechen conflict festers with use of land mines”, *Christian Science Monitor*, 6 February 2002, pg.6.
- 308 Caucasus Times, <http://caucasustimes.com/incidents/en/CHe2-230703.asp>, accessed 19 May 2004.
- 309 UNICEF, “Humanitarian assistance in the northern Caucasus, Situation Report No. 83”, 1 February 2004-29 February 2004, <http://www.reliefweb.int>, accessed on 12 April 2004.
- 310 <http://www.hrvic.net/news2004/23-3-04.html>, accessed on 19 May 2004.
- 311 BBC News, “Chechens bury assassinated leader”, <http://news.bbc.co.uk/1/hi/world/europe/3699823.stm>, accessed 19 May 2004.
- 312 Landmine Monitor 2003, <http://www.icbl.org/lm/2003/chechnya.html>, accessed 23 March 2004.
- 313 The HALO Trust, <http://www.gkw82.dial.pipex.com/cauc.html>, accessed 12 April 2004.
- 314 Timur Aliev, CRS No. 179 (Znamenskoye), 15 May 2003, cited in Landmine Monitor 2003, <http://www.icbl.org/lm/2003/chechnya.html>, accessed 23 March 2004.
- 315 The ICRC, <http://icrc.org/Web/eng/siteeng0.nsf/iwpList412>, accessed 12 April 2004.
- 316 Email to R. Sathre and I. Grdzlishvili, from UNICEF-North Caucasus official, July 2004.
- 317 Landmine Monitor 2003, <http://www.icbl.org/lm/2003/russia.html>, accessed 19 May 2004.

Chile

Background

Chile used AP and AV mines along its borders with Argentina, Bolivia, and Peru during the 1970s to defend against invasion, most notably in 1974-75 in relation to the crisis with Peru and Bolivia, and in 1978 with Argentina.³¹⁸ In the south, mines were laid as recently as the 1980s. The Chilean armed forces regularly carry out military manoeuvres in the border areas and throughout the country. In November 2003, for example, there was an exercise with live mortars and grenades, in the area of El Cajón del Teno, in Talca.

Assessment of the problem

The official number of AV mines in Chile is 113,601, distributed in minefields located in Regions I, II and XII.³¹⁹ The armed forces have maps of the minefields,³²⁰ which are marked and fenced, but not always well maintained.³²¹

There are no official estimates of the area contaminated by AV mines or ERW and the armed forces do not consider that there is a significant problem of ERW contamination in Chile. In some areas, however, ERW remain after the conclusion of exercises, posing a threat to the civilian population.³²² Wherever military manoeuvres have taken place it can be considered likely that there will be some ERW contamination. Chile's UXO and AXO problem stems primarily from a lack of effective measures to exclude civilians from former and current practice ranges (polígonos) and safety procedures that do not adequately take into account the risk from UXO and AXO.

Chile stockpiles five models of AV mines: (1) APVL 83 F4, (2) MAT-80 F5, (3) MAT-84 F5, (4) M-15, and (5) M-19.³²³ Chile has also produced, and stockpiles, cluster munitions.³²⁴ Government and private manufacturers have produced at least four kinds of cluster munitions and dispenser munitions: 100-LB, CB-130-POUND, CB-250-K, CB-500 LB.³²⁵

Impact

Chile has national statistics on the number of AP mine accidents and casualties since 1973. As of October 2003, there were 63 victims (two in 2003).³²⁶ The remote location of Chile's minefields and ERW contaminated areas also raises the possibility that accidents have gone unreported.³²⁷ The Grupo de Supervivientes de Minas Antipersonal y Municiones sin Estallar de Las Américas (GSMMA) has a database on victims of landmines and ERW in Region II.³²⁸ The database includes reports on 20 civilians injured by ERW.³²⁹ The database distinguishes between incidents caused by AP mines and those caused by ERW and shows that most ERW casualties are killed or injured by ERW from military exercises.³³⁰ In the desert zones of northern Chile there are estimates of one person per year being killed or injured by ERW.³³¹

In the period 2003-2004, several items of ERW were found, some of them in the Metropolitan Region of Santiago:

- On 2 February 2003, an 81mm US-manufactured mortar was found in a ravine outside Antofagasta.³³²
- On 4 February 2003, two mortars were found in a refuse area in Ñuñoa, located in the Metropolitan Region of Santiago.³³³
- On 26 March 2003, a 40mm mortar was found in the grounds of Mejillones port, just north of Antofagasta in Region II.³³⁴
- In September 2003, 50 handmade grenades were found on the "Erratchu" property in Coronel, Region VIII. A passer-by discovered the grenades.³³⁵
- In January 2004, a container of 105mm munitions was found in Santiago.³³⁶

ERW have been found in public places of Region II such as near a river in the sector of Yalquincha and on a motocross track in Calama. ERW have also been found in housing areas for miners at the Chuquicamata mineral mine. Three people reportedly lost their legs due to an ERW accident in this area.³³⁷

The discovery of ERW has also caused accidents:

- On 21 January 2003, a 17-year-old youth died when an abandoned rocket exploded while he was handling it. He found the item in the former training grounds of the Army's School of Parachutists and Special Forces in Colina.³³⁸
- In May 2004, three children found 26 fuses in a landfill in Tocopilla (Region II). They kept one of the fuses and sold the rest to a scrap metal dealer. They lit the remaining fuse with a lighter and it exploded, injuring all three.³³⁹

The presence of AV mines has affected infrastructure projects in Arica (Region I). On 11 December 2003, the Instituto de Ecología Política called for the immediate suspension of the renovation and enlargement project at the Chacalluta airport, due to the presence of five MOTAPM minefields containing 1,714 AV mines in the north terminal of the airport.³⁴⁰ On 3 August 2004, units of the Engineer Battalion of Regiment No. 6 "Matucana" initiated clearance of the five minefields.³⁴¹ In addition, companies conducting activities such as mineral prospecting in border areas must inform the Army, which may designate a guide to prevent accidents.³⁴²

AV mines affect tourism in northern areas of Chile, such as the province of El Loa.³⁴³ They pose a threat in national parks and reserves in Regions I and II.³⁴⁴ ERW have been found in the Valle de la Luna, located within the Flamencos National Reserve.³⁴⁵ The Army carries out campaigns to prevent ERW/mine accidents, directed mainly at tourists and it has temporarily closed access to some sections of the Cordillera for this reason.³⁴⁶

Efforts to address these problems

The Chilean Army and Navy are responsible for clearing existing minefields.³⁴⁷ In 2003-2004, military engineers cleared AP and AV mines from minefields situated in the Army School of Engineers in Tejas Verdes (Region V).³⁴⁸ Chile has scheduled 14 minefields for clearance in 2004:³⁴⁹

- Region I, the Frente Norte Costero has 5 minefields containing 1,714 AV mines;
- Region II, Lullullaico National Park has 4 minefields with 289 AV mines;
- Region XII, the Faro Mendez I.G.F.T. and the Island of Picton with two minefields containing 1,517 AV mines and three minefields with 65 AV mines respectively.

The police and its Special Actions Patrol (Patrulla de Acciones Especiales) respond to reports of explosive items in urban areas and are responsible for their clearance.³⁵⁰

Legislation

Chile is a State Party to the CCW and its Amended Protocol II. Chile has not yet signed Protocol V on ERW. The Ministry of Foreign Affairs is currently consulting with the Ministry of Defence on Protocol V, and is in favour of ratifying it. The Ministry of Foreign Affairs is examining provisional application of Protocol V while ratification is completed. Chile does not have a defined position on MOTAPM within the CCW framework. However, both AP and AV mines are being cleared in Chile and the use of landmines is no longer part of Chile's national defence strategy.³⁵¹ Chile is a State Party to the Ottawa Treaty.

- 318 "Profile: Chile", *Journal of Mine Action* 5.2, August 2001, accessed 12 May 2004 at: <http://maic.jmu.edu/journal/5.2/profiles/chile.htm>; Campaña chilena contra las minas antipersonales, *Las minas antipersonales: un problema de salud pública mundial*, 2001. <http://www.iepe.org/econoticias/index.htm>, accessed 14 May 2004; "ANTECEDENTES SOBRE EL DESMINADO NACIONAL HUMANITARIO EN CHILE," Mayo 2003, p. 2.
- 319 Guerra Ibarra, Rafael. *Presentación de la Delegación Chilena en el Seminario Regional "En Camino Hacia un Hemisferio Libre de Minas Antipersonal"*, Lima, 14-15 August 2003, accessed 11 May 2004 at: <http://maic.jmu.edu/conference/proceedings/2003Lima/summaries/chile.htm>.
- 320 Adams, Elizabeth Beery. "Landmines in Chile: Who is at Risk?", *Journal of Mine Action* 5.2, August 2001 accessed 12 May 2004 at: <http://maic.jmu.edu/journal/5.2/focus/elizabethadams.htm>
- 321 Guerra Ibarra, Rafael. *Presentación de la Delegación Chilena en el Seminario Regional de Víctimas de Minas Antipersonal*. Bogotá, D.C.: 12 November 2003, accessed 15 May 2004 at: <http://maic.jmu.edu/conference/proceedings/2003Colombia/WednesdayReports/Ibarra.htm>.
- 322 "Realizadas en la zona del Aconcagua, Colina y Cajón de El Teno. Finalizan maniobras militares en Talca," *La Tercera*, 23 November 2003.
- 323 Human Rights Watch, *Antivehicle Mines with Sensitive Fuzes or Antihandling Devices*, Washington, DC: 25 February 2002; *Landmine Action, Alternative Anti-personnel Mines: The Next Generations*, London 2001, 79.
- 324 Steve Goose, "Cluster Munitions: Toward a Global Solution," *Human Rights Watch World Report 2004*, January 2004 accessed 6 May 2004 at: http://hrw.org/wr2k4/12.htm#_Toc58744961
- 325 U.S. Department of Defense ORDATA, accessed 18 May 2004 at: <http://maic.jmu.edu/ordata/search.asp?SearchMode=0>.
- 326 Rafael Guerra Ibarra, Executive Secretary, National Demining Commission of Chile, Presentation to the Regional Seminar on Anti-personnel Landmine Victims, Bogotá, 12 November 2003, <http://maic.jmu.edu/conference/proceedings/2003Colombia/WednesdayReports/Ibarra.htm>, accessed 15 May 2004.
- 327 Landmine Monitor, 2003, accessed 3 May 2004 at: <http://www.icbl.org/lm/2003/>
- 328 Email from José Miguel Larenas, President of the Group of Landmines and Unexploded Ordnance Survivors of the Americas, 9 June 2004.
- 329 Email from José Miguel Larenas, President of the Group of Landmines and Unexploded Ordnance Survivors of the Americas, 9 June 2004.
- 330 Email from José Miguel Larenas, President of the Group of Landmines and Unexploded Ordnance Survivors of the Americas, 9 June 2004.
- 331 *Econoticias*, "Ecologistas asisten a reunión de Comisión Nacional de desminado", 5 September 2003, accessed 10 May 2004 at: <http://www.iepe.org/econoticias/index.htm>.
- 332 "Detonan proyectil de guerra en quebrada", *El Mercurio de Antofagasta*, 3 February 2003.
- 333 "Hallan proyectiles de mortero en depósito de basura", *La Tercera*, 5 February 2003.
- 334 "Peligroso mortero descubren en Megapuerto", *El Mercurio de Antofagasta*, 27 March 2003.
- 335 "Hallan 50 granadas caseras en sitio eriazso de Coronel", *La Tercera*, 25 September, 2003.
- 336 "Hallan el envase de explosivo", *La Tercera*, 19 January 2004.
- 337 Email from José Miguel Larenas, President of the Group of Landmines and Unexploded Ordnance Survivors of the Americas, 9 June 2004.
- 338 OFICINA DE RR.PP. DE LA ESCUELA DE PARACAIDISTAS Y FUERZAS ESPECIALES, "Comunicado de prensa de la Escuela de Paracaidistas y Fuerzas Especiales (22 de enero del 2003)"; "Teenager Killed by Abandoned Military Explosive", *Santiago Times*, 24 January 2003
- 339 "Tres niños heridos al estallar estopin", *El Mercurio de Antofagasta*, 1 June 2004.
- 340 *Econoticias*, "MOP promete excluir 5 campos minados en obras de aeropuerto de Arica", 25 December 2003, accessed 11 May 2004 at: <http://www.iepe.org/econoticias/index.htm>.
- 341 Ejército de Chile, "Desminado: Ejército inició levantamiento de campos minados en frontera", 3 August 2004.
- 342 Ministry of Defense press release, "Antecedentes sobre el Desminado Nacional Humanitario en Chile", 9 May 2003, p. 11.
- 343 "Desminado potenciará turismo en El Loa", *La Estrella de Norte*, 27 August 2003.
- 344 Department of Foreign Affairs and Trade (Australia) "Travel Advice: Chile", accessed 14 July 2004 at: <http://www.vecci.org.au/resources/chile.pdf>
- 345 Email to GIS from José Miguel Larenas, President of the Group of Landmines and Unexploded Ordnance Survivors of the Americas, 9 June 2004.
- 346 "Ejército destruye 59 mil minas explosivas", *El Mercurio de Antofagasta*, 24 August, 2003.
- 347 Adams, Elizabeth Beery. "Landmines in Chile: Who is at Risk?" *Journal of Mine Action* 5.2, August 2001, accessed 12 May 2004 at: <http://maic.jmu.edu/journal/5.2/focus/elizabethadams.htm>.
- 348 "Bachelet supervisa desminado en regimiento que habría sido centro de tortura", *La Tercera*, 15 April 2004.
- 349 Guerra Ibarra, Rafael. *Presentación de la Delegación Chilena en el Seminario Regional "En Camino Hacia un Hemisferio Libre de Minas Antipersonal"*, Lima, 14-15 August 2003, accessed 11 May 2004 at: <http://maic.jmu.edu/conference/proceedings/2003Lima/summaries/chile.htm>.
- 350 "Peligroso mortero descubren en Megapuerto", *El Mercurio de Antofagasta*, 27 March 2003; "Detonan proyectil de guerra en quebrada", *El Mercurio de Antofagasta*, 3 February 2003.
- 351 Email from Alfredo Labbé Villa, Minister Adviser, Vice-Director of International Security and Disarmament, Ministry of Foreign Affairs of Chile, 21 August 2004.

China

Background

Chinese territory contains ERW dating from the Japanese invasion in the 1939-45 War, the ensuing civil war and subsequent conflicts. In 1959, the People's Liberation Army (PLA) invaded Tibet, followed by a brief border war with India in 1962. During the 1960s and 1970s, the Sino-Soviet split resulted in militarization along China's northern frontier. The most dangerous of the ERW from these conflicts appears to be abandoned Japanese chemical weapons, which are discovered on a yearly basis in northern and north-eastern China.³⁵² It has also been reported that this Japanese ERW also includes biological munitions.³⁵³ The combined effects of these ERW "pose grave threats to the lives and property of local people and [the] environment."³⁵⁴

Most significantly, in terms of subsequent ERW and landmine contamination, China invaded northern Vietnam in 1979 in response to Vietnam's ousting of Pol Pot in Cambodia. The Sino-Vietnamese border was fortified with anti-personnel and anti-vehicle mines and also contains other forms of ERW. The balance of items cleared by the PLA in the border region during the 1990s was approximately 85 per cent landmines and 15 per cent ERW.³⁵⁵

China has been one of the world's largest producers of landmines. These include the SATM Type 72 and Type 84 remote-delivery anti-vehicle mines,³⁵⁶ Type 51 anti-tank blast mine,³⁵⁷ and Types 69, 72 and 81 pressure-activated anti-tank mines. Chinese MOTAPM are found in many post-conflict environments.³⁵⁸

The U.S. State Department and the United Nations estimated in the 1990s that 10 million mines are laid along China's borders with Russia, India and Vietnam, six million of which are anti-tank mines.³⁵⁹ This figure may be much too high. The International Committee of the Red Cross cites a 2004 estimate of 200,000 mines along the Vietnamese border.³⁶⁰ How active a danger they pose remains unclear.

Assessment of the problem

China carried out two large-scale demining operations in the Vietnamese border regions of Guangxi and Yunnan provinces during the 1990s, the first from 1992 to 1994 and the second from 1997 to 1999. This region had contained more than 560 minefields. More than 2,000 PLA personnel participated in clearance, removing 1,880,000 landmines "of various kinds" and 320,000 ERW. They destroyed some 700 tons of ERW, including "abandoned ammunition and explosive ordnance". Teams cleared more than 306 sq km. of land and restored 600 sq km. of deserted agricultural and forest lands "to their original state".³⁶¹ As a result, Chinese officials state that the

country "is now basically safe from landmine hazards on its own territory". Other documents state that "China has basically eliminated the landmine problem within its border".³⁶² However, "basically" should not be read as "completely," as the following sections show.³⁶³

In October 2002, the PLA resumed clearance operations in eight cities and counties of Guangxi and two areas of Yunnan. China's 2002 Article 13 report to the CCW states that the Yunnan team removed "nearly 1,000" mines and ERW; in the 2003 report this is amended downwards. No figures on ordnance cleared are given for Guangxi, and no further breakdown of munitions is available. In December 2002, China and Vietnam signed a bilateral border agreement in which the two countries agreed to complete technical surveys of mined areas by 2005.³⁶⁴

No complete figure of remaining affected areas is available. At least 20 sq km. of minefields were marked and "sealed," not cleared, during the 1990s operations. Minefields have also been reported in Yunnan's Wenshan County, Malipo County and Jinping, Luchun and Hekou in the Honghe Autonomous Region.³⁶⁵ It is not known whether MOTAPM and ERW are also present in these areas. A Chinese military official, however, describes "various mines deployed in high density ... mixed with shells, grenades, bullets and fuzes to form many complex and large minefields."³⁶⁶ It would thus be reasonable to conclude that where AP mines are found, MOTAPM and ERW are also likely.

In 2000 and 2001, Chinese and Japanese forces cooperated in investigations of abandoned chemical weapons in nine locations in Henan, Hebei, Hubei, Jiangsu, Liaoning, Jilin and Heilongjiang provinces, including the major cities of Wuhan, Nanjing and Shenyang.³⁶⁷ No specific data is available for UXO: many of the same areas are probably affected, as well as other parts of northern, central and eastern China that witnessed land battles during the 1939-45 War and the Chinese civil war. Minefields along Chinese-occupied Tibet's border with India reportedly contain AP mines only.³⁶⁸

Mines and ERW remain a localized issue in China, far from the national spotlight. The April 2004 conference in Yunnan on demining technology was the first international meeting held in China on the issue; this event was cosponsored by the Australian campaign of the ICBL and attracted coverage in domestic media.³⁶⁹

Impact

Although the Government of China is believed to be collecting information on mine and ERW casualties, no comprehensive data is available. Landmine Monitor researchers conducted a 2001 field survey in Guangxi and

Yunnan, both bordering Vietnam, finding 359 survivors in three counties of Guangxi and 5,310 total victims (1,499 deaths, 3,811 injuries) in Wenshan County, Yunnan.³⁷⁰ Casualties still occur in Yunnan, although Chinese officials claim that “no person or livestock [has been] killed or wounded by mines in the cleared areas”.³⁷¹ In the 2001 Landmine Monitor survey, the majority of victims interviewed were young male farmers. Three were soldiers on active duty. Of 200 victims treated at the CDPF’s Guangxi Prosthesis Centre in 2000, only six were women. Ethnic minority groups were over-represented, as these groups live in mountainous areas in close proximity to the border.³⁷² It is not known to what extent MOTAPM and ERW may have contributed to these casualties.

Data on casualties from other affected areas, and from 1939-45 War ordnance, is not available. The danger to civilians from mines along China’s borders with India and Russia is reportedly minimal due to the sparsely populated, mountainous terrain.³⁷³ Three incidents involving abandoned Japanese chemical weapons occurred in north-eastern China (Manchuria) in 2003-04: a 75mm mustard gas shell injured two children in Dunhua, Jilin, in July 2004, and poison gas leaking from storage drums in Qiqihar, Heilongjiang, killed one construction worker and injured 43 others in August 2003.³⁷⁴ The Japanese Government expressed sympathy and investigated the incidents.³⁷⁵

Little specific information is available on social and economic impacts of ERW or MOTAPM. The Chinese Government notes that “unexploded ordnance left over from World War II ... pos[es] serious threats to the lives and property of local civilians”.³⁷⁶ Mine or ERW survivors interviewed by Landmine Monitor and the CDPF report that their capacity to work has been drastically reduced because of their injuries and many had to abandon their previous occupations. Their inability to work and earn an income is the major concern for the majority of these survivors.³⁷⁷ Chinese officials stress the positive role that demining around the Vietnamese border has played in economic development and poverty reduction. Clearance operations resulted in the opening of more than 290 border gates, facilitating trade³⁷⁸ and other movements of goods and people between the countries.

Unlike in neighbouring Vietnam and Laos, there is no information regarding a scrap metal or explosives industry in mine and ERW-affected areas.

Efforts to address these problems

There is little international or non-governmental involvement in mine action. Clearance is done solely by the PLA. Other organizations involved in survivor assistance include CDPF, Ministry of Civil Affairs, Post-War Recovery Foundation,³⁷⁹ International Committee of the Red Cross and the Red Cross Society.³⁸⁰

Chinese officials have stated that the Government “attaches great importance to mine victim assistance. Over the past years, the central and local governments have made relentless efforts to assist people affected by the mine problem, including formulating and implementing victim assistance plans, appropriating special funds to help mine victims install artificial limbs, providing medical assistance and daily life relief, and improving local social and economic infrastructure, etc. As a result of these efforts, the living conditions of mine victims have been significantly improved. However, due to the tough natural conditions, the fragile ecological environments and the generally low level of economic development in the local areas, victim assistance remains an arduous task for the government and the society.”³⁸¹

Legislation

China is a party to the CCW and all of its protocols to date, including the Amended Protocol II on landmines, which it joined in November 1998.³⁸² In China’s view, “the landmine issue involves both humanitarian concerns and legitimate military need of sovereign states. These two aspects should be addressed in a balanced way, without ignoring either one.”³⁸³ For China, Amended Protocol II “strikes the right balance between the humanitarian concerns and sovereign states’ need for self-defense”.³⁸⁴

China has not acceded to the Mine Ban Treaty, although it says it endorses the humanitarian objectives of the treaty and sent an observer delegation to the Fifth Meeting of States Parties in September 2003. China views the prohibition of mines as admirable, but considers clearing those already in the ground as “a more pressing task”. China’s defense policy reportedly rules out the use of landmines by its troops abroad.³⁸⁵

In a faxed letter, China’s Department of Arms Control and Disarmament stated that the information contained in Landmine Action’s 2003 ERW Global Survey is “basically objective and correct”.³⁸⁶

- 352 "Japanese chemical weapon injures children in China", *Japan Times*, 28 July 2004, at <http://www.japantimes.co.jp/cgi-bin/getarticle.pl5?nn20040728a4.htm>.
- 353 Communication from Zhao Li, Department of Arms Control and Disarmament, Ministry of Foreign Affairs, 3 August 2004; no further details on biological munitions were provided.
- 354 Statement by Ambassador Sha Zukang, Head of the Chinese Delegation to the 2nd CCW Review Conference, 11 December 2001, <http://www.china-un.ch/eng/cjkk/cjthsm/t85219.htm>.
- 355 Sr. Col. Guo Shoumin, "Chinese Humanitarian [sic] Demining Equipments And Techniques", paper presented at the Humanitarian Mine/UXO Clearance Technology and Cooperation Workshop, Kunming, China, 26-28 April 2004.
- 356 Human Rights Watch, Fact Sheet: Types and Manufacturers of Remotely Delivered Anti-Vehicle Mines (December 2001), p. 2.
- 357 "Types of Landmines Found in China", http://www.peace.internode.on.net/landmines/land_mines/whah_land_mines/wm_index.html.
- 358 Human Rights Watch, Antivehicle Mines with Sensitive Fuzes or Antihandling Devices (25 February 2002), p. 15.
- 359 Landmine Monitor 1999, pp. 460-1. Later editions of Landmine Monitor repeat the 10 million figure without a breakdown by type of mine. The original Landmine Monitor 1999 makes reference to a UN Demining Database Country Report. The 2003 edition refers to the 1994 & 1998 Hidden Killers reports.
- 360 "ICRC and Chinese Red Cross: joint centre fits limbs for mine victims", <http://www.icrc.org/Web/Eng/siteeng0.nsf/html/5X8BUH>. The source of this figure is unknown, as is the precise area it refers to. ICRC officials did not respond to questions for clarification.
- 361 "China's Achievements and Experience in Postwar Demining," statement by the Chinese delegate at the Southeast Asia Regional Technical Workshop for Humanitarian Demining Experts, Bangkok, 4 March 2002, <http://maic.jmu.edu/conference/SEAsiaWorkshop/Daypercent201/China.htm>; 2000 Defense White Paper, <http://www1.china.org.cn/e-white/2000/20-7.htm#d>. The figure of 32,000 ERW cited in the 2003 ERW Global Survey (p. 38) and in Landmine Monitor is in error and should be corrected to 320,000.
- 362 2002 Defense White Paper, <http://www1.china.org.cn/e-white/20021209/VII.htm#5>; "Statement of the Chinese Delegation at the Fifth Meeting of States Parties to the Ottawa Convention", Bangkok, 19 September 2003; Communication from Zhao Li, Department of Arms Control and Disarmament, Ministry of Foreign Affairs, 3 August 2004.
- 363 Comparing these statements with the Chinese original of the 2002 Article 13 report (p. 7), the word "basically" is a translation of the Chinese *jiben* ("fundamental, essential"). A better English rendering in this case might be "mostly". Using "basically" might create the incorrect impression, consciously or not on the part of the speakers, that the mine/ERW problem on the Vietnamese border is entirely solved. It is not.
- 364 2002 Article 13 report (in Chinese), p. 7, and 2003 Article 13 report, p. 5. The locations given are Fangcheng, Ningming, Pingxiang, Longzhou, and Jingxi in Guangxi province (plus three others not listed), and Wenshan County and the Honghe (Red River) Autonomous Zone in Yunnan.
- 365 Landmine Monitor 2001, p. 531; Landmine Monitor 2002, p. 639; Landmine Monitor 2003, p. 573.
- 366 Sr. Col. Guo Shoumin, "Chinese Humanitarian Demining Equipments And Techniques", paper presented at the Humanitarian Mine/UXO Clearance Technology and Cooperation Workshop, Kunming, China, 26-28 April 2004.
- 367 2002 Defense White Paper, Appendix V. <http://www1.china.org.cn/e-white/20021209/VII.htm#5>.
- 368 Communication from Yeshua Moser-Puansuwan, Nonviolence International, Bangkok, 29 July 2004.
- 369 Draft version of Landmine Monitor 2004 provided to Global Survey researcher, May 2004.
- 370 Landmine Monitor 2001, pp. 530-1.
- 371 Sr. Col. Guo Shoumin, "Chinese Humanitarian Demining Equipments And Techniques", paper presented at the Humanitarian Mine/UXO Clearance Technology and Cooperation Workshop, Kunming, China, 26-28 April 2004.
- 372 Landmine Monitor 2001, p. 531.
- 373 Landmine Monitor 2001, p. 529.
- 374 "Japanese chemical weapon injures children in China", *Japan Times*, 28 July 2004, at <http://www.japantimes.co.jp/cgi-bin/getarticle.pl5?nn20040728a4.htm>.
- 375 Japanese Foreign Ministry website, <http://www.mofa.go.jp/announce/announce/2003/8/0815-4.html> and <http://www.mofa.go.jp/announce/announce/2003/8/0822-2.html>.
- 376 Statement by Ambassador Sha Zukang, Head of the Chinese Delegation to the 2nd CCW Review Conference, 11 December 2001, <http://www.china-un.ch/eng/cjkk/cjthsm/t85219.htm>; "China's Position on the Issue of Explosive Remnant of War", working paper, 26 September 2001, <http://www.china-un.ch/eng/cjkk/cjthsm/t85207.htm>.
- 377 Landmine Monitor 2001, p. 531.
- 378 Sr. Col. Guo Shoumin, "Chinese Humanitarian Demining Equipments And Techniques", paper presented at the Humanitarian Mine/UXO Clearance Technology and Cooperation Workshop, Kunming, China, 26-28 April 2004; "China's Achievements and Experience in Postwar Demining", statement by the Chinese delegate at the Southeast Asia Regional Technical Workshop for Humanitarian Demining Experts, Bangkok, 4 March 2002, <http://maic.jmu.edu/conference/SEAsiaWorkshop/Daypercent201/China.htm>. Large quantities of Chinese goods are also smuggled across the border to Vietnam, with documented human trafficking in the opposite direction.
- 379 Landmine Monitor 2003, pp. 574-5; Landmine Monitor 2001, pp. 531-3.
- 380 "ICRC and Chinese Red Cross: joint centre fits limbs for mine victims", <http://www.icrc.org/Web/Eng/siteeng0.nsf/html/5X8BUH>.
- 381 Communication from Zhao Li, Department of Arms Control and Disarmament, Ministry of Foreign Affairs, 3 August 2004.
- 382 <http://disarmament.un.org:8080/TreatyStatus.nsf/>. China signed with the reservation that Amended Protocol's restrictions should not apply to anti-vehicle mines with antihandling devices.
- 383 "Landmine Issues," Ministry of Foreign Affairs position paper (30 June 2004), <http://www.fmprc.gov.cn/eng/wjw/zjzg/jks/kjlc/cgjkwt/dlwt/t141332.htm>.
- 384 "Statement of the Chinese Delegation at the Fifth Meeting of States Parties to the Ottawa Convention", Bangkok, 19 September 2003.
- 385 "Statement of the Chinese Delegation at the Fifth Meeting of States Parties to the Ottawa Convention", Bangkok, 19 September 2003.
- 386 Communication from Zhao Li, Department of Arms Control and Disarmament, Ministry of Foreign Affairs, 3 August 2004.

Colombia

Background

An internal armed conflict ongoing since the 1960s between the armed forces of Colombia and armed non-state actors, including paramilitary organizations, has left serious contamination from ERW, mines and IEDs throughout the country.

Assessment of the problem

Colombian armed non-state actors use a large quantity and variety of weapons and explosives, such as small arms, grenades, rocket-propelled grenades, anti-tank rockets and mortars.³⁸⁷ Some of this weaponry enters Colombia by means of illegal arms trafficking over the Colombia-Ecuador border.³⁸⁸ Colombia stockpiles AV mines, but it is unclear whether the armed forces have used these mines in the internal conflict.

On 13 December 1998, the Colombian air force dropped a U.S.-manufactured cluster bomb in the eastern village of Santo Domingo during an operation against FARC fighters, killing 18 civilians, including seven children.³⁸⁹ This incident became a controversial human rights case in Colombia.³⁹⁰ In May 2004, a judge ordered the Government of Colombia to pay US\$700,000 to the families of the civilians killed in this attack.³⁹¹ Unconfirmed reports have also cited the use of cluster munitions in the internal conflict, but the post-conflict impact of these cluster strikes is not documented.³⁹²

In addition to the ERW and mine problem, Colombia is afflicted by the widespread use of IEDs by non-state actors and paramilitary groups. Many IEDs utilize ERW in their construction.

In 2001 the government established a body called the Anti-personnel Mine Observatory to gather statistics on the impact of landmines and ERW.³⁹³ By April 2004, the government had identified 3,085 ERW/mine-affected areas throughout the country and reported having detailed information on 637 or 22 per cent of these areas.³⁹⁴ There are no exact estimates on the extent of land area contaminated by APM or ERW in Colombia.³⁹⁵ However, the Observatory noted in 2004 that only two of the country's 32 departments are not affected by mines or ERW.³⁹⁶ In 2003, the departments worst affected by ERW and mines according to casualty figures were Antioquia, Cundinamarca, Meta and Caquetá. The intensification of the internal armed conflict has led to an increase in land area contaminated by ERW and mines. Of the total number of events involving mines or ERW, registered data shows a significantly greater number of events since 2001 by comparison with the previous decade.³⁹⁷

Impact

Casualty statistics reported by the Anti-personnel Mine Observatory make no distinction between accidents involving AP mines, ERW, MOTAPM or IEDs. All such incidents appear to be reported as AP mine incidents.³⁹⁸

A significant proportion of casualties from mines and ERW are combatants engaged in ongoing conflict. In 2003 there were 186 reported civilian casualties from mine or ERW accidents. In the six months to 1 July 2004, there were 112 reported civilian casualties.³⁹⁹

A 2003 Observatory impact survey concluded that mine- and ERW-related problems have affected the use of everyday spaces such as rural schools, lakeshores and riverbanks, houses, roads and forests, with the rural sector worst affected. Of 127 areas under study, 69 were located "in pastures and areas of cultivation and cattle, 32 on tracks and 21 near houses".⁴⁰⁰ The report stated that mines and ERW have blocked the use of housing in 25 areas of Antioquia and 10 of Boyacá.⁴⁰¹ In addition, mine/ERW contamination has blocked roads in 70 areas of Antioquia, 16 of Boyacá and 13 of Cundinamarca. It has also blocked access to nine health centres, eight markets and at least one factory in Boyacá. In the department of Meta, the presence of mines and ERW has also been reported in places such as a health post, a bakery, houses and a cemetery.⁴⁰²

The presence of mines and ERW has negative consequences for social and economic development, including an inability to work on formerly productive land, inability to attend school and the obstruction of social and economic infrastructure.⁴⁰³ It has also hindered development projects in rural communities and forced villagers to abandon their homes.⁴⁰⁴

In August 2004, an official from the department of Chocó reported significant ERW/mine contamination on the banks of rivers, which are the only communication routes in the area.⁴⁰⁵ During a meeting of indigenous populations in August 2004, the people of Nasa reported an increase in accidents due to abandoned grenades and mines left by non-state actors.⁴⁰⁶

In June 2003, units of the armed forces cleared 24 gas cylinders and 27 cans full of explosives planted in a 700-metre tract of the highway linking La Jagua del Pilar and Brumita (La Guajira).⁴⁰⁷ In the same month, Colombian soldiers disabled three bombs in a highway near San Vicente del Caguán.⁴⁰⁸ The Army also found three mine/ERW-affected areas, with five cylinders filled with explosives and homemade bombs in Popayán (Cauca) in March 2004.⁴⁰⁹

In March 2004, a 65-year-old man died and another man was wounded in a rural area of Mesetas (department of Meta) when a 50kg cylinder bomb exploded.⁴¹⁰ Several

other IEDs have been found throughout Colombia in recent years, often manufactured using gas cylinders or milk cans filled with explosives.⁴¹¹

The Government's Planning Department released a report on the economic losses that the armed conflict has caused to the country from 1999 to 2003. The report analysed losses related to factors such as kidnappings and ERW/mine contamination.⁴¹² As noted above, the Government of Colombia rarely distinguishes between events caused by ERW and those caused by mines.⁴¹³ This report suggested that the absence in the labour force of individuals killed or injured by ERW or mines cost the country more than 365 billion pesos (US\$143,882,056) between 1999 and 2003. The loss in productivity is calculated at between 2 and 6 million pesos (US\$788 and US\$2,365) for each individual injured and nearly 190 million pesos (US\$75,709) for each individual killed by ERW or mines. In addition, ERW/mine contaminated land could have produced 140 billion additional pesos (US\$55,785,783) for the economy's agricultural sector.⁴¹⁴

Efforts to address these problems

EOD units from the Colombian armed forces are responsible for all ERW and mine clearance operations.⁴¹⁵ In 2002, the armed forces found and disabled 7,692 explosive devices, 1,134 explosive gas cylinders and a total of 49,831 kilograms of explosives. In 2003, units from the military found and disabled 6,927 explosive devices, 1,612 explosive gas cylinders and a total of 70,570 kg of explosive material. In the first half of 2004,

2,596 explosive items, 828 explosive gas cylinders and 17,942 kg of explosives were neutralized.⁴¹⁶ The Government reported that the armed forces also cleared a contaminated road in the municipality of Puerto Guzmán (department of Putumayo), but the nature of the contamination was not provided.⁴¹⁷ In addition to the clearance of ERW/mine-affected areas, the armed forces have confiscated a large quantity of weapons discovered in caches used by armed non-state actors. In 2002, the armed forces confiscated 3,745 grenades as well as mortars, RPGs and rocket launchers, and thousands of small arms.⁴¹⁸

It should be noted that no humanitarian mine clearance is currently taking place in Colombia. Some tactical military mine clearance operations have taken place along certain roads during conflict, but emergency clearance by the military has also been disrupted in some areas by fighting between state forces and armed non-state actors. These areas included roads in the area of Caño de Oro (municipality of La Palma, department of Cundinamarca), the municipality of Teorama (department of Norte de Santander), and the area of Yaco (municipality of Santa Rosa, department of Putumayo).⁴¹⁹

Legislation

Colombia has been a State Party to the CCW since 6 March 2000. It is a State Party to Amended Protocol II and Protocol IV. As noted above, the Government's Anti-personnel Mine Observatory publishes reports on AP mines and AXO in its website.⁴²⁰

387 "Colombia: Rocket used in Bogota attack could have come from Ecuadoran army", *BBC Worldwide Monitoring*, 29 October 2003.

388 "Military Intelligence Report Says Weapons for Guerrillas Coming Through Venezuela", *El Nacional* (Caracas), 16 July 2002.

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390 Christian Miller, "Colombia: Videotape Shows Americans' Role in Village Bombing", *Los Angeles Times*, 16 March 2003.

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392 Steve Goose, "Cluster Munitions: Toward a Global Solution", *Human Rights Watch World Report* 2004, January 2004, accessed 6 May 2004 at: http://hrw.org/wr2k4/12.htm#_Toc58744961

393 The Anti-personnel Mine Observatory refers to AXO in their data, but this appears to include all forms of ERW including UXO. It also appears that AXO as defined by the Observatory would seem to include UXO as it refers to any "explosive forgotten in places where there has been armed confrontation".

394 Government of Colombia, Article 7 Report, Form C, 30 April 2004; María García de Santos, Statement by the Colombian Delegation at Fifth Meeting of the States Parties, Bangkok, Thailand, 16 September 2003, accessed 20 May 2004: www.gichd.ch/pdf/mbc/5msp/update_day2/Columbia_5MSP_16_Sept_2003_spa.pdf.

395 Email from Margarita Martínez, Project Coordinator, Fundación Antonio Restrepo Barco, 6 July 2004.

396 Report by the Mine Observatory, Bogotá, 26 January 2004.

397 Government of Colombia, Article 7 Report, Form J, 30 April 2004. It should be borne in mind that this increase could reflect greater efforts in data gathering during this later period.

398 Diana Roa, *Sembrando minas, cosechando muerte: Colombia y las minas antipersonal*, Ministry of Communications, Canadian Embassy and UNICEF Colombia, 2000, p. 22.

399 Observatorio de Minas Antipersonal, Estadísticas, Sistema de Información – IMSMA, 1 May 2004, accessed 10 May 2004 at: <http://www.derechoshumanos.gov.co/minas/modules.php?name=informacion&file=article&sid=22>

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401 Observatorio de Minas Antipersonal, *Primeros estudios de riesgo socio económico por minas antipersonal y artefactos explosivos abandonados en Colombia*, 5 June 2003, accessed 10 May 2003 at: <http://www.derechoshumanos.gov.co/modules.php?name=informacion&file=article&sid=61>.

402 Government of Colombia, Article 7 Report, Form J, 30 April 2004.

403 Observatorio de Minas Antipersonal, *Primeros estudios de riesgo socio económico por minas antipersonal y artefactos explosivos abandonados en Colombia*, 5 June 2003, accessed 10 May 2003 at: <http://www.derechoshumanos.gov.co/modules.php?name=informacion&file=article&sid=61>.

404 Kim Housego, "Casualties and criticism grow as Colombian rebels sharply increase use of land mines", *The Associated Press*, 19 May 2004.

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- 408 "Desactivan cargas explosivas." *Caracol Noticias*, 3 June 2003.
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- 410 "Un muerto y un herido en zona rural de Mesetas (Meta) por explosión de cilindro bomba", *El Tiempo*, 7 March 2004, accessed 5 May 2004 at: http://eltiempo.terra.com.co/coar/ACC_MILITARES/accionesarmadas/ARTICULO-WEB_NOTA_INTERIOR-1546694.html.
- 411 "Ejército destruye campo minado en Viota", *Agencia de Noticias del Ejército*, 10 April 2003; "Desmantelados campos minados", *Agencia de Noticias del Ejército*, 14 April 2003; "Trampa mortal en Zambrano," *Caracol Noticias*, 15 April 2003; "Explosive material and weapons confiscated", *Agencia de Noticias del Ejército*, 19 May 2003; "Desactivan vía minada", *Caracol Noticias*, 1 June 2003; "Desactivan cargas explosivas", *Caracol Noticias*, 3 June 2003; "Destruyen campos minados en Cauca", *Caracol Noticias*, 24 March 2004.
- 412 "Los Costos de la Guerra", *Cambio*, 16 August 2004.
- 413 See the statistics of the Anti-personnel Mine Observatory in the following website: <http://www.derechoshumanos.gov.co/minas/modules.php?name=informacion&file=article&sid=22>
- 414 "Colombia: 7.4 per cent of GDP spent on conflict in last five years", *Cambio*, 16 August 2004.
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- 416 Agencia de Noticias del Ejército, "El Ejército decomisa: armamento, munición y explosivos", July 2004; Agencia de Noticias del Ejército, "Balance operacional del primer semestre de 2004", 30 June 2004. <http://www.ejercito.mil.co/detalleInforme.asp?numDocumento=7623>; *FBIS Report* (Colombia), "Highlights: Colombia Military/Guerrilla/Paramilitary Activities 5-7 Mar 04", 7 March 2004; Army News Agency, "Overwhelming military offensive operations against the terrorists", 31 January 2004.
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Congo, Democratic Republic of

Background

The conflict in the Democratic Republic of Congo (DRC) drew in forces from seven other nations⁴²¹ and since August 1998 has resulted in more than 3.5 million deaths and displaced 3.4 million residents since August 1998.⁴²² After the Lusaka Peace Accords were signed in August 1999, the U.N. Mission in the DRC (MONUC) arrived in November 1999 to monitor the cease-fire and assist in the disarmament, demobilization, and repatriation of foreign forces. In April 2003, President Joseph Kabila promulgated the transitional constitution, scheduled to govern the DRC until national elections scheduled for June 2005.

The actual scope and impact of the MOTAPM and ERW problem is not assessed. However, preliminary data collected by the United Nations Mine Action Coordination Centre (UNMACC) confirms that mine warfare has been a feature of conflict in the country. Most of the belligerents, including international allies, laid AV and AP mines, especially along the successive front lines.⁴²³ In addition, ERW is scattered in many places where fighting took place.⁴²⁴ According to MONUC, the ERW problem is "more widespread" than the mine problem in the DRC.⁴²⁵

Assessment

Many kinds of munitions were used during the conflict in the DRC. Both MOTAPM and anti-personnel mines were used throughout most of the provinces, most of them planted in 1999 and 2000, with more than 300 contaminated areas.⁴²⁶ In April 2004, the Fondation Suisse de Deminage (FSD), stated that a survey was urgently needed of areas strewn with ERW in Ituri District, north-eastern DRC. According to FSD, the extent of ERW and mine contamination was unknown, but the Mine Action Centre

had catalogued 300 "dangerous area reports". These were mostly based on accident reports, and it appeared that Ituri District, North and South Kivu provinces and the former combat zones were heavily affected. In its project report, "Extension du projet de déminage en République Démocratique du Congo 2004" (Extension of the Mine-Clearance Project in the DRC 2004), FSD said the imminent return of internally displaced people and refugees would coincide with a massive rise in accidents caused by ERW and mines. The types of MOTAPM found in the DRC include the Belgian PRBM 3 and PRBM 1, US M6A2 and M15, UK GS MK5, Yugoslav TMM1, TMA 3, TMA 4, TMRP 6 and Russian TM46, TM 57 and TM 62P3.⁴²⁷

According to a recent interim investigation report by Danish Church Aid (DCA) there is a "massive presence" of ERW and mines in the District of Tanganyika, particularly in the territories of Nyunzu, Kalemie and Moba.⁴²⁸

As of 12 July 2000, ICRC's Kisangani office had recorded 2,046 projectiles, 35 fuzes, and 63 grenades removed from the local area. These were made up of a wide variety of ERW types originating from the US, the former USSR, and other suppliers, such as the Balkan countries and China.⁴²⁹

There have been a few assessments of the ERW/mine problem. From 28 June to 12 July 2000, Handicap International (HI) undertook an exploratory mission to evaluate ERW/mine contamination in Kisangani, in cooperation with OCHA.⁴³⁰ In addition, in 2003 and 2004, the UNMACC, along with UN agencies and local NGOs, undertook an assessment in the Equateur, Kasai and Kivus Provinces.⁴³¹ They identified hundreds of ERW/mine victims, showing that the problem is more serious than initially anticipated.⁴³² As a result, a UNICEF mine risk education specialist was co-located within the UNMACC to develop an MRE plan of action.⁴³³

Official statistics on the ERW/mine situation in the DRC, as of May 2004, are updated monthly in the IMSMA database.⁴³⁴ The system is operated by the MACC and is presently the sole source of the database for mine related information in the DRC. The database contains detailed information, and goes back as far as 1964. In 2004 there were 19 victims of MOTAPM, ERW and APM. Amongst the total recorded casualties since 1964 where the type of device was known, most have been attributed to UXO (46 per cent)⁴³⁵, with anti-personnel mine accounting for 42 per cent. Some 46 casualties (5 per cent)⁴³⁶ have been recorded from MOTAPM and 89 casualties (nearly 10 per cent) have been attributed to cluster munitions.⁴³⁷

Impact

ERW and MOTAPM contamination presents a risk to refugees and IDPs planning to return to their homes in the DRC. This concerns approximately 3.4 million IDPs,⁴³⁸ 200,000 refugees in the DRC⁴³⁹ and 380,000 Congolese refugees in neighbouring countries.⁴⁴⁰ In order to respond to the ERW and mine risk, the Mine Awareness Trust (MAT) and the International Rescue Committee (IRC) in support of UNHCR, conducted a three-month mine risk education (MRE) campaign.⁴⁴¹ MOTAPM also present a risk for peacekeepers and humanitarian workers, and hamper development activities.⁴⁴² According to the IRC, MOTAPM are laid on bush roads by insurgents to blow up vehicles and are a threat to the humanitarian staff.⁴⁴³ The Swiss Foundation for Mine Action (FSD) reported that only three of the 19 NGOs in Bunia were prepared to leave the city by road without being escorted by UN troops, due to the perceived threat of mines. In many cases, humanitarian aid still cannot be delivered safely to those in need.⁴⁴⁴ Several NGOs had asked the FSD to verify the practicability of routes, roads, and airstrips in Ituri and elsewhere in the country.⁴⁴⁵

Efforts to address these problems

Through Security Council Resolution 1291 (2000), MONUC has the mandate to coordinate mine action activities in DRC.⁴⁴⁶ MONUC has established a Mine Action Coordination Centre. MONUC concentrates its activities in

eastern DRC, and has identified the reopening of major roads as a key priority. The Mechem company of South Africa is still continuing verification and clearance of the Bunia-Beni road (Ituri): the operation was due to be completed by mid-May 2004. Mechem will then address additional requirements as identified by MONUC in Ituri, starting with the road from Ika Barrier to Fataki (Ituri).⁴⁴⁷

Locally recruited deminers of the FSD mobile emergency mine/UXO clearance teams started working at the end of January 2004 in the Bunia area (Ituri District).⁴⁴⁸ In a clearance operation in August 2003, MONUC EOD advisers in the eastern town of Kindu destroyed 45 items of AXO, each with 35kg of explosives, found in the open at the national police training camp in Kindu.⁴⁴⁹

In July 2004, MONUC deployed a South African engineering team to help clear key locations in eastern DRC of ERW. It was reported that several rocket-propelled grenades, hand grenades and mortar bombs had been destroyed, a large number of which had been abandoned in schools following fighting in Bukavu. Outside Bukavu, ERW were also reported in Adikivu, close to the South Kivu airport to the north.⁴⁵⁰

MONUC has been working in collaboration with other UN agencies, most notably UNMAS and UNICEF.⁴⁵¹ UNMAS conducted a mine action fact-finding mission to the DRC, and developed a mine action programme to deal with ERW and landmines in the country in order to assist MONUC and the MACC. UNICEF's main activities in the DRC for 2004 were mine clearance and mine risk education.⁴⁵² UNICEF conducted MRE training for Mechem and FSD staff in April 2004, and on community liaison and data collection.⁴⁵³

Mechem has been involved in three main clearance projects, under the auspices of MONUC:⁴⁵⁴ in the Kindu and Kisangani airfields, in La Forestiere and Manono airfields, and in and around airfields and roads in Bunia.

Legislation

The DRC has been State Party to the Ottawa Convention since 2 May 2002. The Government of DRC has not signed or ratified the CCW.

421 Carter Dougherty, "Making gems work for peace -not war", San Francisco Chronicle (20 November 2003), D1.

422 Les Roberts, "Mortality in eastern Democratic Republic of Congo Results from Eleven Mortality Surveys", International Rescue Committee Health Unit, 2001.

423 UN Office for the Coordination of Humanitarian Affairs, Consolidated Inter-Agency Appeal for the Democratic Republic of the Congo 2003, 19 November 2002.

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426 "DRC: Survey of Landmines and Unexploded Ordnance Urgently Needed, Swiss Group Says", Nairobi, All Africa news agency, 14 April 2004; United Nations Security Council, Twelfth report of the Secretary-General on the UN Organization Mission in DR Congo, 18 October 2002.

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- 435 This includes “fuzes” along with “cluster munitions”, “grenades”, “projectiles” and “other UXO.”
- 436 This is the percentage from casualties where the type of device was known.
- 437 *Le mise a jour des statistiques de la situation de mine/uxo en RDC (Mois d’octobre 2004)*, http://www.macc-drc.org/stat_nov04.php, accessed 30 October 2004.
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- 442 Annual Report 2002 for the Programme Mine Action Assistance to the Democratic Republic of the Congo, http://www.mineaction.org/misc/result-display.cfm?doc_ID=1056
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- 446 Annual Report 2002 for the Programme Mine Action Assistance to the Democratic Republic of the Congo, http://www.mineaction.org/misc/result-display.cfm?doc_ID=1056
- 447 Mine Action Support Group Newsletter, New York: Permanent Mission of Switzerland to the United Nations, April 2004.
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- 449 “DRC: MONUC destroys 45 World War II era bombs in Kindu”, Nairobi, Irin News, 20 August 2003, http://www.mineaction.org/countries/_refdocs.cfm?doc_ID=1500&country_id=783
- 450 “DRC: UN Mission destroys unexploded ordnance”, Nairobi, IRIN News, 14 July 2004.
- 451 Projects on Mine Action in Democratic Republic of Congo, http://www.mineaction.org/countries/_projects.cfm?country_ID=783
- 452 Projects on Mine Action in Democratic Republic of Congo, http://www.mineaction.org/countries/_projects.cfm?country_ID=783
- 453 Mine Action Support Group Newsletter, New York: Permanent Mission of Switzerland to the United Nations, April 2004.
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Croatia

Background

Conflict between the Yugoslav Army and Croatia after the latter’s declaration of independence in 1991, and Croatia’s involvement in the war in Bosnia and Herzegovina later in the decade, contaminated significant areas of the country with ERW. Extensive reliance on the use of MOTAPM and anti-personnel mines to defend both urban and rural areas and communities also led to significant MOTAPM contamination. However, extensive clearance operations since the end of the conflict have greatly reduced the threat from ERW and mines.

Assessment of the problem

According to the Croatian Mine Action Centre (CROMAC), which conducted an assessment of the mine and ERW problem in Croatia in 2004, the available field reports state that approximately 100,000 MOTAPM were laid during the 1992-1995 war.⁴⁵⁵ By mid-2004, a total of 9,308 MOTAPM have been found and destroyed.⁴⁵⁶ The Croatian Ministry of Defence has provided all available minefield records and information related to the use of ordnance during the 1992-1995 war to CROMAC. In 2003 the CROMAC database still contained original minefield records supplied by the warring parties that identified 79,408 MOTAPM⁴⁵⁷ and 132,186 anti-personnel mines, but according to CROMAC, the latest estimate on the number of MOTAPM remaining (based upon preliminary results from the 2004 assessment) has been placed at 89,043.

A total of 1,350 square kilometres or 3 per cent of the total surface area of Croatia is estimated to be contaminated by ERW and mines.⁴⁵⁸ CROMAC states that it is impossible to assess the total number of ERW, while other agencies’ estimates range from 400,000 to one million.⁴⁵⁹ The latter figure includes AXO, such as ordnance located in former FRY military storage facilities that were mined when the FRY military abandoned them during the war.

Of the 21 counties in Croatia, 14 suffer from mine and ERW contamination.⁴⁶⁰ In 2003-2004, Osjek-Baranja County and Vukovar-Srijem County have been considered the most severely affected by MOTAPM and ERW. These areas were the scene of fixed lines of defence and confrontation lines that remained in place throughout the war period.⁴⁶¹

From 1 June 2003 to 30 June 2004, CROMAC regional branch offices reported newly discovered contamination and scattered ammunition of various calibres were found in a large number of locations. MOTAPM and APMs were found in Tordinci and Rosinjaca and in Udbina, Vrba and Korenica, where a military ammunition depot was destroyed.⁴⁶²

Impact

Information on mine incidents is gathered through the media, police, the Croatian Association of Mine Victims, the Croatian Red Cross and CROMAC general survey operations.⁴⁶³ During the reporting period, seven civilians were injured by ERW. Two clearance operators were killed

in another accident involving a booby trap. Examples of ERW and MOTAPM incidents are:

- According to CROMAC, a public works vehicle was destroyed in Sibenik County after it drove over a MOTAPM during road works in Velika Glava Skradin. There were no casualties but the vehicle was damaged beyond repair.⁴⁶⁴
- In May 2003, a woman was seriously injured near Velika Gorica when she triggered an unexploded mortar shell while burning branches and grass near her house.⁴⁶⁵
- In March 2003, a civilian was killed in Sibenik County after triggering an anti-tank mine. The victim had activated the mine in the attic of his house.⁴⁶⁶

According to CROMAC, civilians value ERW and mines and are willing to risk entering contaminated areas. Over the last few years there has been a noticeable increase in the number of ERW/mine victims as a result of economic pressure to enter risk areas.⁴⁶⁷ People unwilling to wait to use contaminated farmland also place themselves at risk by ploughing in risk or suspect areas. In addition to farmers, fishermen, children and rural inhabitants are most at risk. There have been instances of people attempting to clear their land themselves rather than wait for clearance teams, thus risking becoming new victims of ERW or mines. A significant amount of agricultural land, particularly in Eastern Slavonia, remains unusable due to contamination by ERW.⁴⁶⁸

Hunting, poaching and fishing are often the cause of accidents. In isolated forests and woods the risk from mines remains significant. The collection of wood, mushrooms or wild fruit has also been the cause of mine and ERW incidents⁴⁶⁹ – along with the collection of mines and ERW as scrap metal.⁴⁷⁰

As the rivers Sava, Drava, Una, Kupa, Korana, Mreznica and others, as well as coastlines, were used as natural barriers during the war, there is a high level of mine and ERW contamination along their banks.⁴⁷¹

CROMAC did not view MOTAPM or ERW as a major hindrance to the road network in Croatia during the reporting period, but the immediate task of clearing roads did lead to delays and was a major financial burden.⁴⁷²

According to the UNHCR Field Team in Sisak, despite the widespread threat of ERW and mines in its area of responsibility, ERW and mines did not have a major influence on the overall implementation of UNHCR projects. But the UNHCR Field Team in Knin viewed the mine and ERW threat as one of the most serious impediments to the returnee process in areas such as Otocac-Podum-Dabar in Lika-Senj County, and Cista Mala-Cista and Velika-Gacelezi in Sibenik-Knin County. Many potential returnees were unwilling to return due to actual or suspected contamination of agricultural land. UNHCR Knin staff said booby traps had been used to try to prevent or delay the return of ethnic minority people, being deliberately placed in or around returnee houses and land. This mainly occurred immediately after the end of the conflict.⁴⁷³

During the reporting period, the most noticeable effect of ERW contamination on government projects was on the Prevlaka Peninsula (Dubrovnik-Neretva County) and the Volinja (Dvor) projects, affecting an environmental project in the Una River Basin and the “Korenica” project for the Pliva pharmaceutical factory. Korenica was a production facility before the war; but during the occupation Serb forces used it as a military storage depot. When the Croatian military freed the area the withdrawing Serb forces detonated charges in the factory, resulting in a great number of UXO being scattered over the surrounding area.

In Volinja, after an explosion at a military storage depot, more than 2,000 pieces of ordnance and an unknown amount of rockets and fuel were scattered over the surrounding area. This occurred in 1995 close to the river Una, which forms the border between the Republic of Croatia and Bosnia and Herzegovina. Before the extent of potential ecological contamination could be determined it was necessary to clear the area and remove all ordnance, including MOTAPM and AP mines. This clearance was still in progress during the reporting period.

In January 2003, the Ministry of Defence stated that, despite the destruction of Croatia’s stockpiles, “the collection of more mines could be expected”⁴⁷⁴ because many unregistered MOTAPM, AP mines and other ordnance remained in private possession. This sentiment was echoed by Slavko Kopjar, Coordinator of the “Farewell to Arms” campaign in Croatia.⁴⁷⁵ In its Article 7 report for 2002, Croatia reported that the “Farewell to Arms” campaign had collected a total of 16,507 mines from the general public.⁴⁷⁶

Efforts to address the problem

CROMAC has created an extensive mine action capacity since it was established in 1998. It is run by a government-appointed board, comprised of representatives of the ministries involved in clearance. Management and supervision of CROMAC is the responsibility of the Ministry of Internal Affairs. An inspectorate body of the Ministry of Internal Affairs supervises CROMAC’s work.⁴⁷⁷

Currently there are 28 operational clearance organizations, the only foreign NGO operational being Norwegian Peoples Aid (NPA), which has been conducting clearance in Croatia for three years.⁴⁷⁸

ERW and MOTAPM within military facilities or on land belonging to the Ministry of Defence is the responsibility of the Croatian Army. From 1 June 2003 to 30 June 2004, the Croatian Army had between five and 10 operational teams with a total of 60 personnel. The Ministry of Internal Affairs Police Bomb Squad, through its regional offices, is also responsible for ERW reported by the general public.

From 1 June 2003 to 30 June 2004, 23,715 ERW were discovered and destroyed in the field. During previous years a total of 91,877 ERW were found and destroyed. During the reporting period 2,704 MOTAPM were located

and destroyed: in previous years a total of 6,604 MOTAPM were located and destroyed.⁴⁷⁹

CROMAC collaborates with various partners on mine risk education (MRE), including the Croatian Red Cross, ICRC, UNHCR and the media.⁴⁸⁰ The Croatian Red Cross has 49 regional branches and 70 mine awareness instructors who reinforce the mine awareness programme started in 1996. It also supports community-based MRE initiatives.⁴⁸¹

UNHCR staff in Sisak attributed the reduction in mine/ERW casualty rates to the successful implementation of mine awareness campaigns run since 1996 by the ICRC, OSCE and the Croatian Red Cross.⁴⁸²

During the reporting period, CROMAC recorded an area reduction of 400 sq km of suspect land, subsequently

declared as safe.⁴⁸³ CROMAC places the combined official estimate of the total number of mines of all types and ERW remaining undetected in Croatia at approximately 700,000.⁴⁸⁴

Legislation

The Republic of Croatia became a State Party to the Ottawa Convention on 1 March 1999.⁴⁸⁵ Croatia is a State Party to the Convention on Certain Conventional Weapons and its Original Protocol II, Protocol III, Protocol IV and Amended Protocol II.⁴⁸⁶ According to CROMAC, the Croatian Government has expressed its willingness to sign Protocol V to the CCW.⁴⁸⁷

- 455 James Madison University, Mine Action Information Center, Journal of Mine Action – Landmines in Eastern Europe & the Caucasus, Issue 7.2, August 2003; “Hierarchic Approach to Mine Action in Croatia”, Faculty of Civil Engineering, University of Split, Croatia and Damir Gorseta, SEEMAC, p.2, <http://www.hdic.jmu.edu/JOURNAL/7.2/focus/mladineo.htm>, accessed 18 July 2004.
- 456 Email interview with Mr. Mirko Ivanusic, Deputy Director of CROMAC, 23 July 2004.
- 457 CROMAC estimates that approximately 20 per cent of MOTAPM were not recorded.
- 458 Email interview with Mr. Mirko Ivanusic, Deputy Director of CROMAC, 23 July 2004. Also: E-MINE, “Country Report, Croatia”, updated December 2003. In 1996 the UN initially estimated the level of mine and ERW contamination at 13,000 sq.km, whereas the National Mine Action Plan of late 2000 was based on the existing estimate at that time of 4,000 sq. km of mine and ERW contamination. James Madison University, Mine Action Information Center, Journal of Mine Action – Landmines in Eastern Europe & the Caucasus, Issue 7.2, August 2003; “Mine Problem in the Region of Southeastern Europe: The ITF and SEESAC”, SEEMAC Damir Gorseta and Eva Veble and Sabina Beber (ITF), p.1 & p.4, <http://www.hdic.jmu.edu/JOURNAL/7.2/focus/gorseta/gorseta.htm>, accessed 18 July 2004, http://www.mineaction.org/countries/countries_overview.cfm?country_id=803, accessed 12 July 2004.
- 459 The Deputy Director of CROMAC stated that – considering that between 10 per cent and 15 per cent of munitions fail to activate after firing, and by making a rough estimate of the amount of munitions used during the war period in Croatia – “it is reasonable to estimate the number of UXO at approximately one million”. See also James Madison University, Mine Action Information Center, Journal of Mine Action – Landmines in Eastern Europe & the Caucasus, Issue 7.2, August 2003; “Mine Problem in the Region of Southeastern Europe: The ITF and SEESAC”, SEEMAC Damir Gorseta and Eva Veble and Sabina Beber (ITF), p.4, <http://www.hdic.jmu.edu/JOURNAL/7.2/focus/gorseta/gorseta.htm>, accessed 18 July 2004.
- 460 CROMAC webpage, “Mine Situation”, <http://www.hcr.hr/>, accessed 4 June 2004.
- 461 Email interview with Mr. Mirko Ivanusic, Deputy Director of CROMAC, 23 July 2004.
- 462 Email interview with Mr. Mirko Ivanusic, Deputy Director of CROMAC, 23 July 2004.
- 463 In 1998, CROMAC inherited mine incident information from the former UNMAC (1991-1998). Through its network of branches and inspectors, the ICRC and the Croatian Red Cross collects and records information on individual mine, UXO, ERW and booby-trap accident victims. When an incident occurs information is immediately recorded in the CROMAC database, which is constantly updated on the basis of information gathered in the field by involved parties. CROMAC also upgrades the database regularly in order to eradicate any deficiencies or inaccuracies in the inherited UNMAC data. CROMAC gives the latter as the reason why accident victim figures for 1991-1998 are periodically altered. This also accounts, mainly, for the use of the category “unknown”, due to insufficient information regarding an accident. Email from Kristina Ikić Banicek, Counsellor for Mine Awareness and Education and Assistance to Mine Victims, CROMAC, received 18 August 2004.
- 464 Email interview with Mr. Mirko Ivanusic, Deputy Director of CROMAC, 23 July 2004.
- 465 Email interview with Mr. Mirko Ivanusic, Deputy Director of CROMAC, 23 July 2004.
- 466 Email interview with Mr. Mirko Ivanusic, Deputy Director of CROMAC, 23 July 2004.
- 467 Email from Kristina Ikić Banicek, Counsellor for Mine Awareness and Education and Assistance to Mine Victims, CROMAC, received 18 August 2004.
- 468 Email interview with Mr. Mirko Ivanusic, Deputy Director of CROMAC, 23 July 2004.
- 469 Email interview with Mr. Mirko Ivanusic, Deputy Director of CROMAC, 23 July 2004.
- 470 Email interview with Mr. Mirko Ivanusic, Deputy Director of CROMAC, 23 July 2004.
- 471 Email interview with Mr. Mirko Ivanusic, Deputy Director of CROMAC, 23 July 2004; see also “Man killed, woman seriously wounded in land mine blast in Croatia,” HINA, 28 June 2004.
- 472 Email interview with Mr. Mirko Ivanusic, Deputy Director of CROMAC, 23 July 2004.
- 473 UNHCR Croatia, email from Snjezana Condic, 29 July 2004. UNHCR Field Team Knin report, 28 July 2004 and UNHCR Field Team Sisak report, 23 July 2004. In one such incident, that occurred in the Zadar hinterland in 1998, two local reconstruction workers were slightly injured when they triggered a booby-trap device while working on a UNHCR / IRC reconstruction project. The result of this incident was that the reconstruction process was completely stopped. This, combined with additional security concerns and the general negative attitude of the local population towards minority return, led to a suspension of the reconstruction effort and minority return process until 2004.
- 474 Interview with Brigadier Slavko Haluzan, President of the Commission for Demining Issues, Ministry of Defence, Zagreb, 13 January 2003; email from Brigadier Slavko Haluzan, 16 January 2003, reported in Landmine Monitor 2003, p. 213.
- 475 Interview with Slavko Kopjar, Coordinator, Farewell to Arms Campaign, Ministry of Interior, Zagreb, 13 January 2003.
- 476 Article 7 Report, Form F, submitted 30 April 2003 for calendar year 2002, reported in Landmine Monitor 2003, p. 213.
- 477 Email interview with Mr. Mirko Ivanusic, Deputy Director of CROMAC, 23 July 2004; Landmine Monitor 2004, pp. 366-367.
- 478 Email interview with Mr. Mirko Ivanusic, Deputy Director of CROMAC, 23 July 2004; Landmine Monitor 2004, pp. 366-367. Norwegian Peoples Aid (NPA), “NPA in Croatia”, p.1, <http://www.npaid.hr/MAIN/introduction/NPAcroatia.htm>, accessed 21 June 2004.
- 479 Email interview with Mr. Mirko Ivanusic, Deputy Director of CROMAC, 23 July 2004.
- 480 CROMAC web-page, HCR / education and victim assistance, Mine awareness, <http://www.hcr.hr/index.pho?link=edukacija&lang=en>, accessed 28 August 2004.

- 481 E-MINE, "Country Report", p.1, Croatia, updated December 2003, http://www.mineaction.org/countries/countries_overview.cfm?country_id=803, accessed 17 July 2004.
- 482 Email from Snjezana Condic, UNHCR Croatia, 29 July 2004, UNHCR Field Team Sisak report (23 July 2004).
- 483 Email interview with Mr. Mirko Ivanusic, Deputy Director of CROMAC, 23 July 2004.
- 484 CROMAC web-page, "Mine Situation", <http://www.hcr.hr/>, accessed 4 June 2004.
- 485 ICRC, Humanitarian law section, "Weapons", "States party to main treaties", <http://www.icrc.org/web>, accessed 23 August 2004.
- 486 Landmine Monitor 2003, <http://www.icbl.org/lm/2003/croatia.html>, accessed 12 July 2004.
- 487 Email interview with Mr. Mirko Ivanusic, Deputy Director of CROMAC, 23 July 2004.

Czech Republic

Background

The Czech Republic has ERW and MOTAPM left over from the 1914-18 and 1939-45 Wars and from former Soviet army bases and training grounds.

Assessment of the problem

The Government says there are "no ERW/MOTAPM problems in the Czech Republic".⁴⁸⁸ Two major areas of contamination in the Czech Republic were the former Soviet training bases in Mlada and Ralsko. Clearance activities were undertaken and the Mlada area was cleared by May 2002 and Ralsko by March 2004.⁴⁸⁹

The media has identified southern Moravia as an area contaminated by ERW and MOTAPM.⁴⁹⁰

Overall, there was significant media coverage on ERW and MOTAPM during the reporting period (more than 50 articles mentioning ERW and MOTAPM in national and local newspapers) mostly reporting about specific discoveries of ERW and MOTAPM.⁴⁹¹

Impact

During this reporting period, there were no ERW or MOTAPM casualties.⁴⁹² However, according to Czech officials quoted by the Landmine Monitor, between 1999 and 2002 12 people were killed and another 40 injured by ERW.⁴⁹³

Efforts to address the problem

When ERW or MOTAPM are found, specialists from the Ministry of the Interior are responsible for handling the

situation. In the case of a discovery on military grounds, Army Engineers are responsible for clearance.⁴⁹⁴ According to government sources, in 2003, approximately 5,000 ERW were found and destroyed in the Ralsko former military area.⁴⁹⁵

In northern Moravia, police reports note that in 2003 the north Moravian pyrotechnics/bomb-disposal squad received more than 250 requests for assistance. The following are examples of ERW collected and destroyed by the regional bomb-disposal squad in 2003:⁴⁹⁶

- 528 pieces of hand and artillery grenades and mines (no distinction possible);
- two pieces of engineering ordnance;
- 17 airborne bombs;
- 187 pieces of artillery munition;
- 25 special munitions, rockets and "Panzerfäuste";
- 302kg of infantry munitions;
- 2.7kg army explosives;
- 12.25 kg industrial explosives.

As of 1 January 2004, it is now legal for civilian bodies to carry out bomb disposal research and supervision.⁴⁹⁷

Legislation

The Czech Republic became a State Party to the Ottawa Convention on 1 April 2000.⁴⁹⁸ The CCW was signed on 10 April 1981 and ratified on 30 August 1982. Preparations are underway for the ratification of Protocol V.⁴⁹⁹ Amended Protocol II was ratified 10 August 1998.⁵⁰⁰ The Czech Republic supports the general EU position on MOTAPM.⁵⁰¹

488 Letter from Jan Kara, Ministry of Foreign Affairs, 15 September 2004.

489 Jan Gazdik, "Sovůty zamofiená zem je mrtvá", MFDNS (Prague), 15 July 2004; Letter from Jan Kara, Ministry of Foreign Affairs, 15 September 2004; Landmine Monitor reports different dates, cf. Landmine Monitor 2004, p. 387.

490 "V Cesku se nejvice stare munice najde vzdy na jihu Moravy (In the Czech Republic the Most Old Ordnance Is Always Discovered in the Region of Southern Moravia)", Zpravodajství CTK, 16 January 2003; "Ve vykopu lezela letecka puma (Air Bomb Laid in Excavation Ditch)", Brněnský a jihomoravský deník, 17/01/2003, Rovnost edition, p. 7; "Na jižní Moravě je nejvíc nevybuchlé munice (Most unexploded ordnance is in Southern Moravia)", Právo, 17 January 2003, p.11.

491 Content analysis of Czech media by project researcher.

492 Letter from Ivo _rámek, Director of UN Department, Ministry of Foreign Affairs, 27 May 2004.

493 Based on information from the Czech Ministries of Foreign Affairs, Defence and Interior as well as the Czech Police, reported in Landmine Monitor 2003, p. 226, and Landmine Monitor 2002, pp. 225-226.

494 Letter from Jan Kara, Ministry of Foreign Affairs, 15 September 2004.

- 495 Letter from Jan Kara, Ministry of Foreign Affairs, 15 September 2004; Letter from Ivo _rámek, Director of UN Department, Ministry of Foreign Affairs, 27 May 2004, also reported in *Landmine Monitor* 2004, p. 382.
- 496 Ph.Dr. Dagmar Bednaráiková, "Nálezý munice," *Zprávy z Ostravy*, 16 April 2004, "<http://www.mvcr.cz/aktualit/regiony/ostrava/2004/040408.html>" last accessed 2 October 2004.
- 497 Letter from Jan Kara, Ministry of Foreign Affairs, 15 September 2004.
- 498 Letter from Jan Kara, Ministry of Foreign Affairs, 15 September 2004.
- 499 Letter from Jan Kara, Ministry of Foreign Affairs, 15 September 2004.
- 500 *Landmine Monitor* 1999, p.707.
- 501 Letter from Jan Kara, Ministry of Foreign Affairs, 15 September 2004.

Djibouti

Background

Djibouti has a small ERW and MOTAPM problem as a result of the 1991-1994 internal conflict between the Front for the Restoration of Unity and Democracy (FRUD), backed by the Afar ethnic group, and the Government of Djibouti, dominated by the Issa ethnic group.⁵⁰²

Assessment of the problem

Most of the suspected minefields or MOTAPM-affected roads are in Djibouti's northern plateau. Anti-personnel and anti-vehicle mines were laid in towns and their immediate surroundings, as well as main roads and small paths.⁵⁰³ In the town of Obok, north of the capital Djibouti City, the Djibouti armed forces used mines to protect an army camp and key installations. FRUD forces are said to have also mined these areas as well as access roads out of Obok and sites near the village of Andoli. Parts of the road leading south from the town of Ali Sabieh are also mined.⁵⁰⁴ The U.S. Department of State reported in 2002 that a small risk from ERW remained in Djibouti, but in 2004 Djibouti declared itself "mine-safe."⁵⁰⁵

Impact

Landmine Monitor has reported that all of Djibouti's 81 mine-related casualties since 1999 appeared to be caused

by MOTAPM.⁵⁰⁶ There is no information on further socio-economic impacts of ERW or MOTAPM in Djibouti, although the government reports that mine clearance activities have helped communities return to normal life.⁵⁰⁷

Efforts to address these problems

Mine/ERW action in Djibouti has been coordinated by the government-run Djibouti Mine Action Centre (DMAC). In 2002 DMAC reported that the main roads affected by MOTAPM had been cleared.⁵⁰⁸

According to *Landmine Monitor* in April 2002, mine risk education activities were conducted by DMAC together with the local NGO, Association for Mine Victim Assistance (ASSOVIM), in two primary schools in the regions of Andoli and Aliou Dadda, in the north of the country.⁵⁰⁹

Legislation

Djibouti has been a State Party to the Ottawa Convention since 1 March 1999. Djibouti is a State Party to the CCW, but has not acceded to Protocol II or Amended Protocol II.

502 U.S. Department Of State, "Djibouti Human Rights Practices, 1993", Bureau of Democracy, Human Rights, and Labor, U.S. Department of State, January 31, 1994. http://dosfan.lib.uic.edu/ERC/democracy/1993_hrp_report/93hrp_report_africa/Djibouti.html

503 US Department of State, "To Walk the Earth in Safety", November 2001, p. 4.

504 US Department of State, "To Walk the Earth in Safety", September 2002 p. 14.

505 US Department of State, "To Walk the Earth in Safety", September 2002 p. 14; Statement of Brig. Gen. Zakaria Cheick Ibrahim, Chef d'Etat-Major, Ministry of Defence, at the end of the mine clearance programme of DMAC and the declaration of Djibouti as mine safe, 29 January 2004, cited in *Landmine Monitor* 2004, p. 397.

506 *Landmine Monitor* 2004, p.398.

507 Presentation of Abdoukader Elmi Elabé, National Commission to Ban Anti-personnel Mines, at the International Colloquium on National Structures in Charge of the Mine Issue, organized by CNEMA, Paris, France, 12-13 March 2004; Statement by Ali Abdi Farah, Minister of Foreign Affairs and International Cooperation, at the Workshop on the Ottawa Convention and Mine Action in the Republic of Djibouti, Djibouti, 4 February 2004, cited in *Landmine Monitor* 2004, p. 397.

508 Djibouti Article 7 Report, Form G, 16 January 2003.

509 *Landmine Monitor* 2003 interview with Daher Osman Omar, Chairman, ASSOVIM, Djibouti, 19 March 2003.

Ecuador

Background

The long-standing territorial conflict between Ecuador and Peru, which ended in 1998, led to ERW and mine contamination along the border. In the Cenepa River area, the most serious incidents occurred near Cueva de los Tallos, Base Sur, and Tiwinza where Ecuadorian troops were stationed in Peruvian territory.⁵¹⁰

Assessment of the problem

There are four ERW/mine-affected areas in Ecuador:⁵¹¹

- The province of Zamora Chinchipe;
- The Canton of San Juan Bosco (in the province of Morona Santiago);
- The Canton of Tiwinza (in the province of Morona Santiago); and
- The Canton Zapotillo (in the province of Loja).

During hostilities, Ecuador used anti-aircraft weapons, shoulder-fired surface-to-air missiles and mortars.⁵¹² Ecuador claims that both parties laid mines, but Peru maintains that it did not use mines during the conflict.⁵¹³ While most of the mines used were AP mines, Ecuador has reported using T-AB-1 AT, MGP31, MP-APVL F4, and TC6 AV mines.⁵¹⁴ ERW such as unexploded grenades, mortars, small arms ammunition, artillery rounds and air dropped bombs are likely to be found in conflict-affected areas of the Cordillera del Condor. Forested areas in Morona Santiago Province, for example, are contaminated by ERW and mines.⁵¹⁵

Canton Zapotillo is contaminated by MOTAPM and 59 AV mines have been destroyed in Loja Province since the conflict ended. Ecuador has also acknowledged laying mines within a 56,005 square metre area inside Peruvian territory.⁵¹⁶

In 2003 the CENDESMI (National Centre for Demining) and the General Command for Mine Clearance, with the support and cooperation of the Organization of American States (OAS) concluded impact surveys in the provinces of El Oro, Loja and Morona Santiago.⁵¹⁷ AV and AP mines in the province of Loja contaminate Zapotillo, Guásimo Norte, Sector Los Cocos, Laguar and Macará. In the province of El Oro, AV and AP mines contaminate the towns of Huaquillas, Balsalito, Chacras, Guabillo, Carcabón, Quebrada Seca, El Progreso, San Pedro and Palmales in the Cantons of Huaquillas y Arenillas.⁵¹⁸

Impact

There have been 12 recorded ERW/mine victims in Ecuador: seven in the province of Loja (cantons of Zapotillo and Macará), and five in Morona Santiago.⁵¹⁹ These

estimates are from the period 1981 to 1995 and make no distinction between AP, AV mines and ERW.⁵²⁰ Further examples of ERW casualties include:

- On 20 March 2002, an anti-tank rocket exploded in the Minas de Chiquero sector, 20 km east of Canton Santa Isabel, in Azuay, injuring four male farmers.⁵²¹
- In February 2004, the government reported the death of a civilian killed by an unexploded grenade in the province of Loja in 1987.⁵²²

The ERW/mine problem has a limited socio-economic impact on Ecuadorian society as a whole but isolated indigenous populations in the border areas may be affected.⁵²³ In 1999, UNMAS estimated that the Shuar and Achuar indigenous peoples in the Zamora and Nangaritza river valleys as well as “colonos mestizos” (mixed settlers) are prevented from accessing farming and hunting areas due to ERW and mine contamination.⁵²⁴

ERW/mine contamination on the border with Peru may affect implementation of the Bi-national Border Development Plan, signed between Ecuador and Peru in 1998 to improve the living standards of the local populations.⁵²⁵ Ecuador and Peru also agreed to create a protected ecological area straddling the border. Clearance operations planned in these areas suggest that the park may be contaminated by ERW and mines.⁵²⁶ It should be noted that this contaminated area is densely forested jungle, ecologically important and very difficult terrain.

Ecuadorian and U.S. military exercises have also contributed to the ERW problem:

- On 29 May 2001, two children died in the city of Puyo when a grenade they found exploded. The armed forces of Ecuador and the U.S. had conducted joint manoeuvres in the area where the grenade was found.⁵²⁷
- On 26 March 2003, five people died and two others were seriously injured when several grenades exploded in the commune of La Concordia, on the Island of Puná, 60 km south of Guayaquil.⁵²⁸ Ecuadorian and U.S. naval forces had been conducting joint operations on this island prior to the incident.⁵²⁹ The following day, 175 grenades were cleared nearby.⁵³⁰
- On 8 July 1997, an explosion in La Balbina, south-east of Quito, left four dead, dozens wounded and 1,200 houses destroyed.⁵³¹
- On 20 November 2002, an ammunition storage facility of the Brigada Blindada Galápagos in Riobamba exploded, killing ten and injuring more than 500.⁵³² Almost two years later, on 26 June 2004, there was another explosion in the same facility. The Army News Agency speculated that the explosives remained from the 2002 explosion.⁵³³

- On 23 March 2003, an explosion at a munitions storage facility in Base Naval Sur, in Guayaquil killed one person, injured 28 more and destroyed or damaged several houses.⁵³⁴ Six days later a shell exploded outside a house nearby.⁵³⁵

Efforts to address these problems

The Ecuadorian armed forces, through the Brigade of Engineers 23 "Cenepa", are responsible for clearing ERW and mines.⁵³⁶ On 15 December 2003, Ecuador and Peru concluded joint demining operations in El Oro and the Peruvian Department of Tumbes.⁵³⁷ Ecuador and Peru continued these operations in 2004.⁵³⁸ Inhabitants of El Oro and Loja can report ERW or mines to mine action authorities using a free telephone number.⁵³⁹ Ecuador has existing or planned clearance operations in the provinces of El Oro, Morona Santiago, Loja and Zamora Chinchipe.

In response to the problem of munition storage facilities in populated areas, the government enacted a law in April 2003 requiring that all ammunition depots be removed from populated areas by May 2005 and prohibiting any development project or settlement near the new depots.⁵⁴⁰

Legislation

Ecuador is a State Party to the CCW and its Amended Protocol II, but it has not signed Protocol V on ERW, nor sponsored the proposal for a Protocol on MOTAPM. There are no official statements or information on the ERW or MOTAPM problems.⁵⁴¹ The coordinator of the mine action programme at the Ministry of Foreign Affairs declared that it is too soon to give an official statement on whether Ecuador will ratify Protocol V.⁵⁴²

- 510 Gabriel Marcella, "War and Peace in the Amazon: Strategic Implications for the United States and Latin America of the 1995 Ecuador-Peru War", Strategic Studies Institute, 24 November 1995, p. 1.
- 511 Ecuador Article 7 report 2003, p. 4.
- 512 Gabriel Marcella, "War and Peace in the Amazon: Strategic Implications for the United States and Latin America of the 1995 Ecuador-Peru War," Strategic Studies Institute, 24 November 1995, p. 1-2, 10-11. See also Carlos Espinosa, "Exorcising the Demons of War: Memory, Identity and Honor in the Ecuador-Peru Peace Negotiations", Paper No. 98/99-2, David Rockefeller Center for Latin American Studies, Harvard University, accessed 15 June 2003 at: <http://drclas.fas.harvard.edu/publications/papers/espinosa.html>; Glenn Weidner, "Operation Safe Border: The Ecuador-Peru Crisis", accessed 15 June 2003 at: www.dtic.mil/doctrine/jel/jfq_pubs/jq019610.pdf; Glenn Weidner, "Peacekeeping in the Upper Cenepa Valley. A Regional Response to Crisis," accessed 15 June 2003 at: <http://carlisle-www.army.mil/usamhi/usarsa/ACADEMIC/MOMEPNDU.HTM>,
- 513 UNMAS Inter-Agency Assessment Mission Report, Ecuador, 15 November 1999, accessed 13 May 2004 at: http://www.mineaction.org/countries/_refdocs.cfm?doc_ID=277&country_ID=607.
- 514 UNMAS. Inter-Agency Assessment Mission Report, Ecuador, 15 November 1999, accessed 13 May 2004 at: http://www.mineaction.org/countries/_refdocs.cfm?doc_ID=277&country_ID=607; United States Department of Defense ORDATA, accessed 18 May 2004 at: <http://maic.jmu.edu/ordata/search.asp?SearchMode=0>.
- 515 To Walk the Earth in Safety: The United States Commitment to Humanitarian Demining – Report Home Page. Released by the Bureau of Political-Military Affairs September 2002. http://www.state.gov/t/pm/rls/rpt/walkearth/2002/14873.htm#peru_ecuador
- 516 Ecuador Article 7 report 2003, p. 5.
- 517 Ecuador Article 7 report, 2003, p. 18.
- 518 *Programa de Asistencia a la Acción Integral contra las Minas Antipersonal del Ecuador*, Updates 6 April 2004, accessed 7 May 2004 at: <http://www.aicma-ec.org/Index.htm>
- 519 Yáñez, Helena. *Presentación de la Delegación Ecuatoriana en el Seminario Regional de Víctimas de Minas Antipersonal*. Bogotá, D.C.: 12 November 2003, accessed 15 May 2004 at: <http://maic.jmu.edu/conference/proceedings/2003Colombia/WednesdayReports/Yanez.htm>.
- 520 OAS Mine Action Program, *Cuadro de Registro de Víctimas de Minas Antipersonal en el Ecuador*, accessed 20 August 2004 at: [http://www.aicma-ec.org/Reporte per cent20Victimas per cent20de per cent20Minas_jul_04.pdf](http://www.aicma-ec.org/Reporte%20Victimas%20de%20Minas_jul_04.pdf).
- 521 "Crece el temor por explosiones militares", *El Universo*, 28 March 2003.
- 522 "Intervención de la Delegación del Ecuador ante el Comité sobre Remoción de Minas, Prevención y Tecnologías de minas", accessed 8 June 2004 at: http://www.gichd.ch/pdf/mbc/SC_feb04/speeches_mc/Ecuador_11Feb04.pdf.
- 523 UNMAS. Inter-Agency Assessment Mission Report, Ecuador, 15 November 1999, accessed 13 May 2004 at: http://www.mineaction.org/countries/_refdocs.cfm?doc_ID=277&country_ID=607.
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- 525 UNMAS. Inter-Agency Assessment Mission Report, Ecuador, 15 November 1999, accessed 13 May 2004 at: http://www.mineaction.org/countries/_refdocs.cfm?doc_ID=277&country_ID=607.
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- 528 "Familias temen a polvorín," *El Universo*, 27 March 2003.
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- 530 "Crece el temor por explosiones militares," *El Universo*, 28 March 2003.
- 531 "Crece el temor por explosiones militares," *El Universo*, 28 March 2003.
- 532 "Quién responde por la explosión en la Base Naval?," *Hoy*, 25 March 2003; "Crece el temor por explosiones militares", *El Universo*, 28 March 2003; "Bomberos inspeccionan más polvorines", *El Comercio*, 3 April 2003; "Prestigio militar, nuevamente en duda", *Hoy*, 1 September 2003.
- 533 "EXPLOTA RESIDUO EN BRIGADA 'GALAPAGOS'", *Notimil* (Ecuador), <http://www.fuerzasarmadasecuador.org/notimil/index.htm>.
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- 535 "Junto a la Base Sur estalló una munición", *El Comercio*, 31 March 2003.

- 536 "Intervención de la Delegación del Ecuador ante el Comité sobre Remoción de Minas, Prevención y Tecnologías de minas", accessed 8 June 2004 at: http://www.gichd.ch/pdf/mbc/SC_feb04/speeches_mc/Ecuador_11Feb04.pdf.
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- 542 Email from Helena Yáñez Loza, Counselor of the Demining Program in Ecuador, Ministry of Foreign Affairs of Ecuador, 18 August 2004.

Egypt

Background

Egypt witnessed the first battles of the 1939-45 War's North Africa campaign, when Allied forces attacked Axis forces in September 1942 in the western desert. In 1956, 1967 and 1973, Egypt and Israel engaged in armed conflict in the Sinai Peninsula and in the western desert. ERW and MOTAPM contamination in Egypt is primarily a problem from this history which affects low-density populated areas. The Egyptian Government has identified areas where it perceives the threat as most severe, but more in-depth assessment is required to fully understand the socio-economic impact.

Wartime AT mines found in Egypt include British MK5 and MK7, German Rieglmine 43, S mines, Tellermine 35, 42, 43 and Italian B-2, V-3.⁵⁴³ MOTAPM from the Israeli-Egyptian conflicts include the Egyptian M71 copy of TM46, T79 copy of TS50, as well as Israeli mines.⁵⁴⁴ There is also a wide variety of ERW in Egypt including air dropped bombs.⁵⁴⁵

Assessment of the problem

According to UNMAS and RONCO Corporation assessment missions in 2000 and 2002, there are two main ERW/mine-affected areas in Egypt:

- A strip of land in the western desert from Borg Alarab to the Libyan border in the west, bordered by the Mediterranean Sea to the north and stretching between 25 and 30 kilometres to the south. Urban areas close to contaminated zones include Al-Alaamen, Al-Dab'aa, Fouka, Marsa Matrouh, Sidi Barani, Al-Salloom, with an estimated area of 248,000 hectares.⁵⁴⁶
- The Sinai peninsula and the Red Sea coast (eastern area), including north Sinai governorate, south Sinai governorate (Sinai peninsula), and coast areas of Port Said, Ismailia, Suez, and Hurgada (Red Sea coast), with an estimated area of 20,000 hectares.⁵⁴⁷

Egyptian officials have reported that only 20 to 25 per cent of the estimated 23 million mines in Egypt are actually AP or AV mines and the rest are in fact ERW.⁵⁴⁸ There are 500,000 inhabitants in the western desert and 300,000 inhabitants in the Sinai Peninsula. No in-depth assessment mission has

been undertaken to document the specific socio-economic impact of ERW and mines on these communities.

Impact

There is no national mechanism to record victims of ERW and MOTAPM. The government has announced the figure of 8,313 casualties (696 killed and 7,617 injured) between 1982 and 2004 and it is likely that many other victims have gone unreported in the western desert since 1982, when official data collection began.⁵⁴⁹ In 2003 and 2004, an Egyptian NGO gathered data on ERW and mine casualties. In 2003, seven people were seriously injured in five reported ERW and mine incidents – two survivors required amputations.⁵⁵⁰ In 2004, there were 10 new victims in five ERW/mine accidents from 1 January to 1 September 2004. All of them were in western desert area. Nine of the victims were civilian and one was military; five of the nine civilians were children under the age of 18.⁵⁵¹

A 2004 government paper noted that ERW and MOTAPM prevented the irrigation of land that could have been used for agriculture in affected areas.⁵⁵² ERW and MOTAPM were also affecting the establishment of new communities in the northern coast area, all the more important considering Egypt's plan to encourage people to move out of the Nile Valley in order to manage the projected increase in population of 15 to 20 million in the next 20 years.⁵⁵³ ERW and MOTAPM have hindered tourist projects on the northern coast and delayed oil and gas extraction from reserves estimated at 4.8 billion barrels of oil and 13.4 trillion cubic feet of gas in the western desert.⁵⁵⁴

Efforts to address these problems

The engineering corps of the Egyptian Army is responsible for clearing ERW/MOTAPM. There are also a small number of commercial companies conducting demining with authorisation from the Army. The Army undertook no clearance in 2003 or 2004. Commercial companies conducted some clearance for oil and tourism projects, but no details are available.⁵⁵⁵ In 2000, Egypt established a national committee to supervise ERW and mine clearance. The name of this body was changed in 2003 to the "National Committee to Develop the Northern Coast and Clear

Mines". Representatives from all ERW/mine-affected governorates are included in this committee as well as all relevant government ministries.

Legislation

Egypt has not signed the Ottawa Convention. It signed the CCW on 10 April 1981, but has not yet ratified it. Egypt participates in CCW meetings as an observer. According to

an official at the Egyptian Permanent Mission to UN in Geneva, Egypt is active within the CCW process and contributed to the negotiations on Protocol V on ERW, although it is not party to the treaty.⁵⁵⁶

The Egyptian military keeps records of munitions they have used in combat, but such information is considered as national security information and not available to the public.

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El Salvador

Background

El Salvador's ERW and mine problem is a result of the 1980-1992 internal conflict between government forces and armed non-state actors of the Farabundo Marti National Liberation Front (FMLN).⁵⁵⁷ The conflict resulted in a wide distribution of ERW and mines throughout El Salvador's 14 provinces.⁵⁵⁸ El Salvador does not appear to be contaminated by MOTAPM.

Assessment of the problem

Weapons collected during disarmament activities in the 1990s include more than 10,000 grenades, hundreds of grenade launchers, mortars and rockets, as well as mines and other explosives.⁵⁵⁹ From 1981 to 1986, the Salvadoran air force bombed villages suspected of supporting rebel forces.⁵⁶⁰ Intensive aerial bombardment resulted in mass displacement of the population in rural areas and probably generated significant ERW.⁵⁶¹

Since the UN verified El Salvador's mine free status, the government has consistently maintained that El Salvador is 97 per cent mine free. However, according to information from the National Civilian Police (Policia Nacional Civil – PNC) and independent surveys conducted by the International Demining Group (IDG) in 2001 and 2002, the areas suspected of containing ERW include: Department of Chalatenango; Guazapa Volcano area (Department of San Salvador); Cinquera region (department of Cabañas);

Department of San Vicente; Department of Usulután; Department of Morazán; Department of Cuscatlán.⁵⁶²

In 2001 IDG and its Salvadoran partner, the Foundation for Cooperation and Community Development of El Salvador [CORDES], identified approximately 150 sq km of land for survey and/or demining operations in the departments of Chalatenango, Cabañas, Cuscatlán and Usulután. The survey identified 53 previously unknown or unrecorded ERW and mine locations.⁵⁶³ Further field research in September 2002 identified 33 sites suspected of being ERW-affected.⁵⁶⁴ The majority of ERW found were grenades.⁵⁶⁵ In July 2003, IDG stated that, while the danger from AP mines had practically been eliminated, uncleared ERW remain in several former conflict areas.⁵⁶⁶

Local NGOs and municipal government have reported that ERW contamination in rural areas remains a problem, but that the civilian population is at relatively low risk.⁵⁶⁷ In April 2004, the Ministry of Foreign Affairs stated that El Salvador "may still be affected by UXO."⁵⁶⁸ In May 2004, the National Civilian Police (PCN) provided information on ERW contamination, recent ERW accidents and the PCN's role in dealing with ERW.⁵⁶⁹ Some examples of ERW discoveries include:

- In November 2002, four M-67 Grenades and 28 ammunition cartridges were found during the construction of a building at the University of El Salvador.⁵⁷⁰

- In January 2004, 300 metal tubes used to make hand grenades (candelitos) during the war were found near Las Vueltas, Chalatenango. A local authority reported that explosive devices may still exist in areas affected by the conflict.⁵⁷¹
- On 3 January 2004, an unexploded 500lb bomb was deactivated by the DEA in a schoolyard in San Francisco Echeverría, in Tejutepeque, Cabañas. Civilians in the area were evacuated prior to the deactivation as a precautionary measure.⁵⁷²

Concerns have regularly been raised that ERW, AP mines and IEDs may be in abandoned weapons caches (tatús) and in the hands of former guerrillas and criminals.⁵⁷³

In May 2000, an explosion at a munitions depot in a residential zone of San Salvador injured 44 people and contaminated a 1.5 square mile area with a wide range of explosive artefacts, including AP mines, 61mm and 81mm shells, grenades and other ordnance.⁵⁷⁴

Impact

In 2004, it was reported that there could already be more than 9,700 ERW/mine victims between the ages of 25 to 40 years, but there is no indication of how many casualties were caused by ERW.⁵⁷⁵

Landmine Monitor, drawing upon data collected by Americas Watch, suggests that some 19 to 25 civilians were falling victim to ERW or mines each month in 1986.⁵⁷⁶ A UNICEF paper reports that in the final year of the war, at least 576 people were injured by either ERW or mines.⁵⁷⁷ From January 1994 to mid-1995, 271 people including 42 children were injured from ERW alone.⁵⁷⁸ The local media has reported 22 ERW casualties between 1998 and 2002.⁵⁷⁹ There are no reports of casualties in 2003. The following provide examples of incidents from the past:

- In October 2000, two farmers were killed after finding a mortar bomb in Cerro El Pedrenal, San Antonio de los Ranchos, Chalatenango.
- In February 2001 three children were killed by an ERW explosion while looking for crayfish in El Carrizal canton, San Simón, Morazán.

- In May 2001, one peasant was killed and another wounded by an unexploded grenade in Piedra Grande Arriba canton in northern Zacatecoluca.⁵⁸⁰
- In October 2001, a 14-year-old boy was killed and his nine-year-old brother injured after handling an unexploded grenade in San Eugenio canton, Sonsonate.⁵⁸¹
- In January 2002, 27 children were admitted to the Hospital Bloom in San Salvador with injuries consistent with ERW.⁵⁸²
- On 29 April 2002, a man lost his hand and damaged his left eye after detonating an unexploded grenade while cleaning a drain with a shovel in San Salvador.⁵⁸³
- In May 2004, several children were injured after breaking open an unexploded grenade they found while collecting firewood in Guazapa.⁵⁸⁴

Efforts to address these problems

The Ministry of Defense and the Division of Arms and Explosives (DAE) of the National Civilian Police are responsible for ERW and mine clearance. The PNC has five regional teams that are trained to respond to public calls to clear ERW.⁵⁸⁵

In April 2004, the government restated the importance of risk education in potentially ERW-affected areas.⁵⁸⁶ No formal risk education programmes currently exist, but the PNC is mandated to provide them with a particular focus on unexploded grenades.⁵⁸⁷

The DAE keeps a list of mines and ERW reported and destroyed. In 2000 575 ERW were cleared.⁵⁸⁸ Between June 2002 and May 2003, the PNC 1009 ERW.⁵⁸⁹ On 5 May 2004, the PNC destroyed 28 unexploded grenades discovered in various locations around the country.⁵⁹⁰

Legislation

El Salvador is a State Party to Amended Protocol II of the CCW and of the Ottawa Treaty. El Salvador did not attend the annual conferences of States Parties to Amended Protocol II in 2001-2003.

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558 Dr. James S. Corum, *The Air War in El Salvador*. *Aerospace Power Journal*, Summer 1998.

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560 Dr. James S. Corum, *The Air War in El Salvador*, *Aerospace Power Journal*, Summer 1998.

561 Report of the UN Truth Commission on El Salvador, 1 April 1993

562 IDG, "Pilot Program for a Level I and II Survey on Humanitarian Mine Action", 2003, p. 7.

563 See Landmine Monitor 2004. During these investigations, AP mines, booby-traps, hand grenades, mortar rounds and one rocket were cleared. ERW and mines were recovered at every location investigated. International Demining Group, "El Salvador: this Hard Land", London, May 2001, available at www.demininggroup.org; see also, Graeme Goldsworthy and Dr. Frank Faulkner, "This Hard Land: A Renewal of Humanitarian Mine Action in El Salvador", in "Landmines in Central & South America", *Journal of Mine Action*, Issue 5.2, Summer 2001, pp. 22-23. In May 2001, a national media report on the issue noted that several departments were still at risk from mines and ERW, including San Salvador, Cabañas, San Vicente, Usulután, Morazán, and Chalatenango. See Landmine Monitor 2004. Ana Lidia Rivera, "La muerte a flor de tierra", *Vértice*, *El Diario de Hoy* (San Salvador), 20 May 2001.

- 564 IDG, "Pilot Program for a Level I and II Survey on Humanitarian Mine Action", 2003, p. 7.
- 565 Interview with Tania Góchez, IDG, 28 January 2003.
- 566 See Landmine Monitor 2003. Email to Landmine Monitor (MAC) from Graeme Goldsworthy, IDG, 11 July 2003.
- 567 Telephone interview with Ernesto Morales, Coordinator, CORDES Chalatanango, 26 March 2004; and interview with José Leonidas Argueta Rolda, Executive Director, PODES, San Salvador, 29 March 2004.
- 568 Telephone interview with Francisco Gonzales, Department of Foreign Policy, San Salvador, Ministry of Foreign Affairs, 15 April 2004.
- 569 Interview with Oscar Chávez Valiente, Secretary-General, PNC, San Salvador, 18 May 2004.
- 570 Mauricio A. Qüehl, "Granadas en la UES", *El Diario de Hoy*, 18 November 2002.
- 571 Tania Membreño, "Hallan 300 piezas metálicas que sirvieron para hacer armas", *La Prensa Gráfica*, San Salvador, 16 January 2004.
- 572 Santiago Leiva, "Encuentran bomba de 500 libras en Cabañas", *diariocolatino*. 15 July 2004. <http://www.diariocolatino.com/nacionales/detalles.asp?NewsID=148>; José Zometa, "Encuentran bomba de 500 libras en patio de escuela", *La Prensa Gráfica*, El Salvador, 4 January 2004.
- 573 See Landmine Monitor Report 2001, p. 336-337; Santiago Leiva, "Encuentran bomba de 500 libras en Cabañas", *diariocolatino*. 4 January 2004. <http://www.diariocolatino.com/nacionales/detalles.asp?NewsID=148>
- 574 "Salvadoran munitions store blows up injuring 44," APF, San Salvador, 10 May 2000.
- 575 Mario Castro Grande, Minister Counselor, Permanent Mission of El Salvador to the UN in Geneva, Standing Committee on Victim Assistance, 12 February 2004.
- 576 See Landmine Monitor 1999, p. 247.
- 577 UNICEF, "Clearing the minefields", *Anti-personnel Mines in Central America*, May 1995, p. 13.
- 578 See Landmine Monitor 2004. CRC, *Anti-personnel Mines in Central America: Conflict and post-conflict*, January 1996, p. 13.
- 579 See Landmine Monitor 2003. Telephone interview with Francisco Gonzales, Ministry of Foreign Affairs, 27 March 2003.
- 580 See Landmine Monitor 2001, p. 341.
- 581 Victor Maldonado, "Un muerto y un lesionado por explosión de granada", *El Diario de Hoy* (San Salvador), 9 October 2001.
- 582 Dr. Carlos Gabriel Alvarenga, Bloom Hospital, in Néfer Muñoz, "Un totla de 95 niños salvadoreños sufrieron heridas de bala el pasado mes de enero, según el Gobierno", *Europa Press*, Madrid, 1 March 2002.
- 583 Guadalupe Hernández, "Empleado municipal pierde su mano derecha. Mi mente la tengo para seguir adelante", *El Diario de Hoy*, San Salvador, 8 May 2002.
- 584 Interview with Oscar Chávez Valiente, Secretary-General, PNC, San Salvador, 18 May 2004.
- 585 Interview with Oscar Chávez Valiente, Secretary-General PNC, San Salvador, 17 May 2004.
- 586 Telephone interview with Francisco Gonzales, Ministry of Foreign Affairs, San Salvador, 15 April 2004.
- 587 See Landmine Monitor 2003. Interview with Luis Fernando Repreza Aguilar, Division of Arms and Explosives, 28 January 2003; Susana Joma, "Enseñan a niños a no jugar con las armas", *El Diario de Hoy*, 4 Marzo 2004.
- 588 See Landmine Monitor 2002.
- 589 "Memoria de Labores Junio 2002 Mayo 2003: División de Armas y Explosivos (DAE)", Policía Nacional Civil de El Salvador, p. 87 [http://www.pnc.gob.sv/memoriadelabores/XVI per cent20AREAS per cent20ESPECIALIZADAS.pdf](http://www.pnc.gob.sv/memoriadelabores/XVI%20per%20cent20AREAS%20per%20cent20ESPECIALIZADAS.pdf)
- 590 "División de Armas y Explosivos: Destruye Material Explosivo", <http://www.pnc.gob.sv/noticias/2004/05/0405172.shtml>

Eritrea

Background

Eritrea gained independence from Ethiopia on 24 May 1993 after almost 30 years of conflict. Following a border dispute in May 1998, conflict between the two neighbours resumed until a cease-fire in 2000 paved the way for a UN peacekeeping force.⁵⁹¹ Both conflicts resulted in serious contamination from ERW and MOTAPM.

Assessment of the problem

There are three main sources of ERW/mine contamination in Eritrea: major 1939-45 War battles between Italian and British forces; the 1961-1991 Eritrean war for independence; and the recent border conflict with Ethiopia from 1998 to 2000.

The HALO Trust has indicated that anti-vehicle mines on roads pose a serious threat to clearance and other relief operations in Eritrea.⁵⁹² Based on clearance figures from UNMEE Mine Action Coordination Centre, Eritrea may be more severely affected by ERW than anti-personnel mines.⁵⁹³ The threat exists in several areas throughout the country, in particular on the border with Ethiopia and in

the north-east of the country. UNMEE estimates that three million ERW and 200,000 to 250,000 mines, both AV and AP, contaminate Eritrean territory.⁵⁹⁴ Most of the ERW/mine-contaminated areas in Eritrea are in the northern, north-western and southern provinces.

Cluster munitions were deployed by the Ethiopian air force against targets in Eritrea between 1998 and 2000, including Asmara airport and the ports of Massawa and Assab on the Red Sea coast.⁵⁹⁵ On 9 May 2000, the Ethiopian air force dropped cluster bombs on the Korokon refugee camp in western Eritrea, which led to some ERW contamination.⁵⁹⁶ The towns of Gulu, Haikota and Nakfa also experienced heavy fighting and bombing, leaving significant ERW contamination.⁵⁹⁷ More recently, in April 2004, UNMEE MACC personnel discovered cluster munition dispensers as well as unexploded BL 755 submunitions in the Shambiko area.⁵⁹⁸ UNMEE MACC reported further unexploded submunitions in its update from 19 July 2004.⁵⁹⁹

There is also an AXO (abandoned ordnance) problem in Eritrea. In May 2004, in the village of Girme in Sector West, the MACC EOD Team cleared a collapsed former Eritrean Defence Force ammunition store. The team found

numerous 122mm artillery projectiles and 82mm mortars.⁶⁰⁰ In October 2003 UNMEE MACC reported the discovery of several burnt out military vehicles in the Tsorena area in Sector Centre. These trucks were probably transporting ammunition, given the thousands of ERW that were scattered over a one-kilometre area around the trucks. According to a local militia commander this ERW dated from the border conflict with Ethiopia.⁶⁰¹

Impact

As of September 2003, according to the Landmine Impact Survey implemented by the Survey Action Center, more than one quarter of the 1,676 visited communities were socially and economically affected by ERW and mines.⁶⁰² The rural population, nomadic people, internally displaced persons (IDPs) and refugees were most at risk. The problem was nationwide and not confined to the Temporary Security Zone (TSZ) along the Eritrea-Ethiopia border.⁶⁰³ The LIS indicated 481 communities regarded as being ERW/mine-affected. The LIS also reported 113 sites contaminated solely by ERW.⁶⁰⁴

The ICRC recorded 157 ERW/mine-related casualties in 2001 and 78 casualties in 2002. The majority of the incidents involved men under the age of 20.⁶⁰⁵ Between 2000 and September 2004 the UNMEE MACC recorded 402 casualties.⁶⁰⁶

During this reporting period there were numerous examples of ERW and MOTAPM incidents:

- On 9 October 2003, an Eritrean shepherd approached a demining site in the Shilalo area and reported the discovery of a bomb where his cows were grazing. The item was a type TM-57 AV mine. The deminers subsequently recovered 13 AV mines and a further 26 AV mines were cleared in the same area over the following two days.⁶⁰⁷
- On 19 July 2003, one man was killed when a truck initiated an AV mine 10 km outside of Asmara. The area where this occurred was a former battlefield in the war for independence.
- In October 2003, a UNDP LIS team reported children playing with mines and ERW in the village of Wanki north of Keren and requested urgent assistance to deal with the issue. A MACC EOD team disposed of 3 82 mm mortar shells, 3 RPG-7 rockets, 1 Mk7 AV mine, 4 Pt M1 BA111 AV mines and 1 F-1 hand grenade.⁶⁰⁸
- On 14 November 2003, a 13-year-old boy was killed in Sector Centre of the TSZ after striking a TM 57 AV mine fuse with a stone.⁶⁰⁹
- On 5 June 2004, a 36-year-old resident of Badme died when a grenade exploded while he was working on his land.⁶¹⁰

An ICRC assessment indicates that many people in Eritrea take risks with ERW and mines, not necessarily because of lack of knowledge, but often because of economic needs.⁶¹¹ In another example of deliberate handling of ERW, in 2002 child cattle herders at the Korokon refugee camp in Western Eritrea were "taking the copper rings from the bomblets and using them as cow bells."⁶¹²

Efforts to address these problems

With the arrival of UNMEE and the establishment of the Mine Action Coordination Centre (MACC) in 2000, humanitarian mine action increased with support from a number of international NGOs and UN agencies. In November 2002, the UNMEE MACC formed a dedicated EOD Cell to counter the significant threat posed by ERW. The EOD cell aims to protect the UNMEE Peace Keeping Force; enhance the safety of local inhabitants by clearing ERW from grazing areas, agricultural land, water sources, village areas and other useful land; and coordinate ERW clearance requirements for the demarcation of the border. A UXO Report Form has been developed and distributed to all UN agencies to facilitate clearance by this EOD team.⁶¹³

UNICEF is the lead UN agency for mine risk education in Eritrea and began programme implementation in 2001. The operation started to respond to the immediate threat to affected people, especially IDPs and returnees, posed by ERW and mines contaminating large parts of Eritrea.⁶¹⁴

UNICEF report that the MRE teams they support have received numerous reports of ERW during their activities and this community reporting has led to the destruction of many ERW.⁶¹⁵ Community reporting and MRE have been identified in several affected countries as key components of any effective response to ERW contamination.

According to a UNOCHA review, from January to April 2004, a MACC EOD Team destroyed more than 1,700 items of ERW. The MACC road clearance contractor, the Peacekeeping Force (PKF) and commercial contractor (Mechem), have cleared more than 650 km of roads. PKF demining assets, together with Mechem, cleared an area of more than 400,000 square metres. In total, more than 9,000 people living in the Temporary Security Zone and adjacent areas have received MRE.⁶¹⁶

In addition to mine clearance, from 2001 to May 2003, HALO Trust conducted battle area clearance on 8,777,382 square metres of land. HALO destroyed 11,577 items of ERW, 379 AV mines, and 2,480 AP mines. It also "threat reduced" 3,929 km of road.⁶¹⁷ In 2004, a further 1,167 km of roads was threat reduced. Since 2000, a total of 50,486 ERW have been cleared, as well as 2,568 AV mines and 4,647 AP mines.⁶¹⁸

Legislation

Eritrea has not signed the Convention on Conventional Weapons (CCW) and did not participate in the third annual meeting of States Parties to Amended Protocol II of the CCW or the Second CCW Review Conference in December 2001. Eritrea has been a State Party to the Ottawa Convention since 1 February 2002.

- 591 The peacekeeping force was called UNMEE (United Nations Mission in Ethiopia and Eritrea.)
- 592 Simon Conway, former HALO clearance operator, interview in Geneva, 10 November 2004.
- 593 Numbers of cleared items reported in UNMEE MACC updates consistently show that the majority of items are ERW, not landmines. See http://www.unmeeonline.org/macc/pr_background.htm accessed on 3 June 2004.
- 594 UNMEE background information available on the web on http://www.unmeeonline.org/macc/pr_background.htm accessed on 3 June 2004.
- 595 Rae McGrath, "Cluster Bombs: the military effectiveness and impact on civilians of Cluster Munitions", (London, UK Working Group on Landmines/Landmine Action, 2000) p 41.
- 596 Landmine Action, "Explosive Remnants of War: Unexploded Ordnance and Post-Conflict Communities", (London, Landmine Action, March 2002) pp. 50-51.
- 597 Simon Conway, former HALO clearance operator, interview in Geneva, 10 November 2004.
- 598 UNMEE MACC update dated 19 April 2004.
- 599 UNMEE MACC update dated 19 July 2004.
- 600 UNMEE MACC updates throughout 2004.
- 601 UNMEE MACC update dated 20 October 2003.
- 602 Executive Summary: "Landmine Impact Survey: Eritrea."
- 603 See UNMAS on http://www.mineaction.org/countries/countries_overview.cfm?country_id=798 accessed on 2nd June 2004
- 604 Eritrea: Humanitarian Update 19 Mar 2004, UN OCHA, 19 March 2004, <http://www.reliefweb.int/w/rwb.nsf/480fa8736b88bbc3c12564f6004c8ad5/00ae294ff42ae2ca85256e5c005491d8?OpenDocument>
- 605 Eritrea: ICRC community-based mine/unexploded ordnance awareness programme, 24 January 2003, available on the web on <http://www.icrc.org/Web/Eng/siteeng0.nsf/iwplList279/D648562285F6A227C1256CB8004756C7> as of 14 June 2004
- 606 UNMEE MACC, IMSMA database figures, 28 September 2004.
- 607 UNMEE MACC weekly update, Asmara, Eritrea, 20 October 2003
- 608 UNMEE MACC weekly update, Asmara, Eritrea, 20 October 2003.
- 609 MASG Newsletter, December 2003, UNMAS update.
- 610 UNMEE press briefing, 10 June 2004 accessed 21 September 2004 at: <http://www.reliefweb.int/w/rwb.nsf/6686f45896f15dbc852567ae00530132/97109eb7807f277785256eaf006f84d5?OpenDocument>
- 611 Eritrea: ICRC community-based mine/unexploded ordnance awareness programme, 24 January 2003, accessed 14 June 2004 at: <http://www.icrc.org/Web/Eng/siteeng0.nsf/iwplList279/D648562285F6A227C1256CB8004756C7>
- 612 Landmine Action, "Explosive Remnants of War: Unexploded Ordnance and Post-Conflict Communities", (London, Landmine Action, March 2002) pp. 50-51
- 613 Email from John Raddatz, EOD/Training Officer, UNMEE MACC, 9 June 2004.
- 614 Email and telephone Communication with Lejla Susic, mine risk education coordinator, UNICEF, Asmara, 16 June 2004.
- 615 See various updates from UNMEE MACC, available online at www.unmeeonline.org/macc/reports.htm; MASG Newsletter, December 2003, UNMAS update.
- 616 UNOCHA "Mid-Year Review of the Consolidated Appeals Process (CAP): Humanitarian Appeal 2004 for Eritrea", 15 June 2004.
- 617 Alan MacDonald, Eritrea Programme Manager, HALO Trust, cited in Landmine Monitor 2003, p. 252.
- 618 Email from Gerhard Betchold, Chief of Information, UNMEE MACC, 18 June 2004.

Estonia

Background

The ERW found in Estonia are primarily unexploded artillery, mortar bombs and rocket shells from the 1939-45 War. Various types of MOTAPM and anti-personnel mines are also present, plus abandoned ordnance the Soviet era.

Assessment of the problem

During the 1939-45 War, battle lines changed frequently and both Russian and German forces buried large caches of ordnance, which are still being found regularly in clearance operations and construction projects, in both cities and in the countryside.⁶¹⁹

There is no accurate and complete knowledge of the amount of ERW still in the ground but, according to defence sources, it could be in the hundreds of thousands, based on records from Estonian clearance teams and telephone calls to the emergency centre.⁶²⁰

The Sõrve Peninsula on the southern tip of the Saaremaa Island is considered to contain the heaviest concentration of ERW. The second most affected area is in the north-east (Sinimäe) region, where it is estimated that more than 25 sq km are contaminated. The third largest concentration discovered and recorded was in the Männiku forest south of Tallinn.⁶²¹ In 2003, 1,284 ERW and 246 landmines were removed from this area.⁶²² Large air-dropped bombs, ranging from 50kg to 250kg each, as well as grenades and explosives have also been discovered in Estonia's rivers (Jõgeveste) and various lakes throughout the country.⁶²³

From about 1942 to 1985, Russian troops and aircraft used the Pakri Islands on Estonia's west coast for military training, leaving the islands badly damaged and saturated with mortar bombs, rockets and artillery shells. Since 1994, Pakri has routinely been part of annual clearance operations.⁶²⁴

As a result of the heavy mining of the Baltic Sea during the 1939-45 War, Estonia also has a problem with sea mines

in its territorial waters. Estimates say that 100,000 mines were laid in the Baltic Sea.⁶²⁵

Impact

Between 1 July 2003 and 30 June 2004, 3,408 ERW and seven MOTAPM were cleared in Estonia.⁶²⁶ One man was killed in an ERW-related accident. Although the rate of accidents has been lower in recent years, between 1993 and 2003 the Office of Defence Cooperation recorded some 46 deaths and 145 injuries.⁶²⁷ Apart from causing casualties among the civilian population the Estonian Demining Organization describes ERW as a hindrance to Estonia's economic and agricultural development in affected areas and also describes it as a source for the proliferation of munitions in illegal and criminal activities.

Efforts to address these problems

There is no programme for mine clearance in Estonia, but when clearance and ordnance disposal activities are necessary they are carried out by the Estonian Defence Force and the Rescue Board. The Rescue Board has established and maintains a National Demining Office (NDO) which functions also as the Demining Centre and Bomb Squad.⁶²⁸ Since 2001, the IMSMA database has been used in Estonia to plan areas for scheduled clearance work and to start ERW clearance of former battlefields.⁶²⁹ ERW and mine risk education is part of the regular school curriculum.⁶³⁰

Legislation

Estonia acceded to the Ottawa Convention on 12 May 2004. The Convention entered into force on 1 November 2004.⁶³¹ Estonia joined Protocol I, Amended Protocol II, Protocol III and IV of the Convention on Conventional Weapons on 20 April 2000.

619 Email from Stan Reber, Estonian Demining Organization, 13 October 2004.

620 Office of Defense Cooperation website, <http://www.usemb.ee/odcprograms.php>, accessed 24 September 2004.

621 Email from Stan Reber, Estonian Demining Organization, 13 October 2004.

622 Office of Defense Cooperation website, <http://www.usemb.ee/odcprograms.php>, accessed 24 September 2004.

623 Email from Stan Reber, Estonian Demining Organization, 14 October 2004.

624 Email from Stan Reber, Estonian Demining Organization, 13 October 2004.

625 "International operation to remove mines from Baltic Sea", Itar-Tass, 2 June 2004.

626 The numbers given here relate to explosive munitions with a minimum of 20mm diameter. Munitions less than 20mm such as training rounds and empty projectiles are not included in this figure. Email from Stan Reber, Estonian Demining Organization, 13 October 2004.

627 Office of Defense Cooperation website, <http://www.usemb.ee/odcprograms.php>, accessed 24 September 2004.

628 Email from Stan Reber, Estonian Demining Organization, 13 October 2004.

629 Landmine Monitor 2003, p. 577.

630 E-Mail from Stan Reber, Estonian De-mining Organization, 13 October 2004.

631 ICBL website, section on Treaty Status; "Estonia Parliament Approves Landmine Convention", RIA Novosti, 25 March 2004.

Ethiopia

Background

The extensive ERW and mine contamination in Ethiopia is a result of the 1998-2000 border dispute with Eritrea, as well as clashes since the 1930s on the borders with Somalia and Sudan. Areas most at risk are along the border with Eritrea, in the Ogaden region and along the border with Sudan.

Assessment of the problem

According to the U.S. Department of State, ERW pose a greater threat to people and livestock than landmines, because minefield locations are fairly well known, whereas ERW are more widespread. For example, ERW accounted for more than 70 per cent of the casualties in 2001.⁶³²

The ERW/mine threat in Ethiopia includes a range of UXO, including unexploded cluster submunitions, significant AXO and defensive and nuisance minefields laid by military forces. The most frequently encountered ERW are mortars, artillery and tank munitions, hand grenades and unexploded cluster submunitions.⁶³³ Both Ethiopia and Eritrea used cluster munitions in the 1998-2000 border war. Eritrea raided towns in Ethiopian territory such as Mekele where an attack on a primary school killed 48 people, including 10 children.⁶³⁴ The use of cluster munitions by Eritrean forces has added a new dimension to the ERW/mine threat in Ethiopia, but the majority of ERW found are mortar shells and unexploded rocket propelled grenades.⁶³⁵

The Ethiopian Mine Action Office (EMAO) indicates that ERW and mines have been found in most communities affected by the 1998-2000 conflict with Eritrea and some ERW and mines even date back to the 1935 Italian invasion.⁶³⁶ In the region of Tigray alone, approximately 19,611 people are affected by ERW.⁶³⁷ UNMAS identifies three regions as the most intensely ERW/mine-affected:

- The border with Eritrea, in particular the regions of Tigray and Afar are affected by ERW and MOTAPM dating from the 1998-2000 conflict;
- Areas on the border with Sudan are affected by ERW and MOTAPM due to border disputes as well as ongoing civil war in Sudan;
- The entire 1,626 km Ethiopia border with Somalia, including the Somali region known as the Ogaden, is heavily affected by AV and AP mines due to Somalia's 1977 invasion of Ethiopia and ongoing separatist activities;
- Specific regions known to be highly ERW/mine-affected are: Gonder province, the North, the town of Dese in Welo province, northern Shewar province on the road between Djibouti and Awash, and areas in Welega province.⁶³⁸

It is estimated that one in five mines found in Ethiopia are AV mines.⁶³⁹ In March 2003, Eritrea accused Ethiopia of laying new AV mines in the Temporary Security Zone (TSZ) between the two countries.⁶⁴⁰

Impact

The Survey Action Center has completed data collection for a Landmine Impact Survey, but the final report was not published at the time of writing. Since much of the ERW and mine contamination affects populated areas, Ethiopia has seen regular casualties, both in terms of people and of livestock. UNICEF has said that the ERW/mine threat endangers local populations as well as displaced persons and hampers the delivery of humanitarian aid.⁶⁴¹ Although not published at the time of writing, the LIS reported that ERW and mines affect 1,492 communities and have killed 588 and injured 737 people between 2002 and 2004 throughout the country.⁶⁴² Specific data on ERW/mine casualties collected by the local NGO RaDO through its mine risk education activities in the northern regions of Tigray and Afar indicate that ERW have caused the majority of casualties.

- There were at least 79 ERW/mine casualties in 2002 in the northern regions and the TSZ, the majority of which were caused by AV mines and ERW (51).⁶⁴³
- In 2003, there were at least 39 casualties in the northern regions, with seven killed and 32 injured. Three children died after handling an AV mine, but ERW caused the majority of victims (27).⁶⁴⁴
- In the Afar region between 1999 and 2002, ERW caused 46 out of the 92 casualties. Casualties included several children who were killed and injured while herding cattle or handling ERW.⁶⁴⁵
- On 14 November 2003, a mine incident occurred in the area of the Mereb River Bridge killing three teenaged boys.⁶⁴⁶
- On 13 February 2004, an eight-year-old child was injured after handling an item of ERW in a grazing field in Berekumudi village.⁶⁴⁷
- On 17 April 2004, a truck detonated an AV mine near Adi Ibrahim village on the Barentu-Awegro road in Sector West of the TSZ, causing the suspension of activities by other UN agencies in the area. The Barentu-Awegro road is a major supply route for the UN Mission in Ethiopia and Eritrea.⁶⁴⁸

There have been at least 540 ERW/mine victims in Ethiopia's northern regions of Tigray and Afar from 1998 to December 2003, with more than half of them caused by ERW.⁶⁴⁹ Along the 1,000 km border with Eritrea, some 76,000 IDPs have been unable to return home, often because their homes are contaminated by ERW and mines.⁶⁵⁰ WFP and other aid

agencies have warned that ERW and mines are hampering attempts to move families displaced by the conflict back to their homes.⁶⁵¹ The presence of ERW and mines has also prevented many people from resuming their farming activities.⁶⁵² WFP considers ERW and mines as the major reason why the EMOP (Emergency Operation Programme) is required in the first place. If the items were cleared, food-for-work activities could begin in affected areas to rehabilitate land, harvest water and undertake other essential reconstruction tasks.⁶⁵³

There is evidence that the local population considers ERW a potential resource. For example, unexploded shells and mortars have been used to crush teff (an Ethiopian staple) and coffee beans.⁶⁵⁴ There are also reports that ERW and mine contamination has hindered cross-border trade with neighbouring countries such as Somalia, Sudan, Djibouti and Kenya.⁶⁵⁵

Efforts to address these problems

Set up early in 2001, the government-run Ethiopian Mine Action Office (EMAO) is the agency responsible for humanitarian mine action in Ethiopia. Drawing on a presentation by members of the EMAO, the Landmine Monitor reports the EMAO as destroying 77 anti-vehicle mines and 9,853 items of UXO during the first 3 years of its existence. This was part of a broader process that saw 4.6 sq km land cleared and 767 anti-personnel mines destroyed. Landmine Monitor also reports that in 2003 “UNMEE MACC and other entities” in the Temporary Security Zone cleared some 2,375 km of road, 4.8 sq km of land and destroyed 187 anti-vehicle mines and 5,785 UXO.⁶⁵⁶

Legislation

Ethiopia signed the Ottawa Convention on 3 December 1997, but will only ratify it once its neighbours have agreed to do so. Ethiopia has not signed the Convention on Conventional Weapons.⁶⁵⁷

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Falklands Islands/Malvinas

Background

The Falklands Islands/Malvinas are contaminated with ERW and AV mines as a result of an armed conflict between the U.K. and Argentina in 1982.⁶⁵⁸ The British Royal Engineers conducted post-conflict clearance in and around Port Stanley, as well as in Argentinean minefields.⁶⁵⁹ However, due to casualties among deminers, clearance of the minefields was stopped. ERW and mine contaminated areas were to “be surrounded by perimeter fences and marked off as danger areas”.⁶⁶⁰

Assessment of the problem

ERW and MOTAPM contaminate conflict-affected areas of the islands, especially the settlements on West Falkland at Port Howard and Fox Bay and on East Falkland at Goose Green, Port Fitzroy, Darwin, the Murrell peninsular and in and around Port Stanley.⁶⁶¹ Stanley Common, Gypsy Cove and York Bay beaches are heavily mined with AP and AV mines, the latter “totally inaccessible.”⁶⁶² Contamination is also significant north-west of Stanley, near Wireless ridge and Mount Longdon, south of Stanley on the Common and east of the capital around the FIGAS (Falkland Islands Government Air Service) airstrip.⁶⁶³ Exact numbers of ERW are not available because: “Unfortunately, as there was no requirement at the time to keep such records (of munitions used), any that were kept would now have been destroyed through routine file maintenance and document control. (...) The best estimate we have of the quantities of ERW/MOTAPM left in the Falklands is about 15,000 items.”⁶⁶⁴

The precise number of booby traps and AV mines in the Malvinas/Falklands Islands is unknown.⁶⁶⁵ In 2001, the U.S. Department of State calculated that the quantity of ERW is small and estimated that the extent of the land area affected by ERW and landmines was about 20 sq km.⁶⁶⁶ In 2003, Argentina gave a similar estimate.⁶⁶⁷ The JSEOD (Joint Service Explosive Ordnance Disposal) stationed in the islands holds maps of battlefields and mined areas.⁶⁶⁸ There have been assessments of ERW/MOTAPM contamination in suspected areas, as well as assessments of the impact of this contamination.⁶⁶⁹ When the U.K. deposited its first Article 7 report it highlighted three items: “Stanley Minefield Record Map revised 12/06/90; Stanley Minefield and Area Situation; and Camp Minefield Situation map dated 01/02/94.”⁶⁷⁰

Cluster munitions were used on the islands by British forces during the 1982 conflict. Because of their high failure rate, due in part to soft ground in target areas, the air-dropped BL-755 cluster munitions left large numbers of ERW.⁶⁷¹

Impact

Fourteen landmine casualties have been reported by the U.S. Department of State in the Falklands/Malvinas, but there were no ERW/mine casualties in the period 1994-2001.⁶⁷² The U.K. Ministry of Defense and sources from the Falkland Islands, however, contend that there have been no deaths or injuries from ERW or mines after the 1982 conflict.⁶⁷³

ERW and MOTAPM have little socio-economic impact on the Falklands Islands.⁶⁷⁴ Although contaminated land cannot “be used for livelihood activities such as agriculture”, this has no significant effect on the Falkland Islands economy or society.⁶⁷⁵ According to UK officials, housing and infrastructure projects are potentially affected by MOTAPM and ERW contamination, but JSEOD personnel are prepared to attend to any ERW or mine-related matter.⁶⁷⁶ “There are areas that the population would like to see returned to safe land around Stanley, such as Stanley Common, but Falkland islanders have adapted their lives around the threat and manage to remain on the whole unaffected by the problem.”⁶⁷⁷

In the period 2003-2004, several items of ERW were found:

- In January 2003, an 11-year-old boy found an 81mm high-explosive mortar hidden in peat.⁶⁷⁸
- On 16 October 2003, the JSEOD received a report of a suspicious metal object near Stanley Airport. The item, a 1,000lb bomb, was blown up in situ.⁶⁷⁹
- In November 2003, a journalist working for a U.S. radio station witnessed the detonation of an Italian AV mine.⁶⁸⁰
- On 26 January 2004, an AV mine was discovered between two rocks close to the Tussock islands in Port William. The mine, located about 100 metres from two minefields in the area, was blown up by JSEOD personnel.⁶⁸¹
- In May 2004, a mortar and an AP mine were found on Wireless Ridge. The devices were located some distance from the nearest minefield and police suspected they had been picked up and moved.⁶⁸²

Efforts to address these problems

The Royal Engineers Joint Service Explosive Ordnance Disposal (JSEOD) conducts mine action in the Falklands Islands.⁶⁸³ It briefs locals and tourists on mine awareness, safe areas on the islands and minefield marking and fencing.⁶⁸⁴ In addition, the Falkland Islands have two regular press publications, which post ordnance-related subjects.⁶⁸⁵ Civilian contractors maintain fences around contaminated areas and the JSEOD conducts regular checks.⁶⁸⁶ The detachment is also responsible for the disposal of all ERW and mines found outside minefields.⁶⁸⁷

On 1 April 2004, the JSEOD operations room in Stanley was closed after the Royal Engineers handed the building back to the Falkland Islands Government.⁶⁸⁸ The office had provided information on the location of minefields and acted as a reporting centre for ERW and mine discoveries. The JSEOD will continue to respond to reports of ERW or mines,⁶⁸⁹ but the Royal Falkland Islands Police will become the point of contact for matters related to explosive ordnance disposal and risk education.⁶⁹⁰

The JSEOD keeps a record of all ordnance encountered and cleared.⁶⁹¹ In 1999 the UN reported that 4,220 mines and 2,713,658 ERW had been cleared since the conflict ended in 1982.⁶⁹² The highest priorities for mine action in the Falklands Islands are risk education, the monitoring of mined areas, the maintenance of the minefield fences, and destruction of any ERW or mines.⁶⁹³ Although the JSEOD is mandated to eliminate ERW outside minefields, neither it nor any other organization is currently undertaking clearance of the minefields.⁶⁹⁴

Legislation

Both Argentina and the United Kingdom are States Parties to Amended Protocol II of the CCW.⁶⁹⁵ Neither Argentina nor the U.K. has signed the new Protocol V on ERW. The U.K., however, intends to ratify Protocol V later in 2004.⁶⁹⁶ The U.K. has co-sponsored the proposal for a Protocol on MOTAPM within the CCW.⁶⁹⁷ The U.K. “fully supports moves at the CCW for the development of best practice for all common fuse types”.⁶⁹⁸

The U.K. armed forces keep records of munitions used during combat operations and make this data available.⁶⁹⁹ Argentina states that it has handed records of the locations of minefields laid by its forces to the British,⁷⁰⁰ including “coordinates, distances and mines per square metre as well as types of mines laid.”⁷⁰¹ However, the U.K. armed forces have stated that these records are “generally either inaccurate or did not exist”.⁷⁰²

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FYR Macedonia

Background

The Former Yugoslav Republic of Macedonia suffers from ERW contamination and, subsequent to the 2001 conflict, there were reports of MOTAPM incidents. Internal conflict occurred in 2001 when an ethnic Albanian armed group (the National Liberation Army – NLA) occupied a number of key villages north of the capital city of Skopje. The resulting conflict involved fixed lines of confrontation with the government forces holding the low ground and the NLA occupying the villages and hills above Tetovo, adjacent and parallel to the Kosovo/Macedonia border.⁷⁰³ Seven months of hostilities ended in July 2001.

The basic and localised nature of the conflict has limited the subsequent ERW problem to specific areas and confines it to basic items of ordnance.⁷⁰⁴ Both sides also reportedly used mines.⁷⁰⁵

In addition to ERW and MOTAPM stemming from the 2001 conflict, there also remains, particularly in the south of the country in an area known as the Thessalonica Front, an ongoing problem with 1914-18 War legacy munitions, some of which have been identified as containing the chemical agent Phosgene.⁷⁰⁶ There has been no systematic programme for the clearance and destruction of this legacy.⁷⁰⁷

Assessment of the problem

Contamination in Macedonia can be divided into two distinct parts:

- Municipalities of Kumanovo, Tetovo and Skopje (hereafter referred to as the northern region) that were contaminated predominantly by UXO in the 2001 conflict between the Macedonian Army and police and Albanian ethnic groups.⁷⁰⁸
- UXO contamination from the 1914-18 War in southern Macedonia, in the area known as the Thessalonica Front, a stretch of trench, approximately 250km long, stretching from Ohrid to Gevgelija.⁷⁰⁹ A partial assessment of this region was conducted by Civil Protection representatives, and Macedonian authorities have in the past apparently applied to undertake joint demining projects through the NATO Partnership for Peace (PfP) Programme.⁷¹⁰

After the cessation of conflict in Macedonia, surveys were carried out by several entities, notably the UN Mine Action Coordination Centre (UNMACC) based in Kosovo and the International Trust Fund (ITF) based in Slovenia. These surveys found landmine contamination in the north and west of the country and established that between the threat of mines and unexploded ordnance (UXO), the greater threat "by far" came from UXO.⁷¹¹ UNMACC recommendations led to the establishment in September 2001 of a UN Mine Action Office (MAO) in the country, and agreement between the UN and the national government on a Mine Action Plan, in February 2002. The MAO was transferred to the national authorities in July 2003.

The UNMACC assessment concluded that "the mine situation in FYROM is currently limited to a very localized and easily defined threat. Mines laid by the NLA are specifically situated on tracks and roads that approach NLA defensive positions. If FYROM government forces were to employ mines it is anticipated that these would be closely associated with occupied defensive positions."⁷¹² ERW composed of land service ammunition such as artillery shells, mortars and rifle grenades were found during these assessments.⁷¹³

The MOTAPM that were available to both sides are the same as those used by the Yugoslav National Army forces and Kosovo Liberation Army (KLA) during the conflict in Kosovo. These fall into the following types:

- TMA series of anti-tank mines;
- Albanian/Chinese copies of former Warsaw Pact anti-tank mines (NLA only).⁷¹⁴

In October 2001, a joint team of ITF and U.S. Department of State representatives conducted an assessment of UXO contamination in the three northern municipalities. Clearance priorities were developed that focussed particularly on areas of IDP return.⁷¹⁵

International assessment has also been undertaken in the south of the country. In November 2002, reconnaissance was carried out by the UN MAO in the areas of Gevgelija, Kavardaci and Bitola to assess the problem of the existence of UXO still remaining from the 1914-18 War. It was established that all three areas, once part of the

Thessalonica line from 1915 to 1918, are still heavily contaminated with UXO. These items are occasionally uncovered by the local population.⁷¹⁶

Impact

Three examples of MOTAPM incidents, reported by the original UNMACC assessment mission and subsequently by the MAO, illustrate that AV mines were causing considerable problems in the post-conflict environment.

- On 19 July 2001 a vehicle belonging to the European Union Monitoring Mission (EUMM) caused an explosion near Novo Selo. The vehicle was destroyed and the three occupants killed. The track that they were travelling is in a remote area and they were heading towards NLA positions. It is considered likely that the vehicle hit an anti-tank mine laid by the NLA.⁷¹⁷
- On 29 July 2001 a Macedonian woman was killed and her family injured when their car detonated an anti-tank mine while heading towards the village of Jazinec. The area had recently been occupied by the NLA and it is again considered likely that this was a mine laid by the NLA.⁷¹⁸
- On 19 May 2002, a Task Force Fox (TFF) EOD team, while carrying out route reconnaissance, detonated an anti-tank mine with their vehicle, resulting in the death of the Italian EOD team commander and injury to the German EOD commander.⁷¹⁹

According to the Ministry of Health and the national Red Cross organization, however, there have been no mine victims in the years 2003 or 2004 (as of August that year).⁷²⁰ However, according to the Landmine Monitor Report, on 4 March 2003, two Polish soldiers serving with KFOR were killed and three civilians injured when the vehicle they were travelling in hit a landmine on a road north-east of Skopje.⁷²¹

Macedonia does continue to report casualties from ERW in the southern "Thessalonica line". According to figures made available to Landmine Monitor, ERW in this region killed 14 and injured 142 between 1965 and 2002.⁷²²

Based on the clearance priorities, it would appear that fear of mines and ERW did restrict agriculture to some extent.⁷²³ It also appears, however, that many people living in affected areas were proactive in dealing with the situation. In early 2002, as the snows thawed and the agriculture season began, Task Force Fox (TFF) reported that the farmers returning to their lands were starting to place the ERW from the fields onto the verges of the roads in the hope that TFF would deal with them.⁷²⁴

According to UNMAS, after the conflict of 2001 "about 80 villages were affected to varying degrees by UXO,

hampering the safe return of about 100,000 IDPs and refugees. In mid-July 2002, about 55 villages were still affected, preventing the return of an estimated 8000 people."⁷²⁵ According to government sources all refugees have now returned to their homes and only a small number villages are still affected with ERW contamination. Civil Protection teams are clearing those villages on the basis of emergency response.⁷²⁶

Efforts to address these problems

Clearance began in early 2002, and involved a variety of actors, including international forces under NATO command structures, as well as international NGOs and national teams.

Practically all of the priorities set by Macedonian Government in the 2001 crisis region were cleared by Handicap International, CARE (contracting Minetech International) and the ITF, and thus the only significant problem remaining is the Thessalonica front in southern Macedonia. According to UN MAO, clearance of that area would require huge amount of funds and some additional clearance capacity (national or international).⁷²⁷ Despite the fact that clearance has been occurring in this region, on an ad hoc basis since 1965, the resources to achieve comprehensive and impact-free clearance are considered beyond the scope of national structures.

On 19 June 2003, all authority for mine action in Macedonia was passed to the national Ministry of Defence, Office of Civil Protection (OCP), along with all resources belonging to the UN Mine Action Office. According to the Executive Summary written at the transition of the MAO to national ownership, "it is envisaged that the national MAO and national clearance capacity, once they have completed the clearance of the 2001 crisis region, shall establish a clearance plan for the areas affected by these [1914-18 era] munitions."⁷²⁸ There seems to be little evidence that this will happen in the near future. The government forces also maintain a specialist EOD capability within the Ministry of Interior.

Legislation

FYR Macedonia is a State Party to the Ottawa Mine Ban Treaty. In January 2003, Macedonia reported to the Organization for Security and Co-operation in Europe that it had not adopted legislation or taken any specific implementation measures "because there is simply no need for it".

FYR Macedonia is a State Party to the Convention on Conventional Weapons (CCW), but has not ratified its Amended Protocol II.

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Georgia and Abkhazia

Georgia and Abkhazia are grouped together in this report for reasons of convenience of representation. No political meaning should be attributed to this grouping.

Background

Georgia regained its independence when the Soviet Union dissolved in the early 1990s, and was recognised by the UN as an independent state in July 1992. Two significant sources of ERW and MOTAPM exist in the country. Armed conflict over the region of Abkhazia, in north-west Georgia along the Black Sea, was most intense in 1992-1993. Tension persists and the resulting ERW and MOTAPM contamination continues to claim victims. There are also several former Soviet military bases on Georgian territory that continued to be occupied by Russian troops after Georgian independence. Substantial amounts of mines, UXO and AXO exist in and around these bases.

In addition to these two sources of ERW and MOTAPM, new anti-tank mines were placed in April/May 2004 during heightened tension over control of Adjara, in south-west Georgia.

Assessment of the problem

The HALO Trust conducted a comprehensive survey of Abkhazia in 1999/2000 that distinguished between areas contaminated by ERW, MOTAPM and APM.⁷²⁹ They estimated that approximately 20,000 mines of various types were laid in Abkhazia during and after the 1992-1993 conflict. All the mines were of Soviet origin and include TM52 and TM57 anti-vehicle mines. Approximately 10 per cent of the mines in Abkhazian are estimated to anti-vehicle mine.⁷³⁰ HALO also found a considerable

number of improvised mines, made mostly from ammonium nitrate packed into oxygen cylinders or fuel drums. Mines and UXO affect three areas of Abkhazia: the Gali, Ochachire and Sukhumi regions. The Abkhazian administration has estimated that 30-35,000 mines are planted in Abkhazia, and other sources have estimated up to 50,000 mines.⁷³¹

The Soviet Union maintained numerous military bases in Georgia, and Russian forces still maintain control a number of military facilities on Georgian territory: the Batumi base in Adjara, the Akhalkalaki base in south Georgia close to the border with Armenia, the Gudauta base in Abkhazia, the No. 205 Warehouse and Bath in Tbilisi, a military sanatorium in Kobuleti, and two military camps.⁷³² Negotiations are ongoing for the Russian forces to vacate these facilities, and the Russian Defence Minister Sergei Ivanov stated on 10 August 2004 that Russia is ready to hand over military facilities in Tbilisi, Akhalkalaki and Kobuleti to the Georgian authorities.⁷³³ Russian military forces withdrew from the Vaziani military base near Tbilisi in 2001.⁷³⁴ Ex-Soviet military bases vacated in the past have presented dangers to civilian populations due to the UXO and AXO left at the bases.⁷³⁵ At least nine former and current Russian military bases in Georgia were mined in the early 1990s, and some of these bases are still staffed by Russian personnel, some have been handed over to the Georgians, and others have been abandoned.⁷³⁶

One of the most notorious former bases in Georgia is the "Alinja" military storage depot in Sagaredjo in east Georgia. Founded in 1938, it covers an area of 110 ha and had stored up to 100,000 tons of munitions. Russian troops transferred much of the contents of the depot by train to another Russian base in Gyumri, Armenia in

2003.⁷³⁷ Munitions whose storage term had expired were shipped by train to the Vaziani military base near Tbilisi for destruction.⁷³⁸ At least 370 railway cars filled with munitions have been shipped out of Sagaredjo since 1999. However, the protective mines placed around the depot have not been cleared.⁷³⁹

Fatal accidents have occurred at the former Russian military airports at Telavi in east Georgia and Kopitnari in west Georgia, as well as the Vaziani army base near Tbilisi. These incidents were variously caused by mines placed defensively by Soviet or Russian forces, UXO resulting from training exercises, or AXO left behind by departing troops.

A programme funded by the OSCE entitled "Recycling and destruction of ammunition and bombs on former Soviet bases in Georgia" is ongoing.⁷⁴⁰ Several surveys have been conducted to determine the extent of UXO and AXO left in and around the 33 bases formerly occupied by Soviet/Russian forces in Georgia.⁷⁴¹ It is unlikely that any "undiscovered" stockpiles exist, and the only unknown factor is the contents of the bases still occupied by the Russians in Batumi, Gudauta and Akhalkalaki.

A dispute over control of the Adjara Autonomous Republic in south-west Georgia in April and May 2004 led to the placement of more than 50 anti-tank mines on roads and bridges in the region.⁷⁴² The mines were placed by security forces loyal to the former Adjarian leader, Aslan Abashidze, who has since been removed from power. Four anti-tank missiles and four TNT bombs were also found in the area.⁷⁴³ It was also reported that areas of the oil terminal in Batumi port were mined, and that a road bridge connecting Batumi with Kobuleti, Adjara's second largest town, was also mined.⁷⁴⁴

Impact

The HALO Trust has recorded 299 civilian mine and UXO victims in Abkhazia since 1992.⁷⁴⁵ All survivors of mine and UXO accidents were interviewed by HALO staff and their details were entered into an accident statistic database.

From the HALO Trust database, 243 casualties can be identified that distinguish between the types of explosive device.⁷⁴⁶ Anti-personnel mines caused 65 per cent of these casualties, anti-vehicle mines caused 28 per cent, and UXO caused 6 per cent.

The ethnic Georgian population of Abkhazia was forced to flee during the war, and now live as IDPs in Zugdidi, Tbilisi or elsewhere. Some of the places of origin of the IDPs, such as Gali, are contaminated by mines and UXO and are now sparsely populated. David McMahon, Halo Trust programme manager in Abkhazia says that "if there was a political settlement to the conflict and the IDPs were allowed to return to Abkhazia then they would be returning to ERW-affected areas".⁷⁴⁷ HALO hopes to implement an accelerated demining programme to make all areas of Abkhazia safe for returning IDP populations by the spring of 2007.

The Georgian Committee of the International Campaign to Ban Landmines has collected information on the number of victims of landmines and UXO in Georgia.⁷⁴⁸ Their data does not distinguish between landmines (AP or MOTAPM) or UXO as the cause of the incident. The number of recorded incidents has decreased each year since 2001 from a high of 97 to 87 in 2002, 43 in 2003 and 25 to July 2004. Adult men are the most common victims (72 per cent of casualties since 2001) and 20 per cent of casualties have been recorded as children.⁷⁴⁹

At least 17 civilian accidents have occurred at the former Russian military base at Sagaredjo in Georgia.⁷⁵⁰ One man and his son were killed in February 2004 while deliberately handling an item of ordnance that they found at the Vaziani military base.⁷⁵¹ At least four other explosions occurred at the Vaziani base during the previous three years, killing seven people and injuring two.⁷⁵² Fatal mine accidents have occurred at the former Russian military airports at Telavi in east Georgia, and at Kopitnari in west Georgia.⁷⁵³

The recovery and recycling of scrap metal is a valuable source of income for some people. Ferrous metal can be sold in Tbilisi for about US\$50 per ton, and non-ferrous metal for about US\$500 per ton.⁷⁵⁴ This is a substantial amount of money in economically depressed areas, and some people take the risk of collecting unexploded ordnance from former military bases and battle areas for sale to scrap metal dealers. The result is, not infrequently, accidental explosions resulting in death or injury. The risk, however, is not limited to those who initially collect the ordnance. Scrap metal dealers, transporters and processors are also in danger. Metals collected in various parts of Georgia are purchased by dealers and transported to the ports of Batumi and Poti for export by ship to Turkey and other countries.⁷⁵⁵ The port of Poti has three large scrap metal storage terminals. The leader of the Georgian NGO Kardinali, Mr. Z. Metreveli, estimates that 0.4 per cent of the scrap metal collected at the three terminals during the first half of 2004 is explosive ordnance.⁷⁵⁶ Unexploded air-dropped bombs, as well as many other smaller munitions, have been found mixed with other scrap metal. On 8 May 2003, as workers in the Poti port were cutting scrap metal into pieces with a torch, a munition exploded due to the heat. Two workers were badly injured by shrapnel and the driver of a delivery truck lost both arms.⁷⁵⁷ In April 2003, a furnace in Turkey that was melting scrap metal from Georgia was destroyed when a shell mixed with the scrap metal exploded.⁷⁵⁸ A ship carrying Georgian scrap metal reportedly exploded in October 2003, although Georgian maritime administration officials have refused to comment on the cause.⁷⁵⁹ Turkish authorities now carefully check scrap metal arriving from Georgia before it is melted. Explosions in melting furnaces have also reportedly occurred in Iran during melting of scrap metal from Georgia and Azerbaijan.

Anti-tank mines were reportedly used as a political instrument in May 2004 in the power struggle in the

Adjarian region of Georgia. Popular protests were occurring in Batumi, the largest city in Adjara, against the continued rule of Adjarian leader Aslan Abashidze. It was reported that Adjarian security forces placed mines on a road bridge connecting Batumi with Kobuleti (Adjara's second largest city) to prevent additional protesters from arriving in Batumi.⁷⁶⁰ This effort proved ultimately ineffectual, as Mr. Abashidze was forced to cede power several weeks later.

The AT mines placed in the Adjara region in early 2004 by Abashidze loyalists were reportedly cleared completely by Georgian security forces after the departure of Mr. Abashidze.⁷⁶¹ At least one mine remained in place, however, and on 21 August 2004 was triggered by an off-road vehicle driving on the beach at the village of Chakvi, near Batumi on the coast of the Black Sea.⁷⁶² One person was killed in the blast, six others were injured.⁷⁶³ Additional mine clearance efforts were made in the area following this blast.

Efforts to address these problems

There is no agency within the Georgian Government that coordinates mine action.⁷⁶⁴ Responsibility for clearance of mines and UXO depends on the location of the device.⁷⁶⁵ In military areas the responsibility lies with the Ministry of Defence, in populated areas and along roads and railways with the Ministry of Internal Affairs, and along border areas with the Department of Border Guards. The HALO Trust has conducted mine surveys in Georgia and there is a local non-governmental demining organization, Jani, composed of former Georgian military engineers.⁷⁶⁶

Within the region of Abkhazia, the HALO Trust funds, staffs and supports the Abkhazian Mine Action Centre.⁷⁶⁷ This agency acts to consolidate and disseminate all mines information in the region.⁷⁶⁸ The HALO Trust conducts mine clearance in the region, and has cleared more than five million square metres of contaminated land.⁷⁶⁹ HALO is

currently working on a proposal to implement an accelerated demining programme and hopes to make Abkhazia mine-safe by spring 2007. Russian forces in the region also have demining capacity.⁷⁷⁰

The Georgian Government requested help from OSCE to get rid of the vast amount of ammunition, bombs and rockets/missiles left in Georgia after the departure of Soviet forces.⁷⁷¹ An agreement was signed on 30 January 2003 between OSCE and the Georgian State Military Scientific and Technical Centre, DELTA, to begin a multi-year project to destroy or recycle old munitions.⁷⁷² Demolition of unstable bombs began in October 2003 at the former military airbase at Shiraki in eastern Georgia.

The AT mines placed in the Adjara region in early 2004 by Abashidze loyalists were supposedly completely cleared by Georgian security forces.⁷⁷³ Additional clearance efforts were undertaken following the fatal MOTAPM explosion on 21 August 2004.⁷⁷⁴ Mr. Abashidze has left Georgia and the Adjara region is now more fully integrated with the Georgian central government, and it is unlikely that further placement of MOTAPM will occur in Adjara.

Legislation

The Georgian Government has not acceded to the 1997 Mine Ban Treaty. A Ministry of Defence representative stated in 2002 that the government is unable to guarantee compliance on certain parts of its territory that are not under its jurisdiction, and is financially unable to clear devices left by Soviet and Russian troops.⁷⁷⁵ Georgia has ratified the original Protocol II of the CCW, but has not ratified the amended Protocol II.

Abkhazia is not an internationally recognised state and its administration is not eligible to ratify international weapons conventions.

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Greece

Background

Greece was invaded and occupied by Italian and German forces during the 1939-45 War and sporadic clashes took place between occupying troops and Greek Partisans. Until recently, relations with Turkey have been tense although, like Turkey, Greece is a member of NATO.

Assessment of the problem

Greece is believed to be the only EU country which still uses landmines. MOTAPM and AP mines are maintained on its border with Turkey, along the Evros River in northern Greece. There are also mined areas dating from the Greek civil war (1947-1949) in the Epirus, Grammos and Vitsi mountains, and in areas near the border with Bulgaria. A press report in October 2001 described the Epirus, Grammos and other mountains in the western Macedonia region as "still not safe for anyone crossing the slopes".⁷⁷⁶ There are also nine mine/UXO-suspected areas in the Aegean islands and five suspected areas on the mainland,

plus Yaros island which was used previously as a test-firing range and thus likely to contain substantial quantities of ERW.⁷⁷⁷ According to a Defence official, there are a total of 41 areas in Greece suspected to be mine/UXO-contaminated, mostly in the Grammos and Vitsi mountains, and 28 known minefields in the Grammos and Vitsi which will be cleared and given for public use.⁷⁷⁸ The minefields along the Turkish border include MOTAPM.⁷⁷⁹ This is reportedly well maintained, clearly marked, and cordoned off by a 1.60 metre-high metal fence while red phosphorescent triangles give a clear warning with the word "mines" in Greek and English⁷⁸⁰. However there are reports that not all minefields are this well marked.⁷⁸¹

Most MOTAPM were placed along the Greek-Turkish border after 1974, when Greece nearly went to war over Turkey's invasion of Cyprus following an Athens-backed coup on the island. Clearance of anti-personnel mines from the Evros minefields started in September 2003, immediately after ratification of the Mine Ban Treaty. Greece intends to maintain defensive minefields on the border with Turkey,

and is removing AP mines from the existing mixed minefields, and replacing them with MOTAPM. Officials have stressed that 'standard' MOTAPM, without anti-handling devices, are being used. By March 2004, 11 minefields had been relaid in this way. One minefield which had contained only anti-personnel mines was left clear of any mines. In 2004, Greece planned to convert 10 more minefields on the Evros.⁷⁸²

In the northern regions, Greece has reported that there are "no properly defined minefields in this area and no maps, the number of dangerous devices to be removed is very large... 'Suspect areas' to be cleared and secured in the mountains of Grammos and Vitsi alone, measure well over 40,000 hectares".⁷⁸³ In 2002, the Greek Army demined 66,000 square metres of mine-affected land in these regions, as part of an ongoing clearance operation. Clearance operations along the border with Bulgaria were completed in December 2001.⁷⁸⁴

ERW/ UXO left over from the 1939-45 War continues to pose a threat. On 17 May 2003, a British mine was found by fishermen in the sea off Kavala and defused.⁷⁸⁵ UXO from the War was found and destroyed at 2004 Olympics construction sites near Hellenikon airport outside of Athens.⁷⁸⁶

Impact

There is no central register of mine casualties. The greatest casualties are among migrants seeking to enter Greece and the EU illegally and these accidents are most likely to result primarily from anti-personnel mines not MOTAPM. Some 60 would-be migrants have been blown up and killed in minefields on the Greek side of the Evros river since 1995 and as many others injured, according to the Greek section of the humanitarian organisation Medecins du Monde.⁷⁸⁷ According to official government statistics, the figures are 40 dead and 30 injured since 1996.⁷⁸⁸ Although the minefields are mixed, it is likely that anti-personnel mines account for the majority of the casualties.

Most recently a Palestinian would-be immigrant was killed and four other people injured in August 2004. The incident occurred on the Greek side of the Greece/Turkey border near the village of Kastanies, the only stretch of the mine-strewn 200-kilometre (130-mile) frontier where illegal would-be migrants can cross into Greece on foot.⁷⁸⁹ The Evros River trail on the Greek-Turkish border is used by thousands of illegal immigrants en route from Asia to Europe every year and people are detained there almost daily.

Efforts to address these problems

Greece has stated that fencing and marking of the minefields along the border between Greece and Turkey has been improved and that it now exceeds NATO standards. Based on the number of migrants arrested, Greece estimates that these measures have resulted in reduction of mine incidents by almost 90 per cent.⁷⁹⁰

All mine clearance has been and will apparently continue to be done by the Greek Military. Mine/UXO clearance is carried out by the Land Minefield Clearance Battalion, which was formed in 1954. It includes 16 teams each composed of eight men and an engineer officer. In 2003, 643,201 square metres of mine-contaminated land were cleared in northern Greece, excluding the Evros minefields.⁷⁹¹ The Ministry of Defence planned to survey and assess the mine/UXO contamination in the Aegean islands, Yaros, and five mainland areas with a view to clearance.⁷⁹²

Greece and Bulgaria agreed in November 1997 to remove mines from their common border. Greece completed manual clearance on its side of the border in December 2001 at an estimated cost of 5.7 million (US\$7.69) over the period October 1997 to December 2001: 38 minefields were cleared, with 16,181 anti-personnel mines and 12,409 MOTAPM removed; 25 of the minefields were being re-checked in 2002 and 2003.⁷⁹³

From 1954 to 2002, demining activities have cleared more than 150 square kilometres of land and disposed of 250,000 mines and other munitions. Greece reported that in 2000 to 2002, 3.7 square kilometres were demined or area reduced, during which 16,000 anti-personnel and 14,000 MOTAPM were cleared and 18,000 UXO destroyed or neutralized.⁷⁹⁴

Legislation

Greece is a party to both the Ottawa Convention banning anti-personnel landmines and the Amended Protocol II to the CCW Convention. Greece signed the Ottawa Convention on 3 December 1997. In September 2003, Greece and Turkey jointly ratified the Ottawa Convention.⁷⁹⁵ Greece presented the first and only Article 7 report as required by the Mine Ban Treaty on 7 July 2004.

Greece is party to Amended Protocol II of the Convention on Conventional Weapons (CCW) and attended the Protocol's Fourth Annual Conference of States Parties in December 2002. Greece submitted an annual report, as required by Article 13 of the Protocol, on 12 March 2002.⁷⁹⁶

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Guatemala

Background

Guatemala's ERW problem is a result of 36 years of internal armed conflict which officially ended in 1996. Due to the nature and duration of the conflict, large populated rural areas were affected by ERW and small numbers of MOTAPM and AP mines.⁷⁹⁷

Assessment of the problem

Clearance operations in Guatemala up to May 1998 found many more ERW than AV or AP mines. Unexploded grenades made up the majority of cleared items. Clearance operations prior to May 1998 resulted in the collection of 78 grenades of various types, eight aircraft bombs, one 500lb. bomb and 18 claymore mines.⁷⁹⁸ Other weapons destroyed in Post Phase One clearance operations include: AT-20 AV mines, smoke grenades, M26A2 fragmentation grenades, 60mm mortar grenades, 80mm mortars, 150mm grenades, 250lb. bombs, 240lb bombs, SR 57 fuse grenades.⁷⁹⁹ In April 2004, a 240lb bomb was discovered, but the explosives had already been removed, presumably to make other explosive devices.⁸⁰⁰ In addition to conventional weapons and explosives, the URNG⁸⁰¹ forces also often employed IEDs.⁸⁰²

In 1997 the government estimated the total number of ERW to be between 5,000 and 8,000, compared with estimates of a maximum of 1,500 mines.⁸⁰³ As of April 2004, there were an estimated 4,500 to 5,000 ERW remaining to be destroyed in final clearance operations scheduled for 2004-2005.⁸⁰⁴ In its June 2002 Article 7 Report, Guatemala listed 13 former conflict zone departments considered at "high risk" and two departments at "low risk" from UXO.⁸⁰⁵ Guatemala has a minor problem with MOTAPM and in May 2003 two AV mines were destroyed.⁸⁰⁶

Impact

Since 1994, there have been 23 registered deaths and 20 injuries by ERW in Guatemala. Although there are no official registries available before this date, the local NGO ASCATED has provided rehabilitation services to a total of 177 ERW/mine victims.⁸⁰⁷ By August 2003 UNICEF Guatemala had identified more than 140 ERW/mine victims, the majority civilians.⁸⁰⁸ In 2001, one ERW incident was recorded, resulting in the deaths of four children. There were no ERW casualties reported in 2002, 2003 or 2004.⁸⁰⁹ Investigative reports indicate that death and injury from ERW places a burden on an already impoverished public health system.⁸¹⁰

According to OAS officials in Guatemala hand grenades present the greatest danger to the civilian population due to accidents when they are found and mishandled and also because they are increasingly being used as offensive weapons. Some incidences of accidents and intentional misuse of unexploded grenades include:

- In 1998, a woman and her six children died in the department of Petén when a hand grenade she was cleaning exploded. The children found the artefact on a soccer field while playing.⁸¹¹
- In 1999, a group of students admitted to a plan where they would throw a hand grenade into a crowded schoolyard while another student actually threw a grenade into an occupied bathroom.⁸¹²
- In December 2001, four children were killed when they handled a grenade in Salama, Baja Verapaz Department.⁸¹³
- In May 2004, two children were killed by a grenade they found in a refuse area.⁸¹⁴

Between 1981 and 1983, 1 million people were internally displaced as a result of the conflict.⁸¹⁵ The existence of ERW in rural post-conflict communities has contributed to the difficulties experienced by many Guatemalans in resettling displaced communities and returning land to agricultural use.⁸¹⁶ Clearance operations have targeted rural areas and formerly productive land, but there is no concrete information on the impact of ERW on agricultural production.

Efforts to address these problems

Clearance operations rely on an integrated multi-language risk education campaign to gather information on the location of ERW from ex-combatants and people living in affected communities. This is the most effective way of facilitating marking and clearance.⁸¹⁷ The Guatemalan Army Engineers Corp – CIEG has primary responsibility for demining. Clearance operations in Guatemala have integrated civil society through the involvement of 18 members of the Volunteer Firemen Corps trained in mine/ERW clearance and 20 reintegrated members of the former Guatemalan National Revolutionary Union.⁸¹⁸ The OAS provides technical assistance and international supervision for clearance operations.⁸¹⁹

From July 2003 to March 2004, 33 items of ERW were found and destroyed – the vast majority were grenades of some kind.⁸²⁰ In 2003, ERW/mine awareness and clearance operations in Guatemala were concentrated on the following five departments:⁸²¹

- Huehuetenango: (31 municipalities; 1,356 villages; 959,945 inhabitants);
- Alta Verapaz: (15 municipalities; 969 villages; 783,820 inhabitants);
- Retalhuleu (nine municipalities; 316 villages; 311,508 inhabitants);
- Suchitepéquez: (20 municipalities; 415 villages; 462,399 inhabitants); and
- Baja Verapaz: (eight municipalities; 524 villages; 234,794 inhabitants).

Legislation

Guatemala is a State Party to Amended Protocol II of the CCW and attended the Fourth Annual Conference of State Parties to Amended Protocol II in December 2002. It did not submit its annual Amended Protocol II article 13 report.⁸²² Guatemala has been a State Party to the Ottawa Convention since 1 September 1999.

- 797 Guatemala has not had a significant AP or AV mine problem; demining operations in affected areas have focused on removing grenades, mortars, unexploded ordnance and other explosives.
- 798 William H. Godnick, "Demining in Guatemala: Observations Applicable to Voluntary Weapons Collection Programs", Program for Arms Control, Disarmament and Conversion (PACDC), Monterey Institute of International Studies (MIIIS), October 1998.
- 799 Article 7 Report 2004; Interview with Coronel Nelson Leonel Bonilla Romero, Chief MARMINCA Nicaragua, Managua, 31 May 2004.
- 800 Interview with Coronel Nelson Leonel Bonilla Romero, Chief MARMINCA Nicaragua, Managua, 31 May 2004.
- 801 Unidad Revolucionaria Nacional Guatemalteca
- 802 Juan Carlos Ruan, "Empowering the People Through Mine Awareness in Latin America," James Madison University Website. [http://www.hdic.jmu.edu/journal/4.3/focus/Latin per cent20America/Latin_America.htm](http://www.hdic.jmu.edu/journal/4.3/focus/Latin%20per%20cent20America/Latin_America.htm)
- 803 Explosive Remnants of War: A Global Survey, Landmine Action 2003.
- 804 See Landmine Monitor 2004. Interview with Jhony Cabrera, Executive Coordination Unit, Guatemala 12 and 22 April 2004.
- 805 Article 7 Report, Form C and National Demining Plan Attachment, 5 June 2002. High Risk Departments: Northern Alta Verapaz, Baja Verapaz, Chimaltenango, Escuintla, Huehuetenango, Quetzaltenango. Quiché, Southern Peten, Retalhuleu, San Marcos, Solola, Suchitepequez and Totonicapan: Low Risk Departments: Santa Rosa and Jutiapa
- 806 Guatemala Article 7 Report, May 2004.
- 807 Landmine Monitor 2004, p.474.
- 808 Consultative Group Examines Progress of Guatemala Peace Process. 15 May 2003. <http://www.globalsecurity.org/military/library/news/2003/05/mil-030515usia04.html> Issue 7.2, August 2003.
- 809 OAS Report, Portfolio 2003-2004/Guatemala, Washington, USA, 2003.
- 810 William H. Godnick, "Demining in Guatemala: Observations Applicable to Voluntary Weapons Collection Programs", Program for Arms Control, Disarmament and Conversion (PACDC) Monterey Institute of International Studies. October 1998.
- 811 William H. Godnick, "Demining in Guatemala: Observations Applicable to Voluntary Weapons Collection Programs", Program for Arms Control, Disarmament and Conversion (PACDC) Monterey Institute of International Studies. October 1998.
- 812 Edward J. Laurance and William H. Godnick, "Weapons Collection in Central America: El Salvador and Guatemala", Chapter Contribution for the Bonn International Center for Conversion, Published January 2000
- 813 Landmine Monitor 2004, p.474.
- 814 Interview with Coronel Nelson Leonel Bonilla Romero, Chief MARMINCA Nicaragua, Managua, 31 May 2004.
- 815 Worldwide Refugee Information: Guatemala Report 1997. U.S. Committee For Refugees. http://www.refugees.org/world/countryrpt/amer_carib/1997/guatemala.htm
- 816 William H. Godnick, "Demining in Guatemala: Observations Applicable to Voluntary Weapons Collection Programs", Program for Arms Control, Disarmament and Conversion (PACDC) Monterey Institute of International Studies. October 1998.
- 817 UN Guatemala Country Portfolio: 2002-2003.
- 818 Edward J. Laurance and William H. Godnick, "Weapons Collection in Central America: El Salvador and Guatemala", Chapter Contribution for the Bonn International Center for Conversion, January 2000.
- 819 Interview with Coronel Nelson Leonel Bonilla Romero, Chief MARMINCA Nicaragua, Managua, 31 May 2004.
- 820 Guatemala Article 7 Report, May 2004.
- 821 UN Guatemala Country Portfolio: 2002-2003.
- 822 See Landmine Monitor 2004. Interview with Silvia Corado, Ministry of Foreign Affairs Guatemala, 14 January 2004.

Guinea

Background

Conflicts with armed non-state actors along Guinea's borders with Sierra Leone and Liberia are reported to have contaminated these areas with ERW.⁸²³ An explosion at an ammunition depot in Conakry in 2001 also contaminated the Simbaya district with ERW.⁸²⁴

Assessment of the problem

Guinea is not considered mine-affected although it has not submitted its initial Article 7 transparency report. While there has been no significant conflict in Guinea itself, because of its proximity to Sierra Leone and Liberia, it has been affected by the internal conflicts in these countries through the flow of refugees, arms and combatants across its borders.

The towns of Guéckédou and Pamelap on the border with Sierra Leone were destroyed by heavy shelling from Guinean forces during combat with RUF fighters from Sierra Leone who had sought refuge there in 2001. ERW contamination resulted from this fighting.⁸²⁵

An influx of former fighters from Liberia has recently fuelled clashes between rival ethnic groups in the Forest region near the border with Liberia.⁸²⁶ Clashes in Nzerekore and neighbouring areas have probably led to some ERW contamination.

The district of Simbaya in the capital Conakry is affected by ERW, which were scattered over a wide area by an explosion in the ammunition depot of Alpha Yaya Diallo Camp on 2 March 2001.

According to a representative of the Guinean armed forces, stockpiles of AXO (abandoned ordnance) from the arsenal of the PAIGC that were left on Guinean territory after Portugal granted independence to Guinea and Cape Verde, were destroyed with the assistance of the U.S. Army.⁸²⁷

Impact

There are no reports of casualties from mines and ERW in Guinea and information on the socio-economic impact of ERW contamination is not available. However, as no full assessment has taken place in Guinea, it is difficult to measure the extent of any potential impacts.

Efforts to address these problems

As the government does not consider Guinea to be a mine/ERW-affected country, it does not have a mine/ERW risk education programme and there are currently no mine clearance operations.⁸²⁸

Legislation

Guinea has not signed the CCW but has been a State Party to the Ottawa Convention since April 1999.

823 Landmine Monitor 2003, p. 275.

824 Landmine Action, *Explosive Remnants of War: A Global Survey*, London, 2003, p. 21.

825 Landmine Monitor 2001, pp. 77-78.

826 IRIN News, *Ethnic tensions threaten to explode in southeast, Nzerekore*, 7 Jul 2004

827 Interview with Lt.-Colonel Armand Favre, Director of armament and ammunition, Guinean Armed Forces, 14 May 2004, Conakry.

828 Interview with Lt.-Colonel Armand Favre, Director of armament and ammunition, Guinean Armed Forces, 14 and 15 May 2004.

Guinea-Bissau

Background

Guinea-Bissau's war of independence from Portugal (1963-1974) and, more significantly, an 11-month internal armed conflict in 1998 and 1999 have led to persistent ERW and mine contamination, including some MOTAPM contamination, in Guinea-Bissau.

Assessment of the problem

ERW and mines resulting from the 1963-1974 war of independence contaminate 22 sites in Guinea-Bissau.⁸²⁹ However, the ERW/mine contamination that affects civilians stems largely from the 11-month conflict between June 1998

and May 1999. Most of the fighting occurred in Bissau and in four other sites in the east of the country. An estimated 20,000 ERW and mines contaminate the former front lines in densely populated areas of Bissau.⁸³⁰ According to the U.S. Department of State, "unexploded ordnance, much of it exposed to the weather and in a deteriorated condition, is scattered throughout populated and agricultural areas."⁸³¹ Seventeen mine-contaminated zones are thought to exist in urban areas in Bissau where there is a constant flow of traffic.⁸³² The ERW/mine contamination in the northern areas bordering Senegal is a result of the ongoing conflict in Casamance.⁸³³ The government has noted that the south of the country is contaminated with MOTAPM and ERW dating from the war of independence.⁸³⁴

An explosion at a military facility in Bra, near the capital Bissau, led to serious contamination in the surrounding area, documented by Handicap International in 2002.⁸²⁹

In February 2003 two National Community Survey Teams from the NGO LUTCAM began a complete general impact survey among communities in suspected areas of Bissau.⁸³⁰

Impact

The national survey of ERW/mine casualties revealed 616 ERW/mine survivors as of May 2004: 35 per cent of the survivors are from the northern region, 25 per cent from Bissau and its surroundings, 19 per cent from the Southern region and 21 per cent from the Eastern region.⁸³¹ Almost 35 per cent of the victims are children and among adults approximately 70 per cent are men.

During 2003 and up until May 2004, 33 accidents with ERW and mines were recorded: 16 in the north of the country, one in south and 15 in the capital, Bissau, killing a total of 10 people.⁸³² Looking at data from 2001-2002 the government noted an increase in accidents during the cashew harvesting season.⁸³³

In the dry season the ERW/mine contaminated areas of the Plaque I district of Bissau are used for gathering cashews, cattle farming, building houses and collecting wood. In the rainy season people cultivate nuts, manioc and black corn. These activities are made much more dangerous by contamination from ERW and mines.⁸³⁴

In "Enterramento", north of Bissau, the socio-economic impact of ERW and mines on the 1,350 inhabitants is heightened due to the expansion of the city of Bissau and local reliance on cashew cultivation. Every day around 1,800 vehicles pass along the main road through this area, which is not expected to be cleared of ERW, MOTAPM and AP mines before the end of 2005.

A number of military ammunition depots attacked during the 1998 conflict are located in urban areas with no barriers to effectively exclude the population.⁸³⁵ In such sites people tend corn and rice crops, collect mangoes and nuts, and forage for scrap metal from the thousands of ERW spread throughout these areas.⁸³⁶

The government has noted that Guinea-Bissau's primary tourist resort, on the island of Bubaque in Bolama region, contains large numbers of ERW, another example of the potentially serious socio-economic impact of ERW.⁸³⁷

Efforts to address these problems

According to Guinea-Bissau's 2004 Article 7 transparency report, "the goal (...) is to eliminate the impact of landmines and UXO in Bissau, the Capital, two years from the period where the requested funds will be available, and the rest of the country in the following three years."⁸³⁸

Two domestic NGOs conduct manual demining in Guinea-Bissau: HUMAID since 2000 and LUTCAM since February 2003. As of April 2004, HUMAID had demined approximately 612,000 square metres, clearing 14,652 ERW and 2,560 landmines. In early 2004 the main focus was on agricultural areas.⁸³⁹ LUTCAM's demining operations in "Enterramento", north of Bissau, have cleared 411 ERW and two AV mines since 10 March 2004.

As of April 2004, 111 risk educators had been trained by the National Mine Action Centre (CAAMI): 89 in Bissau and 22 in the north and south of the country. These risk educators work with facilitators from local communities. Another 84 teachers received training, 50 in Bissau and 34 in the north and east. It was reported by CAAMI that this work had reached a total of 30,000 people: 20,000 in Bissau and 10,000 outside the capital.⁸⁴⁰

Legislation

Guinea-Bissau has not signed the CCW and has not attended CCW-related meetings. The National Mine Action Coordination Centre was officially established and a draft National Humanitarian Mine Action Programme (PAAMI) was prepared in early 2001.⁸⁴¹ Guinea-Bissau has recently expressed an interest in joining the CCW, in particular since the adoption of Protocol V on ERW.⁸⁴² Guinea-Bissau has been a State Party to the Ottawa Convention since 1 November 2001.

829 CAAMI, República da Guiné-Bissau: Situação de minas e engenhos explosivos (map), October 2002.

830 Article 7 Report, Form C, 13 May 2004, p. 5.

831 "To Walk the Earth in Safety: The U.S. Commitment to Humanitarian Mine Action," Bureau of Political-Military Affairs, U.S. Department of State, August 2004, accessed on 29 November 2004 at: <http://www.state.gov/t/pm/rls/rpt/walkearth/2004/37227.htm>

832 Map: CAAMI Guiné-Bissau-UNDP/UNOPS-Data Base -October 2002. Republic of Guinea-Bissau: Situação de minas e engenhos explosivos.

833 Article 7 Report, Form C, 13 May 2003.

834 Article 7 Report, Form C, 13 May 2004.

835 Technical Mission Report, Handicap International in Guinea-Bissau, Lyon, April 2002.

836 Article 7 Report, Form C, 13 May 2004, p. 6.

837 Statement by Irene Laval, PEPAM Assistant, CAAMI, Standing Committee Meeting, Geneva, Switzerland, June 2004.

838 Article 7 Report, Form I, 13 May 2004, p. 15.

839 Article 7 Report, Form I, 13 May 2004, p. 15.

840 Landmine Monitor field visit, 29 April 2004.

841 Landmine Monitor field visit, 29 April 2004.

842 Landmine Monitor field visit, 29 April 2004.

- 843 "PAAMI 2001-2004," April 2001. PAAMI is Guinea-Bissau's national mine action plan for 2001-2004.
- 844 Article 7 Report, Form J, 13 May 2003, page 16.
- 845 CAAMI Document "Action de la Guinee-Bissau concernant la mise en oeuvre de la Convention de Ottawa pour l'elimination des mines anti-personnel", January 2004, p. 11; UNDP, "Guinea-Bissau seeks help to be first in Africa to eliminate landmines", Newsfront, (E-newspaper), 14 January 2004, available at: www.undp.org.
- 846 Interview with Irene Laval, PEPAM Assistant, CAAMI, Bissau, 30 April 2004.
- 847 REPÚBLICA da Guiné-Bissau. Decreto n. 4/2001. Boletim Oficial, n. 38, 17 September 2001, pp. 381-383.
- 848 Interview with CAAMI, Bissau, 30 April, 2004.

Honduras

Background

Over the past two decades, Honduras' border zones have been areas of conflict and refuge for combatants, resulting in ERW and MOTAPM contamination on the borders with El Salvador and Nicaragua. Although Honduras completed its official National Demining Plan in June 2004, several areas remain affected by ERW and MOTAPM.

Assessment of the problem

Since the National Demining Plan was completed, two areas remain affected by ERW and MOTAPM: El Rio Negro and Naco, Cortes.

An eight-kilometre stretch of the Rio Negro, on the border between Nicaragua and Honduras, is affected by ERW, MOTAPM and AP mines. In 1998 floods from Hurricane Mitch redirected the river causing landslides that moved and buried the ERW and mines up to 1.5 metres deep in the area.⁸⁴⁹

AV mines have also been found in Choluteca and El Paraiso. As of 2 April 2004, three AV mines had been destroyed in the department of El Paraiso and four in the department of Choluteca.⁸⁵⁰ In January 2004, the demining team working in El Triunfo discovered four AV mines. Local farmers had already abandoned the El Triunfo area due to numerous accidents.⁸⁵¹

An explosion in a munitions storage area on 13 September 1993 in Naco, Cortes, contaminated a wide area with exploded and unexploded munitions of various types, mostly grenades and mortars.⁸⁵² Some 200 square metres were cleared in 1993 and 1994, but demining was abandoned due to lack of funds, with a large area remaining to be cleared. A study by EOD specialists is being planned to assess the situation and estimate clearance costs.⁸⁵³ Despite two accidents at the site, it has not been cleared because it is not in the prioritized border region.⁸⁵⁴ Other areas near the Honduran-Nicaraguan border may contain ERW due to heavy troop movement and shelling experienced during the Sandinista-Contra conflict.⁸⁵⁵

Impact

Honduran officials estimate that from 1990 to 1995 ERW and mines killed more than 200 civilians. Another five

casualties were reported from March 1996 to September 1997.⁸⁵⁶ Examples of ERW casualties include:

- On 31 December 2002, a six-year-old boy died and his mother was injured in Siguate, near the El Aguacate former military base in Olancho Province, when an abandoned anti-aircraft missile exploded. The missile was propping up the mother's cooking fire when it exploded.⁸⁵⁷
- In January 2004, two children were wounded by an unidentified item of ERW that was buried in the yard of a military service person.⁸⁵⁸

There has been no survey to assess the impact of AV mine and ERW contamination on local communities in the Rio Negro area, but irrigation projects have been halted until the area has been cleared and declared safe.⁸⁵⁹

ERW, MOTAPM, and AP mines prevented displaced persons from returning to the homes they had left to avoid the conflict in the border regions.⁸⁶⁰ Only recently, following the clearance of affected areas, are these people returning to cultivate their land.⁸⁶¹

In September 2003, Honduran police discovered a cache of AXO, including 343 dynamite cartridges and four fragmentation grenades, which had been abandoned by arms dealers. This was the second similar discovery in 2003.⁸⁶²

Efforts to address these problems

The Honduran Army and the OAS provide risk education to affected populations through radio programming and distribution of education materials. In 2002 and 2003, risk education was delivered in the Department of Choluteca; in the first quarter of 2004, students and others received risk education in the community of La Lodosa, Department of El Paraíso.⁸⁶³

Because of the lack of maps or data on MOTAPM or ERW contamination in Honduras, all clearance is done in response to community reporting.⁸⁶⁴ In El Triunfo, Choluteca, clearance teams were brought to an affected area after communities reported animal casualties.⁸⁶⁵

ERW and MOTAPM clearance in Honduras is the responsibility of the Honduran Army (ALFA team), which began clearance in September 1995 with support from the Inter-American Defense Board (IADB) and the OAS. Clearance

was scheduled for completion in 2000 but was set back by Hurricane Mitch in 1998. In June 2004, Honduras had 28 staff conducting clearance in the country.⁸⁶⁶

The majority of ERW found have been fragmentation grenades and mortars.⁸⁶⁷ Affected areas include: water sources, trails, mango groves and agricultural fields.⁸⁶⁸ Although national authorities announced that June 2004 marked the official completion of the National Demining Plan, the Honduran Army and the OAS consider that:⁸⁶⁹

- Both the Rio Negro and Naco, Cortes, are affected by ERW. These two areas are viewed as “special cases” and will require technical assistance for clearance and, in the case of the Rio Negro zone, a bilateral agreement with Nicaragua.
- “The characteristics of the landmine problem in the country (high irregular troop mobility along the border

between Nicaragua and Honduras), and possible UXO and AP landmines on the border area could reawaken high-risk situations in very specific areas within Honduran territory.”⁸⁷⁰

- Given the high density of ERW and MOTAPM in the Nicaraguan border region, aspects related to the demarcation of the border and the possibility of future flooding, cleared areas in Honduras could be contaminated again in the future.⁸⁷¹

Legislation

Honduras acceded to the CCW on 30 October 2003 and ratified its Amended Protocol II and Protocol IV.⁸⁷² It participated as an observer at the fifth Annual Conference of States Parties to Amended Protocol II in December 2003. Honduras is a State Party to the Ottawa Treaty.

849 Interview with Miguel Barahona, OAS PADCA National Coordinator Honduras, Tegucigalpa, 25 May 2004; Luis Felipe Palacios, “Buscan fondos para desminar rio Negro”, La Prensa, 14 May 2004.

850 “OEA/JID Programa de Asistencia al Desminado en CentroAmerica – Resultados del Desminado en Honduras.” Actualizado 02 Abril 2004.” Document given to researcher 24 May 2004 by Miguel Barahona.

851 “Agricultores, temerosos por minas antitanques”, El Heraldo, Honduras, 15 January 2004.

852 Interview with Miguel Barahona, Coordinador OEA Honduras, Tegucigalpa, 26 May 2004. Naco, Cortes, has been the only site in Honduras that has been affected by ERW but not AP mines.

853 Interview with Lieutenant-Coronel Albercio Canas Ortez, Commander E.T.C-ALFA, Tegucigalpa, 24 May 2004.

854 Interview with Miguel Barahona, Coordinador OEA Honduras, Tegucigalpa, 26 May 2004.

855 “Sandinista People’s Army 1979-90.” <http://www.country-data.com/cgi-bin/query/r-9303.html>.

856 James Madison University: Honduras Country Profile. <http://maic.jmu.edu/journal/5.2/profiles/honduras.htm>

857 “Contra-War Missile Kills Boy.” http://www.americas.org/item_8176.

858 “Explota artefacto, dos niños heridos”, El Heraldo, 23 January 2004.

859 Interview with Octavio Salmon Nunez, Minister of Foreign Relations, Tegucigalpa, 26 May 2004.

860 “Taiwán dona 294 mil dólares para concluir desminado en Honduras”, 28 January 2003. http://www.casapresidencial.hn/cooperacion/280103_3.php

861 As of February 2004, clearance activities in the departments of Olancho, Choluteca and El Paraiso benefited approximately 60,000 families and allowed many formerly contaminated areas to be converted into productive areas.

862 “Incautan explosivos y granadas en El Amatillo”, El Heraldo, 15 September 2003.

863 Interview with Miguel Barahona, Coordinador OEA Honduras, San Salvador, 26 May 2004

864 Interview with Lieutenant-Coronel Albercio Canas Ortez, Commander E.T.C-ALFA. Tegucigalpa, 24 May 2004. Generally the community responds to the mayor or the local police – who then contact the military or the OEA.

865 Interview with Lieutenant-Coronel Albercio Canas Ortez, Commander E.T.C-ALFA. Tegucigalpa, 24 May 2004.

866 Email from Miguel Barahona, Coordinador OEA Honduras, 3 June 2004.

867 Interview with Miguel Barahona, Coordinador OEA Honduras, San Salvador, 26 May 2004.

868 Interview with Lieutenant Coronel Albercio Canas Ortez, Commander E.T.C-ALFA. Tegucigalpa, 24 May 2004.

869 Organization of American States Report, Portafolio 2003-2004/Honduras, Washington 2003

870 See Landmine Monitor 2004.

871 Interview with Octavio Salmon Nunez, Minister of Foreign Relations, Tegucigalpa, 26 May 2004.

872 See Landmine Monitor 2004. Interview with Octavio Salom Nuñez, Ministry of Foreign Affairs and Miguel Barahona, Coordinator, AICMA/Honduras, 24 February 2004.

Hungary

Background

Hungary is contaminated by ERW and MOTAPM left over from the 1939-45 War from both the German and the Russian armies, as well as from former Soviet army bases and training grounds.

Assessment of the problem

Both ERW and MOTAPM contamination have been found in Pest, Fejer, Komaron-Eszetgom, Veszprem, Gyor, Vas, Nagybjom, the Pilis Hills and Lake Balaton.⁸⁷³

Impact

Officially, there were no military or civilian casualties from ERW or MOTAPM during the reporting period.⁸⁷⁴ However, the local media reported that an amateur collector of war relics was killed by a piece of unexploded ordnance on 1 November 2003.⁸⁷⁵ No military or civilian casualties were reported from ERW/MOTAPM in 2002, but there were an unspecified number of civilian casualties in 2001.⁸⁷⁶ In December 2001, Hungary reported that, in the last 50 years, 300 EOD personnel had been killed by ERW.⁸⁷⁷

Efforts to address the problem

The First Bomb-disposal and Battlefield Regiment of the Hungarian Army is responsible for clearing and destroying ERW and MOTAPM. According to Government Decree

142/99, this unit is exclusively authorised to carry out clearance and destruction activities in Hungary. The operational procedure is that civilians report ERW to police, who verify the claim and then inform the bomb disposal regiment. Findings are in four categories:

- Urgent and dangerous cases (government areas, embassies, hospitals, schools, etc.);
- Inhabited areas (cleared within one day);
- Non-inhabited areas (clearance within 30 days);
- Suspected not confirmed ERW (no time limit for clearing).

The overall mine planning agency is the Joint Logistic and Technical Support Command of the Hungarian Defence Forces. In 2003, the Regiment received 2,721 reports of mines and other suspicious explosive objects, resulting in the examination of 38,145 square metres and the discovery of 177,658 ERW, including eight active MOTAPM (two Soviet TM-41s, four German TMI-42s, one German TMI-43, one German TMI-35).⁸⁷⁸

Legislation, government attitudes

Hungary ratified the Ottawa Convention in April 1998 and the CCW in 1984. The CCW's Amended Protocol II was ratified on 26 November 1997 and the government intends to sign and ratify Protocol V in the near future. It has aligned itself with all EU statements regarding ERW and MOTAPM.⁸⁷⁹

873 Landmine Monitor 2004, p. 497.

874 Letter from Erik Hauptmann, Ministry of Foreign Affairs, 2 September 2004.

875 "Robbanás a XI. Kerületben (Explosion in district 11)", Magyar Hírlap Online (daily newspaper, Internet version), 2 November 2003, cited in Landmine Monitor 2004, p. 498.

876 Email from László Sz_cs, Arms Control and Security Policy Department, Ministry of Foreign Affairs, 30 May 2003; "Hungarian Army 1st EOD Battalion, 21-22 June 2001".

877 Report at the Second CCW Review Conference, Geneva, 11-21 December 2001, cited in Landmine Monitor 2004, p. 498.

878 Letter from First Bomb-disposal and Battleship Regiment of the Hungarian Army (HTHE), ref. 33/4/2004, 22 January 2004, reported in Landmine Monitor 2004, p. 497; telephone interview with Sergeant-Major Róbert Sulykovszki, HTHE, 17 May 2004.

879 Letter from Erik Hauptmann, Ministry of Foreign Affairs, 2 September 2004.

India

Background

India has used MOTAPM in its three wars with Pakistan (in 1947-48, 1965 and 1971) and in the conflict with China in 1962.⁸⁸⁰ In Jammu and Kashmir (J&K) where Indian and Pakistani armies have been at war for the past five decades, MOTAPM have been laid across the Line of Control (LOC) to deter attacks and intrusions.⁸⁸¹ Most recently, between December 2001 and July 2002, India laid MOTAPM along its 1,800-mile northern and western border with Pakistan.⁸⁸² Non-State Actors (NSAs) in various parts of the country – the north-eastern states, Andhra Pradesh, as well as J&K – have used improvised explosive devices (IEDs) against the security forces.⁸⁸³ In the north-east the pattern of insurgency has included the increasing use of remote-controlled IEDs.⁸⁸⁴ In Kashmir, where some non-state actors (NSAs) have access to Pakistan factory-made anti-tank mines, most of them use IEDs that act as MOTAPM or booby traps.⁸⁸⁵ In J&K at least five insurgent groups – Hizbul Mujahideen, Harkat-ul-Ansar, Lashkar-e-Toiba, Jaish-e-Mohammad and Harkat-ul-Jihadi Islami – are documented as having used MOTAPM and IEDs.⁸⁸⁶

Assessment of the problem

The primary MOTAPM and ERW threat in India is in Jammu and Kashmir. The minefields along the Indian-Pakistani border extend up to eight kilometres from the border.⁸⁸⁷ Landmines including MOTAPM were reportedly planted in cultivated and uncultivated land and around villages in defensive positions. According to government officials, the positions were recorded and marked, and the local population was informed and educated about the location of the minefields.⁸⁸⁸ Some casualties do nevertheless occur affecting stray cattle as well as human beings. Because these incidents are infrequent, the Indian Ministry of Defence considers the human, economic, and social costs in J&K as “rather minimal.”⁸⁸⁹

Another factor contributing to the problem of MOTAPM and ERW in India is the use of these weapons by NSAs. Researchers have suggested that based on recent casualty figures and quantities of mines (APM and MOTAPM), as well as abandoned ordnance (AXO) recovered by the security forces, the use of IEDs by the militant groups in Kashmir may be on the decline.⁸⁹⁰ There has been a general downward trend in the amounts of mines and ordnance recovered by the Indian security forces. While the number of APM and MOTAPM recovered in 2003 was 163, only 24 such devices were recovered until June 2004. Similar trends are also registered regarding recovered explosives and grenades.⁸⁹¹

According to the J&K Militancy Data published by India's Department of Information and Public Relations, there have been a total of 10,201 explosions in the state since

1990. The armed forces have recovered a large amount of AXO from insurgent groups, including 24,375 “explosives”, 48,079 grenades, 56,270 detonators and 7,472 kilograms of RDX explosives.⁸⁹²

According to the Assistant Director of the Institute of Peace and Conflict Studies in New Delhi, the MOTAPM problem is restricted to “certain border villages along the LOC”. However, he noted that “IEDs, on the other hand, pose a problem in terms of human casualties.”⁸⁹³

Impact

There is little available data on the impact of ERW and MOTAPM in India. Figures from the South Asia Terrorism Portal, show that grenade and IED explosions, landmine blasts (APM and MOTAPM) and other “crude device” explosions in J&K have killed 190 people and injured 1,745 more between 1 July 2003 and 30 June 2004.⁸⁹⁴ One example of the impact of such devices on the military was reported as follows:

- “23 May 2004 – At least 28 people were killed in disputed Kashmir yesterday when a bus packed with Indian soldiers and their families ran over a land mine planted by separatist guerrillas, officials said ... the exact toll last night was not certain, and The Associated Press reported as many as 33 people may have been killed and 10 wounded. Torn limbs, blood-stained shoes and clothes, and lunchboxes with rice and bread lay strewn on the highway at Lower Munda, 60 miles south of Srinagar, Kashmir's summer capital ... A leading Pakistan-based rebel group ... claimed responsibility for the blast.”⁸⁹⁵

According to one report, which cited senior Army officials, a total of 173,000 acres of the border area had been mined, but it is unclear how many MOTAPM are present.⁸⁹⁶ Another newspaper report stated that the government revenue department had estimated that ERW and mine contamination had caused a winter crop loss from 2001 to 2002 of Rs.83 million (US\$1.77 million).⁸⁹⁷ According to Landmine Monitor, some farmers had pointed out that the contaminated fields were going to have reduced fertility due to the growth of weeds and lack of irrigation.⁸⁹⁸

Efforts to address these problems

The Indian armed forces are responsible for mine clearance activities throughout the country. Following the Kargil conflict in Kashmir in 1999, army engineers claimed to have cleared the area of all mines.⁸⁹⁹ When India and Pakistan pulled back their troops from the border after 16 October 2002 major mine clearance activities were initiated.⁹⁰⁰ At the end of December 2002, the Minister of Defence announced that the Army had completed clearance of about 16 to 18 per cent of the contaminated

areas and would need another six months to complete the operation.⁹⁰¹ Other reports have suggested that casualties during demining were causing serious concern: “during demining, which starts in June 2002, accidental blasts involving the mines have killed at least 73 people and injured 216, and troops involved in the demining operations in Rajasthan, Punjab and Jammu and Kashmir were exposed to serious dangers, senior army officials said.”⁹⁰²

In case of civilian casualties, the local army units in conjunction with the civil authorities are responsible for evacuation and treatment of the affected individuals. The costs are borne by the local government. Rehabilitation and prosthetic facilities exist at local, state, and national levels.⁹⁰³

There are no formal mine risk education programmes in India, but NGOs, such as the Indian Institute for Peace, Disarmament & Environmental Protection (IIPDEP) and the All India Women’s Conference have conducted some risk education, and the Indian military reportedly conducts risk education during its operations.⁹⁰⁴

Legislation

India is one of the major countries that has not signed the Ottawa Convention.⁹⁰⁵ India has played an active role in the CCW process and has ratified all its protocols including Amended Protocol II on landmines, except for the new Protocol V on ERW.⁹⁰⁶

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Iran

Background

The Islamic Republic of Iran has ERW/MOTAPM contamination, although its description by Iranian officials in terms of the number of "landmines"⁹⁰⁷ (12-16 million) and affected surface area (4 million hectares) is questionable.⁹⁰⁸ There have been no general assessments or technical surveys.⁹⁰⁹ Contaminated areas are primarily within the military zone in the west of the country along the border with Iraq. These are former conflict zones that had been controlled in the past by both Iraqi and Iranian military forces. Landmines, including MOTAPM, are also reported to exist on the eastern borders with Pakistan and Afghanistan as a defence against border smuggling.⁹¹⁰

Assessment of the problem

According to Iranian Government clearance figures, as many as three million anti-personnel mines, 700,000 anti-tank mines and four million items of UXO have been discovered and neutralised or destroyed.⁹¹¹ Although these figures cannot be verified, they do suggest that contamination has been extensive.

According to an assessment made available to Landmine Action, it is unexploded ground- and air-delivered ordnance (UXO) and anti-tank (AT) mines which are a particular threat in the provinces of Ilam and Khuzestan. Anti-personnel mines are a greater threat in the hillier areas of the border, particularly in Kermanshah province.⁹¹²

There are also reports of ERW and MOTAPM originating from counter-revolutionary groups who fought against the central government in the early 1980s. Tens of residents of the border townships of Iran's Kurdistan Province are reported to have been killed or injured, although these incidents are attributed to anti-personnel mines.⁹¹³

There have been occasional official and media reports of ERW arising from insurrectionist activity within the country, such as from the Mojahedin-e Khalq Organization.

According to one army general, General Kiumars Heydari, "landmine" clearance had seen 970,000 anti-personnel mines, 453,000 anti-tank mines and 428,000 anti-vehicle mines removed.⁹¹⁴ Another army commander, Brigadier Mohammad Nabizadeh, said recently that 3.217 million anti-personnel mines, 914,000 anti-tank mines as well as 4.236 million munitions had been defused or destroyed since the end of the war. The cleared lands have gone either under cultivation or turned into residential areas for local villagers or citizens, he said.⁹¹⁵ These figures give an indication of scale and type of contamination present in the country.

Although there is a project listed in the UNMAS Portfolio of Landmine Related Projects for "Initial Landmine Impact Survey of Five Provinces in the Islamic Republic of Iran 2004," this does not seem to have developed substantially.

Impact

According to Landmine Monitor 2003, the Mostazafan and Janbazan Foundation is a focal point for mine-victim assistance.⁹¹⁶ It is reported to provide a variety of services to 400,000 people disabled during and after the war with Iraq, but no details are provided concerning ERW or mine victims. While soldiers injured by mines/UXO refer to a military commission, civilians should refer to the city governmental demining departments, which then assigns them to the relevant provincial services.⁹¹⁷ These individuals' reports are validated by surveys at the site of the explosion conducted by local military authorities. Reports on accidents, injuries and fatalities that cannot be confirmed by the military survey are regarded as false, and these claimants are reported to be strictly punished.⁹¹⁸

Drawing on local sources, James Madison University Mine Action Information Center reports that thousands of Iranian civilians have become victims of landmines since the Iran-Iraq War, especially farmers and shepherds. The Medical Engineering Research Centre estimates that there are about 300 mine and UXO casualties in Iran every year. Landmine Monitor reports that the High Centre for Research and Informatics (HCRI) conducted a survey of mine victims in a western province near Iraq. There, HCRI determined that, over a 10-year period, "landmines" caused 394 deaths and 688 injuries. About one-fourth of the fatalities were in the group determined to be at greatest risk: young people under the age of 20.⁹¹⁹

A 2003 report released by the Public Relations Department of the Institute of Intellectual Development for the Children and the Young Adult (IIDCYA) said that every year 300 people (20 per cent of whom were "children and young adults") lose their lives in Iran as a result of "landmines."⁹²⁰ It is likely that this also includes ERW/MOTAPM.

In 2000, on request from the Ilam University Hospital and in agreement with the Ministry of Health, Ilam province was selected as the target area for a study of landmine victims. The survey indicated that only a few landmine victims from the village populations had been treated by the health centres between 1989 and 1999. However, the health centre staff reported numerous cases of mine-injured people among the tribal nomadic population. These victims had been transferred directly from the site of accident and no records were available for them. This suggests that medical records may significantly under-report the problem in these areas.

From 1989 to 1999, a total of 1,082 persons were reported injured by landmines in Ilam province, at a rate of 40-140 incidents each year. The overall rate of fatalities was 36.4 per cent. Most mine victims were young (the mean age being 23.5 years old) and male (91.4 per cent). In a subgroup of 138 survivors managed by HCRI, 78.5 per cent had injuries to the extremities; 24.6 per cent involved the upper extremities, and 54.4 per cent the lower extremities. Only 3.6 per cent of the survivors had torso injuries.

According to this survey, it is the nomad population that accounts for the majority of landmine casualties in this part of Iran. During their biannual migration, the nomad families may not have time to register their casualties at public offices. Also, the nomad population is less well integrated, making them hesitant to participate in the bureaucratic process of registration. The risk of false positive registrations (over-reporting of casualties) seems to be small due to careful case validation by the military authorities and the possibility of punishment for false positive reports.⁹²¹ Thus, it is possible that the real number of casualties and the pre-hospital death rate may be higher than reported.

According to the UNMAS Portfolio of Mine Related Projects, the Iranian Medical Engineering Research Centre estimates that the number of mine/UXO victims in 2002 at the national level was 300, with a fatality rate of 36 per cent.⁹²²

According to Landmine Monitor, landmines have "severely limited" agricultural production in five provinces along the Iraqi border. Landmines are also located in the oilfields, with one of the largest fields needing clearance before interested Japanese companies could "start full-scale appraisals".⁹²³

There have also been varying reports on numbers of military personnel killed in the process of clearance operations. According to a report to Payvand Iran News, an army general said that, as of mid-2002, 52 Iranian Army deminers had been killed and 122 others injured while clearing contaminated areas from landmines and explosives.⁹²⁴

Efforts to address these problems

The Government of the Islamic Republic of Iran has initiated mine action through the establishment of a National Committee for Demining (NCD). At the policy level, an inter-ministerial working group, chaired by the Ministry of Interior, has been established to review and adopt national strategies and policies. The NCD secretariat serves as the national mine-action regulatory body, responsible for planning, coordinating and regulating all mine-action activities in the country.

Sources indicate that national statistics are distorted by the fact that Iran has two Armed Forces, the regular forces and the Revolutionary Guards. Competition between these security organisations complicates information gathering.⁹²⁵

According to one publicly available Iranian army report, "slow progress" is attributed to two factors. The first problem is the lack of maps showing where the mines are planted. This problem is exacerbated by the landslides, rain and other natural elements that have changed the original location of the mines. The second problem has been that for some time strategic and militarily vital areas could not be fully cleared of mines because Iraq had not accepted all the conditions of the Islamic Republic of Iran for cease-fire. As a result of continuing low-scale skirmishing across the border, security conditions were not sufficient to launch clearance operations. According to a report by the Army Ground Force Ideological-Political Office, this was because "at present our country goes through a period of no war, no peace".⁹²⁶ The report did add that these areas were military zones and not in use by the civilian population.

Legislation

Iran is not a party to either the Ottawa Convention or the CCW.

907 Although there is sufficient evidence to conclude that Iran suffers from a significant ERW/MOTAPM problem – including a UNDP report which mentions unexploded munitions, as well as unconfirmed clearance statistics and at least one local media report of unexploded mortar rounds – there is little material available that addresses anti-personnel mines, MOTAPM and ERW separately. Most often, reports discuss only "landmines," with no reference to the definition of this term. It is concluded from the research conducted for this report that the term "landmine" is often used where referring also to other forms of ordnance contamination.

908 One particularly erroneous yet regularly reported piece of information in the Iranian media is that: "According to UN sources, an estimated 16 million landmines and tens of millions of unexploded objects, left over from the imposed war, still lie hidden in four million hectares of land in southern and western Iran, which borders Iraq." It has not been possible to identify any UN source that indicates any such figure for the contamination in the country and, in fact, this figure is attributable to Iranian army officials. According to the UNDP website, it is "thousands of landmines and unexploded ordnance (UXO)" that remain in the country, far below the figure that is attributed to them. The figure of 16 million landmines is even taken by the James Madison University Mine Action Information Center and attributed to the U.S. Department of State Humanitarian Demining Programme who have never run a programme in Iran and have issued no statement on the impact of explosive ordnance in that country. The same figure is recorded on IRIN news (www.irinnews.org).

909 UNMAS Portfolio of Mine Related Projects 2004.

910 Landmine Monitor 2004. In the light of recent events in the region, it is perhaps entirely understandable that the (limited) information on the ERW/MOTAPM problem should be focussed on the Iran-Iraq border region, but this is to the neglect of contamination believed to exist elsewhere to the country.

911 Report by the Army Ground Force Ideological-Political Office from issue No. 251, Farvardin 1380 [21 March to 20 April 2001]: "Ground Force of the Army: One decade of campaign against millions of hidden landmines".

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913 Islamic Republic News Agency (IRNA), 2 Children Killed In Mine Explosion In Marivan, Iran, 16 April 2003

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Iraq

Background

Iraq is severely affected by ERW and MOTAPM as a result of the 2003 War, 1991 Gulf War, the 1980-88 Iraq-Iran War, two decades of internal conflict and even the 1939-45 War. Additionally, landmines and UXO also remain from internal conflict during the 1960s and 1970s. ERW contamination in Iraq ranges from 1939-45 War munitions to modern American, European and Soviet/Russian designed ordnance.⁹²⁷ As an ICRC spokeswoman pointed out, UXO from the latest conflict is only part of the problem. "One has to take into account the fact that there are several superimposed layers [of land mines and unexploded ordnance] in that country," she said, "[...] one speaks here of several layers and, therefore, of increased danger."⁹²⁸ According to a 2003 report by Human Rights Watch, "staggering quantities of explosive remnants of war continue to endanger civilians as well as military forces."⁹²⁹

Assessment of the problem

Iraq used mines in Kuwait in 1990-1991 during the Gulf War. Of these, some estimates suggest 90,000 were anti-vehicle mines. During 20 years of conflict with Iran, ethnic Kurds and the United States and coalition partners, Iraqi forces are reported to have laid large numbers of mines.⁹³⁰ Although mines have been used extensively there is, however, a general consensus among mine action workers that abandoned explosive ordnance (AXO) has recently been the greatest source of danger facing local residents.⁹³¹

Subsequent to the 2003 invasion, Human Rights Watch (HRW) produced estimates, based on research at local hospitals and morgues, that ascribe high civilian casualties to the general lawlessness that followed the collapse of the ruling Ba'ath Party and to the vast dumps of ammunition left behind by the routed Iraqi Army.⁹³² According to the United Nations Mine Action Service (UNMAS), the greatest problem is stockpiles of ordnance.⁹³³ According to staff from Mines Advisory Group, "[ordnance stores] were basically positioned in and around cities. [The Iraqis had] a plan for a protracted war, but as

soon as command and control collapsed the soldiers left, and they left these piles of ordnance all around."⁹³⁴ In their report from 2003, Human Rights Watch note:

"Iraqi military and *fedayeen* forces abandoned large caches of weapons and ammunition in schools, mosques, hospitals, and residential neighborhoods. These munitions have killed or injured scores of Iraqis, many of whom are children, searching for scrap metal or playing with explosives. Opposition fighters have also looted the sites and used the ordnance for attacks on Coalition forces and against civilians, such as the deadly truck bombing at the U.N. headquarters in Baghdad on August 19."⁹³⁵

While Coalition forces have attempted to control AXO by reducing all Iraqi ordnance storage to six identified Ammunition Supply Points (ASPs) for destruction or redistribution to new Iraqi security forces, sources indicate there is still much to be done to control this problem.⁹³⁶ Latest estimates are that there are still 1,000,000 tonnes of ammunition scattered over Iraq, excluding the contents of minefields.⁹³⁷

Cluster munitions also constitute a significant threat to Iraqi civilians. This problem is particularly focused along the valleys of Iraq's two largest rivers, the Tigris and the Euphrates, where more than 2,200 sites of contamination have been identified.⁹³⁸ Sources have asserted that "the number of submunitions used in Iraq dwarfs that used in Afghanistan or Yugoslavia and has resulted in significant civilian casualties, after as well as during attacks."⁹³⁹ US Central Command (CENTCOM) reported that it used 10,782 cluster munitions, which could contain at least 1.8 million submunitions. The British used an additional 70 air-launched and 2,100 ground-launched cluster munitions, containing a combined total of 113,190 submunitions.⁹⁴⁰ According to Human Rights Watch (HRW), US and UK ground forces repeatedly used these weapons in attacks on Iraqi positions in residential neighbourhoods. They noted particularly that "ground-launched submunitions have caused the most post-conflict civilian casualties [as opposed to air-dropped submunitions]. Coalition forces

used them extensively as part of unobserved counter-battery fire. Since Iraqi forces often occupied populated areas on the edges of towns, the attacks left thousands of duds in urban neighborhoods and villages near the major cities of Iraq.⁹⁴¹ Despite a commonly quoted figure of 5 per cent failure rate among cluster munitions, Human Rights Watch suggests that a number of munitions fail more frequently. Previous assessments of some of the cluster munitions used in Iraq have suggested a failure rate greater than 20 per cent.⁹⁴²

During the recent conflict, the U.S. military used at least three kinds of cluster munitions. The most common are the BLU-97, containing yellow canisters about the size of drinks cans, and the KB-1, which is about the size of a hand grenade. The third, a new type, is the BLU-108, containing four “smart” warheads equipped with sensors for target detection and engagement.⁹⁴³ They are supposed to seek out heavily armoured targets (e.g. tanks) and to self-destruct if they fail to find an appropriate target. The United Kingdom is also known to have used the L20A1, which contains 49 submunitions equipped with self-destruct devices.⁹⁴⁴ Human Rights Watch noted that despite this self-destruct mechanism, unexploded L20A1 munitions were found in the post-conflict environment.

At a Department of Defense news briefing on 25 April 2003, U.S. Chairman of the Joint Chiefs Staff General Richard B. Myers made the following statement about the United States’ use of cluster munitions in Iraq:

“Coalition forces dropped nearly 1,500 cluster bombs of varying types during Operation Iraqi Freedom. Most were precision-guided. An initial review of all cluster munitions used and the targets they were used on indicate that only 26 of those approximately 1,500 hit targets within 1,500 feet of civilian neighbourhoods. And there’s been only one recorded case of collateral damage from cluster munitions noted so far. We used cluster munitions against surface-to-surface missiles, radar sites, air defence sites, surface-to-air missiles, regime mobile communications, aircraft, armour, artillery, troops and other select military targets. Because the regime chose to put many of these military assets in populated areas, and then from those areas fired on our forces, in some cases we hit those targets knowing that there would be a chance of potential collateral damage. Coalition forces used cluster munitions in very specific cases against valid military targets, and only when they deemed it was a military necessity.”⁹⁴⁵

Responding to the disclosure by the U.K. Air Chief Marshal Sir Peter Squire, Chief of Air Staff, that British pilots had dropped 50 BL755 cluster munitions against Republican Guard targets as the forces moved north,⁹⁴⁶ British Defence Secretary Geoff Hoon on 3 May 2003 defended the use of cluster munitions, saying that not using them would have put the lives of Coalition troops at “greater and unnecessary risk”.⁹⁴⁷ The British Ministry of Defence (MoD) acknowledged that its army had used more than 2,000 cluster munitions, but that the type used was designed to

self-destruct if it did not explode on impact. An MoD official stated that the government was “committed to clearing up unexploded ordnance in Iraq”. At a press conference during the conflict, a British MoD spokesperson assured the public that the troops had recorded where these munitions had been dropped in order to expedite post-war clearance efforts.⁹⁴⁸ It should be noted that “post-war clearance” in many areas of the country has been severely curtailed by the prolonged state of general insecurity. In their analysis of the conduct of the war, and of civilian casualties during and after the conflict, Human Rights Watch noted:

“Cluster munitions cause humanitarian harm not only because they are area effect weapons, but also because a large percentage of their bomblets or grenades do not explode on impact. These explosive duds remain live and dangerous and are frequently set off by civilians after the strikes. In Iraq, they continue to cause deaths and injuries months after major fighting ended. Human Rights Watch documented hundreds of casualties with site visits, hospital records, and interviews with victims. Duds have also interfered with local agriculture. During the war, they impeded Coalition troop movements, and they have killed Coalition troops both during and after hostilities.”⁹⁴⁹

In addition to these dangers, abandoned ordnance has been recycled for use in activities relating to insurgency activity.⁹⁵⁰ Iraqi insurgents have taken advantage of the availability of munitions and rigged them with timers and/or remote detonators. According to a US Army Colonel: “Immediately after the war, we mainly dealt with unexploded ordnance such as missiles and grenades, but since August we mostly find improvised bombs, some of them quite complex.” It was added that 450 alerts were reported between August and November 2003.⁹⁵¹ One mine action adviser estimated that between 95 and 98 per cent of all IEDs utilised abandoned explosive ordnance left after the recent conflict.⁹⁵²

An Emergency Mine Action Survey (EMAS) of explosive ordnance in Iraq was completed in February 2004.⁹⁵³ This survey, by two different organisations, examined the country in three regions:

- The northern most Governorates (north of the “green line”) – implemented by MAG;
- Northern Iraq (south of the “green line”) – implemented by MAG; and
- Southern Iraq – implemented by MineTech International.

According to the National Mine Action Authority, “as a generalisation, it is fair to say that mines, both AP and AV, form the greatest threats to populations living in the three northern Governorates of Iraq, and ERW in the rest of the country.”⁹⁵⁴ Most of the contamination in the south was found in abandoned stockpiles rather than intentionally emplaced in minefields or scattered battlefield ordnance. In the south, stockpiles made up 43 per cent of the

reported dangerous areas, while only 19 per cent of areas in the north were reported to be stockpiles.⁹⁵⁵

In the “northern-most Governorates” anti-personnel mines counted for the bulk of contamination. Nearly 58 per cent of communities were affected solely by AP mines, but there were also instances of anti-vehicle mine contamination (1.3 per cent), mixed AP/AV contamination (4.7 per cent) and mixed AP and ERW (34.9 per cent).⁹⁵⁶ Although the Emergency Survey does not yield specific information as to the type of ERW in these instances, no contamination of cluster munitions, improvised explosive devices or missiles was found in this area. In “northern Iraq” (south of the Green Line), anti-personnel mines also accounted for the majority of contamination. However, general UXO was also widespread and MOTAPM, cluster-munitions and IEDs were also reported. In “southern Iraq” general UXO was reported as the major source of contamination, present in 40.5 per cent of danger areas. Here the threat of ERW greatly exceeded that of APs, augmented by significant cluster munition contamination (18.1 per cent of recorded dangerous areas). MOTAPM contamination was also reported as less pronounced than in the north.

Much more is known about ERW/MOTAPM contamination in the “northern-most Governorates” and “northern Iraq,” where humanitarian mine clearance programmes have operated for more than a decade, than in the rest of the country. Multiple sources of data exist regarding ERW and MOTAPM contamination in northern Iraq. MAG had constructed a database and collected ERW and mine clearance data since 1991. The UN Office for Project Services (UNOPS) completed a Landmine Impact Survey in the northern-most Governorates in 2002.⁹⁵⁷ This survey work was implemented by the Mines Advisory Group and Vietnam Veterans of America (VVA). Survey work was also conducted by the University of Durham.⁹⁵⁸ However, these sources overlap to some extent, creating difficulties in consolidating data. Plans for a full Landmine Impact Survey are reportedly being made, employing a “north first” strategy on the basis of expected security constraints. VVA, who were involved in the EMAS supporting MAG activities, are responsible for the overall implementation of this project.⁹⁵⁹

Impact

While the recent Emergency Mine Action Survey does distinguish between types of contamination, allowing ERW and MOTAPM to be seen separately from anti-personnel mines, casualty data is not disaggregated in this manner. National information on impact is also difficult to collate due to a lack of EMAS victim information from the south.⁹⁶⁰

Some casualty data separated by gender is available from the north. Such data is available only for ‘recent’ victims and the definition of ‘recent’ varies between areas. Where it is available, data shows that it is men who make up the great majority of ERW and landmine casualties.⁹⁶¹ Casualty data

broken down by age is available from the north. However, this data does not show a clear pattern.⁹⁶² Some data is reported as suggesting that recent victims have included a greater proportion of children. Of recent casualties (subsequent to the start of the EMS), 45 per cent of those killed and 55 per cent of those injured were children.⁹⁶³

The Mines Advisory Group highlighted the very high levels of casualties being experienced in some areas in the immediate aftermath of the invasion⁹⁶⁴ and also illustrated some of the issues associated with these incidents:

“There were about 350 UXO and mine-related injuries in and around Kirkuk since the fighting began but accurate figures were very difficult to compile,” [Sean] Sutton added. “MAG knows of 47 deaths going unrecorded in Kirkuk. There is no death registration system, and no morgue where people are taken. They are just buried,” he said. The majority of those injured or killed were children. “Most of the children’s injuries are burns to the hands and face from playing with UXOs,” he said. “I have seen a lot of children who have lost eyes.” Many were playing with the guns, ammunition, mortar shells and fuses that they found, with some even trying to set fire to the UXOs themselves. “They find them and dismantle them, and then throw them on fires to blow them up,” he said.⁹⁶⁵

According to the UNOPS Landmine Impact Survey of the three “northern-most Governorates,” deliberate handling of mines and UXO was the most common activity at the time of accidents, accounting for more than 30 per cent of recorded cases.⁹⁶⁶ Other activities at the time of accidents in this area included daily routine activities (29 per cent), herding animals (20 per cent), collecting resources for food and other uses (11 per cent) and digging (5 per cent).

The EMAS victim statistics do not provide information about the causes of accidents. It is reported anecdotally, however, that many accidents in the centre and south of the country result from people deliberately handling abandoned munitions to sell the scrap metal and explosives and to use the propellant and wooden packaging as fuel. The metal can be sold as scrap and the explosive content of mines and ordnance is sometimes used for fishing or is sold at market.⁹⁶⁷ Other sources have also highlighted the important role of the scrap metal trade in bringing people into contact with ordnance.⁹⁶⁸

Where people are living among ordnance contamination, the deliberate engagement in dangerous practices by children can also lead adults to engage with ordnance. Some people are not willing to wait for official clearance teams to come in and take matters into their own hands – attempting to burn items of ordnance, sometimes using sandbags as protection. Local citizens may feel it is better to address the problem than to leave items of ordnance lying around where children can engage with them.⁹⁶⁹

As has been noted previously cluster munition contamination has been distinct component of the post-conflict

ordnance threat. The following examples relating to cluster munition casualties were reported from April 2003:⁹⁷⁰

- Nabil Khalil, 14, was admitted to Kirkuk hospital after playing with a yellow cluster submunition that he found in an abandoned Iraqi army camp. He lost one hand, suffered severe face injuries and can barely open his eyes.
- A crewman working to rebuild a severed power line on the highway to Mosul stepped on a cluster submunition that blew his leg off reported Waheed Khalid, a field operations manager for the non-governmental Mines Advisory Group (MAG).
- Near the village of Dibaga, on a strategic highway linking Kirkuk to Mosul, a girl and two adults were killed when they tried to clear cluster bombs from a spot they had chosen for a picnic, said shepherd Dara Mohammad [...]. A week later, at least half a dozen unexploded KB-1 bomblets were still scattered around the area. Dozens more littered a field where Masoud Samad grazes about 150 sheep. Three of the sheep were killed when they mistook the white cloth ribbons of the submunitions for something to eat, the shepherd said.

Further such examples were reported by Human Rights Watch in their analysis of the conduct of the war:

- “Explosive duds have endangered al-Hilla’s inhabitants since moments after the battle began on March 31. Ambulances could not enter one neighborhood to evacuate wounded civilians because their drivers feared running over a dud in the dark; the next morning hundreds of injured civilians were taken to the hospital. Three days later, in the village of al-Maimira, just southeast of town, a dud killed Hussain Abbas, 30. “He prayed and had dinner and went inside his house,” said Abbas’s sister. “Suddenly there was an explosion. He called, ‘Rihab’ [the name of his wife] and after that he died.” Duds in al-Kifl, a little further south, sent other civilians to al-Hilla Hospital. Thirteen year-old Falah Hassan was injured by an unexploded DPICM on March 26 and remained in the hospital on May 19 awaiting skin grafts. The explosion ripped off his right hand and spread shrapnel through his body. He also lost soft tissue in his lower limbs and his left index finger. His mother, who lay in the hospital bed next to his, suffered injuries to her abdomen, uterus, and large and small intestines from the same explosion.”⁹⁷¹

Sources are not available for civilian accidents from MOTAPM, but a number of Coalition force casualties have been caused by vehicles striking anti-tank mines.⁹⁷²

Although it is almost certainly the case that the ubiquitous presence of ERW and MOTAPM affects economic activity, little research work has been done to determine the exact nature of this impact. The security situation in the country makes such analysis difficult. Human Rights Watch have, however, provided some reports on the efforts to rural

communities to work around cluster munition contamination on their lands:

- “... dozens of unexploded BLU-97 bomblets still covered the field, some lying in ditches where they had fallen or been placed by locals, others buried in the ground after piercing the soft surface on impact. While Human Rights Watch was investigating the site, a shepherd, apparently oblivious to the danger, walked through with a flock of about forty sheep and goats. They grazed among the bomblets, and one goat nibbled grass with a BLU between its legs. About half an hour later, while at another part of the site, the Human Rights Watch team heard a large explosion from the cluster bomb field, possibly a bomblet set off by one of the animals.”
- “DPICMs and ATACMS⁹⁷³ submunitions littered farmland in the month after the war, and in some places ... were found in close proximity to air-dropped bomblets. ‘We have to burn the fields. There are still bombs there. We are growing grains for our animals,’ said the father of Falah Hassan, the submunition victim from al-Kifl. In May, Human Rights Watch found fields contaminated with submunitions in villages around al-Hilla, al-Najaf, al-Falluja, and Agargouf.”⁹⁷⁴

Minefields and UXO pose an immediate threat to local authorities trying to re-establish and repair the country’s infrastructure. In one instance, people were reported to have dumped four or five containers of explosives into a water supply point. In another example, solid rocket fuel was leaking into the water table. It is not known whether these problems resulted from sabotage or accident. UNICEF has also expressed concern that refuse collection activities in Baghdad are being affected by the threat of ERW. There are thought to be around 800 refuse sites in the city that are contaminated with cluster bombs and caches of dumped munitions.⁹⁷⁵

According to the UNMAS Iraq Revised Humanitarian Appeal, “The presence of explosive ordnance, mines and unexploded ordnance (UXO) pose an immediate humanitarian threat and will impede, if not prohibit, the work of the United Nations’ humanitarian agencies in these areas.”⁹⁷⁶

However, these problems must be seen in a certain perspective. Without improved security nationwide it will remain very difficult to determine the impact of ERW and MOTAPM on post-conflict society.

Efforts to address these problems⁹⁷⁷

Poor general security has hindered all agencies attempting mine action operations in the country.⁹⁷⁸ An established National Mine Action Authority exists in the country through the Iraq Mine Action Centre (IMAC) and two Regional Mine Action Centres (RMACs) in Basra and Erbil oversee coordination of mine action in the country. The new IMAC has become part of the Iraqi Ministry of Planning, recognised by

the government and liaising with other ministry sections, such as the Department of International Cooperation, as well as other ministries, such as the Ministry of Oil. IMAC is supposed to play a prioritisation role, where priorities are passed to NGOs: these relationships are described as cooperative, rather than directive.

The U.S. Government is implementing a three-year plan to reduce the threat of landmines/UXO in Iraq after Operation Iraqi Freedom.⁹⁷⁹ The plan includes the following components: Mine Risk Education, the Quick Reaction Demining Force (QRDF), building capacities for mine action coordination and demining operations, and expanding existing mine/UXO clearance capacities. USCENTCOM (US Central Command) has established a Coordination Center to provide data interface between the military clearing and the United Nations and NGO demining efforts.⁹⁸⁰ The US Department of now provides technical advice to the NMAA through the contractor RONCO.

UNOPS, working under the auspices of the United Nations Office of the Humanitarian Coordinator for Iraq (UNOHCI), has contracted several local NGOs to conduct mine clearance operations for its Mine Action Programme.

The following agencies have implemented recent mine action operations in the country. Some, most notably MAG, have been implementing operations in northern Iraq for many years:

- Mines Advisory Group;
- RONCO;
- MineTech International;
- DanChurch Aid;
- Norwegian People's Aid; and
- HELP.

As a major step towards streamlining the UN system's support to mine action in Iraq, it has been decided that UNDP will play the lead role for UN mine action. An agreement was reached and signed in February 2004 between UNMAS and UNDP for the transfer of the lead role in mine action from UNMAS to UNDP. Meanwhile, UNICEF has the lead role in MRE activities.⁹⁸¹

Legislation

Iraq is not a party to either the Ottawa Convention or the CCW.

927 Landmine Action, *Explosive Remnants of War- A Global Survey*, 2003, p. 61.

928 Jean-Christophe Peuch, "Unexploded ordnance, unfired munitions kill, injure children", Radio Free Europe / Radio Liberty, 20 May 2003, online at <http://www.magclearmines.org>

929 Human Rights Watch, 2003, "Off Target: The conduct of the war and civilian casualties in Iraq," p.103

930 Report Of The UN Office For Project Services On Mine Action In Northern Iraq To Mine Action Steering Group, MASG, JULY 2003.

931 Landmine Situation In Iraq, MAIC-JMU, Axis of Logic, 27 April 2004.

932 Jean-Christophe Peuch, "Unexploded ordnance, unfired munitions kill, injure children", Radio Free Europe / Radio Liberty, 20 May 2003, online at <http://www.magclearmines.org>

933 Interview with Archie Law, UNMAS, 14 June 2004.

934 Jean-Christophe Peuch, "Unexploded ordnance, unfired munitions kill, injure children", Radio Free Europe / Radio Liberty, 20 May 2003, online at <http://www.magclearmines.org>

935 Human Rights Watch, 2003, "Off Target: The conduct of the war and civilian casualties in Iraq," p.103

936 Interview with Dave McCracken, NMAA, 28 June 2004.

937 Jo Foster, "On The Ground In Iraq", James Madison University (JMU) , Journal Issue 8.1, June 2004.

938 Interview with Dave McCracken, NMAA, 28 June 2004.

939 Human Rights Watch, 2003, "Off Target: The conduct of the war and civilian casualties in Iraq," p.104

940 Human Rights Watch, 2003, "Off Target: The conduct of the war and civilian casualties in Iraq," p.104

941 Human Rights Watch, 2003, "Off Target: The conduct of the war and civilian casualties in Iraq," pp.104-5

942 Human Rights Watch, 2003, "Cluster Munitions, A Foreseeable Hazard In Iraq,"

943 Textron Systems Website, Precision Strike Products, BLU 108.

944 Landmine Situation In Iraq, MAIC- JMU, AXIS OF LOGIC, 27 April 2004.

945 Landmine Situation In Iraq, MAIC- JMU, AXIS OF LOGIC, 27 April 2004.

946 Sandra Laville, "Hoon Backs Use Of 'Legitimate' Cluster Bombs", Independent Newspaper, 5 April 2003.

947 Unexploded Ordnance, Unfired Munitions Kill And Injure Children, Jean-Christophe Peuch, RFE/RL, 20 May 2003.

948 Landmine Situation In Iraq, MAIC- JMU, AXIS OF LOGIC, 27 April 2004.

949 Human Rights Watch, 2003, "Off Target: The conduct of the war and civilian casualties in Iraq," p.103

950 Iraq: Discarded Ordnance Being Used In Attacks, IRIN, 29 August 2003.

951 Landmine Situation In Iraq, MAIC-JMU, Axis of Logic, 27 April 2004.

952 Iraq: Discarded Ordnance Being Used In Attacks, IRIN, 29 August 2003.

953 It should also be stressed that while the results of the Emergency Survey allow for a useful extrapolation of the impact of ERW and MOTAPM, the survey was not conducted with a view to these terms. Rather the EMAS renders explosive ordnance into exclusive categories of APMs, AVMs, UXOs, Cluster Munitions and Missiles, as well as Improvised Explosive Devices (IEDs). Thus, for the purposes of rough conversion, in this report ERW is considered as including UXO, Cluster Munitions and Missiles. IEDs are not considered as ERW. MOTAPM refers to AVMs.

954 NMAA MRE Strategy 2004.

955 Emergency Survey Preliminary Results, p. 14.

956 Emergency Survey Preliminary Results, p. 19.

957 Landmine Monitor 2003, p. 4.

958 Landmine Action, *Explosive Remnants of War – A Global Survey*, 2003, p.64.

959 Email from Joe Donohue, VVAF, 17 June 2004.

- 960 NMAA MRE Strategy 2004, p. 8.
- 961 Emergency Survey Preliminary Results, p18-19: In the "northern-most Governorates," gender data is available only for those injured between 1999 and 2000. Here, of 315 victims, 298 (94.6 per cent) were men and 17 (5.4 per cent) were women. Information from "northern Iraq" presents a similar picture. From data on recent victims collected in the period January-November 2003, of 85 casualties, 80 (94.1 per cent) were men and 5 (5.9 per cent were women).
- 962 Emergency Survey Preliminary Results, p18-19: In the "northern-most Governorates," age data is available only for those injured between 1999 and 2000. Here, of 315 victims, 22.5 per cent were children of 17 years of age or younger. Information from "northern Iraq," collected in the period January-November 2003, shows that of 85 casualties, 32.5 per cent were children of 17 years of age or younger.
- 963 Emergency Survey Preliminary Results, p. 13.
- 964 Reuters Alertnet, 3rd June 2003, "Iraq's children bear brunt of unexploded munitions", online at <http://www.magclearsmines.org>
- 965 IRIN news, 20th May 2003, "UXOs injure 350 in Kirkuk", Sulemaniye, (IRIN) online at <http://www.magclearsmines.org>
- 966 ES-LIS Results Report, p.5.
- 967 "Iraq- Making A Living", MAG, <http://www.magclearsmines.org>
- 968 For example, The Guardian, April 28, 2003 "Fighting is over but the deaths go on: Guardian investigation reveals mines have killed up to 80 civilians since the conflict ended" and Jean-Christophe Peuch, "Unexploded ordnance, unfired munitions kill, injure children", Radio Free Europe / Radio Liberty, 20 May 2003, online at <http://www.magclearsmines.org>
- 969 Landmine Situation In Iraq, MAIC – JMU, AXIS OF LOGIC, 27 April 2004.
- 970 Paul Watson, "After the war / removing the dangers," Los Angeles Times, April 27, 2003 online at <http://www.magclearsmines.org>
- 971 Human Rights Watch, 2003, "Off Target: The conduct of the war and civilian casualties in Iraq," pp.105
- 972 As of mid-August 2004, there were at least three reported incidents of US forces fatalities in this circumstance. None had been reported among any other Coalition forces. See Iraq Coalition Casualty Count: www.icasualties.org
- 973 Types of cluster submunition.
- 974 Human Rights Watch, 2003, "Off Target: The conduct of the war and civilian casualties in Iraq," pp.110
- 975 Jennette Townsend, JMU 7.2, Summer 2003, Socio-Economic Impact of Landmines.
- 976 UNMAS Iraq Revised Humanitarian Appeal, June 2003, p. 2. Note, however, that this was hypothetical, written before UNMAS had deployed any mine action personnel to the field.
- 977 Unless otherwise referenced, these summaries are sourced from Landmine Situation in Iraq, MAIC-JMU, 27 April 2004.
- 978 MAG EMAS, 9th Monthly Progress Report, 1-29 February 2004, p.4, Jo Foster, "On The Ground In Iraq", JMU, Journal Issue 8, 1 June 2004, and MineTech International, Monthly Report, 1-31 December 2003, p. 2.
- 979 Funded by the Iraqi Relief Supplemental, enacted by Congress in April 2003.
- 980 JMU Issue 7.2, Summer 2003, The US Humanitarian Mine Action Program in Iraq.
- 981 E-MINE, Iraq Country Profile, <http://www.mineaction.org>

Israel⁹⁸²

Background

Tense relationships with neighbouring countries have led to the establishment of minefields on Israel's borders. See also the section on Occupied Palestinian Territories.

Assessment of the problem

According to official Israeli sources, Israel is affected by neither ERW nor MOTAPM. According to a Foreign Ministry official, this is because this type of contamination is of "insignificant number".⁹⁸³ However, according to Landmine Monitor 2003, Israel has used mines along its borders, near military camps and training areas, and near infrastructure including water pump stations and electric power facilities.⁹⁸⁴ This is believed to include AT mines.

According to U.S. State Department estimates, there are 260,000 mines in Israel, primarily along the borders with Lebanon, Syria, Jordan and territories captured in the 1967 war.⁹⁸⁵ According to Israeli sources, these mines are apparently associated with "Israel's Lilliputian breadth and width, coupled with 'hot borders' and a limited area of manoeuvrability for infantry and armoured units".⁹⁸⁶ In addition, there are reported to be significant number of mines scattered through the Golan Heights and Jordan Park area.⁹⁸⁷

Israel may also be affected with ERW, but official estimates make no distinction between ERW and mine contamination.⁹⁸⁸ According to one source in the country, if there is contamination of this sort it is unlikely to be a major problem.⁹⁸⁹

The number of minefields in Israel and the occupied territories is not known but in November 1999 the Israel State Comptroller issued a report stating that 350 of Israel's minefields were no longer needed for security purposes. The Israel Defense Forces (IDF) Engineering Corps maintains a set of detailed regulations and instructions regarding the management of archives and the recording of minefields and mined areas. During 2003, it is reported that the IDF began working to improve the recording measures of several minefields and suspected areas via the use of specific global positioning systems (GPS) and other equipment. This equipment will assist in the management and control of minefields and will enable the Israeli Mapping Centre (IMC) to update maps with more accurate locations of minefields.⁹⁹⁰

Impact

There is no available official database on those killed and injured by mines and ERW. Victims are classed with other types of casualties under the umbrella category of "Victims

of Hostile Activities". There have been no official reports of any fatalities from ERW or MOTAPM within the Israeli Green Line (pre-1967 borders) or Golan Heights since at least 1 January 2000.⁹⁹¹

In February 2001, the Palestinian human rights organisation Al-Haq collected information about Arab Golani landmine and UXO victims since the beginning of the military occupation in 1967. Their conclusions on casualties in the Golan Heights noted:

"Al-Haq collected information about sixty-six Arab Golani victims... of whom sixteen died and fifty were injured. It was not possible in all cases to find out what if the explosion was caused by a mine or by UXO. Al-Haq's data indicates that among the fifty people who survived, forty-three were under the age of eighteen. Eight of the sixteen fatally wounded were under the age of eighteen."

"The last known human accident with mines occurred in November 1999, when teenagers brought a landmine they found outside their village to a local sports club, where it exploded and injured three of them slightly and one seriously in the foot."

It is not possible to state for certain if this last incident resulted from a landmine or from an item of ERW.

Efforts to address these problems

The Israel Defense Forces Engineering Corps is the primary Israeli organisation for clearance of ERW and MOTAPM. Currently, the IDF is reportedly "engaged in various activities in response to the Palestinian terror campaign and does not have the resources to participate in international demining programs". However, the Israeli Government has been reported to "view the issue of international cooperation in the areas of mine clearance, mine awareness and mine victim rehabilitation to be of major importance, despite the difficult budgetary situation" and "to prioritise mine action internally."⁹⁹²

There is at present no systematic humanitarian ERW and mine clearance conducted in Israel.⁹⁹³

Legislation

Israel is not a signatory to the Ottawa Convention. Israel has signed the Treaty on Certain Conventional Weapons (CCW), including its Amended Protocol II. Israel maintains that the existing Israeli legislation enables the government to implement the provisions of Amended Protocol II without the need for additional legislation.

982 Israel, for the purposes of this report, refers to the Israel of pre-1967 boundaries, referred to as the Green Line, and specifically does not include reference to the Occupied Palestinian Territories of the West Bank and Gaza Strip.

983 Interview with Meir Itzchaki, Israeli Ministry of Foreign Affairs, 6 September 2004.

984 Landmine Monitor 2003.

985 U.S. Department of State, "To Walk The Earth In Safety", November 2001.

986 "Israeli Landmine Policy and Related Regional Activity", Prof. Gerald Steinberg and Aharon Etengoff, Bar Ilan University, 21 July 2004.

987 "Israeli Landmine Policy and Related Regional Activity", Prof. Gerald Steinberg and Aharon Etengoff, Bar Ilan University, 21 July 2004.

988 Interview with Meir Itzchaki, Israeli Ministry of Foreign Affairs, 6 September 2004.

989 Interview with Dror Schimmel, Maavarim Civil Engineering Company, 6 September 2004.

990 Aharon Etengoff and Prof. Gerald Steinberg, Bar Ilan University Arms Control and Human Security Division Program on Conflict Management and Negotiation, JMU Journal of Mine Action, Issue 8.1 Summer 2004, The Israeli Defence Forces' Humanitarian Demining Efforts.

991 US Department of State, "To Walk The Earth In Safety", November 2001; Jennette Townsend, Humanitarian Demining Efforts In The Occupied Palestinian Territories, JMU Issue 8.1, June 2004.

992 Aharon Etengoff and Prof. Gerald Steinberg, Bar Ilan University Arms Control and Human Security Division Program on Conflict Management and Negotiation, JMU Journal of Mine Action, Issue 8.1 Summer 2004, The Israel Defense Forces' Humanitarian Demining Efforts.

993 Landmine Action, *Explosive Remnants of War, A Global Survey*, 2003, p. 61.

Jordan

Background

MOTAPM were first laid in Jordan during the 1948 war with Israel. The 1967 war added to the problem, when substantial numbers of anti-tank minefields and mixed anti-personnel and anti-tank minefields were laid mainly in the Jordan valley areas by both Jordan and Israel. ERW contamination also resulted from both conflicts. Defensive MOTAPM minefields were also laid by the Jordanian government along parts of the northern border with Syria. Military records are reported as indicating that some 304,653 mines have been laid in Jordan by both Jordanian and Israeli forces⁹⁹⁴. Of these approximately 89,000 are believed to be MOTAPM. The vast majority of MOTAPM was emplaced between 1957 and 1971⁹⁹⁵.

Jordan claims to have not used MOTAPM since 1973.⁹⁹⁶ According to a Brigadier-General of the Royal Engineer Corps: "Jordan is still suffering from [...] UXOs spread in many locations. Over the past three decades the [Royal Engineering Corps] has conducted thorough inspection and has disposed of thousands of UXOs, however there are still many locations that are categorised as being suspected areas."⁹⁹⁷

Assessment of the problem

Most of the MOTAPM in Jordan date from the 1967 Arab-Israeli conflict. The MOTAPM and ERW problem is recognised by the government and considered to be a serious public safety concern and economic challenge, not just for those communities directly affected by the mines but for the entire country.⁹⁹⁸ Exact figures for both APM and MOTAPM numbers vary, but all suggest approximately 310,000 APM and MOTAPM were laid. UNMAS quotes a figure of 310,000 landmines affecting an area of approximately 100 square kilometres⁹⁹⁹ while a Jordanian Brigadier-General reports the exact figure of 304,653 APM and MOTAPM being emplaced in total.¹⁰⁰⁰ Of these, approximately 80,500 MOTAPM were emplaced by the Jordanian Armed Forces (JAF) and a further 8,323 MOTAPM were emplaced by the Israel Defense Forces (IDF). All IDF-emplaced MOTAPM and APMs were deployed in the Araba valley and Al Baquora region. Figures cited by different sources vary somewhat but are all similar to those presented here.¹⁰⁰¹

Most affected by MOTAPM and ERW are the communities close to the western and northern borders. In addition to posing an immediate threat to the safety of local communities, mines deny access to large areas of extremely high-potential agricultural land. Furthermore, UNMAS suggests that mines in certain areas of the country pose a major obstacle for further growth of the tourism industry.¹⁰⁰² Most of the clearance activity to date has been in the Aqaba region and in the Jordan Valley.¹⁰⁰³

The majority of landmines are located in two areas in the north-west region of the Jordan River Valley. One area is

located near the northern end of the valley on the border with Syria, near Lake Tiberias, and the other further south near the northern end of the Dead Sea. Israeli-laid minefields are located mainly in the south-west part of the country in the Araba Valley in areas restored to Jordan after the Israeli occupation.¹⁰⁰⁴

The Jordanian Armed Forces and the Royal Engineering Corps (REC), which are responsible for APM, ERW and MOTAPM clearance, divide the known 367 minefields into four zones; northern, middle, southern and eastern. These areas are further divided into minefields considered cleared, active or requiring re-clearance. Figures from Jordan's March 2004 Article 7 report suggest the following:

- MOTAPM minefields: 50 cleared, 6 active and 8 requiring re-clearance.
- Mixed MOTAPM and AP minefields: 68 cleared, 89 active and 29 requiring re-clearance.
- AP minefields: 61 cleared, 133 active and 55 requiring re-clearance.

From figures reported in the Article 7 report of March 2004, it appears that some 35,025 MOTAPM had been cleared from 12,808 acres. However, between 41,923¹⁰⁰⁵ and 46,724¹⁰⁰⁶ MOTAPM are believed to continue to contaminate 30,988 acres in 181 Jordanian and 133 Israeli-laid minefields.¹⁰⁰⁷

It is suggested by UNMAS that some 10 per cent of Jordan's 6.3 million people live in areas affected by APM, ERW and MOTAPM. While many of the areas are marked and/or fenced as landmine-affected, floods, erosion and shifting sand have carried APM, ERW and MOTAPM to other areas. In addition, children and adults have reportedly removed signs at previously marked minefields, making it difficult for all mined areas to be identified with complete accuracy.¹⁰⁰⁸

Impact

Between July 2003 and June 2004, five people have been killed by ERW in two incidents. In March 2004, three boys were killed in an incident involving ERW, while two boys were killed in October 2003 while handling an item of ERW. Both incidents took place in the northern zone. During the reporting period, there has been one incident involving MOTAPM, in which a Royal Engineering Corps deminer was concussed when his bulldozer exploded a MOTAPM during demining in the Wadi Araba zone in the south of the country. No one was killed or seriously injured in this incident.¹⁰⁰⁹

A September 2002 U.S. Department of State publication cites the Jordanian Armed Forces Medical Services as reporting 636 mine casualties since 1967, of which 370 were civilians. However, according to a Royal Engineering Corps presentation in June 2004,¹⁰¹⁰ the total number of registered victims of APM, ERW and MOTAPM since 1969 is

529 – although it is recognised that some victims are not known by the authorities. This total of 529 is broken down as follows:

- Civilian casualties: 50 killed and 162 injured (212 in total.)
- Military or peacekeeping casualties: 58 killed and 259 injured (317 in total.)

Specifically with respect to ERW and MOTAPM, the National Demining and Rehabilitation Committee (NDRC)¹⁰¹¹ reports that, between 1967 and June 2004, 87 people have been killed and 34 injured, a total of 121. Combining this information with that presented above on casualties, ERW and MOTAPM are responsible for 80 per cent of all reported AP, ERW, MOTAPM deaths, and 8 per cent of injuries.

According to Landmine Survivors Network,¹⁰¹² the total casualty numbers are low due to under-reporting in remote areas and lack of a systematic reporting system. Most casualties occur in the mined areas of the north.

Efforts to address these problems

The focal point for all mine action in Jordan is the National Demining and Rehabilitation Committee. The NDRC's duty is to ensure continuity of funding and support for mine clearance operations and rehabilitation projects. From 1996 to 2004, foreign funding totalling approximately US\$11 million¹⁰¹³ has been received to aid demining programmes.

All mine clearance in Jordan is undertaken by the JAF. The Royal Engineering Corps deploys a total of 380 men in 20 demining teams. In addition to mine clearance, these

engineering battalions are responsible for maintaining the marking and fencing of known minefields on a regular basis.

At present, the Government's demining operations focus on the 300 minefields in the Jordan River Valley. The valley is the most fertile farmland in Jordan, where arable land is scarce, and these mines severely impede the production of food crops.¹⁰¹⁴ Demining is made more difficult because many of the mines, laid more than 30 years ago, have moved due to erosion, shifting sands, rain and mudslides.

The Red Crescent Society (RCS) is involved in delivering mine risk education activities. Other institutions, such as the Royal Medical Service, Jordan Red Crescent, Landmine Survivors Network and the Hashemite Charitable Society for Soldiers with Special Needs, have projects in support of the medical needs of mine victims, mine risk education and survivor assistance, rehabilitation and reintegration.

Legislation

Jordan signed the Ottawa Convention on 11 August 1998. This was ratified on 13 November 1998 and entered into force on 1 May 1999.

Jordan reported the destruction of 40,580 MOTAPM during the period 30 April 2003 – 1 May 2004.¹⁰¹⁵ Most MOTAPM is overwhelmingly of U.S. manufacture consisting mainly of M5, M15 and M19 anti-tank mines.

While Jordan is party to the Convention on Conventional Weapons (CCW) and its Amended Protocol II, it did not attend the Fifth Annual Conference of States Parties to Amended Protocol II in November 2003.

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- 1001 See Landmine Monitor 2003, "Jordan Mine Action," presentation to the Standing Committee on Mine Clearance, Mine Risk Education and Mine Action Technologies, Geneva, 5 February 2003 and Form C of the 1 May 2003 Article 7 Report.
- 1002 United Nations Mine Action Service website: *E-MINE: The Electronic Mine Information Network* http://www.mineaction.org/countries/countries_overview.cfm?country_id=788 accessed on 12 September 2004
- 1003 Jordan Article 5 Summary, presentation by Brig.-Gen. Falah al-Maiteh, Standing Committee on General Status and Operation of the Convention, Geneva, 5 June 2004.
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- 1006 Jordan Article 5 Summary, presentation by Brig.-Gen. Falah al-Maiteh, Standing Committee on General Status and Operation of the Convention, Geneva, 21 June 2004.
- 1007 Jordan Article 5 Summary, presentation by Brig.-Gen. Falah al-Maiteh, Standing Committee on General Status and Operation of the Convention, Geneva, 21 June 2004.
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- 1011 Telephone interview with Yasin Majali, Board Secretary to the NDRC 0930 6 October 2004.
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1015 Article 7 Report, Form C, 5 March 2004.

Kenya

Background

Kenya has a small problem with MOTAPM, but has significant contamination from ERW, most of them left over from training exercises by British and Kenyan military forces. Mines are primarily planted by criminal groups and Ethiopian insurgent groups operating in the north of Kenya against the Ethiopian government.

Assessment of the problem

During the reporting period there were indications of new MOTAPM contamination in Kenya. In July 2003, two Kenyan police officers were killed when the vehicle they were travelling in was blown up by a suspected MOTAPM in the north-eastern province town of Moyale. Eight police officers and two civilians were injured.¹⁰¹⁶ Militia of the Ethiopian Oromo Liberation Front, which is opposed to the government in Addis Abba, were suspected of being behind the attacks. There are reports of militia frequently crossing the border to Kenya to attack the local Borana community.¹⁰¹⁷

Since 1945, more than 500 people are reported to have been injured by ERW in Kenya, mainly in the Maasai and Samburu regions.¹⁰¹⁸ In 2001, the British charity, Action Aid, approached a British law firm, Leigh Day and Company Advocates, to represent the local community, who were exposed to ordnance left behind by the British Army's live manoeuvres. Action Aid said these remnants had caused deaths, blindness, deafness, burns and amputations among the local population.¹⁰¹⁹ The area contaminated by ERW was 1,500 sq km, of which the Kenyan Army and British Government have cleared 300 sq km, mainly in Samburu and Mukokoto since 2002.¹⁰²⁰ Many of the Maasai and Samburu pastoralists are illiterate and thus cannot read the warning signs.¹⁰²¹ The British military has blamed the herdsmen, arguing that they should not be walking their animals in training areas, and added that there were clear warning signs.¹⁰²² ERW have also been found in areas where the Mau Mau rebellion was fought by Kenyan nationalists against British colonial rule in the 1950s¹⁰²³ – mainly around Mount Kenya and other parts of the Central Province.¹⁰²⁴ However, some researchers said that the ERW contamination in Kenya was "minimal and limited only to some parts of the country which are sparsely inhabited by nomadic tribes".¹⁰²⁵

An operation by Kenyan security agencies at Wada trading centre, 120km from Moyale, in June 2004 yielded 70,000

bullets, three cartons of landmines of unspecified types, and six boxes of hand grenades. They were found buried at an armoury.¹⁰²⁶ Insecurity continued in the area up to July 2004, with security forces fighting intermittent battles with militias, which created the possibility of further ERW and mine contamination.

Impact

In July 2004, a camel which was being led to the livestock market near Moyale was killed after stepping on a MOTAPM.¹⁰²⁷ Passengers on the Moyale-Marsabit-Isiolo Road which connects the country's capital Nairobi to the Ethiopian border got stranded for three days after lorries and buses abandoned the route and instead diverted to Wajir. Transport fares went up by 150 per cent as a result, and business along the towns of Sololo, Turbi and Marsabit which are located along the highway was severely affected.¹⁰²⁸

On 24 July 2003 the police chief of Moyale said that vehicles had been advised not to enter or go out of Moyale town as the Kenyan Army was searching for MOTAPM on the Moyale-Dabel and Moyale-Marsabit roads. He said the number of mine incidents had risen in the districts during of July 2003.¹⁰²⁹ On 11 July 2003, two police officers were killed and six others seriously injured when their vehicle drove over a landmine during an anti-bandit operation in Moyale.¹⁰³⁰ An MP for Moyale district said a vehicle driving to Moyale town early in June 2003 hit a suspected MOTAPM, killing a local businessman and injuring eight other people. He said mines had been a problem in the area for many years and blamed it on Ethiopian militia. Speaking in parliament, he asked the Minister for Internal Affairs to assure the people of Moyale that the roads were safe and that foreign forces would not plant mines on them.¹⁰³¹ There were no bodies – state or non-state – dedicated to addressing the problem of mines. The army did not have any active demining programme and was tackling the problem by preventing Ethiopian militia from entering the country.

No studies have ever been methodically conducted to establish the extent and impact of the ERW problem in Kenya.¹⁰³² The Kenya Coalition Against Landmines (KCAL), the national agency that coordinates ERW and mine issues, says its sources were interviews with rural populations in affected areas. The most contaminated regions in Kenya were said to be Archers' Post in Samburu and Dol-Dol in Laikipia, where the British and Kenyan armies have for

decades conducted military exercises.¹⁰³³ In some incidents the ERW exploded when locals deliberately handled them.¹⁰³⁴ ERW discoveries indicate that ordnance is also littered in the Maasai and Samburu regions. A British lawyer representing ERW victims in the area said that when authorities started clearing the munitions they found four to five items per square kilometre.¹⁰³⁵

A representative of the local NGO "Organization for the Survival of the Il-Laikipiak Indigenous Maasai Group Initiative" (Osiligigi), said in late 2002 that "hundreds if not thousands" of ERW were still in the area but the British army and government were not moving swiftly enough to clear them.¹⁰³⁶ An official of Leigh Day and Company based in Dol Dol said that, although there were no incidents in that area in the reporting period, pastoralists continued to encounter ERW while grazing their animals. "But in other areas like Archer's Post there have been incidents of blasts and Samburu children being seriously injured," he said.¹⁰³⁷ But while there were no incidents in Dol Dol, pastoralists feared grazing their animals in areas they knew or suspected to be heavily contaminated.¹⁰³⁸ In parts of Samburu, an area that is traditionally nomadic, pastoralists had been denied grazing pasture by the reported presence of ERW.¹⁰³⁹

Efforts to address the problem

The military and the police are responsible for removal of ERW. But while the government claims that it is cleaning up the sites immediately after the periodic and annual military drills, one researcher noted that "still a lot of ERW are left behind".¹⁰⁴⁰ Further, some ERW were buried in the ground during the training and only got exposed when it rained.¹⁰⁴¹

While the military has begun some ERW clearance operations, few risk education programmes exist to alert people in the affected areas about the risks of the ERW. Before conducting training exercises, the army puts up notices in the community alerting residents and even conducts mine risk education in the affected locations.¹⁰⁴² ICBL says the government needs to increase and sustain ERW/mine risk education and ERW clearance efforts; and that full implementation of the new Disabilities Act is needed.¹⁰⁴³ Together with the army, ICBL has been engaged in educating residents to minimise the risks of unexploded ordnance. KCAL is also involved in UXO risk education in affected areas.

The issue of ERW came up in the Kenyan Parliament on 21 May 2004 when an MP threatened to take to the assembly two boys who were injured by ERW at Archer's Post, Samburu District. The MP said that in two incidents between 18 and 26 February 2004, two boys named Sukule Timado (12 years) and Iltinga Mirgichan¹⁰⁴⁴ (14

years) were injured by ERW at the British Army training field at Lore Soro, and two others injured. He also said that 13 cattle had been killed by ERW on 18 February 2004.¹⁰⁴⁵ In September 2004, an eight-year-old boy was injured by an item of ERW he was handling at Archer's Post, and admitted at Wamba Hospital.

Leigh Day and Company Advocates, which represented Kenyan ERW victims seeking compensation, said it was aware of three ERW incidents between June 2003 and July 2004.¹⁰⁴⁶ One was on the Archer's Post range, in which two children were severely injured¹⁰⁴⁷ and another near the airstrip close to Maralal, in which a woman chopping firewood at Naiborkeju "appeared to have set off an UXO which caused a laceration wound to her right elbow joint". The firm maintained a member of staff in Dol Dol to monitor ERW incidents and take part in mine risk education.¹⁰⁴⁸

During the reporting period, Leigh Day continued to be involved in seeking compensation for ERW victims. In February 2004, the British Army and Leigh Day announced that 1,046 Maasai and Samburu claimants had accepted an offer of £500,000 made by the British Government as compensation for injuries and deaths alleged to have taken place on three military ranges used by the British Army over the last 50 years.¹⁰⁴⁹ Leigh Day said prior to the deal there was evidence to suggest that the Kenyan Army had been responsible for a greater proportion of the AXO left on the ranges than had been understood when the first compensation deal went through in 2002. It said the 1,046 claimants "decided to accept this reduced offer compared to the amount received by the first group, rather than face a lengthy and uncertain court battle".¹⁰⁵⁰

Leigh Day said in August 2004 that it was not currently representing any more Kenyans with claims for compensation for injuries or deaths caused by ERW. It says in total it represented about 1,280 claimants for whom a total of £5 million was obtained.¹⁰⁵¹ In July 2002, the British Government agreed to pay US\$7 million in compensation to those killed or maimed by the ERW, but said it could not take responsibility for all 233 victims, saying other armies also used the grounds.¹⁰⁵² Those who had sustained minor injuries received US\$1,500 each, while some who had lost limbs or sight received as much as US\$460,000.¹⁰⁵³

Legislation

Kenya signed the Ottawa Convention on 5 December 1997 and ratified it on 23 January 2003. A draft bill on landmines was at the Attorney General's Office and it was expected to be enacted by Parliament before the end of November 2004.¹⁰⁵⁴ Kenya is not a State Party to the CCW and its Protocols.

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- 1018 Telephone interview with Mereso Agina, Kenya Coalition Against Landmines research coordinator, 11 October 2004; Leigh Day and Company Advocates, "Maasai Bomb Victims", <http://www.leighday.co.uk/doc.asp?doc=112&cat=948>, accessed 13 September 2004.
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- 1037 Email interview with Peter Kilesi, Leigh Day and Company Representative, Dol Dol, Kenya, 30 August 2004.
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- 1041 Telephone interview with Peter Kilesi, Leigh Day and Company Representative, Dol Dol, Kenya, 11 October 2004.
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- 1045 "MP Appeals to British Army", The East African Standard, 1 March 2004.
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Kosovo

Background

Widespread killing of civilians in the southern Serbian province of Kosovo during the 1998-1999 internal conflict between the Kosovo Liberation Army (KLA) and the armed forces of the Former Republic of Yugoslavia (FRY) resulted in a NATO bombing campaign that began on 24 March 1999 and ended 78 days later.

Kosovo has since been administered by the UN and has been under NATO protection since mid-1999. As part of the "Kumanovo Agreement" signed between the former FRY military and NATO in June 1999, which marked the end of the conflict, a five-kilometre-wide strip of land known as the Ground Safety Zone (GSZ) was established along the border between Kosovo and Serbia.¹⁰⁵⁵ In June 1999, the NATO Kosovo Force (KFOR) entered Kosovo and aid organizations such as the UNHCR immediately followed. The UN established a mine action centre in Kosovo aimed at reducing the level of threat posed by unexploded cluster submunitions, other ERW and landmines in the province. The continuation of the conflict between ethnic Albanian armed groups and the former FRY Joint Security Forces (JVSF) during 2000 and 2001 created further ERW and mine contamination along the border with Serbia. Kosovo continues to suffer from civil unrest between the Serbian and ethnic Albanian population which has led to the continued illegal use of illegally held MOTAPM and ordnance.

Assessment of the problem

There is a general lack of information regarding the use of mines and ordnance by the Kosovo Liberation Army, other armed groups in Kosovo and, in part, the former FRY forces, particularly in terms of FRY use of cluster munitions. According to the United Nations Mission in Kosovo (UNMIK), the only minefield records that have been made available to them are those supplied by the former FRY military. No minefield records have been supplied to UNMIK by the KLA or any other forces.¹⁰⁵⁶

According to the former director of the United Nations Mine Action Coordination Centre (UNMACC) in Kosovo, NATO dropped 1,392 cluster bombs, each deploying 202 (US) or 147 (UK) submunitions, which, as well as being indiscriminate when they exploded as intended, generated large numbers of ERW, causing many casualties in the aftermath of the air campaign, especially among children.¹⁰⁵⁷ Two-hundred and twenty-two strike sites have been at least surface cleared.¹⁰⁵⁸ The FRY Air Force also used cluster munitions, of the type BL755, but did not provide figures on the numbers used.¹⁰⁵⁹

According to UNMIK, there are still many unexploded submunitions in the ground and at least 29 mine-contaminated areas along the border with Albania in the

west and also in the south of the province. During the reporting period no NATO strike sites were surveyed, but approximately 12 sites were cleared by the Kosovo Protection Corps (KPC).¹⁰⁶⁰

At the end of 2003, the ICRC had recorded a total of 130 areas that required some form of clearance.¹⁰⁶¹ KFOR stated that the remaining level of contamination in Kosovo was as follows: depleted uranium shells in 78 areas, most of them in western Kosovo; ERW in 40 areas spread across Kosovo; five located minefields; submunitions in 75 areas, mostly in western Kosovo close to the border with Albania.¹⁰⁶²

Bajram Krasniqi, Public Information Assistant at the KPC, stated that more contaminated areas are reported from members of the public on a regular basis. In May 2004, the KPC received about one request per week. On average, about 50 per cent of original reports contain some type of ERW or mine contamination.¹⁰⁶³

Since 1999, 283 improvised explosive devices (IEDs) have been removed, but according to KFOR, IEDs do not constitute a significant problem in Kosovo.

Impact

Information relating to ERW or mine accidents is reported through the network of Red Cross of Kosovo (RCK) volunteers, KFOR, UNMIK, KPC and other organizations in Kosovo. The ICRC and RCK network of volunteers throughout the province form an important grass roots source of information regarding the impact of ERW and mines on communities. The Institute for Public Health (IPH) is responsible for maintaining accurate records of all ERW and mine accidents in Kosovo. This information system contains data on the number of victims, type of accident (ERW, mine or submunition), date and gender.¹⁰⁶⁴

According to KFOR statistics, in the period from July 2003 to June 2004, one person was killed in a UXO accident, a further 12 people were injured in UXO accidents (including two accidents with cluster munitions). Five people were injured in mine accidents. All but one of the casualties were male.¹⁰⁶⁵

UNMIK is unaware of any in-depth assessments of the socio-economic impact of ERW and mines being conducted in Kosovo and it could not place an accurate figure on the total number of people affected by MOTAPM and ERW. According to the IMSMA quarterly report on Kosovo, as of 19 March 2004, a total of 982,685 inhabitants were affected by ERW and mines in 33 low risk areas.¹⁰⁶⁶ The majority of affected inhabitants (465,919) live in Western Kosovo.

One of the major successes of the mine action programme in Kosovo was the decline of the casualty rate, which dropped from 100 per month in July 1999 to zero per

month in October 2001. During this reporting period, ERW were the cause of 11 of the 18 casualties from ERW or mines.¹⁰⁶⁷ Following an increase in contact with and injuries from ERW during the reporting period, KFOR issued a press release calling for appropriate and safe responses to ERW.¹⁰⁶⁸

According to the ICRC, economic pressure forces many people to live and work in contaminated areas. This means that they often need forms of humanitarian assistance other than risk education in order to reduce the risk to which they expose themselves.¹⁰⁶⁹ The KPC continually receive requests from the general public to check suspect areas, which reflects farmers' requirements to use land in suspect areas for economic reasons. Submunition-contaminated sites are "mostly found in densely wooded areas that affect the woodcutters' livelihood", according to UNMIK.

Regarding impact on livestock, UNMIK also states that "The most recent incident involved sheep that kicked a cluster bomb whilst grazing; eight sheep were killed outright and two shepherds were injured, this happened in May 2004."¹⁰⁷⁰ Another incident involved a MOTAPM: "Halo Trust just recently discovered four TMA-3 anti-tank mines in the ground from 1999, which were previously unknown to us. They only found these because a cow was unlucky enough to have stepped on the fourth one."¹⁰⁷¹

Violence between the ethnic Albanian and Serbian population of Kosovo, especially in minority areas, has led to the use of MOTAPM. In November 2002 an anti-vehicle mine was found in a recently renovated house. In another incident in September 2002, shortly after a Serbian woman had been killed by a wire-triggered mine, three anti-vehicle mines were discovered in a vehicle owned by an ethnic Albanian.¹⁰⁷²

UNMIK states, however, that MOTAPM or ERW are not considered as having a major affect upon the returnee process of IDPs in Kosovo. "Every now and then a mine is found in or around a village that is earmarked for rebuilding for minority (KO) returnees; it is left there as a warning or to frighten the people into not returning."¹⁰⁷³ No cases of IDPs becoming victims of MOTAPM or ERW as a result of using contaminated roads in Kosovo could be confirmed. The continuing civil unrest in Kosovo has resulted "from time to time, in various criminal gangs often using anti-tank mines for criminal activities", which "are usually used as bulk explosives for booby traps".¹⁰⁷⁴ These devices are placed on roads frequently used by Serb police forces mainly in areas of southern Serbia, close to the border with Kosovo. In one incident, on 23 February 2003, one Serbian policeman was killed and two others injured in southern Serbia when their vehicle detonated an anti-vehicle mine. Ethnic Albanian militants later claimed responsibility for the incident.¹⁰⁷⁵

On 1 July 2003, a former commander of the now disbanded Kosovo Liberation Army (KLA) was indicted for possession of weapons, including 80 mines (both APM and MOTAPM).

Possession of such munitions is illegal under the laws pertaining to the governance of the province.

Efforts to address the problem

Since December 2001 authority for mine action activities has been transferred from UNMAC to local institutions, the UNMIK and the Office of the KPC Coordinator (OKPCC). The overall national mine action planning agency in Kosovo is the UNMIK EOD Management Section which is part of the OKPCC.¹⁰⁷⁶ The KPC is a civilian protection organization that has been operational in Kosovo since February 2000 and deals with the clearance of ERW and mines in Kosovo.¹⁰⁷⁷

According to the IMSMA quarterly report, at the end of June 2004 out of a total of seven organizations a total of 147 staff were engaged in clearance operations, 106 in mine risk education and 67 in coordination and support roles. The organizations operational in the conduct of these activities were Handicap International, Halo Trust, RCK, Ministry of Education, Mines Awareness Trust, KPC and KFOR.

In 2004 a total of 725,606 square metres were cleared and 54,000 square metres was threat reduced. During the two-and-a-half years of operation of UNMAC, a total of 32,224,107 square metres were cleared and 8,485 submunitions, 13,896 other items of ERW, 5,515 MOTAPM and 19,457 APMs were destroyed.¹⁰⁷⁸ As of July 2004, a total of 23 dangerous areas were in the process of being cleared of ERW and mines. Survey teams conducted 26 survey operations between June 2003 and June 2004.¹⁰⁷⁹

KFOR continues to find weapons, ammunition, MOTAPM and APM, and other ordnance during house searches that result from information received from the public. MOTAPM were not generally found in the ground, but were either handed to KFOR by members of the public or were found during searches of buildings.¹⁰⁸⁰ KFOR conduct house searches of occupied and unoccupied buildings based on information from civilians. Most anti-tank mines have been found in lay-bys where people left them for KFOR to collect.¹⁰⁸¹

Throughout the reporting period, and previously, UNMIK broadcast various televised risk education advertisements aimed at warning the general public about the danger posed by ERW and mines in Kosovo. These advertisements were broadcast by all local television stations. UNMIK also broadcast five radio ERW and mine risk education advertisements via different local stations that covered the entire Province. UNMIK also produced MRE posters and notebooks containing written MRE messages that were distributed in schools throughout the Province. As of July 2004, UNMIK has a half-page MRE advertisement in three daily newspapers and plans to make a public service film to be screened at peak television viewing times throughout the Province.¹⁰⁸² As mentioned above, KFOR provides information and warnings to the public regarding the danger of ERW and continues to urge the civilian population to report suspect items to KFOR so they can be safely addressed.¹⁰⁸³

Legislation

The status of Kosovo is uncertain. It is not a recognised state and has no independent capacity to adopt instruments of international law. Serbia and Montenegro has been a State Party to the Ottawa Convention since 1

April 2004.¹⁰⁸⁴ It is also a State Party to the CCW and its 1980 Protocol II, Protocol III, and Protocol IV.¹⁰⁸⁵ Serbia and Montenegro is not a Party to Amended Protocol II of the CCW.

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- 1058 Email from Steven Saunders, Chief of EOD Management Section, UNMIK, 19 July 2004.
- 1059 Email from Steven Saunders, Chief of EOD Management Section, UNMIK, 19 July 2004.
- 1060 Email from Steven Saunders, Chief of EOD Management Section, UNMIK, 19 July 2004.
- 1061 Steven Saunders stated that "over the winter period we looked at a lot of these dangerous areas and realised that they were mostly CBU areas that needed only sub surface clearance or verification" (email 19 July 2004, see above). These areas were then reclassified as EOD response areas, meaning that the KPC would conduct EOD response as and when resources were available.
- 1062 Email from Alain Marchal, LTC FR-A KFOR HQ JOC MINE ENV, Kosovo, "Statistics on ERW and mines in Kosovo, 16 June 1999 – 28 July 2004", email received 16 August 2004.
- 1063 KFOR, KFOR Press Release, "Increase of unexploded ordnance (UXO) sightings", Pristina 19 May 2004, #04-32, <http://www.nato.int/kfor/press/pr/pr/2004/05/32.htm>, accessed 10 June 2004.
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- 1065 Email from Alain Marchal, LTC FR-A KFOR HQ JOC MINE ENV, Kosovo, "Statistics on ERW and mines in Kosovo, 16 June 1999 – 28 July 2004", email received 16 August 2004.
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- 1068 KFOR, KFOR Press Release, "Increase of unexploded ordnance (UXO) sightings", Pristina 19 May 2004, #04-32, <http://www.nato.int/kfor/press/pr/pr/2004/05/32.htm>, accessed 10 June 2004.
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- 1070 Email from Steven Saunders, 19 July 2004.
- 1071 Email from Steven Saunders, 19 July 2004.
- 1072 Interview with Steven Saunders, EOD Operations Officer, Office of the KPC Coordinator, UNMIK, Pristina, 28 January 2003, cited in *Landmine Monitor* 2003, p. 748.
- 1073 According to the Serbian Government there are some 200,000 expelled persons, mainly Serbian, from the Province of Kosovo and more than 5,000 unsolved cases of missing persons on both sides. Internet web-page, Serbian Government, "Kosovo and Metohija", <http://www.srbija.sr.gov.yu/vesti>, accessed 2 July 2004.
- 1074 Email from Steven Saunders, Chief of EOD Management Section, United Nations Mission in Kosovo (UNMIK), 19 July 2004.
- 1075 "NATO, UN Rebut Serb Claims as Ex-rebel Warns of Fresh Violence", Kathimerini, 13 February 2003; "US, UN Deny Serb Allegations as Rebels Claim Responsibility", Kathimerini, 25 February 2003; "Serbs, Ethnic Albanians Brace for More Conflict in Southern Serbia", Kathimerini, 26 February 2003, cited in *Landmine Monitor Report* 2003, p. 677.
- 1076 Steven Saunders (UNMIK), Email 19 July 2004; cf. Bajram Krasniqi, Public Information Assistant, Kosovo Protection Corps, UNMIK, IMSMA Quarterly report April 2004 – June 2004, published 13 July 2004, accessed 17 August 2004.
- 1077 After the Kosovo Liberation Army was officially disbanded on 20 September 1999, much of the structure of the former KLA was then transformed into the KPC. This transition process was supervised and administered by NATO, the UN Mission in Kosovo, UN Administrator Bernard Kouchner and KFOR. The KPC is predominantly comprised of ethnic Albanians; however, the KPC also contains various minorities such as Serbs, Bosnians and Askari gypsies. In areas that are predominantly Serb, the KPC may request the presence of KFOR. See Institute of War and Peace Reporting, Balkan crisis report, www.iwpr.net, "Policing the Protectors", http://www.iwpr.net/index.pl?archive/bcr3/bcr3_200306_440_3_eng.txt.
- 1078 "Kosovo after the UNMACC and beyond", *Journal of Mine Action* – James Madison University Mine Action Information Center, Issue 7.2, August 2003, <http://www.hdic.jmu.edu/JOURNAL/7.2/focus/saunders/saunders.htm>, accessed 11 June 2004.
- 1079 Email from Steven Saunders, 19 July 2004.
- 1080 No anti-vehicle mine has been found in the ground for at least two-and-a-half years, ever since the UNMACC closed, according to UNMIK. Steve Saunders said that it "is hard to imagine that we will find any more anti-tank mines found in place now; however, from time to time, anti-tank mines are planted or used by criminals as booby traps".
- 1081 In June 2000, KFOR-UK troops seized 67 tons of weapons and ammunition discovered during search operations.
- 1082 Email from Steven Saunders, 19 July 2004.
- 1083 KFOR, KFOR Press Release, "Increase of unexploded ordnance (UXO) sightings", Pristina 19th May 2004, #04-32, <http://www.nato.int/kfor/press/pr/pr/2004/05/32.htm>, accessed 10 June 2004.
- 1084 ICBL, Treaty Update as of 13 May 2004, p.3, <http://www.icbl.org/ratification/>, accessed 13 June 2004.
- 1085 As of 12 March 2001. *Landmine Monitor* 2003, p.676.

Kyrgyzstan

Background

The presence of ERW in Kyrgyzstan stems from clashes of Kyrgyz government troops with units of the Islamic Movement of Uzbekistan (IMU) in 1999 and 2000. Mines, presumably including MOTAPM, were laid along the border with Uzbekistan in 1999 by Uzbek border guards as an alleged protection against the intrusion of IMU fighters from Kyrgyz territory during the so-called Batken Wars.

Assessment

ERW and MOTAPM present a significant risk to border villages in the Batken region in south Kyrgyzstan.¹⁰⁸⁶ About a dozen caches of abandoned ordnance have been discovered in southern Kyrgyzstan since 1999, which are assumed to be left behind by IMU fighters – missile and grenade launchers, large quantities of cartridges, fuzes and explosive material, MOTAPM, anti-personnel mines and other munitions.¹⁰⁸⁷

Impact

According to a former spokesperson for the OSCE Centre in Dushanbe, in late 2003 about 2 per cent of Kyrgyzstan's territory was contaminated with ERW and mines, much of it arable land that thus could not be used for agriculture or other productive use.¹⁰⁸⁸ No casualty data were available for 2004, but according to the Kyrgyz Red Crescent between autumn 1999 and October 2003 five people died and another five received injuries from ERW or mines laid in the Batken region. Half of the victims were reportedly children.¹⁰⁸⁹ In 2001 and 2002, three ERW incidents were reported which killed five children.¹⁰⁹⁰

A recent IRIN news agency report described the ERW situation in Kyrgyzstan and neighbouring countries as follows: "According to Colonel Leonid Bondarets, an analyst at the Bishkek-based International Centre for Strategic Research, Central Asia's densely populated Ferghana Valley shared by Kyrgyzstan, Uzbekistan and Tajikistan was used excessively by the three countries' military bodies following the collapse of the Soviet Union in 1991 and was full of weapons and munitions. The danger of accidental explosions remained, he maintained. A local scrap metal dealer was killed by UXO in Batken while loading an artillery shell on a truck to ship it to China as scrap metal."¹⁰⁹¹

Efforts to address these problems

Demining in the Batken region began mid-August 2004.¹⁰⁹² Following a June 2001 decree on mine clearance and mine awareness, the Kyrgyz Ministry of Emergency Situations in 2003 started conducting risk education programmes among high-risk populations in contaminated areas.¹⁰⁹³

Starting early in 2003, the ICRC and the Kyrgyz Red Crescent trained volunteers in community-based mine action, in close coordination with the Ministry of Ecology and Emergency Situations, which collected mine data. The Red Crescent also assisted ERW and mine victims.¹⁰⁹⁴

Legislation

Kyrgyzstan has not acceded to any of the international instruments dealing with ERW and MOTAPM.

1086 Kyrgyz Pyramid TV, Uzbek mine-clearance operation under way on Kyrgyz border, 19 August 2004.

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1088 Salla Kayhko, "Clearing the way for a mine-free Tajikistan, Promising start for OSCE's first de-mining project", OSCE Newsletter, Vol. XI No.7, November/December 2003, p. 18.

1089 "Five Kyrgyz killed, five injured by Uzbek border mine incidents", Kabar news agency, 24 October 2003; Landmine Action, Explosive Remnants of War: A Global Survey, 2003, p. 54.

1090 According to Kyrgyz press reports cited in Landmine Monitor Report 2003, p. 629.

1091 IRIN, Osh, "Kyrgyzstan-Uzbekistan: Demining around Uzbek enclaves brings hope to impoverished villagers", 24 November 2004.

1092 "Uzbekistan to begin to clear mine fields on Kyrgyz border on 15 August", Kyrgyz TV, 12 August 2004; "Uzbekistan to demine Sokh and Shahimardan enclaves", Kyrgyzinfo, 13 August 2004.

1093 Human Rights Watch, World Report 2003, p. 343.

1094 ICRC Annual Report 2003, p. 176.

Kuwait

Background

It has been asserted that, from the Iraqi occupation in August 1990 until the subsequent liberation of Kuwait in February 1991, almost 97.8 per cent of Kuwait became affected by mines and unexploded ordnance (UXO).¹⁰⁹⁵ Others have claimed that Kuwait has the highest number of mines per square kilometre of any country in the world.¹⁰⁹⁶ Iraqi troops planted an estimated nine million mines. The minefields consisted of a mixture of anti-personnel (AP) mines and anti-tank (AT) mines.¹⁰⁹⁷ The most heavily mined areas were Kuwait Bay and the Kuwait-Saudi Arabia border.¹⁰⁹⁸ Iraqi forces did not provide any data about the mines laid in Kuwait, and some 191 deaths and injuries have been recorded among the international teams involved in clearing these mines.¹⁰⁹⁹

Assessment of the problem

Among the different types of ERW found in Kuwait in February 1991 were rocket-propelled grenades, mortars, eight types¹¹⁰⁰ of MOTAPM and 10 different types of Allied cluster submunitions.¹¹⁰¹ These included M42, M46, M77, Mk-118 (Rockeye), BLU-61/B, BLU-63/B, BLU-77/B, BLU-86B, BLU-97/B manufactured by the United States, and French BLG 66 Belouga submunitions.¹¹⁰² In September 2002, a U.S. General Accounting report concluded that "during the Gulf War, accumulations of thousands of US non-landmine submunition duds on the battlefield created unintended de facto minefields. This problem was exacerbated by dud rates for these submunitions that appear to have been higher than the 2 to 4 per cent submunition dud rates that the Department of Defense had previously reported."¹¹⁰³ MOTAPM left in Kuwait included Italian VS1.6 and V22, VS2.2, Bulgarian 111/M/K, Czech PT-M1-BA3 and Russian TMN46 and TM62M.¹¹⁰⁴

Between February 1991 and June 1997, more than 111,000 tons of ordnance was cleared from Kuwait. Environmental conditions such as high temperatures, sand storms and flash floods hampered clearance operations. Between 2000 and 2002, 26,454 items of ERW were disposed of.¹¹⁰⁵ Widespread ERW contamination as a result of the 1991 Gulf War continues to hinder reconstruction and land use in almost all areas of the country, and the government receives several reports a day of ERW and mines being uncovered in the course of normal community activities.¹¹⁰⁶

The areas suspected to contain the most ERW and MOTAPM contamination are in (a) the southern part of Kuwait along the border with Saudi Arabia, (b) the north-west part of the country and (c) the north-east of the country, specifically the tidal flats of Ras as-Sabiyah and Bubiyan Island.¹¹⁰⁷ Mines and UXO of different types are concealed underneath a black cover of crude oil, tar mats and oil droplets in Kuwait's oilfield areas, which cover more than 7 per cent of the

surface area of the country. An unknown amount of mines and UXO are hidden under the sands in certain areas of the country, particularly along the natural sand corridors. Considerable numbers of AP mines remain hidden in the muddy inter-tidal flats of Kuwait Bay. In February 2003, soldiers discovered a dud BLU-63 cluster munition on one of their urban combat training ranges in the Kuwaiti desert.¹¹⁰⁸

The Kuwaiti Ministry of Defense conducted an in-depth assessment and survey of the extent of the mine and UXO problem in Kuwait in 1991.¹¹⁰⁹ A further assessment was carried out from 1991 to 1993 and was followed up by quality assurance in the same areas.¹¹¹⁰ The Ministry of Defence subdivided the country into eight sectors managed by national teams from Pakistan (covering the north-eastern area), Bangladesh (the north-western area), Egypt (the western area north of al-Salmi Road), France (the western area south of al-Salmi Road), the U.S. (the south-western area), the U.K. (the south-eastern area), Turkey (the northern borderline strip) and Kuwait (covering Kuwait City) for subsequent clearance.¹¹¹¹ During clearance efforts up until January 1997, some 567,650 MOTAPM were reported to have been destroyed or stored.¹¹¹² In 1999, the Centre for Research and Studies on Kuwait (CRSK) published a book entitled "Landmines and the Destruction of the Kuwaiti Environment" which presented maps of the density of mine contamination in different areas.

Impact

From July 2003 to June 2004, four people were killed and six injured by ordnance and mines.¹¹¹³ In 2002, there were at least 10 people reported as mine/UXO casualties, of which one was killed.¹¹¹⁴ In February 2002, the Kuwait Institute for Scientific Research published a new report on civilian war casualties in Kuwait. The findings of this report indicated that ERW accounted for 175 (7 per cent) of the total 2,386 war injuries, and 119 (28 per cent) of those killed. In contrast, mine injuries (type unspecified) accounted for 1,026 (43 per cent) injured, and 85 (20 per cent) of the total 421 deaths. The majority of total casualties were male, which is probably due to their employment as labourers in the desert areas and as shepherds.¹¹¹⁵

According to Landmine Monitor 2001, a new mine victim database has been established.¹¹¹⁶ The database was established by the Kuwait Institute for Scientific Research in coordination with the Kuwaiti Ministry of Health.¹¹¹⁷ The database allows for a distinction between AP, MOTAPM and ERW. The data is gathered from hospital records by a team of seven physicians.¹¹¹⁸ Specific details cannot be provided as the information is confidential, because it relates directly to claims made by Kuwait to the UN Compensation Committee for damages from Iraq.¹¹¹⁹

While it was reported that widespread ERW contamination hindered reconstruction and land use,¹¹²⁰ recent reports suggest that access to mosques, schools, residential areas and other required sites is no longer blocked.¹¹²¹ ERW may present a problem to the development of the oilfields. Additionally, groups concerned with the treatment of oil-contaminated soils within the existing oilfields face the same additional risks.¹¹²²

Efforts to address these problems

The Engineering Corps of the Kuwaiti Army Ground Forces (Ministry of Defense) is responsible for survey, assessment, quality assurance, clearance and educating the population about the risks of mines and UXO.¹¹²³ Full records are produced on a monthly basis.¹¹²⁴ Items found during the reporting period included:

- Artillery munitions;
- Cluster munitions 63/61/M42/Rockeye;
- Hand grenades;
- Mortars;
- Rocket-propelled grenade;
- Tank rounds and small arms ammunition.¹¹²⁵

Mine action is not implemented or supported by UN agencies, only national bodies.¹¹²⁶ The UN Iraq-Kuwait Observer Mission (UNIKOM) assists and records mine and UXO casualties occurring in the demilitarized zone between Iraq and Kuwait, but most of the incidents involve Iraqi civilians.¹¹²⁷ Priority for clearance is reportedly given to clearing the oilfield areas, desert areas and recreational areas close to Kuwait City.¹¹²⁸

Legislation

Kuwait has not signed, ratified or acceded to the Ottawa Convention. On 22 November 2002, Kuwait abstained from the vote on UN General Assembly Resolution 57/74, supporting universalisation and implementation of the Mine Ban Treaty.¹¹²⁹ Kuwait is not a party to the 1980 Convention on Conventional Weapons (CCW), but did attend the First Annual Conference of State Parties to Amended Protocol II in December 1999.

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- 1096 Prof. Dr. Abdullah Yousuf al-Ghunaim, "Landmines and the Destruction of the Environment of Kuwait", Center for Research and Studies on Kuwait, 1999, reprinted 2003, p. 338.
- 1097 Prof. Dr. Abdullah Yousuf al-Ghunaim, "Landmines and the Destruction of the Environment of Kuwait", Center for Research and Studies on Kuwait, 1999, reprinted 2003, p. 335.
- 1098 Landmine Monitor 2000, Kuwait, <http://www.icbl.org/lm/2000kuwait.html> accessed 14 July 2004.
- 1099 Prof. Dr. Abdullah Yousuf al-Ghunaim, "Landmines and the Destruction of the Environment of Kuwait", Center for Research and Studies on Kuwait, 1999, reprinted 2003, pp.11-12.
- 1100 Email from Dr Rafaaf Misak, ICBL Campaign for Kuwait, Kuwait Institute for Scientific Research in Kuwait, dated 20 September 2004.
- 1101 John Borrie, "Explosive Remnants of War – A Global Survey", *Landmine Action*, June 2003, p. 62, <http://www.clearup.org/download/ERWGlobalSurvey.pdf> accessed 14 July 2004.
- 1102 John Borrie, "Explosive Remnants of War – A Global Survey", *Landmine Action*, June 2003, p. 82, <http://www.clearup.org/download/ERWGlobalSurvey.pdf> accessed 14 July 2004.
- 1103 John Borrie, "Explosive Remnants of War – A Global Survey", *Landmine Action*, June 2003, p. 62, <http://www.clearup.org/download/ERWGlobalSurvey.pdf> accessed 14 July 2004.
- 1104 Prof. Dr. Abdullah Yousuf al-Ghunaim, "Landmines and the Destruction of the Environment of Kuwait," Center for Research and Studies on Kuwait, 1999, reprinted 2003, p. 203 and p. 348.
- 1105 John Borrie, "Explosive Remnants of War – A Global Survey", *Landmine Action*, June 2003, p. 62, <http://www.clearup.org/download/ERWGlobalSurvey.pdf> accessed 14 July 2004.
- 1106 John Borrie, "Explosive Remnants of War – A Global Survey", *Landmine Action*, June 2003, p. 58, <http://www.clearup.org/download/ERWGlobalSurvey.pdf> accessed 14 July 2004.
- 1107 Email from Dr Rafaaf Misak, ICBL Campaign for Kuwait, Kuwait Institute for Scientific Research in Kuwait, dated 13 October 2004.
- 1108 Landmine Monitor 2003, Kuwait, <http://www.icbl.org/lm/2003kuwait.html> accessed 14 July 2004.
- 1109 Landmine Monitor 2000, Kuwait, <http://www.icbl.org/lm/2000kuwait.html> accessed 14 July 2004.
- 1110 Email from Dr Rafaaf Misak, ICBL Campaign for Kuwait, Kuwait Institute for Scientific Research in Kuwait, dated 13 October 2004.
- 1111 Prof. Dr. Abdullah Yousuf al-Ghunaim, "Landmines and the Destruction of the Environment of Kuwait", Center for Research and Studies on Kuwait, 1999, reprinted 2003, p. 25.
- 1112 Prof. Dr. Abdullah Yousuf al-Ghunaim, "Landmines and the Destruction of the Environment of Kuwait", Center for Research and Studies on Kuwait, 1999, reprinted 2003, extracted from Table 3 (p. 31) and Table 9 (p. 40).
- 1113 Email from Dr Rafaaf Misak, ICBL Campaign for Kuwait, Kuwait Institute for Scientific Research in Kuwait, dated 13 October 2004.
- 1114 Landmine Monitor 2003, Kuwait, <http://www.icbl.org/lm/2003kuwait.html> accessed 14 July 2004.
- 1115 Email from Dr Rafaaf Misak, ICBL Campaign for Kuwait, Kuwait Institute for Scientific Research in Kuwait, dated 13 October 2004.
- 1116 Landmine Monitor 2001, Middle East/North Africa, Regional Overview, <http://www.icbl.org/lm/2001/mena/> accessed 14 July 2004.
- 1117 Email from Dr Rafaaf Misak, ICBL Campaign for Kuwait, Kuwait Institute for Scientific Research in Kuwait, dated 20 September 2004.
- 1118 Email from Dr Rafaaf Misak, ICBL Campaign for Kuwait, Kuwait Institute for Scientific Research in Kuwait, dated 13 October 2004.
- 1119 Telephone conversation with Dr Rafaaf Misak, ICBL Campaign for Kuwait, Kuwait Institute for Scientific Research in Kuwait, 31 October 2004.
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- 1123 Landmine Monitor 2003, Kuwait, <http://www.icbl.org/lm/2003kuwait.html> accessed 14 July 2004.
- 1124 Email from Dr Rafaat Misak, ICBL Campaign for Kuwait, Kuwait Institute for Scientific Research in Kuwait, dated 20 September 2004.
- 1125 Email from Dr Rafaat Misak, ICBL Campaign for Kuwait, Kuwait Institute for Scientific Research in Kuwait, dated 13 October 2004 and telephone conversation 31 October 2004.
- 1126 Email from Dr Rafaat Misak, ICBL Campaign for Kuwait, Centre for Research and Studies in Kuwait, dated 20 September 2004.
- 1127 Landmine Monitor 2003, Kuwait, <http://www.icbl.org/lm/2003kuwait.html> accessed 14 July 2004.
- 1128 Email from Dr Rafaat Misak, ICBL Campaign for Kuwait, Centre for Research and Studies in Kuwait, dated 20 September 2004.
- 1129 Landmine Monitor 2003, Kuwait, <http://www.icbl.org/lm/2003kuwait.html> accessed 14 July 2004.

Lao PDR

Background

The US bombing of Laos (1964-73) was distinctive for its intensity and one-sided character. In total, US Air Force and CIA aircraft dropped more than two million tons of ordnance, or 660 kg for each of the country's three million citizens at the time.¹¹³⁰ There were few military targets to strike at; bombing was carried out for purposes of "interdicting" territory from enemy use, cutting supply lines and targeting food supplies. Some have suggested that at least 80 per cent of victims were civilians.¹¹³¹ The bombing was kept secret for five years, with the true scale of devastation not revealed until the early 1970s. By 1973, not one structure was reported to be still standing in the entire province of Xieng Khouang.¹¹³²

Cluster munitions were widely used. The US dropped more than 80 million submunitions (or "bombies").¹¹³³ Each Cluster Bomb Unit (CBU) could disperse submunitions over an area of 300 by 1,000 metres and a single F-4 Phantom aircraft could hold eight CBUs, (or up to 20 when fitted with special racks). There was little discussion about the longer-term consequences or the high failure rate of these submunitions beforehand. As one U.S. military official put it: "Once we tested them, the immediate question became, 'how many can we make?'"¹¹³⁴ While the submunitions were tactically effective at killing the enemy, they were a strategic failure: as soon as one branch of the Ho Chi Minh Trail was cut, supplies resumed flowing on a different path.

Assessment of the problem

Clearance teams have found at least 186 different types of ordnance scattered across Lao, including 19 types of cluster bombs alone.¹¹³⁵ The most common forms of submunitions encountered are the BLU-24, BLU-26, BLU-61, and BLU-63, with the BLU-26 making up the largest number. The dud rate for these submunitions was very high.¹¹³⁶

Substantial ground fighting also took place during the war in northern Laos between Pathet Lao revolutionaries and North Vietnamese regulars on one side, Royal Lao Army and CIA-sponsored Hmong irregulars on the other. In southern Laos, ground battles took place along the Ho Chi Minh Trail, near the DMZ separating North and South Vietnam, and along the strategic Route 9.¹¹³⁷ These battles left behind unexploded artillery shells, mortars, rockets and grenades, as well as

heavy bombs weighing up to 1,000 kg.¹¹³⁸ ERW remains from both sides, although the U.S.-backed forces had far more firepower at their disposal.

A list of the most common UXO reported in Laos does not include any MOTAPM.¹¹³⁹ The 186 types of munitions documented by Handicap International include four types of MOTAPM. These are the US-manufactured M15 and the Soviet TM41, 46 and 57. Certain U.S.-made submunitions are also "designed to function like mines", including the BLU-45 anti-vehicle submunition mine.¹¹⁴⁰ International agencies working in Savannakhet province report finding very few MOTAPM, fewer than AP mines which are already a minority of ordnance cleared, but note that other areas of the country may contain more.¹¹⁴¹ UXO Lao estimates that AP mines outnumber MOTAPM by a factor of four to one, and AP mines make up only a minimal part of the overall threat.¹¹⁴²

A National Survey on the Socio-Economic Impact of UXO in Lao PDR was carried out in 1997 by Handicap International on behalf of the Lao National UXO Programme (UXO Lao) and the Ministry of Labour and Social Welfare. This document remains the baseline assessment for ERW in Lao. The survey covered 69 per cent of districts in the country and identified 2,861 villages, or 25 per cent of all villages nationwide, with "continued presence of UXO". Ten of the country's 18 provinces are described as "severely contaminated". UXO Lao currently works in nine of these, an area which includes 2,636 of the affected villages. Five additional provinces were recorded as having moderate contamination.¹¹⁴³

Based on US bombing data and survey results in the UXO Lao database, 87,213 sq km. may have some level of UXO contamination. According to the UXO Lao Workplan, 12,427 sq km (5.2 per cent of the country) are considered "high risk."¹¹⁴⁴ Since the 1997 survey did not visit every part of the country, the total affected area is likely to be greater still. Some remote mountainous areas are nearly inaccessible and have a limited central government presence.

Impact

The 1997 national survey identified 11,928 casualties since 1973. One-third of the recorded incidents occurred in the first four years after the war. Since the 1980s, however, the casualty rate remained fairly constant,

averaging more than 200 per year. In 1996, the last year surveyed, 199 casualties were identified.¹¹⁴⁵

Since 1997, UXO Lao has reported casualty figures known to it, averaging 140 per year. However, these figures included only areas where UXO Lao was working, with no comprehensive, grass-roots mechanism for data collection. Thus, UXO Lao itself states that the actual casualty rate is being under-reported to some extent.¹¹⁴⁶

UXO Lao recorded 109 casualties in 2003 (33 deaths, 76 injuries) in nine provinces, resulting from 60 incidents. Some 46 per cent of victims were children and 74 per cent were male. By far the largest number of reported incidents (25) and casualties (40) took place in Xieng Khouang province.¹¹⁴⁷

From January to June 2004, UXO Lao reported 51 incidents in seven provinces, resulting in 117 casualties – 54 per cent children, 85 per cent male. Xieng Khouang continued to record the highest provincial total, accounting for one-third of all casualties, although this is a lower proportion of the total than in 2003. Two other northern provinces, Luang Prabang and Houaphan, posted higher reported casualties in the first quarter of 2004 than during all of 2003.¹¹⁴⁸ The UXO Lao 2003 Annual Report cites anecdotal reports that 12 people were involved in UXO incidents during two weeks in April 2004 in Boualapha district, Khammouane province, alone – evidence that “seems to support the notion that the real level of accidents is far higher than those currently being quoted”. These casualties were linked to the scrap metal trade.¹¹⁴⁹

The percentage of incidents involving children continues to increase. In the period following the war, children made up approximately 20 per cent of victims; by the mid-1990s, this had risen to more than 33 per cent.¹¹⁵⁰ In 2002 and 2003, children made up 46 per cent of victims. Death rates, by contrast, are decreasing; in the 1970s, more than 55 per cent of victims died but by the mid-1990s this had fallen to less than 40 per cent.¹¹⁵¹ In 2002 and 2003, the death rate was 28 per cent.¹¹⁵² In Houaphanh and Xieng Khouang provinces, where Consortium’s War Victims Assistance Project is active, only 22 per cent of victims died.¹¹⁵³

The Handicap International Survey identified the following causes of ERW accidents:¹¹⁵⁴

- 37 per cent – building a fire over buried ordnance;
- 30 per cent – deliberate handling (including “tampering” and playing);
- 26 per cent – agricultural activities.

From incidents reported in 2003, UXO Lao identified casualties as resulting from the following types of ordnance:¹¹⁵⁵

- 32 per cent – cluster bombs,
- 44 per cent – shells and mortars;
- 2 per cent – large bombs;
- Some 22 per cent were unknown or unreported.

From 1973-1996, by contrast, cluster munitions caused 44 per cent of accidents.

Cluster bombs and other ERW found in Laos were designed to kill, not maim. Victims who do survive tend to suffer severe upper body and facial injuries, since most activities linked to explosions involve the arms: hoeing, playing with submunitions, or sawing open a bomb. Of 3,347 survivors surveyed in 1997, the total of upper body amputations (hands, forearm, or whole arm) was 2,331, compared with 1,732 lower body amputations. Roughly one-third of victims reported other disabilities such as paralysis, blindness, deafness and serious burns.¹¹⁵⁶

The Lao PDR Government reports no casualties from landmines along border areas with Thailand.¹¹⁵⁷ Unconfirmed reports of landmine casualties among Hmong insurgents and Lao soldiers in the Saysomboun Special Zone appear to involve AP mines or homemade booby traps, not MOTAPM.¹¹⁵⁸

The National Strategic Plan gives priority to development of a national database on mine/UXO incidents, covering all 18 provinces.¹¹⁵⁹ UNDP commissioned Handicap International-Belgium to undertake a feasibility study for victim data collection in early 2004; the results of this study confirm that UXO Lao figures and the 1997 national survey “underestimate the real number of casualties” and “should be considered with caution”. Provincial offices, meanwhile, do not appear to use casualty figures as a criterion for prioritization of areas to be cleared.¹¹⁶⁰ The report recommends establishing a national casualty reporting system (tentatively entitled LUMVIS – the Lao UXO/Mine Victim Information System) that is “active rather than passive”, uses existing local networks and proactively shares information with stakeholders.¹¹⁶¹

ERW poses a significant obstacle to development in rural Laos. UXO Lao notes that “any kind of development activity – road building, school construction or tourism for example – will categorically incur risks from UXO”.¹¹⁶² If donors funding a development project do not take surveying and clearance requirements into account before beginning, delays and overspending frequently result.¹¹⁶³

ERW are linked to poverty in several interlocking ways. First is the impact on individual families and communities resulting from ERW casualties. Second, the presence of ERW adds substantial risk to clearance of new land, and is connected to problems associated with resettlement policies.

Survey results show that the majority of ERW victims are in their most productive years when they are killed or injured. This affects individual families’ living standards and indirectly affects the economy of the whole country. Both funeral costs and medical costs can impoverish even a well-off family according to the Handicap International Survey. An average Lao funeral ceremony costs more than the annual per capita income.¹¹⁶⁴ Medical treatment for a survivor at a district or provincial hospital averages half

the annual income of a rural family. In addition, transportation costs for emergencies can also be high since drivers fear blame if a patient dies along the way.¹¹⁶⁵ The long-term social and economic consequences of an injury can be even more harmful for a family than a death.

An ongoing survey of psycho-social effects of UXO/mine injuries on children, supported by HI-Belgium and UNICEF, interviewed approximately 200 child survivors and 200 children of adult victims. About 70 per cent of injured children had received hospital care; most also have long-term post-accident medical problems. Health and poverty are very closely linked: poor families cannot afford medicine and treatment, and a UXO victim is frequently a major economic loss for the family. Memory loss, nightmares and learning disabilities are common among child survivors. Children whose parents are survivors are even more affected, as many leave school to earn money or take care of their parents, with no one to care for them in return.¹¹⁶⁶

In lowland Laos, farmers did not significantly change their practices after the war. Facing no alternative, people developed considerable experience in moving cluster submunitions and other ERW themselves.¹¹⁶⁷ Despite the danger, farmers do not leave land fallow because of the presence of ERW; this is partly a question of economic necessity, added to the fact that contamination is so widespread that it is impossible to avoid risks entirely. Perhaps due to self-clearance over time, the rate of casualties on agricultural land is decreasing.¹¹⁶⁸

This situation is different in upland areas, largely inhabited by ethnic minority farmers. The common practice of burning swidden rice fields before cultivation results in ERW exploding from the heat of the fire. These risks are especially high when new land is cleared for the first time since the end of the war.¹¹⁶⁹ Anecdotal evidence suggests that resettled refugees and IDPs may be at higher risk, since they typically move to previously unused land in areas unfamiliar to them.

Bomb detection and scrap metal collection is reported to be on the increase, particularly in southern Laos. NGOs working in areas along the former Ho Chi Minh Trail find large numbers of foragers, including children, hunting for scrap metal on a seasonal basis. In Xepon and Phine districts, Savannakhet province, metal detectors are sold in local markets for as little as US\$16. Average resale prices are 2000-5000 kip/kg for metal (US\$ 20-50 cents) and 10,000-15,000 kip for explosives (US\$1-1.50).¹¹⁷⁰ UXO Lao staff report seeing children as young as 10 operating "cheap but effective Vietnamese-made metal detectors" – some of them with short handles and small heads "that seem to have been made with children in mind".¹¹⁷¹

As new roads and improved infrastructure comes to the region, scrap hunters have easier access to markets where they can sell metal and explosives. Laos has at least two scrap metal processing plants in Luang Prabang and Bolikhamxay provinces.¹¹⁷² Traders also cross the border

from Vietnam, where scrap metal collection is also an important factor in people contacting unexploded ordnance. Laws against transport and sale of explosives exist in both countries, but governments have limited control over local villagers' actions.¹¹⁷³ At workshops in Savannakhet, Attapeu and Champassak provinces in July 2004, national UXO Lao leaders advised provincial directors to work with local authorities to suppress the trade.¹¹⁷⁴

Efforts to address these problems

Clearance is currently being carried out by three separate agencies: UXO Lao, the Lao military and an Australian-Lao commercial joint venture. UXO Lao remains the "preferred national humanitarian UXO/mine clearance operator".¹¹⁷⁵ UXO Lao cleared 8.8 million square metres of land in 2003 and 3.3 million in the first quarter of 2004, for a total of 47.3 million since 1996. Commercial clearance totalled an estimated six million square metres in 2003; figures for military clearance are not publicly available.¹¹⁷⁶

The new National Strategic Plan (NSP), titled "The Safe Path Forward", sets objectives and priorities for the next decade (2003-13) and redefines the roles and structure of the national UXO programme in significant ways. Developed by the Lao Government with UNDP support, the plan creates a new National Regulatory Agency (NRA) to oversee and coordinate UXO/mine action activities.¹¹⁷⁷ The NRA, which will report directly to the Prime Minister, is composed of representatives from all concerned government ministries, with observers from the donor community.¹¹⁷⁸

Under the NSP, UXO Lao will shift to become a UXO/mine clearance agency only under the umbrella of the Ministry of Labour and Social Welfare. The Ministry of Information and Culture and the Ministry of Health will assume oversight of risk education and victim assistance, respectively.¹¹⁷⁹ UXO Lao will continue to work in the nine provinces where it currently operates; independent operators may be able to expand into areas not being covered by UXO Lao. The five international NGOs and clearance agencies that currently function as UXO Lao's Implementing Partners (the Belgian Military, Gerbera, HI-Belgium, Mines Advisory Group and Norwegian People's Aid) are free under the NSP to continue working in partnership with UXO Lao and/or to engage in their own independent projects.

The NSP's goal is for "people from the most highly impacted communities to live free from the impacts of landmines and UXO", to be achieved by a combination of clearance, mine risk education, assistance to survivors and their families, and marking of lower-priority areas for later clearance.¹¹⁸⁰ Prioritization of tasks will be linked to the government's National Growth and Poverty Eradication Strategy (NGPES), updated in January 2004, which identifies 47 districts nationwide (out of 141) as "national priority development areas". UXO Lao will coordinate with the State Planning Committee and Committee for Poverty Reduction to support poverty reduction in each province.¹¹⁸¹

The NSP further divides contaminated areas into high, medium and low priority, to be categorized after planned technical surveys. High priorities include agricultural land, roving clearance, health and educational facilities. Medium priorities are grazing and forest land, government buildings and other public areas such as markets. Low priority tasks include business or commercial areas, infrastructure and tourism. UXO Lao is expected to focus on the high-priority category, completing clearance or marking of all these areas by 2013. Low-priority areas are expected to be handled by commercial operators. From a current level

of approximately eight million square metres per year, UXO Lao's yearly output is projected to reach a high point of 20 million square metres by 2008, with staffing and clearance capacity remaining constant.¹¹⁸²

Legislation

The Lao People's Democratic Republic is a party to the CCW and its original Protocol II on landmines. It is not party to the Amended Protocol II and has not taken part in any recent CCW meetings.

- 1130 *UXO Lao Annual Report* 2003, p. 5.
- 1131 Fred Branfman, *Voices from the Plain of Jars: Life under an Air War* (Harper and Row, 1972); Titus Peachey and Virgil Wiebe, *Clusters of Death*, Appendix 1: Laos (Mennonite Central Committee, 2000), http://www.mcc.org/clusterbomb/report/laos_appendix.html.
- 1132 Bruce Shoemaker, "Legacy of the Secret War", (Mennonite Central Committee, 1994), p. 2.
- 1133 Paul Wiseman, "30-year-old bombs still very deadly in Laos", USA Today, 12 December 2003; Titus Peachey, "Munitions and Mines: Peace Education for Laos", *Journal of Mine Action* 5.1 (April 2001), <http://maic.jmu.edu/journal/5.1/>. Peachey and Virgil Wiebe estimate that more than 100 million cluster munitions were dropped in all.
- 1134 Michael Krepon, "Weapons Potentially Inhumane: The Case of Cluster Bombs", *Foreign Affairs*, Vol. 52 No. 3 (April 1974), pp. 598-9. The speaker in the quotation cited was Vice-Admiral Lloyd Mustin, director of operations for the Joint Chiefs of Staff.
- 1135 Handicap International-Belgium, *UXO Reference Manual*, 2002. 120 of 186 types are of US origin, 46 Soviet, 12 Chinese, 5 Vietnamese, 2 French and 1 Hungarian. HI staff note that the information in the manual is based mostly on clearance operations in Savannakhet province, and other parts of Laos may well contain many additional types of ERW and MOTAPM.
- 1136 Estimates range from 10-30 per cent, leaving 8-25 million bombs in the soil; see Titus Peachey and Virgil Wiebe, *Clusters of Death*, Appendix 1: Laos (Mennonite Central Committee, 2000), http://www.mcc.org/clusterbomb/report/laos_appendix.html; *UXO Lao Annual Report* 2003, p. 5.
- 1137 Handicap International, *Living with UXO: Final Report, National Survey on the Socio-Economic Impact of UXO in Lao PDR*, 1997, pp. 14-16; Nguyen Khac Vien, *Vietnam: A Long History* (Hanoi: The Gioi Publishers, 1999), pp. 322-5.
- 1138 *UXO Lao Annual Report* 2003, p. 5; Handicap International, *Living with UXO: Final Report, National Survey on the Socio-Economic Impact of UXO in Lao PDR*, 1997, p. 24.
- 1139 Handicap International, *Living with UXO: Final Report, National Survey on the Socio-Economic Impact of UXO in Lao PDR*, 1997, pp. 24, 77.
- 1140 Handicap International-Belgium, *UXO Reference Manual*, 2002.
- 1141 Interview with Luc Delneuveille, Country Director, Handicap International-Belgium, Vientiane, 10 August 2004.
- 1142 Interview with Bounpone Sayasenh, UXO Lao National Programme Director, Vientiane, 13 August 2004.
- 1143 Handicap International, *Living with UXO: Final Report, National Survey on the Socio-Economic Impact of UXO in Lao PDR*, 1997, p. 6.
- 1144 *UXO Lao Work Plan* 2004, p. 6.
- 1145 Handicap International, *Living with UXO: Final Report, National Survey on the Socio-Economic Impact of UXO in Lao PDR*, 1997, pp. 24-5, 86-148. The total of 199 is compiled from provincial reports.
- 1146 *UXO Lao Annual Report* 2003, pp. 5-6.
- 1147 Statistics provided by Bounpone Sayasenh, UXO Lao National Programme Director, 8 January 2004; *UXO Lao Annual Report* 2003, p. 10.
- 1148 Statistics provided by Bounpheng Sisavath, Chief of Public Information Unit, UXO Lao, 2 August 2004.
- 1149 *UXO Lao Annual Report* 2003, p. 6.
- 1150 Handicap International, *Living with UXO: Final Report, National Survey on the Socio-Economic Impact of UXO in Lao PDR*, 1997, p. 26.
- 1151 Handicap International, *Living with UXO: Final Report, National Survey on the Socio-Economic Impact of UXO in Lao PDR*, 1997, p. 25.
- 1152 Statistics provided by Bounpone Sayasenh, UXO Lao National Programme Director, 8 January 2004, and Handicap International-Belgium, 30 January 2004.
- 1153 Interview with Barbara Lewis, Team Leader, Consortium War Victims Assistance Project, Phonsavan, 7 February 2004.
- 1154 Handicap International, *Living with UXO: Final Report, National Survey on the Socio-Economic Impact of UXO in Lao PDR*, 1997, p. 26.
- 1155 UXO Lao victim database, provided by Bounpheng Sisavath, Chief of Public Information Unit, UXO Lao, 10 February 2004.
- 1156 Handicap International, *Living with UXO: Final Report, National Survey on the Socio-Economic Impact of UXO in Lao PDR*, 1997, pp. 30-31.
- 1157 Interview with H.E. Somsavat Lengsavad, Deputy Prime Minister and Minister of Foreign Affairs, 9 February 2004.
- 1158 Landmine Monitor 2004 draft report.
- 1159 "Resolutions of the Lao PDR Government on National Strategic Plan for the UXO Programme in the Lao People's Democratic Republic 2003 – 2013: The Safe Path Forward," p. 2.
- 1160 UNDP and Handicap International-Belgium, "Feasibility study into national network for mines/UXO accidents in Lao PDR", June 2004, pp. 9, 17.
- 1161 UNDP and Handicap International-Belgium, "Feasibility study into national network for mines/UXO accidents in Lao PDR", June 2004, pp. 2-3.
- 1162 *UXO Lao Work Plan* 2004, p. 7.
- 1163 Landmine Monitor 2001, p. 551.
- 1164 Handicap International, *Living with UXO: Final Report, National Survey on the Socio-Economic Impact of UXO in Lao PDR*, 1997, p. 38.
- 1165 Interview with Barbara Lewis, Team Leader, Consortium War Victims Assistance Project, Phonsavan, 7 February 2004.
- 1166 Interview with Didier Bertrand, Research Coordinator, Handicap International-Belgium, 10 February 2004.
- 1167 Bruce Shoemaker, "Legacy of the Secret War", (Mennonite Central Committee, 1994).
- 1168 Handicap International, *Living with UXO: Final Report, National Survey on the Socio-Economic Impact of UXO in Lao PDR*, 1997, pp. 40-41.
- 1169 Handicap International, *Living with UXO: Final Report, National Survey on the Socio-Economic Impact of UXO in Lao PDR*, 1997, p. 41.
- 1170 Interview with Bounpone Sayasenh, UXO Lao National Programme Director, Vientiane, 10 February 2004.
- 1171 *UXO Lao Annual Report* 2003, p. 6.
- 1172 Interview with Bounpone Sayasenh, UXO Lao National Programme Director, Vientiane, 13 August 2004.
- 1173 Interview with Tony West, Senior Technical Adviser, Handicap International-Belgium, 3 February 2004.
- 1174 Interview with Bounpone Sayasenh, UXO Lao National Programme Director, Vientiane, 13 August 2004.
- 1175 "Resolutions of the Lao PDR Government on National Strategic Plan for the UXO Programme in the Lao People's Democratic Republic 2003 – 2013: The Safe Path Forward", p. 3.

- 1176 Landmine Monitor 2004 draft report.
- 1177 *UXO Lao Work Plan 2004*, p. 4.
- 1178 At present, the staff and advisory board of the NRA are in the process of establishment, and a UNDP technical adviser is assisting the Lao Government in its formation. Interview with Pascal Simon, UNDP Senior Technical Adviser, Vientiane, 13 August 2004.
- 1179 "Resolutions of the Lao PDR Government on National Strategic Plan for the UXO Programme in the Lao People's Democratic Republic 2003 – 2013: The Safe Path Forward", pp. 2-3, 5.
- 1180 "Resolutions of the Lao PDR Government on National Strategic Plan for the UXO Programme in the Lao People's Democratic Republic 2003 – 2013: The Safe Path Forward", p. 2.
- 1181 Interview with Bounpone Sayasenh, UXO Lao National Programme Director, 10 February 2004; communication from Eric Gagnon, UNDP Chief Technical Adviser, 12 August 2004.
- 1182 "Resolutions of the Lao PDR Government on National Strategic Plan for the UXO Programme in the Lao People's Democratic Republic 2003 – 2013: The Safe Path Forward", pp. 4-5.

Latvia

Background

Large numbers of ERW from the 1914-18 and 1939-45 Wars are still found on Latvian territory. Additionally, the Soviet military presence exacerbated the ERW problem, especially in the deployment areas and military bases of the troops and surrounding rural areas.

Assessment

The Latvian Ministry of Defence estimates that 100,000ha or one seventh of the total territory of the country is ERW contaminated, particularly rural territories where large amounts of ERW, such as aircraft bombs, as well as mines are found.¹¹⁸³ Battle areas of the 1914-18 and 1939-45 Wars in the districts of Liepāja, Tukums, Dobele, Cēsis and Madona have the highest density of ERW contamination. ERW are also found in the former Soviet firing grounds and military bases, particularly in the former aviation bomb firing ground in Zvārde and the former ammunition depot in Cekule near Riga, which are known for their high levels of contamination.¹¹⁸⁴

Impact

Zvārde Firing Ground is estimated to contain more than 200 explosive aviation bombs and other explosive objects. Some 700 former landowners have applied for restitution of this territory, where forestry and some agriculture has been partly re-established since 1993. The territory is also contaminated with fragmentation bombs, and chemical ammunition (such as the toxic substances red and white phosphorous).

Cekule Ammunitions Depot, which was used for military purposes in 1920-1995, is one of the largest sources of ERW

contamination in Latvia. AXO such as small arms ammunition, mortar bombs and armoured personnel carrier ammunition used during the 1914-18 and 1939-45 Wars is found here, and many ERW items have been scattered in the surrounding areas. Although the area is fenced and marked, local residents continue to dig up shells and remove parts made of non-ferrous metals for sale as scrap. In 2000, a young man was killed and another injured in an ERW incident in this area.¹¹⁸⁵ No casualties were reported in 2003 and 2004, but since 1999 a total of four civilian casualties due to ERW were reported.¹¹⁸⁶

Efforts to address the problem

Latvian military personnel have been clearing ERW in the country since 1993. The Latvian Ministries of Defence and Environment and the municipalities are equally responsible for the clearance of contaminated areas. An EOD centre was established in 2003 as a bilateral project with Norway, and also receives substantial assistance from Austria, Denmark and Sweden.¹¹⁸⁷ The centre reportedly also provides risk education to civilians. Several conferences had been held to inform the public about the clearance carried out in the Cekule Ammunitions Depot, as well as the potential risks in the area. Since 1999, more than 24,000 items of ERW and mines have been cleared.¹¹⁸⁸

Legislation

Latvia has not signed the Ottawa Convention but says it has made the political decision to join the treaty and that the accession procedure is due to begin. In May 2003, Latvia voluntarily submitted its Article 7 transparency report. Latvia is a party to both the original and the amended Protocol II of the CCW.

- 1183 Latvian Ministry of Defence website, <http://www.mod.gov.lv/index.php?pid=12326>, accessed 13 January 2005; cf. Landmine Monitor 1999, p.800; Landmine Monitor 2003, p. 639.
- 1184 Latvian Ministry of Defence website, <http://www.mod.gov.lv/index.php?pid=12326>, accessed 13 January 2005.
- 1185 Kristine Kalnina, "Nelaimes gadījumi Cekule var atkartoties (Accidents in Cekule May Repeat)", Rigas Balss, (Latvian daily newspaper), 14 July 2000, cited in Landmine Monitor 2001, p. 893.
- 1186 Email from Valdis Kupcis, National Armed Forces, 28 June 2004, reported in Landmine Monitor 2004, <http://www.icbl.org/lm/2004/latvia>, accessed 21 November 2004.
- 1187 Norwegian Ministry of Defence website, "Norwegian support for new NATO countries", <http://odin.dep.no/fd/engelsk/aktuelt/news/010011-210180/dok-bn.html>, accessed 21 November 2004.
- 1188 According to a Latvian EOD official referenced in Landmine Monitor 2004, p. 1051.

Lebanon

Background

Lebanon's problem with landmines and UXO results primarily from two causes, the civil war of 1975-1990, and Israeli incursions and later the occupation of southern Lebanon between 1982 and 2000. These separate but linked conflicts have left a legacy of hundreds of thousands of AP mines and MOTAPM, along with substantial quantities of ERW including cluster munitions.

The civil war saw intense fighting between Palestinian fighters (based in refugee camps around the centre and south of the country), Christian militia groups, Druze fighters and Muslim militias. Additionally, interventions by the Lebanese Armed Forces (LAF) and the Syrian army resulted in widespread fighting at different times throughout the centre and south of the country, particularly in and around the Bekaa Valley, Beirut and Mount Lebanon.

The Israel army (IDF) invaded the country in 1982 and fought its way as far north as Beirut, before withdrawing from all but an eight-mile wide "security zone" in 1985. Israel and its ally the South Lebanese Army (SLA) withdrew from this security zone in 2000. This occupation and the subsequent fighting resulted in substantial amounts of ERW, and the laying of AP and MOTAPM minefields, along with the emplacement of a substantial number of booby traps.

According to the National Demining Office (NDO), there are more than 3,500 known minefields and dangerous areas containing an estimated 550,000 AP and MOTAPM.¹¹⁸⁹ ERW and mines, both AP and MOTAPM, contaminate a total area of 140 sq km¹¹⁹⁰ – approximately 1.4 per cent of the country. Mine contamination is most dense along the Israel Lebanon border, but can be found throughout the country.

Assessment of the problem

The contamination of these 140 square kilometres significantly impedes development, and affects up to 30 per cent of the 3.7 million population. Preliminary results of a recent Landmine Impact Survey indicate that 22 of 24 districts are affected to some degree by landmines and/or ERW. The survey identified 306 affected communities, of which 28 were considered highly affected, 164 medium and 114 low. The survey also reported 3,500 AP and MOTAPM minefields and dangerous areas containing either booby traps or ERW.¹¹⁹¹ The NDO estimates that there are more than 550,000 AP and MOTAPM throughout the country – of which it is estimated that 450,000 were to be found in southern Lebanon.¹¹⁹²

ERW and landmines affect two distinct areas – the IDF-imposed security zone in south Lebanon (now no longer under Israeli occupation) and the rest of the country. Civilians began returning to their home areas immediately the civil war ended in 1990, however it was not possible for civilians to

return to villages in southern occupied areas until the IDF withdrew in March 2000. According to the NDO, landmine and UXO contamination in south Lebanon is a significant obstacle to the safe return of substantial numbers of refugees and IDPs, preventing access to agricultural and other economically important land, and is substantially impeding the long-term development of much of Lebanon.¹¹⁹³ According to the Landmine Resource Centre (LRC), the socio-economic impact of the landmine problem in Lebanon, and specifically in the south and west Bekaa areas, is huge. "Landmines, cluster bombs, UXO and booby-traps are mainly planted in agricultural areas where agriculture used to be the major source of income for villagers. War, occupation and landmines have decreased opportunities for normal life in the South and increased the exodus of the population. Less than 26 per cent of the indigenous population resided in the South during the occupation."¹¹⁹⁴ These statements do not, however, differentiate between the impact of ERW, MOTAPM and anti-personnel mines.

According to UNDP there are 14 confirmed types of MOTAPM, and six known types of cluster bomb munitions in Lebanon. MOTAPM are mostly of former USSR, Israeli, Italian, former Yugoslavia and U.S. origin¹¹⁹⁵ but also include mines of French, Dutch and Belgian origin.

Specifically, MOTAPM found in Lebanon – both in the south and the rest of the country – include:¹¹⁹⁶

- Former Yugoslavia: TMA 3, TMA 5/5A;
- Former USSR: TM 46/ TMN 46, TM 62 M;
- French: MI AC ID 51, MI AC ID 47;
- USA: M6 A1/A2, M7 A2, M 15, M19;
- Dutch: NR 25;
- Israeli: No. 6;
- Belgian: PRB M3/ M3A1;
- Italian: TC 6.

Cluster munitions found are all of U.S. manufacture and include the M42, M43, BLU 18B, BLU 26B, BLU 63B and MK 118 Rockeye.

Minefields in Lebanon, particularly in the south, are often extremely dense and extend over many kilometres in long belts. Of the 2,934 minefields in south Lebanon, a total of 1,033 (35 per cent) are to be found along the border with Israel. Only five of these have been cleared, compared to 1,122 of the 1,812 non-border minefields.¹¹⁹⁷ It is believed that these border minefields contain a total of 10,666 MOTAPM and a further 246,012 AP mines.¹¹⁹⁸ These border minefields remain a risk to the UNIFIL troops operating in the area and to those villages in the immediate vicinity of the Blue Line. Mines and ERW are also present in and around the villages throughout the area away from Blue Line.

According to the commander of the UN peacekeeping force in South Lebanon, as of June 2002 Israel had handed over maps detailing the locations of approximately 400,000 landmines. The first batch of maps received in June 2000 covered 77,000 mines mainly around former Israeli outposts and 288 booby-trapped explosive devices. A second batch received in December 2001 detailed the presence of some 300,000 mines along the UN-delineated Blue Line. In April 2002, UNIFIL received information on 13,600 landmines along the border south of Alma Shaab. The Lebanese Army has indicated that the Israeli maps provide information on less than 80 per cent of the minefields and that fieldwork has shown the maps are about 60 per cent accurate.¹¹⁹⁹

ERW is scattered around former battlefields and frontline areas. The UN peacekeeping force commander has described cluster submunitions in South Lebanon as perhaps the most dangerous ERW, including the air-dropped BLU-63/B and Mk.-118 Rockeye sub-munitions and the artillery-delivered M43E1 submunition.¹²⁰⁰

Impact

The National Demining Office has recorded the following casualties from mines and ordnance from 2001 to September 2004.¹²⁰¹

- 2001: 69 casualties, 54 injured, 13 killed and two unknown.
- 2002: 16 casualties, 15 injured, one killed.
- 2003: 12 casualties, all injured.
- 2004: eight casualties, seven injured, one killed.

An analysis of casualties from 2000 to 2004 found that 94 per cent were male.¹²⁰²

The reduction in recorded casualties between 2001 and 2004 has been attributed to successful mine risk education and major clearance activities in the most highly afflicted areas in the south. While the number of landmine victims has been significantly reduced, remaining landmines and UXO have continued to affect the confidence of people living in the affected areas and of those who might otherwise return.

Efforts to address these problems

All demining in Lebanon is overseen by the National Demining Office, established in April 1998, and sitting within the LAF command structure as an operational unit of the Lebanese army.¹²⁰³ The NDO coordinates the work of the organizations and entities that execute humanitarian mine action in Lebanon. This does not include operational

mine clearance undertaken by UNIFIL on border minefields, but information concerning clearance of these areas is provided to the NDO through the UN MACC.¹²⁰⁴ A nationwide Landmine Impact Survey (LIS) started in March 2002. The impact survey was implemented by Mines Advisory Group (MAG), in collaboration with the NDO, with technical support from the Vietnam Veterans of America Foundation. A final national report covering all of Lebanon was completed in August 2003.¹²⁰⁵

Operations in the south – under the United Arab Emirates (UAE) funded Operation Emirates Solidarity (OES) – are managed by the Mine Action Coordination Centre, Southern Lebanon (MACC SL), which was established in January 2002 and operates as a tripartite structure of the UAE, the UN and the Lebanese Armed Forces, and is mandated to coordinate mine action within the UNIFIL mission area, defined as the area south of the Litani River.

Clearance activity has been intense in the south – principally through the OES. This programme started in May 2002 and, to the end of June 2004, had been responsible for clearing more than four million square metres of land, removing 56,482 AP mines, 1,678 MOTAPM and 4,420 other ERW items.¹²⁰⁶ Clearance in the OES programme has been undertaken by two commercial mine action companies; BACTEC from the UK and MineTech from Zimbabwe. ArmorGroup, a British company, was selected to undertake the quality assurance function. The Landmine Resource Centre, within the faculty of Health Sciences of the University of Balamand, Lebanon, was awarded the community liaison contract. MAG undertook clearance as tasked by the NDO.

ERW and MOTAPM have also been cleared from other affected areas, primarily by the Lebanese Armed Forces, MAG, and another NGO, the International Mine Initiative (IMI.) The LAF report clearing 38,002 anti-personnel mines, 5,465 MOTAPM and 56,170 ERW since November 1990.¹²⁰⁷ In 2003, up to 16 May, the Army reported clearing 642 anti-personnel mines, 160 MOTAPM mines, and 14,031 bombs and other ERW.

Legislation

Lebanon has not acceded to the 1997 Ottawa Convention.¹²⁰⁸ Lebanon became the first country to vote against a pro-ban resolution on 1 December 1999 when it voted against UNGA Resolution 54/54B, calling for universalisation of the Ottawa Convention.

Lebanon is not a member of the Convention on Conventional Weapons or its Amended Protocol II (Landmines), but attended the Fourth Annual Conference of States Parties to Amended Protocol II in December 2002.

1189 United Nations Mine Action Service website: *E-MINE: The Electronic Mine Information Network* http://www.mineaction.org/countries/countries_overview.cfm?country_id=856 accessed on 11 September 2004

1190 National Demining Office website : <http://www.ndo-lb.org/Results.tpl?rnd=1782&cart=109084458217010695&category=2&startat=1> accessed on 11 September 2004

- 1191 According to the LIS survey summarised on the NDO webpage. However, elsewhere on the same website, the total number of minefields and dangerous areas is stated as being more than 4,000.
- 1192 National Demining Office website : <http://www.ndo-lb.org/Results.tpl?rnd=1782&cart=109084458217010695&category=2&startat=1> accessed on 11 September 2004.
- 1193 National Demining Office website : <http://www.ndo-lb.org/Results.tpl?rnd=1782&cart=109084458217010695&category=2&startat=1> accessed on 11 September 2004.
- 1194 Habbouba Aoun, "The Landmine Resource Centre in Lebanon", in *Journal of Mine Action*, Issue 5.3 December 2001, (<http://maic.jmu.edu/journal/5.3/index.htm>)
- 1195 Harald A. Wie, "Landmines in Lebanon: An Historic Overview and the Current Situation", in *Journal of Mine Action*, Issue 5.3, December 2001 (<http://maic.jmu.edu/journal/5.3/index.htm>)
- 1196 United Nations Mine Action Coordination Centre for Southern Lebanon website : <http://www.maccsl.org/mineproblem.htm> accessed on 11 September 2004.
- 1197 National Demining Office website : <http://www.ndo-lb.org/Results.tpl?rnd=1782&cart=109084458217010695&category=2&startat=1> accessed on 11 September 2004.
- 1198 National Demining Office website : <http://www.ndo-lb.org/Results.tpl?rnd=1782&cart=109084458217010695&category=2&startat=1> accessed on 11 September 2004.
- 1199 Interview with General Massaad, Director, National Demining Office, and other NDO personnel (Lt.-Col. Kassem Jammoul, Lt.-Col. Takieddine Taneer, Maj. Khaled Alieh, and Maj. Marwan Sakr), *Hazmieh*, 5 May 2003. Reported by *Landmine Monitor* 2003, p. 641.
- 1200 Nicholas Blandford, "Interview with ... Major General Lalit Tewari," *Daily Star*, 6 June 2002.
- 1201 National Demining Office website : <http://www.ndo-lb.org/Results.tpl?rnd=1782&cart=109084458217010695&category=2&startat=1> accessed on 11 September 2004.
- 1202 National Demining Office website : <http://www.ndo-lb.org/Results.tpl?rnd=1782&cart=109084458217010695&category=2&startat=1> accessed on 11 September 2004.
- 1203 National Demining Office website : <http://www.ndo-lb.org/Results.tpl?rnd=1782&cart=109084458217010695&category=2&startat=1> accessed on 11 September 2004.
- 1204 National Demining Office website : <http://www.ndo-lb.org/Results.tpl?rnd=1782&cart=109084458217010695&category=2&startat=1> accessed on 11 September 2004.
- 1205 Mines Advisory Group (MAG) website <http://www.mag.org.uk/magtest/magwproj/projleb.htm>
- 1206 UNMACC -SL quarterly report April – June 2004 p 9 accessed at [http://www.maccsl.org/reports/Qtly per cent20Report per cent20Apr per cent20Jun per cent2004.pdf](http://www.maccsl.org/reports/Qtly%20per%20Report%20per%20Apr%20per%20Jun%20per%202004.pdf)
- 1207 National Demining Office website : <http://www.ndo-lb.org/Results.tpl?rnd=1782&cart=109084458217010695&category=2&startat=1> accessed on 11 September 2004.
- 1208 As referenced in *Landmine Monitor* 2003, p. 639.

Liberia

Background

Internal conflicts in Liberia from 1989 to 1997 and more recently in 2003 are likely to have caused a significant ERW problem in the capital Monrovia and other parts of the country.

Assessment of the problem

An UNMAS assessment in September 2003 found no reports of mine use during the most recent conflict, but it did raise concerns over ERW in Monrovia. While it could not confirm ERW contamination in areas outside Monrovia, UNMAS noted that it "will be a problem wherever fighting took place."¹²⁰⁹ Until full assessments of the ERW threat have taken place outside Monrovia, it will be difficult to estimate the nature of the socio-economic impact throughout the country. Liberia does not appear to be affected by AP or AV mines.

Remote and inaccessible areas such as Lofa, Grand Capemount, Bong Mines, Nimba County and Kakata are all likely to be affected by ERW from both recent internal conflicts.¹²¹⁰ The town of Ganta, for instance, in Nimba County, saw heavy fighting during the civil conflict when it was a stronghold for former President Taylor's forces. The widespread destruction from shelling in the town indicates the likelihood of ERW contamination.¹²¹¹

Rocket-propelled grenades and mortars were the most commonly used weapons during the conflicts, with some reported use of surface-to-air missiles.¹²¹² From December 2003 to May 2004, 10,317 pieces of ERW (including rocket-propelled grenades, mortar shells and hand grenades) were recovered during disarmament, demobilisation and reintegration (DDR) activities.¹²¹³ In addition, the UN has commented that many heavy weapons "are not being turned in (during DDR activities) and have been smuggled across the borders of Liberia". This suggests that many munitions used in the conflict may be abandoned or unguarded throughout the country. One such AXO cache containing mortars and grenades in Camp Alpha in Lofa County had to be destroyed by the Swedish explosive ordnance disposal team from UNMIL force headquarters on 3 May 2004.¹²¹⁴

ERW have been found in Zwedru, reinforcing the assertion that other hinterland areas where fighting occurred may be contaminated.¹²¹⁵ An OXFAM report "Liberia: critical time to end the violence" contains indications that people are affected by ERW.¹²¹⁶

Impact

It is clear from the interviews conducted that, in the areas where there was significant fighting, ERW continue to be found. ERW have impacted on societal conditions in different

ways. In areas where LURD and MODEL fighters were concentrated, ERW have caused several injuries and increased the burden on already stretched medical services.¹²¹⁷

The fear of injuries from ERW has seriously affected farming and other economic activities. A Ministry of Agriculture official noted that while it was recognised that fear of ERW had deterred farmers from tilling the land and planting rice, cassava and potatoes, it was difficult to estimate the reduction in food production resulting from this problem.¹²¹⁸

The socio-economic impacts on ERW-affected communities have not yet been fully assessed although officials of the transitional administration are convinced that they will affect Liberia in an adverse way for several years to come. Officials are also aware of contaminated water bodies in which pollutants from ordnance have leached into streams, rivers and wells.¹²¹⁹

Another impact is the public demonstration of masculinity in handling ERW. In Liberia it is known that people, especially young men, have died from handling live munitions in a bid to demonstrate masculinity.¹²²⁰

Efforts to address these problems

In April and May 2004 UNICEF conducted an analysis of the mine and ERW risk in Liberia, noting “a moderate level of

reporting on the danger from rockets, grenades and UXO”, but no significant problem from landmines.¹²²¹

IDPs and refugees returning to their homes, which are now contaminated by ERW, are particularly at-risk, as well as children who may be unaware of the danger. Casualty data suggests that ERW accidents are often due to people intentionally handling rockets and grenades, or clearing land with fire, causing unintentional explosions.¹²²²

UNICEF has informed UNMIL and Monrovia City Corporation waste management staff of safe reporting procedures for discoveries of ERW.¹²²³ In addition, UNMAS is developing mass media materials for ERW risk education in collaboration with UNICEF and UNMIL.¹²²⁴

Final figures from the UN disarmament process were reported as follows: “In all, UN peacekeepers collected 27,000 weapons, 6.2 million rounds of small arms ammunition and approximately 30,000 pieces of heavier ordnance, including mortar bombs, from disarmament.”¹²²⁵

Legislation

Liberia has not signed the CCW. It is a State Party to the Ottawa Convention but, since the Treaty entered into force for Liberia in June 2000, there have been no reports on the location of mined areas or the status of mine action programmes or clearance activities.¹²²⁶

1209 UNMAS country page: Liberia, accessed on 25 August, 2004 at: http://www.mineaction.org/countries/countries_overview.cfm?country_id=640

1210 UNMAS country page: Liberia, accessed on 25 August, 2004 at: http://www.mineaction.org/countries/countries_overview.cfm?country_id=640

1211 IRIN News, “Taylor loyalist recruits Liberians to fight in Guinea – ex-combatants”, GANTA, 22 September 2004.

1212 Ibid, Brabazon, James. 2003. *Liberia, Liberians United for Reconciliation and Democracy (LURD)*. Royal Institute of International Affairs. Armed non-state actors’ project. Briefing Paper No. 1, February. and HRW (Human Rights Watch) 2003, *Weapons Sanctions, Military Supplies, and Human Suffering: Illegal Arms flows to Liberia and the June-July Shelling of Monrovia*. Briefing Paper. 3 November 2003.

1213 Third progress report of the Secretary-General on the United Nations Mission in Liberia, 26 May 2004, S/2004/430

1214 Third progress report of the Secretary-General on the United Nations Mission in Liberia, 26 May 2004, S/2004/430.

1215 IRIN. “Liberia: former combatants gather in Zwedru to hand in their guns”, accessed on 13 July 2004, at <http://www.irinnews.org>.

1216 OXFAM, “Liberia: critical time to end then violence”, Oxfam Briefing Note, November, 2003.

1217 Telephone interview with Dr. Thomas Jaye, Centre for Democratic Empowerment, Monrovia, Liberia, 20 August 2004.

1218 Telephone interview with official from the Ministry of Agriculture, Liberia, 17 August 2004.

1219 Interview with James Tarpeh, Adviser to Minister of Information, Liberia, 20 August 2004.

1220 IRIN, 18 August 2004. In this particular case, two fighters were killed as they “were jubilating on their way to disarm when a grenade which they were handling exploded in their hands killing two of them”.

1221 Update from UNICEF, MASG Newsletter May 2004.

1222 Update from UNICEF, MASG Newsletter May 2004.

1223 Update from UNICEF, MASG Newsletter May 2004.

1224 Update from UNMAS, MASG Newsletter October 2003.

1225 IRIN, VOINJAMA, 20 December, “LIBERIA: No more guns and nothing to do, say disgruntled ex-combatants”

1226 Landmine Monitor Fact Sheet for the May 2003 Meeting of the Intergovernmental Standing Committee on Mine Clearance, Mine Risk Education and Mine Action Technologies of the 1997 Mine Ban Treaty at <http://www.icbl.org> accessed 30 July 2004

Libya

Background

Libya’s problem with ERW and mines stems from the 1939-45 War, its conflict with Egypt in 1977 and from its 1977-1987 border conflict with Chad.¹²²⁷

Assessment of the problem

There have not been any in-depth assessments of the MOTAPM and ERW threat in Libya, but contamination is likely to be most acute along Libya’s borders with Chad

and Egypt. Photographs from clearance operations in Libya led the Landmine Monitor to conclude that ERW are being cleared in larger numbers than mines.¹²²⁸

Impact

According to a Libyan official quoted in Landmine Monitor: "Landmines and UXO have negatively affected development projects in Toubrouk and elsewhere, raised the costs of petroleum discovery and production expenses because of the clearance costs, and also affected the planning for infrastructure, grazing, and industrial projects."¹²²⁹

1227 UNGA Press Release (GA/9833), 28 November 2000, p. 10.

1228 Landmine Monitor 2000, p. 952.

1229 Landmine Monitor 2004, p. 1065.

1230 Landmine Monitor 2004, p. 1066.

Efforts to address the problem

While there is no central mine action coordinating body within the Libyan Government, the Ministries of Defence and Justice and the Libyan Jihad Centre deal with ERW and mine-related issues. In 2004, an NGO called Anti-mines Organisation was established. According to the Government, the Army and the Civil Defence authorities conduct some clearance of ERW and mines.¹²³⁰

Legislation

Libya is not a State Party to either the Ottawa Convention or the CCW.

Lithuania

Background

ERW contamination in Lithuania dates from the 1939-45 War and from the military areas used during the Soviet era. MOTAPM are regularly found and destroyed during EOD operations, mainly Russian-made TM series anti-tank mines.

Assessment of the problem

Many ERW have been found in Rukla Camp, a former Soviet and Russian military base between the cities of Jonava and Kaunas.¹²³¹ The Russian Army left Lithuania in 1993 abandoning 277 military areas upon withdrawal. An evaluation of the environmental situation in those bases concluded that the most harmful pollution was due to oil products and refuse areas in the sites and did not identify ERW as a major environmental problem.¹²³² However, judging by the numbers of ERW cleared during the reporting period, there is still significant ERW contamination in Lithuania. It is also noteworthy that MOTAPM have been cleared in significantly greater numbers than AP mines.

In 2003 a total of 11,525 items of ordnance were cleared by the Lithuanian authorities. The majority of these were artillery shells (10,109 items) followed by cartridges, mortar rounds, grenades, aviation bombs and anti-tank mines (17 items).

1231 Landmine Monitor 1999, p. 739.

1232 P. Baltrenas, Environmental Aspects of Reusing Former Military Lands, Vilnius Gediminas Technical University, undated, p. 2.

1233 Interview with Andrius Krivas, Ministry of Defense, 11 April 2001, reported in Landmine Monitor 2001, p. 833; Email from Grazvydas Jasutis, Ministry of Defence, 22 May 2002, reported in Landmine Monitor 2002, p. 567; Emails from Grazvydas Jasutis, Ministry of Defence, 11 June 2003, and Romualdas Kunigonis, Head of Military Engineering School, 11 June 2003, reported in Landmine Monitor Report 2003, p. 318.

1234 Republic of Lithuania, Article 13 National Annual Report, 15 October 2003, p. 5.

1235 Lithuanian Ministry of Defence website, <http://www.kam.lt/index.php?itemId=13486>, accessed 7 October 2004; The Republic of Lithuania, Article 7 Report 2003, 15 April 2004, p. 4.

Impact

No casualties were reported due to ERW and MOTAPM between 2000 and 2002, but in 2003 a civilian was killed by an ERW.¹²³³ There is no other information available on the socio-economic impact of ERW or MOTAPM in Lithuania.

Efforts to address the problem

The Lithuanian armed forces are responsible for EOD and mine clearance. There are no clearance programmes in Lithuania and no rehabilitation programmes for victims.¹²³⁴ There is no information available on ERW risk education in Lithuania.

Legislation

Lithuania signed the Ottawa Convention on 26 February 1999 and became a States Party on 12 May 2003. Lithuania is also a party to Protocol I, the original and amended versions of Protocol II on landmines, Protocol III and Protocol IV to the CCW Convention.¹²³⁵ On 30 September 2004, Lithuania became the third country to ratify Protocol V on ERW.

Mauritania

Background

Mauritania's MOTAPM and ERW problem is a result of the conflict in Western Sahara from 1975-1978.

Assessment of the problem

Significant numbers of MOTAPM and ERW have been cleared in Mauritania. The bulk of clearance activities have taken place along the border with Western Sahara, in particular in the following towns: Nouadhibou, Zoueratt, Bir Mogrein, F'derick (Tiris-Zemour). However, MOTAPM and ERW have also been cleared in towns such as Nema and the capital Nouakchott.¹²³⁶

Impact

According to the UN, at least 33 vehicles have been destroyed in Mauritania by mines, presumably MOTAPM, between 1978 and 2003.¹²³⁷ The UN has also noted that mine/ERW contamination puts pastoralists and their animals at risk.¹²³⁸ The U.S. Department of State has reported that

"remaining landmines and unexploded ordnance in northern Mauritania continue to hinder economic development."¹²³⁹ In 2001, the President of the Mauritanian Agricultural Engineers Association told Landmine Monitor that ERW and mines hamper "iron ore extraction, coastal fishing, trade through the overland route from Morocco, and tourism in coastal and desert areas."¹²⁴⁰

Efforts to address the problem

The National Humanitarian Demining Office (NHDO), established in 2002, is responsible for coordination of mine action in Mauritania. NHDO clearance and mine risk education teams work with the French NGO HAMAP-Demineurs to clear contaminated land and provide risk education to affected communities.¹²⁴¹

Legislation

Mauritania has been a State Party to the Ottawa Convention since January 2001. Mauritania is not a State Party to the CCW.

1236 Landmine Monitor 2004, p. 567-68.

1237 UNMAS Country Profile, Mauritania, accessed 29 November 2004 at: http://www.mineaction.org/countries/countries_overview.cfm?country_id=758

1238 UNMAS, "Portfolio of Mine Action Projects 2004", December 2003.

1239 To Walk the Earth in Safety: The U.S. Commitment to Humanitarian Mine Action, Bureau of Political-Military Affairs, U.S. Department of State, August 2004, accessed on 29 November 2004 at: <http://www.state.gov/t/pm/rls/rpt/walkearth/2004/37227.htm>.

1240 Moulaye Moulaye Omar, President, Association Mauritanienne des Ingénieurs Agronomes et Filières Associées, Nouakchott, 10 February 2001, cited in Landmine Monitor 2004, p. 566.

1241 Article 7 Report, Form G3, 18 June 2004.

Moldova

Background

The territory of what is now Moldova saw conflict during both the 1914-18 and 1939-45 Wars, with changing front lines and bombing of the hinterland. On 31 August 1991, Moldova proclaimed independence from the USSR. After the declaration of independence the internal Transnistrian conflict broke out. The separatist "Transnistrian" region was supported by the USSR/Russian 14th Army.

Currently, efforts to settle the Transnistrian problem are sponsored by the Russian Federation, Ukraine and Organization for Security and Co-operation in Europe (OSCE). The withdrawal of Russian forces became a stumbling block, however, and despite agreements in 1999 and 2002 this withdrawal has been subject to delays.

Impact

German and Soviet UXO in the former battlefield areas of the 1939-45 War constitute the bulk of the problem in

Moldova. UXO constitutes a more serious threat than landmines, with the most dangerous areas being those where trench battles took place, resulting in greater density of contamination. A substantial amount of UXO contamination has been found in the Ribnita, Dubasari, Tiraspol and Bender areas of the Transnistrian region.¹²⁴²

Former USSR munitions stores abandoned in Moldova present a risk of ordnance theft and of uncontrolled explosions. One such abandoned store is situated in Colbasna village, in the north of Transnistrian region, near the border with Ukraine. The store used to serve the Military District of Odessa but became more congested as ammunition was taken there with the withdrawal of the USSR from countries of the Warsaw Pact. About 60 per cent of the ammunition (26,000 tons approximately) is not safe to transport and should be destroyed in place.¹²⁴³ In 2002, equipment was imported from Germany to assist with the destruction of this ordnance.¹²⁴⁴

There have been political disputes over the removal of stockpiles of weapons and ordnance by the Russian Federation. Since mid-2003, the Transnistrian administration has hampered the removal of this ammunition, resulting in protests from the Russian Ambassador expressing suspicions that it was being done in an effort to preserve the presence of Russian troops in the region.¹²⁴⁵ In March 2004, the process of returning this ordnance resumed with a train with artillery shells and mortars being sent to the Russian Federation.¹²⁴⁶

There is no overall national data available on the impact of ERW or MOTAPM. The Moldova Ministry of Foreign Affairs stated that they do not have specific data on ERW and MOTAPM casualties.¹²⁴⁷

Efforts to address this problem

After the conflict in Moldova, engineers are reported to have destroyed more than 4,000 explosive objects and undertaken the demining of four bridges over the Dniester

river. Moldovan engineering teams are reported to have cleared 520 items of UXO in 2003.¹²⁴⁸

The Ministry of Defence and the Police Demining Teams of the Ministry of Interior Affairs carry out the demining and ordnance disposal on Moldovan territory.¹²⁴⁹ In the Transnistrian region, peacekeeping forces sponsored by Russian Federation undertake demining and ordnance disposal. "Currently, there is no demining operation under procedure. However, sometimes, explosive items are discovered by either by farmers or campers on the bank of Dniester. In that case, demining professionals from peacekeeping forces undertake the work or terminate the explosives at the place of discovery."¹²⁵⁰

Legislation

Moldova is a State Party to the Ottawa Mine Ban Treaty and the CCW. Moldova has ratified Amended Protocol II of the CCW.

1242 Landmine Monitor 2003, p.338.

1243 <http://new.mldnet.com/?id=180&record=535813> (last accessed 6 October 2004).

1244 ITAR-TASS, Kishinev OSCE Officer interview, http://www.mirtv.ru/news/9/174_1.htm

1245 <http://www.strana.ru/stories/01/11/19/2043/205297.html> Date: 22.01.2004 (last accessed 6 October 2004).

1246 Interview given to Lenta.ru journalist by Vladimir Isakov, Deputy Minister of Defence of Russian Federation, <http://lenta2.cust.ramtel.ru/world/2004/03/25/weapons/> (last accessed 6 October 2004).

1247 Communication to Landmine Action researcher 18 June 2004.

1248 <http://www.cry.ru/text.shtml?200004/20000420162434.inc>

1249 Landmine Monitor 2003, p.337.

1250 Anatoly Zverev, Information Agency "Novosti – Moldova", <http://www.newsmoldova.ru/>, 15 April 2004.

Mongolia

Background

A 1939 Japanese invasion of eastern Mongolia left some legacy of ERW. Following the Sino-Soviet split in the 1960s, Mongolia became the site of 18 Soviet bases until the early 1990s. Various types of mines were stockpiled on the bases, including Russian-made TM 57 anti-tank mines. When the Russians left abruptly in 1992, stocks of these mines were abandoned along with other small and medium-sized military waste. It is not known in what condition these mines were left. Rubbish heaps on the bases are also known to contain other AXO and MOTAPM.¹²⁵¹

The Soviet Army is believed to have used anti-tank mines along the Mongolian border with China in the 1970s. At least some of these mines, however, were removed by the Russians before they withdrew. At present, Mongolia keeps a stockpile of 11 types of Soviet-era mines, including anti-vehicle mines. The total number is confidential, but 27 per cent of the total are reported to be MOTAPM. All were purchased from the former USSR between 1960 and 1985.¹²⁵² Ministry of Defence officials state that Mongolia

has never produced or exported mines and would use them only for self-defence purposes.¹²⁵³

Assessment

ERW remain a problem around the 18 former Soviet bases in Mongolia. These areas are primarily in the south, near the Chinese border and along the railroad that links Russia to China. Other affected areas are in Dornod province in the east of the country. These areas total 4,140 sq km and are lightly populated.¹²⁵⁴ A June 2004 workshop statement noted that "general knowledge about the nature and extent of the problems caused by former military sites already exists. [However,] a more detailed assessment of the sites is needed..."¹²⁵⁵

In 1996, the Ministry of Environment commissioned a documentary film, "The Earth Wound," showing damage to the environment around former Soviet Army bases in Baganuur, Choir, Mandalgov and in various parts of Dornod province. No technical surveys have been carried out, and the Ministry of Foreign Affairs states that none are

planned.¹²⁵⁶ Public and media attention to the problem is low. The June 2004 workshop called for “improvement of unexploded ordnance detection capability and expertise” and awareness-raising at different levels, such as through NGOs, government and media.¹²⁵⁷

Impact

An average of three ERW and MOTAPM incidents (accidents or suspect items being found) have been reported to the Ministry of Defence’s Engineering Command each year over the last decade.¹²⁵⁸ This level appears to be stable. No casualties were reported in 2003. In 2004, one boy and one man were killed in separate incidents in Dornod province.¹²⁵⁹ Most casualties have been caused when people are digging through scrap piles on former Soviet bases searching for scrap metal for resale.¹²⁶⁰

The Ministry of Defence does not appear to keep records of damage caused by ERW and MOTAPM in Mongolia. The government and NGOs provide medical care and rehabilitation services for people with disabilities, including but with no special focus on victims of ERW.¹²⁶¹ Since the affected areas are limited in size, there is no clear effect on livelihoods as a result of ERW contamination.

Efforts to address these problems

Although the Mongolian army has the technical capacity to resolve the ERW problem on the former Soviet bases, no cleanup has yet taken place. This appears to be because the contamination is seen as a low-impact issue. In 2002, a Ministry of Defence official stated that clearance operations are not complete partly because detailed data on former Soviet Army bases had not been handed over to

Mongolian authorities and partly because the government did not have sufficient funds for the task.¹²⁶² In 1998, the Ministry of Environment began to bury refuse at the bases and then stopped for safety reasons.¹²⁶³ There are no fences or marking of sites that may be contaminated,¹²⁶⁴ even though these simple measures might be enough to prevent further ERW casualties.

UN agencies are not involved with this issue in Mongolia, nor are international NGOs. There is no mine action centre or other focal point. The June 2004 workshop recommended that Mongolia consider establishing a coordination mechanism among the various national and provincial authorities involved, together with approaches to international donors who might be able to fund “concrete and detailed rehabilitation projects to be developed by the Mongolian authorities, based on a strategy and clear priorities”. It was suggested that these projects might include risk awareness activities around the former Soviet bases, particularly aimed at children.¹²⁶⁵

Legislation

Mongolia is a party to the CCW’s original Protocol II but not the Amended Protocol II. The Ministry of Foreign Affairs is known to have proposed ratification of both the Amended Protocol II and the Mine Ban Treaty (MBT). To date, the Ministry of Defence has not responded.¹²⁶⁶ In June 2004, officials from these ministries and members of Parliament met to discuss Mongolia’s military base conversion policy. The workshop concluded that “consideration should be given to the adherence to the Ottawa Convention.” The CCW’s ERW and MOTAPM protocols were not mentioned in the workshop summary.¹²⁶⁷

1251 Landmine Monitor 2000, p. 517.

1252 Handout provided by Colonel Lhagva Gantumur at meeting between Mongolian delegation, Canada’s DFAIT Mine Action Team, and Mines Action Canada, Ottawa, 17 May 2001.

1253 Communication from Tungalag Johnstone, Canadian Consulate, Ulaanbataar, 26 July 2004.

1254 Landmine Monitor 2000, p. 516 (footnote 22).

1255 “NATO/CCMS Workshop on rehabilitation of former military sites”, document posted on Ministry of Foreign Affairs website, <http://www.extmin.mn/news040603.html>.

1256 Landmine Monitor 2002, p. 715.

1257 “NATO/CCMS Workshop on rehabilitation of former military sites”, document posted on Ministry of Foreign Affairs website, <http://www.extmin.mn/news040603.html>.

1258 Landmine Monitor 2002, p. 715.

1259 Communication from Tungalag Johnstone, Canadian Consulate, Ulaanbataar, 26 July 2004.

1260 Communication from Tungalag Johnstone, Canadian Consulate, Ulaanbataar, 30 July 2004.

1261 Landmine Monitor 2002, p. 715.

1262 Landmine Monitor researcher’s meeting with Colonel Yadmaa Chojjamts, Director of Strategic Management and Planning Directorate, Ministry of Defense, Ulaanbaatar, 7 February 2002.

1263 Communication from Tungalag Johnstone, Canadian Consulate, Ulaanbataar, 26 July 2004.

1264 Landmine Monitor 2003, p. 650.

1265 “NATO/CCMS Workshop on rehabilitation of former military sites”, document posted on Ministry of Foreign Affairs website, <http://www.extmin.mn/news040603.html>.

1266 Landmine Monitor 2003, p. 649.

1267 “NATO/CCMS Workshop on rehabilitation of former military sites”, document posted on Ministry of Foreign Affairs website, <http://www.extmin.mn/news040603.html>.

Morocco

Background

After the departure of the French colonial army in 1976, Morocco fought an armed conflict with Mauritania and Polisario Front forces over sovereignty in the Western Sahara. Mauritania withdrew from the conflict in 1979, but fighting continued between Morocco and the Polisario Front until a UN-brokered ceasefire came into effect on 1991.

Assessment of the problem

The Royal Moroccan army built six defensive walls, known as "berms", in Western Sahara and placed between one and two million AT and AP mines around them. Due to the risk from ERW and mines, civilians are not allowed within five to 10 kilometres either side of these berms.¹²⁶⁸

Impact

According to the government, Morocco is not affected by ERW or MOTAPM, but the territory of Western Sahara under its control is contaminated by ERW and MOTAPM.¹²⁶⁹ There were no reports of ERW or mine casualties during this reporting period, but 51 military casualties from MOTAPM and ERW were recorded by the Moroccan Government in Western Sahara between March 2000 and March 2001.¹²⁷⁰

Efforts to address these problems

Under bilateral military agreements signed by Morocco and Polisario in early 1999, both parties committed to cooperate with the UN Mission for the Referendum in Western Sahara (MINURSO) in the exchange of ERW/mine-related information, marking of mined areas, and clearance and destruction of ERW and landmines in the presence of MINURSO observers. On 1 September 2003, a field containing an unspecified number of grenades was discovered and marked at Bir Lahlou on the eastern side of the berm.¹²⁷¹ From May 2003 to January 2004, MINURSO discovered and marked 87 ERW and landmines on both sides of the berm and monitored the destruction of additional munitions located by the Moroccan Army.¹²⁷² Since 1997, MINURSO has facilitated the discovery and marking of 1,123 ERW and mines and it has participated in 750 disposal operations.¹²⁷³

Legislation

Morocco is not a State Party to the Ottawa Convention. It is a State Party to the Convention on Conventional Weapons (CCW) and its Protocols I, II, IV as well as Amended Protocol II. It has not expressed its intention to ratify the new CCW Protocol V on ERW and it has not participated in discussions on MOTAPM within the CCW framework.

1268 UN Mission for the Referendum in Western Sahara (MINURSO), Western Sahara Updated Mine Situation, February 1998.

1269 Interview with Seham Lemrabet, Moroccan permanent mission to the UN in Geneva, 25 June 2004.

1270 Landmine Monitor 2003, p. 652.

1271 Report of the UN Secretary-General on the situation concerning Western Sahara, 19 January 2004. Report of the UN Secretary-General on the situation concerning Western Sahara, 16 October 2003.

1272 Report of the UN Secretary-General on the situation concerning Western Sahara, 16 October 2003; Report of the UN Secretary-General on the situation concerning Western Sahara, 19 January 2004.

1273 Report of the UN Secretary-General on the situation concerning Western Sahara, 23 April 2004.

Mozambique

Background

Mozambique's armed struggle for national liberation between 1964 and 1974 left northern and central parts of the country contaminated by ERW, AP mines and MOTAPM. From 1977 to 1992, the conflict between RENAMO and the Government of Mozambique increased ERW and mine contamination throughout the country. It has been noted that Renamo in particular laid MOTAPM "to close roads connecting towns and markets."¹²⁷⁴ Few records were kept of minefields laid during this period.¹²⁷⁵ Although significant problems have been attributed to MOTAPM in the past,¹²⁷⁶ the limited nature of this problem, the capacity of local people to find alternatives to suspect routes and an extensive mine action programme mean that

MOTAPM contamination has not had a substantial impact in recent years.

Assessment

In August 2001, the National Demining Institute (IND) published the final results of the country's first comprehensive Landmine Impact Survey (LIS). The survey indicated that virtually every part of Mozambique experienced negative social and economic consequences from mines and ERW which were estimated to affect approximately 1.5 million people directly. Mines were reported to affect 123 of the 128 districts and all 10 provinces with some 791 communities affected by 1,374 "suspected mined areas" (SMAs). However, many mine action operators considered that this

survey put back onto the map suspect areas for which suspicion was not warranted or where the contamination had already been addressed, resulting in an additional but perhaps unnecessary phase of mine action work.

At least 15 different types of MOTAPM have been found in Mozambique.¹²⁷⁷ According to a former head of mine clearance teams in Mozambique and Angola, minefields in Mozambique are relatively uniform. With few exceptions, MOTAPM were laid only on the roads, sparingly and very rarely in concert with anti-personnel mines.¹²⁷⁸ Although sections of road have been closed due to the suspicion of MOTAPM local people have often established alternative routes to alleviate the impact of such suspected contamination. For example, the HALO Trust report working in 2004 on a 21 km section of road that had been abandoned due to the suspicion of anti-vehicle mines. Local people had established an alternative route which substantially alleviated the problem but was not wholly satisfactory as it was only passable in the dry season. Work on this section of road had not yet revealed any anti-vehicle mines although a number of anti-personnel mines had been found. Although some such suspect areas remain, MOTAPM are not considered to present a substantial threat in Mozambique and are not thought to be having a very significant ongoing impact the civilian population or humanitarian operations.¹²⁷⁹

The history of conflict in Mozambique is not so fierce as has been experienced in countries such as Afghanistan and Angola. Although ERW contamination has been widespread it has not been of the volume encountered in other environments. Mine action operators have generally addressed ordnance contamination as part of their ongoing work and after a long history of mine action in the country the most striking problems have been addressed. Although ongoing destruction of UXO is now limited there are remaining requirements to address outdated government ordnance stores including naval torpedoes, air-dropped bombs and artillery ammunition.¹²⁸⁰

Impact

In 2003, there were 13 recorded accidents involving ERW and mines that resulted in six deaths and eight injuries. Four of the 14 victims were deminers and 10 were civilians.¹²⁸¹ According to the Landmine Monitor 2004, "the number of new mine casualties has dropped significantly from 133 casualties reported in 1998, to 60 in 1999, and 29 in 2000 (eight killed and 21 injured), but rose again to 80 casualties in 2001, before dropping again to 47 casualties in eight provinces in 2002."¹²⁸² It was not determined during this research how these casualties were split between ERW, AP mines and MOTAPM.

Efforts to solve these problems

The National Demining Institute (IND) in Maputo is the government body tasked with the management and coordination of mine action activities. In 1999, IND was formed with Mozambican staff and five international technical Advisers. With funding from Canada, an IND database was established and the LIS was conducted in 2000-2001.

There are a number of mine clearance organizations in Mozambique, including Accelerated Demining Programme (ADP), Norwegian People's Aid (NPA), HALO Trust, and Handicap International (HI), as well as a number of other humanitarian and commercial mine clearance agencies. The mine action process has been ongoing in Mozambique for many years and some agencies are now starting to focus on a process of declaring operational areas "impact free" from mine and ordnance contamination.

Legislation

Mozambique signed the Ottawa Convention on 3 December 1997, ratified it on 25 August 1998 and the Convention entered into force on 1 March 1999.¹²⁸³ Mozambique is not a State Party to the CCW.

1274 The HALO Trust web-page on Mozambique, <http://www.halotrust.org/mozambique.html>

1275 Jeremy Coulson, Mozambique Country Profile, <http://maic.jmu.edu/journal/6.2/profiles/profilemozambique.htm>, accessed 22 December 2004.

1276 Actiongroup Landmine.de, MAG and The Uniting Church in Australia Justice and International Mission Unit, "Anti-vehicle mines: Discussion paper," 2004, p 6. This paper relates a story of MOTAPM contamination on the road between the towns of Milange and Morrumbala resulting in these areas being cut off from the rest of the world for ten years.

1277 See Canadian Forces Landmines Database website, Anti-Tank Mines in Mozambique, <http://ndmic-cidnm.forces.gc.ca/>, accessed 22 November 2004.

1278 Al Venter, "Angola: New mines, what ban?" Bulletin of the Atomic Scientists, May/June 1999, pp. 13-15.

1279 Discussion with Tim Porter, The HALO Trust, January 2005.

1280 Discussion with Tim Porter, The HALO Trust, January 2005. The impetus towards stockpile destruction is seen as coming out of Ottawa Treaty commitments with respect to anti-personnel mines.

1281 Annual Report Mine Action Programme 2003, Republic of Mozambique, Ministry of Foreign Affairs and Cooperation, National Demining Institute, Maputo, February 2004.

1282 Landmine Monitor 2004. <http://www.icbl.org/lm/2004/mozambique>

1283 A resolution approved by the Council of Ministers formally recognised the Mine Ban Treaty on 10 June 1999: Decree 37/99, as published in Boletim da Republica, No. 29, 10 June 1999.

Myanmar/Burma

Background

Myanmar has suffered from internal armed conflict since decolonization. The ruling military junta is opposed by several ethnically based, armed insurgencies and armed rebels. The conflict is waged by ground forces, with very little use of aerial bombardment or mechanized artillery. Difficult terrain and guerrilla tactics have meant that light weapons and mines have been the weapons of choice. MOTAPM include domestic and foreign-made AV mines, and domestic and foreign-made directional mines.¹²⁸⁴ ERW primarily results from mortars, rocket-propelled grenades, rifle grenades and some artillery shells.¹²⁸⁵

Assessment of the problem

Areas particularly affected by ERW and MOTAPM include many parts of Karen State, Karenni State and southern Shan State. Armed conflict is waged between the Tat Ma Daw (official armed forces) and armed opponents such as the Karen National Liberation Army, the Karenni Army and the Shan State Army, plus proxy conflicts by non-state armed groups with non-aggression pacts with the ruling authorities, such as the Democratic Karen Buddhist Army and the United Wa State Army.¹²⁸⁶

Due to the ongoing armed conflict, there has been no formal assessment of the ERW/MOTAPM contamination, nor does data exist from which it can be determined how many people suffer from such contamination.

It is known that the Tat Ma Daw keep records of munitions used on the battlefield but these records are unavailable. It is reported that, in some cases, the Tat Ma Daw units know from records if an area was previously mined, but they do not necessarily know the precise location of the mines.¹²⁸⁷ Mined areas are generally unmarked¹²⁸⁸ but some minefields laid near infrastructure (such as bridges or camps) are fenced to prevent people or cattle from inadvertently entering the area.¹²⁸⁹ In 2002, during a border dispute with Thailand, the Tat Ma Daw laid anti-tank mines on roads crossing into Thailand, but after the dispute these mines were removed. It is believed that none of the armed opposition groups keep records of munitions used.

Impact

No centralized injury database exists within Myanmar from which UXO or landmine casualty information can be

extracted. Along the Myanmar-Thai border, both Médecins Sans Frontières and the International Committee of the Red Cross refer injured people to Thai medical facilities. During 2003, neither MSF nor ICRC recorded a case of injury by UXO or MOTAPM. The only known data on ERW/MOTAPM is from interviews with trainees in mine risk education (MRE) programmes run in the border area. One instance related that several children had been killed when an unexploded rifle grenade found in the field detonated in their midst while they were playing with it. In another case, a villager found an unexploded mortar shell and died, along with his child, when he handled it.¹²⁹⁰ Some 40 per cent of public health medics in Karen State undergoing MRE training knew of someone killed or injured by UXO.¹²⁹¹

UNHCR has suggested that widespread landmine pollution will be an impediment to the return of refugees and is a danger to IDP populations.¹²⁹² Several proposed development projects have been slowed or halted due to the presence of mines and UXO. A proposed road from Mae Hong Son province of Thailand to Taungii in Shan State of Burma/Myanmar was proposed by the Governor of Mae Hong Son Province, but activity has been halted due to mine infestation and tank traps on an old road bed.¹²⁹³ In another case, Thai contractors were prohibited from moving equipment across the border to begin work on a dam site near Mae Sariang, Thailand, reportedly due to mines in the area. Thai businessmen with timber concessions across the border in Burma/Myanmar regularly lose logging elephants when they step on landmines.¹²⁹⁴ Whether these examples relate to MOTAPM or solely to anti-personnel mines is not known.

Efforts to address these problems

UNDP Yangon has arranged several seminars on the landmine/UXO problem, both for UN agencies and for international NGOs working in the country. A visit by UNMAS was expected in late 2004 or early 2005.¹²⁹⁵ Mine/ERW Action is not yet seen as a priority for the ruling authorities.

Legislation

Burma/Myanmar has not signed the Ottawa Convention and is not a signatory to the CCW or its amended protocols. The ruling authority has made no statements specific to ERW and MOTAPM.

1284 Landmine Monitor 2004.

1285 Nonviolence International's Mine Risk Education Program Knowledge Survey. Internal report. March 2004.

1286 Burma/Myanmar sections of Landmine Monitor 1999-2004.

1287 Landmine Monitor 2000, p. 471.

1288 Landmine Monitor 2004.

1289 Nonviolence International interview with humanitarian worker in Yangon. Nov. 2003.

- 1290 Nonviolence International's Mine Risk Education Program Knowledge Survey. Internal report. March 2004. These stories and several reports of UXO being seen were recorded by a survey of trainees for Nonviolence International's Mine Risk Education program during 2003 and 2004.
- 1291 Nonviolence International's Mine Risk Education Program Knowledge Survey. Internal report. March 2004. RPGs, followed by mortars and rifle grenades were the most commonly seen UXO in the field.
- 1292 Interview with Rajiv Kapur, Country Representative, UNHCR, Yangon, Myanmar, 16 July 2004.
- 1293 "Thai road to Taunggyi blocked by Burma's minefields", Shan Herald Agency for News, May 30, 2004 (from their website: <http://www.shanland.org>)
- 1294 Film interview by Next Step Production at the Friends of the Asian Elephant (FAE) hospital in Lampang, Thailand September 2003. FAE has extensive knowledge of the numbers of elephants working across the border, and believes only about 10 per cent of the elephants they have heard about stepping on mines have reached their facility.
- 1295 Interview with Charles Petrie, United Nations Development Program Resident Coordinator, Yangon, Myanmar. 17 July 2004.

Namibia

Background

Namibia has an ERW and MOTAPM problem resulting from the war of liberation (from 1960 to 1988) and the contamination of live-fire training ranges and military bases used by the South African Defence Force (SADF) during this period. In the late 1990s, UNITA operations using both anti-personnel mines and MOTAPM have resulted in further contamination in north-eastern areas (Caprivi.)

Assessment of the problem

In the liberation war, both the South West African People's Organisation (SWAPO) and SADF had used MOTAPM and anti-personnel mines.¹²⁹⁶ Another source of ERW and MOTAPM contamination was the granting of Namibian air and land space for the Angolan MPLA government to use in its war with UNITA forces from December 1999 until February 2002. In January 2000, UNITA launched a MOTAPM and anti-personnel mine offensive in north-eastern Namibia.¹²⁹⁷

Before that offensive, a Mines Advisory Group (MAG) assessment in 1998 had concluded that ERW were a threat to populations across northern Namibia, with ERW accounting for significantly more accidents (87 per cent) than anti-tank and anti-personnel mines. While the problem was described as being not as severe as those faced by many other post-war countries, it was recognised that UXO contamination was steadily claiming lives and inhibiting development.¹²⁹⁸ This assessment noted that "through a commercial contract and the [US funded] demining programme, much more money has been spent on clearing the minefields; however, the statistics show that anti-personnel mines account for little over 4% of all casualties since 1989 [to 1998]."¹²⁹⁹ Another assessment in 1999 by UNMAS concluded that "the landmine situation in Namibia constitutes neither a humanitarian emergency nor a major obstacle for development".¹³⁰⁰ Prior to the UNITA conflict of 2000, the anti-personnel mine threat was limited to a number of former SADF bases and electricity pylons running from the town of Ruacana to the south.¹³⁰¹

There is widespread ERW contamination on and around the former SADF artillery firing ranges, aerial bombing target ranges and bulk destruction sites. MOTAPM-contaminated roads include: MR100 (Opuwo-Omakange), MR110 (Rundu-

Siko-Nkurenkuru), MR120 (Onhuno-Endola-Okatana) and MR123 (Outapi-Tsandi-Okahoa).¹³⁰²

During the war, hundreds of thousands of pieces of ERW – the remains of clashes between opposing forces, military exercises and mass destruction of munitions – accumulated on the battlefield, on artillery firing ranges, training areas and in and around demolition pits all over the northern regions. AXO and UXO in these areas are estimated to pose a greater threat to Namibian civilians than landmines in marked minefields.¹³⁰³ According to a report by the Namibian Chief Inspector of Explosives, 87.4 per cent of recorded incidents were caused by ERW, 6.7 per cent by MOTAPM and 5.8 per cent by anti-personnel mines between June 1989 and December 1999.¹³⁰⁴

Impact

The Office of the Chief Inspector of Explosives maintains records of every reported ERW/mine incident, victims and survivors. The statistics provide a breakdown by age, gender, type of munition, date and area, disaggregated between ERW and mines. Between June 1989 and March 2004, a total of 596 ERW, MOTAPM and anti-personnel mine casualties were reported. Of these a total of 377 were attributed to ERW and 219 to mines. However some 129 mine casualties were recorded in 2000 alone (as a result of UNITA operations in the north east of the country) and this masks the extent to which ERW has been the dominant cause of casualties over the last 16 years. Apart from this spike in casualties in 2000 and to a lesser extent 2001, the general trend has been a decline in the impact of ERW and mines. Twelve casualties were recorded in 2003.¹³⁰⁵

Recent incidents involving MOTAPM and ERW include the following:

- On 14 June 2003, in the village of Mushangara in Western Caprivi, a road grader of a private construction company, while levelling an empty space near Lipumbu Senior Secondary School at Oshakati-West, detonated what was believed to be an old anti-tank mine.
- On 3 March 2004, a young child was injured while handling an ERW in the village of Rundu in Kavango.¹³⁰⁶

Namibia hosts a large number of refugees from Angola and these groups may also be at risk from mines and ordnance if they return home. In economic terms, ERW are reported to have had an effect on cotton farming development projects in the Omega region and also on road paving and construction.¹³⁰⁷

In the period immediately after the war, many civilians in northern provinces collected ERW to sell to Angolan and Namibian scrap dealers, but meanwhile this scrap business has been curtailed by domestic legislation.¹³⁰⁸ According to the MAG assessment report from 1994 to 1997 the Namibian Police successfully prosecuted prominent scrap dealers who had been profiting from trade in scrap metal from unexploded ordnance.¹³⁰⁹

Efforts to address these problems

The Namibian Government is responsible for clearing or destroying ERW and MOTAPM, through the Regional Mine Action Coordinating Committees (REMACC), which oversee the clearance of ERW. With the withdrawal of South Africa under Resolution 435, the Explosives Unit of the Namibian

Police was tasked by the then Inspector-General of Police and the Minister of Home Affairs to destroy huge quantities of ERW all over the former battle areas.¹³¹⁰ Today, the Explosives Unit, headed by the Chief Inspector of Explosives, is responsible for the disposal of ERW and mines, except on active military terrain for which the Namibian Defence Force (NDF) is responsible. It is the legal responsibility of the Chief Inspector of Explosives to investigate explosions, including outbreaks of fire caused by the accidental detonation of explosives causing injury, damage to property or death.¹³¹¹ The Namibian Police (NAMPOL) and the NDF combine forces to eradicate the ERW and mine problem. Joint NAMPOL and NDF operational clearance teams have been formed, trained and deployed in seven regions: Caprivi, Oshikoto, Ohangwena, Omusati, Oshana, Kavango and Kunene.¹³¹²

Legislation

Namibia has been a State Party to the Ottawa Convention since 1 March 1999. Namibia has not signed or ratified the CCW, original Protocol II or the amended Protocol II.

1296 Interview with deputy chief of engineering and demolition of the People's Liberation Army of Namibia (PLAN), The Combattant, July 1986, cited in Landmine Monitor 1999, p. 67; United Nations Mine Action Service (UNMAS), Joint Assessment Mission Report: Namibia, 13 March 2000, p. 4.

1297 Landmine Monitor 2000, <http://www.icbl.org/lm/2000/namibia.html#fnB245>.

1298 Namibia, Mines Advisory Group, July 1998.

1299 Namibia, Mines Advisory Group, July 1998.

1300 United Nations Mine Action Service (UNMAS), Joint Assessment Mission Report: Namibia, 13 March 2000, p. 4.

1301 Interview with Chief Inspector of Explosives for the Namibian Police, Col. Theyse. In the Namibian context "minefields" refers to known minefields while "mined areas" refers to areas suspected of being contaminated with ERW and mines.

1302 Interview with the Chief Inspector of Explosives for the Namibian Police, Col. Theyse.

1303 United Nations Mine Action Service (UNMAS), Joint Assessment Mission Report: Namibia, 13 March 2000, p. 6.

1304 Colonel J.T. Theyse, Chief Inspector of Explosives for the Namibian Police, The Namibian Experience, without date, cited in Whitney Tolliver, "Demining Efforts in Namibia", Journal of Mine Action, Issue 6.2, August 2002, <http://maic.jmu.edu/journal/6.2/focus/whitneytolliver/whitneytolliver.htm>, accessed 25 November 2004.

1305 Data provided by the Chief Inspector of Explosives for the Namibian Police, Col. Theyse.

1306 Interview with the Chief Inspector of Explosives for the Namibian Police, Col. Theyse.

1307 Chrispin Inambo, "Cotton Farmers Miss Out On Reaping Harvest Pay." The Namibian/All Africa Global Media via COMTEX, 26 February 2003.

1308 Whitney Tolliver, "Demining Efforts in Namibia", Journal of Mine Action, Issue 6.2, August 2002, <http://maic.jmu.edu/journal/6.2/focus/whitneytolliver/whitneytolliver.htm>, accessed 25 November 2004.

1309 Namibia, Mines Advisory Group, July 1998, p.16.

1310 Whitney Tolliver, "Demining Efforts in Namibia", Journal of Mine Action, Issue 6.2, August 2002, <http://maic.jmu.edu/journal/6.2/focus/whitneytolliver/whitneytolliver.htm>, accessed 25 November 2004.

1311 United Nations Mine Action Service (UNMAS), Joint Assessment Mission Report: NAMIBIA, 13 March 2000, p. 4.

1312 "Namibia: Training and Mine/UXO Clearance Support," http://www.demining.com/interface/popup/split_content.php?cpath=hmc/pop_content//&file=Namibia, accessed 25 November 2004; Interview with the Chief Inspector of Explosives for the Namibian Police.

Nepal

Background

In 1996 the Maoist Communist Party of Nepal (CPN) launched an insurgency against the ruling monarchy. The CPN, who are now in control of about 40 per cent of the country, are using improvised explosive devices (IED) as anti-tank mines to target security force vehicles. The security forces are using fragmentation and blast type anti-personnel mines and MOTAPM.¹³¹³

Assessment

IEDs have emerged as a threat to the safety of civilians, particularly on roads to remote parts of Kabhre, Sindhupalchok and Dhading, which the CPN has blocked to limit the armed forces' mobility. The CPN uses wire-detonated pressure cookers packed with explosives to target passing military vehicles. The insurgents use them around their bases for defensive purposes or to attack security forces.¹³¹⁴ The CPN produces significant quantities of IEDs, most of which are homemade but, according to army sources, Indian-manufactured piped gelatine "Superdyne" explosives have also been recovered.¹³¹⁵

The Nepalese army uses MOTAPM made in China, India and Russia. These security forces also use similar devices around security posts, army bases, government offices and mobile barracks.¹³¹⁶ By the end of 2002, mines and IEDs had been used in all 75 districts of Nepal.¹³¹⁷

According to press articles, after the resumption of hostilities in 2003, security forces have seized facilities for manufacturing IEDs and, between August and December 2003, 1,171 detonators to be used in IEDs had been confiscated, according to the Nepalese Army. Most of the explosive material comes from storage points, in particular from the Department of Roads.¹³¹⁸ The IEDs are constructed from gunpowder, detonator, gelatine, fuse wire, pieces of iron, iron pipe, pitchers, pressure cookers, sockets, pieces of glass, electric wire, batteries and even ballpoint pens.¹³¹⁹

According to the Dhimi Commission, the Maoists looted over 41,000 units of detonators from the bunker of a Department of Roads office in Charikot, Dolakha district and captured more than 300kg of gelatine from Surkhet meant for the construction of Chhinchu-Jajarkot road.¹³²⁰ They also looted a cache of gelatine and detonators from Surkhet-Jumla road and the Kaligandaki Hydroelectricity project, and captured a large amount of sophisticated weapons and explosives from an army barracks during a large-scale offensive.¹³²¹

Security forces reportedly do not systematically secure or destroy IEDs and other devices they recover from the CPN forces and there are instances of incidents involving unsecured explosives.¹³²² In some districts, security forces have been reported to produce their own IEDs using local

resources.¹³²³ Security forces also import a large amount of explosives. The Royal Nepalese Army has stockpiled a large amount of explosives at Swyambhu.¹³²⁴

Impact

As the conflict continues the problem of ERW, MOTAPM and IEDs is increasing day by day. From January to June 2004, 28 children were killed and 26 injured in ERW explosions in 25 districts.¹³²⁵ Civilians were also reported to have handled IEDs deliberately, particularly in the district of Rukum.¹³²⁶ The following incidents provide examples of the impact of ERW, IED and MOTAPM:

- Three members of a family were killed instantly and a minor was injured when they tried to use a pitcher, fabricated as an improvised device by the CPN, on 5 March 2004 in Jajarkot district.¹³²⁷
- Three civilians were killed in an explosion on 3 September 2003 in Mangalghat in Myagdi district.¹³²⁸
- Four civilians and three security officers were injured in an IED or mine explosion in June 2004. The blast occurred on the Bandeu-Chautara road while a group of security officers were removing a CPN road barrier in Sindhupalchowk district, 120km north-east of Kathmandu.¹³²⁹
- On 19 June 2004, 14 policemen and four civilians were killed and 16 more injured when a police van and a bus hit an IED and was subsequently attacked by CPN forces near Kalakate locality in Bhaluwang district.¹³³⁰
- On 16 March 2004, a truck carrying villagers and wildlife park employees ran over a MOTAPM or IED, killing 11 people. Four people in the truck were wounded. The blast occurred near the Royal Shuklaphanta Wildlife Reserve in Kanchenpur district.¹³³¹

Measures undertaken by the Nepalese Government in the last two years to assist ERW and mine victims include: emergency evacuation after an incident; provision of free medical and prosthetic treatment; financial, administrative and logistical support to hospitals. Eight hospitals provide assistance to ERW, mine and IED victims, including Bheri Zonal Hospital, Bir Hospital, Tribhuvan Teaching Hospital, Dipendra Police Hospital, Birendra Police Hospital, Pokhara Zonal Hospital, B.P. Memorial Hospital and Patan Hospital.

Handicap International started its activities in Nepal in 2001 and supports 47 local NGOs in 12 districts.

There were no formal mine risk education activities in Nepal until 2003, when the NCBL initiated MRE activities. By May 2004, MRE had been provided to 480 people in the conflict districts of Ramechhap, Dhading, Rukum, Salyan and Sindhupalchok.¹³³²

In 2004, UNICEF began monitoring mine, IED and ERW casualties and began to develop a mine action strategy – to include an integrated MRE programme, an advocacy campaign on the use of mines and IEDs, and measures to improve the mine safety knowledge of UNICEF staff and counterparts.¹³³³

Legislation

Nepal is not a party to any of the international instruments dealing with ERW or MOTAPM. According to national law it is illegal to use, produce, transfer and stockpile any kind of explosives and weapon.¹³³⁴

- 1313 "Govt to outline defence policy on landmines", Himalayan Times, 3 February 2004.
- 1314 Report from Field Research in Achham, Jajarkot, Myagdi and Dolakha districts June and July 2004.
- 1315 Jan McGirk., "Nepal lays 10,000 landmines to counter insurgents", The Independent, 6 December 2003.
- 1316 Report by Hom Pathak, Researcher for Dolakha District, June-July 2004.
- 1317 Landmine Monitor Draft Report 2004, by Ban Landmines Campaign Nepal (NCBL).
- 1318 Landmine Monitor Draft Report 2004, by Ban Landmines Campaign Nepal (NCBL).
- 1319 Report from Achham, Jajarkot, Myagdi and Dolakha and Growing Threat of Landmines (Collection of articles).
- 1320 Prakash Jwala, Former Parliamentarian, paper presented on "Ban on Landmines: Challenges and Possibilities", organized by Ban Landmines Campaign nepal (NCBL), Hotel Everest Kathmandu, 8-9 September 2004.
- 1321 Prakash Jwala, Former Parliamentarian, paper presented on "Ban on Landmines: Challenges and Possibilities", organized by Ban Landmines Campaign nepal (NCBL), Hotel Everest Kathmandu, 8-9 September 2004.
- 1322 Report from Hom Pathak, Dolakha.
- 1323 Report from Field Researcher Achham, Jajarkot, Myagdi and Dolakha.
- 1324 Prakash Jwala, Former Parliamentarian, paper presented on "Ban on Landmines: Challenges and Possibilities", organized by Ban Landmines Campaign nepal (NCBL), Hotel Everest Kathmandu, 8-9 September 2004.
- 1325 The Growing Threat of Landmines in Nepal part 6 (a collection of newspapers). The 25 districts are Sarlahi, Sindhuli, Palpa, Myagdi, Achham, Banke, Ilam, Kathmandu, Dolakha, Ramechhap, Rautahat, Dhanagadi, Chitawan, Dhading, Nuwakot, Lahan, Doti, Dhanagadhi, Lalitpur, Dang, Bajhang, Makawanpur, Arghakhanchi, Gorakha, Kapilbastu.
- 1326 Report by Narad Sharma for Jajarkot District June-July 2004 (based on different interviews).
- 1327 Report by Narad Sharma for Jajarkot District, June-July 2004 (based on different interviews).
- 1328 Report by Field Researcher Myagdi, 2004.
- 1329 "7 wounded by landmine in central Nepal", Xinhua News Agency, 27 June 2004.
- 1330 "Nepal landmines kills 14 policemen, four civilians", Agence France Presse, 19 June 2004.
- 1331 "Nepal: Rebel Land Mine Kills 11", Agence France-Presse, 17 March 2004; "Eleven Nepalese killed in Maoist booby trap", BBC Monitoring Newsfile, 16 March 2004.
- 1332 See www.nepal.icbl.org
- 1333 "Update from UNICEF", MASG Newsletter, April 2004, p. 15, cited in Landmine Monitor 2004.
- 1334 Nepal Ain Sangraha [Collection of Acts], Terrorist and Destructive Activities (Control and Punishment) Act, 2058 (2002).

Nicaragua

Background

Nicaragua's ERW and MOTAPM problem is a result of the 1979-1990 internal armed conflict between Sandinista forces, Government forces and Contra forces. The high number of combatants, the guerrilla style of warfare, large-scale diffusion of unregistered arms and large areas of the country being affected by conflict left widespread MOTAPM and ERW contamination throughout the country.¹³³⁵

Assessment of the problem

Various types of grenades, mortars and AV mines were all widely used during the conflict,¹³³⁶ leading to significant ERW and AVM contamination. As demining operations progress, the remaining ERW and MOTAPM problem in Nicaragua is primarily concentrated along the northern border region in:

- The Department of Nueva Segovia;
- The Department of Jinotega; and
- The RAAN (Northern Atlantic Autonomous Region).

However, ERW are dispersed throughout the country in both rural and urban areas, within agricultural fields, forests and jungles, in the mountains, and within homes, gardens and communities. The widespread nature of ERW contamination makes it difficult to address.¹³³⁷ Ongoing clearance operations are finding a substantially greater proportion of ordnance than landmines.¹³³⁸ OAS representatives estimate that there are up to 70,000 items of ERW in the 13 departments affected by conflict.¹³³⁹

The National Demining Commission (CND) has stated that "all of Nicaragua was a war zone, ERW have been spread everywhere."¹³⁴⁰ Media reports indicate that UXO, in particular grenades, are dispersed throughout the country in both urban and rural areas.

The most common type of AV mine found in Nicaragua is the PT-MIK mine.¹³⁴¹ AV mines are either confirmed or suspected to exist in the following areas:

- El Rio Negro;
- Department of Madriz; 1342
- Jalapa, Nueva Segovia; and
- RAAN.

An eight-kilometre stretch of the Rio Negro, on the border between Nicaragua and Honduras, is affected by MOTAPM, AP Mines and ERW. In 1998 floods from Hurricane Mitch redirected the river causing landslides that moved and buried the mines and ERW up to 1.5 metres deep in the area.¹³⁴³ While the government has declared the department of Madriz mine-free, ERW and MOTAPM were reported in 2004.

- In March 2004, an AV mine was found in a tree in Las Pintadas, Madriz.¹³⁴⁴
- In November 2002, in RAAN, deminers discovered six AV mines at a home in Kamla, 10 km from Puerto Cabezas. A 72-year-old homeowner had placed the mines, found in a former military refuse area, on his roof seven years earlier to weigh down and secure the roof. During the same visit, deminers destroyed a further eight AV mines discovered in the refuse area.¹³⁴⁵

Impact

Civilian injuries from ERW accidents continued to be reported in 2003 and 2004. As of June 2004, 103 ERW accidents had been registered since data collection began in 1980, although authorities confirm that the numbers are probably much higher.¹³⁴⁶

As of 18 June 2004, the OAS had registered a total of 753 ERW and landmine victims resulting from 632 reports, 609 of them classified as incidents and 23 as clearance accidents. Of the 632 reports, 478 involved landmines and 103 ERW. The IMSMA database for Nicaragua shows that ERW accidents and incidents occurred in 13 of 16 departments (not including the RAAN and RAAS autonomous regions.)

- In April 2002, an item of ERW injured 20 people in a Leon schoolyard after a student brought the item to school and passed it among students.¹³⁴⁷
- In December 2003, a six-year-old boy lost the fingers of his right hand after discovering an explosive in his backyard.¹³⁴⁸
- Also in December 2003, a 12-year-old girl was severely injured in the city of Estelí after an unidentified explosive device she found exploded.¹³⁴⁹
- In February 2004, a 21-year-old man wounded his right hand after using a detonator to improve the reception of his TV antenna. Military officials later discovered more explosives at the site where he had found the detonator.¹³⁵⁰
- In July 2004, two young brothers were wounded by an unidentified UXO in La Vigía, at the western perimeter of the National Military Shooting Range near the community of Tecuaname, in León.¹³⁵¹

The exact number of ERW casualties in Nicaragua is difficult to determine, as many accidents go unrecorded.¹³⁵² The National Demining Commission

estimates that there are between 700 and 2,000 victims of ERW and mines and approximately 15,000 disabled ex-combatants.¹³⁵³ While the majority of mine accidents affect adult males, ERW accidents most often affect children.¹³⁵⁴

ERW continue to be reported in both rural and urban areas. For example:¹³⁵⁵

- In March 2004, 18 grenades (16 RG-5 grenades – known as piña/pineapple – and two F1 grenades) were found abandoned in a garbage container at the Mayoreo Market in Managua. The grenades were discovered by two youths who started playing with them in the market. Police later found the remaining live grenades.¹³⁵⁶
- In March 2004, farmers discovered 21 bars of war-era TNT in an agricultural plot near the El Realejo neighbourhood in Chinandega.¹³⁵⁷
- In April 2004, a grenade was found on a farm two kilometres south of Mateare in a former 1980s Sandinista Army training area. Other AXO are thought to be buried on this farm and surrounding area.¹³⁵⁸
- In June 2004, a grenade was found in Tiscapa park, Managua¹³⁵⁹

Similar reports of ordnance being discovered in public areas occurred in 2002 and 2003 when ERW were reported in numerous areas, including schools, business zones and backyards.¹³⁶⁰

The OAS lists the primary causes of ERW casualties as: lack of information about affected areas; people entering affected areas to collect water, fuel, wood and to farm and graze livestock; intentional handling of ERW or mines; and changes in their location due to weather.¹³⁶¹

Examples of the socio-economic impact of ERW and mines include:

- Infrastructure projects to reroute the Rio Negro to its original course have been delayed until the area has been cleared and declared safe.¹³⁶²
- The construction of schools and health centres has been delayed in the Nueva Segovia due to mine/ERW-affected areas.
- Road construction projects on the Atlantic Coast have been delayed due to ERW contamination in construction zones.¹³⁶³
- ERW continue to be found in tourist areas.¹³⁶⁴
- Fire-fighters in Nueva Segovia have been constrained by ERW contamination in forest fire zones, worsening the impact of these fires.¹³⁶⁵
- During the war, entire communities were moved away from combat zones. After the war, many people were unable to return to their homes due to the presence of mines and ERW. Communities were often permanently resettled in drought-prone areas lacking fertile soil and access to water.¹³⁶⁶

- Widely dispersed ERW throughout society creates fear and insecurity and limits economic development.¹³⁶⁷
- Large areas of productive land are unusable due to ERW, MOTAPM and AP mine contamination. Authorities note that it “would be important to have a study to see if cleared land is being used for productive purposes” and to assess how productivity on formerly affected areas can be facilitated.¹³⁶⁸

Nicaragua has reported people storing both ERW and MOTAPM in their homes and locals conducting “amateur demining”. Nicaraguan officials explain that there is widespread familiarity with weapons of war and in many cases a “lack of fear” of explosive artefacts. International agencies have reported numerous cases, usually involving male adults and adolescents, of people removing or intentionally handling ERW.¹³⁶⁹ The OAS office in Ocotal regularly responded to reports of civilians storing ERW and mines.¹³⁷⁰ According to UNICEF, mine risk education activities in Jinotega in 2003 and 2004 identified UXO stored under beds, ovens, in wells and suspended from beams to secure roofing.¹³⁷¹

Efforts to address these problems

Risk education activities in Nicaragua are carried out by the Nicaraguan Army, OAS PADCA, the Nicaraguan Red Cross, UNICEF, Acción Médica Cristiana (Christian Medical Action) and the Joint Commission of Disabled and Victims of War for Peace and Development of Madriz Foundation (FCC).¹³⁷²

Clearance operations in Nicaragua are the responsibility of the Pequeñas Unidades de Desminado (Small Demining Units) of the Engineer Corps of the Nicaraguan Army. In

March 2004, there were five 100-person operational units and three 50-person platoon-sized units (the mechanized unit, a mobile rapid reaction unit and a canine unit) for a total of approximately 650 soldiers trained and equipped for clearance activities.¹³⁷³

According to the April 2004 Article 7 Report, reports from the public have resulted in the destruction of 288 mines and ERW, including grenades, aerial bombs and mines.¹³⁷⁴ UNICEF has gathered information on 114 cases of ERW and mines stored by civilians, resulting in the destruction of 399 ERW and mines.¹³⁷⁵ As recently as May 2004, community reporting resulting from risk education has resulted in the discovery of unregistered minefields¹³⁷⁶ and ERW within communities or individual homes.¹³⁷⁷ The OAS Ocotal Coordinator noted that civilian risk educators have been “very effective at gaining the confidence of people who may not give the same information to representatives of the military or the police; people that have been storing explosive artefacts in their homes are often afraid of informing the police or military due to an (unwarranted) fear of reprisal”.¹³⁷⁸ To address the inevitable ongoing problem with ERW, demining authorities have stressed the importance of continuing national risk education campaigns and maintaining trained and equipped EOD teams to respond to public reports of ERW and mines.¹³⁷⁹

Legislation

On 5 December 2000, Nicaragua acceded to the CCW and its Amended Protocol II. It attended the Fifth Annual Conference of States Parties in November 2003, but did not attend the 2001 Review Conference of the CCW. Nicaragua is a State Party to the Ottawa Treaty.

- 1335 Alexander Chloros, Joel Johnston, Katherine Joseph and Rachel Stohl, “Breaking the Cycle of Violence: Light Weapons Destruction in Central America”, DECEMBER 1997, NUMBER 24, SSN 1353-0402. Basic Papers: Occasional Papers On International Security Policy. <http://www.basicint.org/pubs/papers/BP24.htm>.
- 1336 Based on information from *The Military Balance*, 1993-1994, London, 1993, 190; and *Jane's Fighting Ships*, 1993-94, Alexandria, 1993, 442.
- 1337 Interview with Ramon Zapeda, OAS-Ocotal Coordinador, Ocotal, Nueva Segovia, 28 May 2004.
- 1338 “Inseguridad en el istmo por restos de explosivos” EFE, *La Prensa*, 27 June 2003.
- 1339 Interview with Ramon Zapeda, OAS-Ocotal Coordinador, Ocotal, Nueva Segovia, 28 May 2004.
- 1340 Interview with Dr. Juan Umaña, Executive Secretary CND, Managua, 2 June 2004.
- 1341 Interview with Ramon Zapeda, OAS-Ocotal Coordinador, Ocotal, Nueva Segovia, 28 May 2004.
- 1342 Interview with Uriel Carazo, Director Fundación Comisión Conjunta, Somoto, 11 May 2004.
- 1343 Interview with Miguel Barahona, OAS PADCA National Coordinator Honduras, Tegucigalpa, 25 May 2004; Luis Felipe Palacios, “Buscan fondos para desminar río Negro”, *La Prensa*, 14 May 2004.
- 1344 Interview with Uriel Carazo, Director FCC, Somoto, 11 May 2004.
- 1345 Clifford Hall Ellis, “Con minas antitanques aseguraba el techo”, *El Nuevo Diario*, Puerto Cabezas, RAAN, 12 November 2002.
- 1346 See OAS PADCA Nicaragua website, “Accidentes por minas o UXOs”, p. 7, accessed 13 July 2004; Interview with Dr. Juan Umaña, Executive Secretary CND, Managua, 2 June 2004.
- 1347 “Mas de 20 heridos en explosion”, *La Prensa*. (Managua) 21 April 2002; Marianela Flores Vergara, “Explosion de artefacto hiere a 13 estudiantes”, *El Nuevo Diario*, 21 April 2002.
- 1348 Miguel Flores, “Bomba explota en manos de un niño”, *La Prensa* (Managua), 4 December 2003; Maricely Linarte, “Bomba mutila dedos a niño”, *El Nuevo Diario* (Managua), 4 December 2003.
- 1349 Máximo Rugama, “Niña grave tras explosión”, *El Nuevo Diario* (Managua), 5 December 2003.
- 1350 Luis Alemán Saballos, “Lesionado por supuestos explosivos”, *La Prensa*, 26 February 2004.
- 1351 Elizabeth Romero, “Artefacto explosivo lesiona a dos hermanos menores”, *La Prensa*, Managua, 21 July 2004.
- 1352 Interview with Dr. Juan Umaña, Executive Secretary CND, Managua, 2 June 2004.
- 1353 Interview with Juan Umaña, Technical Secretary, National Demining Commission, 1 June 2004; Landmine Monitor (MAC) interview with Juan Umaña, Technical Secretary, National Demining Commission, 25 June 2004; A report provided by the European Commission identifies that 90 per cent of registered mine/UXO victims are male and heads of family, between the ages of 20 and 40; the majority of these accidents occurred during agricultural activities; 12 per cent of landmine and UXO survivors are adolescents and 4 per cent are children.

- 1354 Interview with Carlos Orozco, Coordinator OAS/PADCA Nicaragua, Managua, 3 June 2004.
- 1355 Luis Alemán Saballos, "Lesionado por supuestos explosivos", *La Prensa* (Managua), 26 February 2004; Carlos Martínez Morán, "Descubren granada cerca de escuela", *La Prensa* (Managua), 3 November 2003; Orlando Barrios Cruz, "Detectan granada en empresa eléctrica", *El Nuevo Diario* (Managua), 10 October 2003.
- 1356 Elizabeth Romero, "Encuentran material bélico en basurero", *La Prensa*, 15 March 2004.
- 1357 Carol Munguía, "Encuentran explosivos en parcela agrícola", *La Prensa*, 26 March 2004.
- 1358 Carlos Martínez Morán, "Encuentran una granada en finca de Mateare", *La Prensa*, 28 April 2004.
- 1359 Carlos Martínez Morán, "Encuentran granada en Tiscapa", *La Prensa* (Managua), 11 June 2004.
- 1360 Carlos Martínez Morán, "Descubren granada cerca de escuela", *La Prensa* (Managua), 3 November 2003; Orlando Barrios Cruz, "Detectan granada en empresa eléctrica", *El Nuevo Diario* (Managua), 10 October 2003; Edwin Somarriba, "Bomba mutila a dos niños", *El Nuevo Diario*, 26 November 2002.
- 1361 OAS PADCA website, "Víctimas 15 March 2004."
- 1362 Interview with Miguel Barahona, OAS PADCA National Coordinator Honduras, Tegucigalpa, 25 May 2004; Luis Felipe Palacios, "Buscan fondos para desminar río Negro," *La Prensa*, 14 May 2004.
- 1363 Heberto Jarquín M., "Minas amenazan a comunidad indígena," *La Prensa* (Managua), 15 September 2003.
- 1364 Carlos Martínez Morán, "Encuentran granada en Tiscapa," *La Prensa* (Managua), 11 June 2004.
- 1365 Interview with Ramón Zapeda, OAS PADCA MRE Coordinator, Ocotal, Nueva Segovia, 28 May 2004.
- 1366 Interview with Uriel Carazo, Director Fundación Comisión Conjunta, Somoto, June 18, 2004.
- 1367 Interview with Carlos Orozco, OAS PADCA National Coordinator Nicaragua, Managua, 3 June 2004.
- 1368 Interview with Dr. Juan Umaña, Executive Secretary CND, Managua, 2 June 2004.
- 1369 UNICEF, "Landmine and Unexploded Ordnance (UXO) Awareness Education in Nicaragua through Community Liaison", UN Portfolio of Mine-Related Projects, April 2001, p. 186; Russel Gasser, "Interview with an amateur deminer", in "Landmines in Central & South America", *Journal of Mine Action*, Issue 5.2, Summer 2001, James Madison University, pp. 46-48.
- 1370 Interview with Ramón Zapeda, OAS Ocotal, Ocotal, 28 May 2004.
- 1371 Francisco Mendoza S., "Avanza plan de desminado", *El Nuevo Diario* (Managua), 19 April 2004; Interview with Wanda Obando, UNICEF MRE Coordinator, Managua, 1 June 2004.
- 1372 FCC was previously called Comisión Conjunta de Discapitados de Madriz para la Paz y Reconstrucción (ORD/ADRN).
- 1373 Article 7 Report, "Proyección del Cumplimiento del Programa Nacional de Desminado Humanitario conforme a los compromisos que señala el Convenio de Ottawa", 28 April 2003, p. 7; Organización de Estados Americanos, Programa de Asistencia a la Acción Integral Contra las Minas Antipersonales (AICMA), *Portafolio 2003-2004*, August 2003, p. 31.
- 1374 Article 7 Report, "Principales Logros Del Desminado En Nicaragua", 28 April 2004, p. 6.
- 1375 UNICEF update, Mine Action Support Group Newsletter, July 2004
- 1376 Interview with Ramón Zapeda and Danis Hernández, OAS OADCA Ocotal, Ocotal, 28 May 2004.
- 1377 Article 7 Report, "Principales logros del desminado en Nicaragua", 31 March 2004, p. 6. According to the April 2004 Article 7 Report, reports from the public have resulted in the destruction of more than 288 ERW items, including items located in areas other than where they were officially registered.
- 1378 Interview with Ramon Zapeda, OAS-Ocotal Coordinator, Ocotal, Nueva Segovia, 28 May 2004.
- 1379 Interview with Dr. Juan Umaña, Executive Secretary CND, Managua, 2 June 2004.

Niger

Background

Niger's landmine problem dates back to the 1939-45 War and more recently to an armed conflict between the Government and Touareg and Toubou rebel groups. Peace agreements in 1998 called for clearance of the northern areas but action was not taken until 2003. Demobilisation of former combatants is still ongoing, as are clearance activities, which take place only sporadically due to financial constraints.¹³⁸⁰

Assessment of the problem

Rocket propelled grenades and hand grenades have been recovered in Niger during weapons collection.¹³⁸¹ It is likely that some ERW will have resulted from the use of these weapons in the internal conflict. However, Niger appears to be more severely affected by AV mines than by ERW.

According to information provided in the Article 7 Report, there are four known mine-affected areas in Niger: the Djado Plateau (Axe Chirfe, Dao-Timi), the Talak Plains (district of Teguidan in Taqait and district of Boukou-Arlit), the Mangueni Plateau (Achelouma) and Massif de l'Air (Abardok).¹³⁸² These regions are sparsely populated. Other areas suspected of being mine affected are in Plateau du Karama, Plateau du Tchigai, Massif d'Afafi and the region of Emi Fezzan.

After a recent clash between Government forces and the Salafist group for Preaching and Combat in northern Niger, an AXO cache was recovered containing 14.5mm anti-aircraft guns, mortars, and other weapons and ammunition.¹³⁸³ Since this clash occurred, the government has reported that insurgent groups have been exploiting AXO contamination by "using hideouts and caches left over from the Touareg rebellion" for some of their attacks.¹³⁸⁴

Impact

The threat from AV mines on roads in Niger appears to be the most significant recorded impact in the country. Some examples of AV mine incidents include:

- On 3 January 2003, three Italian tourists were killed and their guide injured when their vehicle hit an AV mine in Orida, in the north of the country.¹³⁸⁵
- In 1997, one person was killed and five others injured after their Jeep hit a mine in Teguidon.¹³⁸⁶
- In 1998, a driver was injured after his truck hit an AV mine in Achelouma in the north of the country.¹³⁸⁷

Efforts to address these problems

In March 2003, Niger indicated that it has destroyed 34 AV mines, five AV detonators, 48 AP mines and 65 AP detonators since May 2001.¹³⁸⁸ It reports a stockpile of 1,006 AV mines of Polish, Belgian and Russian origin and 146 French 'missile mines'. It intends to retain 949 of the AV mines and the 146 French mines. It also reports that 57 Russian and Belgian AV mines have been transferred for destruction.

Legislation

Niger is a party to the Ottawa Convention and the original Protocol II to the CCW, but not to Amended Protocol II. The National Commission for the Collection and Control of Illegal Weapons is in charge of the ERW/mine issue.¹³⁸⁹

1380 Interview with Nigerien official in Abuja, Nigeria, 24 July 2004.

1381 PACD (Projet pilote de collecte d'armes illicites et d'appui au développement durable de l'arrondissement de N'Guigmi) 2003 *Rapport Semestriel*. Niamey and N'Guigmi: UNDP & Republic of Niger. December 2003.

1382 Niger Article 7 Report: 1 April 2004.

1383 IRIN (United Nations Integrated Regional Information Network) 2004 "Niger: government reports clashes with Islamic militants" 17 March 2004.

1384 IRIN, 2004 "Niger: government reports clashes with Islamic militants" 17 March 2004

1385 "Three Italian tourists killed when jeep hits mine in northwestern Niger," Agence France Presse, 5 February 2003.

1386 Landmine Monitor 2003, p. 377.

1387 Landmine Monitor 2003, p. 377.

1388 Article 7 Report, 31 March 2003

1389 Landmine Monitor 2002, p.384.

Nigeria

Background

The Nigerian Civil War from 1967 to 1970 led to some ERW contamination and it is also known that improvised explosive devices (IEDs) were used during the conflict.¹³⁹⁰ In addition, the civil unrest in northern Nigeria in 2001-2002 and in the Niger Delta region in 2004 probably contaminated those areas with ERW also. Clashes in the north were around Kano and Yelwa, while fighting in the Niger Delta has primarily affected Port Harcourt and Warri.

Assessment of the problem

While it does not appear to have a problem with MOTAPM contamination or widespread ERW, Nigeria is affected by AXO and UXO from munitions storage facilities.

Under the regime of General Sani Abacha large parts of the Niger Delta were transformed into a militarized and heavily-garrisoned area. This raises the strong likelihood of contamination from AXO and other ERW.

On 27 January 2002, a huge explosion at the Ammunition Transit Depot in Ikeja, Lagos scattered ERW over a wide area.¹³⁹¹ Apart from the immediate death and destruction caused by this incident, it had wide-reaching socio-economic implications, affecting up to 20,000 people.¹³⁹²

In September 2003, the Nigerian Air force reported that "tonnes" of dangerous munitions which had expired more than 10 years ago were "posing a grave danger to the public." Residents in the area surrounding the base in Makurdi where these unsafe munitions are stored reportedly abandoned their farms and homes fearing an explosion.¹³⁹³

During the civil war different types of weapons were used, most of which were not stored properly. Information on weapons stockpiles from both sides is scant and it was not

until the Ikeja explosion in Lagos that stockpiles received attention. Until this accident, such stockpiles had been neglected because of the perception that they were located in isolated areas. However, because of population growth these ammunition dumps have now been surrounded by communities and pose a serious threat to inhabitants.¹³⁹⁴

Nigerian military officers have stated that IEDs, locally known as *ogonigwe*, which were developed by the Biafrans, have caused injuries to civilians after the war.¹³⁹⁵ More recently, rockets and grenades have been used in clashes between armed militias and government troops in Port Harcourt and in the Niger Delta area, raising the likelihood of ERW contamination.¹³⁹⁶

Impact

The 2002 Lagos explosion destroyed people's livelihoods in terms of farming, fishing and trading activities. A vast area of previously vigorous economic activity was left desolate following this explosion and at least one person is reported to have been killed by ERW from this event.¹³⁹⁷

While the munitions dump at Makurdi has not exploded yet, the fact that the public has become aware of the danger of these munitions has prompted several communities and families to abandon their farms and other economic activities.¹³⁹⁸

Efforts to address these problems

Nigeria is not mine affected and has no mine action programme.

Legislation

Nigeria has signed the Ottawa Treaty but is not party to the CCW.

1390 Interview with Nigerian Ministry of Defence (MoD) official at Abuja, Nigeria, 27 July 2004.

1391 GICHD, *Explosive Remnants of War (ERW): Undesired Events in Ammunition Storage Areas*, p. 37.

1392 Harold Lockwood, Aquaconsult (UK), Presentation on Nigeria Ammunition Dump Explosion to the Ottawa Mine Ban Convention Standing Committee on Stockpile Destruction, (30 May 2002), available online at: http://mineaction.org/countries/_refdocs.cfm?country_id=394.

1393 IRIN, "Disused bombs in Makurdi pose a grave danger, Air force warns," ABUJA, 30 Sep 2003

1394 Okonkwo, Eva, "Nigeria's ammunition dump tragedy," accessed 27 July 2004, at <http://www.sustainability.com/news/articles/core-team-and-network/eva-okonkwo-nigeria.asp>; Ugborgu, Victor & Alex Mabayoje. 2003. "Another disaster in the making: displaced victims of bomb explosion at Ikeja military cantonment in Lagos facing yet another disaster", at <http://www.newswatchngr.com/editorial>, accessed on 27 July 2004. For further information, see *NewsWatch*, Volume 37, No. 4, 3 February 2003.

1395 Interview with Nigerian Ministry of Defence (MoD) official at Abuja, Nigeria, 27 July 2004

1396 IRIN, "Troops patrol Port Harcourt after clashes", KANO, 31 August

1397 Okonkwo, Eva, "Nigeria's ammunition dump tragedy", accessed 27 July 2004, at <http://www.sustainability.com/news/articles/core-team-and-network/eva-okonkwo-nigeria.asp>; Landmine Monitor 2003, p. 378.

1398 IRIN, "Disused bombs in Makurdi pose a grave danger, Air force warns" ABUJA, 30 Sep 2003

Oman

Background

MOTAPM and anti-personnel mines were laid in the Dhofar region, in the south of Oman,¹³⁹⁹ between 1964 and 1975, during an internal conflict between the Government of Oman and the Communist separatist group, the Popular Front for the Liberation of Oman (PFLO). All parties involved in the conflict, including the Royal Army of Oman (RAO) and its allies, Jordan, Iran and the United Kingdom, and the PFLO used mines. The RAO stated that it mapped, marked and then cleared some of the minefields at the end of the conflict, but the PFLO did not map, mark or clear their minefields.¹⁴⁰⁰

Assessment of the problem

The following MOTAPM are reported to have been used:¹⁴⁰¹

- Israel: No.6;
- U.K.: Mk 7;
- U.S.: M4.

The mines and UXO in the Dhofar region are in two zones along the border with Yemen. The RAO mapped seven zones of suspected mined areas, based on historical records of battlefields, unit positions and mine incident reports.¹⁴⁰²

The RAO is reported to have conducted a survey approximately four years ago of minefields and areas that contained UXO, mainly in the Dhofar region. This survey became the baseline document for the U.S.-sponsored humanitarian demining programme in Oman. In 1999, Oman was accepted into the U.S. Humanitarian Mine Action Program and in 2002, donations were used to fund RONCO, a commercial U.S. demining contractor, to support demining operations and to verify clearance of mined areas.¹⁴⁰³ It has been reported that heavy seasonal monsoon rains and terrain and soil conditions have allowed a number of the mines and UXO to migrate from their original positions, which further contributes to the

difficulty of locating them.¹⁴⁰⁴ There has not been any focused survey work since 2001 from which ERW and MOTAPM information can be extracted.¹⁴⁰⁵ Approximately 5,000 sq km of the Dhofar district are reported to be affected by mines and UXO.¹⁴⁰⁶

Impact

Since the end of the Dhofar conflict, mines and UXO have killed 12 people and wounded 84. In March 2001, two people were seriously injured in a UXO incident. There was no evidence of any casualties in 2002.¹⁴⁰⁷ It has been reported that the threat of the presence of mines and UXO prevents residents from using land for agricultural and economic purposes.¹⁴⁰⁸ Although the mine/UXO casualties appear to be low, the impact to the affected areas is substantial. The presence, or suspected presence, of mines and UXO in the Dhofar region is reported as hindering expansion of development in the area.¹⁴⁰⁹ However, it is not known if this impact results specifically from MOTAPM and ERW.

Efforts to address these problems

The U.S. Government has taken a leading role in clearing the UXO and mines, and has provided training, equipment and technical advice to assist Oman.¹⁴¹⁰ A National Mine Action Center was set up in Muscat and a Regional Mine Action Center in Salalah.¹⁴¹¹ US Central Command (CENTCOM) and commercial demining contractors, such as RONCO, have provided support to the RAO Mine Clearing Troop.

Legislation

Oman has not signed, ratified or acceded to the 1997 Ottawa Convention (Mine Ban) Treaty. On 22 November 2002, Oman voted in favour of UN General Assembly Resolution 57/74 supporting universalisation and implementation of the Treaty, as it had done in previous years.¹⁴¹² Oman is not party to the CCW.¹⁴¹³

1399 Steve Soucek and Darrel Strother, Mine Action Information Center, "Humanitarian Demining in the Sultanate of Oman", *Journal of Mine Action*, Issue 5.3: Landmines in the Middle East, December 2001. http://www.maic.jmu.edu/journal/5.3/focus/Soucek_Strother/Soucek_Strother.htm accessed 14 July 2004.

1400 Stacy L Smith, Mine Action Information Center, "US Humanitarian Demining in the Middle East", *Journal of Mine Action*, Issue 5.3: Landmines in the Middle East, December 2001 <http://maic.jmu.edu/#journal/5.3/notes/stacysmith.#htm> accessed 10 September 2004.

1401 Email from Major Mike Ammons, Chief Army Programs, (Office of Military Cooperation), US Embassy, Muscat, Oman, dated 22 September 2004.

1402 *Landmine Monitor* 2003, Oman, August 2003, <http://www.icbl.org/lm/2003/oman.html> accessed 15 July 2004.

1403 *Landmine Monitor* 2003, Oman, August 2003, <http://www.icbl.org/lm/2003/oman.html> accessed 15 July 2004.

1404 Steve Soucek and Darrel Strother, Mine Action Information Center, "Humanitarian Demining in the Sultanate of Oman", *Journal of Mine Action*, Issue 5.3: Landmines in the Middle East, December 2001 http://www.maic.jmu.edu/journal/5.3/focus/Soucek_Strother/Soucek_Strother.htm accessed 14 July 2004.

1405 Email from Major Mike Ammons, Chief Army Programs, (Office of Military Cooperation), US Embassy, Muscat, Oman, dated 22 September 2004.

1406 Steve Soucek and Darrel Strother, Mine Action Information Center, "Humanitarian Demining in the Sultanate of Oman", *Journal of Mine Action*, Issue 5.3: Landmines in the Middle East, December 2001 http://www.maic.jmu.edu/journal/5.3/focus/Soucek_Strother/Soucek_Strother.htm accessed 14 July 2004.

1407 *Landmine Monitor* 2003, Oman, August 2003, <http://www.icbl.org/lm/2003/oman.html> accessed 15 July 2004.

1408 Email from Major Mike Ammons, Chief Army Programs, (Office of Military Cooperation), US Embassy, Muscat, Oman, dated 22 September 2004.

- 1409 Email from Major Mike Ammons, Chief Army Programs, (Office of Military Cooperation), US Embassy, Muscat, Oman, dated 22 September 2004.
- 1410 Email from Major Mike Ammons, Chief Army Programs, (Office of Military Cooperation), US Embassy, Muscat, Oman, dated 22 September 2004.
- 1411 Steve Soucek and Darrel Strother, Mine Action Information Center, "Humanitarian Demining in the Sultanate of Oman", *Journal of Mine Action*, Issue 5.3: Landmines in the Middle East, December 2001, http://www.maic.jmu.edu/journal/5.3/focus/Soucek_Strother/Soucek_Strother.htm accessed 14 July 2004.
- 1412 Landmine Monitor 2003, Oman, August 2003, <http://www.icbl.org/lm/2003/oman.html> accessed 15 July 2004.
- 1413 Landmine Monitor 2000, Oman, August 2000, <http://www.icbl.org/lm/2000/oman.html> accessed 15 July 2004.

PACIFIC ISLANDS: Kiribati, Marshall Islands, Tuvalu, Northern Mariana Islands, Hawaii

Background

Kiribati (formerly known as Gilbert Islands) was taken by the Japanese in the 1939-45 War before the end of December 1941.¹⁴¹⁴ Kiribati was left with considerable quantities of military wreckage and unexploded ordnance, especially on Tarawa which was taken by Allied invasion. Gilbert Islands were granted self-rule in 1971 by United Kingdom and full independence in 1979 under the new name of Kiribati.¹⁴¹⁵

The Marshall Islands were taken over by the Japanese during the 1939-45 War. In February 1944, the U.S. forces captured Kwajalein Atoll from the Japanese. This conflict left a considerable quantity of abandoned and unexploded ordnance.¹⁴¹⁶ The U.S. held the Marshall Islands and identified some of its islands as suitable for testing of atomic bombs. From 1947 to 1962, Bikini, Majuro, Rongelap and Utirik atolls became the nuclear testing site of the United States. The islands finally gained full independence in 1986 under a Compact of Free Association after being under the US Government for four decades. The ties between the Marshall Islands and the U.S. continue and the Islands have been home to the US Army Base Kwajalein since 1964, serving as a target for inter-continental ballistic missiles fired from California.¹⁴¹⁷

The Gilbert and Ellice Islands was annexed by Britain in 1916. During the 1939-45 War, parts of Tuvalu were occupied by the United States military. They built an airstrip in Funafuti in 1942. Japanese forces occupied the Gilbert Islands in 1942 but were driven out by the US in 1943. In 1974, residents of Ellice Islands voted by referendum to be separated from Gilbert Islands. The Ellice Islands became the independent nation of Tuvalu in 1978.¹⁴¹⁸

The Northern Mariana Islands saw fierce fighting during the 1939-45 War. Saipan island, near Guam, was the scene of one of the key battles of the Pacific War. US landings began on June 15, 1944 in an effort to dislodge an entrenched Japanese occupation. By the time the battle ended on July 9, 1944, approximately 30,000 Japanese soldiers and civilians had been killed. The U.S. suffered 16,525 casualties and 3,426 deaths.¹⁴¹⁹

As well as seeing fighting during the 1939-45 War, certain areas in Hawaii were subsequently used as firing ranges by the US military resulting in massive ordnance contamination within identified areas.

Assessment of the problem

Fighting between the Japanese and American forces during the 1939-45 War left ERW contamination in numerous areas of Kiribati, Marshall Islands and Tuvalu but there is no substantial analysis of the extent of contamination.

In the Northern Mariana Islands, ERW contamination has been identified as a particular problem for construction work and local ordnance disposal operators have suggested that even more ordnance is unearthed in excavation sites than is reported only to be returned to their excavation site "out of ignorance or complacency." They note further: "On Kwajalein, the amount of UXO recovered from excavation sites went up 1,000 percent when those sites were monitored by UXO specialists."¹⁴²⁰

Looking at the impact of ordnance in Saipan, part of the Northern Mariana Islands, Margaret Busé writes in the *Journal of Mine Action* that:

"Northern Marianan emergency management officials believe there are still tons of UXO scattered across the small island today. Marpi, most of which is now forested, was the site of the last Japanese stronghold. It is so concentrated with UXO that efforts to clean up the site have been hampered by the cost of the enormous undertaking. [Finding] UXO while walking the shoreline is not uncommon. Road and construction projects are often delayed. The government occasionally hires a contractor to deal with the problem, but there is no organized ordnance disposal in current governmental plans. Officials feel the task would be too costly and may take many years. Adding to this dilemma is the bureaucratic red tape for undertaking such a job. The outlook for development in Saipan and the rest of the Northern Marianas Islands is not optimistic, as these weapons stay indefinitely volatile."¹⁴²¹

As well as presenting a hazard to people and an impediment to infrastructure projects, sources have highlighted the environmental damage that ordnance disposal operations can cause to marine reefs. Underwater ERW contamination is extensive in many of these island areas and under-water ordnance disposal can result in the destruction of reefs if plans are not made to mitigate this.¹⁴²²

Kaho'olawe, one of the Hawaiian islands, was used as a gunnery and bombing range by the Army, Air Force, and Navy

for more than 50 years.¹⁴²³ A diverse mixture of munitions make up the contamination on Kaho'olawe, including aerial bombs, rockets, naval gunnery shells, torpedoes and small arms. Based on an assessment of the scale of contamination and challenges facing clearance of ordnance from Kaho'olawe the Director of the Center for Public Environmental Oversight suggests "that the cleanup of other Naval island target areas may be even more challenging. Finding and removing UXO, clearing scrap, and restoring the environment will be costly and difficult at Vieques, No Man's Island, Adak, and other Pacific Islands."¹⁴²⁴

Efforts to address these problems

According to Landmine Monitor 2000, much of the unexploded ordnance left on Tarawa (Kiribati) was removed during development of a new port.¹⁴²⁵ There are reports of mortar rounds found by children being brought to the Betio police station in Tarawa¹⁴²⁶. However, no systematic clearance or awareness programmes have been conducted in Kiribati.¹⁴²⁷

No injuries or deaths linked to the problem have been reported in Tuvalu.¹⁴²⁸

According to an article by Margaret Busé, in the Northern Mariana Islands U.S. military EOD teams deal with over 225 emergency UXO calls on Guam per year.¹⁴²⁹ However, commercial operators have criticised the reliance on responsive teams suggesting that this leaves "children and construction workers," amongst others, to bear the burden of risk.¹⁴³⁰ Lack of effective reporting is also identified as a problem with construction workers simply moving ordnance onto abandoned land nearby. According to a

paper in the Journal of Mine Action, "this method may remove the danger from a specific area but it adds to the UXO problems in the remaining land. Government regulations and professional standards must be altered to consider the long-term affects of mine action."¹⁴³¹

The clearance of the Kaho'olawe's 28,000 acre former US Navy target range is generally considered one of the largest unexploded ordnance (UXO) cleanup projects ever with an anticipated ten-year budget of \$400 million.¹⁴³²

Legislation

Kiribati acceded to the Ottawa Convention on 7 September 2000. Kiribati has not acceded to the amended Protocol II of the Convention on Conventional Weapons.¹⁴³³

Marshall Islands signed the Ottawa Convention on 4 December 1997 but has not yet ratified.¹⁴³⁴ Marshall Islands voted in support of First Committee vote on UN Resolution 57/74 calling for the universalization of the Mine Ban Treaty.¹⁴³⁵ Marshall Islands are a State Party to the CCW but they have not signed Amended Protocol II.¹⁴³⁶

Tuvalu did not sign and has not yet acceded to the Ottawa Convention.¹⁴³⁷ Officials of Tuvalu promised to look into the ratification but it is not considered a priority.¹⁴³⁸ Tuvalu is not a party to the CCW.

The Commonwealth of the Northern Mariana Islands is a commonwealth of the United States of America (USA). The islands of Hawaii are a state of the USA. The USA is not a party to the Ottawa Anti-personnel Mine Ban Treaty. The USA is a party to Amended Protocol II of the CCW.

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Pakistan

Background

The Federally Administered Tribal Areas (FATA) comprise seven agencies or districts, which are controlled by the Federal government. They border on Afghanistan and most of the areas are rough terrain and mountainous.¹⁴³⁹ During the cold war they were used as a conduit to supply manpower and ammunition. Numerous ammunition depots were established here to provide logistical and military support to various mujahideen factions in Afghanistan. The Soviet military responded by targeting these areas with landmines and other explosive devices including booby traps on Pakistani territory. The existence of millions of landmines in the soil of Afghanistan and their spilling over to Pakistan is a legacy of the Soviet invasion and the subsequent civil war in Afghanistan.

Apart from these areas, casualties have also been reported along the Line of Control (LOC) in the Kashmir region and in areas on the Indian border in Punjab. In Baluchistan, non-state actors (NSA) used MOTAPM against law enforcement agencies, resulting in civilian casualties along with the soldiers.

Assessment of the problem

The extent of the ERW and MOTAPM problem in Pakistan has not been assessed. The number of casualties is not known because of poor reporting mechanisms, and no comprehensive and continuous data collection program exists. The Sustainable Peace And Development Organisation (SPADO), a Pakistani NGO, maintains a database of landmine and ERW casualties (both civilian and military) that have been reported by various newspapers, media, SPADO teams and other related organizations. The total number of casualties registered by SPADO is 150 ERW and mine victims in 2003.¹⁴⁴⁰ Between June 2003 and 2004, the database registered 142 casualties throughout Pakistan.¹⁴⁴¹ As most of the incidents go unreported, the number of casualties could be significantly higher.

Impact

The SPADO database records a total of 142 military and civilian casualties between June 2003 and July 2004, with 87 attributed to MOTAPM, 38 to ERW and the only 17 to anti-personnel mines.¹⁴⁴² According to the data collected, of the 142 casualties, 73 were civilians. Most of the incidents affecting the army, paramilitary forces, rangers, etc. were due to MOTAPM. During this period, MOTAPM were reportedly used in the province of Baluchistan against the law enforcement agencies. In the past higher numbers of casualties were reported for ERW and APM; more recently the use of MOTAPM has increased significantly.

According to the SPADO database, the highest number of ERW, MOTAPM and APM casualties occurred in the province of Baluchistan (54). The second highest number of casualties were from the FATA (40). There were 22 casualties recorded along the Sind/Baluchistan border, and casualties were also recorded in Punjab, Sind and North West Frontier Provinces, as well as along the Line of Control. It is believed that there is a general under-reporting of casualties.

SPADO have undertaken assessment work in some of the most affected areas of Pakistan¹⁴⁴³ and they note importance of the scrap metal trade in bringing people into contact with ordnance. Scrap coming from Afghanistan is also a source of income for the people in the FATA. This scrap contains live ammunition, which has caused casualties, including to children. The business is not only confined to FATA but scrap is brought to cities to get greater profit, which has also resulted in deadly incidents in the cities. Often whole families are involved in segregating and cleaning the scrap, which means that when incidents occur they can affect many members of the same family. It is noted that children are often directly involved in scrap metal business.

The following incidents were described during SPADO research in Kurram area:

- In February 2004, a truck loaded with scrap exploded and killed an unknown number of people in the market of Parachinar, the headquarters of Kurram Agency.
- In another incident, ERW killed the owner of scrap metal depot.
- In upper Kurram, a 14-year-old boy triggered an ERW explosion, killing himself and six others.

In the Khyber area the scrap metal trade is also highlighted as a driving force behind risk behaviour, particularly as ERW are contained within scrap being brought into the country from Afghanistan. However the widespread trade in weapons in this area, and the history of Soviet bombing in the border region, all contribute to an environment where ERW is widespread and engagement with ordnance is commonplace. SPADO suggest that low literacy and awareness also contribute to the vulnerability of the local populations.¹⁴⁴⁴

During the reporting period, other tribal areas particularly Bajaur, Waziristan and Mohmand and the Kashmir region were also affected by ERW incidents.¹⁴⁴⁵ In Kashmir, both India and Pakistan have laid MOTAPM along the line of control (LOC).¹⁴⁴⁶ India has carried out massive shelling of Pakistani areas along the LOC undoubtedly causing significant ERW contamination.

Fighting and the presence of ERW and mines has encouraged the migration of local people.¹⁴⁴⁷ Along the

LOC in Kashmir region many of the local people have moved to refugee camps and the presence of ERW has contributed to deteriorating socio-economic conditions for the local people, causing migration, loss of jobs, poor access to agricultural lands, for humans and livestock.¹⁴⁴⁸

Efforts to address the problem

The Headquarter Engineers and Engineer units of the Pakistan Army are responsible for mine clearance and rehabilitation programmes. No efforts have been carried out either by Pakistan or the UN to address the issue of landmines in the FATA. There are no mine clearance operations going on, and no government rehabilitation facilities are available to ERW, APM and MOTAPM victims in the FATA and Baluchistan. However, people residing along the LOC in Kashmir and the Indian border in Punjab province have received rehabilitation/compensation from the government.

The government of Azad Kashmir has established refugee camps to deal with the migration of local people from the contaminated border areas. The government is paying a living allowance of Pak Rs. 750 per person to the people who have migrated from the Indian held Kashmir.

Some organizations, supported by foreign donors, have carried out mine awareness and rehabilitation programmes in the tribal areas, Kashmir and Baluchistan province. Community Motivation and Development Organization

(CMDO), previously known as Human Survival and Development (HSD) has carried out MRE and rehabilitation programmes in Bajaur and Kurram tribal areas.¹⁴⁴⁹ The Italian NGO, INTERSOS, has also provided risk education to Afghan refugees in refugee camps in Pakistan.

The ICRC has no rehabilitation workshops in Pakistan for landmine survivors, some of whom try to travel to Afghanistan for rehabilitation. The ICRC is advocating measures to ensure that victims of ERW receive the treatment they need. Working in close conjunction with the local authorities, the ICRC is currently assessing the situation with a view to launching mine-awareness programmes.¹⁴⁵⁰

Legislation

Pakistan is not a State Party to the Ottawa Convention.¹⁴⁵¹ However, as recently as November 2003, Pakistan spoke of "achieving our ultimate goal to clean the earth from the scourge of landmines of all kinds."¹⁴⁵²

Pakistan ratified Amended Protocol II of the CCW on 9 March 1999, and indicated it would exercise the option to defer implementation of key provisions for a nine-year period. Pakistan participated in the Fifth Annual Conference of the States Parties to Amended Protocol II in November 2003 and submitted its annual report required by Article 13.¹⁴⁵³

1439 FATA comprises of seven agencies, South Wazistan, North Waziristan, Kurram, Orakzai, Mohmand, Khyber and Bajaur. Moreover, there are five tribal areas in the districts of Peshawar, Kohat, Bannu, Tank and Dera Ismail Khan, known as Frontier Regions. The term "agency" is used for a one whole tribal area, so seven agencies means seven tribal areas. The population of FATA is estimated at 3.54 millions, in an area of 27,220 sq. km (2.6 per cent of Pakistan's total area. These areas are geographically linked to NWF Province but have representation only in the National Assembly.

1440 SPADO database of UXO/Landmine Victims.

1441 SPADO database of UXO/Landmine Victims.

1442 SPADO database of UXO/Landmine Victims.

1443 The field research was conducted in the two tribal areas of Kurram and Khyber Agencies as well as in the Kashmir region of Pakistan. While in case of Kashmir data was collected by visiting the refugee camps and interviewing landmine/UXO victims, in the tribal areas data collectors visited the contaminated areas, interviewed victims and communities, met with government officials and hospital visits were made.

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Palestinian Territories

Background

In 1993, an interim peace agreement, the Oslo Agreement, was signed between the Israeli Government and the Palestine Liberation Organization. The ensuing agreements resulted in an initial redeployment of the Israeli army from parts of the Occupied Palestinian Territories (OPT) and the division of the West Bank into zones: A, B, C. These zones are controlled by various combinations of the Palestinian National Authority (PNA) and the Israeli army.¹⁴⁵⁴

Since the onset of the Israeli occupation in 1967, thousands of hectares of land have been appropriated for Israeli military training. Following training, or in between sessions, the Israeli military departs leaving behind numerous items of UXO.¹⁴⁵⁵ In 2001, 17.6 per cent of the total land area of the West Bank was designated by the Israelis as closed military areas. Many of the recorded injuries in this area are caused by discarded unexploded ammunition from training practices.¹⁴⁵⁶

A 2002 UNICEF assessment highlighted minefields (with large numbers of anti-vehicle mines) dating from the 1967 Middle East War in the first defensive lines between Jordan and the West Bank, in the second defensive lines in the Jordan Valley, and in other areas leading to the West Bank. Most were not properly fenced or marked.¹⁴⁵⁷ Although, the Israeli Defense Forces (IDF) claims to have cleared a number of such sites of ERW and MOTAPM, there have been doubts voiced as to the quality of this clearance, and casualties have occurred in areas officially "cleared".¹⁴⁵⁸

Mines were also planted by the British army during the British Mandate and by the Jordanian army before the 1967 war. The purpose of planting landmines by the Jordanian army was to delay a possible Israeli military attack using tanks. Most of these minefields therefore include anti-vehicle mines and are found on the sides of strategic roads that lead to main towns of the West Bank.

Ongoing incursions, such as the IDF Operation Defensive Shield, raids on Jenin in April 2002 and, most likely, events in Rafah in May-June 2004, have increased the sphere of contamination of ERW and MOTAPM.¹⁴⁵⁹ Palestinian armed groups are believed to have access to APMs, ERW and MOTAPM, and have sometimes used their contents to make human activated bombs, booby traps and improvised explosive devices (IEDs).¹⁴⁶⁰

As a result, the scope of the ERW and MOTAPM problem extends beyond the minefields and military training zones in the northern and southern parts of the West Bank to include all areas in the Occupied Palestinian Territories.¹⁴⁶¹

Assessment of the problem

Issues regarding minefield mapping, and landmine use are contested between Israel and the Palestinian

institutions.¹⁴⁶² It has been stated by Israeli researchers that "in this environment, Palestinian claims of Israeli landmine use in the West Bank and Gaza Strip cannot be considered reliable."¹⁴⁶³ So far, the issue of landmines "has not been addressed in any of the agreements negotiated between Israel and the Palestinian National Authority (PNA)."¹⁴⁶⁴

In 1995, an IDF spokesperson stated, in response to a B'Tselem¹⁴⁶⁵ inquiry concerning injuries to Palestinians from explosions of ordnance, that the IDF "takes every measure required, including the issuing of orders, putting up fences and signs in the areas, and providing information to local residents in order to prevent the recurrence of these incidents." The response also mentioned that the orders related to preventing such incidents "are implemented in the Judea and Samaria region" and that "the fire practice areas in Judea and Samaria are marked and bordered according to standing army regulations".

When B'Tselem researchers visited the areas in which most of the incidents had occurred, they reported finding none of the measures intended to warn the local residents had been implemented; there were no fences, and no signs or markings of any type. Testimonies given to B'Tselem by wounded persons and witnesses to incidents present an identical picture. Contrary to the statements of the IDF spokesperson, the fire zones were reported as not marked and bordered.¹⁴⁶⁶ Subsequent legal representation of casualties and access to maps of the training areas proved contentious.¹⁴⁶⁷

In response to the B'Tselem Report of 1995, the IDF issued a response on 14 May that year. This response detailed the preventative measures that the IDF took to avoid civilian casualties and noted that "there have been cases in which these residents removed the warning signs, entered the fire practice areas and did not heed the proper instructions."¹⁴⁶⁸

The minefields in the first defence lines are along the border areas between Jordan and the West Bank (from Ein El Bayda in the north to the Dead Sea in the south). Large minefields are also believed to exist in areas close to the Damia Bridge, Al Karameh-Allenby Bridge, King Abdullah Bridge and on the sides of main roads in the Jordan Valley that lead to Jerusalem and Nablus. Other minefields are believed located in the second defence line, especially around the agricultural and military colonies in the Jordan Valley and in other strategic areas leading to central areas of the West Bank.¹⁴⁶⁹ The existence of minefields in the Jordan valley and particularly along the Israeli-Jordanian border is well known as they can be seen clearly on the road to Amman. In 1997, Israel and Jordan completed a joint mine clearing project along their shared border. But fieldwork in 1999 revealed that mined areas still remain.¹⁴⁷⁰

Although ERW and MOTAPM contamination is said to exist throughout the West Bank and Gaza Strip, the main concentrations are in a number of areas in the West Bank used by the Israeli army for military training. These areas include: the fields north-east of Tubas, Tayaseer, Tammoun, Tal Elmaleh, Wadi Albathan, the fields between the Dyook and Oja villages in the Jordan Valley, the fields east of Bethlehem and Hebron districts, the fields close to the military camps in Zababdeh (south of Jenin), Saroor (south-west of Jenin), Arabeh (west of Jenin), Howarah (south of Nablus) and the fields in Al Khan Al Ahmar (east of Jerusalem) and Bardala and Kardala (in the northern area of the Jordan Valley).¹⁴⁷¹

No minefields have been officially declared in the Gaza Strip, but the Palestine Section of Defence for Children International (DCI-PS) states that parts of this area are contaminated.¹⁴⁷² While there are reports of casualties in the Gaza Strip among civilians and IDF soldiers, little assessment work has been done to investigate the nature of impact there.

Impact

A B'tselem survey of 1995 contains a compilation of data, analysing 23 fatal incidents (of 60 believed total incidents) that have occurred since the beginning of the Intifada, December 1987. Analysis includes date of incident, name of victim, age, circumstances of incident and place. The B'tselem survey of victims concluded that most of the injured were children who stumbled across the objects while grazing their flocks or working in the fields. The munitions exploded after the person handled, stepped on, or tried to ignite them. The majority of the incidents occurred in, or near, IDF camps or fire zones, where military training was regularly conducted.¹⁴⁷³

DCI-PS also conducted a survey of landmines and UXO incidents during the period of October 1997 to February 1998. The research depended on a field study using a questionnaire. Questionnaires were completed by trained field workers during interviews with victims or members of the family. Fieldworkers visited sites of contamination, and a number of military personnel were consulted on a range of issues, including the identification of types of mines or explosive devices based on victims' descriptions or drawings. DCI-PS survey teams ceased their activity after gathering data on 334 explosions, totalling 445 victims.¹⁴⁷⁴ On the basis of this research, a conference on The Problem of Landmines, Unexploded Ordnance and Munitions Remnants in the Palestinian Territories was held in 25-26 March 1998.¹⁴⁷⁵

DCI-PS continues to monitor the situation, documenting continuing and increasing casualty figures, including a number of ERW-related incidents. However, the difficult situation on the ground means that comprehensive figures and analysis of casualties are unavailable.¹⁴⁷⁶

It should be noted also, that despite a lack of available Israeli victim statistics, there are not believed to have been any Israeli civilian casualties of ERW and MOTAPM, inside or outside the OPT¹⁴⁷⁷ since November 2000, when two

Israelis were killed and nine others, including five children, were injured when a school bus struck a roadside bomb in the Gaza Strip.¹⁴⁷⁸ It is not clear that the cause of this incident would fall under the definition of ERW or MOTAPM.

According to an analysis conducted by Defense for Children International, of a sample of 334 incidents of explosion, 40.3 per cent were landmine explosions (it is not stated whether these were APM or MOTAPM), 38.8 per cent were UXO. The type of explosive devices was not identified in 20.9 per cent of cases.¹⁴⁷⁹ Some 93 per cent of the victims interviewed were male, and 7 per cent female.¹⁴⁸⁰ According to DCI-PS research, an overwhelming majority of the victims of landmines and UXO were Palestinian children.¹⁴⁸¹ Subsequently, in the period 1997-2000, DCI-PS has documented 37 Palestinians injured or killed by landmines or UXO. Of those, 30 were children.¹⁴⁸² Of those victims surveyed, 31 per cent were killed and 69 per cent injured. The most common injuries were burns, loss of limbs and fragments of the exploded device entering the body.¹⁴⁸³ These types of injuries, combined with the high incidence of multiple fatalities, do suggest that a large number of these incidents were caused by ERW. Almost half of the incidents occurred when the victim found an object in the fields and touched it.¹⁴⁸⁴

Some 46.6 per cent of victims' families were involved in agriculture (compared to a West Bank average of 14.9 per cent). DCI-PS field workers photographed a minefield with more than 200 sheep and four children within it.¹⁴⁸⁵

In addition, there a number of reports of fatalities among Israeli soldiers killed as their vehicles struck anti-vehicle mines in the Occupied Territories, particularly in the Gaza strip. Since February 2002, 14 soldiers have been killed and four injured in this manner.¹⁴⁸⁶

Efforts to address these problems

The Israel Defence Force Engineering Corps is the primary Israeli organisation for clearance of ERW and MOTAPM.¹⁴⁸⁷ Israeli minefield clearance activities appear to occur on a sporadic basis in the OPT.¹⁴⁸⁸

After Israeli incursions into Nablus in 2002, for example, it has been left to the local Palestinian security forces to deal with the clearance and destruction of ordnance. After the 2002 incursion into Jenin, a short-term UN Explosive Ordnance Disposal Action Cell (UNEAC) was established for liaison and mutual operating procedures with a locally provided security forces for such services as cordon duties, search and information gathering.¹⁴⁸⁹

In August 2002, a National Mine Action Committee was created consisting of the ICRC, UNICEF, UNRWA, the Palestinian Government and other governmental and non-governmental organisations. The committee is responsible for coordination of day-to-day mine action activities in the OPT, including mine risk education, and for the design of a national mine action plan. The Committee is tasked with ensuring that

ERW awareness messages used in the OPT are consistent and coherent. It will also carry out surveys to assist in the appropriate design and prioritisation of activities.¹⁴⁹⁰

In the wake of the IDF raids on Jenin in April 2002, UNRWA commissioned an UNMAS emergency assessment, but for reasons of political sensitivity declined to share the contents of the report.¹⁴⁹¹

UNICEF has also involved itself in mine risk education in the OPT and includes a UXO risk education component in its programme assistance.¹⁴⁹²

In the current OPT environment, mine action is not a high priority. However, the problem of mines, MOTAPM and ERW is causing tens of casualties a year, and the possibility of a Gaza withdrawal – which will increase Palestinian mobility and the risk of accident – means that urgent action should be taken as soon as possible.

Legislation

The Occupied Palestinian Territories are not a recognised state and therefore not eligible to sign international treaties.

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Panama

Background

Panama's ERW problem is primarily a result of three decades of U.S. training exercises and weapons testing in military ranges in the Panama Canal Zone. In addition to ERW contamination, chemical munitions from weapons testing programmes between 1930 and 1969 contaminate at least one area, San Jose Island. Other areas are suspected of being contaminated by chemical weapons.¹⁴⁹³

Initial clearance operations in the Canal Zone identified that the region is affected with a wide variety of ERW including mortars, artillery rounds and submunitions.¹⁴⁹⁴ Other weapons reportedly found on test sites include Claymore mines, VX chemical mines and depleted-uranium shells.¹⁴⁹⁵

Assessment of the problem

Confirmed or suspected ERW-affected areas in Panama include: the Piña Firing Range; the Balboa West Firing Range; the Empire Firing Range (Nuevo Emperador); the Darien region (a boarder area with Columbia); the Bailamonos River; the site of the Rio Hato military base (Coclé province); the urban neighbourhood of Nuevo Veracruz; the island of San José (Pearl Islands Archipelago); Iguana Island. Areas requiring survey include Isla Iguana in Los Santos province, Rio Hato in Coclé province, San José in the Pearl Island archipelago and Darién province.¹⁴⁹⁶

While the U.S. Government cleared some ERW from the firing ranges prior to the Canal Zone handover, large tracts of land were not cleared. As a result, when control of the Canal Zone was transferred, 3,000 hectares had not been cleared of ERW.¹⁴⁹⁷ It is estimated that there are 120,000 items of ERW on the three ranges.

According to numerous sources, U.S. forces tested a large number of chemical agents, including mustard gas, phosgene, sarin nerve gas and the Agent Orange herbicide, while the firing ranges were under U.S. control.¹⁴⁹⁸ On 25 March 2002, the Panamanian President announced that the U.S. had agreed to supervise the clean up of chemical weapons abandoned by the U.S. Army on San José Island.¹⁴⁹⁹ However, as of July 2004, clearance operations had not been completed. In June 2004, the owners of San José Island prepared a legal position against the U.S. Government to demand the clearance of munitions and compensation for income lost. A representative of the island community states that five additional bombs have been found since specialists visited the island in 2001 to verify the previous claims.¹⁵⁰⁰

The Bailamonos River was used until 1997 for military exercises that left ERW in an inlet feeding into the Panama Canal.¹⁵⁰¹ In May 2004, nine ERW, identified as mortars, were found by the National Environmental Authority

(Autoridad Nacional del Ambiente – ANAM) on the former Rio Hato military base in the province of Coclé.¹⁵⁰²

Impact

Approximately 3,250 hectares of land in the Piña, Balboa West and Emperador areas are contaminated with ERW, putting 81 communities at risk.¹⁵⁰³ Government officials are concerned that munitions left behind will kill and injure more people as the population increases and pressures for land force people onto former firing ranges.¹⁵⁰⁴ According to an official responsible for management of the former firing ranges: "As the demand for land increases, people are anxious and hard to control." In some areas, locals used range property for many years, believing it safe to do so, for hunting and planting without incident and now do not understand why the government is trying to keep them out.¹⁵⁰⁵

Many of the reported accidents in former range areas have involved individuals entering the range areas for economic purposes – such as agriculture, salvaging scrap metal, collecting fruit or hunting. According to media reports and government officials, youth and other individuals who gather scrap metal to sell to recycling companies are most at risk.¹⁵⁰⁶ Some examples of ERW casualties include:

- In 1988, two men returned home from a firing range where they had been collecting scrap metal to sell. The 13-year-old son of one of the men was killed when a mortar exploded. The explosion killed one other family member and maimed the father who lost his lower left leg and hand.¹⁵⁰⁷
- On 29 June 2004, a man was killed on the Piña range by a 60mm mortar explosion while looking for bananas for his family.¹⁵⁰⁸

As the population grows and new people, unfamiliar with the history of the area, search for means to make a living it is probable that accidents will increase, particularly since not all areas are fenced. Media reports in 2004 indicate that the Pina range, as well as the Balboa Oeste and Empire ranges in the Arraiján district, continue to be used by the surrounding communities for agriculture and housing.¹⁵⁰⁹

Prior to February 2004, six people were reported killed and up to 27 injured in ERW incidents.¹⁵¹⁰ Panamanian officials stated in 2003 that there have been "hundreds injured by stumbling upon unexploded ordnance in the jungle".¹⁵¹¹

According to media reports in the spring of 2004, road and bridge construction in the area of the Empire (Nuevo Emperador) firing range had been complicated by the discovery of ERW.¹⁵¹² As of 16 March 2004, 14 ERW have been discovered.¹⁵¹³ Although the areas surrounding the highway on the Empire range are also suspected of being

ERW-affected, only the area required for highway construction is being cleared.¹⁵¹⁴ Because of the importance of the project, the Panamanian Government paid for ERW clearance in the highway construction area.¹⁵¹⁵ Clearance for the 21.5-hectare area cost the Panamanian Government US\$688,000.¹⁵¹⁶

The ERW discovered in Coclé Province disrupted the second stage of a reforestation project. ANAM officials stated that in the first stage of the project at least 50 mortars were found near the former Rio Hato base.¹⁵¹⁷ The Governor of the province of Coclé expressed concern about the mortars as they were found in an area that people use for transit.

Tourism on the island of San José has been curtailed by the discovery of unexploded and abandoned chemical munitions.¹⁵¹⁸

Efforts to address these problems

ERW risk education activities have been undertaken by the Ministry of Health, the National Police, the Foreign Affairs and Education Ministry, the National Environmental Authority, the Regional Inter-Oceanic Authority, the Red Cross and Centro Juvenil Vicentino (CEJUVI). Since 1999, UNICEF and an Inter-Institutional Working Group have supported a risk education programme in 15 districts in Western Panama and Colon. Some of these activities have specifically targeted the risk from ERW.¹⁵¹⁹ UNICEF reports

that it has trained teachers, fire fighters, police, community leaders and students in mine/ERW risk education.¹⁵²⁰ Three local NGOs (Caritas, Vicariato del Darien and Fundación por Los Niños del Darien) planned a mine/ERW risk education programme for indigenous peoples in the Darien border region later in 2004.¹⁵²¹

A consistent challenge for risk education in Panama is the open access to the former range areas. Large sections of the former ranges are not fenced and the primary deterrents are warning signs on the roads around the most dangerous impact areas.¹⁵²² According to the United Nations, new surveys are required to assess progress made to date, to determine the number of individuals in need of risk education and to help measure future impact.¹⁵²³

Prior to the U.S. handover of the firing ranges, the U.S. removed 8,500 pieces of ERW from the Canal Zone.¹⁵²⁴ According to an EODT representative contracted to clear the Canal Zone, ERW found on the range included mortars, various artillery rounds and submunitions.¹⁵²⁵

Legislation

While Panama is a State Party to Amended Protocol II of the CCW, it has not participated regularly in CCW meetings. Panama has been a State Party to the Ottawa Convention since April 1999.

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Peru

Background

The longstanding conflict between Peru and Ecuador, which ended in 1998, led to ERW/mine contamination along the border. In the Cenepa River headwaters conflict, the most serious incidents occurred near Cueva de los Tallos, Base Sur and Tiwinza where Ecuadorian troops were stationed in Peruvian territory.¹⁵²⁶ During the 1980s and early 1990s the Government of Peru fought an internal conflict against the Partido Comunista del Peru-Sendero Luminoso (PCP-SL) and the Movimiento Revolucionario Túpac Amaru (MRTA).

Assessment of the problem

During hostilities, Ecuador used automatic anti-aircraft weapons, shoulder-fired surface-to-air missiles and mortars.¹⁵²⁷ Ecuador claims that both parties laid mines, but Peru maintains that it did not use mines before, during or after the 1995 Cenepa conflict and that it does not possess maps or registries of mines in these areas.¹⁵²⁸

Sendero Luminoso used dynamite to build basic AV mines.¹⁵²⁹ The internal conflict was fought in isolated, rural areas of Peru so it is possible that incidents involving these IEDs have gone unreported over the years. There is a risk that conflict between the Sendero Luminoso and the Peruvian armed forces may lead to further mine and ERW contamination. In June 2003, for example, the media reported that the Sendero Luminoso may be using "death traps" with explosives to mine certain areas of southeastern Peru.¹⁵³⁰ In July 2003, the media reported that the armed forces were preparing an airborne rocket grenade attack on armed units of the Sendero Luminoso in a jungle area located in San Martin of Pangoa and Vizcatán.¹⁵³¹

The most significant mines and ERW threat is along the border with Ecuador, in particular in the Cordillera del Condor in the Amazon basin.¹⁵³² Ecuador has acknowledged emplacing AB-1 AT, MGP31, MP-APVL F4, and TC6 AV mines in an area of 56,005 sq m inside Peruvian territory.¹⁵³³ The U.S. Department of Defense ORDATA reports that the T-AB-1 AT mine has been used in Peru, but it does not offer information on the possible location.¹⁵³⁴

In 2001, the U.S. Department of State reported that the precise amount of land area affected by ERW in Peru was unknown, but likely to be limited.¹⁵³⁵ The Peruvian Anti-personnel Mine Action Center (CONTRAMINAS) has no information on the existence of MOTAPM in Peru, but considers it unlikely that MOTAPM would be located in the Cordillera del Cóndor, due to the geography of this area. AV mines, however, may be found in some areas of Tumbes Piura or Amazonas.¹⁵³⁶ CONTRAMINAS has no estimates of the number of ERW remaining in the country, but considers that ERW may exist in the Cordillera del Cóndor.¹⁵³⁷

Clearance operations around the electric power grid have created a form of limited ERW problem. During the internal conflict, the government used AP mines to protect high-tension electrical towers throughout the country.¹⁵³⁸ The Landmine Monitor draws upon an ICRC report suggesting that these minefields had been affecting some 350 communities.¹⁵³⁹ From March 2003 to March 2004 clearance operations around the electric power grid destroyed 31,280 mines.¹⁵⁴⁰ However, there have been problems reported with explosive fuzes from mines being left behind in the cleared areas.

Impact

CONTRAMINAS has registered 252 cases of people affected by AP or AV mines.¹⁵⁴¹ "Statistics on mine casualties are believed to be incomplete and inaccurate because the locations of incidents are remote."¹⁵⁴² From January to August 2001, abandoned grenades killed three children and wounded several people in Lima.¹⁵⁴³ Between 2001 and 2003, several ERW were found, most of them AXO:

- From January to August 2001, an AXO cache of 120 grenades was found in Lima.¹⁵⁴⁴
- In July 2001, police found 1,520 cartridges of dynamite, explosives and rifles in the Province of Apurímac.¹⁵⁴⁵
- In August 2001, police discovered an AXO cache of 113 grenades on the left bank of the river Itaya, in the city of Iquitos, Loreto.¹⁵⁴⁶
- On 30 August 2001 five sticks of dynamite and a mortar were found in Iquitos, Loreto.¹⁵⁴⁷

- In November 2001 police recovered 18 assault rifles, grenades and ammunition in the Huallaga Valley.¹⁵⁴⁸
- An unexploded rocket was found near the police complex in the district of Wanchaq, city of Cusco on 11 September 2003.¹⁵⁴⁹
- On 5 November 2003, an unexploded anti-aircraft projectile was found near the city of Arequipa.¹⁵⁵⁰
- In May 2004 an AXO cache containing grenades and other explosive devices was found near a school in Chilca.¹⁵⁵¹

Ammunition depots located near populated areas also constitute a risk to public safety. On 23 January 2003 an explosion in a military base in Tumbes, near the Ecuadorian border, killed seven soldiers and injured nearly 100 other people.¹⁵⁵²

The presence of ERW and mines along the border with Ecuador may have a socio-economic impact.¹⁵⁵³ The Aguarunas and Huambisas tribes are most at risk from these items as they may contaminate commonly used forest paths.¹⁵⁵⁴ In 2004, CONTRAMINAS planned ERW/mine risk education programmes for inhabitants in the border area, in particular in Cenepa and Santiago.¹⁵⁵⁵

Efforts to address these problems

Peru conducts clearance activities along the electricity transmission line in the central Andes and on the border with Ecuador.¹⁵⁵⁶ As of June 2004, in addition to the Police clearance units, Peru had two active units with a total of 124 military personnel ready to operate in the northern border.¹⁵⁵⁷ Peruvian clearance operators continue to undertake joint operations with their Ecuadorian counterparts along the border.¹⁵⁵⁸ On 14 June 2002, the Peruvian armed forces declared that they had cleared 906 mines and 1,259 ERW from an 18-kilometre strip alongside the Zarumilla Canal.¹⁵⁵⁹ In addition, in 2004 the government announced that in three years of operations on the northern border 707 explosive devices had been cleared.¹⁵⁶⁰

Legislation

Peru is a State Party to the CCW and its Amended Protocol II. Peru, along with Brazil and Japan, presented a working document on cooperation and assistance to facilitate implementation of any future instrument on ERW at the first session of the meetings of the group of governmental experts of the CCW in May 2002.¹⁵⁶¹ Peru has not yet signed Protocol V on ERW and it has not sponsored the proposal for a Protocol on MOTAPM.¹⁵⁶²

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Philippines

Background

Ongoing internal armed conflict has been the primary cause of ERW contamination in the Philippines. However, abandoned and unexploded ordnance from the 1939-45 War continues to be reported.

From 1941 to 1945 the Philippines were occupied by Japanese forces. In 1945, USA forces liberated the islands.¹⁵⁶³ In the late 1960s and early 1970s, the government started to be challenged by internal armed conflicts. Recently there has been conflict between the government and a national insurgency movement led by the Communist Party of the Philippines, the National Democratic Front (CPP/NDF), and its the New People's Army (NPA). In southern Philippines, there has been an armed struggle led by the Moro Islamic Liberation Front (MILF) asserting their right to self-determination.

Aside from the internal armed conflicts contributing to the presence of ERW, the Philippines had been host to a number of US military bases in the Philippines until the Philippine Senate voted against its extension in 1991. These US military bases have been sites of military training as well as depots for ammunition.

Assessment of the problem

Areas where skirmishes have been fought in the southern Philippines are reported to have ERW and MOTAPM contamination. A report by Balay Rehabilitation Center, an NGO working with displaced communities, stated that both the Moro Islamic Liberation Front and the Armed Forces of the Philippines (AFP) acknowledged the presence of "unexploded war materials" in some villages. Other sources have noted that shells and aircraft bombs may pose a threat to civilians in a number of areas.¹⁵⁶⁴

Impact

The Landmine Monitor (1999-2004) have reported a number of people killed or injured by ERW/MOTAPM. However, the reports do not provide a clear distinction between anti-personnel mines, ERW and MOTAPM. According to these

reports, all of the victims of ERW are civilians while most of the victims of MOTAPM are either military personnel or combatants with armed rebel groups¹⁵⁶⁵.

A few ERW incidents are reported. For example:

- In June 2003, Tatuan Mamadra was injured when a 105mm howitzer shell exploded on his farm. He was burning dried grass and set off the shell hidden beneath the ground.¹⁵⁶⁶
- In March 2004 in Pikit, North Cotabato, an item of UXO exploded, killing a farmer and seriously injuring his brother, Norhamin Toga, aged 18, who said he and his brother Solayman were ploughing when they hit the item of buried ordnance. The area was one where intense fighting had taken place between the government and the MILF. The family had to seek assistance from the local parish to cover their hospital costs.¹⁵⁶⁷
- Explosives from the 1939-45 War continue to be uncovered. In August 2004, 104 bombs were reportedly unearthed in Barangay Dalig, Antipolo City in Rizal Province. The EOD unit of the 418th Police Mobile Group ordered a halt to digging in the area due to the sensitivity of the ordnance. Some residents suspected that the area had been a Japanese military camp during the War and that the ordnance had been part of a stockpile.¹⁵⁶⁸

Landmine Monitor reports (1999-2003) show incidents of the use of anti-tank mines in the Philippines. However, it is difficult to verify whether these incidents relate to anti-personnel mines or anti-vehicle mines in a context where most landmines are homemade and improvised. As the following examples indicate, much of the MOTAPM problem relates to ongoing conflict:

- In August 2003, military troops operating in Southern Luzon activated an anti-vehicle mine, instantly killing four personnel, including the commanding officer. Their vehicle was reported to be completely destroyed.¹⁵⁶⁹ In the same month, five Army engineers working on a road project were killed when the truck they were riding hit a landmine before they were fired on, allegedly by the New People's Army.¹⁵⁷⁰ The chief of the military's Civil

Relations Group for South-eastern Mindanao condemned the act, saying the New People's Army does not distinguish between combatants and those not engaged in combat, like the engineers whose job was to build roads, bridges and schools in conflict areas.¹⁵⁷¹

- In February 2004, nine policemen were killed while three were seriously wounded when the vehicle they were riding hit a mine allegedly laid by the NPA in Masbate. The mine was "command-detonated" according to Gregorio Rosal, spokesperson of the Communist Party of the Philippines.¹⁵⁷²
- In May 2004, 10 rebels of the New People's Army were killed while six others were injured when a mine they were planting on a highway in Esperanza town, southern Philippines, exploded.¹⁵⁷³

Efforts to address these problems

The Office of Chief of Ordnance and Chemical Service of the Armed Forces of the Philippines is mandated to oversee the policies pertaining to ERW and MOTAPM. But the Office does not have any records on how many ERW and MOTAPM were found and destroyed for the past year and report that they are currently working on their database.¹⁵⁷⁴ There has been no systematic clearance of areas where heavy fighting occurred during the 1939-45 War.

The Armed Forces of the Philippines have been conducting yearly activities and courses on Explosive Ordnance Disposal and Bomb Threat Prevention to military and civilians as part of the Mine Awareness Education Program. The AFP has deployed seven detachments of explosive

experts nationwide to educate and protect civilians and soldiers from the threat of improvised explosive devices and mines.¹⁵⁷⁵

In 2001, the Philippine Campaign to Ban Landmines (PCBL) proposed to the government and MILF peace panel a joint clearance operation by the government and MILF as a measure for rehabilitation and confidence building.¹⁵⁷⁶ The MILF committed to the planned joint demining initiative in September 2002.¹⁵⁷⁷ On 12 May 2004, the government peace panel welcomed the proposal and stated that it would consider its possible integration into the programmes of the peace process. Areas for consideration include coordination, risk education and reporting of found ordnance.

Legislation

The Philippines signed the 1997 Ottawa Convention on 3 December 1997 and ratified it on 15 February 2000. The Philippines is a party to the Convention on Conventional Weapons and ratified Amended Protocol II on 12 June 1997. It attended the Fifth Annual Conference of States Parties to Amended Protocol II on 26 November 2003 and submitted its annual Article 13 report¹⁵⁷⁸.

The Philippines reports that courses on International Humanitarian Law and its relevant instruments, including CCW Amended Protocol II and the Mine Ban Treaty, are part of the training curriculum of the Armed Forces of the Philippines.¹⁵⁷⁹

There have been no discussions yet on the Government's position in relation to the new Protocol V on ERW nor on the MOTAPM issues within the CCW framework.

1563 Teodoro Agoncillo and Milagros Guerrero, *History of the Filipino People*, Quezon City: R.P. Garcia Publishing Co. 1983 pp.139-517.

1564 Kaloy A. Anasarias, *The human rights implication of internal displacement in the Philippines*, Balay Rehabilitation Center, 27 January 2004, p.7. Locations specifically mentioned by different sources include Pikit and Pagalungan in North Cotabato and Kudal, Pagalungan, Barangays Bago Inged and Kabasalan.

1565 See Landmine Monitor reports (1999-2003), Human Rights Watch.

1566 Kaloy A. Anasarias, *The human rights implication of internal displacement in the Philippines*, Balay Rehabilitation Center, 27 January 2004, p.7.

1567 Interview with Butch Gilman and Fr. Bert Layson of the Immaculate Concepcion Parish in Pikit, North Cotabato, April 2004.

1568 Aries Cano, "104 vintage bombs nahukay", *Abante Tonight*, 25 August 2004, p.3. Saksi, GMA Public Affairs 10pm, reporter.

1569 A response letter to Atty. Soliman Santos Jr of the Philippine Campaign to Ban Landmines, 01 October 2003.

1570 Anthony Allada and Ferdinand Zousola, "Army slams NPA for attack on 5 engineers", *Philippine Daily Inquirer*, 22 August 2003

1571 Anthony Allada and Ferdinand Zousola, "Army slams NPA for attack on 5 engineers", *Philippine Daily Inquirer*, 22 August 2003

1572 Joyce Mejillano, Michael Jaucian and Marlon Ramos, "Cops run over NPA land mine; 9 killed", *Philippine Daily Inquirer*, 17 February 2004, p.A5.

1573 "Ten Philippine communist rebels killed by own landmine (PHILIPPINES)" *Agence France Presse*, 30 April 2004; and "10 rebels killed while planting landmines in Philippines", *Xinhua News Agency*, Manila, Philippines, 1 May 2004.

1574 Interview with Cdr Virgilio M. Mateo, Executive Officer, Office of the Chief Ordnance & Chemical Services, Armed Forces of the Philippines (OCOCS), 22 June 2004.

1575 Article 7 report, Form I, 15 February 2004.

1576 See, "Working Paper for GRP-MILF Joint Mine Clearance as a measure for rehabilitation and confidence building: A proposal of the Philippine Campaign to Ban Landmines", 18 September 2001.

1577 See, "Implementing Guidelines for the Moro Islamic Liberation Front (MILF) Pursuant to its 'Deed of Commitment under Geneva Call for the Adherence to a Total Ban on Anti-Personnel Mines and for Cooperation in Mine Action'", signed by MILF's legal counsel Lanang S. Ali and Soliman Santos, Jr., regional director for Asia of Geneva Call on 20 September 2002 in Geneva.

1578 CCW Amended Protocol II Article 13 Report, Form A, 27 November 2003

1579 CCW Amended Protocol II Article 13 Report, Form A, 27 November 2003.

Poland

Background

Poland experienced heavy and prolonged fighting during the 1914-18 and 1939-45 Wars. A massive clearance campaign was carried out until 1957. Yet Poland still has ERW and MOTAPM left from the wars and from former Soviet army bases and training grounds. ERW/MOTAPM are found in areas of past heavy fighting and abandoned ordnance in abandoned field ammunition depots.

Assessment of the problem

According to official data, an estimated 99 per cent of all explosive ordnance (ERW, MOTAPM and anti-personnel mines) in Poland had been cleared by 2003.¹⁵⁸⁰ From 1944 to 1994, some 77,173,765 artillery shells, bombs, grenades, missiles and other munitions were removed. This is 83 per cent of all materials cleared in this time period, the other 27 per cent comprising anti-vehicle and anti-personnel landmines.¹⁵⁸¹

The national media regularly reports ERW discoveries. In 2003-2004, *Gazeta Wyborcza*, Poland's largest national newspaper, reported occurrences almost monthly. Most reports identified the discovered ordnance as ERW (old bombs, grenades, etc.) usually found by individuals or during construction work.¹⁵⁸²

Mention of ERW discovery and removal was also common in the specialised military press during the reporting period, for instance in *Zolnierz Polski* and *Polska Zbrojna* (periodicals dealing with military topics).¹⁵⁸³

Impact

The total cost for all government-related clearance and EOD activities in 2003 was 17.4 million PLN (about US\$4.8 million).¹⁵⁸⁴

In 2003, there were no casualties of ERW/MOTAPM among soldiers and civilians working for the military.¹⁵⁸⁵ But in 2004 eight soldiers were injured while loading an ERW item onto a vehicle at the Drawsko military training ground.¹⁵⁸⁶

It is estimated that from 1945 to 1994 12,000 civilians were killed or wounded by ERW, MOTAPM or anti-personnel mines.¹⁵⁸⁷

The police keep detailed track of civilian casualties from ERW and MOTAPM incidents. There were 10 reported ERW incidents among civilians in 2003: five deaths (four men and one child) and 11 injured (six men and five children). In all cases the causes were attributed to attempts at "disarming mortar shells from WWII". Police records contain such data from 1993.¹⁵⁸⁸

Newspaper articles mentioned that people gather ERW for economic purposes¹⁵⁸⁹ and government officials have also

given indications of this practice.¹⁵⁹⁰ There is a market for ERW: *www.allegro.pl* (the largest Polish online auction website) showed more than 120 items of ERW for auction. In most cases, these were artillery or field ammunition shells and grenades from the 1914-18 or 1939-45 Wars. Invariably these items were described as having been disarmed and safe – but there was no way to confirm this.¹⁵⁹¹

There is significant evidence that ERW and MOTAPM affect the implementation of infrastructure projects. In at least three cases in 2003, in Poznan,¹⁵⁹² Torun¹⁵⁹³ and Warsaw,¹⁵⁹⁴ construction work was stopped because of discovered ERW (the type was not specified) and was held up until the ERW was removed.

Certain local governments have taken direct action in this regard. In the particular case of Torun, an area that saw heavy fighting during both wars, the town council has taken the following action since 2002:

- Set up a local working group (representatives of the police, fire department, military clearing groups and an independent expert on military issues) to map the possible dangers from ERW in the town. This map is compiled from historical documents, an analysis of the region and from the testimonies of people who remember local events from 1939-45. Once an area is identified, the working group gathers detailed information about it, measures the risk it poses, and takes action as required. The mapped information is confidential so as not to encourage curious children, scrap gatherers or criminals looking for explosive materials. The town council consults this map before approving any new construction.
- Town funds were used to buy specialised ERW discovery and clearing equipment which was donated to local military clearing teams for work on town lands.
- Local awareness campaigns were organized for youth about the dangers of ERW: activities included visiting schools, holding talks and publishing an information pamphlet.¹⁵⁹⁵

Efforts to address the problem

There are estimated to be 260 specialists working in patrol teams covering Poland's 35 regions. They respond to reports and are obliged to clear the area as soon as possible but no later than within three days of receiving a report.¹⁵⁹⁶ In 2003, 10,309 reports of ERW/MOTAPM were received by government clearance patrols. In total they removed 5,449 landmines, two sea mines, two torpedoes, 28,395 bombs, 29,397 shells, 6,590 grenades and 723,630 rounds of infantry ammunition.¹⁵⁹⁷

Several former military training grounds were also cleared in 2003, including 538ha of Okonek, 220ha of Lambinowice and 1,586ha of Czerwonoy Bor.¹⁵⁹⁸

In at least one case, it was noted that the patrol teams' equipment was designed for landmine clearance and was not especially well suited for working with and discovering ERW, which is often found much deeper in the ground.¹⁵⁹⁹

Legislation

Poland signed the Ottawa Convention on 4 December 1997 but has not ratified it.¹⁶⁰⁰ Poland ratified the amended Protocol II of the CCW 14 October 2003. The Polish Ministry

of Defence is currently looking into the necessary procedures and measures that would result from accepting Protocol V.¹⁶⁰¹

The Polish Government considers that there is no ERW or MOTAPM problem in the country. It does acknowledge the presence of ERW, noting, however, that due to factors such as time and weather conditions any ERW or MOTAPM still undiscovered are unlikely to be active or explosive and therefore only pose a "potential threat" rather than an actual problem.¹⁶⁰²

1580 Letter to Joanna Stempinska from Czeslaw Juzwik, Ministry of Defence, undated.

1581 Letter to Joanna Stempinska from Czeslaw Juzwik, Ministry of Defence, undated.

1582 Media analysis of various Polish media by project researcher.

1583 Media analysis of various Polish media by project researcher.

1584 Letter from Andrzej Braiter, Ministry of Foreign Affairs, 15 March 2004, cf. Landmine Monitor 2004, p. 910.

1585 Letter from Andrzej Braiter, Ministry of Foreign Affairs, 15 March 2004, cf. Landmine Monitor 2004, p. 910.

1586 "O_miu_o_nierzy rannych na poligonie w Drawsku Pomorskim", PAP (Warsaw), 16:20 CET, 27/04/2004; "Przenosili niewybuch," *Rzeczpospolita*, 28 April 2004.

1587 Letter to Joanna Stempinska from Czeslaw Juzwik, Ministry of Defence, without date.

1588 Letter to Andrzej Braiter from Marek Wierzbiński, Police Head Office, 10 February 2004.

1589 Piotr _ytnicki, "Ewakuacja wie_owca. Granat pod biurkiem", *Gazeta Wyborcza*, 2 July 2004, Zielona Góra edition, p. 3; Julita Jutka, "Niewypa_y ci_gle gro_ne", *Gazeta Wyborcza*, 24 July 2004, Radom edition, p. 2.

1590 Letter from Maciej Zalewski, Mayor of Torun, 11 October 2004

1591 Content analysis of allegro.pl, accessed 21 October 2004.

1592 Lech Bojarski, "Niewybuch na budowie biblioteki Collegium Novum. Wybuchowa niespodzianka," *Gazeta Wyborcza*, Poznan edition, 14/11/2003, p. 4.

1593 TOR, "Bombowa sprawa – _eby niewypa_ nie wypali_". *Gazeta Wyborcza*, Torun edition, 24 March 2003, p. 4.

1594 "Rozmaitosci Polska," PAP (Warsaw), 10:22 CET, 30 June 2004.

1595 Letter from Maciej Zalewski, Mayor of Torun, 11 October 2004.

1596 Letter to Joanna Stempinska from Czeslaw Juzwik, Ministry of Defence, undated.

1597 Letter to Joanna Stempinska from Czeslaw Juzwik, Ministry of Defence, undated, cf. Landmine Monitor 2004, p. 909.

1598 Letter from Andrzej Braiter, Ministry of Foreign Affairs, 15 March 2004; cf. differing figures in Landmine Monitor 2004, p. 909 (footnote 42). Detailed information of this sort also exists for 2002. Letter from Adam Kobieracki, Ministry of Foreign Affairs, 27 March 2003.

1599 Telephone interview with Wojciech Pawlik, Torun City Council, 21 September 2004.

1600 Poland stated in January 2004: "Until now none of these conditions has been fulfilled. Nevertheless, in view of the development in the international security environment and pursuant to the new National Security Strategy of the Republic of Poland, steps have been taken to review the current Polish military doctrine. The outcome of this effort will hopefully enable the Polish Armed Forces to redefine the role of APM in our defence system." At the same time, Polish authorities underline that "Poland fully supports and associates itself with the goals of the Ottawa Convention". Letter to Thierry Vanneste, Director-General, Handicap International Belgium, from Tadeusz Iwanicki, Secretary of State, Chancellery of the Prime Minister, 4 March 2004, quoted in Landmine Monitor Report 2004, p. 905.

1601 Letter from Robert Kupiecki, Ministry of Foreign Affairs, 9 August 2004.

1602 Letter from Robert Kupiecki, Ministry of Foreign Affairs, 9 August 2004.

Russian Federation

Background

The Russian Federation has suffered extensive ERW and MOTAPM contamination in both the east and the west of the country since the 1939-45 War. This contamination has demanded a substantial clearance effort and within the past 10 years more than 65 million items of ordnance are reported to have been found and destroyed by Russian military personnel.¹⁶⁰³

In the west, the shifting front line against German forces was some 1,500 kilometres long. Control over territories, towns and cities was transferred repeatedly between the warring parties, resulting in increased ordnance contamination in these areas.

In the east, the 1939-45 conflict with Japan resulted in ordnance contamination around Sakhalin Island,

Vladivostok and the surrounding islands. After a history of conflict between Russia and Japan over Sakhalin Island, the 1939-45 conflict saw renewed fighting between the two nations.¹⁶⁰⁴ As a result Russian and Japanese munitions remain as contaminants in these areas.¹⁶⁰⁵

Current and former firing ranges experience ERW contamination as a result of items being left unexploded. Munitions storage areas also present areas of concern. Major firing ranges are situated around Orenburgh, Volgograd, Samara, Saratov. There are also abandoned munitions stores remaining from the 1939-45 War.

Effective records have only been kept since 1945. Some records regarding minefields installed during the 1939-45 War and marine minefield maps (for minefields installed by USSR forces) are available. Moreover, some of marine minefields maps were submitted to Estonia for marine

demining as part of Russia's international cooperation activities.¹⁶⁰⁶

Assessment of the problem

Large areas of the Russian Federation saw combat activities during the 1939-45 War and may as a result contain items of ERW and MOTAPM. Data on state clearance activities suggests that mortars are the most commonly recovered items, followed by grenades, anti-vehicle mines and artillery shells.

For example, Kaliningrad (former East-Prussia Königsberg), which was formerly a highly fortified region, still contains an unknown number of former German stockpiles. In 2003 more than 45,000 ERW items were discovered in the area.¹⁶⁰⁷ Such abandoned stockpiles are fenced with barbed wire and marked with signs, but they are not guarded. For most of the abandoned stockpiles there is no available information regarding their contents.

Data from secondary sources suggests 84 accidents between 1992 and 1998 on former 1939-45 battlefields¹⁶⁰⁸ and these accidents were reported as resulting in 39 dead and 67 wounded. Although these are reported as "mine" casualties it is likely that a significant proportion of accidents were caused by ERW. The available data suggests that casualties continue to be incurred but at a low level.

Many areas may be subject to such contamination but continue to be used for agricultural activities. State, local and independent mass media cover issues relating to ERW and MOTAPM quite often. Most of the coverage relates to items being found and destroyed. Other coverage relates to people salvaging ordnance and related casualties.

The following are examples of ordnance incidents during the reporting period:

- On 8-9 July 2003, several ERW items were detonated by fires in Sakhalin forests. Three ERW explosions caused by forest fires in the area of Chaplanovo, near Holmsk town, resulted in people being evacuated by the local civil defence authorities.¹⁶⁰⁹
- On 1 August 2004, six soldiers were injured and two killed at Prudboy firing range near Volgograd when an explosion occurred during rubbish clearing on the territory of an artillery regiment. An artillery shell detonated while refuse was being burned in a waste pit. A criminal investigation was initiated by the military.¹⁶¹⁰
- Five people from Kubanovka, Gusevskiy region, Kaliningrad area, were seriously injured when an item of ERW from the 1939-45 War exploded. They were clearing stones from a field before planting, discovered an artillery shell and decided to pick it up. While carrying it, the shell was dropped and detonated.¹⁶¹¹

Efforts to exploit economic value from ordnance contamination seem to be widespread. In many affected areas

people are reported as collecting unexploded or abandoned munitions for sale (either whole, or for the separate metal and explosive content). These people are referred to as "black archaeologists" and there is particular concern where they bring items of ordnance into inhabited areas such as villages or towns.

- On 7 June 2004, according to a Ministry of Interior for Moscow press release, mortar shells and artillery shells from the 1939-45 War were discovered near Kuzavlevo, Podolsk district of Moscow area. The stockpile was considered to result from "black archaeologists" collecting the ordnance for future sale. The report further noted that extracted explosives could be used for criminal or terrorist activities.¹⁶¹²
- On 7 July 2003, stocks of wartime explosive items were found in the ground floor of a housing building in Voronezh. An investigation discovered that the munitions had been collected by a mentally-ill 30-year-old man living in the building. Neighbours reported that he had threatened that they would all die together.¹⁶¹³
- On 25 December 2003, a man from Moscow delivered a considerable number of 1939-45 ERW items to the police. He had collected the ordnance from a former battlefield area. Since the explosives were delivered voluntarily, it was reported that he would not be charged. Moreover, a reward would be paid to him by the State.¹⁶¹⁴

Efforts to address these problems

There was an extensive process of landmine clearance and ordnance disposal between 1946 and 1970.¹⁶¹⁵ Although this work involved sub-surface search for ordnance, items continue to be found in these areas every year as soil movement brings them to the surface.¹⁶¹⁶ The rate at which ordnance was cleared declined to a low in 1993 and this has been linked by Roman Dolgov to the worsening economic situation in the country restricting the state's capacity to undertake ordnance disposal work.¹⁶¹⁷ A sudden increase in clearance was reported in 1997. Ongoing destruction of ordnance is undertaken and coordinated through military structures, the Ministry of the Interior¹⁶¹⁸ and the Emergencies and Disaster Relief Ministry.¹⁶¹⁹

The Russian Emergencies and Disaster Relief Ministry regularly provides information through its website on items destroyed. Since the beginning of 2004 its staff have cleared approximately 23,000 ERW items comprising some 176 aviation bombs, 2,842 pieces of ammunition, 10,199 artillery shells and 9,723 grenades and mines (no other distinction between ERW and MOTAPM is indicated).

Approximately 150 to 200 mobile demining/ordnance disposal teams operate under the Ministry of Defence and more than 1,000 MoD personnel are involved in this work each year. In combination, specialist engineering forces from the Ministry of Defence and engineers of the

Emergencies and Disaster Relief Ministry are destroying more than 100,000 ERW items each year. According to available data, the majority of ERW items are artillery shells and mortar bombs.

The following provide examples of the ongoing efforts of the Russian Federation to tackle the problems of ordnance and MOTAPM contamination:

- On 4 July 2003, in Novgorod area, staff from Emergency and Disaster Relief Ministry destroyed almost 100 ERW items remaining from the 1939-45 War. According to the Russian news agency Novosti, 58 mortar shells, one artillery shell, 33 grenades, two anti-personnel mines and one 5kg aircraft bomb were found.¹⁶²⁰
- On 21 August 2003, teams destroyed 123 ERW items near Davydovo, Novgorod area. The munitions destroyed included 69 mortar shells, 40 artillery shells, five anti-vehicle mines (including TM-35 and TM-42 mines) and four aviation bombs. The munitions were discovered by volunteers working in the area. During the summer of 2003 these volunteers discovered some 359 items of ERW in the area. More than 3,000 items were discovered in this area over the course of the whole year.¹⁶²¹
- Field engineers in the Leningrad area responded to 736 requests from local authorities during 2003. According to a report for 2003, 16,205 ERW items were destroyed in this area, 3,625 in Novgorod area, 1,405 in Karelia, 5,710 in Pskovshchiny area, and a further 676 items of ERW were discovered and terminated around Saint-Petersburg.¹⁶²²
- On 3 November 2003, Federal Security Service (FSB) agents confiscated an ERW "arsenal" from a "black archaeologist" in the Novgorod area. As a result of their investigation, agents discovered the 34-year-old was keeping six artillery shells, five mortar shells, anti-vehicle and anti-personnel mines, as well as some detonators. The items were collected from 1939-45 War battlefields to extract explosives and metal for sale.¹⁶²³
- According to reports for 2003 from Alexander Zimin, head of demining division of Karelia (north-western part of the Russian Federation), ERW items continue to present problems in this area. In 2003, two children were killed as a result of an explosion after they put a mine that they had found into a fire. Construction of a road between Pryazha and Lebedi found some 300 ERW items. In the Medvezhigorskiy area of Karelia, a truck was damaged by a 1939-45 War anti-vehicle mine during logging operations. In the area of Kalevala, a KamAZ truck was also damaged by another wartime anti-vehicle mine.¹⁶²⁴
- On 12 February 2004, 74 artillery shells from the 1939-45 War ordnance were discovered during an excavation in Sovetskiy district of Volgograd.¹⁶²⁵
- On 11 November 2003, 100,000 Roubles (more than 3,000) were provided to Leningrad Regional Department of the Emergency and Disaster Relief Ministry for clearance of "Neva Place", known as a 1939-45 War battlefield. Within the past 15 years this is the first scheduled demining operation in Leningrad area (excluding work in advance of construction projects). As a result, the area became popular for "black archaeologists," notably adolescents.¹⁶²⁶
- On 24 March 2004, more than 100 artillery shells were found in the Kalingrad region. On the same date, while work was being constructed on rain drainage system, four 82mm mortar shells were discovered. The mortars were planned for destruction by a team from the Baltic Navy.¹⁶²⁷
- On 9 April 2004, a 100kg aircraft bomb from the 1939-45 War was discovered in Krasnodar region near to petroleum and gas pipes.¹⁶²⁸
- According the FSB, a stock of 1939-45 War ordnance was discovered near Apraksino, Kirovskiy district, Leningrad area on 6 June 2004. Explosives and ordnance, including more than 36kg of extracted TNT, grenades, mortar shells and a considerable amount of ammunition, were discovered after they had been collected and stored illegally. The explosives and ordnance were destroyed in place because they were considered too dangerous to transport.¹⁶²⁹
- On 26 July 2004, work was done to address 1939-45 War ammunition stocks in Pskov region. Some 526 anti-vehicle mines of German origin were destroyed by teams from the Emergency and Disaster Relief Ministry.¹⁶³⁰

Legislation

The Russian Federation is a signatory to the Convention on Conventional Weapons and has stated its intention to sign and ratify Protocol V on ERW. The Russian Federation is not a signatory to Protocol II to the CCW, nor is it a signatory to the Ottawa Convention.

1603 Statement of the Russian Public Fund "Centre of Mine Problem Solution and Ammunition Disarmament" ("Antimine Centre"), on the elaboration of IMAS Standards Project (Version 6.0) submitted in Geneva (May, 2001) by J.P. Osipovich: on the internet at: http://www.antimine.ru/osip_vare.html (last accessed 5 October 2004).

1604 M.S. Vysokov, *Historical Survey*, Moscow, 1996.

1605 News report relating to ordnance found in the Sakhalin area, 26 May 2004, <http://www.regions.ru/article/any/id/1520403.html> (last accessed 5 October 2004).

1606 ITAR-TASS Information Agency, 2 June 2004.

1607 Russian Parliament Newspaper, Issue No. 1059.

1608 Dolgov, R. "Landmines in Russia and the Former Soviet Union: A Lethal Epidemic", in *Medicine & Global Survival*, (April 2001, Vol.7, No.1).

1609 <http://www.gtrk.ru/news/0710/print/news.htm> (last accessed 20 October 2004).

- 1610 <http://proekt.ogj.ru/news/2004/08/01/volg.html> (last accessed 5 October 2004).
- 1611 <http://kaliningrad.rfn.ru/rnews.html?id=753> (last accessed 5 October 2004).
- 1612 <http://www.rubop.ru/news/vovars.htm> (last accessed 5 October 2004).
- 1613 http://www.federalpost.ru/crime/issue_10657.html (last accessed 5 October 2004).
- 1614 <http://news.iof.ru/lenta.ru/2003/12/25/41> (last accessed 5 October 2004).
- 1615 Dolgov, R. "Landmines in Russia and the Former Soviet Union: A Lethal Epidemic", in *Medicine & Global Survival*, (April 2001, Vol.7, No.1), p.38 citing data from Russian Physicians for the Prevention of Nuclear War.
- 1616 The processes of clearance undertaken in the Russian Federation have also been criticised for "lacking standardisation, verification or control mechanisms", Dolgov, R. "Landmines in Russia and the Former Soviet Union: A Lethal Epidemic", in *Medicine & Global Survival*, (April 2001, Vol.7, No.1)
- 1617 Dolgov, R. "Landmines in Russia and the Former Soviet Union: A Lethal Epidemic", in *Medicine & Global Survival*, (April 2001, Vol.7, No.1).
- 1618 Newsline of Saint-Petersburg TV dated 01/04/2004: <http://www.spbtv.ru/?cat=newsAll&key=921> (last accessed 5 October 2004)
- 1619 <http://www.mchs.gov.ru/result.php?fid=1054730575224608> (last accessed 5 October 2004). 30 <http://www.mchs.gov.ru/news> (last accessed 5 October 2004).
- 1620 <http://www.novgorodinform.ru/news/16.html> (last accessed 5 October 2004).
- 1621 <http://www.news.izvestia.ru/community/news57237>
- 1622 Interview by Press Attaché of Leningrad Division of MoD to Interfax information agency dated 08/12/2003: <http://informpskov.ru/army/10780.html> (last accessed 5 October 2004).
- 1623 <http://www.fsb.ru/smi/ufsb/2003/031105-6.html> (last accessed 5 October 2004).
- 1624 <http://www.severozapad.com/archiv2004-2.htm>
- 1625 http://www.kp.vgg.ru/TEXT/02_14_04/index.html (last accessed 5 October 2004).
- 1626 http://vyborg.korpunkt.ru/news756_65.html (last accessed 5 October 2004).
- 1627 <http://www.kaliningrad.net/index.php?type=146&idT=247> (last accessed 5 October 2004).
- 1628 http://www.interfax.ru/r/B/0/182.html?menu=35&id_issue=9688452 (last accessed 5 October 2004).
- 1629 <http://ra.ircnet.ru/smi/ufsb/2004/040611-6.html> (last accessed 5 October 2004).
- 1630 <http://www.regions.ru/article/any/id/1584022.html>

Rwanda

Background

The Rwanda Government claims that the current government has never stockpiled any mines, whether anti-personnel or anti-tank.¹⁶³¹ But in 2002 the Rwanda Government was accused of arming its Congolese rebel allies with landmines.¹⁶³² During most of the late 1990s and early to mid-1990s, Rwanda battled insurgents from the DRC, who are believed to have planted mines. The fighting also left behind large amounts of ERW.¹⁶³³ Other sources said both the current government and insurgents that opposed it employed landmines haphazardly, resulting in minefields with indefinable borders.¹⁶³⁴

Assessment of the problem

Rwandan officials say ERW have been a bigger problem than either MOTAPM or anti-personnel mines.¹⁶³⁵ One official said: "We have encountered a really big problem with UXO, in fact this is the major thing we have been combating here. The UXO are even more than the anti-personnel mines."¹⁶³⁶ Among the prevalent ERW are hand grenades, rocket-propelled grenades, bullets and mortar shells. From 2002, it had been declared that, as in most former war zones, "the UXO problem in Rwanda is at least as great as the nation's landmine problem, though sketchy statistics prevent accurate UXO estimates".¹⁶³⁷

Rwanda has ERW and MOTAPM in the provinces of Byumba in the north and Gisenyi in the north-east, which were planted between 1990 and 1994. More mines are in Kigali, planted between 1997 and 1998.¹⁶³⁸ The government said no mines were laid on Rwandan territory since 1998.¹⁶³⁹

The Rwanda Government estimated in the past that the heaviest concentrations of MOTAPM were in the Kigali area and in four prefectures in the north and north-west, about 10 km from the border with Uganda.

The National Demining Office (NDO) says MOTAPM represent a significantly smaller problem than anti-personnel mines and ERW; and that few MOTAPM have been recovered or been responsible for injuries and deaths.¹⁶⁴⁰

Rwanda said in a 2004 report that the mined areas had been reduced from 974,673 sq m in 2003 to 693,770 square metres. During the year to April 2004, three minefields, covering an area of 41,501 square metres were cleared, while Nyabihu in Gisenyi province and Kanombe in Kigali were under clearance. In June 2004, Rwanda was clearing the Kanombe minefield occupying a surface area of 525,400 square metres. There were 14 other landmines surveyed but not cleared, measuring 437,901 square metres.¹⁶⁴¹

Impact

An official of the NDO said that agricultural activities continued to be affected by ERW during 2003 and 2004, and that Rwanda is a small country that requires the use of all its land. The problem in 2004 was less severe than it was a few years ago, as the biggest portion of the land had been cleared and could be utilised. In spite of the gravity of the situation, the NDO says the public does not seem aware of the extent of the problem. A senior journalist reported that no stories on ERW or landmines had appeared in the local media for a significant time.¹⁶⁴²

The main sector affected by ERW and landmines is tea, Rwanda's main export. For instance, the Nyabihu and Kabaya Tea Estates in the north-western province of Gisenyi have land they cannot use because it is contaminated by ERW and mines. It was anticipated that clearance of this land would start in early 2005. Two other tea factories/estates (Mulindi and Pfunda) faced a similar problem in the past.¹⁶⁴³

One mine clearance official said that because of the fierce battle for control of Kigali in 1994, which lasted about three months, "areas near infrastructures like schools, hospitals, factories, military barracks were heavily mined".¹⁶⁴⁴ Other sources said many suspected minefields in Rwanda were farm fields: the government was hesitant to restrict access to such important lands, so it did not fence these areas, leaving farmers to decide independently which of their fields were too risky to enter.¹⁶⁴⁵

During 2003 and the first six months of 2004, five people were killed and eight injured by ERW and mines. They included a man in Kigali Town, two men in Mutara and one man in Ruhengeri.¹⁶⁴⁶ The casualty figures were for military personnel and civilians brought to the attention of the NDO. The NDO prepares a monthly report to the Defence Ministry, and thereafter an annual report is made by the Foreign Affairs ministry.¹⁶⁴⁷

Efforts to address the problem

Between June 2003 and June 2004, the NDO cleared 823 ERW and mines from Kigali T&R, Muvumba, Byumba, Butare, Ruhengeri, Gisenyi, Gitarama, Gikongoro, Cyangugu, Kibungo and Kibuye.¹⁶⁴⁸

The NDO, set up in 1995 under the Ministry of Defence, oversees mine and ERW action. It has also carried out risk education through regular broadcasting over national radio, through newspapers and television, and through seminars where it distributed education material.¹⁶⁴⁹

The U.S., the key funder of the NDO, said by 2002 it had trained more than 200 Rwandan deminers, who had cleared more than 500 million sq m of land and destroyed more than 27,250 mines and thousands of ERW. It said: "Rwanda's main and secondary roads are now clear of landmines, allowing valuable exports, necessary imports, consumer goods, and international aid to flow freely. Much of the cleared land supports subsistence farming, an aid to decreasing the food shortage."¹⁶⁵⁰

But, in April 2004, Rwanda said it needed additional resources to clear the remaining minefields. The NDO had been using manual demining but – considering the size of the remaining minefields (693,770 square metres) – more funds and better clearance methods were required. The NDO was active in risk education between 1995 and 2001 but this has now ceased due to lack of funds.¹⁶⁵¹

The NDO's main functions are to propose mine action policies and strategies to government, to develop and supervise a sustainable and integrated mine action plan, to coordinate demining activities and to maintain a national database. Its criteria for determining priority clearance areas include the number of people at risk and the economic impact of clearance, for instance accessibility to roads and to agriculturally productive land.¹⁶⁵²

Legislation

Rwanda signed the Ottawa Convention on 3 December 1997, ratified it on 13 June 2000 and it came into force in the country on 1 December 2000. Efforts are currently under way to enact legislation and put in place administrative measures to effect the Ottawa Convention. Since 1995, the Government has had the National Demining Office in charge of demining operations.¹⁶⁵³

1631 Article 7 Report, April 2004.

1632 Landmine Monitor 2003, p. 409.

1633 Telephone interview with Major Patrick Karegeya, Rwanda Defence Forces (army) spokesman, 15 August 2004; Article 7 Report, April 2004.

1634 See MAIC website, maic.jmu.edu/journal/6.2/profiles/profilerwanda.htm, accessed 19 November 2004.

1635 Telephone interview with Major Patrick Karegeya, Rwanda Defence Forces (army) spokesman, 15 August 2004; Telephone interview with Lt. Francis Kabucye, Head of Operations, National Demining Office, 14 October 2004.

1636 Telephone interview with Lt. Francis Kabucye, Head of Operations, National Demining Office, 14 October 2004.

1637 See MAIC website, <http://maic.jmu.edu/journal/6.2/profiles/profilerwanda.htm>; accessed 17 August 2004.

1638 "Rwanda said to have up to a million landmines", Reuters, 11 November 1994.

1639 Article 7 Report, April 2004.

1640 Telephone interview with Lt. Francis Kabucye, Head of Operations, National Demining Office, 14 October 2004; Report given to researcher by Database Department, National Demining Office, 17 August 2004.

1641 Report given to researcher by Database Department, National Demining Office, 17 August 2004. These minefields are named Muhororo, Bugwe, Kanyentanga, Nkana, Mutobo, Rubaya I, Rubaya II, Rubaya III, Nyabihu, Yanze I, Yanze II, Yanze III, Jali, and Nyabishambi.

1642 Telephone interview with Arthur Asiimwe, Reuter Correspondent, and the UN's Integrated Regional Information network, Kigali, 9 September 2004.

1643 Telephone interview with Lt. Francis Kabucye, Head of Operations, National Demining Office, 14 October 2004

1644 Inter Press Service, 15 May 1996, cited in Rwanda Landmine Monitor Report 1999, quoting then head of the National Demining Office, Maj. Joshua Mbaraga.

1645 <http://maic.jmu.edu/journal/6.2/profiles/profilerwanda.htm>; accessed 17 August 2004

1646 "Funding Shortage Retards Mine Action Efforts in Rwanda," AllAfrica.com, 22 November 2004.

1647 Telephone interview with Major Patrick Karegeya, Rwanda Defence Forces (army) spokesman, 15 August 2004

1648 According to data from a different source over a slightly different time period, between April 2003 to April 2004 the following ammunition was cleared: six flare grenades, 14 fuses and 165 A/T Rifle grenades, 51 grenades, 44 hand grenades, 45 grenade launchers, 221 stick grenades, 497 tortoise grenades and 27 rocket propelled grenades, see Article 7 Report, April 2004, Annex B. The statistics from NDO did not break down the statistics for ERW and landmines. Report given to researcher by Database Department, National Demining Office, 17 August 2004.

1649 Article 7 Report, April 2004.

1650 <http://www.state.gov/t/pm/rls/rpt/walkearth/2002/14869.htm>

1651 Telephone interview with Major Patrick Karegeya, Rwanda Defence Forces (army) spokesman, 15 August 2004.

1652 Telephone interview with Major Patrick Karegeya, Rwanda Defence Forces (army) spokesman, 15 August 2004: Rwanda, Landmine Monitor 2004.

1653 Telephone interview with Major Patrick Karegeya, Rwanda Defence Forces (army) spokesman, 15 August 2004.

Senegal

Background

On 26 December 1982, demonstrators in Ziguinchor claimed independence for the Casamance region, sparking a low-level conflict that affected thousands of civilians over 22 years. Fighting intensified in 1997 with widespread use of anti-vehicle and anti-personnel mines.¹⁶⁵⁴

Assessment of the problem

Senegal's ERW and mine problem is in the southern region of Casamance. The two main areas of Ziguinchor and Kolda, on the border with Guinea-Bissau, were used for arms trafficking by the Movement of the Democratic Forces of Casamance (MFDC).¹⁶⁵⁵ Niaguiss in Nyassia region in the south of Casamance is the area most affected by ERW and mines.¹⁶⁵⁶ Military engineers estimate that approximately 1,400 sq km are affected by ERW and mines: 80 per cent in Ziguinchor and 20 per cent in Kolda.¹⁶⁵⁷ Since September 2003 the Senegalese Army has removed eight rifle grenades, 15 RPGs, two 105mm shells, one 82mm shell and one 60mm shell, as well as 1,150 AV or AP mines during clearance operations in Casamance.¹⁶⁵⁸ Of the 52 contaminated sites, 42 have been cleared.¹⁶⁵⁹

Impact

Due to the increasing ERW and mine problem, inhabitants of Casamance have fled their previously prosperous villages, giving up their goods and resources. The Casamance Association of Young Farmers (AJAC) reports that 10-15,000 displaced persons wish to return to the villages they abandoned during the fighting, most notably in the districts of Nyassia and Niaguiss. With USAID support, there are plans to rebuild 100 houses at Mpack, 500 houses and 60 wells at Bounouf and dozens of classrooms. But this reconstruction work can only begin once the area has been cleared of ERW and mines.¹⁶⁶⁰

Handicap International reports that ERW and mines are found regularly in Casamance and that they affect both

people and livestock.¹⁶⁶¹ In Casamance between 1996 and July 2004 Handicap International recorded 661 ERW and mine victims, although it is unclear how many casualties were due to ERW or MOTAPM.¹⁶⁶² Several examples of AV mine incidents recorded by Landmine Monitor show that AV mines on roads present an enduring threat to both civilians and the delivery of relief in Casamance. For example, in 1993, an ICRC vehicle hit an AV mine, killing and injuring several people.¹⁶⁶³ In August 1998, an AV mine destroyed a civilian vehicle, killing 13 and injuring 10 people.¹⁶⁶⁴ More recently, in March 2004, a military vehicle was destroyed by an AV mine, injuring five soldiers.¹⁶⁶⁵

Efforts to address these problems

The army is the only organisation conducting clearance operations in Senegal. Mpack, Gouraf, Mandina Mancagne, Soucoute and Boutoute are being cleared as well as three kilometres of roads and former conflict zones such as Santiaba Mandjack, Dar es Salam, Efock, Kaguitt and Basséré. As of January 2004, 700 mines or ERW had been cleared or destroyed.¹⁶⁶⁶

Handicap International conducts mine/ERW risk education from its office in Ziguinchor and its staff has built a local capacity for risk education through an extensive number of training sessions. Handicap International estimates that it has reached people in Kabrousse, Loudia Ouolof, Nyassia, Niaguiss, Goudomp, Diattacounda, Tanaff, Bounkilling, Tanghory, Tendouck, Sindia and Diouloulou.¹⁶⁶⁷

Legislation

Senegal is a State Party to the Ottawa Convention as well as to the Convention on the Conventional Weapons (CCW) and its Amended Protocol II. It has participated in meetings of the CCW and expressed a commitment to dealing with ERW and MOTAPM.

1654 Landmine Monitor has reported use of AV mines by both MFDC forces and the Senegalese Army. See Landmine Monitor 1999 pp. 78-79; Landmine Monitor 2001 p. 138.

1655 MFDC refers to the armed independence movement for Casamance established in 1982.

1656 Landmine Monitor 2004, p. 703.

1657 Interview with Colonel Sarr, Senegalese Armed Forces, 20 April 2004.

- 1658 Army clears southern Senegal of 1,000 landmines. ZIGUINCHOR, Senegal, 17 June 2004 (Panafrican News Agency Daily Newswire).
- 1659 Army clears southern Senegal of 1,000 landmines. ZIGUINCHOR, Senegal, 17 June 2004 (Panafrican News Agency Daily Newswire).
- 1660 Interview with Landing Diedhiou, President of AJAC, Ziguinchor, 30 March 2004.
- 1661 Interview with Manuel Gonzal, HI, in an article by Madior Fall, "Une victime et 20 têtes de bétail toutes les semaines," *Sud Quotidien*, 17 December 2003.
- 1662 Handicap International questionnaire, July 2004: response from Doudou Fall head of PEPAM in Ziguinchor; Army clears southern Senegal of 1,000 landmines. ZIGUINCHOR, Senegal, 17 June 2004 (Panafrican News Agency Daily Newswire); cf. Article 7, Form I, "Mine/UXO Victims in 2004", 2 June 2004, provided by Handicap International, 5 July 2004, reported in *Landmine Monitor* 2004, p. 708.
- 1663 *Landmine Monitor* 1999, p. 76
- 1664 *Landmine Monitor* 1999, p. 77.
- 1665 IRIN news, April 2, 2004, accessed on 16 August 2004 at http://www.irinnews.org/report.asp?ReportID=40410&SelectRegion=West_Africa&SelectCountry=SENEGAL
- 1666 Questionnaire response from Colonel Sarr, Senegalese Armed Forces, 29 March 2004
- 1667 Handicap International, "Rapport final narratif du programme Amélioration de la prise en charge des personnes handicapées par mines ou autres et mise en place d'activités anti-mines en Casamance." October 2003, p. 41.

Serbia and Montenegro

Background

While there was some ERW and MOTAPM contamination resulting from the conflict in the Province of Kosovo, the majority of ERW contamination in Serbia and Montenegro stems from the NATO bombing campaign in 1999. Military installations, lines of communication, roads, airports, factories, refineries and power stations in Serbia were targeted. This created a major problem in terms of the widespread dispersion of cluster submunitions which left unexploded bomblets in both rural and populated areas.

As part of the "Kumanovo Agreement" signed between the Former Republic of Yugoslavia (FRY) military and NATO in June 1999, which marked the end of the conflict, a five-kilometre-wide strip of land known as the Ground Safety Zone (GSZ) was established along the boundary with Kosovo. Continued conflict between ethnic Albanian armed groups and the FRY Joint Security Forces (JVSF) between 2000 and 2001 created further mine and ERW contamination along the border with Kosovo and other parts of southern Serbia.¹⁶⁶⁸

Assessment of the problem

Many rural areas have been contaminated by unexploded cluster submunitions, which constitute the main ERW problem in the country. Other unexploded bombs and projectiles dating from the 1999 NATO bombing campaign also constitute a major problem; however, the level of contamination is less severe than that of cluster submunitions.¹⁶⁶⁹

In March 2003, the Serbia and Montenegro Centre for Clearing Mines and Other Unexploded Lethal Devices (S&MMAC) estimated that 39 million sq m of the country were suspected of being contaminated by ERW and mines, with the main threat being cluster submunitions. Cluster munition contamination was reported in 14 locations amounting to a total of 29 million sq m, while mine contamination was estimated at 10 million sq m.¹⁶⁷⁰

The International Trust Fund (ITF) states that 40 locations are contaminated with approximately 60 air bombs and high-calibre projectiles in Serbia and that these locations have not yet been cleared. According to the ITF, the minefields in Montenegro are along the border area with Croatia (the tri-border area). ERW are expected to be found under water in the coastal area of Montenegro. However, exact data is not yet available.¹⁶⁷¹

The majority of minefields in the tri-border area with Croatia and Bosnia & Herzegovina are recorded and do not constitute a major threat to the public. Mines laid in the GSZ bordering Kosovo were also laid by Serbian military and police; therefore, mine laying records exist. The main uncertainty regarding ERW and mines within the GSZ relates to mines and ordnance used by ethnic Albanian forces who used the GSZ to stage attacks against Serbian forces and police following their withdrawal from the GSZ.

According to the ICRC, there is no large ERW and mine contamination problem in southern Serbia.¹⁶⁷² This was corroborated by the FRY Government and illustrated by the relatively small number of accidents there. The most highly contaminated areas are in the municipalities of Presevo, Bujanovac and Kursumlija. Other municipalities, such as Medvedja and others along the administrative border with Kosovo and Metohija, may also be contaminated.¹⁶⁷³ In the vicinity of Jamena village, on the tri-border, it is estimated that there are around 3,800 MOTAPM and 7,200 anti-personnel mines in 103 minefields. The minefields range from 100 to 3,000 metres wide and about 40,500 metres long.¹⁶⁷⁴

Unexploded cluster submunition contamination is present in strike site areas, which are mainly in rural areas in the municipalities of Presevo, Bujanovac and Kursumlija, as well as towns such as Nis, Novi Sad and in and around Belgrade.¹⁶⁷⁵

Between 5 March and 31 December 2002, 10 weapons caches were discovered in southern Serbia, which included 14 MOTAPM and numerous ERW.¹⁶⁷⁶ As of March 2003, the

Serbia and Montenegro Ministry of Defence estimated that more than 50 large aerial bombs were located close to civilian property and more than 75 aerial bombs were on military property, all requiring removal and destruction.¹⁶⁷⁷

The worst contaminated areas are, specifically: Sjenica (two sites: 16 million sq m), Kopaonik (two sites: six million sq m), Merdare (two sites: three million sq m), Ni_ airport (three sites: two million sq m), Kraljevo (three sites: one million sq m), Cacak (700,000 sq m) and Vladimirci (200,000 sq m).¹⁶⁷⁸

Impact

Between 1999 and 2002, the ICRC has records of 41 casualties resulting from mine and ERW accidents. All but five casualties were male and all but nine were injured rather than killed. Most (14) resulted from anti-personnel mines, six from anti-tank mines, six from cluster submunitions, four from booby-traps and three from other types of UXO.¹⁶⁷⁹ Between 1999 and March 2003 a total of four EOD operators were killed in the conduct of their duties.¹⁶⁸⁰ The ICRC figures for 1999-2002 do not include incidents in which army or police personnel were either killed or injured. Such incidents often involve MOTAPM that have been deliberately placed on roads to target police and military vehicles.¹⁶⁸¹ According to the ICRC, between 1999 and 2001, 14 army and police personnel were killed by anti-tank mines and a further 39 injured.¹⁶⁸²

The ICRC states that economic motivations to enter known risk areas have contributed to ERW and mine accidents in Serbia and Montenegro. Local residents and IDPs are prevented from creating a sustainable environment for their families due to farmland being inaccessible through known or suspect ERW and mine contamination. In many cases, farmland is a secondary priority compared to housing and infrastructure within the return process and therefore it may take several years before clearance operations can be instigated. This has the consequence that local farmers either decide to ignore the risk or attempt to clear areas themselves rather than wait for authorised clearance teams. The absence of former sources of income can force people to enter risk areas for firewood, to farm or to collect abandoned or unexploded ordnance for sale, particularly copper shell casings.¹⁶⁸³

Efforts to address the problem

The Serbia and Montenegro Centre for Clearing Mines and Other Unexploded Lethal Devices is the main authority for ERW and mine clearance in Serbia and Montenegro. The military also deals with ERW and mine contamination; however, the military is responsible for contaminated areas within their jurisdiction and operates outside the jurisdiction of S&MMAC. Ministry of Defence and Civil Defence personnel and Army Engineers are responsible for EOD operations in Serbia and Montenegro.¹⁶⁸⁴ The UNDP South Eastern Europe Clearinghouse for the Control of

Small Arms and Light Weapons (SEESAC) provides EOD training to various organizations.¹⁶⁸⁵

In southern Serbia, within the former GSZ, between May 2001 and December 2002, 6,654 mines (of all types) and 223,058 ERW, including cluster submunitions, were deactivated or destroyed.¹⁶⁸⁶ According to SEESAC in Belgrade, in 2002 S&MMAC organized the clearance of 3.5 million sq m of contaminated or suspect land. In 2003 the United States, via the ITF, financed the removal and destruction of aerial bombs from five locations, four of which were in Belgrade.¹⁶⁸⁷

From late 1999 to March 2003, Serbia and Montenegro EOD operators had investigated and or rendered safe more than 12,000 suspect items. As of April 2002, more than 727 items of ERW had been identified and rendered safe. A further 3,120 required further investigation and clearance. During the same period, EOD operators also rendered safe 45 large aircraft bombs, of which 30 required fuse removal by hand. The remaining 15 were deemed not to be in a condition to permit the removal of the fuse and therefore had to be transported for destruction, at great risk to both operators and the public.¹⁶⁸⁸

Twelve of the 14 ITF tasks conducted during 2003 and 2004 were in the vicinity of Sid, a FRY major railway junction. The other two tasks were conducted at Nis airport.

On the Danube, close to Novi Sad, 2.7 million sq m of riverbed were searched and a total of six large calibre projectiles were removed. On the River Sava, 800,000 sq m of riverbed were searched near Ostruznica, without result. PMC-Engineering of Belgrade carried out both riverbed search operations.¹⁶⁸⁹

People can report ERW and mines to the S&MMAC, the police, the military, SEESAC, the Yugoslav Red Cross or the ICRC, UNHCR and other authorized NGOs or organizations accredited or authorized to conduct ERW and mine action or risk education in Serbia and Montenegro.

The ICRC has been active in Serbia and Montenegro since the end of the NATO bombing campaign in 1999 and instigated risk education campaigns aimed at both children and the adult population in risk areas. Initially, through cooperation with MSF Belgium, it was possible to train teachers and therefore reach the entire school population.¹⁶⁹⁰ In southern Serbia, the Joint Army and Ministry of Interior Coordinating Body formed a group of clearance operators to educate people about the danger of ERW and mines. This was coordinated with the ICRC, EC, UNHCR and OSCE, as well as local NGOs.¹⁶⁹¹

Legislation

Serbia and Montenegro acceded to the Ottawa Convention on 18 September 2003.¹⁶⁹² It is not a Party to Amended Protocol II or Protocol V of the CCW.¹⁶⁹³

- 1668 ICRC, "ICRC mine action in southern Serbia", published 3 February 2003, <http://www.icrc.org-Web-Eng-Siteeng0.nsf-html-5JEJPO>, accessed 21 August 2004.
- 1669 The ERW problem is not restricted to rural areas. In April 2002, Slovenian and U.S. teams visited Serbia to locate aerial bombs and projectiles dropped during the NATO bombing campaign of 1999. Four locations were prioritised: Belgrade city centre, Batajinica (Belgrade airport area), Zvezdana (a section of Belgrade) and Avala (mountain area near Belgrade): email from Adrian Wilkinson, Team Leader, UNDP South Eastern Europe Clearinghouse for the Control of Small Arms and Light Weapons (SEESAC), Belgrade, 20 July 2004.
- 1670 Letter from Petar Mihajlović, Director, S&MMAC, 13 March 2003, cited in Landmine Monitor 2003, p. 678.
- 1671 International Trust Fund (ITF) website, "ITF Demining Results", <http://www.itf-fund.si/dokumenti/dokument.asp?id=29>, accessed 18 June 2004.
- 1672 ICRC, "ICRC mine action in southern Serbia", published 3 February 2003, <http://www.icrc.org-Web-Eng-Siteeng0.nsf-html-5JEJPO>, accessed 21 August 2004.
- 1673 ICRC, "ICRC mine action in southern Serbia", published 3 February 2003, <http://www.icrc.org-Web-Eng-Siteeng0.nsf-html-5JEJPO>, accessed 21 August 2004.
- 1674 Letter from Petar Mihajlović, Director, Mine Action Centre, Belgrade, No. 2948 13 March 2003, reported in Landmine Monitor 2003, p.678.
- 1675 ICRC, "ICRC mine action in southern Serbia", published 3 February 2003, <http://www.icrc.org-Web-Eng-Siteeng0.nsf-html-5JEJPO>, accessed 21 August 2004.
- 1676 Serbian Ministry of Internal Affairs, "Report: 2002", No. 153, 21 January 2003, cited in Landmine Monitor 2003, p. 678.
- 1677 Letter from Petar Mihajlović, Director, S&MMAC, 13 March 2003, cited in Landmine Monitor 2003, p. 678.
- 1678 James Madison University, Mine Action Information Center, Journal of Mine Action – Landmines in Eastern Europe & the Caucasus, Issue 7.2, August 2003, "Mine Problem in the Region of Southeastern Europe: The ITF and SEEMACC", by Damir Gorseta, SEEMACC, and Eva Veble and Sabina Beber, ITF, p.2, <http://www.hdic.jmu.edu/JOURNAL/7.2/focus/gorseta/gorseta.htm>, accessed 18 July 2004.
- 1679 ICRC, "ICRC mine action in southern Serbia", published 3 February 2003, <http://www.icrc.org-Web-Eng-Siteeng0.nsf-html-5JEJPO>, accessed 21 August 2004.
- 1680 Email from Adrian Wilkinson, Team Leader, UNDP SEESAC, Belgrade, 20 July 2004.
- 1681 ICRC, "ICRC mine action in southern Serbia", published 3 February 2003, <http://www.icrc.org-Web-Eng-Siteeng0.nsf-html-5JEJPO>, p.2, accessed 21 August 2004.
- 1682 Information regarding mine or ERW incidents involving police or military personnel is restricted by the authorities. Therefore, it is not possible to question how these incidents occurred or ascertain how behaviour could be changed to avoid them in the future.
- 1683 ICRC, "ICRC mine action in southern Serbia", published 3 February 2003, <http://www.icrc.org-Web-Eng-Siteeng0.nsf-html-5JEJPO>, accessed 21 August 2004.
- 1684 Letter from Petar Mihajlović, Director, S&MMAC, 13 March 2003, cited in Landmine Monitor 2003, p. 678.
- 1685 ICBL, Serbia and Montenegro, Landmine Monitor 2003, p.2, http://www.icbl.org/lm/2003/serbia_montenegro.html, accessed 10 June 2004.
- 1686 Email from Adrian Wilkinson, Team Leader, UNDP SEESAC, Belgrade, 20 July 2004.
- 1687 ICBL, Serbia and Montenegro, Landmine Monitor 2003, p.2, http://www.icbl.org/lm/2003/serbia_montenegro.html, accessed 10 June 2004.
- 1688 Email from Adrian Wilkinson, Team Leader, UNDP SEESAC, Belgrade, 20 July 2004.
- 1689 Email from Adrian Wilkinson, Team Leader, UNDP SEESAC, Belgrade, 20 July 2004.
- 1690 ICRC, "ICRC mine action in southern Serbia", published 3 February 2003, <http://www.icrc.org-Web-Eng-Siteeng0.nsf-html-5JEJPO>, accessed 21 August 2004.
- 1691 ICRC, "ICRC mine action in southern Serbia", published 3 February 2003, <http://www.icrc.org-Web-Eng-Siteeng0.nsf-html-5JEJPO>, accessed 21 August 2004Ibid.
- 1692 ICBL, Treaty Update as of 13 May 2004, p.3, <http://www.icbl.org/ratification/>, accessed 13 June 2004.
- 1693 The FRY was also a State Party to Protocols I,II,III and IV.

Sierra Leone

Background

Internal conflict in Sierra Leone from 1991 to 2002 left a legacy of displacements, economic disaster and destroyed infrastructure. Fighting between the Sierra Leone Army and the Revolutionary United Front (RUF) took place throughout the country, but was fiercest in diamond-mining areas, particularly along the Liberian border.

Assessment of the problem

According to an UNMAS Assessment Team in 2000, "items of UXO remain to be cleared following conflict in a number of areas. Based on available evidence, including reports of injuries and records of weapons handed in at disarmament sites, these are likely to include unexploded mortar shells, hand grenades, and possibly rocket-propelled grenades."¹⁶⁹⁴ Nigerian ECOMOG troops reportedly used cluster munitions in Sierra Leone and unexploded BL-755 submunitions have been found Freetown.¹⁶⁹⁵ It will not be possible to evaluate

the true ERW impact on Sierra Leone until a full assessment has taken place throughout the country.

However, fighting continued subsequent to this mission and it is difficult to know for sure the extent of the current impact. Affected areas may include:

- Ocarra Hills; Kono district; Kailahum district; the northern part of Moyamba district from Moyamba town; the southern part of Tonkolili district from Marburaka town; Koinadugu district and the southern part of Port Loko district from Port Loko town.¹⁶⁹⁶
- There may also be contamination from battles in Kabala, Pujehun, Telu, Kenema and Bo.

Impact

While Sierra Leone faces more danger from ERW than from landmines,¹⁶⁹⁷ the general mine/ERW threat is limited compared to other United Nations peace-keeping

operations.¹⁶⁹⁸ According to its Article 7 report, Sierra Leone is not affected by AP mines, although it recognizes that it is affected by ERW.¹⁶⁹⁹ Landmine Monitor has classified Sierra Leone as a mine-affected country,¹⁷⁰⁰ but UN officials have said “there is no real threat of landmines in the country.” As reported in Landmine Monitor 2003, 45 people were killed and 11 injured by mines during the 1992-1997 civil war.¹⁷⁰¹

In 2000, UNMAS assessed that “the area of the problem posed by landmines and UXO is limited in extent. Incidents involving mines and or unexploded ordnance have been reported in the local press but they have been relatively few in number. Press reports of a ‘major’ problem of uncleared landmines do not seem borne out by the available evidence.”¹⁷⁰² A small area of land adjacent to a disused secondary school in Kabala has been identified as likely to be affected by either mines or booby traps. It is thought that the school was occupied by Guinean troops serving in ECOMOG, who may have attached tripwires to hand grenades as a protection against enemy soldiers. In the same town, an item of ERW exploded in January 2000, but no casualties resulted.¹⁷⁰³

- In January 2000, a girl was injured by what she said was a “mine” in the Mile 91 area. Her injuries were more consistent with ERW, probably a hand grenade.¹⁷⁰⁴

- A farmer in the village of Jombohun died in an explosion that local sources attributed to an unexploded hand grenade. More unexploded hand grenades were subsequently recovered in the area.¹⁷⁰⁵

Efforts to address these problems

Since February 2000, UNAMSIL’s Mine Action Office has coordinated the destruction of 28,289 items of ERW, 240 scatterable munitions, 104 AP mines and one AT mine.¹⁷⁰⁶ An initial survey of the ERW and mine contaminated area in the six affected districts has not yet been conducted and a mine action programme has not been established.¹⁷⁰⁷ In early 2004, a local NGO, SHARE, issued warnings to the population about the dangers of ERW in areas that had experienced heavy combat during the 1991-2002 conflict.¹⁷⁰⁸

Legislation

Sierra Leone is a State Party to the CCW and on 30 September 2004 it became the third country to ratify Protocol V on ERW. Sierra Leone is a State Party to the Ottawa Treaty.

1694 United Nations Mine Action Service, “Mine/UXO and Mine Action Technical Assessment in Sierra Leone. Mission Report”, 7 February 2000.

1695 Rae McGrath, “The military effectiveness and civilian impact of cluster munitions”, Landmine Action, 2000, p. 41.

1696 United Nations Mine Action Service, “Technical Evaluation Mission Report, Sierra Leone”, 06 March 2001, p. 4.

1697 International Campaign to Ban Landmines, “Landmine Monitor Report 2003: Toward a Landmine-Free world” (New York: Human Rights Watch, 2003), p. 420.

1698 United Nations Mine Action Service, “Technical Evaluation Mission Report, Sierra Leone”, 06 March 2001, p. 4.

1699 Article 7 Report, Form C, Form I, 9 February 2004, p. 4, 10.

1700 International Campaign to Ban Landmines, “Landmine Monitor Report 2003: Toward a Landmine-Free world”, (New York: Human Rights Watch, 2003), p. 420.

1701 United Nations Mine Action Service, “Mine/UXO and Mine Action Technical Assessment in Sierra Leone. Mission Report”, 7 February 2000.

1702 United Nations Mine Action Service, “Mine/UXO and Mine Action Technical Assessment in Sierra Leone. Mission Report”, 7 February 2000.

1703 United Nations Mine Action Service, “Mine/UXO and Mine Action Technical Assessment in Sierra Leone. Mission Report”, 7 February 2000.

1704 United Nations Mine Action Service, “Mine/UXO and Mine Action Technical Assessment in Sierra Leone, Mission Report”, 7 February 2000.

1705 United Nations Mine Action Service, “Mine/UXO and Mine Action Technical Assessment in Sierra Leone. Mission Report”, 7 February 2000.

1706 United Nations Mine Action Service, “Technical Evaluation Mission Report, Sierra Leone” 06 March 2001, p. 5.

1707 United Nations Mine Action Service, “Sierra Leone Country page,” available at:

<http://mineaction.org/countries/countries_overview.cfm?country_id=279>. Access on 21 July 2004.

1708 Article 7 Report, Form I, 9 February 2004, p. 11.

Somalia

Background

The regime of Mohamed Siyad Barre, established after a military coup in 1969, was overthrown in 1991. Since then, various warlords have fought to establish or maintain control over Somalia's key ports and most fertile land. The country has not had a unified central government since 1991, resulting in localized factional fighting.¹⁷⁰⁹ Together with various conflicts over the past four decades, this fighting has led to significant contamination from ERW and mines along the border with Ethiopia and throughout the country.¹⁷¹⁰

Assessment of the problem

Assessment in Somalia is difficult because of a lack of security. However, the second phase of the Landmine Impact Survey (LIS) in Somalia got under way on 22 August 2004 for the three regions of Bari, Nugaal and Mudug which make up Puntland. The LIS is being implemented by the Puntland Mine Action Center (PMAC) with management being provided by a Survey Action Center team operating out of Garowe.¹⁷¹¹

A wide variety of artillery and mortar shells were used in the border and internal conflicts from the 1960s onwards. More than 10 different types of AV mines were also used during these conflicts.¹⁷¹² Both AV and AP mines were widely used in Somalia and are reportedly still being laid in the south of the country, despite many of the warring factions having signed the Geneva Call agreement to cease using AP mines. A large amount of ERW also exists countrywide.¹⁷¹³ The German Bundeswehr has identified 22 different types of AVM and 35 different types of APM used in Somalia.¹⁷¹⁴

Between 1977 and 1978 the Somali Democratic Republic went to war with Ethiopia, with both sides conducting large-scale bombardment and heavily mining the front lines, the perimeters of military installations and important access routes with both AV and AP mines. These operations resulted in significant ERW and MOTAPM contamination in the border areas.¹⁷¹⁵ The Somali National Movement (SNM) fought an armed conflict against the Barre regime from 1981 to 1991, contaminating the border between Puntland and Ethiopia with ERW and MOTAPM, particularly in Goldogob and Burtinle in the Mudug region.¹⁷¹⁶ In 1991 and 1992, the Islamic El-Itihad Fighters clashed with the ruling Somali Salvation Democratic Front west of Bossaso and MOTAPM used during this period have caused vehicle accidents and road denial.¹⁷¹⁷ Accidents have been reported near Laskoray town, 120 km west of Bossaso in the Sanaag region. Some accidents involving AV mines have also occurred on the roads through the Saliid Mountains in this region.¹⁷¹⁸

From 1991 to 1993, the Hawiye and Daarood clans clashed in the southern part of the Mudug region. Both sides are believed to have used AV mines along the "green line" or clan border, which passes through the Galkayo and up to the coast north of Garad.¹⁷¹⁹ Since the end of the conflict, many battlefield areas have caused casualties among children interacting with hand grenades and other ERW.¹⁷²⁰

Central and southern Somalia are also heavily contaminated with mines and ERW, in particular Galguduud, Bakool, Bay, Hiran and the Lower Jubba region.¹⁷²¹ Although no surveys have been conducted in these regions, sporadic reports suggest that the ERW and mine contamination poses a significant threat.¹⁷²²

Militias and private individuals are believed to possess large stocks of AV mines. Both AP and AV mines can be purchased in Somalia and are sold at markets in Mogadishu and elsewhere.¹⁷²³ The 37 AV mines cleared between November 1999 and March 2000 constituted 6 per cent of the total items cleared by HALO Trust in Somalia and Somaliland during that period.¹⁷²⁴

Impact

A lack of reporting and data collection in Somalia make it difficult to assess the impact of ERW and MOTAPM throughout the country. However, a study by UNICEF and Handicap International in the northern region of Puntland has provided some insight into the nature of the problem in that region. The groups most at risk are children (interacting with ERW) and passengers travelling by car (vulnerable to AV mines). There are no credible surveys on how much land is unused due to ERW and mine contamination, but there are reports of cultivable land and pastureland that remain unused and of roads that are avoided due to fear of ERW and mines.¹⁷²⁵

UNICEF notes that street-level evidence from areas like Bossaso, Gardo and Garowe indicates few ERW or mine related accidents or amputations. However, the report suggests that where accidents have occurred, they are more consistent with ERW than mine accidents. It also suggests that risk education has reduced the risk from landmines, but not from ERW, which are less widely understood.¹⁷²⁶ The report notes several vehicle accidents involving AV mines on roads in the Goldogob and Burtinle districts.¹⁷²⁷ Police officers in Garowe confirm that the worst-affected district in the Nugal region is Burtinle district where AV mine contamination has blocked roads.¹⁷²⁸ According to the same source, most of the mined areas are military points, as well as some water facilities and grazing land.¹⁷²⁹

In Puntland, most accidents have occurred in the two most contaminated areas of Goldogob and Burtinle district along

the border with Ethiopia. There are also some sporadic cases in villages along the Bossaso-Gardo road and in and around Garowe mainly due to ERW contamination.¹⁷³⁰ In Garowe town, where previous conflicts left significant ERW contamination around military camps, accidents have occurred with people using explosives from an item of ERW or a mine to dig wells or break rocks.¹⁷³¹

MOTAPM contamination has denied access to roads in Somalia. For example, in areas to the west of Bossasso, vehicle accidents and road denial have resulted from AV mine use during the 1991-1992 conflict.¹⁷³²

UNICEF reports of MOTAPM accidents from June 2003 to July 2004 included:

- In Bossaso, a seven-year-old boy had a leg amputated after stepping on an ERW/mine while herding in 2003.¹⁷³³
- In June 2003, in Bursaalax, Goldogob, a driver was killed and another person was injured when a car hit an AV mine.¹⁷³⁴
- In June 2003, five people were killed when an AV mine exploded in the home of a weapons dealer in southern Mogadishu. "Among those killed were three men, including the weapons dealer, and two women."¹⁷³⁵
- On 6 June 2003, in Qorqoore Dheer village, east of Galakayo, a man and his camel were injured by an ERW/mine explosion close to a watering point.¹⁷³⁶
- On 3 July 2003, a truck hit an AV mine 12 km north of Baadweyn, killing a man and injuring a woman.¹⁷³⁷
- In August 2003, on the road from Galkayo to Goldogob a car hit an AV mine killing one person and injuring two.¹⁷³⁸
- In September 2003, in Riigoomane village, along the border with Ethiopia in Goldogob district, a car detonated an AV mine, injuring two women.¹⁷³⁹

Reports of ERW accidents from June 2003 to July 2004 included:

- On 18 June 2003, in Baadweyn on the road from Garowe to Galkayo, an ERW injured a seven-year-old boy after he lit a fire in a refuse area.¹⁷⁴⁰

- In August 2003, a 13-year-old boy lost two fingers after handling a fuse near the military camp by the Garowe hospital.¹⁷⁴¹
- In July 2003, in Burtinle city a young boy was injured when he picked up an item of ERW in a refuse area.¹⁷⁴²
- On 3 June 2004, a doctor and seven children were killed when an item of ERW exploded as they handled it.¹⁷⁴³

In central and southern Somalia, it is very difficult to assess the socio-economic impact of ERW and MOTAPM, but media reports and casualty data collected by the Mogadishu-based Somali Centre for Research and Documentation indicate at least 16 casualties from ERW in 2003 and 75 casualties from landmines.¹⁷⁴⁴ In addition, the 2003 report of an independent human rights monitor, Mr. Ghanim Alnajjar, notes that ERW and mines have hindered humanitarian assistance, especially around Gedo.¹⁷⁴⁵

Efforts to address these problems

During its mission, UNICEF was informed of a voluntary initiative taken in September 2003 by the communities of Bahalley, Magaleey, Qoriley and Eleyli. After a survey by the residents of these villages, UNICEF identified the need for a comprehensive survey of ERW/mine contamination and local youths began fencing some of the contaminated areas. There are no known mine clearance operations currently under way in Somalia. However, in Puntland, UNDP is assisting with the establishment of EOD teams within the Puntland police force.¹⁷⁴⁶

Legislation

Its lack of control over the territory of Somalia and its lack of international recognition prevent the Transitional National Government (TNG) from acceding to the Ottawa Mine Ban Treaty or taking a position on ERW or MOTAPM within the CCW framework. So far the TNG has not issued any statements on the nature of the ERW or MOTAPM contamination in Somalia.

1709 UNDP "Country brief for Somalia, UNDP July 2002

1710 UNICEF/HI, "Mine Risk Education Feasibility Study Mission in Puntland", October 2003, p. 8.

1711 See overview of Somaliland Landmine Impact Survey available on the web on http://www.sac-na.org/surveys_somalia.html accessed on 16 October 2004.

1712 German Initiative to Ban Landmines, "Why Anti-vehicle Mines Should Also be Banned," Berlin, 2000, p. 16.

1713 Landmine Monitor 2002, p. 744.

1714 Pionierschule und Fachschule des Heeres, *Minenhandbuch Somalia*, 1993.

1715 Sebastian Taylor, "Landmines and UXO in Somaliland, Puntland and Central and Southern Somalia: A Feasibility Study," 26 May 2000, p. 11.

1716 UNICEF/HI, "Mine Risk Education Feasibility Study Mission in Puntland", October 2003.

1717 UNICEF/HI, "Mine Risk Education Feasibility Study Mission in Puntland", October 2003.

1718 UNICEF/HI, "Mine Risk Education Feasibility Study Mission in Puntland", October 2003.

1719 UNICEF/HI, "Mine Risk Education Feasibility Study Mission in Puntland", October 2003.

1720 UNICEF/HI, "Mine Risk Education Feasibility Study Mission in Puntland", October 2003.

1721 UNICEF/HI, "Mine Risk Education Feasibility Study Mission in Puntland", October 2003.

1722 Landmine Monitor 2002, p. 744.

1723 Landmine Monitor 2003 reported evidence of AV mines being sold in a market.

- 1724 ICRC, Anti-vehicle Mines: effects on humanitarian assistance and civilian populations, July 2002, CCW document, available at: <http://ods-dds-ny.un.org/doc/UNDOC/GEN/G02/629/03/PDF/G0262903.pdf?OpenElement>
- 1725 UNICEF/HI, "Mine Risk Education Feasibility Study Mission in Puntland", October 2003.
- 1726 UNICEF/HI, "Mine Risk Education Feasibility Study Mission in Puntland", October 2003.
- 1727 UNICEF/HI, "Mine Risk Education Feasibility Study Mission in Puntland", October 2003.
- 1728 UNICEF/HI, "Mine Risk Education Feasibility Study Mission in Puntland", October 2003.
- 1729 UNICEF/HI, "Mine Risk Education Feasibility Study Mission in Puntland", October 2003.
- 1730 UNICEF/HI, "Mine Risk Education Feasibility Study Mission in Puntland", October 2003.
- 1731 UNICEF/HI, "Mine Risk Education Feasibility Study Mission in Puntland", October 2003.
- 1732 UNICEF/HI, "Mine Risk Education Feasibility Study Mission in Puntland", October 2003.
- 1733 Information provided by Dr. Moh Ali Kawir, Surgeon, Bossaso hospital.
- 1734 This incident was outlined in a Radio Galkayo report in June 2003.
- 1735 AFP, "Five killed as landmine explodes in arms dealer's house in Somali capital", AFP, (Mogadishu) 2 June 2003, <http://www.reliefweb.int/w/rwb.nsf/0/36fb188b6d609fa1c1256d39005e6923?OpenDocument>
- 1736 Information provided by the Director of Radio Galkayo.
- 1737 UNICEF/HI, "Mine Risk Education Feasibility Study Mission in Puntland", October 2003.
- 1738 Information provided by Mr. Souleymane Hadj Abdalle, Director of PMAC and Mr. Ahmed Djama, SRCS Branch Secretary in Galkayo.
- 1739 Information provided by Christian Watson of UNICEF, after a field visit conducted in October 2003 and by Osman Aden, director of local NGO UNISOPO in Galkayo.
- 1740 Information provided by 2 ERW/mine operators in Baadweyn.
- 1741 Information provided by the management team at Garowe Hospital, June 2004.
- 1742 UNICEF/HI, "Mine Risk Education Feasibility Study Mission in Puntland", October 2003.
- 1743 IRIN, "SOMALIA: Nearly 60 killed, thousands displaced in Bulo Hawa clashes", IRIN, (Nairobi) 3 June 2004, available on the web on <http://www.reliefweb.int/w/rwb.nsf/0/da197b2148decfe2c1256ea80043bad0?OpenDocument>
- 1744 SOCREd, "Landmines in Somalia", Mogadishu, April 2004; HornAfrik Online, 11 April 2003. Neither of these sources indicate whether the landmine casualties were due to AP or AV mines.
- 1745 Economic and Social Council, UNCHR "Assistance to Somalia in the field of human rights; Report of the independent expert, Mr. Ghanim Alnajjar", submitted in accordance with Commission on Human Rights resolution 2002/88, E/CN.4/2003/115 available on <http://www.unhchr.ch/Huridocda/Huridoca.nsf/TestFrame/460846883b48bf6c1256cda00367522?Opendocument>
- 1746 UNDP update, Mine Action Support Group Newsletter, February 2004.

Somaliland

Background

The ERW/mine problem in Somaliland is the result of three decades of warfare. The Ogaden conflict with Ethiopia from 1977 to 1978; the 1981 to 1991 insurrection against the Government of Somalia; and civil wars from 1992 to 1996, have left the territory with serious contamination from ERW and MOTAPM.

Assessment of the problem

The Landmine Impact Survey (LIS) in Somaliland, managed by UNDP and conducted by the Survey Action Center and Danish Demining Group (DDG), found 42 per cent of impacted communities had significant ERW contamination.¹⁷⁴⁷ The LIS further noted that in the majority of surveyed areas at least one or two ERW were found, but that this contamination did not warrant the classification of "impacted."¹⁷⁴⁸ The LIS also showed that 421 of 772 suspected hazard areas had MOTAPM contamination only, 92 per cent of which was along roads.¹⁷⁴⁹

AV and AP mines are found along borders and around military sites as well as around towns garrisoned during the conflict.¹⁷⁵⁰ Since there was no aerial bombardment during the conflict, most ERW are ground-launched munitions, mortars, hand grenades and small arms ammunition.¹⁷⁵¹ ERW are found in former military camps as well as in battlefield areas.¹⁷⁵² The large quantity of AXO such as

missiles abandoned by withdrawing Soviet forces in 1977 present a particular danger.¹⁷⁵³ The AXO problem is further demonstrated by clearance operations at Hargesia airport where 180,000 sq m of land were contaminated with ERW after an explosion in an ammunition dump.¹⁷⁵⁴

Data from a feasibility study carried out in Somaliland, Puntland and Central and Southern Somalia indicates that ERW were more frequently encountered than landmines.¹⁷⁵⁵ Accident profiles suggest children are a significant ERW casualty group.¹⁷⁵⁶

Impact

ERW/mine contamination directly impacts the safety and livelihoods of an estimated 1.34 million people in Somaliland.¹⁷⁵⁷ The number of ERW and mines has been reduced over recent years due to the efforts of clearance agencies and the local population, but fear and uncertainty over the residual threat is a further factor delaying the resettlement and rehabilitation of rural society and the economy.¹⁷⁵⁸

The LIS recorded 276 victims of ERW/mine incidents in the surveyed area from 2001 to 2003; males made up 75 per cent of mine victims and just over half of all victims were between the ages of five and 14; 64 per cent of victims were harmed while herding livestock. Other significant activities that led to mine incidents include travel (10 per

cent), playing (9 per cent), and tampering (7 per cent). In general terms, the typical profile of an ERW/mine victim in Somaliland is a boy engaged in herding livestock.¹⁷⁵⁹

In many of the surveyed areas, access to roads, pastures, sources of drinking water and irrigated cropland is blocked or disrupted by ERW and MOTAPM contamination.¹⁷⁶⁰ ERW and mine contaminated areas around former government camps also block access to pasture and cropland and pose a danger to herders in these areas.¹⁷⁶¹ UNDP reports that a number of civilians have died trying to recover scrap metal from dangerous items of ERW. In a resource-starved region, scrap metal from ERW has become a valuable commodity for some local traders.¹⁷⁶²

The regional capital of Hargeisa suffers from particularly acute contamination and, since 1991, many of the casualties treated in Hargeisa hospital have been children who have lost limbs after entering ERW/mine affected areas or handling ERW.¹⁷⁶³ In addition, AV and AP mines were laid in large numbers along the runway at Hargeisa Airport for defensive purposes. Clearance operations were conducted in the early 1990s, but accidents continued to be reported in the area. As a representative from DDG noted: "completion of this task further reduces the threat which minefields laid in the vicinity of Hargeisa airport have presented to a large and vulnerable local population since the late 1980s."¹⁷⁶⁴

Efforts to address these problems

In the absence of a central government in Somalia, UNDP is working with local authorities to undertake mine action

activities.¹⁷⁶⁵ The mine action community in Somaliland is comprised of the clearance agencies Danish Demining Group (DDG), The HALO Trust and Santa Barbara Foundation (SBF). UNICEF and Handicap International are involved in mine/ERW victim assistance and risk education, supported by a number of smaller local NGOs such as the Somali Red Crescent Society. UNICEF is now raising funds to implement an indigenous mine risk education project in Somaliland.¹⁷⁶⁶

According to the UN, between 1999 and 2002, demining organizations in Somaliland destroyed 220,874 ERW and 14,596 AV or AP mines.¹⁷⁶⁷ These operations have continued with the clearance of infrastructure, community lands, and border minefields.¹⁷⁶⁸ ERW items destroyed included anti-aircraft projectiles, artillery projectiles, rifle projectiles, fuses, rockets, hand grenades, mortar bombs and rifle grenades.

UNICEF and Handicap International are implementing joint mine risk education projects in Somaliland. Children and youth herders who handle ERW and mines have been identified as at risk groups. To reach these nomadic groups, relevant and cost-effective communication channels have been identified, through veterinary networks, mine action organisation EOD teams and radio.¹⁷⁶⁹ In addition, two UNDP-supported police EOD teams in Somaliland have cleared more than 10,000 items of ERW.¹⁷⁷⁰

Legislation

With no formal recognised government, Somaliland cannot accede to international agreements on ERW or mines.

1747 "Landmine Impact Survey – Awdal, Galbeed, Sahil & Togdheer Regions", p. 43.

1748 "Landmine Impact Survey – Awdal, Galbeed, Sahil & Togdheer Regions", p. 13.

1749 "Landmine Impact Survey – Awdal, Galbeed, Sahil & Togdheer Regions", p. 42.

1750 Jab Swart, Mine Action Programme for Somalia, *Journal of Mine Action*, (6, 1) April 2002, <http://maic.jmu.edu/journal/6.1/focus/swart/swart.htm>

1751 Survey Action Center, *Landmine Impact Survey-Phase1: Awdal, Galbeed, Sahil and Togdheer Regions*, (New York: 2003), p.32

1752 Derbet Eric, UNICEF/HI "Analysis of Mine/UXO Socio-Economic Impact in Somaliland", 2003 document made available by email to researcher.

1753 IRIN, "SOMALIA: Dealing with a deadly legacy", IRIN, (Nairobi) 13 April 2001, http://www.irinnews.org/report.asp?ReportID=2984&SelectRegion=Horn_of_Africa&SelectCountry=SOMALIA

1754 "Explosive remnants of war: a global survey" (London: Landmine Action, 2003), p. 17.

1755 Sebastian Taylor, "Landmines and UXO in Somaliland, Puntland and Central & Southern Somalia: A feasibility study", 2000, p. 11. The Danish Demining Group had cleared some 32,000 items, of which less than 200 were AP or AV mines, the rest being ERW.

1756 Sebastian Taylor, "Landmines and UXO in Somaliland, Puntland and Central & Southern Somalia: A feasibility study", 2000, p. 13.

1757 Survey Action Center, *Landmine Impact Survey-Phase1: Awdal, Galbeed, Sahil and Togdheer Regions*, (New York: 2003).

1758 Email from Nick Bateman, Programme Manager DDG Somaliland, Monthly Clearance Statistics Sheet, 1 July 2004

1759 Survey Action Center, *Landmine Impact Survey-Phase1: Awdal, Galbeed, Sahil and Togdheer Regions*, (New York: 2003), p. 7.

1760 Survey Action Center, *Landmine Impact Survey-Phase1: Awdal, Galbeed, Sahil and Togdheer Regions*, (New York: 2003), p. 7.

1761 Survey Action Center, *Landmine Impact Survey-Phase1: Awdal, Galbeed, Sahil and Togdheer Regions*, (New York: 2003), p. 45.

1762 Email from John Dingley, UNDP Chief Technical Adviser, Somalia, 10 May, 2004.

1763 IRIN, "SOMALIA: Dealing with a deadly legacy", IRIN, (Nairobi) 13 April 2001, http://irinnews.org/report.asp?ReportID=2984&SelectRegion=Horn_of_Africa&SelectCountry=SOMALIA

1764 Email from Nick Bateman, Programme Manager, DDG Somaliland, Monthly Clearance Statistics Sheet, 1 July 2004.

1765 Email communication with John Dingley, UNDP Chief Technical Adviser, Somalia, 10 May 2004.

1766 Email communication with Silvia Danailov, Child Protection Officer, UNICEF Somalia Support Centre, 17 June 2004.

1767 *Landmine Monitor 2003*, p. 761 quoting "UNDP/OPS Annual Report", December 2002. The data reported here did not include clearance activities by Rimfire (before 1999), Greenfield Associates and MineTech.

1768 Email from Nick Bateman, Programme Manager, DDG Somaliland, Monthly Clearance Statistics Sheet, 1 July 2004; information provided by Norbert Rossa, Executive Director SBF, in an email dated 7 July 2004; Halo Trust information on Somaliland available on <http://www.halotrust.org/somaliland.html> as at 30 June 2004.

1769 MASG Newsletter, October 2003, Update from UNICEF.

1770 MASG Newsletter, September 2003, Update from UNDP.

Sri Lanka

Background

In February 2002, the Government of Sri Lanka and the Liberation Tigers of Tamil Eelam (LTTE) signed a cease-fire agreement after 19 years of civil war. This conflict affected large areas of the north and east of the country, resulting in tens of thousands of people being displaced. The conflict saw the establishment of a substantial network of defensive lines, with earthworks and barbed wire crossing the landscape in the areas of fiercest fighting. These areas are subject to substantial ERW contamination and also extensive minefields (primarily containing anti-personnel mines rather than MOTAPM). Addressing landmine and ordnance contamination was a priority for both the government and the LTTE authorities in the immediate wake of the 2002 cease-fire. Although the peace talks between the two parties have been stalled since the latter part of 2003, mine action operations continue in both government and LTTE controlled areas.

Assessment

Northern Sri Lanka is extensively contaminated with ERW. During the conflict both parties used a range of ordnance, including artillery, mortars, rifle grenades and hand grenades. The government also utilised air-dropped bombs, though not in great quantities. Anti-personnel mines were widely used by both parties,¹⁷⁷¹ along with IEDs¹⁷⁷² and, to a lesser extent, MOTAPM. A Landmine Action assessment report of ERW contamination in Sri Lanka, published in 2003, noted that:

“A broad range of munitions is causing humanitarian problems. The main munitions posing a risk to civilians are 60mm, 81mm and 120mm mortar shells, artillery shells and grenades including illuminating and white phosphorous mortars. Of particular concern in the LTTE-controlled Vanni region are 40mm grenades as they are highly unstable and difficult to clear. Small arms ammunition also presents a ... hazard.”¹⁷⁷³

Most ERW are found in the LTTE-controlled areas of the Vanni, Batticaloa and Trincomalee and the government-controlled areas of Vanuniya, Mannar and Jaffna. The Landmine Action assessment report of ERW in Sri Lanka also noted that “the ERW problem ... is not just one of ordnance that has failed to explode at the time of its use; there is also a significant contamination from abandoned ordnance as frontlines shifted and army camps were deserted.”

Although very extensive the anti-personnel mine threat in many parts of Sri Lanka is well defined and contained. The Sri Lankan Army (SLA) has handed over 1,000 minefield records to UNDP.¹⁷⁷⁴ In addition, extensive survey work of landmine and ERW contamination has been undertaken by Mines Advisory Group (MAG) (working in partnership with the local Humanitarian Demining Unit in areas controlled

by the LTTE), the HALO Trust (working primarily in government-controlled areas) and the Swiss Foundation for Demining (FSD). Whilst the minefields may be well defined, ordnance contamination can be more widespread and dispersed as a result of the shifting lines of the conflict.

The SLA used MOTAPM to defend or prevent access to areas of strategic importance such as military camps and bridges.¹⁷⁷⁵ The LTTE also use MOTAPM to attack military convoys. Although the location of remaining MOTAPM contamination may be difficult to determine, the MOTAPM threat is not causing a significant disruption to civilian or humanitarian access.

Impact

The presence of ERW has affected the resettlement process, hampered access to land, and continues to kill and harm civilians. At the time of the cease-fire agreement, 731,838 people were internally displaced.¹⁷⁷⁶ Most of the areas to which these groups sought to return were subject to some level of ERW contamination. In the north, refugees returning to their area have sometimes been unable to settle, as social infrastructure (such as community buildings) cannot be accessed because of the threat of ERW.¹⁷⁷⁷ More than 300,000 IDPs were thought to have returned by February 2004, leaving a similar number still displaced. A substantial proportion of the displaced people are living in welfare camps.

Mines Advisory Group relay a story of how their ordnance disposal teams in the LTTE controlled north of Sri Lanka have been tasked to address ordnance contamination that was making community facilities inaccessible:¹⁷⁷⁸

“Pullaveli was the scene of intense fighting between the Sri Lanka Army and the Tamil Tigers during the civil war and as a result the only landmark remaining is the church of Saint Sebastian. The church and surrounding area has been inaccessible for 14 years due to extensive UXO contamination remaining after the fighting. Parishioners from the church, many of who are still displaced and live as far away as Jaffna, were determined to celebrate a special service there, and planned it for June 2004. The event was expected to encourage in excess of 1,000 worshippers. An urgent request for assistance was sent to the Humanitarian Demining Unit, MAG’s partner organisation in Sri Lanka. MAG immediately deployed an Explosive Ordnance Disposal team to identify, remove and destroy all UXOs in an area of over 15,000 sq m around the church and the approach roads.”

Some 1,198 civilians are recorded as suffering ERW or landmine accidents since 1985.¹⁷⁷⁹ Although many incidents go unreported, the reporting system has improved since the introduction of international support to mine action in 2002. In 2003, the total numbers of victims

due to incidents of AP mines, ERW and MOTAPM in all Sri Lanka was 99. In 2004, to August, some 33 casualties were reported.¹⁷⁸⁰ The highest impacts are in the north where most fighting has taken place, in the areas of Jaffna, Kilinochchi, Mannar and Mullaitivu. Of the 99 casualties in 2003, landmines accounted for 44, UXO for 33 and the remainder were unknown.

Although ordnance accidents amount to a substantial proportion of casualties, this may in part be due to the formalised nature of the landmine contamination. The fact that a significant proportion of the anti-personnel mine threat is to be found in predictable locations (such as on the forward side of defensive lines or around former military camps) means that the local population can manage the threat more easily than is possible in countries which have experienced more sporadic mine-laying. Thus extensive landmine contamination is not resulting in as many accidents as may otherwise be expected – and ordnance is more prominent as a proportion of the casualties.

Although MOTAPM incidents are less common than incidents from anti-personnel mines or ERW, MOTAPM do present a threat. Three people were killed when a tractor hit an AT mine in Paranthan village, just outside Kilinochchi, on 11 June 2004.¹⁷⁸¹ The area previously hosted army camps and suffered from severe fighting.

A concentration of casualties around Kilinochchi might be due to a relatively high ERW contamination in the area. Although extensive risk education has been given to these communities since 2002,¹⁷⁸² many people in the area were previously soldiers and may thus consider themselves familiar with weapons. Most victims in this area have been men between 18 and 35 years.¹⁷⁸³

The Landmine Action assessment report noted that “ERW victims are predominantly male” and related this to division of labour or deliberately interacting with ERW through economic necessity or feelings of social responsibility.¹⁷⁸⁴ Some accidents with ERW have happened when people tried to move or disarm items of ordnance. Of the 31 reported ERW and MOTAPM incidents in 2003 and 2004, only 18 contain a record of the victims’ activity at the time of the accident. Five of these happened while people were handling explosive devices. However, a further 13 happened while people were collecting firewood or water, tending animals or engaged in domestic work.¹⁷⁸⁵ For people returning to their homes after a period of displacement, the process of clearing away rubble in preparation for rebuilding can be particularly dangerous. The following story was related to an assessment team by a woman returning to part of the Jaffna peninsula:¹⁷⁸⁶

“Our house had been damaged during the conflict. My husband and a friend were repairing it and clearing the land when the shell [a 60mm mortar] exploded injuring them and me. We had no idea it was there at the time. My husband and friend were thrown by the blast [...] I suffered minor injuries on my forehead and my left eye.”

Similarly people may deliberately engage with ordnance in order to move it off their land so as to resume agricultural activities.

There are reports of people crossing into marked dangerous areas to collect scrap metal.¹⁷⁸⁷ Scrap metal from ERW can be found on local markets, but there is no extensive documentation of this problem. The general situation in the LTTE-controlled areas is that economy is growing, steadily but slowly, but a substantial proportion of households still have restricted access to cropland, infrastructure resources and other agricultural resources.¹⁷⁸⁸ Although this economic constriction may result primarily from anti-personnel mine contamination, it increases the economic pressure on people to search for ERW as scrap and ignore minefield fencing.

According to Landmine Action’s analysis from 2003, “children under 18 years old make up a significant proportion of ERW victims. Between January 2000 and December 2002, 52 per cent of ERW victims in the Jaffna peninsula were children. In 2002 alone, children represented 78 per cent of all ERW victims.”¹⁷⁸⁹ That report relates children’s risk from ERW to their economic activities (gathering resources), deliberate contact out of curiosity and efforts to demonstrate bravery. Elsewhere, children are reported as being involved in salvaging scrap metal and it is important to note that children’s expenditure from scrap metal is not always focused towards economic ‘necessities.’ The UNDP Chief Technical Advisor, Sri Lanka, reported an accident in Sri Lanka resulting from children collecting scrap metal that they planned to sell so as to buy sweets and ice-cream.¹⁷⁹⁰

Efforts to address the problem

Since the cease-fire in 2002, the international community has provided humanitarian assistance to support landmine clearance, ordnance disposal and risk education. The most prominent organizations in this work have been international organizations such as MAG, the HALO Trust, Norwegian People’s Aid, and Swiss Foundation for Demining and Danish Demining Group. In LTTE-controlled areas such organizations have been working in partnership with the local Humanitarian Demining Unit, established by the Tamils Rehabilitation Organization (TRO). The Humanitarian Demining Unit was conducting humanitarian mine clearance in the LTTE-controlled area prior to the influx of international assistance in 2002. In government-controlled areas, the Sri Lankan Army has also been conducting ongoing clearance work.

According to UNDP figures, in 2003 a total of 24,038 anti-personnel mines, 54 anti-vehicle mines and 13,231 items of UXO were destroyed in 2003. From January to March 2004, a further 8,896 anti-personnel mines, five anti-vehicle mines and 5,883 UXO were cleared.¹⁷⁹¹

UNDP have been working in partnership with the Sri Lankan Government to establish structures of mine action

coordination in the country. Nationally, a National Steering Committee for Mine Action has been established in the Prime Minister's Secretariat, based in Colombo. It is chaired by the Secretary to the Ministry of Relief Rehabilitation and Reconciliation and has representatives from stakeholder ministries, government agents, donors, the Tamils Rehabilitation Organization, mine action operators and UNDP and UNICEF. Operational coordination and tasking is provided by Regional and District Mine Action Offices in Jaffna, Kilinochchi, Vavuniya and Batticaloa.

Risk education programmes have been implemented nationally through a range of local organizations. MAG and UNICEF have worked in an ongoing partnership with the local NGO White Pigeon to implement risk education in LTTE-controlled areas.

Legislation

Sri Lanka has not signed the Ottawa Convention. There have been ongoing efforts by NGOs and donors to foster support from the Government and the LTTE for the Convention or a parallel Deed of Commitment, but this remains deadlocked. In September 2004, Sri Lanka ratified the CCW and its Amended Protocol II, Protocol III and Protocol IV.

- 1771 Telephone interview with Norwegian Peoples Aid Senior Technical Adviser, Richard Schimdt, 30 September 2004.
- 1772 Report from Media Conference arranged by the Landmine Ban Advocacy Forum, Colombo, Sri Lanka, 14 July 2004: http://www.humanitarian-srilanka.org/Pages/Mine_Action_Resource_Centre.htm. Last accessed 30 September 2004.
- 1773 Landmine Action and The Sri Lanka Campaign to Ban Landmines, "ERW in Sri Lanka", May 2003, p. 10.
- 1774 Landmine Monitor 2001: http://www.icbl.org/lm/2001/sri_lanka/, last accessed 9 October 2004.
- 1775 Telephone interview with Norwegian Peoples Aid, Senior Technical Adviser, Richard Schmidt, 30 September 2004.
- 1776 Durable Solution Progress No: 15 – The Bulletin of the United Nations Inter-Agency IDP working group, 29 April 2004: <http://www.unhcr.lk/publications.htm>, last accessed 30 September 2004
- 1777 Email from Claire Sanford, Programme Officer, Mines Advisory Group, Sri Lanka, 20 August 2004.
- 1778 From MAG's website, <http://www.mag.org.uk/magtest/srilanka/Pullaveli.htm>
- 1779 According to the IMSMA database the first record of a mine victim was in 1985. Comprehensive records were not kept prior to this and, even since the introduction of international support to mine action in Sri Lanka in 2002, such data-gathering mechanisms have been subject to ongoing development.
- 1780 All raw materials in this report are from the UNDP-led IMSMA database in Sri Lanka.
- 1781 Telephone interview with Richard Schmidt, Senior Technical Adviser, Norwegian Peoples Aid, 30 September 2004. Information also provided from the IMSMA database, Sri Lanka. Accident ID number LK-720.
- 1782 Main organizations: Sarvodaya, the Refugee Settlement Organisation (TRRO), White Pigeon (WP), Mines Advisory Group, Community Trust Fund (CTF), Save The Children Sri Lanka, National Institute for Education (NIE). Report from Media Conference arranged by the Landmine Ban Advocacy Forum, Colombo, Sri Lanka, 14 July 2004: http://www.humanitarian-srilanka.org/Pages/Mine_Action_Resource_Centre.htm. Last accessed 30 September 2004.
- 1783 Article " Landmines in Sri Lanka have devastating consequences", in Report from Media Conference arranged by the Landmine Ban Advocacy Forum, Colombo, Sri Lanka, 14 July 2004: http://www.humanitarian-srilanka.org/Pages/Mine_Action_Resource_Centre.htm. Last accessed 30 September 2004.
- 1784 Landmine Action and The Sri Lanka Campaign to Ban Landmines, "ERW in Sri Lanka", May 2003, p. 11.
- 1785 According to IMSMA data. The rest of the incidents do not report what the victim was doing when the incident happened.
- 1786 Landmine Action and The Sri Lanka Campaign to Ban Landmines, "ERW in Sri Lanka", May 2003, p. 12.
- 1787 Email from Claire Sanford, Programme Officer, Mines Advisory Group, Sri Lanka, 20 August 2004.
- 1788 MAG survey in LTTE-controlled areas, January 2004-June 2004.
- 1789 Landmine Action and The Sri Lanka Campaign to Ban Landmines, "ERW in Sri Lanka", May 2003, p. 13.
- 1790 Email from Judy Grayson quoted in Richard Moyes, (2004) *Tampering: deliberate handling of live ordnance in Cambodia*, HI-B, MAG, NPA, p.77
- 1791 UNDP figures quoted in Landmine Monitor 2004.

Sudan

Background

The civil war between northern and southern Sudan that erupted after independence in 1956 and the subsequent targeting of ethnic minorities in the south, Nuba Mountains and currently in the Darfur region have left a legacy of armed conflict throughout the country. ERW and mines severely impact 20 of the country's 26 states. AV mines on roads pose a particularly acute danger and restrict the delivery of humanitarian relief as well as the movement of international monitors and civilians.¹⁷⁹²

Assessment of the problem

From June 2003 to July 2004 the UN reported destruction of 809 items of ERW and 165 AV mines.¹⁷⁹³ The majority (432) of the ERW were projectiles such as mortars and artillery shells.¹⁷⁹⁴ The Sudan Landmine Information & Response Initiative (SLIRI) has gathered accident data in many affected areas: this shows that 49 per cent of accidents were caused by AV mines and 13 per cent by unexploded ordnance.

Over the course of the internal conflict, the Government of Sudan and opposition groups used MOTAPM along defensive positions, around garrison towns and along roads and scattered others as they retreated from positions.¹⁷⁹⁵ This has led to serious contamination from AV mines on access routes to many towns and villages. A 2002 Nuba Mountains emergency field assessment by a team from SLIRI noted "the major threat to non-combatants to date has been the use of anti-vehicle mines to deter movement on roads and tracks." They reported that all of the AVMs observed were pressure activated and had commonly been laid "both on the carriageway and on the verges and possible diversions from the main track." They go on to state that booby-trapping and other adaptation of AVM is reported to have been common practice and falls into four main categories:

- Boosting: linking AVM to other weaponry, commonly shells, rockets or block TNT, in order to increase the blast effect of the mine on detonation. Two AVM may also be laid in tandem to achieve this effect.
- Improving: adaptations are employed to widen the critical pressure area of the mine, commonly by placing a plank of wood over the pressure plate. In some cases an APM may be placed above the pressure plate so that detonation of both mines only requires the minimal force needed to initiate the APM.
- Anti-detection: the mine is laid deeply to make detection more difficult and the pressure plate is 'extended' by a vertical wooden pole. It was also reported that AVMs had been covered with sheets of leather or rubber to avoid detection, although this would not be a viable strategy against modern detection equipment.

- Anti-lift: this tactic to combat clearance of AVM may be achieved through an integral device or by improvised methods. Although some of the AVM observed by SLIRI were designed to be equipped with integral anti-lift there were no reports that these had been used in the Nuba Mountains. Reports of improvised anti-lift devices were common however; the technique most often reported was the use of an armed hand-grenade emplaced below the mine.¹⁷⁹⁶

This initial SLIRI assessment went on to identify an initial 45 routes in the Nuba Mountains area alone that were "high-risk, suspect or reportedly mined." As well as AVMs on routes, this assessment also notes that water-sources were all also mined. In an incident from May 2001 a commercial Landrover carrying twelve children on the cargo deck was being driven to the village water point when it hit a mine. Nine of the children died instantly and the remaining three died either during or shortly after a 20 hour trip by tractor to hospital.¹⁷⁹⁷

Fighting in the Nuba Mountains, southern Sudan and recently in Darfur has caused significant ERW contamination. Cluster munition use in southern Sudan has left particularly dangerous unexploded submunitions which have had both immediate and indirect effects on civilians in this region.¹⁷⁹⁸

In December 2004, UNICEF described the ERW problem in Sudan as follows: "Many towns in southern Sudan suffer from the after-effects of major battles and aerial bombardments. Untold numbers of live bombs, grenades, and shells lie below the surface of fields near homes, putting children and their families at risk for dismemberment or death."¹⁷⁹⁹ In one indication of the extent of the problem, during the period June 2003 – July 2004 the UN reported destruction of 809 items of ERW and 165 AV mines.¹⁸⁰⁰ The majority (432) of the ERW were projectiles such as mortars and artillery shells.¹⁸⁰¹

UNMAS has assessed the following areas as most at risk from ERW and mines: Western Equatoria, Eastern Equatoria, Bahr Al-Ghazal, Jonglei, Upper Nile, the Nuba Mountains, Lakes, and Southern Kordofan. Sudan's borders with Chad, Democratic Republic of Congo, Eritrea, Ethiopia, Libya and Uganda are also ERW/mine affected.¹⁸⁰² In addition there is an ERW threat as a result of the conflict in Darfur.

Impact

Explosive remnants of war, anti-vehicle and anti-personnel mines have affected all areas in which conflict has taken place.¹⁸⁰⁵ In the Sudan Mine Action Policy framework, signed in July 2004, the Government of Sudan and Sudan People's Liberation Movement (SPLM) jointly agreed that they were "deeply concerned and alarmed over the tragic consequences of war, in particular the presence of landmines [and] ERW." UNMAS estimates that one ERW/mine accident occurs every

six weeks in Sudan.¹⁸⁰⁶ Between June 2003 and July 2004, the UN reported 17 incidents involving ERW resulting in a total of 24 victims. During the same period, the UN reported 10 accidents involving MOTAPM resulting in a total of 22 victims.¹⁸⁰⁷ Landmine Monitor reported, based on figures by the National Mine Action Office (NMAO), a total of 79 ERW and mine casualties in 2003, 43 per cent of which are caused by MOTAPM, 24 per cent by ERW and 20 per cent by APMs.¹⁸⁰⁸

According to UNMAS, 367 of the 485 areas identified as dangerous during this reporting period are civilian areas.¹⁸⁰⁹ OCHA reported in February 2004 that ERW and mines present a new problem for humanitarian relief operations in Darfur.¹⁸¹⁰ UN agencies warned in August 2004 that ERW and mines would be “a major hindrance” to the provision of relief supplies and the resettlement of 600,000 displaced people and refugees returning home to southern Sudan after two decades of civil war.¹⁸¹¹

The airstrip used by WFP in Rumbek, southern Sudan, is currently unable to receive aircraft large enough to supply the necessary amount of food and relief supplies. ERW contamination around the airstrip prevented WFP from extending the runway to allow aircraft with greater capacity to land. In October 2004, a mine clearance company, RONCO, cleared the runway under contract from the U.S. Department of State.¹⁸¹² This further demonstrates the negative effect that ERW contamination can have on the provision of crucial humanitarian relief.

There have been several reports of AV mines blocking the provision of relief supplies. “WFP estimates there are 2 million people whose food security is directly affected by mines and UXO.”¹⁸¹³ The UN has reported that the “majority of the access routes to the villages and towns are blocked with AV mines (...).”¹⁸¹⁴ Of the 485 known dangerous areas in Sudan, 196 are roads or roadsides.¹⁸¹⁵ In October 2004 a technical advisor for the Southern Sudan Regional Mine Action Office reported that 75 percent of food assistance to the region had to be delivered by air because of the poor conditions of the roads and the suspected presence of mines. He estimated that 80 percent of the casualties in Sudan resulted from AV mines and 20 percent from anti-personnel mines.¹⁸¹⁶

One example of the impact of AV mines in southern Sudan occurred on 3 October 2003, when eight people were killed and two injured when a DanChurchAid truck hit an AV mine near Kauda in the Nuba Mountains.¹⁸¹⁷ This incident occurred on a vital road access route for aid deliveries crossing the frontlines and could thus have a significant impact on the delivery of relief. One of the five women killed in this incident was reported to be a double amputee from a previous anti-personnel mine accident who had recently returned to the area from an ICRC hospital where she had had further surgery and new prosthetic legs fitted.¹⁸¹⁸

Beyond such tragic events, an even more severe impact from MOTAPM relates to the blockage of humanitarian

relief, as illustrated by the following testimonies from relief organisations affected by AV mines in Sudan:

- Save the Children US: “Our movement to some villages is hampered by the closure of the roads due to presence of anti-tank mines.”¹⁸¹⁹
- Save the Children Sweden: “(...) anti-tank mines affect humanitarian operations in southern Sudan, Nuba Mountains, Blue Nile and recently North Darfur. In North Darfur, two incidents reported in 2004 with anti-tank mines exploding a vehicle of a humanitarian agency. There are also reports of anti-tank mines infestation in eastern Sudan (Kassala and the Red Sea areas) to the border with Eritrea and again with implications on humanitarian work. The impact in southern Sudan, Nuba Mountains and Blue Nile on humanitarian operations is very noticeable in the very high cost of transportation of relief (airlifting), taking long safe roads because the short ones are planted with anti-tank mines, agricultural land abandoned because some tractors exploded...”¹⁸²⁰
- UNICEF: “(AV mines) affect our delivery of health and nutrition services in the Darfur region of Sudan, especially in the North Darfur State ... (Umbarro, Tina and Kornoj locations and/or routes). There are also many unexploded UXOs lying about in North Darfur from Um Marahik to Dissa and beyond.”¹⁸²¹
- OXFAM: “Because of the Save the Children landmine incident last month, landmines have curtailed our operations in the Northern part of North Darfur.”¹⁸²²

The situation in Darfur has become more serious since the recent fighting in the province. UNMAS has reported the following incidents:¹⁸²³

- On 10 February 2004, two people were injured when a Save the Children UK vehicle struck an AV mine in Orchi, Umbaru, 315 km north-west of El Fasher.
- On 25 February 2004, a police vehicle struck an AV mine in Mukjar, injuring six people.
- On 3 March 2004, a commercial truck struck an AV mine in Kobo, Mukjar, injuring five people.
- On 12 October 2004, two humanitarian aid workers were killed when a Save the Children UK truck struck an AV mine near Umbaru.

WFP reports that there have been some incidents in Red Sea state along the sealed road in south Tokar;¹⁸²⁴ ERW and mines have hampered agricultural activities in the Nuba Mountains and in the surrounding plains;¹⁸²⁵ and in Kassala State mines and ERW have exacerbated food insecurity among IDPs.¹⁸²⁶

There have also been numerous reports of cluster munitions being used on civilian targets such as schools and hospitals. Although there were no reports of incidents involving unexploded cluster munitions during this

reporting period, in the past local people have ceased cultivating their fields due to contamination from unexploded cluster munitions, which directly endangered their food security.¹⁸²⁷

The 2002 field assessment report by a team from the Sudan Landmine Information & Response Network (SLIRI) noted that: "the potential dangers of a failure at community level to recognise the risk involved when dealing with ERW was well illustrated when three PM-1 submunitions were brought to the SLIRI team in Tangal. Such items are highly dangerous and should never be approached, but fatalities due to handling of unexploded ordnance are common in conflict and post-conflict communities world-wide."¹⁸²⁸

Efforts to address these problems

The national body responsible for mine and ERW action in Sudan is the National Mine Action Office (NMAO), established in Khartoum in September 2002. In May 2004, the SPLA/M set up a new coordination body on mine and ERW action for Southern Sudan. The New Sudan Authority on Landmines will coordinate policy and the New Sudan Mine Action Directorate will act as its operational branch.¹⁸²⁹

In the Nuba Mountains 1,295 ERW and mines have been destroyed in joint clearance operations supported by engineers from the government and the SPLM/A.¹⁸³⁰ Landmine Action/SLIRI reported clearing 24 villages of more than 750 landmines and items of UXO, plus 10,000 items of small arms ammunition, in 2004. The South African clearance operator Mechem reported on its operations along roads from Lokichoggio to Kapoeta County in collaboration with Operation Save Innocent Lives (OSIL), a south Sudanese NGO. OSIL said it had made safe 906,675 sq m and removed 6,726 ERW and 24 AT mines from April 2003 to March 2004. OSIL said such explosive items claimed thousands of victims in the region each year and had a socio-economic impact by making productive land and water points dangerous.¹⁸³¹

In July 2003 UNICEF deployed a mine risk education coordinator in the south to give local people "the skills to live safely in a contaminated environment." Another coordinator has been in the north since 2002 working with IDPs in northern areas.¹⁸³²

ERW are already difficult to locate because they are not mapped and seldom recorded. A further problem in locating ERW was noted by the head of Landmine Action in Kaduqli who pointed out that heavy seasonal rains affect clearance operations by moving explosive items away from their original position.¹⁸³³

In June 2004 UNMAS reported good progress with clearance operations in southern Sudan. Civilians and humanitarian workers are now safely using 180 km of the main road from the southern border of Sudan to Kapoeta, which has been recently cleared.¹⁸³⁴

UNICEF reported on its data collection efforts in 2003: "The UNICEF-supported Sudanese Red Crescent KAP and victim survey, implemented by 75 volunteers trained by [UNICEF], continued throughout August 2003 to collect data in the areas most affected by mines/UXO (Upper Nile, Blue Nile, Kassala, South Kordofan and Bahr El Jebel States). The survey was implemented in coordination and collaboration with the Federal Ministry of Health and WHO. [UNICEF] is entering data from the survey into the IMSMA database."¹⁸³⁵

Legislation

Sudan has signed but not ratified the CCW. Sudan joined the Ottawa Convention banning AP mines in April 2004. UNMAS has expressed a hope that a peace agreement signed in 2004 between the Government and the Sudan People's Liberation Movement/Army (SPLM/A) will allow for a permanent cease-fire and increased clearance activities.¹⁸³⁶ However, despite the international commitments made by the Government of the Sudan as well as the SPLA/M, both sides have repeatedly accused each other of continuing to use both MOTAPM and AP mines.¹⁸³⁷

1792 United States Department of State, To Walk the Earth in Safety: the United States commitment to humanitarian demining – 2002, available online at: <http://www.state.gov/t/pm/rls/rpt/walkearth/2002/>

1793 Written response to GIS from Mohammad Kabir, Information Management Officer, UNMAS – Sudan, by email, 7 November 2004.

1794 Written response to GIS from Mohammad Kabir, Information Management Officer, UNMAS – Sudan, by email, 30 August 2004. In an update on 7 November 2004 which added data from clearance by the Swiss Foundation for Demining (FSD), the number of ERW cleared during the period had increased to 95,694. However, it should be noted that the FSD data listed each individual bullet cleared as one item of ERW.

1795 UNMAS country page: Sudan, accessed on August 26, 2004, available at: http://www.mineaction.org/countries/countries_overview.cfm?country_id=829

1796 SLIRI, "Explosive Remnants of War in the Nuba Mountains: An Emergency Field Assessment," March 2002, p.12.

1797 SLIRI, "Explosive Remnants of War in the Nuba Mountains: An Emergency Field Assessment," March 2002, p.18.

1798 Rae McGrath, "The military effectiveness and impact on civilians of cluster munitions", Landmine Action, 2001, pp. 38-39.

1799 UNICEF, "Clearing deadly mines from southern Sudan," Yiol, Sudan, 1 December 2004, accessed 20 December 2004 at: http://www.unicef.org/infobycountry/sudan_24361.html

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1801 Written response to GIS from Mohammad Kabir, Information Management Officer, UNMAS – Sudan, by email, 30 August 2004. In an update on 7 November 2004 which added data from clearance by the Swiss Foundation for Demining (FSD), the number of ERW cleared during the period had increased to 95,694. However, it should be noted that the FSD data listed each individual bullet cleared as 1 item of ERW.

1802 UNMAS country page: Sudan, accessed on August 26, 2004, available at: http://www.mineaction.org/countries/countries_overview.cfm?country_id=829

1803 Refugees International: <http://www.refintl.org/content/article/detail/3070/?mission=2971;>

- 1804 TINE CHAD, 29 Jan 2004 (IRIN).
- 1805 Email from Richard Lloyd, Director of Landmine Action UK, Sudan, 10 November 2004.
- 1806 "Land Mine Accident Indicates Lurking Dangers In Sudan", 15/10/2003, available at: http://www.mineaction.org/countries/_refdocs.cfm?doc_ID=1605&country_id=829
- 1807 Written response to GIS from Mohammad Kabir, Information Management Officer, UNMAS-Sudan, by email, 7 November 2004.
- 1808 Email from Shaza Nagmeldin Ahmed, Victim Assistance Associate, NMAO, 28 July 2004, reported in Landmine Monitor 2004, p. 764.
- 1809 Written response to GIS from Mohammad Kabir, Information Management Officer, UNMAS-Sudan, by email, 7 November 2004.
- 1810 SUDAN: UN teams arrive in Darfur to help people affected by war, NAIROBI, 19 Feb 2004 (IRIN).
- 1811 Landmines hamper relief aid supplies to Southern Sudan, 26 August 2004 (PANA).
- 1812 U.S. Dept. of State, Clearance of Unexploded Ordnance Will Enable Rumbek Airstrip to Receive More Relief Aid for Southern Sudan, Rumbek, Sudan, October 12, 2004 accessible at: <http://www.state.gov/r/pa/ei/pix/b/37518.htm>
- 1813 UNMAS country page: Sudan, accessed on August 26, 2004, available at: http://www.mineaction.org/countries/countries_overview.cfm?country_id=829
- 1814 Written response to GIS from Mohammad Kabir, Information Management Officer, UNMAS-Sudan, by email, 7 November 2004.
- 1815 Written response to GIS from Mohammad Kabir, Information Management Officer, UNMAS-Sudan, by email, 7 November 2004.
- 1816 "Sudan: Mines may hinder reconstruction in the south," IRIN, 1 December 2004.
- 1817 "Land Mine Accident Indicates Lurking Dangers In Sudan," 15/10/2003, available at: http://www.mineaction.org/countries/_refdocs.cfm?doc_ID=1605&country_id=829
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- 1820 Email from Waleed Elbashir, Save the Children Sweden, 18 November 2004.
- 1821 Email from Samson Agbo, UNICEF, 18 November 2004.
- 1822 Email from Shaun Skelton, Country Programme Manager, Oxfam North Sudan, 17 November 2004.
- 1823 UNMAS
- 1824 Sudan Annual Needs Assessment 2003/2004, Food Security Report: Regional outlines & recommendations, WFP Sudan, January 2004, p. 31.
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- 1830 SUDAN: Improved relations between government and rebel forces in Nuba Mountains, KAWDAH, SOUTHERN SUDAN, 21 July 2004 (IRIN).
- 1831 SUDAN: Joint clearance of landmines in the south, NAIROBI, August 10, 2004 (IRIN).
- 1832 "Land Mine Accident Indicates Lurking Dangers In Sudan", 15/10/2003, available at: http://www.mineaction.org/countries/_refdocs.cfm?doc_ID=1605&country_id=829
- 1833 KAWDAH, SOUTHERN SUDAN, 21 July 2004 (IRIN).
- 1834 MASG Newsletter, June 2004, UNMAS update.
- 1835 MASG Newsletter, September 2003, UNICEF update.
- 1836 UNMAS country page: Sudan, accessed on August 26, 2004, available at: http://www.mineaction.org/countries/countries_overview.cfm?country_id=829
- 1837 The SPLM/A signed a parallel Deed of Commitment in 2001, committing itself to a "total ban" on landmines, including a "complete prohibition" on the use, production, stockpiling, or transfer of mines, as well as an undertaking to destroy any in its possession. However, the Government of Sudan has not ratified CCW AP II on mines and militias and other armed groups may not acknowledge any restrictions on the use of mines. In addition the Landmine Monitor has cited numerous allegations of use of mines by all parties to the conflict. For details see: Landmine Monitor 1999-2004 reports on Sudan. Available at: www.icbl.org/lm.

Syria

Background¹⁸³⁸

A result of the 1973 War with Israel, large parts of the Golan territory are believed to suffer from both ERW and MOTAPM contamination. Minefields are only partly marked and remain largely unmapped.

Most ERW and MOTAPM are in areas of close proximity to the occupied Golan territory, in the Qunaitra Governorate. The Golan, in south-west Syria, is divided into three areas: Syrian-controlled, Israeli-controlled, and a buffer zone monitored by the United Nations Disengagement Observer Force (UNDOF). According to Landmine Monitor 2003, each contains mined areas.¹⁸³⁹ Within its zone of operation, UNDOF reports a casualty rate of one or two people a year.¹⁸⁴⁰ According to one source, the contamination also includes former-Soviet and U.S.-made ordnance, including BLU-26 and BLU-63 cluster munitions.¹⁸⁴¹

According to UNDOF there are an estimated 500,000 landmines in the organization's area of operation. But the scope of the problem is much larger. There are alleged mines along the Syria-Turkey border as well as the border with Jordan. With the recent crisis in Iraq, the Iraqi-Syrian border is the latest addition to possible mine/UXO contaminated areas in Syria (although no incident has yet been reported on the Syrian side of the border).

In addition, there may be a persistent ERW and mine problem in other areas of Syria dating back to the 1939-45 War, but there is at present insufficient data to substantiate this.¹⁸⁴²

Impact

The population at risk includes herders, children (while playing and herding) and women (while collecting firewood). However, all accidents related to mines/UXO are registered as normal accidents in health centre records, so the extent of victims and casualties is unknown.

The Palestinian Red Crescent Society Orthopaedic Centre, which treats Syrian UXO victims, reports that a majority of casualties come from the Qunaitra area. The organization also issued a report (from the Ministry of Social Affairs and Labour) with a list of 66 mine/UXO casualties treated in 2002, but the exact statistics of ordnance-related incidents

are unclear and it is possible that the number of incidents is under-reported. The centre also receives people injured on the Syria-Turkey border. There are no known cases from areas on the Syria-Jordan border.

According to Landmine Monitor 2003, new information indicates that there have been at least 216 landmine casualties since 1973 in the Syrian Golan. Some 40 children were reported to be among those killed.¹⁸⁴³ It is not known for certain if these casualties are solely the result of anti-personnel mines or if these figures also contain ordnance-related accidents.

According to one source, there is minimal media coverage relating to explosive ordnance, and what there is relates predominantly to demining efforts on the Turkish side of the border. Media reporting makes no distinction between APM /MOTAPM/ERW. Rather, they are referred to as "dangerous devices".¹⁸⁴⁴

Efforts to address these problems

The Government of Syria is not known to be involved in mine action activities, except some mine awareness activities. Syrian authorities have not expressed any desire to carry out demining programmes in the Qunaitra Governorate, probably due to the fact that Qunaitra remains within Israeli artillery range.¹⁸⁴⁵

With the exception of UNDOF, which was considering efforts to map and post signboards in mine-affected areas, no other UN agency is involved in landmine-related activities. According to the UNMAS Portfolio of Mine Related Projects 2004: "The main priority at present is a mine risk education campaign with the message 'how to live safely without getting hurt.'"

The following organizations may be involved in the development of mine risk education activities: UNICEF, ICRC, UNDP, UNHCR, UNDOF, Arab Network of Researchers on Landmines and Explosive Remnants of War.

Legislation

Syria is not a signatory of the Ottawa Convention, nor is it a state party to the Convention on Conventional Weapons.

1838 All information unless otherwise stated, is sourced from the UNMAS Portfolio of Mine Related Projects 2004.

1839 Landmine Monitor 2003.

1840 Interview with Lana Baydas, ICRC Damascus, 15 June 2004.

1841 Interview with Ben Lark, ICRC Geneva, 25 July 2004.

1842 Landmine Action, *Explosive Remnants of War- A Global Survey*, 2003, p.6.5

1843 Landmine Monitor Report 2003, citing a presentation by Ahmad Alsaeed, Director of Social Affairs, Qunaitra, to the regional symposium, Damascus, 19-20 February 2003.

1844 Interview with Lana Baydas, ICRC Damascus, 15 June 2004.

1845 Interview with Ben Lark, ICRC Geneva, 25 July 2004.

Taiwan

Background

Although the main island of Taiwan is free of ERW, the two islands of Kinmen and Matsu are contaminated from fighting with mainland China and from subsequent defensive installations. In October 1949, after the Chinese Nationalist army retreated to Taiwan, the Communists attacked Nationalist positions on Kinmen. After a brief battle the Communist forces withdrew. The island was bombarded by Chinese forces during the 1950s and 60s, most heavily in 1958.¹⁸⁴⁶ Kinmen was a closed military zone until 1989 and was opened to the public as a national park in 1995. The neighbouring Matsu islands remain under military control.¹⁸⁴⁷

MOTAPM, particularly sea mines, are believed to make up part of Taiwan's defences. Military analysts note that both land minefields and underwater mines along the coast of the main island of Taiwan would make any direct assault risky.¹⁸⁴⁸ Taiwan has a mine stockpile of undetermined size and composition.¹⁸⁴⁹

According to the Ministry of National Defence, minefields in the interior of Kinmen Island have all been cleared, and remaining minefields along the coast have been marked.¹⁸⁵⁰ The precise composition of these minefields is not known. Before their demolition by Specialist Gurkha Services UK Ltd. in 1999, nine landmine dumps on Kinmen were observed to contain both anti-vehicle and anti-personnel mines, as well as other ERW.¹⁸⁵¹

Assessment

Kinmen and Matsu remain militarized, with some 73,000 troops stationed there. The entire land area of Kinmen (153 sq km.) and Matsu (10 sq km.) should be considered ERW-affected. Kinmen County has a civilian population of 61,000, while Lienchiang County, which includes Matsu, has fewer than 18,000.¹⁸⁵² In a March 2001 hearing, the Ministry of National Defence stated that all "strategically irrelevant" minefields had been removed, but that others needed to be maintained for defence purposes.¹⁸⁵³ At least on Kinmen, however, demining and explosive removal operations from 1998 to 2002 have lessened the danger that ERW and MOTAPM, as well as AP mines, pose to civilians.

Impact

There have been no reported ERW or mine casualties since the 1970s. Twenty accident survivors are known to still live on Kinmen; as of 2002, the national government has compensated 53 families of victims injured or killed between 1950 and 1973, with 57 more applications pending.¹⁸⁵⁴ No information is available on the types of mines or ERW that caused these incidents.

With no reported casualties in decades, the assessment that "the presence of landmines poses a very serious threat to civilians" on Kinmen¹⁸⁵⁵ is no longer demonstrably true. In the absence of a comprehensive survey on livelihoods or resource effects of ERW or landmines, however, the exact scope of the problem cannot be shown.

Efforts to address these problems

Demining and ordnance removal has been contracted by Taiwan's army and public utility companies to international commercial operators since 1997. Specialist Gurkha Services cleared seven priority areas on Kinmen, including five landmine dumps, in 1998-99. Following the completion of this contract, SGS recommended the formation of a national mine data centre and clearance programme, citing the lack of available technical data from the army.¹⁸⁵⁶ These recommendations have not been acted upon.

Beginning in 2001, the British company BACTEC International Ltd. has cleared more than one million sq m of beach minefields, which were also reported to contain UXO such as aircraft bombs, on sites that have been redeveloped into a power station, harbour and airport.¹⁸⁵⁷ BACTEC's managing director confirmed that the company has cleared "over 5,000 mines in Taiwan, all of US design/origin," plus an unspecified number of bombs and land service ammunition.¹⁸⁵⁸ Although the majority of mines cleared were anti-personnel, mines also included M7A2A anti-vehicle and M6A anti-tank mines.¹⁸⁵⁹

Legislation

As Taiwan is not a member of the United Nations it is not eligible to join international conventions. Government officials have expressed Taiwan's support for a ban on anti-personnel landmines, and legislation prohibiting use or transfer of AP mines was considered in the Legislative Yuan in 2003.¹⁸⁶⁰ The government has no known position on MOTAPM and ERW protocols in the CCW.

1846 Kinmen National Park website, <http://www.kmnp.gov.tw/english/battlefield.htm>.

1847 Joe Lokey, "And They Killed No Enemy: Taiwan's Landmines", *Journal of Mine Action* 2.3 <http://maic.jmu.edu/journal/2.3/editors/taiwan.htm>; "Quemoy (Kinmen)", <http://www.globalsecurity.org/military/world/taiwan/kinmen.htm>.

1848 Jianxiang Bi, "Managing Taiwan Operations in the Twenty-first Century: Issues and Options", [US] *Naval War College Review* (Autumn 1999), <http://www.nwc.navy.mil/press/Review/1999/autumn/art2-a99.htm>, pp. 5, 8.

1849 *Landmine Monitor* 2003, p. 766.

- 1850 Landmine Monitor 2003, p. 766. No response was received to further inquiries with the Ministry of Defence.
- 1851 Report by Mine Clearance Planning Agency (MCPA), Pakistan, cited in Landmine Monitor 1999, pp. 521-2. MCPA was hired to survey minefields and ammunition dumps on Kinmen Island, which it completed in 1998.
- 1852 Data from <http://www.nationmaster.com/encyclopedia/Kinmen>, <http://www.globalsecurity.org/military/world/taiwan/kinmen.htm> and <http://www.globalsecurity.org/military/world/taiwan/matsu.htm>.
- 1853 Landmine Monitor 2001, p. 594.
- 1854 Landmine Monitor 2003, p. 767.
- 1855 "Profile: Taiwan", *Journal of Mine Action* 5.1 (April 2001), <http://maic.jmu.edu/journal/5.1/Profiles/Taiwan/taiwan.htm>.
- 1856 Specialist Gurkha Services (SGS) UK Ltd., "Mine Clearance Technical Transfer Report (Contract Number TB88001 W041PE)", 12 June 1999, cited in Landmine Monitor 2000, p. 557.
- 1857 BACTEC International website, <http://www.bactec.com/post/case.htm>.
- 1858 Email from Guy Lucas, Managing Director, BACTEC International Limited, 21 August 2004. BACTEC did not respond to requests for additional information.
- 1859 Email from Lisa Nichols, Administrative Assistant, BACTEC International Limited, 15 October 2004.
- 1860 Landmine Monitor 2003, pp. 765-6.

Tajikistan

Background

ERW and MOTAPM problem in Tajikistan results mainly from the 1992-1997 civil war, when it is thought that cluster munitions were used. Additionally, there is a problem with recently laid minefields (probably APM) along the borders with Uzbekistan and Afghanistan.

Assessment of the problem

During the civil war both the Government and the United Tajik Opposition (UTO) used landmines. While government forces reportedly only used anti-personnel mines, the UTO also used MOTAPM (Italian TC-6, Pakistan P2Mk2 and Soviet TMN series).¹⁸⁶¹

The main region affected by ERW and MOTAPM is the central region centred on the Rasht and Tavildara valleys.¹⁸⁶² In October 2003, police recovered an abandoned ordnance (AXO) cache in Tavildara district.¹⁸⁶³ A large stockpile of AXO was discovered in the Kalai-Khumb border area in November 2003.¹⁸⁶⁴ Another AXO cache was discovered by Russian troops on 29 July 2004 along the Tajik-Afghan border.¹⁸⁶⁵

In 2004, the following ERW were identified and destroyed: unexploded Russian-made AO-2.5 sub-munitions, Shoab bomblets, RBK-500 tactical munitions dispensers, ODAB 500 fuel-air explosive bombs, FAB bombs and OFAB submunitions of various sizes. Also cleared were two MOTAPM.¹⁸⁶⁶

An estimated 16,000 mines, demolition charges and explosive devices remain deployed in Tajikistan, with approximately 2,500 sq km of contaminated agricultural land and some 700km of contaminated roads and paths.¹⁸⁶⁷ These are not considered accurate figures as both the numbers of landmines along the Tajik borders and those from the civil war are unknown.¹⁸⁶⁸ Records from the civil war about quantities and locations of munitions and mines were reportedly lost.¹⁸⁶⁹ A complete survey of the contamination has not yet been implemented.

The Afghan-Tajik border is also a transit area for illegal traffic in small arms and light weapons. Various armed groups regularly stockpile munitions in Tajikistan and the Tajik security forces frequently discover large amounts of AXO.¹⁸⁷⁰

Impact

The Tajik Mine Action Cell (TMAC) only started gathering data on mine casualties in 2003, and is unable to provide exact statistics. Reportedly, between 2000 and March 2004 landmines killed 160 people and injured 148. This is thought also to include ERW and MOTAPM. During this same period, 64 people were killed and 58 injured in the northern Sogd region, along the Tajik-Uzbek border; 19 killed and 12 injured in the southern Khatlon region; 14 killed and six injured in the eastern region of Tajikistan; and 63 killed and 72 injured in the central region.¹⁸⁷¹ The majority of victims were reportedly children and women gathering mushrooms and wood or herding animals.¹⁸⁷²

Explosions in some unmarked mine fields in the Karetegin Valley in central Tajikistan reportedly killed civilians during 2003.¹⁸⁷³ Two civilians were killed by a mine explosion on the Tajik-Uzbek border on 2 September 2003.¹⁸⁷⁴ Two more civilians were killed and three others seriously injured at the Tajik-Uzbek border when they were gathering firewood on 4 November 2003.¹⁸⁷⁵ Following this incident, the Tajik Government sent a note to the Uzbek Embassy in Dushanbe urging the Uzbek authorities to take the necessary measures to prevent further incidents and to clear the minefields along the border with Sogd Oblast.¹⁸⁷⁶

Efforts to address these problems

The first humanitarian mine clearance programmes are now under way in Tajikistan. Since June 2003, the government, together with UNDP, has been developing a national mine action capacity. The Tajik Mine Action Cell (TMAC) was established as the central agency in late 2003 and now oversees national mine clearance, mine risk education and victim assistance – and coordinates the

mine action efforts undertaken by the ministries, departments, local authorities and other governmental and non-governmental bodies.¹⁸⁷⁷ The Swiss Foundation for Demining (FSD), the Tajik Red Crescent Society and the ICRC were providing the operational components.¹⁸⁷⁸

In August and September 2003, 20 members of the Tajik Army Engineering Battalion were trained for deployment in two survey teams.¹⁸⁷⁹ The teams began research work in the priority sites of Rasht Valley.¹⁸⁸⁰ Volunteers from the Red Crescent Society also assisted survey teams in the central region of Tajikistan.¹⁸⁸¹ By April 2004, the survey work had resulted in the discovery and destruction of 38 ERW.¹⁸⁸²

Training of the Tajik Army teams took place during August and September 2003. The teams were sent to Tavildara and the surrounding territories in central Tajikistan for an initial survey: when items of ERW were posing a high threat to the local population, the survey teams immediately destroyed the devices.¹⁸⁸³

Clearance operations continued during 2004 in the village of Jomri-i Bolo in Tavildara and in a number of places in the

Rasht area, where more than 100 unexploded shells were cleared near the settlement of Shul, as well as in the village of Saghirdasht in Mountainous Badakhshon Autonomous Region's Darvoz District.¹⁸⁸⁴

The ICRC and Tajik Red Crescent Society mine/ERW risk education programme was established in 2002. In the reporting period, the programme focused on the recently-mined border areas in Sogd province and Tursun Zade district, where contaminated areas included land commonly used for grazing, hunting, collecting wood and cross-border travelling and trading. The programme also covered Rasht valley.¹⁸⁸⁵

Legislation

Tajikistan is a State Party to the Ottawa Convention, which entered into force in April 2000, and also to the CCW, Amended Protocol II and Protocol IV.

- 1861 Email from Bakhtiyor Begmuradov, Tajik Campaign to Ban Landmines, 6 October 2004.
- 1862 Email from David Smyth, Swiss Foundation for Mine Action, 30 September 2004.
- 1863 "Law enforcement agencies in Kulob recollect illegally possessed weapons from population", Asia-Plus News Agency (Tajikistan), 12 November 2003.
- 1864 "Major cache with ammunition destroyed on Tajik-Afghan border", Itar-Tass (Dushanbe), 11 November 2003.
- 1865 "Russian troops find large arms cache on Tajik-Afghan border", Asia-Plus (Dushanbe), 29 July 2004.
- 1866 Email from David Smyth, Swiss Foundation for Demining, 30 September 2004.
- 1867 Email from Bakhtiyor Begmuradov, Tajik Campaign to Ban Landmines, 6 October 2004. These are also the official contamination figures from the Tajik Ministry of Defence: cf. "Tajikistan bans landmines, needs help to get rid of them", Agence France Presse, 30 April 2003; also cf. "Tajikistan begins clearing mines from Afghan border", Agence France Presse, 24 June 2004. According to more recent figures reported by the OSCE, some 2,586 sq. km are contaminated, cf. "Tajikistan: Focus on demining efforts", IRIN, 13 July 2004. Other estimates of the AV and AP mine contamination range between 15,000 and 18,000 in Eastern Tajikistan alone, see "Over 225 landmines defused in Pamir foothills in Tajikistan", Itar-Tass (Dushanbe), 1 October 2004.
- 1868 According to the project manager of the TMAC, Dzonmakhmad Radzhavov, cf. "Tajikistan needs 13.5 million dollars to remove mines – official", Agence France Presse, 3 February 2004.
- 1869 Email from Bakhtiyor Begmuradov, Tajik Campaign to Ban Landmines, 6 October 2004.
- 1870 Small Arms/Firearms Education and Research Network (SAFER-Net), "Republik of Tajikistan", last updated 2 September 2003: http://www.research.ryerson.ca/SAFER-Net/regions/Asia/Taj_SR03.html, accessed 5 September 2004.
- 1871 "Swiss instructors start courses to train Tajik sappers", Asia-Plus (Dushanbe), 10 March 2004. Other reports contradict these statistics including "Official says mines kill 62 Tajiks on Uzbek border since 2000", Itar-Tass (Dushanbe), 3 February 2004; and Peter Isaacs, adviser to TMAC, reporting in September 2003 that mines on the Tajik-Uzbek border had killed 60 and injured more than 100 in "Tajik-Uzbek border mine problem 'alarming' – clearance specialist", BBC Monitoring Central Asia (Dushanbe), 11 September 2003.
- 1872 "Tajikistan: Focus on demining efforts". IRIN, 13 July 2004.
- 1873 U.S. States Department, Country Report on Human Rights Practices Tajikistan, Released by the Bureau of Democracy, Human Rights, and Labor, 31 March 2003: <http://www.state.gov/g/drl/rls/hrrpt/2002/18395.htm>, accessed 29 March 2004.
- 1874 "Two More Tajiks Killed by Land Mines on Uzbek Border", RIA-Novosti, 4 September 2003.
- 1875 "Two Dead, Three Other Tajiks Severely Injured in Uzbek Landmine Blast". Muslim Uzbekistan, 10 November 2003.
- 1876 "Tajik Foreign Ministry Raises Latest Land-Mine Incident with Uzbekistan", Central Asia-Caucasus Monitor, 10 November 2003.
- 1877 Email from Bakhtiyor Begmuradov, Tajik Campaign to Ban Landmines, 6 October 2004.
- 1878 UNDP, "UNDP and the international community assists Tajikistan develop a capacity to deal with the problem of landmines and other explosive remnants of war", News Release, 23 June 2003; Swiss Foundation for Demining, Annual Report 2003, p. 14; ICRC, Annual Report 2003, p. 177.
- 1879 Mine Action Support Group Newsletter, February 2004.
- 1880 Statement by the delegate of the Republic of Tajikistan, Fifth Meeting of States Parties, Bangkok, 15-19 September 2003, unofficial translation by Bakhtiyor Begmuradov, 13 January 2004.
- 1881 Mine Action Support Group Newsletter, February 2004.
- 1882 Statement by the delegate of the Republic of Tajikistan, Intersessional Standing Committee meeting, Geneva, 21 June 2004 (unofficial translation provided by Bakhtiyor Begmuradov).
- 1883 Swiss Foundation for Demining, Annual Report 2003, p. 14.
- 1884 "Tajikistan begins clearing mines from Afghan border", Agence France Presse, 24 June 2004; "Tajiks continue de-mining operations", Tajik Avesta, 13 August 2004; "Tajik sappers defuse over 100 shells in east Tajikistan", Asia-Plus, 19 August 2004.
- 1885 ICRC, Annual Report 2003, p. 176.

Thailand

Background

Thailand's MOTAPM and ERW problems result from insurgencies by Thai and Malaysian communists and from border conflicts. Many of the most heavily affected areas are disputed, such as Hua Lone Hill between Thailand and Myanmar, and some areas of Sakeo Province bordering Cambodia, where Cambodian and Khmer Rouge forces fought and laid mines on what is now territory claimed by Thailand.¹⁸⁸⁶ Numerous abandoned weapon caches have been found in jungle areas along the Thai-Cambodian border, particularly near Pailin.¹⁸⁸⁷ Of its four neighbours, Myanmar is the only one in which internal armed conflict is taking place today. The official military forces and several different insurgent groups possess and use AV mines.¹⁸⁸⁸ UXO from conflicts within Myanmar have been found in the adjacent provinces of Thailand, although not in large quantities.¹⁸⁸⁹ Forests and mountainous terrain on the Thai frontier adjacent to all four of its neighbours have some, usually very low amounts of ERW.¹⁸⁹⁰

Assessment of the problem

A Landmine Impact Survey (LIS) of Thailand was completed in May 2001. It provides national data on landmine/UXO impact on communities in Thailand with a focus on the regions bordering Cambodia, Laos, Myanmar and Malaysia.

According to the survey, the total UXO/mine contaminated area covers more than 2,500 sq km of land in 27 provinces along the Cambodia, Lao, Myanmar and Malaysia borders.¹⁸⁹¹ A total of 530 communities were reported as landmine and/or UXO affected, of which 69 communities were considered as suffering a high impact, 232 communities medium impact and 229 communities low impact.¹⁸⁹²

Some 295 communities along the Thai-Cambodian border, with a total population of 216,000 people, were reported as UXO and mine affected. They reported a total of 457 contaminated areas. Along the Thai-Lao border 90 communities with a population of 56,000 people were reported as UXO and mine affected, with 213 contaminated areas. Along the Thai-Burma/Myanmar border, 213 danger areas were identified.¹⁸⁹³ The survey found that UXO/mine contamination on the Malaysian border was lower than expected with only four affected communities identified.¹⁸⁹⁴

According to the Director-General of Thailand Mine Action Centre (TMAC), the UXO problem is less severe than that of anti-personnel mines. UXO were mostly found in the border areas with Burma/Myanmar as a result of the ongoing conflict in that country.¹⁸⁹⁵

Apart from MOTAPM and ERW problems as a legacy of war, Thailand has suffered problems caused by several

explosions of military arsenals in the past few years. A major incident was the Nong Sarai Army Arsenal in Pak Chong, Nakorn Ratchasima in October 2001. The incident claimed 17 lives, with many more injured. Residences within a radius of three kilometres from the explosion area were damaged. Only a few months later there was another explosion at the same arsenal.¹⁸⁹⁶ Mine clearance teams were pulled off their fields near the Cambodia border to undertake UXO clearance operations, which covered an area within a radius of five kilometres. Yet another military arsenal exploded in March 2002, in the northern Sa Kaeo province. There were no reported casualties but a number of people had to be evacuated.¹⁸⁹⁷

Impact

Nationwide data on UXO/mines casualties is incomplete and there is no centralized database from which casualty data can be extracted. Despite installation of the Information Management System for Mine Action database (IMSMA) at TMAC in early 2001, the data collection process is still in need of development. Only information on incidents and casualties around the Thai-Cambodian border is collected with this data transmitted to IMSMA by the Humanitarian Mine Action Units (HMAUs) working in these areas. TMAC is presently attempting to make an improvement on data collection through partnership with the Ministry of Health.¹⁸⁹⁸

From the Thai-Cambodia border area during 2003, TMAC recorded four killed and 25 injured as a result of mine and ordnance accidents. A similar level seemed to continue into 2004 with two killed and 12 injured between January and September.¹⁸⁹⁹

UXO/landmine contamination in Myanmar is also a major concern regarding any future programme for the return of Burmese refugees now sheltering in Thailand. The Thai Government has set a goal that all Burmese refugees shall be repatriated as soon as conditions permit. Provision of safe passage for a repatriation process is already part of the government's concerns. However discussion of humanitarian clearance activities beyond the Thai border is unlikely in the near future as it is considered an intervention on Myanmar's internal affairs.¹⁹⁰⁰

Efforts to address these problems

TMAC is responsible for mine action coordination. In February 2002, TMAC issued the "First interim – corrected and revised – edition of the National Plan on Humanitarian Mine Action 2002-2006". Priorities are given to civilian needs, including access to schools, agricultural and water resources, based on data collected by the Landmine Impact Survey.

Mine clearance operations have been carried out by TMAC since 2000. As of February 2002, TMAC had conducted 934 rapid response operations for mine clearance and 1,269 operations for UXO clearance.¹⁹⁰¹ Up to March 2004 a total of 1,468,402 sq m of land had been cleared.¹⁹⁰²

From the Thai-Cambodian border area, during 2003, TMAC teams recovered the following: 178 AP mines, one AT mine, 134 UXO. Between January and September 2004 they had recovered 97 AP mines, eight AT mines and 62 UXO.¹⁹⁰³

Legislation

Thailand signed the Ottawa Convention on 3 December 1997, and deposited its instrument of ratification on 27 November 1998. Thailand is not a party to the Convention on Conventional Weapons nor to its Amended Protocol II. The treaty is being studied and is expected to be in consultancy between the Ministry of Foreign Affairs and the Ministry of Defence in the near future.¹⁹⁰⁴

1886 U.S. Department of State, *Hidden Killers: The Global Problem with Uncleared Landmines*. July 1993, p. 164.

1887 Dave McCracken, *Humanitarian Demining Operations in Thailand*, Thailand Mine Action Centre/USHDP, Bangkok, March 2002, p.3.

1888 Landmine Monitor 2004.

1889 Thailand Landmine Impact Survey data, Thailand Mine Action/Norwegian People's Aid Thailand.

1890 Thailand Landmine Impact Survey data, Thailand Mine Action/Norwegian People's Aid Thailand.

1891 Those 27 provinces are Sa Kaeo, Chanthaburi, Trat, Buriram, Surin, Sisaket, Ubon Ratchathani, Petchabun, Phitsanulok, Uttaradit, Nan, Phayao, Chiang Rai, Chiang Mai, Mae Hong Son, Tak, Ratchaburi, Petchaburi, Kanchanaburi, Prachuap Khirikhan, Loei, Udonthani, Nong Bua Lamphu, Nong Khai, Chumporn, Yala, and Nakorn Sithammarat.

1892 Thailand Landmine Impact Survey data, Thailand Mine Action/Norwegian People's Aid Thailand.

1893 According to the Impact Survey, five mine/UXO affected provinces bordering Burma/Myanmar are Mae Hong Son, Petchaburi, Prachuap Khirikhan, Ratchaburi and Tak. In Tak province most areas are contaminated by UXO and located in the forest areas along the border.

1894 Thailand Landmine Impact Survey data, Thailand Mine Action/Norwegian People's Aid Thailand.

1895 Interview with Thamrongsak Deemongkol, Director-General, Thailand Mine Action Centre, Bangkok, 31 August 2004.

1896 *Thai Rath* daily, (29 March 2002) [on-line]; available from http://www.thairath.com/29_3_2002/ntoday/...html; Internet; accessed 18 August 2002 (in Thai).

1897 *Thai Rath* daily, (29 March 2002) [on-line]; available from http://www.thairath.com/29_3_2002/ntoday/...html; Internet; accessed 18 August 2002 (in Thai).

1898 Interview with Thamrongsak Deemongkol, Director-General, Thailand Mine Action Centre, Bangkok, 31 August 2004.

1899 Figures reported from TMAC to Non-Violence International, Thailand.

1900 Telephone conversation with National Security Council officer (anonymous); March 2004.

1901 Email from Dave McCracken, USHDP Consultant to Thailand Mine Action Centre, 12 March 2002.

1902 Landmine Monitor 2004

1903 Figures reported from TMAC to Non-Violence International, Thailand.

1904 Interview with Hataikarn Yamali, Officer, Ministry of Foreign Affairs, Bangkok, 31 August 2004.

Timor Leste

Background

Timor experienced fighting between Japanese and Australian armed forces during the 1939-45 War, from which some ordnance has been found. East Timor remained under Portuguese control after the war, until decolonization in 1975. Following an extremely brief experience of independence, Indonesia claimed the territory for its own, and waged a counter-insurgency war against the people and a small but persistent armed resistance movement, until the downfall of Suharto in 1998. A referendum on independence in 1999 led to an enormous spasm of violence and death orchestrated by the Indonesian authorities, and the separation of East Timor from Indonesia. UN peacekeeping forces arrived in late September 1999, and by late October established the UN Transitory Administration to East Timor (UNTAET) to aid transition to self governance. Timor Leste became the world's most recent state on 20 May 2002.

Assessment of the problem

In April 2004, a security officer of United Nations Mission of Support in East Timor (UNMISSET) reported that since the commencement of the UN mission in 1999, there had been 10 unexploded devices found in East Timor. Some were left since the 1939-45 War.¹⁹⁰⁵

A beach near the capital of Dili was found to be UXO affected because the area had been used as a firing range. There were unexploded munitions under the sand and under the water. Some were left from 1939-45. There was documentation that the range had been used for various ammunition, hand grenades, explosive demolition charges, 40mm high-explosive and practice rounds and M18A1 Claymore fragmentation mines.¹⁹⁰⁶

Impact

ERW has resulted in the following incidents:

- In March 2000, six children in the villages of Vemasse, close to Baucau, and in Gleno lost their lives and one was seriously wounded in two separate incidents. They are reported to have played with artillery or mortar shells they found, not knowing that they were weapons.¹⁹⁰⁷

- On 1 July 2000, three Portuguese UN soldiers were injured by fragments at a popular beach 10 kilometres from Dili when they disturbed some unidentified unexploded device.¹⁹⁰⁸
- On 3 August 2000, Corporal Mohammad Abdul Aziz, a UN peacekeeper from Bangladesh, was killed by a grenade explosion during an EOD search and clearing operation at the Dili beach. After a search of the area, three more grenades were found.¹⁹⁰⁹
- In October 2002, some youths found a half-buried, unexploded mortar shell in Viqueque. It is unknown if it was from the Indonesian or Japanese occupations. Peacekeeping forces disarmed it without injury.¹⁹¹⁰

Efforts to address these problems

In 2000, the UNTAET launched a public information campaign with radio messages and posters to increase people's awareness about the dangers of UXO. UNTAET's Civilian Police and the UN peacekeeping forces established a Control Centre on UXO in Dili to gather information.¹⁹¹¹

A UXO hazard reduction operation at the Cristo Beach firing Range was conducted by the Australian company G-tek Australia Pty Limited, from October to December 2002. During the clearance operation, an area measuring 105,000 sq m was searched and some 200 live small arms rounds and 400kg of spent cartridges were found, after which the beach was declared safe and reopened to the public.¹⁹¹²

Legislation

Timor Leste acceded to the Ottawa Convention on 4 May 2003. The treaty entered into force for East Timor on 1 November 2003. Timor Leste is not a state party to the Convention on Conventional Weapons and its Amended Protocol II.

1905 Email from Charles Scheiner, Web Coordinator of East Timor Action Network for Justice and Self-determination (ETAN), 2 August 2004.

1906 Otelio Ote, "Handover of Cristo Rei Beach", Timor Post, 11 December 2002, available at www.eastimorpress.com.en/news.asp?ID=677

1907 "Defusing potential danger: UNTAET on the lookout for unexploded ammunition", *TAIS TIMOR*, 1-14 May 2000, Vol. I, No. 6.

1908 *TAIS TIMOR*, 7-20 August 2000, Vol. I, No. 13.

1909 *TAIS TIMOR*, 7-20 August 2000, Vol. I, No. 13.

1910 Email from Charles Scheiner, Web Coordinator of East Timor Action Network for Justice and Self-determination (ETAN), 2 August 2004.

1911 "Defusing potential danger: UNTAET on the lookout for unexploded ammunition", *TAIS TIMOR*, 1-14 May 2000, Vol. I, No. 6.

1912 Otelio Ote, "Handover of Cristo Rei Beach", Timor Post, 11 December 2002, available at www.eastimorpress.com.en/news.asp?ID=677

Tunisia

Background

Tunisia is affected by ERW and MOTAPM from the 1942-1943 North Africa Campaign during the 1939-45 War, as well as AV and AP mines laid to secure its borders with Algeria and Libya during tension with Libya from 1970 to 1980.¹⁹¹³ Unknown numbers of ERW from a variety of munitions contaminate 1942-43 battlefields.¹⁹¹⁴ Tunisia also emplaced 1,530 AT mines in nine minefields along its borders with Algeria and Libya.¹⁹¹⁵ These minefields include AT mines fitted with booby-traps to prevent removal.¹⁹¹⁶

Assessment of the problem

Areas affected by 1939-45 War ERW/MOTAPM in Tunisia include the southern region, the central region and the north-west region. According to the government, Tunisia has emplaced AV mines in four locations along its border with Libya.¹⁹¹⁷ On request from the Tunisian Government, UNMAS conducted an assessment mission on ERW and landmine contamination in the country in early 2003. The British NGO, Mines Advisory Group, conducted a similar mission in December 2002. There are no national statistics on people considered affected by ERW and MOTAPM, but the area affected by AV and AP mines is estimated at a total of 1,389,300 square metres.

Impact

The humanitarian impact of mines is low and while the humanitarian impact of 1939-45 War ERW is more significant, it remains relatively low by international standards.¹⁹¹⁸ This is because most of the ERW/mine-affected land is in remote, thinly populated, desert areas.¹⁹¹⁹ There are no national or regional statistics for people killed or injured by ERW/MOTAPM in Tunisia. Since 1991, 11 victims have been reported.¹⁹²⁰ Many of these

incidents were reported as "mine" victims, but it is unclear whether some incidents were actually due to ERW.¹⁹²¹

Any large-scale construction or engineering projects in Tunisia require prior clearance of all ERW by the engineering battalion of the armed forces.¹⁹²² The Tunisian Government intends to build new roads throughout the country, including a road between Tunis and Tripoli. The government also plans to construct a gas pipeline that will cross the Tunisian-Libyan border. To begin these projects, clearance of the minefields in the border area is required.¹⁹²³

Efforts to address these problems

The Tunisian army is responsible for clearing or destroying ERW and MOTAPM.¹⁹²⁴ Between 1991 and March 2001, 6,997 mines and ERW were reported cleared.¹⁹²⁵ There were no clearance operations in 2003 or 2004.¹⁹²⁶ The army conducts clearance through its engineering corps. There is no information available on the numbers or facilities of this corps. While minefields are marked and extensively fenced with barbed wire, which is maintained regularly by the army,¹⁹²⁷ the absence of precise maps poses problems for ERW clearance operations.¹⁹²⁸ There is no overall national mine action agency, but there is a national commission tasked with implementation of the Ottawa Convention.¹⁹²⁹ Tunisia met its obligation under the Convention regarding stockpile destruction and its highest priority is clearance of minefields.¹⁹³⁰

Legislation

Tunisia is a State Party to the Ottawa Convention and to the Convention on Conventional Weapons, but not to Amended Protocol II. Tunisia has not expressed its intention to ratify the new CCW Protocol V on ERW and it has no position on the MOTAPM discussion within the CCW framework.¹⁹³¹

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1924 Interview with Tunisian Official at the Group of Governmental Experts of States Parties to the CCW, Geneva 16 March 2004.

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Turkey

Background

Turkey has in the past placed MOTAPM on nearly all its borders, reflecting its strategic position as the most easterly NATO member with land borders with (then) the Warsaw Pact countries of the USSR (now Georgia) and Bulgaria. Additionally MOTAPM, AP mines and UXO result from regional conflicts, including tension with Greece, and especially the conflict with the Kurdish PKK forces within south-eastern Turkey and in northern Iraq. During the conflict with the PKK from 1984 to 1999, AP mines and MOTAPM appear to have been used by both sides, while the fighting has resulted in UXO casualties in this area.

Assessment of the problem

It is reported that MOTAPM contamination is present on Turkey's borders with Azerbaijan, Bulgaria, Georgia, Iran, Iraq and Syria, and in parts of the south-eastern provinces.¹⁹³² In March 2001, Greece's Defence Minister referred to minefields on the Turkish side of the border with Greece.¹⁹³³ It is the south-eastern areas of the country that have seen recent conflict and it is these areas that are most highly contaminated with ERW. Elsewhere, reports indicate minefields are confined to the country's borders. Bilateral negotiations and agreements with Azerbaijan, Bulgaria and Georgia indicate that these borders have previously been mined.¹⁹³⁴ However, it appears from the reports of casualties that mine contamination and ERW is heaviest in the south-east of Turkey and on the borders with Iran, Iraq, and Syria. The Human Rights Foundation reports that areas most affected are Bingöl, Batman, Diyarbakir, Hakkari, Mardin, Siirt, Sirnak and Van.¹⁹³⁵ The November 2002 report of the Landmines Committee of the Human Rights Association said there was evidence that in the south-east a number of evacuated villages were mined, presenting an obstacle to the return of displaced people. It is likely these areas also contain ERW and possibly MOTAPM.¹⁹³⁶ While most border minefields make use primarily of AP mines – the 877-mile Syrian border is reported to be mined with substantial numbers of MOTAPM.¹⁹³⁷

On 17 July 1999, the Voice of Iraqi Kurdistan radio claimed that the PKK emplaced MOTAPM in July 1999 along roads in the Chaman border area. A local man was reported injured by one of these mines.¹⁹³⁸ Another report stated that Turkish security forces captured 15,000 landmines from the PKK, of which 3,250 were seized in Turkey's South Anatolia region and the remainder were found in northern Iraq. Of the 3,250 mines, 2,866 were reported to be AP mines and 384 were anti-tank mines.¹⁹³⁹

During the 1974 occupation of northern Cyprus, anti-personnel and anti-vehicle mines were used extensively by Turkish armed forces to create the buffer zone which

divides the island and in areas adjacent to the buffer zone. The minefields have been maintained since then.¹⁹⁴⁰

Impact

In 2003, The International Federation for Human Rights (FIDH) expressed concerns about allegations of new mine fields along the Iraqi border.¹⁹⁴¹ It is not clear whether these minefields consisted of AP, MOTAPM or a mixture of both. Some sources suggested that these minefields were impeding IDP return.

In November 2002, The Human Rights Association produced a report that calculated that 146 incidents involving UXO killed 137 and injured 213 people between 1990 and 2002. During the same period, a total of 838 people were killed and 937 injured in 512 mine explosions. Of the 975 fatalities from both mines and UXO, 244 were children and 394 were adult civilians; 334 were security force personnel and three were members of the PKK.¹⁹⁴² It is not known what proportion of mine accidents resulted from MOTAPM.

On 1 December 2003, five soldiers were killed and five injured when a military vehicle struck a MOTAPM close to the Syrian border.¹⁹⁴³ Geneva Call and the Turkish Human Rights Association (HRA) reported that 22 people were killed (seven military and 15 civilians including nine children) and 45 injured (eight military and 37 civilians including 20 children) by landmines and UXO in 2003.¹⁹⁴⁴ On 3 November 2003, four children were killed and seven were injured near Sirnak by UXO.¹⁹⁴⁵

Efforts to address these problems

Turkey reported to the Standing Committee meetings in May 2003 that "comprehensive mine clearance" started in 1998. All AP, MOTAPM and ERW clearance is undertaken by the Turkish military. It is not clear to what standard clearance is undertaken.

Turkey announced that mine clearance along the Turkish side of the border with Bulgaria was completed in mid-2002. Clearance elsewhere is ongoing, including along the Armenian border.¹⁹⁴⁶ Previously, in January 2001, Turkey signed a joint declaration with Georgia on a "strategic partnership," which includes "the elimination of landmines on the border of the two states and the inadmissibility to use them in future".¹⁹⁴⁷ A similar agreement was being negotiated with Azerbaijan.¹⁹⁴⁸

In November 2000, the Turkish Minister of Internal Affairs informed legislators of a project to demine the border with Syria.¹⁹⁴⁹ On 2 April 2001 an agreement was signed with Bulgaria, Georgia, Romania, and the Russian Federation to establish the Black Sea Co-operation Task Force. Among the tasks identified in the agreement are "mine counter measures".¹⁹⁵⁰

Legislation

The Republic of Turkey acceded to the Ottawa Convention on 25 September 2003.¹⁹⁵¹

Turkey is a signatory to the Convention on Conventional Weapons (CCW), and reported in May 2004 that it has “reached the final stages of ratifying” the CCW and its Amended Protocol II.¹⁹⁵²

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Uganda

Background

Uganda has experienced war for most of the last 25 years, since the overthrow of Idi Amin’s regime in 1979. Current President Yoweri Museveni’s National Resistance Army (NRA) took power in January 1986 and its most persistent armed challenge has been from the Lord’s Resistance Army (LRA) operating in the north of the country.

Both the LRA and another armed non-state actor the Allied Democratic Forces (ADF) have been accused of using landmines, including MOTAPM. The use of MOTAPM and anti-personnel mines has reportedly escalated since 1992, when the LRA intensified its activities in Uganda.¹⁹⁵³ The LRA and ADF have in the past received training and arms from the Sudanese government. The Uganda Government has also used mines, some of them manufactured by the Ministry of Defence’s Luwero Enterprises at the army headquarters in Bombo, north of Kampala.¹⁹⁵⁴

Assessment of the problem

Though Uganda has been clearing some ERW and mines, the continuing war has meant more were planted, and that many contaminated areas can not be accessed and cleared.¹⁹⁵⁵ Some sources indicate that the LRA continued

to acquire MOTAPM in 2002 when Sudan momentarily cut off support to the insurgents – and that, later in 2003, Sudan gave the LRA anti-tank mines after the rebels helped capture the town of Torit in October 2002.¹⁹⁵⁶

Humanitarian agencies report that the number and location of mines planted in northern Uganda is not known, but efforts at mapping and injury reports show that the most affected districts are Gulu, Kitgum and Pader.¹⁹⁵⁷ Katakwi, Kaberamaido and Soroti districts have also been affected by MOTAPM since the LRA rebels extended their insurgency to those districts during 2003.¹⁹⁵⁸

In 2003, the Uganda Peoples Defence Forces (UPDF, the national army) recovered a large number of anti-tank mines, which was greater than the eight MOTAPM cleared in 2001 and 2002.¹⁹⁵⁹ In September 2003, UPDF recovered 20 MOTAPM of Russian design assembled in Arab countries, plus 84 ERW, all in Gulu district.¹⁹⁶⁰ According to information from the UPDF Fourth Division 37 anti-tank mines and 31 ERW were cleared in another operation. Most of the mines (30) were recovered from Gulu district, four from Kitgum, two from Soroti, and one from Yumbe. All the ERW were recovered from Pader district.¹⁹⁶¹

The areas affected with ERW are the Acholi region (Gulu, Kitgum and Pader districts), the northern part of Lira

district, some areas of Teso region (Soroti, Kaberamaido and Katakwi districts), the Karamoja region, and northern parts of the West Nile region, particularly Yumbe district.¹⁹⁶² In Yumbe there are ERW resulting from the rebellion by the Uganda National Rescue Front and West Nile Bank Front rebel groups in the late 1990s.¹⁹⁶³ Local leaders claim the UPDF has laid mines along the border with Sudan to cut off insurgents based in that country, making a 50km strip between Yumbe district and the Sudan border a no-go area.¹⁹⁶⁴

UPDF Captain Wilson Kabera said ERW are littered all over the region: "they are both intended and unintended devices laid by the government and the LRA. Most, however, are bombs left behind by tired soldiers, like grenades."¹⁹⁶⁵ Bernard Ocen, the Gulu district rehabilitation officer, said there were many ERW scattered all over the district, which affected farming as people feared tilling land thought to be contaminated.

Abandoned ordnance is also widespread in Uganda and the army deals with it on a regular basis. Between 1 January 2004 and 7 July 2004, the UPDF recovered seven anti-tank mines and a variety of AXO, including 32 hand grenades, 35 rocket-propelled grenades and 17 60mm mortar bombs. It also recovered nine special purpose gun shells, 15 bombs of various calibres, 242 empty magazine shells for sub-machine guns (SMGs), and 101 full magazines of SMG ammunition.¹⁹⁶⁶ Between 1 June 2004 and 3 July 2004, UPDF recovered 14 grenades, one 60mm mortar, 148 SMGs and 54 assorted bombs.¹⁹⁶⁷

Impact

There were at least nine incidents of vehicles being hit by MOTAPM during June 2003 to June 2004. No agency kept statistics on MOTAPM incidents so it was not possible to establish exactly how many people were killed, maimed or injured. NGOs merely kept information on survivors without indicating whether they were injured by MOTAPM or anti-personnel mines. UPDF had statistics only on recovered ERW and mines.¹⁹⁶⁸ In 2003, 35 MOTAPM and 99 anti-personnel mines were recovered from the LRA, while nine MOTAPM and 58 anti-personnel mines were recovered between January and May 2004.¹⁹⁶⁹ Based on media reports and field interviews, a number of incidents involving MOTAPM were identified:

- On 10 June 2003, a bus on the main road from Kitgum to Kampala hit a suspected MOTAPM, killing six people injuring 25. The incident occurred between Angu-Gura and Lacek Ocet villages in Atanga sub-county, Pader district.¹⁹⁷⁰
- An army officer said that, in May 2004, a lorry was destroyed at Ogin, on the Aleptong-Aloi Road in Lira district, when it hit an anti-tank mine, but the five people on board all escaped unhurt. "I had warned them not to use that road but they insisted. Rebels had been in the

area for two months so we suspected the road was mined," he said.¹⁹⁷¹

- Seven people, including the headmaster of Akore-Acowa Primary School, were killed on 18 September 2003, when a truck they were travelling in hit a MOTAPM in Katakwi district.¹⁹⁷²
- In July 2003, a taxi hit a suspected MOTAPM along the Lira-Soroti Road.¹⁹⁷³
- An army battle vehicle was damaged on 21 September 2003 when it hit a suspected MOTAPM on the Asamuk-Wera Road in Katakwi.¹⁹⁷⁴
- In June 2003, a truck travelling from Katakwi to Lira was destroyed by a landmine near Katine. Two people were killed and many injured.¹⁹⁷⁵
- On 25 February 2004, a government soldier died and one person was critically injured when a patrol vehicle they were travelling in hit a suspected MOTAPM on the Lira-Okwang road, 80 km from the northern Lira town.¹⁹⁷⁶
- On 29 October 2003, three people including a government soldier were killed when a suspected MOTAPM hit their pickup truck at Amillimil in Kuju sub-county, Katakwi district.¹⁹⁷⁷

Some people have suggested that handling landmines and ERW may have been encouraged in part by former army commander's campaign that gave out money to anyone who took mines and pieces of ERW to the army in 1998 and 1999.¹⁹⁷⁸ People are reported to have been injured as they tried to identify mines and deliver them to the army.¹⁹⁷⁹

The Gulu district rehabilitation officer said ERW and mines have negatively affected the economy of the affected regions. Among the roads where mines have been found are Gulu-Kitgum and Gulu-Nimule.¹⁹⁸⁰ The NGO, Canadian Physicians for Aid and Relief (CPAR) works with ERW and mine survivors but says it cannot access many villages. An official of the agency said that near the border with Sudan many people died or were maimed as a result of ERW explosions, but they could not access these victims.¹⁹⁸¹

According to the International Rescue Committee, in northern Uganda MOTAPM are used to deter LRA rebels. The IRC often has to identify roads that may be dangerous, slowing down delivery and monitoring of aid programmes.¹⁹⁸²

MOTAPM have also taken lives indirectly. Some people did not go to health centres and schools as they feared that roads were mined, a CPAR official said, adding: "Some die because they fear mines on the way to the health centres so they resort to using local herbs for treatment."¹⁹⁸³

CPAR said it was reluctant to establish programmes in suspected contaminated areas and that small NGOs that did not have guards or detectors had been affected. One case, in October-December 2003, was in Koch Goma subcounty in Gulu where contamination forced CPAR to put off a training

programme for formerly abducted children in tailoring, carpentry, brick-laying and concrete practice. "We had already picked 57 children but we feared we could hit landmines or get attacked by rebels," said the official.¹⁹⁸⁴

Other sources said that in many parts of the north, particularly in Pader, Kitgum, Gulu and Yumbe, land could not be accessed for water, cultivation, firewood and grazing because of ERW contamination. Access to community resources such as schools, health centres, markets and granaries had also been constrained by ERW and mines.¹⁹⁸⁵ Separately, local people in Kasese complained of the army's reluctance to pick up landmines they identified, or to comb through areas they suspected had landmines, which had made them reluctant to report ERW to the authorities, thus hampering clearance efforts.¹⁹⁸⁶

Early in 2004, unexploded grenades killed four children and their mother at Custom Corner in Gulu.¹⁹⁸⁸ In Maracha subcounty, Arua district, an unexploded grenade killed four people after a person handled it deliberately.¹⁹⁸⁹ The Italian NGO Associazione Volontari per il Servizio Internazionale (AVSI) said that at the beginning of the conflict mines were the more pressing problem, but in 2003 and 2004 ERW have become more of a problem.

In February 2004, five items of ERW were discovered in Kyabitondo village, Kabigo Parish, Mukunyu subcounty in Kasese.¹⁹⁹⁰ Johnson Bwambale, the chairman of Mukunyu Landmine Victims Association, said the ERW were a threat to people engaged in agriculture. The ERW were apparently abandoned by fleeing ADF combatants three years before. Bwambale, a former commander with the ADF, said the recovered ERW comprised of a Tortoise grenade, two stick grenades and two mortar grenades. Nelson Rubuya, the local council chairman for Kighali village in Kasese, said the Rwenzori Mountains are contaminated and that residents should avoid them.¹⁹⁹¹

Lira Hospital in Lira district, where rebels have been active since 2002, reported a dramatic rise in ERW and mine related injuries in 2002 and 2003. The figures of war-related injuries were 67 in 2001, 148 in 2002, and 280 from January to September 2003.¹⁹⁹² The Orthopaedic Hospital and other health units in the region give ERW/mine victim statistics to AVSI, the organization that maintains the main database on mine issues. But the

statistics do not disaggregate figures on the basis of the types of munitions.

Efforts to address the problem

A Ministry of Health official said Uganda was in the process of mapping out a comprehensive strategy for coordinating ERW and mine issues in the country, including ways of establishing the magnitude of the problem.¹⁹⁹³

Since 1998, the main agency involved in risk education and victim support is AVSI. Since 1998, the AVSI office in Gulu in northern Uganda had been supporting activities related to risk education and victim assistance. The risk education programme focused on mine awareness training for specific target groups, while victim support was done through the Gulu Regional Orthopaedic Workshop in the Gulu Government Hospital.¹⁹⁹⁴ AVSI and its partners also developed a variety of radio programming to help spread awareness. Books and posters were produced in English and Luo (a local language) and handed out during training sessions.¹⁹⁹⁵

According to AVSI, a national office to coordinate issues of ERW and mines should be established.¹⁹⁹⁶ There are no immediate plans to create an IMSMA system, and the agencies involved in mine action do not have a long-term strategy.

Data on ERW and mine incidents comes from agencies like CPAR and AVSI. According to them it is impossible to go into the villages to try to establish where the minefields are. The UPDF, the primary authority engaged in clearance, says it does not have the capacity to carry out a proactive programme; instead it reacts to ERW and mines identified and reported by the public or soldiers.¹⁹⁹⁷

Legislation

The Ottawa Convention came into force in Uganda on 1 August 1999. Uganda has yet to adopt legislation on mines. By May 2004, the draft legislation had been with the Ministry of Defence for more than two years, and the Ministry of Foreign Affairs was lobbying the Deputy Speaker of Parliament to ensure it was speedily tabled before Parliament.¹⁹⁹⁸ Uganda is a party to the original Protocol II to the CCW Convention, but not to Amended Protocol II.

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Ukraine

Background

ERW and MOTAPM contamination in Ukraine results primarily from ground fighting and bombing during the 1939-45 War. There is also concern regarding ERW in artillery ranges and ordnance yards that remain after Ukraine became independent of the Soviet Union in 1991. The focus of international support to mine action in Ukraine has been stockpile destruction of anti-personnel mines.

Assessment of the problem

Areas of major 1939-45 War combat were around Odessa, Dnepropetrovsk, Vinnitsa, Ternopol, Zhitomir, Kiev, and Kharkiv.

The Ukraine inherited some 220 military arsenals and stockpiles from the former Soviet Union. Large quantities

of ammunition are reported as needing destruction between 2004 and 2010. The Ukraine Mine Action Coordination Centre has published an account of the basic status of these stockpiles.¹⁹⁹⁹

Key areas of concern have been on the Crimean Peninsula, particularly around Sevastopol and Kerch. In this area, large quantities of ordnance became buried when the Germans sought to capture underground facilities near Sevastopol in 1942.²⁰⁰⁰ According to estimates from the Ministry of Emergency Situations based on archive records, more than 3,000 tons of ordnance may be stored in the Inkerman Adits near Sevastopol. Other estimates suggest that some 100,000 tons of ordnance may be buried in this area.²⁰⁰¹ The Government of Ukraine promised to provide US\$ 1 million to clear areas of the Crimean Peninsula and the Emergency Situations Ministry contracted two companies for survey and EOD operations in this area.²⁰⁰² Before the break-up of the

USSR, the area was guarded by the Navy. Recently, however, the area has been accessible to people looking to salvage metal and explosives.

In March 2004, Defence Minister Marchuk admitted that “several hundred” Soviet-era surface-to-air missiles remained unaccounted for in Ukraine. He claimed this must only be a case of bad book-keeping and categorically dismissed the possibility of the missiles being stolen, even though Ukraine has been accused in recent years of delivering arms to nations such as Iraq on the black market. Ukraine has returned all of its nuclear warheads to the Russian Military after the Soviet Union’s collapse under a deal that the United States helped broker and insisted upon, fearing instability in independent Ukraine. But the security and technical maintenance of the massive quantities of arms is still prompting fears in the West.²⁰⁰³

Impact

Lack of effective controls over ordnance stores can present a serious hazard. As a result of a fire at such stores in Zaporizhzhya Oblast, Melitopol region, multiple explosions started on 6 May 2004 and finished on May 13, 2004. As a result of this stockpile incident some 936 houses were damaged.²⁰⁰⁴ Government sources were reported as saying that the incident was caused by soldiers smoking at work.²⁰⁰⁵ Some reports noted that five people were killed and four injured, more than 5,000 had to be evacuated and there was extensive disruption to infrastructure as fragments were scattered over a 10km radius.²⁰⁰⁶ Other reports suggest 10,000 people had to be evacuated and that buildings, including a local railway station, were destroyed.²⁰⁰⁷ This incident was taken by the Defence Minister as indicative of the acute problems faced by Ukraine with the respect to excessive stocks of ordnance. The MoD was reported as noting that the 184 such arms depots in the Ukraine were overfilled by 110-120 per cent, meaning Ukraine was storing more than one million tons of needless ammunition.²⁰⁰⁸ It has been reported that some 60 per cent of the ammunition was kept in open stacks and stored as a single body – a technique that is strictly against national regulations designed to prevent the occurrence of such an accident.²⁰⁰⁹

On 11 May 2004, the Ukrainian Parliament debated the problems posed by these stockpiles. Mr. Grigoriy Reva, Minister of Emergency Situations, suggested that “the military financial losses are more than US\$500 million, civilian financial losses US\$300 million”.²⁰¹⁰

After incidents in Artemovsk and Zaporizhzhya Oblast, the President of Ukraine signed a decree stopping all activity on the destruction of ammunition and give the Defence Ministry three months to create a new system of coordination and organization for these problems.²⁰¹¹

Information on incidents and casualties is posted on the website of the Emergency Ministry.²⁰¹² For example:

- On 29 June 2004, four workers were injured and one died when they tried to disassemble an artillery shell from the 1939-45 War in the building of a private enterprise near Voronotsa village, Vinnitsky district. All of the victims were male. Two 15-year-old boys had minor injuries to their legs. A 20-year-old man lost his arm and a 50-year-old man was injured in the stomach. It is not known how the shell got into the building.
- On 24 March 2004, on a dump near Fedorovka in Lugansk area, schoolchildren discovered a 120mm mortar shell. The children informed the school principle and the ordnance was addressed by a team from the Ministry of Defence.²⁰¹³
- On 26 January 2004 a sea mine found in Kamyshovy Bay, Sevastopol, was taken to the house of the businessman who found it while diving. During an effort to take the device apart there was an explosion which left two people dead and a third severely injured. After inspecting the scene, the demining team concluded that only the detonator had exploded and that the main explosive charge was still intact. A large number of people had to be evacuated to deal with the mine (which was finally completed on 4 February 4 2004). According to the police investigation, the victims of the explosion had planned to sell the parts for scrap metal.²⁰¹⁴

There are numerous reports of “illegal” collection of ordnance from contaminated areas for sale of extracted explosives or metal content.

UMACC’s report “Situation in Ukraine 2004” states that in 2003, there were 4 mine and UXO casualties (2 people were killed and 2 people were injured.) To May 2004 there were 14 mine and UXO casualties (7 people killed and 7 were injured as results of [...] explosive incidents.)²⁰¹⁵

Efforts to address these problems

In the course of reports at the plenary meetings of 58th United Nations Assembly, representative of Ukraine stated: “Despite the fact that more than half a century has passed since the end of World War II, every year our specialists neutralize tens of thousands of pieces of ammunition and unexploded ordnance.”²⁰¹⁶

In January 2004, a coalition of Ukrainian NGOs created the Ukrainian Mine Action Coordination Centre as a non-governmental organisation. On January 15, the UMACC Council held its first session in Kiev, and confirmed its role as being to help implement mine action and other Mine Ban Treaty and CCW issues in the Ukraine, to support ratification by Ukraine of the Mine Ban Treaty, and to work in partnership for full-scale PFM mines²⁰¹⁷ and small arms and light weapons (SALW) destruction projects.²⁰¹⁸

Key bodies involved in responded to ordnance contamination in Ukraine include the Humanitarian Demining Centre (HDC) of the Ministry of Defence (MOD), the Ukraine

Mine Action Information Centre (UMAIC), the Emergency Ministry (EM) and the State Department for Veterans.²⁰¹⁹ The Social Rehabilitation Centre in Kiev provides artificial limbs to those who have encountered ERW and landmines.

According to the Emergency Ministry, some 274 items were found by their teams between August 2003 and July 2004. The majority of these were artillery shells, although aircraft bombs, mines and grenades were also recorded. The Ministry of Defence recorded a total of 38,000 items found and destroyed by their teams during the same period.²⁰²⁰

Ukraine continued cooperation with NATO on stockpile destruction in a project to destroy 1.5 million firearms and

130,000 tons of ammunition under NATO's Partnership For Peace. Greece, Turkey and Germany are supposed to provide financial support of Ukraine in its implementation. The project is supposed to be implemented within six to ten years.²⁰²¹

Legislation

Ukraine has signed but not ratified the Ottawa Convention. Ukraine is a State Party to the CCW and has signed Amended Protocol II. The Ukraine has stated an intention to sign and ratify Protocol V.²⁰²²

- 1999 The following examples, paraphrased from UMACC's report "Situation in Ukraine 2004" give an indication of the extent of the problem: Slavuta, Khmel'nitska Oblast – destruction needed of more than 1,000 wagons of shells, mines, and ammunition. The stockpiles are in a high-risk location near Khmel'nitska Nuclear Station and 500 metres from Russian-European Gas transit lines; "Yamal-West", Grechani suburb of Khmel'nitskiy city – stockpile containing 650 wagons of ammunition for Air Forces; Kalinovka, suburb of Vinnitsa city – destruction needed of more than 1,000 wagons of shells, mines, and ammunition, including a WWII ammunition stockpile located 500-600 metres from gas transit lines; Bryuhovichi, suburb of Lviv city – stockpile containing 350 wagons of old shells and mines; Lyudovka, Vinnitsa Oblast, suburb of Pirogovo town – immediate destruction needed of more than 200 wagons of shells, mines, and ammunition; Olshanița, Kievskaya Oblast – the main stockpile of former Soviet Kiev Military District with engineer's ammunition and landmines, including PFM-1 mines. Immediate destruction needed of more than 400 wagons of engineer's ammunition and mines; Ozernaya, Zhitomirskaya Oblast – 330 wagons of old ammunition for the Air Force; Chudnov, Zhitomirskaya Oblast – 330 wagons of old artillery shells; Lozovaya, Kharkov Oblast – immediate destruction needed of more than 315 wagons of artillery shells; Novobohdanovka, Zaporozhie Oblast – immediate destruction needed of more than 42,000 tons of UXO, missiles, artillery shells; Kerch (Crimea) – stockpile of former Soviet ammunition for Army, Air Force and Navy. Also in and around Kerch city are old arsenals of Russian and German ammunition; Sevastopol (Crimea) – immediate destruction needed of more than 200 wagons of artillery shells. Also around Sevastopol city are the largest and oldest underground stockpiles remaining from 1945; Mashino – immediate destruction needed of more than 540 wagons of former Soviet navy mines and ammunition; Odessa – 20 per cent of ammunition needs immediate destruction; Balta, Odessa Oblast – the main engineer's stockpile of former Soviet Odessa Military District. The stockpile has engineer's ammunition and landmines, including more than 1,500 wagons of landmines. Some 20 per cent needs immediate destruction; Izmail – the largest stockpile in south-eastern Ukraine. Some 50 per cent of all mines and ammunitions need immediate destruction; Belenkoe – more 100 wagons of mines, shells, and ammunitions need immediate destruction.
- 2000 <http://www.crimera-resorts.com/gazeta/2004/04/index.html> (last accessed 6 October 2004).
- 2001 Lt. Col. Sergei Pashinsky, "Ukrainian Update and Regional Coordination Issues". 2000, online at http://maic.jmu.edu/conference/proceedings/global_mine_action/Perspectives/pashinsky.htm (last accessed 7th October 2004)
- 2002 MES reports, January-July 2004, Kiev.
- 2003 From UMACC report "Situation in Ukraine 2004", drawing upon "Analysis of Novobohdanivka Ammunition Depot Blast", TR Ltd, May 2004, UK.
- 2004 17 May 2004, <http://www.polit.ru/news/2004/05/17/ukrbaza.html>
- 2005 "Fire at Ordnance Depots in Zaporizhzhya Oblast Broke Out Due to Smoking of Soldiers", online at <http://www.unian.net/eng/news/news-55952.html> (last accessed 7 October 2004).
- 2006 "5 People Perished and 4 Injured As Result of Explosions at Arms Depots in Zaporizhzhya Oblast", online at <http://www.unian.net/eng/news/news-55882.html> (last accessed 7 October 2004) and "Shell from Arms Depot Got into Gas Pipe Line, Supplying Gas to Two Districts of Zaporizhzhya Oblast", online at <http://www.unian.net/eng/news/news-55885.html> (last accessed 7 October 2004).
- 2007 "Explosions hit Ukraine arms dump", online at <http://news.bbc.co.uk/1/hi/world/europe/3690779.stm> (last accessed 7 October 2004).
- 2008 "Catastrophe in Zaporizhzhya Oblast Proved that Army's Acute Problems Realized Only in Case of Accidents – Marchuk", online at <http://www.unian.net/eng/news/news-55917.html> (last accessed 7 October 2004).
- 2009 UMACC report "Situation in Ukraine 2004", drawing on "Analysis of Novobohdanivka Ammunition Depot Blast", TR Ltd, 9 May 2004, UK.
- 2010 UMACC report "Situation in Ukraine 2004", reporting the statement of Mr.H.Geva, Minister of Emergency Situations of Ukraine, 11 May 2004.
- 2011 UMACC report "Situation in Ukraine 2004", drawing on a Report of Press Service, President of Ukraine, 30 May 2004, Kiev
- 2012 <http://www.mns.gov.ua>
- 2013 <http://kl.lg.ua/~ispolkom/news01.htm> (last accessed 6 October 2004).
- 2014 <http://gazeta.sebastopol.ua/2004/06/mina.shtml> (last accessed 6 October 2004).
- 2015 UMACC report, 17 May 2004, Kiev.
- 2016 Statement by the representative of Ukraine Mr. Victor Kryzhanivsky at the plenary meeting of the 58TH session of the General Assembly on Agenda Item 22, "Assistance in Mine Action", 5 November 2003 New York.
- 2017 PFM mines are a type of scatterable anti-personnel mine.
- 2018 UMACC report, 1 July 2004.
- 2019 "Ukraine Mine Action", online at <http://maic.jmu.edu/journal/6.1/focus/pashinsky/pashinsky.htm> (last accessed 7 October 2004).
- 2020 Letter to SCAF/CBL-Belarus, Ref. No. 6132/36-110-754 dated 20/07/2004 from Embassy of Ukraine to Belarus.
- 2021 From UMACC report "Situation in Ukraine 2004", drawing on NATO updates, press report, March 2003, Brussels.
- 2022 Letter to SCAF/CBL-Belarus, Ref. No. 6132/36-110-754 dated 20/07/2004 from Embassy of Ukraine to Belarus.

Uzbekistan

Background

In Uzbekistan there are minefields along the borders with Tajikistan, Kyrgyzstan and Afghanistan, but it is unclear how many MOTAPM have been deployed. Additionally, there are reported casualties due to ERW in areas near the Afghan border and around former Soviet army bases and firing ranges.

Assessment of the problem

In November 1999, Uzbek border guards laid anti-personnel mines along the Kyrgyz border after an attempt by militants from the Islamic Movement of Uzbekistan (IMU) to penetrate the Uzbek border via the Batken region in Kyrgyzstan. It is not clear whether MOTAPM were also laid.²⁰²³ This policy was justified as a move to strengthen the Uzbek border defence.²⁰²⁴ The border with Tajikistan was mined after an incursion by IMA insurgents into the Sukhandarya region in August 2000.²⁰²⁵

In a change of policy in 2004, Uzbekistan announced that it was committed to demining its borders with Kyrgyzstan and Tajikistan.²⁰²⁶ Reportedly, the entire border with Afghanistan is mined. The Uzbek Government never officially acknowledged the existence of the border minefields.²⁰²⁷ Civilian casualties caused by ERW occur in Uzbekistan, mainly near the Afghan border and near former Soviet bases and firing ranges, as well as at the former Chirchik Tank College on the border with Kazakhstan.²⁰²⁸

Impact

No official records on ERW and mine-related casualties are available.²⁰²⁹ It has been estimated that 70 Tajik civilians have been killed and dozens of others wounded by ERW and mines on the Tajik-Uzbek border since summer 2000.²⁰³⁰

Efforts to address these problems

In June 2004, Uzbekistan announced it would reverse a 1999 decision to mine its borders and begin clearing the mines along the Kyrgyzstan-Tajikistan border.²⁰³¹ Central Asian neighbour states have long pushed for removal of border minefields.

Legislation

Uzbekistan is not a State Party to the Ottawa Convention. It has signed the CCW and the original Protocol II on landmines, but not the Amended Protocol II.²⁰³²

2023 The border between Uzbekistan and Kyrgyzstan is unclear: both countries acknowledge 690km, while a remaining 710km are under dispute. This issue is not settled after many years of negotiation. See Human Rights Watch, World Report 2003, p. 386.

2024 And to keep drugs and weapons smugglers out of Uzbekistan. "Uzbekistan says it's ready to demine borders with Tajikistan and Kyrgyzstan", Associated Press, 23 June 2004.

2025 Uzbek minefields were also emplaced around the Tajik enclave of Sokh in the southern Batken region of Kyrgyzstan, around the Shakhi-Mardan enclave, and along the Uzbek-Kyrgyz border areas in the Fergana Valley.

2026 Eric Walberg, "Uzbekistan to stop use of landmines", 19 July 2004.

2027 Landmine Monitor 2003, p.715.

2028 Landmine Monitor 2004, <http://www.icbl.org/lm/2004/uzbekistan>, accessed 23 November 2004.

2029 Landmine Monitor 2004, <http://www.icbl.org/lm/2004/uzbekistan>, accessed 23 November 2004.

2030 "Uzbekistan says it's ready to de-mine borders with Tajikistan and Kyrgyzsta", Associated Press, 23 June 2004.

2031 Eric Walberg, "Uzbekistan to stop use of landmines", Peace Magazine, 19 July 2004.

2032 Landmine Monitor 2003, p.715.

Vietnam

Background

More than 30 years after the end of the “American War,” Vietnam is still severely contaminated with ERW. U.S. forces dropped a total of 15,350,000 tons of ordnance on both the northern and southern portions of the country from 1961 to 1973. The average density of bombardment was some 46 tons per km.²⁰³³ Incomplete US military records confirm the use of at least 82.6 million cluster submunitions and 6.5 million larger bombs.²⁰³⁴

The Vietnamese Ministry of Defence estimates that 5 per cent of this ordnance failed to explode on impact and that between 350,000 and 800,000 tons still remains in the ground.²⁰³⁵ A 1974 Foreign Affairs article noted that visitors to North Vietnam were frequently taken to observe the devastation of cluster munitions, and remaining unexploded bomblets, in areas where they could be isolated from other weapons. Cluster bomb strikes were reported against six North Vietnamese cities, including Hanoi, Vinh and Viet Tri: with a damage radius of several square kilometres, the bombs were reported as causing severe civilian casualties in addition to military damage.²⁰³⁶

According to one survey, BLU 26/36 cluster bombs and M79 rifle grenades are the most common types of ordnance found and are together responsible for 65 per cent of accidents/incidents since 1975. An additional 25 per cent of incidents were caused by other types of ERW, with AP landmines comprising only 10 per cent.²⁰³⁷ The vast majority of the ordnance found in Vietnam is of American origin, with much smaller quantities of Soviet, Chinese and French ordnance.²⁰³⁸

MOTAPM were used during the American war, primarily around military facilities, as well as during border conflicts with Cambodia (1978-89) and China (1979), and may also remain in smaller quantities from the resistance war against the French (1946-54). At present there is insufficient information to confirm the extent of a MOTAPM problem in Vietnam: this may change following the release of the findings of Phase I of a national mine impact survey.²⁰³⁹

Assessment of the problem

ERW affect all areas of the country, particularly the central and southern regions. In 2003, the domestic press reported new discoveries of ERW in 43 of 64 provinces and cities. Ministry of Defence sources confirm that the most contaminated portions of the country are the central provinces from the former DMZ southward, including Quang Tri, Quang Nam and Quang Ngai.²⁰⁴⁰ Ordnance has been reported to be found buried at depths of up to 15 metres.²⁰⁴¹ It is difficult to separate the effects of ERW and mines, as both are frequently found on the same land: bombing targets in the war were simultaneously the site of ground battles and fortified military positions.

The Vietnamese military conducted surface clearance operations in populated areas following the war, removing some of the immediate threats to people in cities, towns and along major roads. “Hundreds of thousands [of] hectares of cultivated land” were cleared of more than eight million ERW and landmines during this period.²⁰⁴² Heavy contamination remains in remote and mountainous areas that have not been cleared since the war. However, the intensity of bombing during the war, combined with the depth at which ERW may be buried and its capacity to shift over time, means that ordnance may be discovered almost anywhere in the country, even in areas believed to be unaffected or that had previously undergone surface clearance. Sea mines and ordnance launched from offshore naval units are also found along Vietnam’s long seacoast, especially near ports and at the mouths of rivers. Many of these areas were mined extensively during the American war, and not all were cleared afterwards.²⁰⁴³

One valuable, though limited, source of data is US records of air-dropped ordnance. This database has been transferred from the US Department of Defense to the Technology Centre for Bomb and Mine Disposal (BOMICO) of Vietnam’s Ministry of Defence. Although not complete, this resource allows for comparison between types of ordnance in different areas.

The first national impact survey began in February 2004, following three years of negotiations between Vietnam’s Ministry of Defence, the Vietnam Veterans of America Foundation and the U.S. State Department, which is funding the survey. Phase I of the survey will last one year, covering Ha Tinh, Quang Binh and Quang Tri. BOMICO is the implementing agency, with technical support, training and monitoring from VVAF. The goal of the survey, according to VVAF, is “to provide Vietnam and international donors with quantifiable, standardized data . . . [to] better define the problems cause by UXO and provide authorities with an improved capacity to plan and prioritize mine action resources”. Following the completion of Phase I, the survey is expected to be extended to cover the remainder of the country for two additional years.²⁰⁴⁴

Local-level surveys released in 2003 offer detailed information on contamination in three districts in the central region (Thua Thien-Hue and Quang Tri provinces). For example, in Trieu Phong district, Quang Tri, survey results by Project RENEW and the Vietnam Veterans Memorial Fund show 41 areas “severely contaminated” by ERW and landmines, more than were previously known.²⁰⁴⁵ Of 149 villages in the district, 83 per cent witnessed ground battles, all but one were bombed and almost half of them contain old military bases.²⁰⁴⁶

Compared with the massive ERW contamination nationwide, MOTAPM make up a small fraction of the total. Surveyors in Trieu Phong, for instance, discovered seven AT

mines out of a total of 428 pieces of ordnance (1.6 per cent) during a five-day field visit. These, like AP mines, are primarily located around former US and South Vietnamese bases.²⁰⁴⁷ In a 2001 survey in A Luoi district, Thua Thien-Hue, 30.7 per cent of respondents said they had seen anti-tank mines at least once in the district; however, 22 other types of ordnance were more frequently encountered than MOTAPM.²⁰⁴⁸

Domestic media coverage of ERW incidents has increased over the last five years as the scope and quality of investigative reporting improves. Substantial coverage is also given to projects that clear ERW and assist survivors. A small percentage of these stories is also picked up by international media and news services. Incidents involving children and/or multiple victims and those occurring closer to an inhabited area are more likely to be reported in the press. This may be a factor contributing to the widespread misperception that children are at higher risk than adult males.

Impact

With no national database of ERW or landmine accidents, an accurate estimate of casualties is difficult. From July 2003 to June 2004, media and international NGOs reported a total of 89 incidents attributed to ERW, resulting in 74 deaths and 145 injuries.²⁰⁴⁹ This data almost certainly under-reports the true number of incidents, although it is difficult to know by how much. The number of reported incidents for both ERW and landmines is rising compared to the late 1990s and early 2000s. This rise may relate to opening of new land along the Ho Chi Minh Highway, improved data collection and/or a higher sale price for scrap metal.

According to the Ministry of Labour, Invalids and Social Affairs (MOLISA), 38,849 people have been killed and 65,852 injured by all types of UXO and landmines from 1975 to 2000. No breakdown by date, location or type of ordnance is available.²⁰⁵⁰ Ministry of Defence sources, meanwhile, continue to cite “average” casualty figures of “an annual rate of 2,000 victims . . . However, the [actual] figure may be many times higher than that”.²⁰⁵¹ No detailed data is provided to support these statistics. Recognizing that data is insufficient, a MOLISA-UNICEF study recommends that the government conduct a national survey of people with disabilities (including ERW and mine victims), including coordination of data collection activities among donor organizations.²⁰⁵²

More detailed information comes from the provincial-level surveys conducted in 2001-03. The Project RENEW survey released in November 2003 suggested that 2,540 people had died and 4,243 were injured in Quang Tri from 1975 to 2002. Some 50 per cent of these incidents occurred between 1975 and 1980; casualty rates then declined to approximately 200 per year province-wide in the 1980s, 150 in the early 1990s, and 50 since 1998.²⁰⁵³ Clear Path International reported 44 casualties in Quang Tri in

2003.²⁰⁵⁴ All of these figures include ERW and landmine casualties combined, although the majority are likely to be ERW-related (see below.)

Data from other local surveys shows a similar pattern of a steady decline since the 1980s, interrupted by temporary spikes during periods of expansion into previously unused areas.²⁰⁵⁵ In particular, the number of incidents in lowland agricultural land has dropped significantly over time, while upland areas remain heavily affected.²⁰⁵⁶ The highest documented casualty rate in the country, as a proportion of the population, is in mountainous A Luoi district, Thua Thien-Hue.²⁰⁵⁷

In the Project RENEW survey, 32 per cent of incidents occurred to those aged 18 or younger. By comparison, 27 per cent of Clear Path International’s beneficiaries are children, as are 13 per cent of victims in Phong Dien district, Thua Thien-Hue, and 11 per cent in A Luoi district in the same province.²⁰⁵⁸ By contrast, 59 per cent of incidents reported in the domestic and international press in 2002-03 involved children.²⁰⁵⁹ These figures appear high until it is considered that 44 per cent of Vietnam’s population is under 20.²⁰⁶⁰ According to Project RENEW, “[casualty] rates for those 8 years old or younger are lower than for other age groups, while little statistically significant variance...is noted between ages 9 to 40”.²⁰⁶¹ Death rates have been broadly consistent across regions and type of ordnance, ranging from 29 to 37 per cent.²⁰⁶² Some evidence suggests that recent death rates are slightly lower than in the immediate post-war period, perhaps because access to health care has improved. More research would be needed to confirm this hypothesis.

All of these figures include ERW and landmine incidents. The vast majority, however, are caused by ERW. Of survivors who remember the cause of their injury, survey results find that cluster bomblets or “bombies” (BLU 26/36) are the most frequent, making up 50 per cent of the total in Quang Tri province and 52 per cent in A Luoi district, Thua Thien-Hue. M-79 mortar shells are second in frequency (14 per cent in Quang Tri, 26 per cent in A Luoi), followed by anti-personnel mines (11 per cent and 12 per cent respectively). Of the incidents responded to by Clear Path International’s rapid response team in the same two provinces in 2002 and the first quarter of 2003, cluster bombs caused 80 per cent.²⁰⁶³ With the recent upsurge in scrap metal and explosives collection, however, the composition of ERW involved in incidents causing casualties appears to be changing (see ERW as an economic resource, below).

Since close to 90 per cent of injuries nationwide are caused by cluster munitions and other ERW, victims suffer greater upper body trauma and limb loss and comparatively fewer leg amputations. Less than 14 per cent of survivors in Quang Tri since 1975 lost a foot, lower or upper leg.²⁰⁶⁴ In Bo Trach district, Quang Binh, 15 per cent of survivors are lower-limb amputees, compared with 27 per cent missing upper limbs.²⁰⁶⁵

No MOTAPM casualties can be confirmed in the period from July 2003 to June 2004. Out of eight incidents reported in the press and attributed to landmines, however, one was probably caused by an anti-vehicle mine, killing three and injuring one.²⁰⁶⁶ The buried mine was detonated by an earth mover during road construction in Dong Nai province. The news report does not mention the type of mine involved, but an AV mine seems likely given the location of the mine and the scale of damage it caused. The following examples give an indication of the circumstances behind some of the ERW accidents:

- Ho Van Hoa, his wife and six children are subsistence farmers near the former Khe Sanh combat base in Quang Tri province. On 25 July 2002, Hoa, his wife, aunt and uncle were weeding a newly-cleared ricefield when Hoa disturbed a small object that no one saw clearly. The injuries both men suffered were consistent with a cluster bomb: Uncle Khon lost his left hand and the index finger of the right, with burns and minor wounds. Hoa suffered perforated intestines and minor “steel-pellet” wounds over much of his upper body, lost three teeth, had a broken jaw, right leg and shattered right patella. Amazingly, neither man was blinded, and the women were uninjured.²⁰⁶⁷
- A welding shop owner in Tan Thanh market in the southern province of Binh Phuoc set off a fatal explosion on 27 May 2003. Witnesses said that he was testing his electric welding rod on the wartime bazooka shell that he was using as a welding stand when it detonated. The shell was propelled across the highway, instantly killing a 17-month-old child seated on a motorbike. The projectile then hit and killed a four-year-old boy and a 43-year-old woman who was shopping nearby. It also injured a vendor at the market. The welder himself was uninjured; police detained him and his three employees for questioning.²⁰⁶⁸
- Two brothers, Ho Van Yen, 27 and Ho Van Lung, 21, were killed by a 12-kilogram American bomb on 10 April 2004. They found the warhead in a forest in Huong Hoa district, Quang Tri, according to the district police. As Yen and Lung were sawing the warhead for scrap metal and explosives, it detonated and killed both men instantly.²⁰⁶⁹
- Phan Van Rot, 14, walked to the stream in the early morning of 5 July 2002 to check the fish traps near his house in Bo Trach district, Quang Binh, north of the former DMZ. The heavy rains a few days earlier must have washed a cluster bomb downstream to Rot’s traps. When Rot finished collecting the fish from the traps, something round caught his eye. He bent down and lifted the object in his hand. It exploded. The cluster bomb took Rot’s left hand above the wrist and left leg below the knee. His lower intestines were perforated, and neither his family nor neighbours expected him to live. Fortunately, he was brought in time to the Vietnam-Cuba Hospital in the provincial capital for treatment.²⁰⁷⁰

The impact of ERW on affected communities was most severe in the late 1970s and early 1980s, immediately after the conclusion of the war. Surveys have found a strong, direct correlation between ERW contamination and poverty.²⁰⁷¹ Nationwide, 4,359 sq km of arable land have been left fallow because of the presence of ERW or mines, according to government officials, exerting “a direct impact on [the] economic development of the country”. A psychological impact has also been suggested, as fear of ERW reduces people’s productivity,²⁰⁷² but this has not yet been measured in any way.

Vietnamese officials and international agencies make little differentiation between the impacts of mines and ERW. In discussion among participants at a UNICEF and Thua Thien-Hue Provincial Youth Union workshop on mine risk education, most respondents believed that the type of ordnance made little difference in the risk posed to society, since all mines and ERW are dangerous. Others said they were aware of a difference, but since ERW is the largest component of the problem, provincial and military agencies adapt their programmes to deal with ERW contamination.²⁰⁷³ However, the common language of area clearance, area denial and certain education messages more closely reflect the impact of landmines than ERW.

Provincial authorities in Quang Binh, just north of the former DMZ, believe that the scale of the problem is decreasing as surface ordnance is cleared from inhabited and heavily-travelled areas. With economic development, people have more alternatives to farming on affected land or engaging in scrap metal or explosive hunting.²⁰⁷⁴

The link to poverty, however, persists. The Project RENEW survey found that 55 per cent of people who said they willingly entered dangerous areas to hunt for scrap metal came from families in extreme poverty (less than US\$130/year). And 58 per cent of recent victims’ families lived in extreme poverty, compared to 13 per cent of non-victim families. Injuries bring a greater financial strain than fatalities.²⁰⁷⁵ When an ERW incident does occur, the economic and psychological effects on a poor family are frequently devastating. Land, animals and other property must be sold to pay medical expenses. Children withdraw from school to take care of family members or earn extra income. Almost one-third of families with victims survive on 5,000 dong (US\$0.30) or less per day, and 90 per cent live in substandard housing. Survivors’ unemployment rate is 3.5 times higher than before they were injured.²⁰⁷⁶ Recovery can take years, even decades.

Survey data shows that residents of Quang Tri and Thua Thien-Hue provinces have seen landmines and UXO in all areas and locations, with the largest responses being while gathering firewood, farming or tending livestock, and near homes. Up to 35 per cent of local land in Quang Tri cannot be used for cultivation or settlement and 25 per cent of Quang Tri survey respondents said that contamination limits access to farmland: 20 per cent said that mines and UXO make movement or travel difficult. In A

Luoi district, Thua Thien-Hue, 35 per cent of interviewees did not use parcels of land due to contamination or perceived contamination.²⁰⁷⁷

However, surveyors in A Luoi found that “farmers did not significantly change their agricultural practices after the war ... It might have been expected that people would change their farming practices ... to reduce contact with UXO. This, however, did not appear to have occurred – A Luoi inhabitants do not leave land fallow because they suspect the presence of UXO ... contamination is so widespread that it is impossible” to find land free of it. “Consequently, land denial and the socio-economic impact in this sector is hard to quantify ... The inhabitants have had no choice but to continue to farm and use their land, only avoiding those areas believed to contain landmines.”²⁰⁷⁸

Vietnam’s rapid economic growth is bringing more and more of the population into closer proximity to affected areas. Urban expansion in Ho Chi Minh City, Hanoi, Danang and elsewhere is now entering areas that were military perimeter zones during wartime. More significantly, previously remote and heavily affected rural areas are becoming accessible with the construction of new roads such as the 1,676-kilometre Ho Chi Minh Highway along Vietnam’s western border. With about half of the highway completed, tens of thousands of migrants and settlers are expected to move onto land adjacent to the road to seek a living. However, military clearance extends only along the roadbed itself; those who attempt to clear land on either side of the road for fields or houses will do so at their own risk.²⁰⁷⁹ Particular danger exists when villages are relocated (or choose to relocate themselves) from upland areas to new locations with permanent cultivation. This involves not only land clearance but also construction of irrigation works, which requires extensive excavation of the site.²⁰⁸⁰

Collection of scrap metal and explosives from ERW has existed as an economic activity in Vietnam since the American war. However, the trade has increased in recent years as the selling price and availability of this material has risen. Much of the increase in ERW casualties in 2003-04 is attributable to “bomb hunting,” which now makes up more than half of the causes of all ERW casualties. Project RENEW reports that 20 per cent of recent incidents in Quang Tri were caused by scrap metal collection and 13 per cent by “tampering” with ordnance.²⁰⁸¹ The distinction between these two classifications, however, is somewhat vague. Survey data also shows 14 per cent of casualties caused by “other”: many of these may also have involved deliberate handling of ordnance, although the survivors were afraid to admit it. The source of this fear, according to Vietnamese and international observers, is a combination of potential legal sanction and social shame. “People know that scrap collection is illegal and wrong,” said one provincial official. “But they go ahead and do it anyway out of economic need.”²⁰⁸²

Although the total number of scrap dealers appears to be decreasing compared to the 1980s and 1990s, reports from central and southern Vietnam describe new collectors entering the trade, searching in areas that have not been cleared since the war. The rising market price of scrap metal is also a factor. Depending on quality, the selling price for metal is about US\$1 per kilogram, while extracted explosives can sell for US\$2 per kg.²⁰⁸³ At this price, a scrap hunter can earn up to US\$10 per day, far more than through other available work. Citing the rising price of scrap, for instance, 24 students in Quang Tri’s Cam Lo District quit secondary school in March 2004 in order to scavenge for ERW full-time. The district education department has urged the students to return to school.²⁰⁸⁴

Some 148 of 149 villages surveyed in Trieu Phong district, Quang Tri, had people involved in the scrap metal business.²⁰⁸⁵ One village in Thua Thien-Hue province had 58 people working as bomb hunters and scrap collectors; with no demining capability, the local government reportedly organized these people to clear an area for a rubber plantation.²⁰⁸⁶ Le Tung Phuong, a scrap hunter in the Mekong Delta’s Can Tho province, told a journalist in April 2004: “Up to 80-90 per cent of people in Luoi village are involved in the scrap trade. The old, young, even children, all go to search” (about 500 people in all).²⁰⁸⁷ Two resulting explosions in the village on March 27 and April 9 killed one and injured nine.²⁰⁸⁸

Few of these affected areas are marked, even with local materials such as bamboo sticks.²⁰⁸⁹ Survey results in Quang Tri province indicated that only 33 per cent of sub-districts contained marking signs, and 92 per cent of survivors reported that the areas where their injuries occurred were not marked as dangerous.²⁰⁹⁰ When military units marked areas in Can Tho with red flags, local bomb hunters moved in immediately to remove the ordnance.²⁰⁹¹

Scrap metal collecting is a legal activity in Vietnam; possession or use of explosives, however, is not. Fines and prison terms have been imposed on explosives dealers and fishermen²⁰⁹² who have hoarded large quantities of ERW, but enforcement of the law remains sporadic.²⁰⁹³ The average reported cost of a locally-produced metal detector is 300,000 dong (US\$18); these devices can search to a depth of two metres.

Inquiries in Quang Tri province confirm a thriving cross-border scrap metal trade into Laos. As long as no explosives are involved, the import or export of metal and metal detectors is legal. According to officials in charge of border control, no explosives smugglers have been caught attempting to cross international borders.²⁰⁹⁴ Scrap collectors are not trying to undertake methodical clearance and they will usually choose to remove items of high value that can be taken at low risk. An international mine action manager noted that experienced collectors tend to leave other, potentially more dangerous ordnance behind, such as rifle grenades and cluster munitions.²⁰⁹⁵

The increase in the scrap metal and explosives trade is changing the composition of ERW involved in casualty-causing incidents. Where the type of munition is known, the majority of casualties in 2003-04 have been from grenades and large bombs; scrap hunters are unlikely to target cluster munitions because of the lower metal and explosive content of these devices, combined with their perceived higher volatility. The assessment that aircraft bombs are low-risk ERW that cause few casualties²⁰⁹⁶ may need to be re-examined in light of their economic attractiveness.

Efforts to address these problems

Vietnam has no national mine/UXO coordinating body. A Landmine Working Group, comprising 12-15 international NGOs and frequent observers from government and donors, meets quarterly in Hanoi.²⁰⁹⁷ The UN is not directly involved in ERW or mine action, although UNICEF does support small-scale education projects in several provinces. Mine action is not explicitly mentioned in the UN Development Assistance Framework or the government's Comprehensive Poverty Reduction and Growth Strategy.²⁰⁹⁸

Although the government considers clearance an important priority, a national strategy on mine action has not yet been developed.²⁰⁹⁹ The National Impact Survey conducted by BOMICO and VVAF includes among its objectives to "help establish a focal point" and to "enable the development of a national strategy for mine action".²¹⁰⁰ At present, the Engineering Command of the Ministry of Defence is in charge of clearance and redevelopment, while the Ministry of Labour, Invalids and Social Affairs (MOLISA) takes responsibility for long-term survivor assistance and rehabilitation, with contributions from the Ministry of Education and Training and the Ministry of Health.

From 1975 to 2002, BOMICO states that 1,200 square kilometres were cleared of four million landmines and eight million UXO.²¹⁰¹ At present, BOMICO is reported to be clearing two million square metres in A Luoi district, Thua Thien-Hue province, but this is only a small part of their national efforts.²¹⁰²

International clearance projects cleared 2.77 square kilometres of land in 2003 in the three central provinces of Quang Binh, Quang Tri and Thua Thien-Hue. Four non-governmental organizations – MAG (UK), Solidarity Service International (SODI – Germany), Potsdam Kommunikation (Germany) and Australian Volunteers International (AVI) – carry out both site clearance and explosive ordnance

disposal (EOD) services. Two additional groups, Peace Trees (US) and Project RENEW, are cooperating on an EOD project.²¹⁰³ To the end of 2003, MAG mobile teams had cleared 24,539 UXO and 227 mines in three provinces.²¹⁰⁴ SODI roving teams, beginning in mid-2002, had removed 4,613 ERW in two districts of Quang Tri, while PK's team had cleared more than 8,000 pieces of ordnance from July 2003 to June 2004.²¹⁰⁵ The RENEW team began operation in early 2004.

While there is no national list of priorities for mine action, provincial authorities do make such prioritizations. No written copy of these plans is available, but conversations with provincial officials suggest that economic infrastructure is the highest priority, followed by site clearance for resettlement. In a speech to the International Conference on Vietnam-International NGO Cooperation in Hanoi in November 2003, a Quang Tri provincial official expressed local priorities as (1) clearance, "in a sustainable manner and appropriate with [the] Vietnamese context," where an international organization supplies funding and facilities and a Vietnamese partner implements the project; (2) integrated programmes including demining and resettlement, victim assistance and post-clearance economic support; and (3) establishment of an NGO-funded Landmine Coordination Centre.²¹⁰⁶

Legislation

Vietnam is a signatory to the CCW, though not a full state party. It has not signed any of the CCW protocols and has not signed the Ottawa Mine Ban Treaty. A Vietnamese delegation participated in the Group of Governmental Experts of the CCW for first time in March 2004.²¹⁰⁷

Vietnam has not taken a public position on the questions of ERW or MOTAPM.²¹⁰⁸

At an international conference on Vietnam's cooperation with international NGOs in November 2003, Deputy Prime Minister Vu Khoan noted "overcoming the consequences of war" as one area requiring further external assistance.²¹⁰⁹ Ambassador Le Van Bang, former ambassador to the US and currently chair of the Committee for Foreign NGO Affairs, identifies landmines and UXO as one of four priority areas for NGO assistance in development. The number of international organizations involved in addressing ordnance contamination has risen from three in the late 1990s to 30 as of 2003.²¹¹⁰

2033 Le Huy Hoang, Bui Minh Tam and Le Van Trung, "Vietnam: Demining Activities and Challenges", paper presented at the International Forum on Demining and Victim Assistance, Phnom Penh, 26-28 October 1998.

2034 Data from the US Indochina Bomb Records Database, provided by Michael Sheinkman, Vietnam Veterans of America Foundation, 16 May 2004. The database shows the use of 413,130 CBUs: at an estimated 200 bomblets per CBU, this gives a minimum figure of 82.6 million cluster submunitions.

2035 Sr. Col. Bui Minh Tam, "Cuoc chien dau sau chien tranh" (The Struggle After the War), *Su kien & Nhan chung* (Events & Witness), monthly military magazine, date unknown, pp. 17, 31, and "Vietnam Demining Activities and Challenges" (unpublished paper, February 2002). The 5 per cent estimate is low compared to estimates produced in other countries. Other sources, including more recent Ministry of Defense papers and estimates quoted in the international press, all appear to refer back to these figures.

2036 Michael Krepon, "Weapons Potentially Inhumane: The Case of Cluster Bombs", *Foreign Affairs*, Vol. 52 No. 3 (April 1974), pp. 603-4. The writer

believes, using sources available at the time, that bombing of North Vietnam was heavier and less restricted than in the South; in fact, the reverse was true (see below.)

- 2037 Project RENEW and Quang Tri Provincial Health Service, *A Study of Knowledge – Awareness – Practices to the Danger of Postwar Landmines/Unexploded Ordnance and Accidents in Quang Tri Province, Viet Nam*, November 2003, pp. 28, 86.
- 2038 International clearance staff working in Quang Tri province—one of the areas most heavily affected by ground fighting—state that approximately 80 per cent of the ordnance they find is of US origin, while 20 per cent is Russian or Chinese. Interview with staff of SODI (Solidaritaetsdienst International), Dong Ha, 30 March 2004.
- 2039 Vietnam Veterans of America Foundation (VVAF), “Vietnam UXO/Landmine Impact Assessment and Survey,” information sheet, February 2004.
- 2040 Interview with Lt. Gen. Vu Tan, Director of Foreign Relations, Ministry of Defence, 13 May 2003.
- 2041 The higher figure comes from Sr. Col. Bui Minh Tam and Nguyen Thi Xuan Huong, “Overview on Demining Technology and Experience in Vietnam”, paper presented at the Humanitarian Mine/UXO Clearance Technology and Cooperation Workshop, Kunming, China, 26-28 April 2004. Lower figures are given in *Landmine Monitor* 2003, pp. 717-8.
- 2042 Sr. Col. Bui Minh Tam and Nguyen Thi Xuan Huong, “Overview on Demining Technology and Experience in Vietnam”, paper presented at the Humanitarian Mine/UXO Clearance Technology and Cooperation Workshop, Kunming, China, 26-28 April 2004.
- 2043 Interview with Nguyen Quang Vinh, Director, and Amb. Nguyen Quy Binh, Vice-Director of the Boundaries Committee, Ministry of Foreign Affairs, Hanoi, 16 May 2003.
- 2044 Vietnam Veterans of America Foundation (VVAF), “Vietnam UXO/Landmine Impact Assessment and Survey”, information sheet, February 2004.
- 2045 Interview with Chuck Searcy, Representative, Vietnam Veterans Memorial Fund, 6 May 2003.
- 2046 Project RENEW, *Report of Landmine/UXO Impact Survey in Trieu Phong District, Quang Tri Province, Vietnam*, November 2003, p. 48.
- 2047 Project RENEW, *Report of Landmine/UXO Impact Survey in Trieu Phong District, Quang Tri Province, Vietnam*, November 2003, pp. 45-7.
- 2048 10-80 Committee, “Results of UXO Presence and Victims Survey in A Luoi”, in Hatfield Consultants and 10-80 Committee, *Developing Methodologies and Techniques for Supporting Clearance of Landmines and Unexploded Ordnance in Vietnam*, January 2003, Appendix A7, pp. 24-5.
- 2049 Information gathered from domestic media, international newswires and incident response reports from Clear Path International (an American NGO carrying out victim assistance in 10 central provinces).
- 2050 At the April 2004 demining conference in China, BOMICO and Ministry of Foreign Affairs representatives quoted slightly different figures of 42,135 deaths and 62,163 people injured over the same time period. The source of these figures is unclear. (The total number of casualties, 104,135, is nearly unchanged from the earlier figures.)
- 2051 Sr. Col. Bui Minh Tam and Nguyen Thi Xuan Huong, “Overview on Demining Technology and Experience in Vietnam”, paper presented at the Humanitarian Mine/UXO Clearance Technology and Cooperation Workshop, Kunming, China, 26-28 April 2004; presentation by Lt. Col. Vu Ngoc Diem at the UNICEF workshop on mine risk education, Hue, 19 August 2004.
- 2052 MOLISA and UNICEF, *Situational Analysis on Children with Disabilities in Vietnam* (Hanoi, November 2003), pp. 47-8.
- 2053 Project RENEW and Quang Tri Provincial Health Service, *A Study of Knowledge – Awareness – Practices to the Danger of Postwar Landmines/Unexploded Ordnance and Accidents in Quang Tri Province, Viet Nam*, November 2003, pp. 15, 72.
- 2054 Data provided by Hugh Hosman, Representative, Clear Path International, Quang Tri, 16 April 2004.
- 2055 10-80 Committee, “Results of UXO Presence and Victims Survey in A Luoi”; Brendan Cantlon, “UXO Clearance and Community Development in Thua Thien Hue”, (Australian Volunteers International, April 2003); data from Phong Dien survey provided to *Landmine Monitor*, 13 May 2003.
- 2056 10-80 Committee, “Results of UXO Presence and Victims Survey in A Luoi”, 2001, pp. 39-40.
- 2057 10-80 Committee, “Results of UXO Presence and Victims Survey in A Luoi”, 2001.
- 2058 Survey data from Project RENEW (2003), Clear Path International (2004), Australian Volunteers International (2003), and Hatfield Consultants/10-80 Committee (2001). At an August 2004 conference in Bangkok, a UNICEF representative stated that children make up “half of all mine-related injuries and one-third of all deaths” in Vietnam (“Asian children and societies still being crippled by landmines”, 30 August 2004, http://www.unicef.org/media/media_23364.html). The data do not support this statement.
- 2059 Calculated from domestic and international press reports. See Andrew Wells-Dang, “New Landmine/UXO Surveys in Vietnam”, *Interchange* (Summer 2004), online at www.ffrd.org.
- 2060 Calculated from U.S. Census Bureau, International Data Base, March 2004 version (www.census.gov).
- 2061 Project RENEW and Quang Tri Provincial Health Service, *A Study of Knowledge – Awareness – Practices to the Danger of Postwar Landmines/Unexploded Ordnance and Accidents in Quang Tri Province, Viet Nam*, November 2003, pp. 18-9.
- 2062 In rank order of surveys: Project RENEW (37 per cent), Australian Volunteers International (36 per cent), Clear Path International (30 per cent), 10-80 Committee and Hatfield Consultants (29 per cent). In *Landmine Monitor*'s press survey, deaths comprise 44 per cent of casualties reported.
- 2063 *Landmine Monitor* 2003, p. 718.
- 2064 Presentation by Duong Trong Hue, Project RENEW, at the Landmine Working Group, Hanoi, 20 February 2004; Project RENEW and Quang Tri Provincial Health Service, *A Study of Knowledge – Awareness – Practices to the Danger of Postwar Landmines/Unexploded Ordnance and Accidents in Quang Tri Province, Viet Nam*, November 2003, pp. 28-9, 79.
- 2065 Data provided by Don Townsend, Vietnam Adviser, Landmine Survivors Network, 26 March 2004.
- 2066 Deutsche Presse-Agentur, “Three killed by war-era landmine in Vietnam”, 21 November 2003.
- 2067 Clear Path International website, <http://www.clearpathinternational.org/casestudies/archives/000044.php>.
- 2068 Nhan Dan [The People] daily newspaper, 29 May 2003, p. 8.
- 2069 Deutsche Presse-Agentur, “Brothers killed by war-era bomb in Vietnam”, 13 April 2004.
- 2070 Clear Path International website, <http://www.clearpathinternational.org/casestudies/archives/000043.php>.
- 2071 The earliest of these surveys was Jim Monan's *Landmines and Underdevelopment: A Case Study of Quang Tri Province in Central Vietnam* (Oxford Hong Kong, 1994).
- 2072 Sr. Col. Bui Minh Tam and Nguyen Thi Xuan Huong, “Overview on Demining Technology and Experience in Vietnam”, paper presented at the Humanitarian Mine/UXO Clearance Technology and Cooperation Workshop, Kunming, China, 26-28 April 2004.
- 2073 Discussion at UNICEF/Thua Thien-Hue Youth Union mine risk education workshop, Hue, 19-20 August 2004.
- 2074 Interview with Nguyen Ngoc Quy, Quang Binh Province Foreign Relations Department, 26 March 2004.
- 2075 Project RENEW and Quang Tri Provincial Health Service, *A Study of Knowledge – Awareness – Practices to the Danger of Postwar Landmines/Unexploded Ordnance and Accidents in Quang Tri Province, Viet Nam*, November 2003, pp. 19, 27, 41.
- 2076 *Landmine Monitor* 2003, p. 727.
- 2077 *Landmine Monitor* 2003, pp. 718-9.
- 2078 10-80 Committee, “Results of UXO Presence and Victims Survey in A Luoi”, in Hatfield Consultants and 10-80 Committee, *Developing Methodologies and Techniques for Supporting Clearance of Landmines and Unexploded Ordnance in Vietnam*, January 2003, Appendix A7, pp. 38-9.
- 2079 *Landmine Monitor* 2003, p. 719.
- 2080 10-80 Committee, “Results of UXO Presence and Victims Survey in A Luoi”, pp. 40-1.

- 2081 Project RENEW and Quang Tri Provincial Health Service, *A Study of Knowledge – Awareness – Practices to the Danger of Postwar Landmines/Unexploded Ordnance and Accidents in Quang Tri Province, Viet Nam*, November 2003, pp. 20-5, 80.
- 2082 Discussion at UNICEF/Thua Thien-Hue Youth Union mine risk education workshop, Hue, 19-20 August 2004.
- 2083 Deutsche Presse-Agentur, "Two killed recycling warhead in Vietnam", 5 April 2004.
- 2084 Associated Press, "School dropouts scavenge unexploded war bombs in central Vietnam", 15 April 2004.
- 2085 Project RENEW, *Report of Landmine/UXO Impact Survey in Trieu Phong District, Quang Tri Province, Vietnam*, November 2003, p. 62.
- 2086 Interview with Gerd Willkommen, Senior Technical Supervisor, SODI, Quang Tri, 31 March 2004.
- 2087 "Digging Bombs in the Middle of the Street", online article [in Vietnamese], <http://vnexpress.net/Vietnam/Xa-hoi/2004/04/3B9D1C72/>, posted 19 April 2004.
- 2088 *Cong An TpHCM* (Ho Chi Minh City Police) daily newspaper, 30 March 2004, p. 2; Vietnam News Agency, "War-time bomb blast kills one, wound [sic] five others", 8 April 2004, online at http://www.vnagency.com.vn/news.asp?LANGUAGE_ID=2&CATEGORY_ID=29&NEWS_ID=94263.
- 2089 Interview with Tran Khanh Phoi, Programme Coordinator, Mines Advisory Group, Quang Tri, 30 March 2004.
- 2090 Project RENEW and Quang Tri Provincial Health Service, *A Study of Knowledge – Awareness – Practices to the Danger of Postwar Landmines/Unexploded Ordnance and Accidents in Quang Tri Province, Viet Nam*, November 2003, pp. 10, 32.
- 2091 "Digging Bombs in the Middle of the Street", online article [in Vietnamese], <http://vnexpress.net/Vietnam/Xa-hoi/2004/04/3B9D1C72/>, posted 19 April 2004.
- 2092 Fishing with explosives can be quite common in post-conflict societies. Extracting explosives from ordnance for use in fishing can be one the reasons for people deliberately handling ordnance.
- 2093 Vietnam News Service, "Fish bombing blows up in locals' faces", 19 September 2002; "Bombs Seized from Sunken US Warship", *Tien Phong* (Pioneer) daily newspaper, 12 March 2003, p. 2; *Sai Gon Giai Phong* (Liberated Saigon) daily newspaper, 12 March 2003, p. 6.
- 2094 Interview with Nguyen Quang Vinh, Director, and Amb. Nguyen Quy Binh, Vice-Director of the Boundaries Committee, Ministry of Foreign Affairs, Hanoi, 16 May 2003.
- 2095 Information provided by Nick Proudman, Programme Manager, Mines Advisory Group, 21 April 2004.
- 2096 GICHD, *Explosive Remnants of War: A Threat Analysis*, p. 9.
- 2097 Most organizations in Vietnam use the term "landmines" to describe the ERW problem, even though, as noted above, the vast majority of ordnance is not comprised of AP mines.
- 2098 UNMAS, *Portfolio of Mine Action Projects 2004*, pp. 364-5, 372.
- 2099 UNMAS, *Portfolio of Mine Action Projects 2004*, p. 364.
- 2100 Information provided by Vietnam Veterans of America Foundation, 22 April 2004.
- 2101 Landmine Monitor 2003, p. 721.
- 2102 Interview with Guy Rhodes, Vietnam Veterans of America Foundation, 20 February 2004.
- 2103 See Landmine Monitor 2003, pp. 722-4, for more details.
- 2104 Information provided by Nick Proudman, Programme Manager, Mines Advisory Group, 21 April 2004. This compares with 11,836 UXO, and 2,025 landmines removed during site clearance operations over the same period. No breakdown of AP mines and MOTAPM is available.
- 2105 Communication from Ilona Schleicher, Public Relations Office, SODI, Berlin, and Lutz Vogt, Chairman, Potsdam Kommunikation, 13 July 2004.
- 2106 Quang Tri People's Committee, "On the Issue of International Cooperation in Reversing the Legacy of War", presentation at International NGO Conference, Hanoi, 20 November 2003, available at <http://www.frd.org/indochina/10yearsngo/quangtri.pdf>.
- 2107 CCW/GGE/VII/3, 23 March 2004, pp. 5, 29. The delegation comprised Truong Trieu Duong and Dang Quoc Hung, both from the Permanent Mission in Geneva.
- 2108 Officials in the Ministry of Defence and the Ministry of Foreign Affairs did not reply to requests for information about Vietnam's position, which may indicate that no position has yet been formed.
- 2109 "Remarks by H.E. Deputy Prime Minister Vu Khoan at the International Conference on Vietnam-INGO Cooperation", Hanoi, 19 November 2003.
- 2110 Andrew Wells-Dang, "Vietnam Outlines New Priorities for International NGO Assistance", *Interchange* (Spring 2003), <http://www.frd.org/indochina/spring03news.html>.

Western Sahara

Background

After the withdrawal of the Spanish colonial forces in 1975, Morocco, the Popular Front for the Liberation of Saguia el Hamra and Rio de Oro (POLISARIO) and Mauritania engaged in an armed conflict for sovereignty over the territory of Western Sahara. Mauritania withdrew from the conflict in 1979. Parties to the conflict used a variety of munitions throughout the conflict including a large number of AV mines.²¹¹¹

Assessment of the problem

The Royal Moroccan army built six defensive walls, known as "berms", in Western Sahara and placed between one and two million AT and AP mines around them. Due to the risk from ERW and mines, civilians are not allowed within five to 10 kilometres either side of these berms.²¹¹²

Landmine Monitor has reported that the ERW contamination in Western Sahara includes unexploded cluster munitions.²¹¹³ While these contaminated areas are relatively remote, the Saharawi nomads, who live in contaminated areas near the berms, are at risk from the ERW and MOTAPM threat.²¹¹⁴

Impact

Tens of thousands of Saharawi refugees who fled the conflict in Western Sahara are currently located in Tindouf, southern Algeria. Should POLISARIO and Morocco reach an agreement and the UNHCR begin to repatriate these refugees, they would face a serious threat from ERW/mine contamination. In 1998, UNHCR assessment missions had discovered several contaminated areas along a possible repatriation route.²¹¹⁵

There are reports of at least three incidents involving MOTAPM between 2000 and 2002 in Western Sahara, claiming nine civilian casualties.²¹¹⁶

Efforts to address the problem

Under bilateral military agreements signed by Morocco and Polisario in early 1999, both parties committed to cooperate with the UN Mission for the Referendum in Western Sahara (MINURSO) in the exchange of ERW/mine-related information, marking of mined areas, and clearance and destruction of ERW and landmines in the presence of MINURSO observers. Since 1997, MINURSO has facilitated the discovery and marking of 1,123 ERW and mines and it has participated in 750 disposal operations.²¹¹⁷

Legislation

POLISARIO declared itself government in exile (The Saharawi Arab Democratic Republic) in 1976, but since it is not internationally recognised it cannot join any the international treaties or conventions including the Ottawa Convention and the CCW and its Protocols.

2111 UN Mission for the Referendum in Western Sahara (MINURSO), Western Sahara Updated Mine Situation, February 1998.

2112 UN Mission for the Referendum in Western Sahara (MINURSO), Western Sahara Updated Mine Situation, February 1998.

2113 Landmine Monitor 1999, p. 924.

2114 Landmine Monitor 2004, p. 1241.

2115 UNHCR Tindouf Road Reconnaissance Mission Report, August 1998.

2116 Landmine Monitor 2004, p. 1241-42.

2117 Report of the UN Secretary-General on the situation concerning Western Sahara, 23 April 2004.

Yemen

Background

Yemen has witnessed a number of conflicts which have resulted in a significant mine and unexploded ordnance (UXO) problem. According to a 1998 inter-agency assessment report, anti-personnel mines (AP) and anti-tank mines (AT) were laid in Yemen over the course of four main conflicts:

- 1962-1975, conflict between republicans and royalists in North Yemen;
- 1963-1967, the war of independence in South Yemen;
- 1970-1983, the leftist guerrilla war against North Yemen which affected the central governorates, mostly Taiz, Ibb, Dhamar and Al-Baidhaa; according to the Yemen Government, up to 1,000,000 AP mines were scattered in fertile agricultural and grazing areas during this conflict;
- 1994, the war of separation; large numbers of mines were reportedly laid in the southern governorates of Aden, Lahej, Abyan and in the eastern governorates of Hadhramout and Shawba; it was estimated that as many as 100,000 mines, mostly AT mines, were planted and large quantities of UXO were scattered in different areas.

AT mines and AP mines were laid indiscriminately during Yemen's conflicts by inexperienced soldiers and militia, hence proper records were not kept and affected areas were left unmarked and unfenced.²¹¹⁸ A Commander of US Navy Central Command reported in 2001 that the mines in Yemen were "by a ratio of 10:1 AT mines to AP mines".²¹¹⁹

Some of the AT mines used in the conflicts and recently found in Yemen include TM-62T, TM-46 and TM-57, all Russian made.²¹²⁰

Assessment of the problem

A Survey Action Center/VVAF Impact Survey provides a basis for understanding the extent of MOTAPM and ERW contamination within the country: 18 of the 19 governorates were identified in 2001 as mine and ordnance affected, with 592 communities reported as affected by some 1,078 contaminated areas.²¹²¹ These areas are primarily in the south and central part of Yemen. The central governorate of Ibb is identified as the most-affected area with 95 mine-affected communities, affecting a population of 73,922. The Impact Survey presents the following information that gives a good impression of the prevalence of MOTAPM and ERW as components of the overall contamination:²¹²²

- AP only: 631 locations, contaminated area 157 sq km.
- AP and MOTAPM combined: 114 locations, contaminated area 446 sq km.

- AP, MOTAPM and ERW combined: 49 locations, contaminated area 189 sq km.
- AP and ERW combined: 65 locations, contaminated area 7 sq km.
- MOTAPM only: 128 locations, contaminated area 49 sq km.
- MOTAPM and ERW combined: 27 locations, contaminated area 33 sq km.
- ERW only: 59 locations, 38 sq km.

This shows that while anti-personnel mines contaminate the greatest number of contaminated areas, there are also significant areas of contamination linked to MOTAPM and ERW. Some 78 per cent of contaminated areas is suspected of containing MOTAPM, most commonly in combination with anti-personnel mines. Nearly 30 per cent of contaminated areas present a suspicion of ERW contamination. The survey noted that "areas with only AT mines or UXO contamination made up almost one-tenth of the total area".²¹²³

The Survey added that village communities were most affected by the mine and UXO problem: 521 of 592 affected communities were villages, as opposed to urban or nomadic communities.²¹²⁴ The survey assessed the impact of contamination, taking into account (a) the number of recent victims, (b) the livelihood and institutional areas to which access was blocked and (c) the class of munitions.²¹²⁵

Of the 592 communities, only 2 per cent were identified as suffering a high-impact, 14 per cent were medium-impact and 83 per cent were low-impact. A total population of some 827,794 people was identified in these communities, with nearly 36,000 people in "high-impact" communities.²¹²⁶

Impact

Among the 592 affected communities, 488 had a history of mine and UXO accidents injuring one or more persons. The Landmine Impact Survey reports a total of 4,904 casualties from landmines and ERW in 488 communities. Of this total some 2,560 were reported as killed and 2,344 as injured.²¹²⁷ However, their analysis of recent casualties showed a lower proportion of people killed as opposed to injured.

Although the Yemen Executive Mine Action Centre (YEMAC) does hold disaggregated national statistics on the number of people killed and injured by ERW and MOTAPM specifically²¹²⁸ this data was not available for this survey. Additionally, there is a victim registration file which includes IMSMA casualty forms, all victims in the "high impact" districts have been surveyed to identify their injuries, and each has a file explaining his or her physical condition.²¹²⁹ The database allows for a distinction between AP mines and ERW, but not MOTAPM. The YEMAC

receives accident reports from local security authorities, hospitals and mine action teams in the field. The database information is updated as soon as the accident reports are received. The emergency number of the YEMAC and its regional offices is known nationwide.²¹³⁰

The Landmine Impact Survey provided a breakdown of mine and UXO casualties by gender, age, activity at the time of accident, number of people injured (survivors), number of people killed (victims), and their occupation at the time of the incident. Of the total 178 recent victims, three out of four were male and the age group most affected (male and female) was that between five and 29 years old.²¹³¹

All but two of the 178 victims were civilians, mainly shepherds and farmers, with 65 victims engaged in herding and 20 in farming before the mine accidents. An additional 43 are identified as "others", for whom there was no specific information, but it was assumed that most were children or students.²¹³² Deliberate handling of mines or ordnance accounted for more than one third of the victims and ranked as the second most frequent activity for males and females.²¹³³ In some communities local people collect pieces of metal to sell in the market²¹³⁴ and this may be linked to deliberate handling accidents.

The Yemeni National Mine Action Committee has noted that "ERW do not affect livelihood activities to a great degree, however the number of ERW accidents are almost the same as mine accidents".²¹³⁵ This is in line with findings in many other areas regarding ERW contamination. The Landmine Impact Survey identified four key areas to which mines and UXO blocked access: (a) pastureland, farmland and forest, (b) roads and trails, (c) water, and (d) housing. These categories were further refined by the presumed value of the resource area. For example, water sources that supplied drinking water were distinguished from other purpose sources, and rain-fed farms and irrigated farms were considered separately. However, although the Survey

notes many communities affected by ERW, the impact in terms of blocked access to resources is much less than that experienced from mines.²¹³⁶

Some ERW-contaminated areas have affected the implementation of development projects, such as road building. YEMAC cleared the areas as soon as requests were received. But there are also 10 areas contaminated by mixed ERW and mines where the implementation of development projects has been delayed as they await clearance.²¹³⁷

Efforts to address these problems

The Yemen Executive Mine Action Centre is responsible for clearing and destroying ERW and MOTAPM.²¹³⁸ The YEMAC has records of the number of ERW and MOTAPM found and destroyed, and in some cases the category of the device has also been recorded.²¹³⁹

There are three specialist EOD teams working in areas identified in the Landmine Impact Survey as high-impact areas. ERW/MOTAPM items reported by locals are passed on to the EOD teams via mine action teams operating in the affected areas.²¹⁴⁰ Mine action is implemented by the YEMAC and supported by UNDP. No NGO or UN agencies are involved in mine action operations.²¹⁴¹

Legislation

Yemen signed the 1997 Ottawa Convention on 4 December 1997, ratified it on 1 September 1998 and the Treaty entered into force on 1 March 1999.²¹⁴² Yemen is a State Party to the 1980 Convention on Conventional Weapons (CCW) and its original Protocol II,²¹⁴³ but has not ratified the Amended Protocol II on landmines, booby traps and other devices.²¹⁴⁴ The Director of the National Mine Action Committee has confirmed there is no information available on the official position relating to the signing or ratifying of Protocol V on ERW, or anything relating to the MOTAPM discussion within the CCW framework.²¹⁴⁵

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- 2129 Minister Kassim Ahmed al-Agam's sixth report relating to Article 7, addressed to the Secretary-General of the United Nations, dated 7 April 2004 <http://disarmament.un.org:8080/MineBan.nsf> accessed 10 August 2004.
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Zimbabwe

Background

Minefields were laid by the Rhodesian army along the northern and eastern borders of Zimbabwe at the height of the war of liberation between 1976 and 1979. They were sited on movement corridors likely to be used by the Zimbabwe Peoples Revolutionary Army (ZIPRA) and the Zimbabwe African National Liberation Army (ZANLA) forces, to prevent their movement from "safe" bases in Mozambique and Zambia. ZANLA guerrillas used Chinese-made TM57s, unmarked TM46 and TMH46s (with anti-handling devices) and wooden TMD-B antitank mines.²¹⁴⁶

Assessment

In the 1983-1987 conflict in Matebeleland, ZAPU dissidents received a number of TM57 Russian anti-vehicle mines from South African-linked sources between April and November 1983.²¹⁴⁷ Areas that are known to be contaminated by mines and ERW include Msergezi to Nyamapanda South, Stappleford Forest to Mutare, Burma Valley, Junction Gate to Jersey Tea, Mahernia (Sango) to Crooks Corner and Victoria Falls to Mblizi. Some of these have been surveyed and partially cleared but all remain dangerous according to UNMAS.²¹⁴⁸

Several assessments of Zimbabwe's mine and ERW problem have been undertaken. In 1994, the local commercial demining company MineTech prepared a report

on all mined areas for the Ministry of Defence. The survey found that Zimbabwe had an estimated 1.5 million AP mines, 10,000 claymore mines and an unknown number of ERW in the ground.²¹⁴⁹

There are no official estimates available of the ERW and MOTAPM and there is no database or information system currently in place in Zimbabwe to monitor the problem and its consequences.²¹⁵⁰ The extent of the ERW problem in Zimbabwe does not appear to have been comprehensively assessed.

Impact

Only limited information exists regarding ERW and MOTAPM related casualties, with no systematic data gathering mechanism existing to monitor it.²¹⁵¹ The Zimbabwe Mine Action Centre (ZIMAC) reported 26 new ERW and mine casualties in 2003, including five people killed and 21 injured.²¹⁵² There is also a lack of information exchange between the various partners involved in victim assistance.²¹⁵³

The number of casualties resulting from ERW and mines in the country seems to be relatively low.²¹⁵⁴ The majority of victims come from the rural population, with a significant number of livestock also killed or maimed each year.²¹⁵⁵

In the south-east, the border minefield in the Gonarezhou National Park area has affected the migration patterns of

local elephant herds.²¹⁵⁶ Gonarezhou was an infiltration point for insurgents in 1975. Many of the ERW and mines in the reserve come from this period. The park was declared a closed "free fire" zone by Rhodesian forces.²¹⁵⁷ A joint endeavour between South Africa, Mozambique and Zimbabwe to develop a game park in this area has been signed recently, and clearance of ERW and mines in the vicinity of the Gonarezhou National Park would aid this project considerably.²¹⁵⁸

Efforts to address these problems

The National Demining Office (NDO) was established in 1998 and coordinates all demining activities in Zimbabwe. The National Authority on Mine Action in Zimbabwe (NAMA) is the policy-making body tasked with the formulation of a national Mine Action Plan while the ZIMAC manages and coordinates all mine action activities in cooperation with the international community.²¹⁵⁹ According to UNMAS, an unknown amount of ERW-contaminated areas require clearance.²¹⁶⁰ About 400km of

Zimbabwe's border are still covered by mines, including an unspecified number of MOTAPM.²¹⁶¹

Besides the Zimbabwe Defence Force Engineering Squadron, there are a number of other mine clearance organisations including the Southern African Demining Services Agency, Southern African Demining Operators, MineTech International and Mine-Clearance International, which currently are not under contract in Zimbabwe itself.²¹⁶² According to the United States, Zimbabwe has reached a sustainable phase in their humanitarian demining programmes, and has the capability to conduct their own programmes either independently or with minimum outside assistance.²¹⁶³

Legislation

Zimbabwe signed the Ottawa Convention on 3 December 1997 and ratified it on 18 June 1998. Zimbabwe has not signed or ratified the CCW, original Protocol II or the amended Protocol II (APII).

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2150 UNMAS: Inter-Agency Assessment Mission Report, Zimbabwe UNMAS, 02/2000, http://www.mineaction.org/countries/countries_overview.cfm?country_id=601

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