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Tim Carstairs
MAG (Mines Advisory Group)

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Humanitarian Mine Action in Northern Iraq

Through sustained efforts, the Mines Advisory Group has made significant progress in the demining of war-torn Northern Iraq. Cooperation with local villagers has been a key to their success.

by Tim Carstairs, Mines Advisory Group

History of Mine Laying

There have been three main eras of mine laying in the region over the

last 30 years. Throughout the 1960s and 1970s, regular fighting between Iraqi forces and Kurdish mountain fighters, the Peshmerga, gave rise to the extensive use of landmines by the Iraqi army to protect military positions and close footpaths in an attempt to

prevent military action by the Peshmerga. The first Gulf War fought between Iran and Iraq during the 1980s was fought over large parts of what is currently known as Iraqi Kurdistan. Large "traditional" mine fields were laid as well as smaller "nuisance" mine fields. The conflict raged back and forth across the strategic bordering areas of Iraqi Kurdistan and Iran. As the conflict ebbed and flowed, mine laying followed a similar pattern. In 1990 and early 1991, Iraq launched the "Anfal" operations against the Kurdish community, driving hundreds of thousands into the mountainous refuge of southeastern Turkey and Iran.

Iraq had already destroyed many Kurdish settlements within 15 km of the border with Iran and relocated much of the population in collective towns lower down on the plains. The "Anfal" campaign saw all remaining Kurdish villages razed to the ground; further quantities of mines were laid in the rubble and remain in order to prohibit re-settlement by the original villagers.

In 1991, the second Gulf War saw Iraqi forces defeated by the "coalition." Simultaneously, the Kurdish north and the Shia south rose up against Iraq. The brutal backlash against the Kurds following the uprising brought about massive movements of refugees to the mountainous areas of Turkey and Iran. Following the conclusion of the second Gulf War in 1991 and the withdrawal of Iraqi forces from the Kurdish area, Kurdish villagers began

The Situation Today

Over the years, MAG has conducted a series of surveys throughout the region and has established a vast database within its Data Coordination Unit. MAG estimates that 760 villages are badly affected by mines, representing over 15 percent of all villages in the region; this amounts to 220 million square meters of land suspected to be mined and consequently remaining unused.

MAG reports 6,250 injuries and 3,450 deaths as a result of mine and UXO explosions. These figures may significantly underestimate the true casualty level due to under-reporting, particularly of the number of deaths in the region. The nature of rural life and the absolute need for grazing of animals dictates that the number of livestock casualties is 10-15 times higher than human casualties, with severe economic consequences.

Lessons Learned

The vast majority of mines were laid during local fighting between the Kurds and the Iraqi army, and during the Iran-Iraq war. They are already 15-20 years old. The age of the mine fields leads to a number of complicating factors and difficulties in conducting demining operations. Most of the mine fields have been badly disrupted; in some cases, local villagers have attempted to clear their land by collecting or disarming visible mines or by removing the mines from the mine field and stockpiling them in another area. In the past, there was also an active trade in salvaged mines and explosives to be used for fishing (this activity has now been banned by the local authorities and the trade has diminished). Mine fields were also disrupted during some of the heavy fighting. Nature also played its part. Many mines were washed down from the hills and mountains to the flat areas, thereby creating "new" mine fields. The action of rain and snow

to return home to rebuild their lives. Casualties mounted daily from mines and unexploded ordnance (UXO): planting crops, collecting wood, and other normal tasks had become deadly activities. The Mines Advisory Group's (MAG) Data Coordination Unit recorded 932 deaths and 1,512 injuries as a result of mine and UXO accidents in 1991 alone.

MAG's Response

MAG's worldwide aims can be summed up in the following brief words: *Clear mines, save lives, and build futures.* In northern Iraq, MAG created the first ever—and until 1996, the only—mine action program in the region.

Following an initial assessment in 1991, MAG started planning and recruitment for a mine action program. With initial funding from the European Community, demining courses at Diana in Erbil governorate and Penjwen in Sulaimanya governorate began in summer 1992 to train an initial 72 local deminers. Difficulties in importing the necessary equipment delayed the first demining operations until April 1993. The first demining started at Rawgan village in Penjwen District (one of the most heavily-mined areas in the world) and in the Diana sub-district of Erbil governorate.

In the same year, MAG began to train local staff in EOD to respond primarily to the tons of ordnance left over from the 1980s war. A mine awareness program was begun in order to help minimize the risks as longer-term clearance was undertaken.

A Long-Term Capacity

Since first arriving in the region, MAG knew that the appropriate response to the mine and UXO problem would be a long-term mission. Thus MAG's policy was to create a local sustainable capacity.

MAG has aimed to enhance the

skills and abilities of both its local and expatriate staff to plan, implement, monitor and evaluate. A huge amount of knowledge has passed from MAG expatriate staff to the local staff in the form of on-the-job training and formal training courses within and outside the region (management, technical training, leadership, etc.).

In 1992, all management positions were held by expatriate staff, and as the program expanded, the total number of expatriate staff reached 14 persons in 1995, with about 200 locally-trained deminers.

Today, all management positions except that of the program manager are held by national staff. One expatriate technical adviser provides monitoring and other input. Three hundred fifty deminers are currently operating in the program; some 45 staff members manage and implement mine awareness, data gathering and community liaison activities; over 100 other staff members are involved in planning, supervision and management, mapping, logistics and repairs, administration, transport, security and other support tasks. MAG's operation is managed by a "senior management team" made up of senior local staff and the expatriate program manager. Locally, this management structure works through branch management at each of its operations centres across the region. This transformation has been achieved by MAG's vision of real national ownership and by the hard work, commitment and dedication of all MAG's staff and the firm support of MAG's donors.

It is important to mention the local staff's willingness to accept responsibilities and to prepare themselves for higher levels of responsibility. The role played by the entire MAG expatriate staff in passing on their knowledge has made a great contribution to the development of the necessary capacity and confidence.

A local Kurd practices mine detection he has learned from the UN. c/o AP



over the years has also caused some mines to become more deeply buried in the ground, making their detection and destruction more difficult.

An additional difficulty is a number of areas is the mineralized soil types that can affect the ability of metal detectors to effectively and safely detect mines. Further difficulties are caused by the minimum-metal content of some mines found: VAR 40, TS 50, the Type 72, M14 anti-personnel blast mines and VS2.2, VS 1.6 and TC 2.4 anti-tank mines.

MAG has conducted several studies to minimize the effects of these problems. All types of mines in the region were classified according to metal content: high, medium and minimum. A number of trials were undertaken to enable MAG to adjust or re-calibrate detector sensitivity accordingly. In order to address the problems presented by the laterite soil, detector comparison trials are being conducted in Schiebel's ATMID, Guartel's MD8 and the Minelab detector. Further trials are continuing.

Priorities

MAG's Northern Iraq program has developed a set of Standard Operating Procedures that is well matched with international standards for humanitarian mine clearance. All MAG technical staff are trained and monitored to achieve these standards.

Due to the vast number of mine fields in the region, it is necessary to prioritize them so that scarce resources are used in the most effective manner. The prioritization process relies on the availability of high-quality data collected during MAG's various field activities. MAG's prioritization system involves two main assessments. The first is the level of risk as measured by previous casualties (human life and livestock), the proximity of the area to occupied houses and the presence of water sources or other community resources that cause people to frequent the area. The second assessment

considers the level of benefits that can be expected to result from clearance. This includes the community's own assessment and ranking of priorities. Factors include the economic uses of land (e.g., for crops and pasture) and the number of families expected to benefit from clearance. This means that community lands are often prioritized over private lands.

Importantly, this process is conducted together with the communities and their leaders to ensure a clear understanding of MAG's capacity and its aims in a given area or village and to ensure that community members recognize the need to "share" resources as fairly as possible according to a commonly agreed prioritization system.

Area Reduction

When mine fields were first demarcated in the mid-90s, the perimeters established were larger than they should have been —no maps were available, and local knowledge was limited and tended to err on the side of greater safety. When MAG re-checks survey results and confirms the initial information, it is sometimes found that some of the land is already in use. Due to accidents to themselves and to animals, villagers have gained a better knowledge of the mined areas and their perimeters. This information is passed on to MAG.

In order to increase productivity without affecting safety, the practice of area reduction has been steadily introduced.

MAG ensures full involvement of local villagers in all stages of the process:

1. *Before Clearance:* If MAG and the villagers agree on the redefined area of the mine field following new information from the villagers and the "guide-men" (local people assigned by the village as having particular knowledge of certain areas of land), area reduction is conducted immediately and markers are placed

at the commonly-agreed perimeter and the previous markers are removed.

2. *During Clearance:* Following confirmatory breaches (a minimum of three breaches of at least 10 meters each in breadth) through the mine field, MAG gains further information about the mined area, the types of mines and how they were laid, and the nature of the ground. MAG re-assesses at this stage. The local guide-men are then again involved in deciding which land is to be considered mined and which areas are to be considered mine-free. At this point, other guide-men may be brought in and consulted in order to test the knowledge gained. The guide-men are required to take some of the responsibility together with MAG for the choices made.

3. *As Clearance Continues:* MAG re-assesses the situation continually. For instance, if it appears likely that no more mines are present in an area, further village-level discussion takes place. Again, MAG takes joint responsibility for the decisions made. Responsibility in decisions made on area reduction is taken by MAG's Technical Operations Manager and the appropriate representatives of the community.

There are a number of situations where this type of area reduction is not possible: for example, minimum-metal and blast mines might be buried too deep for detection or are not visible to surface search. Such smaller mines also tend to roll downhill after flooding into areas outside originally-established perimeters. Disruption of mine-laying patterns can also be caused by villagers who might pick up and dispose of surface mines or animals may tread on mines or knock them downhill. In these cases and where possible, MAG's new mechanical device (see after) will save time in safely checking such suspect areas.

Outputs

The program deploys multi-skilled mine action teams to respond in a flexible and comprehensive manner. From MAG's experience, smaller, more flexible teams are more appropriate to the terrain and nature of the taskings in Northern Iraq. The Mine Action Team (MAT) includes demining, demarcation, EOD and community liaison skills to allow the teams to respond to the priorities identified by target villages. MAG's dedicated EOD Teams were incorporated into the MATs now that all large concentrations of UXO have been destroyed following MAG's previous program to eradicate all major stockpiles, ammunition dumps and arms caches.

Since 1992, the following quantifiable outputs have been achieved:

- 5,321,165 square meters of land have been cleared of mines/UXO and officially returned to the communities safely.
- 86,996 mines were destroyed.
- 423,886 items of unexploded ordnance destroyed; this equates to 3,105 tons.
- 350 deminers have been successfully trained and deployed.
- 107,551,867 square meters of land have been demarcated.
- 960,000 people have directly benefited from MAG's clearance, EOD and other emergency tasks. Direct benefit is derived by those who own or use the land that has been

handed over as safe to the community.

• From 1999 to date, 1,095,543 m² have been reduced and handed over as safe to the community.

The rate of human casualties during the year 2000 has fallen to little more than 10 percent of the 1991 rate. In the year 2000, MAG also successfully introduced a region-wide mine awareness education program for primary school children with the support of the local Ministries of Education and UNICEF. Mine awareness has now been made a part of the school curriculum. MAG has also set up an education system for parts of the male population through the Mullabs. This program is supported by the *Awqaf* (Ministry of Endowments or Religious Affairs).

In 2001, MAG manufactured a "mini-rotovator" in Suleimaniya. This machine is currently under field trials and hopefully will be deployed in area reduction and limited mechanical clearance roles in the coming months. Further plans to examine additional tools and systems (mini-flail systems, rollers, magnets, etc.) will also be assessed during the year.

Given the difficulty of importing such equipment into the region, MAG is working with the Development Technology Workshop (DTW), the UK charity responsible for developing the locally-produced "Tempest" vegetation cutter used today in Cambodia and Thailand, to consider local design and manufacture capacities in this area. MAG and DTW will also examine the potential

for the local manufacture of PPE. These developments will further increase the local sustainability and independence of mine action.

Conclusion

Substantial progress has been made in addressing the problem posed by mines and UXO in the region; much still remains to be done. The combination of initiatives and methods from MAG's toolbox of mine action is a fruitful one, and continues to stand the test of the most difficult operating environments.

This has been MAG's longest-running operation, and has been the source of many successes and lessons that have enabled improvements and innovations in many of MAG's other initiatives. MAG is grateful to all its donors—these include the UK (DFID), the governments of the Netherlands and Sweden (SIDA), SPAS (Swedish Peace and Arbitration Society), Laing Family Trusts, Radda Barnen (Sweden) and Trocaire (Ireland). MAG hopes that these donors will continue to support the project into the future. At the same time, MAG is seeking further individual, corporate and institutional donors to help. ■

Contact Information

MAG Northern Iraq Program
Tel: 00873 761 576 191
Fax: 00873 761 576 192
E-mail: magniraq@yahoo.com