

Background: The Landmine Problem

Years of war have left millions of scattered and unrecorded landmines and unexploded ordnance (UXO) in scores of countries. Originally intended to impede troop movements and halt the engines of war in times of conflict, these landmines and UXO remain after the fighting is finished, continuing to claim civilian victims for years to come. The current nature of war and terrorism places this threat squarely on the doorstep of the

civilian population. Civilian men, women and especially children, who often mistake mines and UXO for toys, make up the bulk of all mine accidents in peacetime.

In addition to the thousands of deaths and injuries, landmines and UXO have denied farmers the use of vast areas of valuable land, overloaded the health care system because of the horrific injuries they cause, and blocked vital infrastructure improvements, foreign investment and development in many countries that desperately need them. Sadly, countries

recovering from conflict, with weakened social and political structures, endure the most impact from this scourge and are in turn ill-prepared to address the problem. The high levels of contamination and the far-reaching socio-economic impact of UXO contamination and landmine accidents demand an integrated and sustained commitment by the entire international community.¹

The Changing Nature of the Threat || Clearing landmines and UXO after both World Wars was a monumental undertaking, especially by countries that were devastated socially, economically and politically. However, the WWI Armistice Agreement of 1918 required the Germans to report their minefield plans and the location of delayed action charges. During WWI and WWII, the combatants laid mines in uniform patterns and generally adhered to marking and recording norms. The reports they generated are still being used to clear mined areas in Europe and North Africa.

During the Cold War era and into the late twentieth century, nations continued to use landmines, generally as barriers or for deterrence. While these mined areas were static in nature, the end of the Cold War and the resulting re-designation of borders throughout

the world have focused attention on areas where these mines had been emplaced.

Landmines in Post-Cold War Regional Conflicts || Regional wars in Africa, Asia, Europe and South America during the 1980s and 90s saw the deployment of millions of conventional landmines, but often without the employment restrictions and recording discipline that had guided most conventional use of landmines since WWII. Although most of these mines were made by mainstream arms manufacturers, making landmine detection and identification possible, they were often employed using random, unknown or unreliable methods. Many of today's landmine victims are being killed or injured as a result of accidents involving landmines from these recent regional conflicts.

The majority of wars fought in the later half of the twentieth century have involved non-state actors outside the control of governments recognized by the United Nations. The experience of many non-governmental organizations (NGOs) is that non-state actors (NSAs) often use improvised landmines, which are usually more dangerous and volatile than commercial landmines. Landmines have been and continue

A deminer marks the boundary of minefield with a standard mine warning sign.



to be produced and used not only by terrorists and drug cartels but also by such seemingly benign groups as local communities protecting their livelihoods and homes.

Landmines as Offensive Weapons ||

The ideology, objectives and strategies of these groups vary greatly. Terrorist groups commit violent acts that seemingly have no purpose other than to inflict terror among the civilian population. The acts of violence are not directed at military troops or other military targets. They are not for defense. The purpose of the acts of violence is to disrupt the social fabric by creating a high level of fear among the civilian population.

States usually try to defend a position, deny an area or disrupt an opposing force. Malicious and other irregular military forces use landmines to disrupt the social, economic and political infrastructure, and terrorize the local population. Because they are more likely to position landmines in places around schools, trodden paths, wells, etc. Because of indiscriminate placement, there are rarely well-kept mine records or minefield maps. Landmines also may not be laid in a conventional pattern. It is a combatant's memory and a community's victims

that have to serve as starting points for clearance operations.

The improvised landmines used by these groups are more dangerous than commercial mines because they have a tendency to be highly unpredictable and unsafe to handle. The relative damage caused by these mines—to the combatants themselves and to official or unofficial deminers—has the possibility of being greater than that of the regular mines to which states have access.

What is Meant by “Mine Action” ||

A Comprehensive Approach ♦ Mine action aims to reduce the social, economic and environmental impact of mines and UXO. Mine action is not just about demining, removing the mines and destroying UXO. It is also about people and societies, and how they are affected by landmine contamination. The objective of mine action is to reduce the risk from landmines to a level where people can live safely; to live in a way in which economic, social and health development can occur free from the threats posed by landmines and in which the victims' needs can be addressed.

Mine action has four components:

1. Mine risk education,
2. Humanitarian demining, i.e., landmine and UXO survey,



Once uncovered by a deminer, a flag marks the mine's location so it can be destroyed with explosives.

mapping, marking and clearance,
3. Survivor assistance, including rehabilitation and reintegration,
4. Stockpile destruction, and
Many groups also consider diplomacy against the indiscriminate use of AP mines to be a part of mine action.

Mine action is a holistic approach to the landmine and UXO problem; it refers to a diverse set of actions that aim collectively to minimize the negative social, economic and environmental impact that landmines have on people and their communities. By addressing the full spectrum of mine action activities, the goal is to develop a

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comprehensive and systematic way of dealing with mine and UXO problems in a societal context, while still meeting the needs of individually affected people.² To restore people's land and livelihoods, mine action practitioners must design a scenario-specific strategy that makes use of selected capabilities across the mine action spectrum.

Consequences of Use of Landmines II Unusable Land ♦ Consider the effect that only a few mines can have on a village: "In 1996, Norwegian Peoples 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. Four mines had denied the people access to their homes and land and caused the dislocation of 10,000 people."³

Health Problems Multiplied ♦ Since the landmine threat is generally greatest in countries in need, the following are typical health problems either caused or heightened by the threat of landmines:

- Mined agricultural land, water and canals decrease farming activities causing food scarcity and promoting malnutrition-related diseases.
- Mines, which limit access to drinking water and firewood, cause people to drink from contaminated water sources and increase waterborne diseases such as bacterial diarrhea, amoebiasis and giardiasis.
- Mined public places and road-ways can lead to avoidance of the area by mobile health and vaccination teams and can result in an increase in all six

childhood killer (but preventable) diseases.

- Increased amputation and injury requiring blood infusion results in the lack of blood supplies and contributes to the rise of contaminated blood.
- Mined roads prevent food transport, contributing to increased iodine deficiency disorders.⁴

These scenarios are occurring daily, severely affecting the quality of life for men, women and children around the world.

Indirect Health Consequences ♦ While the most visible victims of landmines are the amputees, their families and others also typically suffer greatly. Landmines do not just kill and injure an individual. Death or the disability of a parent should not be measured only by the economic toll it takes on the family, but also in the emotional scars of the widow or widower and children. Caring for the injured, poverty-stricken and depressed survivor can put enormous stress on a family. Even worse, families must cope with the tragic and untimely death of a beloved member who was also the breadwinner. These factors must be accounted for when developing support programs for survivors and victims. They also create long-term costs for communities, the immediate problem being medical

Civilians plant rice on the edge of disaster: a minefield adjacent to farm fields.



costs. People who have survived the blast of a landmine have to be transported to a hospital. Once there, blood transfusions, surgical time and skill, medication, artificial limbs, and rehabilitation may all be necessary. How can an impoverished family, community or country support such an extensive and ongoing medical dilemma?

Developmental Consequences ♦ II In order to develop an area successfully, people need access to roads, water, markets, schools and facilities. If landmines are present or are suspected, no economic development can occur.

The immediate effects of land rendered unusable are exacerbated by hidden costs associated with diverted medical resources, impediments to the return of refugees, destruction of livestock, the disruption of economic patterns and inhibited tourism. Because landmines hinder travel, the presence of landmines inhibits the mobility of teachers, technicians, and employers, restricts the availability of goods and services—particularly food—and impedes the restoration of normal community services.⁵

Mine Action Programs II Mine Action Centers ♦ Given the range of activities and the number of players involved in mine action, coordination is a pre-

requisite to the effective implementation of mine action programs in the field. The establishment of a Mine Action Center (MAC) or national landmine office is therefore a central component of most mine action programs. Support for the establishment and development of these planning and coordination hubs has been at the core of mine action since the first center was established for Afghanistan in 1989.

MACs are normally initiated and developed under the authority of local and national governments. The United Nations typically provides them with assistance by coordinating international support. This assistance is provided through the United Nations Mine Action Service (UNMAS) for programs developed in the context of peace-keeping operations or in response to immediate humanitarian needs and the United Nations Development Program (UNDP) for long-term capacity-building programs. Many donor countries and NGOs support and fund national or regional offices as part of their bilateral efforts to improve mine action in a country at risk.

To be successful, MACs rely on two primary supports: the commitment of the national government to mine action and the strength of the partnerships they build with donors,



A red flag marks a mine pit in the Jordanian desert.

operators—in particular, NGOs—humanitarian agencies and the local communities themselves. Typical major mine action center activities include:

- Managing and coordinating outreach and operation activities
- Conducting geographical surveys
- Conducting socio-medical surveys
- Prioritizing activities in conjunction with host nation planning
- Mine removal or destruction
- Survivor assistance
- Mine risk education
- Maintaining landmine-related information

MACs are usually responsible for managing the mine action campaign through various phases, listed below (notionally):

- Validating and assessing the need and national will
- Planning

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White tape and danger signs written in Portuguese and English warning of landmines cover the entrance to a building in Kuito, Angola.

- Training
- Deploying of personnel and equipment
- Conducting operations
- Evaluating the program
- Sustaining the program⁶

A Diverse Cast of Players ♦ The number and diversity of organizations involved in mine action includes donor countries, NGOs, international organizations, military units, commercial firms, and host nation agencies. Unfortunately, they do not always coordinate and communicate.

Militaries, with their special training in countermine operations, often play key roles by developing training programs and offering valuable advisory assistance. Critical NGOs such as Mines Advisory Group, HALO Trust and Norwegian Peoples Aid have played a critical role.

The creation of the United Nations Mine Action Service (UNMAS) and the Swiss government-sponsored Geneva International Centre for Humanitarian Demining (GICHD), offers international support and coordination, and focuses on such issues as mine action standards and mine action information management.

Some countries (such as the United States) rely heavily on bilateral nation-to-nation support, others combine their energies with those of a region, such as the European Commission, and some rely on international or regional

organizations to coordinate national mine action efforts.

While there exist perennial problems in coordinating the actions of so many diverse organizations, the major difficulty remains finding adequate funding and resources to start and finish the job.

Funding ♦ A key problem for many mine action organizations is a lack of long-term funding commitments from donors. It often takes months and sometimes years for a successful mine action campaign to be completed. Donors understandably want to see results, but indicators of success are difficult to measure.

Early attempts to measure effectiveness by ordnance destroyed or even acres cleared have proven to be inadequate. Many donors have been reluctant to obligate funds for extended operations.

Without adequate funding and appropriate action, the effects that landmines have on civilians and their communities will continue to take their toll. Nevertheless, many humanitarian organizations and agencies continue to work tirelessly to improve the quality of life in communities threatened by landmines. Great strides have been made and many successful operations have rendered hundreds of communities and countries mine-safe.

The Components of Mine Action Operations || While developing a comprehensive and integrated approach to mine action is the key to a successful program, it cannot be achieved if each of the core components of a program are not themselves meticulously and skillfully designed. The following sections summarize the critical factors of surveying, mine detection and clearance, survivor assistance, mine risk education, and research and development programs.



(Above) Two deminers prepare to clear a minefield.



(Left) Cambodian deminers conduct a pre-operation check of their equipment before heading into a minefield.