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# Humanitarian Mine Action: The First Decade of a New Sector in Humanitarian Aid

## by Chris Horwood

## Abstract

There are two important messages concerning mine action that emerge from this paper. The first is that after only a few years of mobilisation, campaigning and project initiation there are, in place, the forces and legislation to effectively address the threat of landmines in the coming years, rather than decades or centuries. The second is that mine action cannot be successful as an isolated, specialised sub-sector of the aid world but must be seen as a legitimate component of emergency, rehabilitation and development assistance.

This paper is specifically written for the aid community outside the mine action sector who may have had very little exposure to the details of mine action and its dramatic growth as a sector in the last 10 years. The paper is also designed to present certain definitions, premises and issues that have emerged within the mine action sector in recent years. It may also serve as a resource document as it disassembles and identifies the issues and main players in global mine action.

The start of a new century and a decade after the initiation of humanitarian mine action programmes seems a suitable point to review progress to date, and open the issues facing the mine action sector to the wider aid community.

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# Executive Summary

## Realisation of a New Crisis

L andmines have caused deaths and injuries (among non-combatants) since they were first used at the start of the century. It was the Soviet withdrawal from Afghanistan, the Vietnamese withdrawal from Cambodia, and the flight of Kurds from Iraqi government forces that shocked the world awake to the devastating impact of these abandoned weapons. Later too, with the cessation of conflicts in Mozambique and Angola, the scale of this 'new' catastrophe became apparent in terms of the numbers of victims, socioeconomic devastation and potential for obstruction to peace and development. In fact the landmine threat could be seen as a 'slow onset emergency'; the 'creeping genocide' of the hidden killers. This realisation developed between 1989 and 1993, but was not immediately widely recognised. Recognition of the scale of the crisis and the cost to societies is still developing.

There was nothing in place to address the problem as the scope of the problem itself was unknown and undocumented. There were no statistics of mine injuries and deaths, or identification of minefields or mine types. There were no agencies dedicated to, or experienced in, peacetime mine clearance. The United Nations (UN) had no department charged with the responsibility to address landmines, the NGO community was highly sceptical of any involvement in what was seen as a military issue, and international donors neither had the budget lines or inclination to fund de-mining operations. There were no workable conventions or international

standards to adhere to, no lessons learnt or guidelines available, and no one other than military or ex-military with the technical expertise to assess the technical aspects of the problem. The last 15 years of the cold war, with proxy wars and vast transfers of lethal aid to developing countries, the low cost of anti-personal mines and the proliferation of civil and international warfare, had left, and continued to leave, a legacy of landmines scattered in unprecedented numbers across inhabited and agricultural land in developing countries. It has been said that at the start of the 1900s, 90 per cent of war casualties were combatants; by the 1990s, 90 per cent of war casualties were non-combatants. In numerous countries, thousands of communities of civilians were living (and continue to live) in areas of extreme danger due to the debris of war, and in particular the landmine.

It was in this context that the sector of humanitarian mine action emerged and established momentum as various geo-political changes seemed to act as a catalyst to rip the veil that prevented the aid community from seeing clearly the problem that lay before it: suddenly it was apparent, not just as a growing problem or potential risk, but as a humanitarian emergency – fully developed and lethal, on a massive scale, and demanding urgent attention. In this respect the realisation of the landmine crisis differs from other humanitarian sectors that may have emerged over decades, and where tools and systems to address the issues have been tried and tested.

## The Contribution Made by This Paper

Apart from the frequently seen articles that catalogue the horrors of landmines there has been an almost complete lack of documentation concerning the politics, operations and structures within the mine action sector available to those outside of what has become seen, to some, as a closed specialisation This paper assumes readers are generally aware of the personal, social and economic devastation caused by landmines and other abandoned, but lethal, weapons. Nevertheless, Section 1 outlines the scope and nature of the landmine crisis and, by implication, promotes the importance of an integrated approach to mine action.

The momentum and achievements of the International Campaign to Ban Landmines have been unprecedented. Changes within the sector at the operational and institutional/structural level have also been rapid, though are still at an early stage of development[1]. An explanation of the various players in mine action is presented in Section 2. Progress achieved in the past decade in terms of sensitising governments, donors and the aid community has been more impressive, however, than the growth and success of field operations. A target set by the US government of a world free of the threat of landmines by 2010 will be difficult to achieve given the current levels of mine clearance and mine operations in most affected countries – not only due to limited resources being offered but also due to the general slow development and adoption of time-saving technologies (machines and dogs) within existing programmes. Section 3 outlines the current operational status of mine clearance and other mine action activities.

The paper ends with a section which highlights selected central issues facing the sector. These are crucial to the global response to the lethal and economically debilitating threat of landmines.

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### Defining Humanitarian Mine Action

Throughout this paper the terms 'mine action', 'humanitarian mine action' and 'humanitarian de-mining' will be used to refer to the same group of activities that comprise the sector. These include all activities that are associated with the alleviation or elimination of the landmine problem and its effects, and the provision of assistance to, and rehabilitation of, its victims. The identifiable components of humanitarian mine action typically include mine assessment, survey and marking, mine clearance, mine awareness education and victim assistance. The term mine action also refers to the campaigning and lobbying activities associated with the ban of landmines and the legal frameworks to enforce and monitor the existing Ban Mines Convention, also known as the Ottawa Treaty of 1997. Humanitarian mine action also aims to create indigenous capacity in mine-affected communities as mine action is, in theory, directly linked to longer term rehabilitation and development.

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### Unexploded Ordnance in Relation to Landmines

UXO are explosive munitions (shells, mortars, bombs, small arms ammunitions, etc) that have been primed, fused, armed or otherwise 'live' that may have been fired, dropped, launched or projected but remain unexploded. They could be unexploded either through malfunction, poor design or lack of use (storage), and neglect or abandonment. Frequently found in and around minefields and suspected mined areas, UXO are equally hazardous to civilian communities. In some cases they present a higher risk to certain sections of the population and inevitably most mine clearance and mine awareness programmes have to address the problems of UXO at the same time as mines.[1] In most situations the number of UXO abandoned and hazardous is far greater than that of mines.[2] De-mining and mine clearance refers to the location and destruction of UXO and landmines in this paper unless specifically specified otherwise.

# The Scope and Nature of the Landmines Crisis

## Countries Affected

According to data collected through the UN landmines database, the US Army National Ground Intelligence Centres, and during the compilation of the 1998 *Hidden Killers* publication (US State Department, 1998), there are 93 listed mine-affected countries. Seventy of these report a landmine problem, although for many the number of landmines has not been calculated or estimated and is no more than a minor issue in specific areas. Some countries listed are also European such as Belguim, Austria and Luxembourg, where the mines and UXO threat originates from the two world wars and does not present a humanitarian risk except in exceptional circumstances. Other nations listed, for example, include Mexico, Mongolia, and the Federated States of Micronesia where there may be unspecified reports of mines but where a national or international response is not justified.

However, this database does list the most seriously affected nations. Ten of these are judged to account for 50 per cent of all laid landmines, as well as the highest number of casualties. They are categorised as the 'most severely affected' countries, and are: Afghanistan, Angola, Bosnia-Herzegovina (BiH), Cambodia, Croatia, Eritrea, Iraq (Kurdistan), Mozambique, Somalia and Sudan (see Annex C for more details).

Kosovo is being added, *de facto*, to this list although some would argue that Ethiopia, Iran and areas of Iraq outside of Kurdistan/north Iraq should be included in this list before Kosovo. (The focus on Kosovo and the disproportionate attention it currently receives is discussed in Section 4 of this report under 'Resource Biases'). The current war in Chechnya will probably result in Chechnya requiring considerable mine action assistance in the future. Also, Laos is a special category. The illegal bombing of Laos by the US in the 1960s and 1970s left a legacy of millions of UXO (bomblets) that pose, as anti-personnel devices, a similar risk to the rural population as landmines.

## Numbers of Mines: a persistent distraction

The current, best working estimate, made by the US State Department (ibid) is of 60 to 70 million un-cleared landmines globally. These new estimates go some way to redress what some considered to be an exaggeration of the problem (in terms of statistics) in the early 1990s. But the true figure will remain unknown until all mines globally have been located and counted – an unimaginable and unnecessary objective.

The difficult reality facing mine action planners is that the majority of mines have been randomly laid in the various conflicts around the world over the last four decades. Mines are frequently laid to terrorise and demoralise local populations and are not laid with precision and frequently without tactical rationale. 'Front-lines' in civil wars surge backwards and forwards and new minefields are laid sporadically over old ones. What records have been kept are poor and insufficient, people's memories are unreliable, and even contemporary local knowledge of an affected area has been shown to be unreliable.

In the analysis of the landmine crisis the actual number of mines in any country is a persistent distraction which, in recent years, has absorbed far too much time and

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*MAG bomb disposal experts prepare shells and mortars for demolition in northern Iraq.*

energy in terms of speculation and disagreement. It is not a specific quantity of mines in an area that, for example, deters communities from functioning normally or refugees from returning to their homes. Rather it is the perceived threat and suspicion of mines that is the main disruption of communities in mine-threatened areas. A relevant example quoted in the *Landmines Monitor Report 1999* (Human Rights Watch, et al; also referred to as *Landmines Monitor*) illustrates this: 'In 1996 Norwegians People's Aid cleared a village in Mozambique after it had been abandoned by the entire population of around 10,000 villagers due to alleged mine infestation. After three months of work, the deminers found four mines.'

However, it is important for the mine action community to understand the scale of the problem statistically. This entails an understanding not only of the estimated quantity of landmines but also the estimated size of land affected and the numbers of communities affected. A good understanding of the number of mines laid in an affected country can:

- directly assist the planning process for operations;
- provide a tool (among others) for measuring the progress of mine action;
- provide a tool (among others) to assist mine action prioritisation;
- satisfy the general public, the media and donors who often respond more effectively to numerical estimates rather than non-quantifiable human and social indicators;
- contribute to an understanding of the scope of the global crisis.

An important final point concerning the number of landmines needs to be made. As pointed out earlier, since the start of humanitarian mine action there has been a gradual recognition that UXO are also a major humanitarian threat. In most cases mine clearance activities *de facto* include removal/destruction of UXO. However, no attempt has been made to calculate the level of UXO contamination. Focusing only on mines is therefore an inaccurate indicator, but perhaps because the numbers of UXO are greatly in excess of abandoned mines the sector has been reluctant, and unable, to include estimates of UXO due to the daunting figures that would face the aid community.

The number of mines manufactured and currently stored for potential use, as stockpiles, are huge. The *Landmines Monitor* estimates that there are over 250 million anti-personnel mines stored in the arsenals of 108 countries. A central part of the Ottawa Treaty requires states to destroy stockpiles of mines. The on-going destruction of these stockpiles by state signatories will be an important indication of the success in the enforcement of the Ottawa Treaty and is part of the rationale for the establishment of the Landmines Monitor Group.

## Human Impact: physical and psychological

The ICRC as well as the International Campaign to Ban Landmines (ICBL) now claim that, globally, mines injure or kill 2000 people a month, or 24,000 a year. These are, however, extrapolations from a relatively weak database. No agencies working with mine victims have developed a more comprehensive estimate. The vast majority of these victims are non-combatants and live in rural, subsistence communities in countries that are no longer at war. The victims are normally from marginalised sectors of society in terms of access to education, medical support, sanitation potable water, infrastructure and political representation. Economically they are also normally the most vulnerable groups. Mine action activities normally take place in post-conflict environments where social structures, government authority, and civic networks have also been damaged. For the better targeting of assistance and the planning of more prioritised clearance and awareness programmes, it is essential that a clearer statistical understanding is achieved.

The real terror of the landmine is that normally it does exactly what it has been designed to achieve – and for years and decades after manufacture. It rips and tears into flesh, shatters bone and drives dirt and fragments of plastic, metal and body tissue deep into the wounds of its victim. It is designed to terrorise the victim as well as those that see the victim: most who die from landmine

wounds die from blood-loss or infectious diseases resulting from the wound (though being smaller, children often die from their wounds). Designed for other purposes, UXOs often kill both adults and children (often in groups) when tampered with.

The psychological impact of mines upon a community cannot be measured; neither can it be ignored. Interviews repeatedly show that the majority of mine victims were aware that they were in a suspected mined area when their injuries occurred. Socioeconomic constraints and economic imperatives force communities at risk to continue to take risks. One of the most devastating impacts on an individual hit by a mine is a depressing feeling of guilt: guilt to have denied the threat; guilt to be unable to work and care for children and elderly; guilt to have burdened their local community. Major issues face individuals and communities when the mine victims return to their social group. The impact of every single mine injury stretches deep into the future and touches many people beyond the victim him/herself.[3]

As an indication of the crisis the ICRC estimates that in 1997 that the number of amputees per number of inhabitants in Cambodia was one per 384; in Angola one per 334; in Iraq one per 987; and Afghanistan one per 631 (Red Cross Crescent, 1997).

In war-affected countries such as Afghanistan, Cambodia and Bosnia, for example, as the initial wave of refugees, returnees and civilians have begun to inhabit old war zones and recommence civilian activities there has been a surge of mine-related deaths and accidents. (As mine action activities have concentrated on high risk areas and as communities have taken their own measures to minimise risk in mined areas, the toll has reduced in the last decade.) When natural disasters or a resurgence of civil or international conflict occur, accident rates frequently increase due to increased population movements. Though available data suggests that levels of deaths and injuries have fallen, there are still thousands of vulnerable communities that mine action agencies have not addressed, or even where data has not been collected. It is, therefore, premature to suggest that injuries and deaths have significantly fallen globally.[4]

Although various agencies were working to assist mine victims before the signing of the 1997 Ottawa Ban Mine Convention, the needs of mine victims had not been formally recognised as an integral part of mine action up to that point. The ICBL pressed hard to have language related to assistance to mine victims included in the Treaty, and the effect has been a significant rise in interest from agencies and donors to provide mine victims with increased support. The scale of the problem is huge, particularly as assistance is required at levels far beyond the supply of an artificial limb or wheelchair (psychosocial, pysiotherapy, support for families of victims, social reintegration, vocational training, etc). In addition, the ICBL Working Group on Victim Assistance was created in February 1998. This comprises 25 NGOs, some of which are now considering the need to redirect their lobbying activities towards a genuine international recognition and compensation of the rights of each individual and/or family that has been affected by the explosion of a landmine. Handicap International (HI) and the Landmine Survival Network (LSN; US) are at the forefront of this new endeavour.

## Medical Impact

Clearly, multiple landmine and UXO injuries absorb valuable medical resources and personnel. Surgical operations, aftercare, physiotherapy, limb replacement, and psychosocial counselling are demanding and expensive provisions for any government to provide, even if assisted by the international aid community. The costs are considerable but the strains on an overburdened and poorly functioning health service will be significant and will require almost complete external support if victims are to receive even the most rudimentary assistance. For example, mine victims put a heavy demand on hospital blood banks, if any exist. Most post-conflict countries find it difficult to supply and maintain safe blood banks for their injured. The quantity required and the frequency of transfusion has been shown to increase contaminated blood transfusion diseases such as malaria, HIV and typanosomiasis (sleeping sickness).

The reality for the vast majority of the world's mine victims is that medical support is many hours, often days, away, and in most cases insufficient. It is too commonly understood and accepted that mines simply rip a part of a limb, which is a handicap easy to compensate with a proper prosthetic. However, the reality of the medical impact poses a much more complex public health challenge due to often multiple, and sometime grievous, wounds anywhere on the body.

Recent observations have indicated that landmines also indirectly affect the health of those living in mine-affected areas. Public health campaigns can be seriously disrupted by inaccessibility due to landmines. Mobile immunisation teams will be unable (and unwilling) to visit mine areas. There are claims that infectious disease risk is much higher in mined communities due to the absence of immunisation. In Afghanistan, apparently, most of the current polio cases of disability originate from provinces where landmines are most highly concentrated. Furthermore, in countries where cholera recurs annually minefields can prevent access to safe drinking water thereby dramatically increasing chances of mortality. There is also clear correlation between malnutrition among certain families and the fact that their main breadwinner is incapacitated by landmine

injury; in subsistence communities where the household economy is already fragile it is not surprising that this would be the case.

## Economic Impact

Mines deny access to livelihoods, home/shelter and land. They prevent the use of irrigation canals, and cut access to communal resources and facilities such as water-points and wells, schools, clinics, police posts, market places and land for settlement. Mines sever communication and transport networks between villages, local and metropolitan markets. It is important to remember that the fear of mines is often as much a deterrent as the actual presence of mines. The results can be economic isolation or the need to create alternative access and alternative resources. Mines prevent the use, rehabilitation or maintenance of infrastructure such as bridges, power-lines, water pipes and sanitation structures, and of war-damaged housing.

Mines also destroy livestock. The implication of this is not only the end of a source of income for the owners but also loss of milk supply and skins, the creatures' potential off-spring and draught (ie, agricultural) or transport power. In addition, available data indicate that young and middle aged men are the most frequent victims of landmines (75–90 per cent of victims). Although in some special cases children face a high risk, they generally represent between 5 and 15 per cent of mine victims. Women represent between 5 and 10 per cent of mine victims, depending on location and circumstances.

This list represents the deep and pervasive economic effect of the impact of mines. Most mine-affected countries are overwhelmingly agrarian and often affected communities are already living in a subsistence situation, fragile and highly vulnerable to resource denial or change. The knock-on effect of the above statistics in economic terms are significant but little understood and poorly documented. To date, only two socioeconomic analyses have been attempted – in Laos (Handicap International, 1997) and Afghanistan (UNMAP/MCPA, 1998).

Indirect economic consequences of the above-mentioned factors such as the 'opportunity cost' and diversion of central or international resources to mine-affected areas also needs to be evaluated in any full analysis of economic impact. Loss of investment opportunities or tourism are also part of the indirect costs due to landmines.

## Obstacles to Reconstruction and Sociopolitical Reconciliation

Generally, landmines and the suspected presence of landmines can be a significant obstacle to post-conflict reconstruction and social and political reconciliation –

though this will vary from context to context. As landmines affect the community as a whole they impact various different but inter-related levels concurrently. Some of the main areas where landmines act as obstacles are:

### Post-conflict, Confidence-building Measures

Physical insecurity, fear of mines and inaccessible roads and land inspires little confidence in any government-promoted 'return to normalcy' or peace. For communities in war zones, the battles may have ended but insecurity from landmines continues to restrict and terrorise their activities. As the government tries to promote confidence and social reconciliation communities are daily reminded of war, and the mines themselves prevent government services and provisions extending into affected areas.

### Reviving Socioeconomic Activities

A return to economically productive employment and a revival of social and economic interaction is severely restricted in mine-affected areas. Not only is meaningful employment negatively affected by the presence of mines, but the supply of goods and market activity is restricted, as is the return of communal facilities such as clinics, schools, water supplies and electricity. At a delicate stage in the post-conflict process, landmines prevent a return to normalcy and economic revival.

### Legitimacy and Consolidation

If, following peace accords, elections are planned to give legitimacy to a new government, landmines can hinder this process. Effective legitimacy for a new government requires high levels of participation in the election process. Political campaigning will be an important and visible part of the post-conflict approach. Clearly landmines do not entirely paralyse nations but certain communities can be paralysed and new governments may lose legitimacy in key areas where they have no visibility and low representation.

Equally, in terms of consolidating a peace process and return to civilian rule, a new government will need to extend its presence in war-torn areas – not only through government representatives for administration and law and order, but also through teachers, doctors, extension workers, technicians, public health workers and the support of aid agencies etc. Where landmines restrict access and return to normal activities, government presence will remain weak and the consolidation process partial. Obviously as time continues, and if the mine threat persists, the affected communities may become marginalised economically, politically and socially. As mentioned above, it would be naïve to suggest that the presence of landmines is the controlling factor in marginalised areas. Post-conflict countries have to face a wide range of issues at the same time, but in certain regions and areas the presence of landmines has an overwhelming impact that touches almost all aspects of social interaction and productive activity.

## Implications for Refugees, Returnees and IDPs

Refugees and IDPs are highly vulnerable to landmines and their freedom to return and/or resettle may be very dependent on landmines. According to UNHCR, in 1997 half of all the world's 22 million refugees were located in the heavily mined countries of Afghanistan, Angola, Bosnia, Cambodia, Croatia, Eritrea, Iraq, Mozambique, Somalia and Sudan. In many cases refugees flee battle zones which by definition will be littered with UXO and landmines, preventing return. In some cases their homelands may not be mined but roads and bridges necessary for their return may be, making return hazardous and/or impossible. In cases in Mozambique and Angola, professional clearance teams located fewer than one mine per 100km of road but the risk was apparent and until the roads were cleared vast sections of these countries were only accessible by plane at colossal additional expense.

The free movement of refugees around their camps is restricted by mines, and return passage and resettlement can be totally compromised by the presence of mines. However, despite warnings and mine awareness education programmes in the camps, IDPs and refugees frequently elect to return to mine-infested areas – for example, in Afghanistan, Angola, Cambodia and Bosnia. Without local historical knowledge of where mines may have been laid, and often without the assistance of mine action operations, accidents involving returnees are frequent. While in some cases it appears that refugees or IDPs refuse to return to their home areas due to the presence of mines, landmines are rarely the sole reason inhibiting return; normally other economic or security issues influence decisions. Indeed there is a curious risk-taking behaviour among the world's mine-affected populations seen as a 'coping mechanism'. In contrast, for international agencies and those that advocate for refugees and IDPs mines will normally, and correctly, be one of the chief priorities influencing policy and planned population movements in an affected area.

# 2

# The International Response

## Humanitarian Mine Action: the start of a new response

Humanitarian mine clearance is a new approach to the problem of landmines that dates from the early 1990s. As an approach it continues to be defined in terms of methodology and philosophy, but is characterised by its aim to return mined (and suspected mined) areas of land to the community completely free of risk.[5]

Few organisations in the sector are active in all aspects of mine action. Rather, they maintain and perform their specialities or preferences. Many agencies that are involved in clearance operations on the ground are not involved in mine awareness or campaigning activities, and may even disagree with the campaign objectives. Equally, many agencies that are deeply involved in campaign or mine awareness education may have no involvement with, or expertise in, clearance operations. The major international organisations such as the UN and the Geneva International Centre for Humanitarian De-mining (established in 1998; see Section 3) aim to be active in all the mentioned components of mine action, although not necessarily operationally.

## Military Mine Clearance

The early to mid-1990s witnessed a massive dependency on serving or ex-military personnel not only to train and enact clearance operations, but also to maintain middle and senior management responsibilities throughout the emerging sector (see Section 4). Military personnel and military methods have also been tasked to address the threat of mines in civilian communities in mine awareness education in peacetime. Many civilians

assume that mine clearance performed by trained combat engineers is suitable for mine action operations in post-conflict scenarios.[6] Many military personnel and government authorities make the same error.

At an operational level, military mine clearance is not designed to return agricultural and communal land to communities with 100 per cent clearance and total elimination of the mines' threat. The primary objective of the military approach is to breach or clear a safe passage through a mined area, or secure a particular area within a mined area. Clearly the methods and equipment used are often relevant to humanitarian mine clearance but the objectives and scope are not. Military clearance is a response isolated from the lives and futures of affected societies, taking no account of the change in nature (in effect) of the landmine following the transition from war to peace.

Military teaching methods suitable for imparting technical information concerning mines in a military training or briefing context are wholly inappropriate in community mine awareness. Although army personnel and military methodologies are continually used in different mine action programmes, there is a growing recognition of the importance of using non-military personnel and perspectives. While military personnel are normally trained to, and operate with, high standards, there is need for appropriate systems and approaches to harness their specialisation towards a purpose other than that for which they were originally trained.[7]

It must be added that the military involvement in mines action has, however, yielded some important benefits which will be discussed later in this paper.

## The Growth of Commercial Agencies in Mine Action

Similar to the military sector, the specialised technical knowledge and experience in commercial agencies faced a new challenge when confronted by widescale humanitarian mine clearance requirements. Staffed by mainly ex-military personnel, commercial agencies had previously been involved in demolitions, pre-construction explosive location (looking for WW2 bombs before foundations are laid), and clearance of weapon testing areas, etc. They were used for limited tasks, worked at speed, and were well paid for their efforts. They were therefore unprepared to meet the challenge of clearance of huge areas of agricultural and communal land to lower project budgets and to higher standards of quality assurance.

However, following the lucrative clean-up of Kuwait after the 1991 Gulf war, commercial agencies were keen to be fully involved in mine action operations elsewhere. In particular, there was a pool of trained ex-military men who were available once the Gulf had been 'de-mined'.[8] In the absence of effective UN coordination or operations, and the limited capacity of the few NGOs operating in the sector, commercial companies gained a foothold. They adapted well, appeared to be more professional and operational than the emerging NGOs and UN agencies, and had experience with specialised clearance equipment and dogs. Their lack of social or political agenda and their contract-based approach to tasks also made them an attractive option to donors. With less than half-a-dozen active in the early 1990s, there are now at least 41 listed commercial agencies available for mine action contracts.

The increased involvement of commercial agencies in the humanitarian sector is also a direct reflection of the increase and diversity of the donor base now funding mine action. Commercials companies in mine action have adopted the 'language' of NGOs and the aid sector to good (and profitable) effect, somewhat blurring the distinctions between the fundamental differences between NGOs and commercial companies.

## Overview of the Role of NGOs

While the growth of commercial agencies specialising in mine action has been considerable, the increase of NGO agencies specialising in mine clearance has been modest. However, despite this it was in fact a small group of NGOs that were at the vanguard of technical and operational humanitarian de-mining between 1990 and 1996 and they led the way in terms of field innovations in areas of clearance and prioritisation (see Section 4).[9] Indeed before UN agencies assumed their responsibilities in the sector, and before significant openings were available for commercial agencies, NGOs were the dominant force pushing donors, the UN and public awareness to face the full impact of landmines. In Cambodia, North Iraq, Afghanistan, Mozambique, Laos

and Angola it was these pioneering NGOs that initiated mine action projects. These same mine action NGOs continue to be the most active NGOs in the sector today with very few new or established NGOs joining the clearance sector.

In comparison the 'sub-sectors' of mine awareness – victim assistance and political campaigning – have seen a huge increase in interest, understanding and involvement by established NGOs as of the mid to late-1990s, and the status of NGOs in mine action has in fact shifted in recent years with relatively less representation and prominence in activities involving marking, detection and destruction of mines to greater emphasis in these 'awareness' areas. Hundreds of NGOs became involved in the campaign to ban landmines, while a smaller group of established international NGOs have realised the important role they can play in the sector in the sense that, far from being a specialised quasi-military issue, mines are a legitimate humanitarian concern for any agency committed to advocacy on behalf of the vulnerable. NGOs that work with children and women, human rights groups, specialists in public health information as well as medical NGOs are recognising that the concerns of the mine action sector have to be part of their own mandate. In addition to this, new NGOs have been established to meet particular needs.

In the early 1990s most established NGO's were reluctant to consider any direct operational NGO involvement in the landmines issue, at any level. Banning landmines was considered a utopian and unrealistic goal; mine awareness was understood poorly and clearance of mines and UXO was considered a job for the national military or UN peacekeeping forces. Initially, donors funding de-mining activities did so to a very limited degree and were primarily funding mine clearance operators to protect expatriate staff in other aid projects. Wide-scale humanitarian clearance was not the objective.[10] The few NGOs active in mine action in the early 1990s expended considerable effort to persuade donors to recognise the scale of the humanitarian problem and develop emergency and development budget lines to fund mine action.

As this paper is primarily for readers from the humanitarian sector Annex A, a list of NGOs currently involved in mines action, has been included. Probably more than in any other humanitarian sector, mine clearance NGOs are now competing for funds against a growing group of aggressive commercial agencies.

## The Involvement of UN Agencies

In the first years of the 1990s the UN was just as unprepared to address the global landmine crisis as the NGOs, armed forces and commercial agencies. The Lessons Learnt Unit of the Department of Humanitarian Affairs (DHA; now OCHA) published a report in 1998 that details the early failures (and successes) of the UN in mine action in four key mine-affected countries (Eaton

et al, 1998). This report is the most comprehensive analysis of the UN involvement in mine action during the decade. The findings of the report exposed a serious lack of organisation, commitment and vision as well as many missed opportunities by the UN. However, significant progress has been made since 1998 and many recommendations listed in the report have been, or are currently being, addressed by the UN.

Initially mine action within the UN suffered a prolonged 'identity crisis' almost as an orphan, with no parent agency able to take responsibility and deal competently with this demanding and awkward new issue. At the same time different UN agencies began to take interest in mine action not only because they felt their mandate required them to take action, but because it became evident that mine action involved significant levels of financing and visibility. Although the then DHA was the official 'focal point' of mine action responsibilities in the first half of the 1990s, it had few staff, little expertise, low financial backing, and difficulty attaining respect in the field. In addition to this, DHA's mine action mandate was to coordinate and facilitate rather than to implement operations. At a time when the scale of the problem of landmines was perceived as colossal, and the resources and organisations available to address the problem so few, the failure of the UN to take a greater role and greater authority in mine action operations remains a serious indictment of that period (though OCHA's role in Afghanistan is an important exception). This ambivalence between being the focal point but non-operational was neither appreciated nor understood by NGOs, donors and national governments. However, the institutional changes and structural developments in the UN since the mid-1990s deserve recognition. Since October 1997, the focal point for all mine-related activities in the UN has been the Mine Action Service (UNMAS) within the UN Department of Peacekeeping Operations (UNDPKO). The current profile of UN agencies involved in mine action is comprehensive and indicates the strong commitment of the UN to take long term responsibility in the sector.

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### UN Agency Involvement

As described in *Mine Action and Effective Coordination: The UN Policy 1998* (UNMAS) the following summaries indicate the present roles of different organisations in the UN family (the actual operational activities of the UN, and other agencies, are outlined in Section 3).

The **United Nations Mine Action Service (UNMAS)** is the focal point within the UN system for all mine-related activities. In this capacity it is responsible for ensuring an effective, proactive and coordinated UN response to landmine contamination. UNMAS, in consultation with other partners, establishes priorities for assessment missions, facilitates a coherent and constructive dialogue with the donor and international communities on mines issues, and coordinates the mobilisation of resources. It is also responsible for the development, maintenance and promotion of technical and safety standards; for the collection, analysis and dissemination of mine-related information, including information on technology; for advocacy efforts in support of a global ban on anti-personnel mines; and for creating mechanisms for mobilising and receiving donations for mine action, such as the Voluntary Trust Fund for Assistance in Mine Clearance.

The **United Nations Children's Fund (UNICEF)**, working in collaboration with UNMAS, is the UN focal point on mine awareness education. In this capacity it has the mandate to provide appropriate guidance for all mines awareness programmes, liaising closely with concerned partners to ensure comprehensive rehabilitation of landmine victims. This includes psychosocial counselling, physical rehabilitation and education for those with disabilities. Additionally, UNICEF continues to be an active advocate for the promotion of a total ban on anti-personnel mines and the ratification of the Ottawa Convention.

The **United Nations Development Programme (UNDP)** is responsible for addressing the socioeconomic consequences of landmine contamination and for supporting national/local capacity-building to ensure the elimination of the obstacles they pose in resumption of normal economic activities, reconstruction and development. When applicable, UNDP has primary responsibility for the development of integrated, sustainable national/local mine action programmes in situations where the problem of landmines is not only a humanitarian emergency.

The **United Nations Office for Project Services (UNOPS)** is a principle service provider within the UN system for integrated mine action and capacity building programmes. It implements mine action programmes as appropriate in collaboration with concerned partners (UNMAS, UNDP and others). As its mandate enables it to work with all UN agencies, UNOPS is instrumental in providing the continuity of implementation that is required for mine action programmes.

The **Office for the Coordination of Humanitarian Affairs (OCHA**, previously DHA) is responsible for sharing with UNMAS and other partners information regarding the humanitarian implications of

landmines, particularly in countries where mine action has not yet been initiated. It works to ensure that humanitarian needs are met as an integral component of the overall humanitarian endeavour. It advocates for a global ban on anti-personnel landmines and for victim assistance. OCHA also works closely with UNMAS on resource mobilisation in its capacity as manager of the Central Emergency Revolving Fund (CERF) and coordinator of the Consolidation Appeal Process (CAP).

The **Office of the United Nations High Commission for Refugees (UNHCR)** ensures that the needs of refugees and other populations of concern to UNHCR are met. In particular, it works with UNICEF to develop appropriate mine awareness programmes in refugee camps and with WFP for the safe delivery of food.

The **World Food Programme (WFP)** is involved in mine action in relation to its mandate to provide food assistance. Its three main areas of concern are (1) the clearance of access roads for the speedy and cost-effective delivery of food assistance; (2) the clearance of land required for the safe return of displaced people; and (3) the clearance of crop land for agricultural use in order to promote sustainable levels of local food production.

The **Food and Agriculture Organisation (FAO)** is involved in mine clearance in relation to its humanitarian agriculture relief activities in countries affected by complex emergencies. The definition of criteria for the selection of priority sites requiring mine clearance is a pre-requisite to the formulation of humanitarian relief/short-term rehabilitation interventions.

Within the framework of its mandate the **World Health Organisation (WHO)** is responsible for the development of appropriate standards and methodologies, as well as the promotion of health service capacity building for sustained victim assistance through the ministries of health of affected countries. It provides public technical health support to the various UN partners involving in mine action, and cooperates closely with UNICEF and the International Committee of the Red Cross (ICRC).

The **World Bank**[11] shares with UNDP a perspective which views mines pollution as a development problem with long-term consequences and, necessarily, with long-term solutions which extend far beyond initial humanitarian concerns. Globally, the World Bank shares responsibility with UNDP for convening donor groups in reconstruction situations and thus has a major role in resource mobilisation and in setting long-term agendas for international support for mine action and other needs.

The UN **Department for Disarmament Affairs (DDA)**, in collaboration with UNMAS and other agencies, supports the role of the UN Secretary General in relation to the Ottawa Convention. The department's specific responsibilities relate to provisions of two articles: 'Transparency Measures' (Article 7) and 'Facilitation and Clarification of Compliance' (Article 8).

Clearly, the above summaries of responsibilities allow for different interpretations as to when one agency's mandate ends and another begins. There appears to be some continuation of interagency competition and in some cases UNMAS struggles to assert its leadership within the UN family. UNMAS is formally well-accepted as the focal point for mine action, but in terms of operational relevance UNDP, UNICEF and UNOPs now have considerable leverage. Generally, however, roles are well-defined and cooperation proceeds well. This is partly achieved through the various formal coordination and liaison groups that have been established. These operate at three levels:

1. The Interagency Coordination Group on Mine Action, chaired, when it meets at senior management level, by the Under Secretary General for Peacekeeping, to support the overall interagency coordination of UN mine action initiatives and activities. It includes, *inter alia,* representatives of all the UN agencies listed above.
2. A Steering Committee on Mines Action, chaired, when it meets at the senior management level, by the Under Secretary General for Peacekeeping Operations, supports the coordination of UN mine action initiatives with those of non-UN partners. In addition to the members of the InterAgency Coordination Group on Mine Action, it includes, *inter alia*, representatives from the ICRC and the International Campaign to Ban Landmines. The Geneva International Centre for Humanitarian De-mining and the Organisation of American States have also recently been invited to participate.
3. UNMAS has the responsibility of ensuring that mine action issues are addressed and that NGOs and the ICRC are involved in the different existing coordinating mechanisms at the UN HQ level. These are: the Humanitarian Liaison Working Group (HLWG), the InterAgency Standing Committee (IASC) , and the Executive Committee on Humanitarian Affairs (ECHA).

## The International Committee of the Red Cross (ICRC)

According to its own statement 'In dealing with the scourge of landmines, the ICRC has encouraged the international community to adopt a ''public health'' approach comprising preventative, curative and rehabilitative measures. While these measures include, as a key element, humanitarian mine clearance, the ICRC's efforts have focused on advocacy, mine awareness and risk-reduction education, and assistance to landmine victims (first aid, surgery, rehabilitation and socioeconomic reintegration).'

What has been remarkable concerning the ICRC is the approach it has taken since the mid-1990s concerning the campaign to ban landmines. Normally strictly non-partisan and non-political it began an aggressive high-profile publicity campaign to ban landmines and expose the scourge of mines in November 1995. This unprecedented ICRC involvement has been driven by a small group of its most experienced field surgeons who became increasingly outspoken on the need to take action. The ICRC has filmed numerous videos and printed numerous publications to publicise both the scale of the problem and the urgency for a fully implemented global ban. Its involvement, considering its mandated limitations, has been outstanding. In other areas such as documentation of victims, mine victim prosthesis provision, and activities in surgical amputation, the ICRC has been a major contributor. In mine awareness ICRC has had limited programmes, being most active in the former Yugoslavia.

## The Geneva International Centre for Humanitarian De-mining

The Geneva International Centre for Humanitarian De-mining (GICHD) was set up as a result of the Swiss government's determination to promote humanitarian de-mining. It was established in April 1998 as a foundation under Swiss legislation, but with international responsibilities. Although independent, this foundation is mainly financed by the Swiss Ministry of Defence, while a number of different countries provide the centre with staff and finance for special studies. Direction and guidance for the GICHD is provided by the Council of Foundation. This meets twice a year and currently comprises representatives from 17 countries.[12] These representatives are attributed ambassadorial status.

The stated overall objective of the GICHD is the promotion of international cooperation in the field of mine action. It sees itself as a service provider for the benefit of the UN, UNMAS and the wider mine action community. Its specific objectives are to:

- strengthen the role of the UN and UNMAS as the focal point of de-mining;
- 'exploit and further the expertise' of the different agencies and organisations in the mine action sector in a 'fully supportive and non-competitive' way;
- contribute to the formulation of coherent and comprehensive mine action strategies.

GICHD is increasingly recognised as *the* centre for research, study and strategy in the mine action sector. This recognition has been promoted through, for instance, its development of a global Information Management System for Mine Action (IMSMA),[13] its organising and funding of the annual conference for mine action managers (on behalf of the UN), and its preparation of studies and analysis and dissemination of information. This could be seen as a 'division of labour' within the sector since the UN is already stretched in dealing with its numerous mine action initiatives. Indeed, the UN reform of 1998 encourages the development of partnerships with specialist agencies and organisations such as the GICDH, thereby amplifying the impact of its own resources – moral, institutional and material.

Certainly it should be noted that the development of GICHD as a *European* 'centre of excellence' for mine action took place at a time when many governments engaged in mine action were not satisfied with the past performance of the UN in the early and mid-1990s. If GICHD continues and strengthens as an effective provider of relevant information, tools and personnel to the sector it is difficult to resist the suggestion that it will *de facto* become the global authority for mine action activities (clearly without the coordinating and operational authority which resides with UNMAS.) While its credibility and capacity has yet to be earned and established the humanitarian aid sector should expect to see the fast ascendance of this foundation given the high-level, governmental endorsement it enjoys.

## The Role of Research and Academic Institutions

The 1990s has seen a dramatic increase of interest from professional research and development organisations, university departments and private societies in relation to mine action.

Research and development (R&D)associated with humanitarian mine action in the early 1990s was negligible – the concept itself was very new and the requirements for widescale humanitarian mine action conducted by civilian groups, frequently in extreme climatic conditions and terrain, was unknown. Equally, the many academic institutions and private societies that focus on the environment, human disasters, refugees, social development, medical issues, post-conflict situations, and complex emergencies, among others, were initially slow to identify and understand the full range and depth of the landmine crisis. It was initially viewed as a quasi-military problem requiring specialised analysis and high-level governmental resolution.

However, since 1995/6 there has been an increased interest in mine action. Certain universities are currently playing an active role in conducting research into finding a faster technology to locate and destroy landmines, and the physics, mechanical engineering, chemistry and biological faculties of these universities are registered as conducting research in this field. Other academic institutions are examining the social, psychosocial and other medical implications of landmines, while still others offer information and exchange websites, etc. The James Madison University in the US has set up a Humanitarian De-mining Information Centre that brings together governments, international organisations, NGOs, private voluntary organisations, corporate associates, and academics to share information and resources. The address of this agency and others of interest are included as Annex B. There is still considerable scope for social research centres and socioeconomic evaluation experts and statisticians, among others, to make valuable contributions to the sector. The mechanisms (and inclination) for players in the mine action sector to link with, and benefit from, external and objective analysis is at present weak.

# 3

# The Current Status of Mine Action in Terms of Operations

Given the relatively small size of the sector, it is surprising that there is no central body collating mine action data on a global scale.[14] It is therefore important to have some understanding of the operational range of the sector as it is currently constituted. A table indicating certain quantitative data is presented after the narrative descriptions.

## Country Assessment Missions

The establishment of assessment missions is one of the results of the UN's process of regulating the approach to the global landmine process in a systematic manner. They are managed and implemented by UNMAS, and their objective is to define the scope and nature of the landmine/UXO problem in countries that have requested assistance from the UN or international community.

Assessment teams are designed to be multidisciplinary and multisectoral, involving representatives from a number of UN agencies.[15] Assessments do not necessarily lead to mine action operations but where mine action assistance is required, the successful completion of an assessment report will assist member states (donors) to allocate donations towards a particular country and initiative. Missions began in 1997. Since then, assessment missions have been conducted in Azerbaijan, Ecuador, Ethiopia, Jordan, Lebanon, Namibia, Peru, Sudan, Yemen, and Zimbabwe. Further assessment missions are planned in 2000 for Egypt, Balarus, Senegal, Nicaragua and Zambia.

UN assessment missions have not, however, been conducted in the most severely mine-affected countries. This is because the scope and nature of the mine problem in, for example, Iraq, Cambodia, Afghanistan, Angola,

BiH, Croatia, and Mozambique was already apparent long before 1998, and mine action was therefore already underway. As indicated previously, 'assessment' made by UN agencies, international agencies and NGOs did not follow particular guidelines in the early 1990s. Typically, an NGO would send a small team to an affected country to gauge the level of urgency and the feasibility of setting up operations there. Their negotiations with government officials would often be independent of other agencies' activities and any plans of the UN. In most of the severely affected countries, NGOs were operational before the UN established a coordinating role or a mine action centre. NGOs continue to act with independence when selecting countries for operations and are not necessarily guided by the UN assessment missions.

## Survey Operations

Effective mine action cannot seriously proceed without a measure of the scope of the problem, and its specific location, within an affected country. The survey process has, however, only recently been formalised; after a decade of mine action operations this has yet to be systematically implemented (see above).

It was the urgency of the humanitarian crisis in the early 1990s (North Iraq, Afghanistan and Cambodia in particular) that resulted in reluctance to spend time and money on systematic survey. Rather, there was pressure on agencies to deliver results in terms of numbers cleared. Fast, imprecise reconnaissance tours were made with minimal interaction with communities and local authorities. Initial mappings were compiled with whole regions marked off as being mined without any correlation with levels of accidents, demographic

distribution, importance of land-use and other factors that are now used. In many cases NGOs and national de-mining teams were already operational in areas suspected to be high-priority but which had not been surveyed. The use of the term 'survey' often only referred to the identification of a shortlist of local areas suitable for clearance or mine awareness.

The problem with a superficial or partial survey is that it is of little use to national planning and coordinating centres. Equally, mine action authorities cannot accurately justify their operations to donors. When agencies are already set up and operational in certain regions (before a national survey) there is clear reluctance to move to areas that may be of greater risk. Agencies become territorial, as do their donors. The other problems with inadequate surveys are that they need to be repeated at a later date. For example, in Mozambique a national survey is currently underway seven years after at least 13 difference clearance agencies have operated in the country at different times. The issue of survey is therefore symptomatic of the fast and disorganised growth of mine action. Numerous different agencies have been, and continue to be, involved in partial or even quasi-national surveys using their own systems and criteria.

### Global Landmines Survey Programme
In 1998 the Global Landmines Survey Programme (GLSP) was established by a group of NGOs in close collaboration with the UN. Called the Survey Action Centre (SAC) this programme is now recognised, internationally, as the way forward towards a standardised, systematic, community-based national level one survey process (see below).[16] Critics of this new survey programme suggest that too many financial resources will inevitably be directed towards this level one process, which does not yield sufficient technical data to assist technical prioritisation of different areas. The GLSP is currently conducting national surveys in Mozambique, Yemen, Chad and Thailand. It is considering additional surveys in Lebanon, Cambodia and other countries.

The initial survey process (level one) requires minimal technical knowledge of mines or mine clearance. Using Rapid Rural Appraisal techniques, focusing on community knowledge, and using controlled group interview processes, the survey teams aim to develop an understanding of the socioeconomic impact of the mined areas in addition to the general location of the mines affecting communities. Regional information is collated at a national level and centralised for analysis and interpretation. Minefield marking prior to clearance is a technical operation performed by the designated mine clearance teams and represent part of survey level two. (Level two is actual minefield marking and clearance operations. Level three is a completion report once the area has been cleared.)

This programme represents an important development in mine action due to the focus of the survey process on prioritisation (see Section 4) based on socioeconomic factors, and the integration of different disciplines to analyse the mine problem. The globally standardised approach is also an important development and conforms with the UN-driven movement to develop standardised 'operating procedures' for a wide range of mine action activities.

## Global Mine Clearance Operations

For the purposes of this report mine clearance operations include survey, mapping, marking, mine clearance training, and clearance.

### The UN Approach
*Characteristics*
According to its mandate, the UN approach is, primarily, to provide 'effective coordination' in mine action, to provide 'assistance' to mine action, to 'foster the establishment of mine clearance capacities', to 'develop a comprehensive mine action strategy' and, for the Mine Action Service (within the Department of Peacekeeping Operations), to be the designated 'focal point' for mine action within the UN. It does not have a mandate to implement or operate directly in clearance operations. (The exception to this rule is during UN peacekeeping operations when specific mine clearance operations may be directly implemented, or in emergency situations when there is an absence of local government. Nevertheless the UN cannot directly employ mine clearance operators.) In many cases, however, there is a degree of ambiguity between the UN's active pursuit of its mandate and direct implementation. The UN's strength in resource mobilisation and allocation of funds in favour of mine clearance operations means that the UN is the main international authority in mine action.

UNMAS, UNDP and UNOPS are active in fostering the establishment of indigenous, national capacities, and encouraging the development of appropriate institutions to support a national mine action programme. The mechanism normally used is the creation of a mine action centre (MAC). Within the affected country this may be known by this name (eg, Bosnia Mine Action Centre) or the actual MAC unit may be subsumed by a national governmental agency under a different name (eg, in Mozambique, the National Centre for De-mining. Senior and middle-level managers (technical and managerial) in these organisations tend to be either on secondment from the military of donor countries or on direct contract with UNOPS. They normally work with national counterparts. In most cases the director of the national agency in which, or for which, the MAC works, is a senior national government placement. However, the MACs and the national entities are non-military and normally maintain an independent status or come under national ministries of social welfare or rehabilitation.

The role of the UN and MACs are various but they are most active in the following areas:

- working with host governments to establish and develop a national mine action capacity;
- developing national strategies and plans;
- collecting mine data (size and location of affected areas, mine victims, etc);
- soliciting for funding/resource mobilisation in favour of national mine action;
- coordinating commercial and NGO agencies within the host country;
- participating in testing and accreditation of mine clearance technologies according to international standards;
- training and developing indigenous staff in technical and non-technical positions towards a full indigenous capacity.

### *Location*

The major UN MACs are in Afghanistan, Kosovo and northern Iraq. In BiH, Croatia, Cambodia, Laos, Angola and Mozambique the UN supports national mine action centres in the manner described above. The UN (UNDP) is also working closely with host governments to develop national mine action centres and initiatives in Chad, Iran, Somalia, Sri Lanka, Tajikistan, Azerbaijan and Yemen.

### *Scope*

The UN's involvement varies considerably from one country to another and different model's of coordination are employed. The following examples offer a brief overview of some country approaches.

In Afghanistan, OCHA coordinates and supports the implementation of the whole national mine action programme. All agencies involved are NGOs (mainly local with some international) and all agencies accept coordination and direction from the UN MAC. Management control is comprehensive and covers fiscal, technical, quality assurance, standardisation, deployment and evaluation issues. UNOCHA mine action expatriate staff are less than 10 and, other than the programme manager, maintain only advisory positions. Over 4,700 national staff are involved in the combined effort that operates throughout Afghanistan and this MAC has been a model of success in terms of coordination and achievement. (This figure from mid-1999 includes mine action operators and back-up administrative and support staff. It also includes approximately 1200 staff of the British HALO Trust.) The special political conditions that have pertained, and continue to pertain, to Afghanistan have required the UN to maintain singular control of mine action. Donors continue to endorse this model in Afghanistan by channelling all funding through OCHA .

Since 1993, UNDP has supported the development of the independent national mine action agency of Cambodia – CMAC, or the Cambodian Mine Action Centre. Directed and fully staffed by nationals, the agency is approximately 2000 strong. The UN and various donor countries supplement CMAC staff with expatriate advisors. These have increased over the years.

Currently there are over 70 expatriate technical advisors. There are four NGOs active in mine clearance in Cambodia. Together they employ approximately 1000 national staff. These were operational before CMAC was established**.** They recognise and endorse the role of CMAC as the central authority and cooperate well, while maintaining their independence. Donors deal with the NGOs and CMAC separately.

Mozambique illustrates a more problematic scenario. After the peace accords were signed in late 1992 the UN, donor community and Mozambican authorities entered a protracted period (up to 1995) of disagreement concerning institutional arrangements for national mine action. A de facto situation emerged with NGOs and commercial companies liaising directly with donors and local authorities and proceeding with clearance operations, while the UN failed to develop any authority or programmes. Eventually OHAC – the humanitarian arm of the UN peacekeeping mission in Mozambique – started an accelerated de-mining programme (ADP). This is now directly supported by UNDP and has involved the training and deployment of clearance personnel (late 1995). The ADP tried to assume a central coordinating role and was closely involved in the development of the government national body, the National De-mining Commission. This was launched in 1995 with almost no financial backing. Staff had no mine action expertise and it did not have the confidence of donors or the de-mining community. The commission struggles to fulfil its role as a central coordinator, as does the UN, in a situation where up to 15 commercial and humanitarian agencies have been operational for up to seven years, with no effective coordination or regulation.

These three country examples are documented in detail in the country case study reports which form part of the UN's 'The Development of the Indigenous Mine Action Capacity' published in 1998 (Eaton, et al).

### *General Performance*

The strength of the UN is that it is well positioned to mobilise international resources and negotiate with national governments. Its focus on developing institutional arrangements to support long-term indigenous responses to mines is sound and in its absence no other agency would perform such a role. Furthermore the UN, after a sluggish start, is now proactive in mine action; it also operates with standardised approaches in terms of assessments, survey and humanitarian mine clearance. More and more agencies within the UN family have become involved in mine action, increasing the momentum, donor interest and level of resources accordingly.

A criticism is the lack of consistency in approach: in certain countries the UN performance has been outstanding (eg, Afghanistan) while in others there have been serious failings (eg, Angola). Detractors of the UN would suggest that in certain situations it has wasted time and resources and achieved very little. The UN's

own study from the Lessons Learnt department of the Department of Humanitarian Affairs in 1998 published a series of serious indictments in relation to mine action acvtivities. The UN preoccupation with the development of institutional mechanisms has, in some instances, detracted from the organisation of urgent mine clearance and related activities. Equally, an emphasis on 'standards' and procedures and conferences instead of on actual field results can sometimes make the UN seem distant from field requirements.

## The International NGO Approach
### Characteristics
As explained in Section 2, NGOs were initially at the forefront of mine clearance in terms of innovation, operations, integrated approaches and cost-efficient results. NGOs were also pre-eminently involved in lobbying governments, the UN and donors to react to the mines crisis at a time when there was little interest or understanding of the nature and scope of the problem. Their strength was also their ability to start operations at speed with minimum bureaucratic obstacles. NGOs promoted integrated mine action (mine clearance with mine awareness and community-based priorities) long before it became official rhetoric and policy. In some areas they maintain a vanguard position in the mine action sector, particularly in the current development of the use of low-technology machines and dogs to assist mine action, but appear to struggle to compete with commercial agencies in terms of cost-efficiency. This, however, is very much a function of the terms by which cost-effectiveness is measured (this is further discussed in Section 4, under Productivity).

The four main international NGOs active in mine clearance are the HALO Trust, Handicap International (HI), the Mines Advisory Group (MAG) and Norwegian People's Aid (NPA). Two smaller German NGOs operate in Southern Africa (MGM and Santa Barbara), and the Danish De-mining Group has recently established operations. There was, and is, no reason why new NGOs cannot be created or why established international NGOs cannot develop mine clearance specialisations.[17] Certainly donor interest has been high and opportunities sufficient, but in the absence of NGO presence (both in choice of NGOs available and scope of their operations) commercial companies have filled a vacuum.

The NPA is at the forefront in terms of the use of dogs in mine clearance. HALO Trust and MGM continue to innovate and operate with low-cost and low-tech mechanical assistance to manual clearance teams. MAG and HI have mainly operated using classic manual methods of clearing mines but they also experiment with different combinations of teams and different levels of engagement with communities in order to develop a more community-based, integrated approach. It has also been HI and MAG that have been most active in the international campaign to ban landmines, and most involved in mine awareness programmes.

Local NGOs in mine clearance exist in Afghanistan and Bosnia/Croatia. In most cases they have been fostered by the UN and encouraged to start with guarantees of funding, training and equipment supplies. In Afghanistan these NGOs constitute the bulk of mine action capacity in the country, and perform to high standards of efficiency.

### Location
NGOs may operate with very different programmes from country to country. It cannot be assumed that the size, technical approach or programme profile of a particular NGO is similar in different locations. Those interested in an outline of NGO country operations should refer to Annex A, which also includes the different NGO websites where more detailed information can be found.

### Scope
The five main NGOs (as listed in Annex A) operate globally with a combined staff of approximately 6300 persons. Including the various local NGOs (3,500 Afghan nationals; a few hundred local staff in NGOs in Bosnia, Croatia and Kosovo) the approximate total of NGO mine action staff directly involved in mine clearance and mine action is over 10,000 persons.[18]

NGOs vary considerably in terms of operational approach and methodology. Some programmes use mechanical assistance and dogs, which can dramatically increase their performance, while others integrate clearance teams with mine awareness and community liaison staff. There are programmes that focus on training locals to create indigenous local response



Villagers in Moxico, Angola, pool information using stones to represent suspected mine areas and mangos for UXO.

© Sean Sutton/MAG

capacity, while others concentrate on marking minefields or field-testing new technologies. In terms of prioritisation, NGOs are similar insofar as they focus predominantly on community needs and urgent priorities. Infrastructure and longer term development clearance is normally tackled by the UN-supported national mine action centre initiatives.

### General Performance
In terms of swift start-up, training and deployment of clearance staff the NGOs perform well. Their lack of involvement in national politics (which surrounds the establishment of indigenous coordination mechanisms), governmental negotiations and bureaucratic funding channels makes them effective implementers and attractive to donors. Their focus on local communities and humanitarian emergency relief is also a hallmark of their approach. In terms of learning from lessons and adapting programmes to local conditions, the smaller the NGO programme the greater the advantage. However, mine clearance is a slow operation and the focus of the NGOs on community priorities and safety (for the communities as well as the de-miners) has resulted in slow progress in actual clearance rates. The independent attitude of the NGOs initially also led to a slow interest in, and adoption of, new technologies or alternatives to the manual approach. NPA is a striking exception to this with its early use of dog teams. However, this is a criticism of all mine clearance operators outside of the commercial companies. More innovative and field-developed mechanised aid is now increasingly used by NGOs, in particular the Halo Trust and MGM, and more attention is given to cost-efficiency/ cost-benefit analysis than previously.

## The Bilateral (and Peacekeeping) Military Approach
### Characteristics
During the 1990s bilateral military initiatives classified as 'humanitarian de-mining' took place in parallel to national mine action programmes, as well as in countries outside the focus of international mine action. These consisted of military-to-military non-lethal aid and training packages, as well as the subsequent equipping and funding of local de-mining groups (police or military). The US armed forces were by far the most active in this regard, operating in countries such as Eritrea, Rwanda, Namibia and Yemen among others.

In addition, when participating in UN peacekeeping missions military units of member states have engaged in mine clearance and the training of local military in mine clearance. These mine clearance initiatives have been described as 'operational mine clearance' insofar that the clearance occurred to enable UN peacekeepers to perform their mission (rather than based on local communities' priorities). Those conducting this work also referred to the clearance as humanitarian de-mining though this was not what is currently recognised as 'humanitarian' today. The scope of these activities has not been measured. No doubt serving military units from

member states have kept their own records and possibly there are some records in the UN. However, they are not used as part of the statistics compiled to track national mine clearance progress.

In many cases serving military officers involved in bilateral programmes have an ambivalent attitude to the campaign to ban landmines and in some cases oppose the movement. This is an unholy alliance and an unacceptable contradiction within the mine action world that includes not only the military contributors but also many of the commercial operators.

### Location and Scope
During the 1990s peacekeeping forces in Cambodia, Bosnia, Angola, Croatia and Mozambique all conducted some degree of mine clearance to support the UN missions' objectives or other UN agencies' objectives. It can be assumed that some level of operational clearance occurs whenever UN multinational peacekeeping forces are deployed in mine-affected countries.

The only data located for this paper concerning bilateral (non-peacekeeping related) military humanitarian mine clearance concerns the US. The US was by far the most engaged in this form of assistance in the 1990s. Between 1994 and 1998 (inclusive) the US Department of Defence expended goods and services for humanitarian de-mining to the level of US$68.4m in 12 different countries, including less-affected countries such as Zimbabwe, Yemen, Namibia and Rwanda.

### General Performance
The over-ridding concern is that these activities occur predominantly outside the UN, international and national mine action strategies, and often with minimal information sharing. The UN and NGOs cannot use serving military nationals in their mine action programmes and normally have to re-train staff originally trained by military training programmes due to the different mine detectors and different methodology used. Equally, military training is not conducted within the framework of humanitarian principles or vision that dominates civilian mine action. Considering the above high figure for the US alone (US$68.4m) many observers wonder how these donations are evaluated and accounted for as very little evidence is seen on the ground. As national military forces are not normally involved in humanitarian mine action activities the question has to be raised as to whether this is the right channel for spending such large amounts of money – unless, of course, the assistance to humanitarian mine action is not in fact the primary objective of bilateral military to military contributions:

> 'These programmes are military to military involving US Special Forces rather than engineers and, to the extent that their results are visible at all, achieve very little return for the money reportedly expended and could in no way be seen

to contribute meaningfully to the development of an indigenous humanitarian-based mine clearance capacity' (McGrath, 2000).

## The Commercial Approach
### Characteristics
As explained in Section 2, there has been a fast growth of commercial companies offering their services in mine clearance. Staffed predominantly by ex-military officers and engineers at the senior level they often use imported foreign workers as field operators and mine clearers (eg, from South Africa or Nepal). These companies often use mechanised assistance and sniffer dog teams, they adhere strictly to contractual stipulations and don't get involved in humanitarian politics or community engagement. As such they are popular with donors who wish to address specific mines threats.

Contracts won by commercial companies normally concern roads, power-lines, infrastructure, and specific urban areas for reconstruction. Dealing with commercial companies is seen as clean and unambiguous; ideal for swift discrete clearance. Another characteristic of commercial companies is that they often have the support of their home governments (through embassies). They can also, therefore, represent a form of 'tied aid', despite competitive bidding procedures.

The main companies currently active originate from the US, the UK and South Africa. None of these companies had a prior history of involvement in humanitarian operations. On the contrary, in some cases it is well known that certain of these commercial companies were, before the 1990s, directly involved in mines development, 'special' forces operations, or mercenary activities. Normally the companies have little interest or capacity in mine awareness, and have no involvement in the campaign to ban landmines.

### Location
Commercial companies have been active within severely affected countries such as Angola, BiH, Croatia, Mozambique and now in Kosovo. Only a single French commercial company operated in Cambodia. It is probable that individual companies have other work in countries not listed here in connection with specific investment projects (eg, clearance for pipelines or pre-construction clearance). They have not been operational in Afghanistan or north Iraq though a UK commercial consultancy company (Greenfields International) has been sub-contracted to perform humanitarian operations in north Iraq.

### Scope
There are 109 commercial de-mining companies registered on the James Madison University listing (The Mine Action Information Centre web-site (see Annex A). Sixty-eight of these appear to focus entirely on research into de-mining technology. Forty-one claim to be active in mine action. As with the NGOs there is a relatively small group (under 10) of commercial agencies that operate internationally and with a recognised track record. As commercial contracts are timebound and not normally ongoing it is not relevant to give a figure for the commercial workforce in mine clearance.

### General Performance
An important strength of the commercial sector is its use of mechanised assistance and dog teams. In certain situations these techniques advance operations at great speed in a way that NGOs and national de-mining groups could not operate. In one contract in Angola a commercial company clearing mined roads using machines, dogs and manual teams moved at 38km per day (NGOs using manual methods would have spent many days/weeks clearing a single kilometre). The fact that commercial companies are not engaged with communities or have particular philosophical mandates

## Table 1: Comparative Table Displaying Basic Mine Action Data

|  | Afghanistan | Angola | Cambodia | Mozambique | BiH | Croatia |
|---|---|---|---|---|---|---|
| **Population** | 20 million | 11 million | 10 million | 16 million | 3.5 million | N/A |
| **Area affected by mines** | 714.5km | 2,272 minefields identified | 644km² | Area not known; 1943 locations | 290km² | 6,000km² (10% of Croatia) |
| **Land cleared to date** | 429.8km² | 6.8km² (280 minefields) & 5000 km road | 72.8km² | 200 areas 188km² of which 149km² was pylon, road and rail | 34km² (between 1995-97) | 60km² |
| **Estimated number of mines** | 5-7 million | 6-15 million | 4-6 million | 1 million | 400,000 | 600,00 – I million |
| **Number of mines cleared to date** | AP: 200,570 AT: 8,957 | 15,000 | N/A | AP: 55,000 AT:400 | N/A | N/A |
| **Number of UXO cleared to date** | 937,018 | 190,000 | N/A | not known | N/A | not known |
| **Approximate number of mine action staff** | 4,800 | N/A | 3000 | 1,500 | N/A | 1,000 |
| **Ratio of amputees per population** | 1/631 | 1/334 | 1/384 | 1/2414 | N/A | not known |

N/A = Not available

allows them to be flexible from the donor point of view. They will work, for example, in areas which NGOs may not consider a community priority. Equally they are used to working within strictures (which, in clearance, is a quality level of 100 per cent clearance to 200mm depth, with a confidence level of 99.6 per cent) and timetables. While there have been reports of commercial companies missing mines during clearance operations this has also been the case for NGOs and national de-mining teams and there does not appear to be a particular prevalence of such cases within this sector. Donors and MACs appear to be satisfied with the performance of



*Teaching children in Laos the dangers of UXO.*

commercial companies and they are now a permanent component within the mine action sector (see further comment concerning the commercialisation of mine action in Section 4).

## Clearance by Affected Communities

This section would be incomplete without some mention of mine clearance conducted by affected communities. Despite all the efforts of the international community in the last decade the truth is that probably the majority of people directly affected by mines have never seen a mine clearance team, a sniffer dog, or a mechanical clearance aid. They may not have had mine awareness education despite living with mines and UXO in and around their living areas for years if not decades. If they have been aware of that presence they have, in many cases, acted to remove the mines and UXO themselves – in some cases on their own, in others through the organisation of small teams at village level. Alternatively, someone might set up as the local 'expert' and clear mines in return for food or money.

In most cases this level of local, unsupervised village clearance takes place without any protective clothing, detection equipment or medical back-up. Reports are common of villagers extracting explosive from mines for fishing, or piling mines up and setting fire to them. The number of mines and UXO cleared in this way and the number of people killed or maimed attempting clearance will never be known. Although village clearance can never be a realistic substitute for organised professional clearance (in terms of thoroughness and safety) there is no doubt that countless affected communities have acted independently to move, clear, and destroy mines.

## Mine Awareness Education

### Characteristics

Mine awareness involves information and education programmes to reduce the threat of landmines to affected communities. Using different educational and participatory approaches, mine awareness focuses on changing risk behaviours and creating knowledge of safety measures. A wider interpretation includes promoting the awareness of mines to journalists, tourists, national and international governments and the general public, though in this section mine awareness refers to activities targeting affected communities. Mine awareness often also incorporates a process of collecting mine victim data.

There is a wide variety of approaches to mine awareness but increasingly agencies involved are establishing and agreeing on certain international guidelines and guiding principles. UNICEF is leading this process. Typically, mine awareness involves the training of local trainers who visit different communities in affected areas or potentially vulnerable communities (refugees and IDPs). Certain agencies are increasingly using participatory approaches that involve the communities, while others employ more didactic presentation-type approaches. The materials normally used in mine awareness include dummy mines and UXO, posters, leaflets, videos and school materials with mine awareness messages and images. Theatre, puppetry and role-playing mechanisms are also frequently used. Mass media has also been used, sometimes in support of a community-based approach. There has been a considerable rise in the number of agencies involved in mine awareness activities worldwide since the mid-1990s.

### Location

It is hard to fully represent the scope and location of mine awareness due to the fact that various established international NGOs and local NGOs may now include some elements of mine awareness as part of their 'public health' activities. Equally, they may only distribute posters and participate in community involvement or training.

### Scope

Within the UN, UNICEF is the designated focal point of mine awareness and operates in a wide number of countries, including most of those in Table 1. It operates

through its own field programmes and through local and international NGOs and is an important resource mobilising agency. It is also responsible for developing the International Guidelines for Mine Awareness Education.

All five main mine clearance NGOs also conduct mine awareness training as part of an integrated approach. HI is considered a specialist in mine awareness. When appropriate, it conducts only mine awareness without other activities; MAG and NPA normally conduct mine awareness as part of their overall mine action country strategy, though in Sudan and Western Sahara NPA operates purely in a mine awareness capacity.

There is an increasing number of international NGOs involved in mine awareness. Large organisations (federations) such as Care, World Vision, Save the Children, ICRC and others have mine awareness departments that are increasing their scope of activities and country programmes.

## General Performance

The success of mine awareness programmes is notoriously difficult to measure as the qualitative nature of the changes defy simple measurement and are also part of a complex mix of factors that affect a vulnerable community living with risk. If a reliable database of mine accidents exists in an area, a comparison of data before and after mine awareness training would only partly indicate whether the training had made an impact as other factors influence the rise or fall of numbers of accidents – such as changes in farming activities, and population movements. The quantitative indicators most used by agencies include numbers of people that attend training, number of materials distributed, number of community visits conducted, etc.

The first national mine awareness evaluation was conducted in Afghanistan in 1997 by CIET International (Anderson et al, 1998; CIET is a research centre in Mexico. The acronym stands for Community Information, Empowerment, Transparency). Despite using a sound methodology, collecting excellent data and spending considerable time on the research and analysis, its conclusions are somewhat vague, non-conclusive and qualified. This is not a criticism of CIET, but an indication of the difficulty of assessing to what degree mine awareness succeeds in reducing death, injury and risk in mine-affected environments.

On the other hand much has been achieved in terms of reaching affected communities, training local trainers and exposing large portions of affected communities to mine awareness education. For example, in Afghanistan, almost 5 million people have been exposed to mine awareness training since 1989 (25 per cent of total population); in Cambodia the figures are more than 1.1 million people (more than 10 per cent of the population). Figures quoted from Angola up to the end of 1996 indicate 1 million people have received mine awareness

training. Despite the renewal of hostilities and problems of access in many areas it should be assumed that agencies have added considerably to this total by now. In Bosnia, in a highly cooperative and organised programme involving a large number of local and international agencies, an extensive multi-media and schools programme is assumed to have reached every section of society at some point since 1996.

It must be stressed, however, that numbers reveal nothing of the quality of the mine awareness training and the subsequent impact on communities' behaviour.

## Victim Assistance Operations

### Characteristics

The *Landmines Monitor 1999* (Human Rights Watch, et al) ends its introduction with the statement: 'A world free of mines, but not free of the suffering of their victims, is hardly a goal to strive for.' The ICBL pressed hard for the 1997 international Ottawa Treaty to include significant reference and commitment to landmine victims. This was a previously neglected area of mine action as mine clearance and mine awareness dominated discussion, funding allocation and operations. The dramatic growth in awareness of the landmine problem in the mid- to late-1990s led to a broader understanding of the depth of the problem and the importance of addressing the needs of mine victims (landmine survivors) and 'victimised' communities. Responding to mine victims is of interest and concern to very different groups of organisations with expertise different to that involved in other aspects of mine action. The identified areas of need concerning mine victims include:

- emergency medical care, amputation surgery and post-operation care;
- physical rehabilitation and prosthetics, wheelchairs and crutches;
- assistance for non-amputee mine victims (blindness, deafness, etc);
- psychological rehabilitation and combating social stigma;
- returning victims to economic productivity, vocational training etc.

During the 1990s the majority of resources provided for victim assistance have supported medical and physical rehabilitation initiatives. But there has never been enough of such support and now other requirements have been identified as well. The needs of landmine survivors are long term, and although various NGOs are working to provide assistance, ideally disability issues should be dealt with within the mandate of national government ministries of health, education, employment/labour and social welfare.

### Location

This is hard to summarise accurately, particularly as various medical, prosthetics and orthotics institutions or initiatives may be involved in mine victim support as

part of their normal activities or general work with war victims. Equally, disability groups may be working with mine victims as part of their regular programme without differentiating them from other disabilities. Nevertheless there are specific agencies that focus on mine victims that deserve comment here.

The ICRC has been very active in this area, providing mine victims with surgery and prosthetic/limb replacement support. The ICRC operates 25 physical rehabilitation programmes in 13 countries.[19] In addition, the ICRC continues to assist projects which have since been handed over to local organisations, government ministries or National Red Cross and Red Crescent Societies.[20]

HI, with its French and Belgium sections operational in 48 countries, is the biggest single operator in the field of disabilities. Mine victims have been the target of its work since creation in 1982, and it has remained a strong advocate for appropriate technologies adapted to a given situation versus a standardised approach. HI also advocates a public health and multidisability approach versus the creation of specialised services for mine victims, which the community and the existing health system could not afford and which create different scales of care for different categories of disabled people. It also favours the establishment of financial compensation for mine victims as a reflection of international responsibility.

Other international NGOs that have been working specifically with mine victims since the early 1990s include the German Medico International, British Power, World Vision International, and the Vietnam Veterans of America Foundation (VVAF). These agencies offer different provisions that include limb replacement, physiotherapy, psychotherapy and, in some cases, vocational training. Others have more recently become involved under the umbrella agency LSN. LSN was initiated in 1995 by two American amputees and is closely affiliated to the ICBL. LSN is considered the focal point for NGO collaboration and involvement in mine victim support, and currently works with over 20 NGOs in Africa, Asia and Europe. Agencies involved in victim assistance work predominantly in the most severely affected countries.

### Scope
The above summary should not give the impression that this component of mine action is well addressed. Reports and presentations concerning landmine survivors all note that current provisions are wholly inadequate, and that the international aid community and signatories of the Ottawa Treaty have a legally binding responsibility to greatly increase their financial and operational commitments in this area. The LSN points out that these responsibilities are not optional for states party to the Convention, and are using as a target level of commitment the figure of US$3bn over the next 10 years. This target, quoted in the *Landmines Monitor*, is based

on the calculation of $US9,800 per landmine survivor and the estimation of approximately 300,000 such persons in affected countries. Further estimations indicate that in affected countries only 10 per cent of current mine victims have access to proper medical care and rehabilitation services. HI argues that a more realistic global level of survivors, both civilian and military, is between 400 and 600,000 as a consequence of a quarter of a century of landmines. (Estimation from personal communication with JB Richardier, Co-Director of HI, France.)

### General Performance
Following the Ottawa Treaty the ICBL has developed guidelines offering baseline recommendations for emergency medical care, physical rehabilitation, prosthetics, psychological and social support, and employment and economic integration for mine victims. Also for capacity-building, sustainability, legislation, public awareness, access for persons with disabilities and data collection. It is a comprehensive package of which very little is currently being funded or carried out. This aspect of mine action is a long-term and formidable challenge facing the mine action community, donors and international signatories of the Treaty. Current performance, therefore, must be judged as poor and insufficient, despite the best efforts of those presently offering assistance. It may also be noted that established mine clearance and mine action NGOs, most UN agencies and national mine action centres are almost entirely un-involved in victim assistance. There is a need for a change towards a broader understanding of mine action to incorporate these elements and to avoid the current separation that exists between the short-term urgency of removing mines and the longer term requirements of assisting victims. A world free of mines, but not free of suffering for the victims of mines, would indeed be an insufficient goal for the mine action sector – both morally and legally.

## The International Campaign to Ban Landmines

### Characteristics
The ICBL was started in 1993 by a small group of concerned NGOs who shared the seemingly idealistic and utopian hope of banning the use, stockpiling, production and transfer of landmines. Within four years the movement had grown to incorporate over a 1,400 humanitarian, development and religious NGOs and organisations, and it enjoys the support and endorsement of senior world statesmen, military commanders and religious leaders worldwide. The speed and momentum of the movement has been unprecedented and culminated in December 1997 with the Ottawa Ban Mines Treaty – 122 nations signed the *Convention on the Prohibition of the Use, Stockpiling, Production, and Transfer of Anti-Personnel Mines and On their Destruction.*[21] As of 27 October 1999 a total of 136 countries had signed (or accessed to) the Convention, and there have been 89

ratifications (and accessions or approvals). NGOs of the ICBL are collectively co-laureate of the 1997 Nobel Peace Prize.

A defining characteristic of the ICBL has been its action-oriented approach to all aspects of mine action. It pressed hard for the convention to legally bind signatories to act in positive ways not only to end the use, production, stockpiling and transfer of mines, but also to work positively toward the removal of mines, the promotion of mine awareness and assistance to the victims of landmines. ICBL considers it has a responsibility to monitor and insist on the rapid ratification by states to ensure early entry-into-force and universalisation of the Treaty. Equally, the task of ensuring that states destroy stockpiles and act to destroy the millions of mines in the ground, as well as the provision of adequate assistance to affected communities, is considered by the ICBL a central role of its mandate. As part of its strategy to monitor and publicise international progress in adherence to the treaty, the ICBL publishes the *Landmine Monitor* through Human Rights Watch. The first report, published in 1999, is a comprehensive country-by-country analysis which includes commentary on all mine action issues, specific statistical data, legal issues concerning adherence to the Treaty, and a detailed listing of the global status concerning those nations that have signed, ratified or rejected the Treaty.

### Scope and Performance

UN Secretary General Kofi Annan described the Ottawa Convention as 'a landmark step in the history of disarmament'. In many ways the convention has marked the turning of the tide against landmines. Some of the achievements to date include the following:

**Universalisation**: The details of the Convention were developed and negotiated in a single year (1997); by October 1999, 136 nations had signed the Treaty. Every country in the western hemisphere has signed, except the US and Cuba. All members of the EU, except Finland, have signed meaning that all members of NATO (except Turkey and the US) are signatories. Forty out of the 48 African nations have also signed.

**Ratification and entry-into-force**: More than half of the signatories (89 nations) had ratified the Ottawa Treaty as of October 1999. Following the ratification of the 40th country a date for entry-into-force was triggered. This date was 1 March 1999. This means that the Ban Mines Treaty is now binding in international law and for those countries that have ratified. For those that have ratified there are legal implications for reporting to the UN Secretary General (within designated timeframes) on issues including the destruction of stockpiles, removal of abandoned mines (in the ground) and other implementation measures.

**Global use of anti-personnel mines**: The findings of the *Landmines Monitor* (HRW, 1999) and *Hidden Killers* (US State Department, 1998) indicate that although mines are still being used in certain conflicts this no

longer occurs on a large scale or on a sustained basis.[23] Furthermore, the number of mines being laid annually is, for the first time in decades, less than the number being cleared and destroyed. The global stigmatisation of the use of mines and the emerging international norm against their use, following the Treaty, has turned the tide in this regard.

However a dissenting view on this issue is not so optimistic (MacGrath, 2000). The concentrated deployment of mines 'on a massive scale' in the recent Eritrea/Ethiopian war, and the continued use of mines in Angola, Sierra Leone, Burundi, DR Congo, Liberia, Afghanistan, Chechnya, Sudan, and Kosovo, cannot in any way be seen as positive and challenges the view held by both the *Landmines Monitor* and the *Hidden Killers* reports that the number of mines being laid annually is, for the first time in decades, less than the number being cleared and destroyed. In the case of Angola, in particular, the government's continued use of mines is deplorable insofar that they are signatories of the Ottawa Treaty. Clearly this raises the inevitable question of Treaty enforcement and how serious the international community really is about the Treaty when Nato countries themselves used weapon systems in Kosovo that contradict the spirit, if not the legal definitions, of the Ottawa Treaty.

**Global production of anti-personnel mines**: The number of anti-personnel mine producers has fallen from 54 countries to 16. The 38 countries that have halted production include those primarily responsible for the proliferation (through production and transfer) of mines use between 1970 through to the early 1990s. Several of the 16 producers of mines have not manufactured mines in recent years. They are considered producers as long as they refuse to institute moratoria or issue formal statements against production.

**Global trade in anti-personnel mines**: As the nations that are most affected by mines are normally non-producers, the global export and transfer of mines has been identified as one of the most fundamental underlying problems contributing to the crisis (the former Yugoslavia is a notable exception to this finding). The *Landmines Monitor* has found no evidence that Treaty signatories have engaged in the export of mines since 1997. Of the 34 nations that were previously exporters of mines all except Iraq have made formal statements that they no longer export mines. Of these, 22 have signed the Treaty and have thereby formally bound themselves to the ending of all exports of mines. Clearly this is a difficult area for investigators to monitor, but their findings are corroborated by specialist military observers.

**Global stockpiles of anti-personnel mines**: An estimated 250 million anti-personnel mines are stored in arsenals of 108 countries. The ICBL insists that these must be destroyed before they have a chance to be laid in the ground. For those countries that have ratified the Treaty there is a legal undertaking and responsibility to

destroy these stockpiles. However, some of the largest stockpiles are held by non-signatories – for example Russia, 60–70 million; China, 110 million; the US, 11 million; India, 4–5 million. Eleven Treaty signatories have already completed destruction of their stocks, while another 19 nations are currently conducting demolitions.

The above findings illustrate the level of analysis and monitoring that is currently being conducted, both by the ICBL and other parties, to ensure that the early success of the Ottawa Convention translates into positive action: 'By providing an action-oriented, scheduled, legal framework for international cooperation on mine action, the Ban Mines Treaty represents a breakthrough in the struggle against landmines (LSN,1999). Despite the great challenges that remain in dealing with the millions of abandoned mines and the hundreds of thousands of victims, the 1998 Nobel Peace Prize was given to the ICBL, among others, for the major contribution it has made, and continues to make, towards this breakthrough.

## The Funding of Mine Action: donors

### Characteristics
Mine action is funded by national governments, the EU, the World Bank, corporate donations, and public donations. Funding is passed through the UN or directly to the NGO or the private/commercial agencies that perform mine action activities. Military and government funding is allocated within countries as part of the national budget allocation. Academic and industrial research organisations may also be government funded through different budget lines. The mechanisms within the UN include the Voluntary Trust Fund for Assistance in Mine Clearance (VTF), the Central Emergency Revolving Fund, the Consolidated Appeal Process, and assessed contributions of member states. The World Bank makes contributions on the basis of interest free loans which are provided directly to governments. Government donors have different budget lines from which funding for mine action can be supplied. The range of activities in mine action and the range of contexts where mine action takes place means governments can use different resources and budget lines. Added to this there is the problem of whether mine action is considered emergency, rehabilitation or development as most countries as well as the European Commission use these categories to separate funding budgets.

### Location
The largest and most consistent contributors to mine action activities have been the Scandinavian countries, the European Commission, the US, Canada, Japan, Germany and the UK. Increasingly, Australia and Switzerland are becoming active donors. Mine action activities are funded in a wide variety of countries and to varying degrees including Angola, Azerbaijan, BiH, Cambodia, Chad, Croatia, El Salvador, Eritrea, Ethiopia, Namibia, Rwanda, Honduras, Nicaragua, Guatemala, Iran, Iraq, Jordan, Laos, Mozambique, Somalia, Sudan, Uganda, Sri Lanka, Tajikistan, Yemen, Vietnam.

### Scope
Funding is complex and not easy to track due to the various budgets from which it is allocated as well as the general lack of transparency. This report was not able to establish a reliable and up-to-date total figure, although some isolated examples give an indication of the scope of funding available. For example, between 1992 and 1998 the European Commission reports 182,657,000 ECU[24] spent on mine action worldwide. The UN VTF reports that between 1994 and 1998, US$49m was spent on programmes. The UN Mine Action Support Group reports that bilateral support for mine action up to mid-November 1998 totalled US$430m. However, this figure is probably inaccurate due to lack of time-specific entries and aggregated figures for several fiscal years, though it may serve as an indication of funding levels. The Canadian Ministry of Foreign Affairs notes that during 1998, 10 donor countries started 98 new mine action programmes in 25 countries, but offers no more detail.

### Performance
Since 1989, when humanitarian mine action started in Afghanistan, there has been a fast increase in the number of donors and the level of funding available for mine action. With the various stipulations of the Ottawa Treaty and the inclusion of victim support as an important element of mine action, funding should further increase. The US alone, in 1998, claimed to have contributed US$92m to 21 countries. However the 1999 *Landmines Monitor* is critical of current funding levels claiming they lack transparency, are inadequate as well as impossible to monitor as governments use allocations for military-to-military assistance and can include gifts-in-kind values (ie, monetising the value of the 'gift' for accounting purposes). This casts doubt as to how much individual allocations actually benefit affected communities.

However, whatever has been achieved in mine action to date could not have been achieved without funding from donors and therefore credit is due. Nevertheless, many donors have been slow to develop strategy or policy guidelines concerning mine action. Too often resource allocation has been ad hoc and inconsistent, reacting to media attention or pressure groups rather than following a planned approach. In addition, funding allocations have almost entirely been annual grants which means programmes don't have the ability to plan longer than 12 months. Even when donors have requested three or five year plans funding has rarely exceeded 12 months. The mine action sector would benefit from a more strategic and coordinated approach from donors in this regard. If the donors worked with the sector to develop their policy guidelines then they could assume a useful and important monitoring and analytical role within the mine action sector.

If mine action is to address, seriously, the mines threat and have a major impact in the coming years, and not just decades, then increased funding of larger country programmes and specifically mine clearance programmes must be pursued.

# 4

# Central Issues Facing Mine Action

## Sectoral Self-criticism

Although some debate occurs at international conference level there is a marked absence of public discussion of most issues in the mine action sector as there is a prevailing sense that disagreement and polemic is bad publicity for a sector that is both funding-conscious and funding-sensitive. Privately, however, there is considerable discrediting, rumour-spreading and conflict between the different players in what has become an increasingly competitive sector. There needs to be an effort to counter this somewhat anti-analytical and non self-critical culture. Cooperation and solidarity will not be undermined by debate. Constructive self-criticism exists in other sectors of humanitarian aid and should be encouraged more in this sector.

## Statistics and Baseline Data Collection

The absence of reliable statistics and baseline data concerning different components of mine action affects the sector in various ways. Absent data in short supply concerns the number of mine victims in affected countries (also their location and social groupings), the number of communities affected by mines, the type of land affected by mine and intended end-use of land prioritised for clearance, as well as the socioeconomic impact of mines and socioeconomic benefit of mine clearance.

Two major constraints prevent the collection of this data. First, in most war-torn, mine-affected countries war, poverty and dislocated government structures create data vacuums and 'data-free' contexts that not only affect mine action but other humanitarian initiatives as well. Second, collecting data is a costly and time-consuming

process and one that mine action agencies and donors have not seen as a priority in the face of the urgency of clearing mines or of providing mine awareness education. However, those involved in mine action are now realising that if the problem cannot be measured it cannot be managed. Prioitisation of operations, efficient distribution of resources, cost and time-benefit analyses, comparative analyses, the measurement of progress and impact of mine action are all affected negatively by the lack of baseline (and ongoing) data. As mine action 'matures', donors and operators are increasingly feeling the need for data.

In response to this an information management system is being developed (see below), though this system will require the collation of well-collected and well-interpreted information to be from the ground. The commitment needed by operators and donors to establish and collect the necessary information is considerable, and has not been adequately addressed.

At another, and different, level there is an absence of collation and sharing of basic mine action data in terms of the status or progress of mine action organisations worldwide. Theoretically, the sector is organised in a logical manner: in most countries all national agencies, commercial operators or NGOs operate under the aegis of the UN-supported national mine action centre. These centres accredit and coordinate the different agencies, they meet regularly and the participating agencies are required to submit reports of their operations. This structures appears streamlined and more controllable than other sectors of international aid, but the reality is that basic progress data is neither collated nor shared. Some individual programmes have comprehensive progress data while others seem incapable of collating

or presenting such data. The UN landmines database, the Geneva International Centre, international publications and the various internet web-sites available do not display what would appear to be critical (and basic) management information. The information illustrated in Table 1 of this report was compiled by using a variety of reports and through contact with various different offices. A lack of centralised information at this level is both surprising and serious after a full decade of international mine action.

As pointed out in Section 3, the Geneva International Centre is currently developing the IMSMA to address the current dearth of centralised and collected information. It is initially being used in Kosovo and will soon be available to all programmes.

## Prioritisation

In the context of mine action, prioritisation refers to the process of selection of the most important areas to be cleared or to receive mine awareness. The premise is that resources available are scarce, that need overwhelms capacity, and that a hierarchy of priority areas should be developed. Theoretically, humanitarian mine action aims to meet emergency life-threatening needs before addressing rehabilitation and development needs. However, the political (and by implication socioeconomic) importance of rebuilding dislocated societies may be considered as vital as reducing risk in outlying rural communities.

Concerning the prioritisation of humanitarian tasks, operators and planners have known for years that this is an imprecise science. Even with sound socioeconomic data, planners would be taxed to establish sure methods of establishing a hierarchy of needs. Without such data (not least mine victim statistics) most programmes operate 'hit and miss', ad hoc processes that are a mix of expediency and good intentions. It is an area that will greatly benefit not only from more socioeconomic data, but from careful interpretation of such data. Field research experts, rapid rural assessment specialists, and other NGOs can greatly assist the mine action sector in this, and it is an important area for interagency cross-sectoral collaboration.

This already takes place to some degree in local regions of mine-affected countries with mine action NGOs working closely with other NGOs, or meeting on local committees to select clearance tasks. Many NGOs and national mine action centres have broad outlines of what they consider to be priority groups. This list from Cambodia's mine action centre is typical:

Priority 1:   Land to be used for resettlement
              (of IDPs and refugees)
Priority 2:   Land to be used for agriculture
Priority 3:   Land to be used for community
              development
Priority 4:   Land to be used for infrastructure

These are broad categories which are not tight enough to ensure effective prioritisation. More information is needed to justify the expending of scarce resources in clearance. Clearly all mine clearance agencies are vulnerable to being manipulated by local interest groups, powerful individuals or unrepresentative local structures when they make their prioritisation. While prioritisation will never be precise, the understanding of socioeconomic conditions and data and wide interaction with national and community authorities will greatly assist the process. In many cases such consultation occurs more in theory than in practice, and agencies can only continue to operate at such a level due to continued low levels of accountability that exist in the sector.

## Productivity and Cost-Efficiency

Productivity is the term used to express operational progress and the achievement of measurable results. Also implied is the improvement, over time, of these results. Commercial groups, for example, are normally contracted to perform discrete tasks to a strict timetable and to a non-negotiable quality standard. These contracts assume a certain level of productivity to which the contractors are bound; penalties are often attached to the failure to perform to agreed stipulations.

The 1999 *Landmines Monitor* introduction suggests that the primary operational challenge to the mine action sector is to develop measurable indicators, and to allow its activities to be scrutinised in a more analytical, systematic and accountable way. However, the UN, NGOs and national mine action groups have resisted the notion of evaluating the productivity of their activities, challenging the idea that the cost of saving lives and limbs can be measured financially. They have also questioned whether cross-comparisons of productivity can be valid when country conditions and minefields differ. These arguments are only partially plausible as certain methodologies and approaches can be seen to be more 'productive' than others, and conditions between certain mine-affected countries are not as different as some would suggest. Also, these differences can be defined and categorised if necessary to enable useful cross-comparison of performance. Mine clearance agencies have in the past been shielded by the mystique that surrounded the supposed technical specialisation of mine clearance and the potentially lethal nature of mines. Increasingly (non-technical) advisors, observers, analysts and donors are realising that, despite the special nature of mines and UXO, operations can, and should, be evaluated by productivity and delivery of measurable results.

Less quantifiable and intangible factors of some mine action approaches do present problems for measurement. For example, if an NGO works closely with a community to develop an indigenous local capacity (such as HI's approach in Bosnia and Mozambique) then quantifiable and measurable results will not be apparent in the short term and cannot be evaluated alongside standard

clearance operations. However, even in these cases the approach used has to be analysed for cost-efficiency in the medium to long term, and then the approach maintained as effective, or discontinued as ineffective. 'Pet ideologies' or idiosyncratic approaches should not be above evaluation and analysis.

In respect to cost-efficiency, there appears to have been minimal effort on behalf of the UN, national central agencies or NGOs to issue any level of 'management directive' based on field observations. For example, in Afghanistan, the use of dogs for minefield marking and actual clearance in a wide range of conditions (including different levels of mine concentrations) has been shown to be highly effective with high levels of speed and cost-efficiency.[25] Within the national Afghan programme the management approach has been to enlarge and broaden the use of dogs based on their performance. However, this has not translated into policy directives for other UN programmes and the overall use of dogs has progressed slowly considering their high performance level.[26] The Norwegian NGO, NPA and some commercial groups also use dogs increasingly but strangely their effectiveness has not been widely welcomed or adopted. The same is true of various low-tech machinery developed and used by NGOs which considerably enhances clearance speed. This includes mostly the use of customised and armoured tractors to clear ground cover before clearance teams commence their work. (In mine clearance a massive amount of time is spent by the operators cutting overgrown vegetation, centimetre by centimetre, to allow their metal detectors to get close enough to the ground to function correctly.)

Perhaps, in the absence of more centralised policy directives, the donors themselves need to make their own analyses and begin to insist on certain technologies being used in operations which they fund.

## Low-tech Devices and the Use of Dogs

If a technology was found that increased the overall speed of mine clearance by, say, 100 or 200 per cent, without compromising safety, and which was affordable to all, the R&D community would no doubt consider this a success. Even more so a higher per centage increase in cost-efficiency. Yet the fact that some existing programmes use such technologies that result in these levels of increased productivity, and that this is not replicated sector-wide, is remarkable.[27] For example, low-tech ground clearing machines used by certain NGOs already increase the overall speed of clearance from 50 to 200 per cent. The use of explosive-sniffing dogs raises productivity from between 100 and 1000 per cent (depending or where and how they are used). Annex D is a table taken from a detailed statistical analysis of the use of dogs in Afghanistan compared with manual teams in different types of terrain and with different mine contamination. The results of the dog teams are spectacular. However, what is mysterious in that the mine action sector, and particularly those most

interested in R&D and new technologies, are not promoting these low-tech or dog-team alternatives.

## Technology and R&D

Issues concerning technology in the mine action sector refer to efforts to improve the speed, cost-effectiveness, quality and safety of mine clearance. Since the early 1990s the predominant methodology used in humanitarian mine clearance is the use of metal detectors (despite the fact that, in minimum-metal minefields and in areas where metal fragments are excessively present, metal detectors have serious limitations) supported by manual ground-prodding, centimetre by centimetre.

The main contextual problems facing mine clearance operations are four-fold:

- The high number and random placement of mines, of different types and ages, often in areas of high metal content (in some situations even the soil has a ferrous content that triggers the mine detector and renders it useless for detection).
- The placement of mines in a wide range of difficult locations including irrigation canals, war-damaged residential areas, roads, around water sources, on mountain sides and in wooded areas etc (ie, not in flat, open areas of land).
- The need for clearance systems to be 100 per cent accurate (this is non-negotiable in humanitarian clearance operations).
- The system used needs to be sustainable over years in terms of cost (one comparative advantage most mine-affected countries have is a labour pool that is both cheap and large).



De-mining in Angola.

There is currently no 'silver bullet' or piece of technology that successfully locates or destroys mines to necessary levels of speed, cost and accuracy and many operators, unlike research groups, believe that the current 'tool box' will not significantly change despite research efforts. This belief is based on the fact that, while in recent years different technologies and methodologies have been slowly introduced these only *assist* and do not *replace* the time-consuming and labour-intensive manual approach. Most of these field-developed mechanical aids are low-technology, customised agricultural or road construction vehicles that perform tasks that enable the de-miners to get closer to the mines. In many minefields foliage (or rubble in urban cases) is the most time-consuming impediment to clearance operations, and it has mainly been the NGOs that have developed independently these mechanical aids. In other scenarios vehicles designed for military clearance that were available before the 1990s have limited use – they are too large, heavy, expensive and inaccurate to be cost-effective for most minefields. And they, too, require support from manual clearance teams.

Dogs must also be considered a technology and tool. One commercial company has developed a combination approach using vehicles, dogs and manual teams that are able to clear and check roads at high speed.[28]

The James Madison University database lists 68 commercial mine action companies that are exclusively focused on research. There are an additional 31 government organisations that are also involved in research towards improved clearance technology. The scope of research being performed includes ground-penetrating radar, infrared detection, electromagnetic induction, acoustic sensors, nuclear radiation, chemical detection, bacteriological detection, robotics, explosive and neutralisation foam, and a wide range of different vehicular machines. Rats and cockroaches are even being tested as possible aids to detection. R&D is expensive and typically commercial companies have higher interest in hi-technology as the profit margins are potentially far higher.

Information concerning the total level of current investment in R&D is not available, although it is clear certain donors and governments are investing significant levels of funding.[29] Despite these multi-million dollar investments the main concern for those involved in operations at the ground level is that they see little or no evidence of results from R&D investments over recent years. Indeed this is one of the conclusions of the current multi-country study of the use of mechanical means conducted by HI (forthcoming, Spring 2000).

Due to the commercial implications of the development of a successful technology, some governments have been promoting their own national companies and pressurising field programmes to field-test equipment that is often found to be inappropriate before it even arrives in a country. There has been a suggestion that prototypes of de-mining technologies should be field-tested with the expectation that they will fail.[30] This suggestion is to counter the current tendency to optimistically promote the use of a technology even when it has been found to be inappropriate and of limited use. The UN appears to have cooperated too easily with donors and governments with vested interest without applying stricter guidelines as to where and what they agree to trial or promote. In contrast, the UN has not been involved in the promotion of low-technology solutions currently pioneered by NGOs.

Those critical of R&D are not 'luddite' or reactionary but want to see a balance between funding allocations and research that is far more appreciative of prevailing ground conditions. Apart from the climatic and topographical obstacles, most mine-affected countries do not have the qualified personnel, resources or ability to support high-tech, expensive technologies either in the short or long term. Humanitarian aid organisations working in water resources, agriculture and medical interventions have long since realised this fact and concentrated on 'appropriate technologies' or what is called 'intermediate technologies'.

A final consideration is the fact that in most affected countries the problem of mines and UXO is finite and definable. The humanitarian landmine crisis is with us now but will be contained and the threat significantly reduced using current manpower, technology and approaches. The real danger of the R&D community concentrating on high-tech and rarified solutions is that by the time they are developed, field-tested and affordable the major threat of landmines may have been addressed. In the meantime R&D will have absorbed millions of dollars that could better be channelled into mine action and the development and purchase of low-tech, existing technologies. Donors and governments are used to making funding choices in favour of supporting and promoting current technologies and approaches, in particular the use of dogs.

## Multisectoral/Multidisciplinary Issues and the Culture of the Sector

The mine action sector is gradually realising that it is part of the larger international family of humanitarian assistance in emergency, rehabilitation and development interventions, and vice versa. Developments within the sector and pressure and influence from outside are affecting a maturity towards a more multidisciplinary and multisectoral approach as mine action realises the need for expertise and experience from numerous disciplines to achieve its goals. This is partly due to the fast growth and broadening of the sector to incorporate mine awareness education, victim support and the campaign to ban landmines in recent years. Within mine clearance itself there is a growing realisation of the need for a multidisciplinary approach, particularly at the level of planning, prioritisation, programme evaluation and socioeconomic analysis.

However, there is a separation between this emerging multidisciplinary approach and current reality. Almost all senior and middle level personnel in national mine action centres, relevant UN agencies, mine action NGOs and commercial agencies are serving or ex-military officers. In a sector where the technical aspects of mine clearance, survey or mine marking are very defined and have distinct operational or training roles, it is surprising that ex-military expatriate and nationals fill so many non-technical, planning and administrative positions. But the armed forces worldwide are the only places where formal mine clearance training and explosive ordnance disposal (EOD) is conducted and therefore it is not surprising that most field operators should be drawn from the pool of serving or ex military personnel. However there are numerous other logistical, administrative, managerial and director positions that, considering the sector is part of the humanitarian assistance effort, need not be filled with military personnel. Inevitably, drawing so many staff from military backgrounds has not only given the mine action sector a certain military culture but has, in some respects, limited the range and vision of the sector. Clearly there are some excellent professionals in these positions but in many cases an inevitable use of military-style approaches to operations or management has prevailed. Equally it has taken time for many of these staff to understand the humanitarian aid sector, the UN and donor relationships, as well as wider issues of rehabilitation and development. Inevitably task-oriented clearance programmes have been pursued in relative isolation with frequent marginalisation of other activities of mine action, such as mine awareness, victim assistance and socioeconomic assessment, as well as the campaign to ban landmines. Somewhat incredibly, there have been examples of senior managers in humanitarian mine action programmes that openly disagree with the goals of the ban mines campaign.

Overall there is still an underlying assumption that ex-military personnel are more suited to lead mine action. The profile of operations and activities in the mine action sector, and the level of experimentation of different approaches, would have been different if the selected managers and directors of mine action had been multidisciplinary.

Finally, there is a noticeable lack of female involvement in the sector. Women are employed in mine awareness programmes, data collection roles, and as secretaries, but with very few exceptions they are seriously un-represented in this sector. In Cambodia and Laos the Mines Advisory Group specifically recruited teams of female de-miners in 1995; they are still operational . Their performance was/is at least as good as their male counterparts yet these are the only examples of female involvement in technical operations globally, and even MAG has not promoted or increased female participation at this level.

## Commercialisation of the Mine Action Sector

As mentioned earlier, the mine action sector is probably the most commercialised sector of international humanitarian assistance.

In terms of funding and certainly in terms of area cleared (mainly infrastructure), commercial companies in Mozambique, Angola, Bosnia and now Kosovo have been highly active. The underlying reason for this is a simple case of supply and demand: in the mid-1990s NGOs were not available or able to respond to large-scale infrastructure clearance tasks, while a small group of commercial companies had both the technology and experience to do so. Once established as viable operators, donors increasingly used commercial companies to perform clearance tasks outside those pertaining directly to local communities. In some rare cases mainstream NGOs have hired consultancy companies to perform humanitarian clearance at the community level. There is evidence of commercial companies re-packaging themselves as NGOs to better compete for contracts from humanitarian budget-lines.

Commercial companies have added a professionalism to the sector and introduced new technologies. They perform to tight contract agreements and donors appear to prefer the 'clean', in–out approach and accountability attached to contractual agreements that are less easy to enforce with NGOs. Furthermore, they perform clearance tasks vital to the rehabilitation of post-war countries which NGOs simple could not attempt.

Nevertheless there are some moral and operational issues that should be raised. Advocacy is an essential issue for NGOs. They work among the most vulnerable, marginalised and unrepresented people in the world and often adopt an advocacy role on behalf of the communities they work with, acting as the 'voice of the unheard'. In this regard the culture and motivation between NGOs and commercial companies differs considerably.

When mine action NGOs work within communities they not only perform identified clearance tasks but will adapt and enlargen their scope and clearance priorities according to what they learn from the communities and the ground conditions. NGOs also work closely with local civil authorities and other humanitarian NGOs, seeing their work as integrated with general humanitarian objectives. This is increasingly so with mine awareness and victim support. Commercial companies predominantly perform tasks defined by donors or national governments and have neither the motivation nor opportunity to deviate from the contracted agreement. If a specified contract requires road clearance to be performed to an 8 metre width, mines situated outside of this width may be ignored and passed by. In addition, the task-orientated nature of commercial contracts may miss important humanitarian opportunities for intervention. Finally, there is a degree of distaste that companies are gaining considerable profits by conducting what many see as emergency humanitarian intervention.

In some cases the history of particular companies indicate involvement in mine development and design, mine laying and mercenary operations. The fact remains that humanitarian intervention operates in a moral context and these aspects cannot be ignored; donors and senior managers need to be careful that the philosophical integrity of mine action as a sector is maintained and enhanced. Already it has gained a reputation as a high-finance and profit-making sector in some circles. It is also open knowledge that various commercial companies have little sympathy with the campaign to ban landmines.

## Resource Biases

The same donor and media biases that affect other sectors affect mine action. The past (and continuing) interest in BiH and the current donor interest in funding operations in Kosovo illustrate an inescapable bias when compared with levels of interest in funding mine action in Southern Africa and parts of Asia. The added irony in the case of Kosovo is that the majority of UXO were dropped by NATO forces and, in some cases, the weapons used were in direct contradiction to the spirit of the Ottawa Convention which many participating nations had signed and ratified only months previously (McGrath, 1999). There are at least 17 mine action agencies competing for contracts (and areas of operations) in Kosovo, of which a minority are NGOs. Even so, NGOs need to reflect on why they are involved in Kosovo when so many other agencies are available; should they not turn their focus on less 'fashionable' countries where the humanitarian needs may be less well addressed? If humanitarian mine action, including all its different components of assistance, is genuinely driven by the humanitarian crisis caused by mines and UXO, then the sector needs to work with donors to try to reduce resource biases based on political or media-motivated rational.

## Gifts-in-kind: military assistance

Ministries of defence and militaries of the advanced industrial countries have become very active in mine action. Apart from being motivated by the humanitarian crisis it is clear that various western nations see humanitarian mine action as a vehicle for peacetime training of their own personnel, off-loading non-lethal military aid, and having a profile in a country that may be useful to them for other reasons. Gifts-in-kind of ambulance vehicles, armoured personnel vehicles, mine detectors, serving officers, training materials and training programmes are being donated on an ongoing basis. The American armed forces were perhaps the most prolific donors in this regard during the 1990s. This often occurred in parallel with the national/UN/NGO coordinated effort, but outside the coordinated plan. Liaison with the UN and other national mine action programmes has now increased but for past initiatives arrangement occurred on a bilateral basis between military hierarchies and local ambassadors with little reference to the national de-mining plans or appropriateness of the 'donation'. The host government and the national de-mining programme (if existing) have no measure of the suitability of the gift-in-kind before it arrives, or the appropriateness of the officer sent to assist in training. It is presented as a *fait acompli*. An example is the arrival of a team of military 'mine awareness specialists' (Special Forces; Psychological Operations) with mine awareness materials and programmes designed in the States on computer and introduced in Cambodia without field-testing or consultation. In other cases French and American military teams have trained local national soldiers in 'humanitarian mine clearance' without any connection to the timetable or programme of the national mine action strategy. In various cases the trained personnel could not be deployed because there was no funding, equipment or organisation to use them. Apart from operational issues, a major oversight is that serving military personnel cannot be operators in UN or NGO programmes, so training local military personnel serves little use. Equally the political ramifications are questionable when, for example, in Cambodia, US Special Forces were training national military forces in 'humanitarian de-mining' while the country was still at war with the Khmer Rouge. The neutrality and safety of the national mine action staff was automatically compromised by these actions.[31]

The problem with bilateral military donations is that they are hard for a government to refuse, not only diplomatically, but there is normally some aspect of the donation that is useful to the programme (e.g the equipment that training advisors leave behind). The mine action sector should feel more confident to be assertive. They should expect military to military donations and gifts-in-kind to respect the fact that in the international community the UNMAS is the designated focal point and monitoring authority of standards and operating procedures. Humanitarian mine action can not be a pretext for giving military personnel overseas training or to act as a 'wedge/ entry point' into a country in order to pursue non-mine action goals.[32]

## Underestimation of UXO

A 'blind-spot' of the mine sector has been its slowness to recognise, represent, document and address the risk of UXO even though most, if not all, mine eradication programmes will automatically detect and destroy UXO in their work to address landmines.

It is interesting to speculate how the humanitarian sector would act if, overnight, all mines disappeared but UXOs still threatened vulnerable communities. In some respects the UXO problem is being dealt with by accident, and rides in the wake of concern for landmines.

## Indigenous Capacity

A central feature of UN-supported mine action programmes is to develop an indigenous capacity and indigenous authority within an affected country. UNDP, in particular, actively pursues this objective. Many NGOs

also aim to develop local operational capacity with the objective of reducing expatriate presence in their programmes (and therefore cost); they also aim to 'hand over' their teams to the central mine action agency. In mine awareness there has always been a typically minimal presence of expatriate managers or trainers, while in mine clearance technical advisors have had a high and defining presence in country programmes. Country politics, cultural contexts and funding (or availability of technical advisors as gifts-in-kind) act as deciding factors in most cases. Programme progress reports frequently cite their intention towards, or proximity to, 'full indiginisation' as a measure of success. In most cases expatriate involvement in programmes is initially high and reduces as local capacity increases. However, there are some exceptions to this trend, such as the Cambodian Mine Action Centre. Initiated in 1993 with less than 20 expatriate advisors, over six years later there are over 70 multinational technical advisors despite little expansion in overall programme size. In Afghanistan, where the UN supports and manages the Afghan and international NGOs, less than 10 international advisors and managers operate a far larger programme. Many NGOs that started country programmes with up to a dozen expatriate staff have reduced the number considerably, with often two or three remaining. However, the process of creating local capacity cannot be measured in such a simplistic way; overall capacity has to be evaluated in operational quality and effectiveness and (particularly important to donors) financial transparency.

The overridding urgency of the landmine crisis has, and should continue to be, the reduction of risk and human suffering and socioeconomic disruption. The rush to create indigenous capacity is a distraction if the primary goals of humanitarian mine action are not met. If the accomplishment of such goals requires the temporary or sustained presence of international experts, so be it. What benefit is it to affected communities to know that the national mine action centres are fully staffed by nationals if at the same time their needs, in respect to mine action, are not adequately met? There is an important difference between supporting a country's health or education system and supporting a mine action capability: unlike national health systems and education the mines problem is finite. Some Central American countries have recently taken their names off the mines-affected country lists due to the successful clearance and awareness operations conducted in the 1990s. Therefore the development of indigenous capacity is important but needs to be kept in perspective and balance with the immediate (and finite) goals of humanitarian mine action.

## Conclusion: Rhetoric versus Reality

This paper has presented a consciously ambivalent picture of the mine action sector.

## The Optimists Perspective

On one hand there has been a turning of the tide against landmines both in term of international legislation, stigmatisation and operational intervention: the last decade has seen a meteoric rise in interest and engagement internationally in the efforts to combat the landmine crisis. Governments, donors, militaries, NGOs, UN agencies, commercial companies and other private enterprises have mobilised resources and developed programmes in a short period of time. The UN has supported and found resources to set up mine action centres in numerous affected countries, developed institutional mechanisms for the distribution of responsibilities, and has overseen the development of global standards for different aspects of mine action. The NGO community has become active in all aspects of mine action; it will continue to push for the full implementation of the Mines Ban and increased support for mine victims in the long term, while continuing to perform mine awareness and mine clearance operations at community level. A large group of professional commercial companies are available for essential clearance operation, and a wide range of R&D initiatives are concentrated on the search for better technologies to assist mine detection and clearance. Different military forces from various countries are also increasingly engaged in assisting mine action and using their personnel in peacetime humanitarian interventions. As the nature and scope of the problem becomes better defined and the capacity to deal with it increases we see that landmines present a finite and containable problem that can be successfully addressed in years rather than decades.

## The Realist's Perspective

A more sober and analytical perspective needs to recognise the limitations of the current efforts to address the landmines problem. The ICRC still use the figure of 24–26,000 deaths or injuries a year caused by landmines; a figure that was used in the mid-1990s and has reduced only marginally. The lack of reduction of this total has to be an indictment of the sector's effectiveness. The lack of information and data concerning victims and other aspects of mine action (minefield survey, socioeconomic impact, etc) means that even though some of the most known affected communities are assisted through mine action, there are many others that have not been identified and are highly vulnerable. The reality is that despite all the current levels of intervention mine clearance proceeds at a slow rate using relatively primitive technologies. The number of actual teams deployed on the ground globally sounds impressive in terms of actual personnel but the capabilities of a manual clearance team of 30 operators, for example, are very limited – as anyone who has watched or supervised mine clearance can attest.

While the level of international interest and concern is impressive this is not always translated into operational benefits. For example, in 1995 there was a single international landmines conference (held in Cambodia),

but according to calendar listings for 1999 there were over 70 national and international conferences directly concerning mine action.[33] Dozens are being planned for this year (2000) and conferences are expensive. At the same time the increase in actual operational capacity is modest or non-existent and programmes have to work hard to mobilise resources. The media attention on landmines is waning and efforts needs to be made to ensure that donor interest does not follow suit.[34]

The year of 2010 has been set by President Clinton as the target for the international community to eliminate the global threat of landmines. (This is ironic given that, while setting this target and increasing the US contributions to mine action, the US still refuses to sign the Ottawa Treaty.) While this is ambitious it is not an impossible hope: resource allocations have to be increased and maintained, operational efforts redoubled, and appropriate

technologies developed and deployed if the scourge of landmines is to be seriously addressed by 2010.

The sobering reality is that, after 10 years of international mine action, if we were able to bring together all the mine-affected communities and landmine survivors worldwide to one huge conference and ask how many of them had seen any evidence of international or national intervention or assistance in mine action, the results would be shocking. Perhaps some would have once seen a survey vehicle pass by. Others may have seen a poster or two with a warning message about mines. A small group will have had their community cleared of mines, and others will have limb replacements that help them walk again. But the vast majority would have seen no evidence of international interest or intervention of any kind to reduce the risk with which they have lived for years. Somewhat emotively, this summarises the real challenge of mine action in the coming years.

# Endnotes

1. Children are particularly at risk from UXO and are commonly killed or injured through playing with UXO. Unlike mines that are manufactured to have a limited injurious effect on their victim, most UXO have the explosive potential to kill and injure large groups, and when tampered with frequently do exactly that.

2. An indication of the scale of the ratios between mines and UXO located and destroyed comes from Afghanistan where a total of 158,000 mines have been destroyed while 540,000 UXO were destroyed in the same period; in Angola 70,000 UXO have been located and destroyed against only 10,000 mines.

3. Handicap International psychologists have produced a report on this topic. See Thiviet and Lecoin (1999) in the references.

4. An example of the persistent threat: In Kandahar, Afghanistan, teams have been de-mining inside and around the city for the last eight to nine years with great success. Yet somehow, on a much-used track on the outskirts of town, a wedding bus turned into an area that had never been suspected of mines: 86 women and children were hit by what is suspected to have been an anti-tank mine detonated by an anti-personnel mine. Forthy-three died and 43 were seriously injured. This was in October 1998 just as the ICRC hospital was reporting less mine victims among its patients.

5. This paper argues that programmes in Afghanistan, Cambodia and North Iraq between 1990 and 1992 represent the birth of humanitarian de-mining. Some commentators suggest that the clearance of Kuwait saw the initiation of humanitarian de-mining efforts. However this should correctly be seen as a commercial mine clearance operation using international contractors with no involvement or commitment to humanitarian principles or the current international commercial standards of 100 per cent clearance (with error allowance of 0.04 per cent).

6. Mine clearance is normally not conducted in active combat situations, but in Afghanistan and Angola (etc) mine action, including clearance, continues outside frontline areas.

7. In recognition of the differences between military mine clearance and humanitarian mine clearance the US military have set up the Humanitarian De-mining Training Center in Missouri, USA, as part of the pre-mission training for all army personnel associated with mine action.

8. The Kuwaiti government has found certain areas supposedly covered by Western mine clearance agencies poorly cleared, and in some cases has employed companies to re-clear areas.

9. The group of international NGOs that have been active since 1990 are the Halo Trust (British), the Mines Advisory Group (British), Norwegians Peoples Aid, and Handicap International (French & Belgian). The Vietnam Veterans of America Foundation (VVAF) has also become more active in recent years.

10. The European Union's initial funding of mine clearance in Cambodia and North Iraq was seen by the EU as a way to protect EU-funded NGO staff from mines in other projects, and was the result of intense individual lobby. Decisions were ad hoc and limited in time and scale, forbidding proper long-term planning.

11. As the World Bank is featured with other UN agencies in the UNMAS policy paper it has been included here.

12. These are Austria, Belgium, Cambodia, Canada, Finland, France, Germany, Italy, Japan, Mexico, Netherlands, Norway, South Africa, Sweden, Switzerland, the UK and the US.

13. IMSMA is actually a UN project developed by the GICHD for the UN under the terms of a formal agreement between the two organisations; once finalised, IMSMA will be fully owned and controlled by the UN.

14. There are intentions from the Canadian government and the Geneva International Centre to establish global data in the near future. Canada has developed a database on donors' mine action projects/investments for UNMAS; this database is now under UNMAS' responsibility. As mentioned previously the GICHD is developing IMSMA for UNMAS.

15. Normally UNMAS, UNDP, UNICEF, WHO (on occasion OCHA).

16. The Survey Action Centre (SAC) is supervised by the Survey Working Group comprising Association to Aid Refugees (Japan), GICHD, Handicap International (Belgium and France), Landmine Survivors Network (USA), Medico International (Germany), Mines Advisory Group (UK), Mine Clearance Planning Agency (Afghanistan), Norwegian People's Aid, UN Mine Action Service. It is coordinated by VVAF.

17. Some NGOs, such as Care and Save the Children, sponsor clearance through contracted commercial agencies.

[18] Although this section deals with mine clearance the staff totals here reflect total mine action staff. It may be assumed that no more that 2% from these agencies are involved in mine awareness.

[19] Afghanistan, Angola, Azerbaijan, Cambodia, Democratic Republic of the Congo, Georgia, Iraq, Kenya, Rwanda, Sri Lanka, Sudan, Tajikistan and Uganda.

[20] Clinics supported in Chad, Colombia, Ethiopia, Lebanon, Mozambique, Burma, Nicaragua, Syria, Vietnam and Zimbabwe.

[21] Shorter titles in this and other references such as Ban Mine Treaty, Ottawa Convention and Ottawa Treaty refer to the same international agreement. A full transcription of the Treaty can be found on the internet at http://www.icbl.org/treaty.

[22] Most of the information in this section has been summarised from the 1999 *Landmines Monitor*.

[23] According to the findings, between 1997 and 1999 mines were laid in at least 13 countries and mostly by opposition forces or rebel groups. Few government forces appear to be actively using mines.

[24] At time of writing the ECU and the US Dollar have approximate parity in value.

[25] UNOCHA mine programme reports verify this. Detailed analysis and cross-comparison with manual mine clearance presented in 'The Use Of Dogs For Operations Related to Mine Clearance' by the author for Handicap International (July 1998). (Following this study, Handicap International incorporated dogs into its operation in Bosnia and Mozambique and later in Kosovo, increasing its cost-efficiency by a factor of 3 to 5). Also substantiated in the US Department of State's 'Assessment of Mine Detection Dogs' Report of September 1998.

[26] Some progress in this regard has recently been seen with the UN programme in Kosovo, where there is an increased use of dogs.

[27] For example, Halo Trust has developed a variety of aids that they now use in most of their nine country programmes. MAG uses an adapted and armoured tractor in certain programmes. MGM (Angola) are pioneering mechanised innovations in Southern Africa, and the UN-supported NGOs in Afghanistan use customised back-hoes in residential clearance work. Handicap International will soon publish (planned for November 2000) the first comprehensive study on mechanical mine clearance based on multi-country field studies.

[28] This is Mechem of South Africa with its MEDDS system collecting sequential air samples for laboratory analysis with the assistance of dogs. MGM also uses a combination of armoured vehicles, dogs and men to clear roads and tracks.

[29] An example of funding levels in the US: between 1992 and 1996 the State Department contributed US$14.7m to R&D, and in their 1998 budget for military (DoD) humanitarian mine action alone, US$26m was planned. The European Commission contributed 8.37m ECU for R&D in 1998 (26 percent of its total annual mine action budget for 1998).

[30] Andy Smith, CECOM, Night Vision Labs, quoted at Wintergreen Conference, October 1988.

[31] As a matter of record, on many occasions the Khmer Rouge (KR) proclaimed by radio that they viewed any mine clearance activities as linked to the government. Indeed in 1996 a MAG de-mining team was kidnapped and a Khmer interpreter and British technical advisor murdered by the KR while conducting humanitarian mine clearance. This paper is not implying that the US training resulted in these deaths but urges military-to-military mine action assistance to be closely coordinated with the national plan, both in terms of operations and guiding principles.

[32] That humanitarian mine action could be used as a *wedge* and *entry point* to countries of strategic interest to the US is cited in the US State Department documentation, also available on their information website.

[33] James Madison University Mine Action Information Centre website, calendar listing 1999.

[34] Richard Price and Daniel Hope's 'Media Coverage of Landmines' (published in the *Landmines Monitor*) charts the rise of media interest, culminating in 1997 and dropping by almost 50 percent since then.

[35] Categorisation is defined as follows: (A) Minefields where mines are visible to the eye (B) Minefields where survey teams located sub-surface mines (C) Suspected minefields where mines were neither visible nor found by survey teams (low contamination assumed).

[36] This average was taken from the annual clearance results from the three largest Afghan NGOs: ATC, OMAR, DAFA.

[37] These figures were compiled from the results of the Mine Dog Centre (MDC) annual clearance operations.

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McGrath, R (1999) A Wasteland Called Peace (discussion paper for the UK Campaign for a Transparent and Accountable Arms Trade).

McGrath, R (2000) *Landmines And Unexploded Ordnance: A Resource Book* (London: Pluto Press).

Mine Clearance Planning Agency (1998) Socioeconomic Impact Study of Mine Action Operations In Afghanistan (United Nations/Mine Action Programme for Afghanistan).

Office of Humanitarian De-mining Programs (1998) *Hidden Killers: The Global Landmine Crisis* (US State Department: Washington, DC).

Patterson, P (2000; draft) 'The Use of Mechanical Means for Humanitarian De-mining Operations' (Handicap International: France)

Price, R and Hope, D (1999) 'Media Coverage of Landmines' in the *Landmines Monitor.*

Red Cross Crescent (Magazine, Issue 2, 1997).

Thiviet, P & Lecoin, S (1999) Elles Polluent Notre Paix (Handicap International: France).

United Nations Mine Action Service (1998) Mine Action and Effective Coordination: The United Nation Policy (United Nations: New York).

# Annexes

## Annex A: List of NGOs Active in Humanitarian Mine Action

**Halo Trust**
804 Drake House
Dolphin Square
London SW1V 3NW
UK
Tel: +44 (0)207 821 9244
Fax: +44 (0)207 834 0198

**Handicap International (HI)**
14 Avenue Berthelot
F-69361 Lyon Cedex 07
France
Tel: +33 7869 7979
Fax: +33 7869 7994

**Handicap International (HI)**
Rue de Spa 67-B
1000 Brussels
Belgium
Tel: +32 2 280 1601
Fax: +32 2 280 1601
Email: anne.cappelle@handicap.be

**Mines Advisory Group (MAG)**
45/47 Newton Street
Manchester M1 1FT
UK
Tel: +44 161 236 4311
Fax: +44 161 236 6244
Email: maguk@cybase.co.uk

**Norwegian Peoples Aid (NPA)**
Postbox 8844
Youngstorget,
N0028 Oslo 1
Norway
Tel: +47 2203 7700
Fax: +47 2220 0870

**Stiftung Menschen Gegen Minen (MGM)**
Diessemer Bruch 150
47805 Krefeld
Germany
Tel: +49 2151 555 755
Fax: +49 2151 511 448
Email: info@mgm.org

**Vietnam Veterans of America Foundation (VVAF)**
2001 S Street NW, Suite 740
Washington, DC
USA
Tel: +1 202 483 9222
Fax: +1 202 483 9312
Email: bob@vi.org

## Annex B: Addresses of Information Centres, UN Agencies, and Other Useful Contacts for Mine Action

### UN Landmine and UXO Action

**United Nations Mine Action Service (UNMAS)**
DC-1500
New York, NY 10017
USA
Fax: +1 212 963 2498
Email: MineClearance@un.org

UNMAS Chief: Tore Skedsmo
Tel: +1 212 963 2627
UNMAS Public Information Officer
Tel: +1 212 963 1161
UNMAS Database Coordinator
Tel: +1 212 963 0062

**UN Office for Project Services (UNOPS)**
220 East 42nd St, 14th Floor
New York, NY 10017
USA
Fax: +1 212 906 6963

**United Nations Development Programme (UNDP)**
1 United Nations Plaza, 4th Floor
New York, NY 10017
USA
Fax: +1 212 906 5379

*Emergency Response Division*
Team Leader, Mine Action: Ian Mansfield
Tel: +1 212 906 5193

Mine Advocacy Specialist: Judy Grayson
Tel: +1 212 906 6579

**Mine Action Unit**
Division Chief: Marylene Spezzati
Tel: +1 212 906 6135
Officer in Charge: Dimitri Samaras
Tel: +1 212 906 6872

**United Nations Children's Fund (UNICEF)**
UNICEF House
United Nations
New York, NY 10017
USA
Fax: +1 212 326 7037

*Office of Emergency Programmes*
Project Officer, Landmine Focal Point: Tehnaz
Dastoor
Tel: +1 212 326 7068

**Office of the High Commissioner for Refugees (UNHCR)**
15 Chemin Louis Dunand
VNG
CH1211, Geneva
Switzerland
Fax: +41 22 739 7371

*Programme and Technical Support Division*
Chief: Kolude Doherty
Tel: +41 22 739 8178

**United Nations Mine Action Coordination Mechanism**
Chair: Bernard Miyet (Under Secretary General for Peacekeeping Operations)
Fax: +1 212 963 9222

**World Bank**
1818 H Street NW
Washington, DC 20433
USA
Fax: +1 202 522 3247

*Post Conflict Unit*
Expert: Steven Holtzman
Tel: +1 202 473 3455

## Landmine and UXO-Related Websites

This is a list of the more interesting websites that have been been created by the global landmine crisis.

*Detech De-mining Technology*
http://diwww.epfl.ch/lami/detec/minelinks.html
Contains many links to other de-mining sites

*German Initiative to Ban Landmines*
www.landmine.de/

*Handicap International* (French language site)
www.handicap-international.org/presentation/icbl/

*ICRC* (English, Spanish, French)
www.icrc.org/eng/mines

*International Campaign to Ban Landmines*
www.icbl.org

*Italian Campaign to Ban Landmines* (Italian language site)
www.manitese.it/mine

*James Madison University Humanitarian De-mining Centre*
http://www.hdic.jmu.edu
Extremely comprehensive and informative

*The Mennonite Central Committee*
www.mennonitecc.ca/mcc/programs/peace/land-mines.html
Useful updates on landmine/UXO problems related to cluster bombs and Laos in particular

*Mines Action Canada*
www.minesactioncanada.com/
One of the best landmine campaign sites, with excellent links to other related sites

*Mines Advisory Group*
www.mak.org.uk
Excellent information about MAG, plus photographs

*United Nations Landmine Resource Centre*
www.un.org/Depts/Landmine

## Organisations

**Physicians for Human Rights**
100 Boylston Street
Suite 702
Boston, MA 02166
USA
Tel: +1 617 695 0041
Fax: +1 617 695 0307
Email: cobey@worldnet.att.net

**UK Working Group on Landmines**
The 1st Floor
89 Albert Embankment
London SE1 7TP
UK
Tel: +44 (0) 207 8200 222
Fax: +44 (0) 207 8200 057
Email: ukwglm@msn.com

## Annex C: Revised Estimates of Landmine Contamination Relating to the 10 Most Severely Affected Countries

The following table is based on the revised estimates presented by the United States Department of State in *Hidden Killers 1998: The Global Landmine Crisis*. In most cases these revised figures are lower estimates than those made in 1993 and 1994 in previous publications of the US State Department and the United Nations.

The estimates are presented as a range (high and low estimates) as an illustration of the absence of precise information. It should be stressed that, as explained in the body of the paper, a precise landmine figure is of little importance in contrast to the degree minefields and suspected minefields damage socioeconomic activity and threaten life and limb.

**Revised Estimates of Landmine Contamination**

| Country | Low estimate (*Hidden Killers 1998*) | High estimate (*Hidden Killers 1998*) |
|---|---|---|
| Afghanistan | 5,000,000 | 7,000,000 |
| Angola | 6,000,000 | 15,000,000 |
| BiH | 600,000 | 1,000,000 |
| Cambodia | 4,000,000 | 6,000,000 |
| Croatia | 400,000 | 400,000 |
| Eritrea | 1,000,000 | 1,000,000 |
| Iraq (Kurdistan) | 10,000,000 | 10,000,000 |
| Mozambique | 1,000,000 | 1,000,000 |
| Somalia | 1,000,000 | 1,000,000 |
| Sudan | 1,000,000 | 1,000,000 |

There are no global estimates for numbers of UXO. As mentioned in the text, UXO represent a serious humanitarian threat, are normally found in the same locations as landmines, and require clearance and/or removal before land can be returned for economic or social use. Numbers of UXO are generally far greater than numbers of landmines.

## Annex D: Comparative Analysis between Manual and Dog Teams in Afghanistan

The following comparative table was compiled by the author of this Network Paper as part of a multi-country study of the use of dogs in mine action for Handicap International, France (The Use of Dogs for Operations Related to Humanitarian Mine Clearance; 1998). The data was drawn from detailed records collated and maintained by the Mine Clearance Planning Agency (MCPA), one of the central Afghan NGOs working under the umbrella UN Mine Action Programme for Afghanistan. The data illustrates the comparative speed difference between manual clearance teams and dog-assisted clearance teams.

**Table 2: Comparison Between Manual Mine Clearance Teams (as an average) and Dog-assisted Clearance Teams in Afghanistan during 1996**

| Land Type | Category[35] | Manual teams average[36] (SqM/hr/team) | Dog-assisted teams[37] (Sq M/hr/team) | Factor of increase in speed when using dogs |
|---|---|---|---|---|
| Agriculture | A | 421 | 603 | **1.4** |
| | B | 234 | 505 | **2.2** |
| | C | 275 | 935 | **3.4** |
| Grazing | A | 426 | 870 | **2.0** |
| | B | 333 | 669 | **2.0** |
| | C | 430 | 1188 | **2.8** |
| Road | A | N/A | 1051 | **N/A** |
| | B | 82 | 771 | **9.4** |
| | C | 123 | 906 | **7.4** |
| Residential/ Urban | A | 96 | 499 | **5.2** |
| | B | 137 | 299 | **2.2** |
| | C | 96 | 593 | **6.2** |
| Irrigation/ Canals | A | 187 | N/A | **N/A** |
| | B | 123 | N/A | **N/A** |
| | C | 342 | 535 | **1.6** |

### Points of Interest Concerning Annex D

- Depending on the terrain and mine concentration levels, dog-assisted clearance teams can be seen to clear land faster than manual teams by factors ranging between 1.4 to 9.4. The average overall factor of increased speed in this example is 3.8.
- These statistics also illustrate that dogs can be used in a wide variety of terrain. Contrary to conventional prejudice on this issue, dogs are found to be effective and fast in areas of high intensity minefields as well as in residential areas.
- These figure also belie the general assumption that dogs are best used for survey and not clearance. Although dogs also assist survey work in Afghanistan, these figures are totally concerned with land clearance – for which dogs have been proven to be very effective.
- The above data relates to speed of clearance. When a similar cross comparison was compiled for safety between manual and dog-assisted teams, it was found that de-miners working with dogs were far less likely to suffer an accident. A cost-efficiency comparison was not compiled, but initial analysis indicated that dog-assisted teams were also more cost-efficient than manual teams.

# The Humanitarian Practice Network – HPN

### (formerly the Relief and Rehabilitation Network – RRN)

The **Humanitarian Practice Network (HPN)** is the new name for the Relief and Rehabilitation Network (RRN). As from 1 April 2000 the new **HPN** will continue the work of the former RRN in contributing to improved practice in the humanitarian field, but with several important changes.

The success of the RRN in producing objective, analytical and accessible material was confirmed by the conclusions of an independent external review in 1999. The review also found that humanitarian practitioners are increasingly using its publications and that the Network compares very favourably with other professional information services. As a result of the review the purpose of the Network has been re-articulated to emphasise its role of stimulating critical analysis, advancing the professional learning and development of those engaged in and around humanitarian action, and improving practice.

## Why the name change?

The use of the word 'humanitarian' in the **Humanitarian Practice Network (HPN)** is more in tune with today's way of thinking, and 'practice' reflects all that we do and who we target.

## What else is changing?

*Publishing* will remain **HPN**'s primary activity. Good Practice Reviews, published once a year as the flagship publication, will remain as management reference guides on a particular topic – but with the further aim of being used as training manuals by specialist training organisations. Network

Papers will be produced three times a year as a critical review of a specific thematic or sectoral topic, or an analytical and critical reflection of a particular approach in a specific country/region. The successor to the Newsletter will be published twice-yearly as a resource document with updates, practice notes and features.

The **HPN** *website* will become a key reference site for those in the humanitarian field, providing a resource gateway into the humanitarian sector. It will store the majority of past publications in English and French which can be downloaded for free. The value of the website will be enhanced by the number of organised web-links to key players in the sector, strengthening the thematic search function, creating a profile of masters and training courses relating to the humanitarian sector, and having a conference and educational/training courses announcement page. More opportunity for feedback will be possible through the enhanced website and, where authors agree, readers will be able to dialogue directly with them.

## How do I join?

The **HPN** Newsletter is FREE to all on request. Full membership to the **HPN** costs only £20.00 per year (£10.00 for students) and entails automatic receipt of all **HPN** publications as they are produced, as well as a discount when ordering back copies. A number of FREE subscriptions are available to those actively involved in humanitarian assistance operations or in ongoing activities in countries experiencing complex political emergencies.

If you would like to subscribe to the **HPN**, visit our website <www.odihpn.org.uk> and subscribe on-line. If you do not have access to the internet, you can contact the **HPN** via email at <hpn@odi.org.uk> and the Network will mail you a copy of the latest newsletter, which contains a registration form.

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### FOR FURTHER INFORMATION:

Visit the **HPN** website at:

**<www.odihpn.org.uk>**

Email us at:

**<hpn@odi.org.uk>**

Phone us on:

**+44 (0)20 7393 1631**

Fax us on:

**+44 (0)20 7393 1699**

Write to us at:

**The Humanitarian Practice Network**

Overseas Development Institute

Portland House

Stag Place

London

SW1E 5DP

UK

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*The Humanitarian Practice Network is part of the Humanitarian Policy Group at*

**odi**

**Overseas Development Institute**

# Network Papers

Network Papers are contributions on specific experiences or issues prepared either by HPN members or contributing specialists.

### 1994

1 *MSF-CIS (Celula Inter-Secçoes), Mozambique: A Data Collecting System Focused on Food Security and Population Movements* by T. Dusauchoit

2 *Responding to the 1991/92 Drought in Zambia: The Programme to Prevent Malnutrition (PPM)* by D. Mukupo

3 *An Account of Relief Operations in Bosnia* by M. Duffield

4 *Bad Borders Make Bad Neighbours - The Political Economy of Relief and Rehabilitation in the Somali Region 5, Eastern Ethiopia* by K. Van Brabant

5 *Advancing Preventive Diplomacy in a Post-Cold War Era: Suggested Roles for Governments and NGOs* by K. Rupesinghe

6 *The Rwandan Refugee Crisis in Tanzania: initial successes and failures in food assistance* by S. Jaspars

7 *Code of Conduct for the International Red Cross and Red Crescent Movement and NGOs in Disaster Relief* ed. J. Borton

### 1995

8 *Targeting the Poor in Northern Iraq: The Role of Formal and Informal Research Methods in Relief Operations* by P. Ward and M. Rimmer

9 *Development in Conflict: the Experience of ACORD in Uganda, Sudan, Mali and Angola* by ACORD

10 *Room for Improvement: the Management and Support of Relief Workers* by R. Macnair

11 *Cash-for-Work and Food Insecurity in Koisha, Southern Ethiopia* by P. Jenden

12 *Dilemmas of 'Post'-Conflict Transition: Lessons from the Health Sector* by J. Macrae

### 1996

13 *Getting On-Line in Emergencies: A Guide and Directory to the Internet for Agencies involved in Relief and Rehabilitation* by L. Aris, P. Gee and M. Perkins

14 *The Impact of War and Atrocity on Civilian Populations: Basic Principles for NGO Interventions and a Critique of Psychosocial Trauma Projects* by D. Summerfield

15 *Cost-effectiveness Analysis: A Useful Tool for the Assessment and Evaluation of Relief Operations?* by A. Hallam

16 *The Joint Evaluation of Emergency Assistance to Rwanda: Study III Main Findings and Recommendations* ed. J. Borton

17 *Monetisation: Linkages to Food Security?* by J. Cekan, A. MacNeil and S. Loegering

18 *Beyond Working in Conflict: Understanding Conflict and Building Peace (The CODEP Workshop Report)*, by J. Bennett and M. Kayitesi Blewitt

### 1997

19 *Human Rights and International Legal Standards: what relief workers need to know* by J. Darcy

20 *People in Aid Code of Best Practice in the Management and Support of Aid Personnel* ed. S. Davidson

21 *Humanitarian Principles: The Southern Sudan Experience* by I. Levine

22 *The War Economy in Liberia: A Political Analysis* by P. Atkinson

23 *The Coordination of Humanitarian Action: the case of Sri Lanka* by K. Van Brabant

### 1998

24 *Reproductive Health for Displaced Populations* by C. Palmer

25 *Humanitarian Action in Protracted Crises: the new relief 'agenda' and its limits* by D. Hendrickson

26 *The Food Economy Approach: a framework for understanding rural livelihoods* by T. Boudreau

27 *Between Relief and Development: targeting food aid for disaster prevention in Ethiopia* by K. Sharp

### 1999

28 *North Korea: The Politics of Food Aid* by J. Bennett

29 *Participatory Review in Chronic Instability: The Experience of the IKAFE Refugee Settlement Programme, Uganda* by K. Neefjes

30 *Protection in Practice: Field Level Strategies for Protecting Civilians from Deliberate Harm* by D. Paul

31 *The Impact of Economic Sanctions on Health and Well-being* by R. Garfield

### 2000

32 *Humanitarian Mine Action* by C. Horwood

# Good Practice Reviews

RRN Good Practice Reviews are commissioned 'state of the art' reviews on different sectors or activities within the relief and rehabilitation field. Prepared by recognised specialists, and subject to peer review, they are produced in a format that is readily accessible to field-based personnel.

### 1994

1 *Water and Sanitation in Emergencies* by A. Chalinder

2 *Emergency Supplementary Feeding Programmes* by J. Shoham

### 1996

3 *General Food Distribution in Emergencies: from Nutritional Needs to Political Priorities* by S. Jaspars and H. Young

4 *Seed Provision During and After Emergencies* by the ODI Seeds and Biodiversity Programme

### 1997

5 *Counting and Identification of Beneficiary Populations in Emergency Operations: Registration and its Alternatives* by J. Telford

### 1998

6 *Temporary Human Settlement Planning for Displaced Populations in Emergencies* by A. Chalinder

7 *The Evaluation of Humanitarian Assistance Programmes in Complex Emergencies* by A. Hallam

### Forthcoming (May 2000)

8 *Operational Security Management in Violent Environments* by K. Van Brabant

*To obtain any of the above, please complete the form overleaf and return it to:*

HPN Publications, Overseas Development Institute,
Portland House, Stag Place, London SW1E 5DP, UK.
Tel: +44 (0)20 7393 1631. Fax: +44 (0)20 7393 1699. Email: <hpn@odi.org.uk>
*Or place an order via our website: <www.odihpn.org.uk>*

## Background

The Relief and Rehabilitation Network was conceived in 1993 and launched in 1994 as a mechanism for professional information exchange in the expanding field of humanitarian aid. The need for such a mechanism was identified in the course of research undertaken by the Overseas Development Institute (ODI) on the changing role of NGOs in relief and rehabilitation operations, and was developed in consultation with other Networks operated within ODI. Since April 1994 the RRN has produced publications in three different formats, in French and English: Good Practice Reviews, Network Papers and Newsletters. The RRN has just completed its second three-year phase (1996 – March 2000) during which it was supported by: DANIDA (Denmark), SIDA (Sweden), the Department of Foreign Affairs (Ireland), the Department for International Development (UK), the Ministry of Foreign Affairs (Netherlands), and OFDA/USAID (USA). This is the last Network Paper to be produced under the name of the RRN.

## RRN Objective

To improve aid policy and practice as it is applied in complex political emergencies.

## RRN Purpose

To contribute to individual and institutional learning by encouraging the exchange and dissemination of information relevant to the professional development of those engaged in the provision of humanitarian assistance.

## RRN Activities

To commission, publish and disseminate analysis and reflection on issues of good practice in policy and programming in humanitarian operations, primarily in the form of written publications, in both French and English.

## RRN Target audience

Individuals and organisations actively engaged in the provision of humanitarian assistance at national and international, field-based and head office level in the 'North' and 'South'.

The Relief and Rehabilitation Network is supported by:

Ministry of Foreign Affairs
DANIDA

Sida

**OFDA/USAID**

Department of Foreign Affairs,
Ireland

DFID Department for International Development

Netherlands *Ministerie van*
Buitenlandse Zaken/Ministry of Foreign Affairs