Finding Legacy Minefields in the Jordan Valley

by Jamal Odibat [ Jordan’s National Committee for Demining and Rehabilitation ]

Due to the many difficulties in accurately determining the location of legacy minefields, demining personnel need traditional and sometimes improvised methods for locating and verifying contamination. With a unique combination of terrain, vegetation, water resources and soil types, the Jordan Valley requires specialized minefield survey and clearance methods to avoid harming the environment.

Regarded as the main source of Jordan’s food security, the Jordan Valley’s climate allows the country to export large amounts of fruit and vegetables year round, and has great potential for further agricultural and economic development. However, the Royal Engineering Corps cleared an estimated 150,000 landmines between 1993 and 2008. In the past few years, most mine-related accidents in the region took place in areas that were previously believed to be free of mines or in areas adjacent to former minefields.¹ After clearance operations concluded in 2008, mines continued to kill or injure civilians, not only posing a serious risk to human security but also blocking millions of dollars’ worth of investments in the region.

In August 2008, the National Committee for Demining and Rehabilitation (NCDR) assessed the clearance reports and conducted local community impact surveys to determine whether mines might have shifted due to flooding or erosion and how this risk was impacting their livelihoods. Following the review of records of legacy minefields and clearance efforts, it was determined that there is still considerable risk to the local population. Results indicated that an estimated 15 percent of the 150,000 mines laid remain unaccounted for.¹ To eliminate the risk that these remaining mines posed, NCDR planned and implemented a new Missing Mine Drill process.

**Missing Mine Drill**

Using this new process, project activities include post-clearance sampling and verification on demined sites employing manual and mechanical teams according to the International Mine Action Standards (IMAS) and the National Technical Standards and Guidelines. This type of sampling both identifies the level of risk in cleared sites and defines the fade-out area to be considered in the operational work plan for each task. Land release procedures for handing over land cleared or released as being verified and safe are applied accordingly.² One of the main challenges was to accurately determine the location of the old minefields and its mine belts.

**Challenges**

Based on NCDR’s experience in the field, some of the greatest challenges faced by demining personnel in determining the exact location of old minefields include the following:

- **Flooding** from the Jordan River leads to the displacement of remaining mines and disturbs the minefield marks, often rendering them inaccurate and useless.
- **Vague sketches** of legacy minefields in the Jordan Valley do not provide comprehensive information on current minefield locations. Coordinates using the old mapping system represented an area of one or more
square kilometers, whereas actual minefields are hundreds of square meters wide. By using rough approximations and vague sketch marks to indicate topographical features, existing minefield sketches could potentially match multiple locations in the surrounding areas.

*Thick vegetation in contaminated areas makes identifying landmarks or the nature of the terrain very difficult. This is made worse by the vegetation that has grown in the minefields over the years.*

**Solutions**

Due to the difficult and dangerous nature of demining in the Jordan Valley, NCDR must compile all available information in order to identify the exact locations of the minefields. To do this, NCDR will conduct field research such as interviewing the local people about their knowledge of existing mines and searching for signs of a minefield, (i.e., barbed wire, fence pickets and any explosive remnants). NCDR will also examine and redraw sketches and documents of the original minefield. In particular, NCDR will use past military movement in the Jordan Valley to determine where militaries would have found it most effective to lay mines. After this process, NCDR will redraw the original minefield on the ground and study suspicious locations again. Once NCDR has sufficient information on the locations of these landmines, the sampling and verification process can begin.

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