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Minefield as a School Ground: The Tzur Baher Minefield Clearance Project

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Geneva Diary: Report from the GICHD

The Geneva International Centre for Humanitarian Demining provides operational assistance to mine-action programmes and operators, creates and disseminates knowledge, works to improve quality management and standards, and provides support to instruments of international law like the Ottawa Convention and the Convention on Certain Conventional Weapons.

by Ian Mansfield [Geneva International Centre for Humanitarian Demining]

O ver the past 15 years, mine action has evolved into an established component of the relief and development sector. During this period, programmes and projects for demining, mine-risk education, victim assistance, advocacy and stockpile destruction have been discussed, refined and improved by operators, programmes, diplomats and activists. As part of its ongoing role to reinforce the effectiveness and efficiency of mine action, the GICHD commissioned contributions from development and mine-action experts on the many lessons that have been learned over the past 15 years and the challenges that remain to be met. These have been brought together in a book titled Mine Action: Lessons and Challenges.

Following an executive summary of its main conclusions and findings, the work is laid out in two parts. Part I looks at the core activities—the “pillars”—of mine action: advocacy, victim assistance, mine-risk education, demining and stockpile destruction. Part II looks at key management issues, specifically programme coordination and management, information management and capacity development. This work concludes with a thought-provoking assessment of what mine action has actually achieved. The book was published in November 2005 and can be ordered via the GICHD Web site.

IMAS Mine-risk Education: ‘Best Practice’ Handbooks

The seven mine-risk education components of the International Mine Action Standards outline minimum standards for the planning, implementing, monitoring and evaluation of MRE programmes and projects. The IMAS are large- ly prescriptive, advising national authorities, operators and donors on what is necessary for the development and implementation of effective MRE programmes. However, they do not guide stakeholders on how they might adapt their programmes to be more compliant with the standards.

To facilitate the implementation of the MRE standards in the field, UNICEF commissioned the GICHD to develop a series of “best practice” guidebooks to provide more practical advice on how to implement the MRE standards. A total of 12 guidebooks have been developed using a variety of people, countries and contexts. The guidebooks address a wide range of areas covered by the MRE standards, including:

- How to support the coordination and the dissemination of public information
- How to implement risk education and training projects
- How to undertake community mine-action fusion
- What elements should be considered for the implementation of MRE project emergencies

Copies of the guidebooks are available by contacting GICHD or UNICEF or online at www.mineactionstandards.org.

Ongoing Work at the GICHD

The GICHD is undertaking a major study, Land Release and Risk-Management Approaches, which aims to examine the various processes used to release land (other than by full clearance) and to advise on ways in which a risk-management approach can be applied to speed up this process. The study will be completed by the end of 2006.

The development of the International Mine Action Standards has been undertaken by the GICHD on behalf of United Nations Mine Action Service. There are currently 38 existing IMAS and 13 new IMAS are in the final approval stage of the process. The latest IMAS are always posted on the Standards’ Web site (www.mineactionstandards.org) and the GICHD produces an updated CD each year. A revised, simple Guide to IMAS was published in early 2006.

See Endnotes, page 112

Geneva, Switzerland

The GICHD was established in 1998 to implement the Ottawa Convention, which bans landmines, and the Geneva Conventions. The Centre produces an updated CD each year, which includes a website (www.mineactionstandards.org) and a CD-ROM (www.gichd.ca).

by Benzi Telefus [Maaanov Civil Engineering Ltd.]

W hen you think about building a high school, the last word that probably comes to mind is minefield, but that’s exactly what the people of Tzur Baher considered. Clearing a minefield and returning it to civilian use is always important. When the purpose is to allow youth to obtain an education, this significance has added benefits.

Tzur Baher is a small Palestinian village on the eastern outskirts of Jerusalem where 15,000 residents live with only one general school for 4,000 village children. Due to the lack of a public high school, those who do not find schools outside of the village get at most 10 years of basic education.

The community decided to build a new school, but available land was scarce. Most potential building sites in the village were in use for private housing, and the only public land under municipal control was the minefield in the western outskirts of the village, where the Jordanian Army emplaced mines before the 1967 War.

In 2000, the Israeli government and Jerusalem municipality approved a new public housing program that included building two new high schools and a youth center. The building program resulted from an Israeli Supreme Court ruling that forced the authorities to build schools for the villagers.

The decision regarding who would do the clearance and who would fund the clearance of the minefield caused a disagreement between the army and the municipality; each side placed the responsibility with the other. The Israeli Defence Force claimed it is responsible for clearing minefields only when the clearance is a military necessity. Additionally, the IDF insisted that since the land is located on a Jordanian minefield, it was not the IDF’s responsibility to clear it.

The municipality, on the other hand, argued the IDF has the professional and public responsibility to clear the field since the municipal- ity has no expertise in mine clearance.

The government’s legal counsel made the final decision: Israel’s Ministry of Justice decided it was the municipality’s responsibility to do the work and ordered it to engage a civilian mine-clearance company to complete the project. The Ministry of Justice found that although the IDF was not responsible for emplacing the field, it was, nevertheless, responsible for verifying the professional quality of the clearance work. The court consequently ordered the IDF to give the


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With so many factors limiting the education process in the Middle East, it is hard to believe that one more could be imposed upon the people of Tzur Baher, a village in Jerusalem. However, the presence of a minefield in their village severely hindered progress in the building of a school. Maaanov Civil Engineering Ltd. was brought in to begin work. The planned site for the school is now mine-free, and construction is scheduled to start in the near future.
before clearance could begin. The minefield contained a combination of M-3 Belgian and Jordanian AP mines and M-3 mines. In the late 1980s and 1990s, the IDF removed some of these mines to minimize risk, but there was no certainty regarding the extent of the mines left. To make things more complex, over the years the residents encroached on the minefield boundaries to a point that some of the houses were built bordering the field. The presence of these houses made mine clearing much more difficult and called for a gentler and more accurate clearance process.

Clearing the Field

Demining companies in Israel must be approved by the Ministry of Defense and the IDF to assure compliance with quality-control standards and operating procedures. Maavarim Civil Engineering has years of experience in contracting with the MoD for mine clearance and explosive ordnance disposal projects, and was chosen to conduct the mine clearance and to prepare the field for construction of the school. Because this project was undertaken on behalf of the villagers, a special Maavarim liaison officer was appointed to keep the villagers informed about the stages of the project and to address any complaints that arose.

Maavarim’s standard operating procedures, based on the International Mine Action Standards, led to planning and execution of the work on the Tel Bihat project from start to finish. The work on this site was a combination of a few methods. Although the survey and analysis of the field showed no evidence of anti-tank mines, to identify and dispose of the presence of this type of mine, Maavarim personnel marked the boundaries of the field and conducted manual demining using metal detectors.

Next, mechanical demining removed the land to a depth of 0.3 meter (1.6 feet) to the bedrock. In the last stage, Maavarim used specially trained mine-detection dogs to verify that all mines had been removed.

The Israeli Army provided supervision and final approval for the clearance of the site. The first step in clearing a minefield is to identify and dispose of the presence of this type of mine, Maavarim personnel marked the boundaries of the field and conducted manual demining using metal detectors. Next, mechanical demining removed the land to a depth of 0.3 meter (1.6 feet) to the bedrock. In the last stage, Maavarim used specially trained mine-detection dogs to verify that all mines had been removed. The Israeli Army provided supervision and final approval for the clearance of the site.

The concept of the Systematic Test & Evaluation of Metal Detectors: Interim Report Field Trials Mozambique describes the second field trial of the STEMD project. Some basic information on the project, including the background and objectives, was provided. The project involved testing of metal detectors and giving an overview of the state-of-the-art of current mine-detection fleet. The project consists of laboratory tests, field trials and training of interested parties in testing methods. Lab tests are being carried out in the laboratories of the JRC-Ipra. A trial in southern Africa was planned from the outset. Mozambique was favoured because of previous experience and because of the existence of a dedicated training site with different types of soils and the availability of local test targets. The report discusses the second field trial of the STEMD project. Some basic information from the STEMD Interim Report Field Trial Trials is presented. The purpose of the trials in Mozambique was to:

1. Assess commercial-off-the-shelf detectors believed to be appropriate to Mozambique and for humanitarian demining generally.
2. Make the data available for the humanitarian-demining community.
3. Assess the performance of detectors in different types of Mozambican soils.
4. Measure the sensitivity of detectors to typical local targets of interest and standard targets.
5. Train local staff in the CoDA.

The report gives an overview about the prepare and describes in detail the methodology and procedures used to achieve comparable results. The technical details of the detectors described in the report are divided into two categories: technical information that is relevant to users and that which is relevant to technical personnel. A full chapter explains the main factors influencing metal detector performance—the ground. A simple method to gain measurement and gain knowledge about the magnetic soil properties is explained.

In this trial, we were able to take advantage of seven prepared lanes used for training purposes by the Accelerated Demining Program. Lane 1 contained buildings’ sand from a sandpit. Lanes 2–6 contained five different soil types from the zone around Moamba. Lane 7 contained soil from Namaacha, adjacent to the Swaziland border. With these seven lanes and increasing detection difficulties from one lane to the other, the results reflected the influence of soil on the detection abilities of the current metal-detector fleet. The detectors being tested included the 12 latest models from the following manufacturers:

- CEIA S.p.A.
- Ebinger GmbH
- Fastco Ltd.
- Ivisco AG
- Institute Dr. Fötzer GmbH and Co. KG
- Minshah Pty. Ltd.
- Schönherr GmbH
- Shanghai Research Institute of Micro-wave Technology
- Villon GmbH

The results of the trial are laid out in two chapters of the report. One describes the direct comparison of all detectors versus the 13 targets and the seven soil types, and the other is an individual assessment of each detector. For seniority comparison in air, the detectors were...