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Ukraine Responds to New Mine Action Demands

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similar to requirements with decentralized data entry. MACA has accomplished much of this, with read-only terminals as well as decentralized data entry and advanced data quality capabilities.

Conclusion

IMSSMA V3.0 is a "mission accelerator" for mine action operations and planning; no MAC should run without it. Process management tools expedite day-to-day activities and track actual work on the ground. IMSSMA connects operations staff and managers with each other and the outside world, in real time if they have strong communications. A properly used IMSSMA system reduces administrative burdens.

The powerful SQL database allows fast export and import of data among mine action partners and other agencies (e.g., socio-economic or infrastructure data). GIS functionality allows map display, spatial analysis and quality control of data. IMSSMA offers a wide selection of preformatted forms and reports and can be customized for local needs.

With IMSSMA V3.0's improved management tools, Operations can efficiently task and plan, sometimes without visiting the field. Using IMSSMA this way doesn't require deep IT knowledge, just an interest and willingness to learn—and some helpful "IMSSMA geeks" who will share their knowledge.

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References

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4. For further information on IMSSMA set-up and training, see the following sources:

- Geneva International Centre for Humanitarian Demining (GICHID), IMSSMA implementation and training: www.gichid.ch.

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Ukrainian deminers in south Lebanon used detectors and prods made in the Ukraine.
The work of EOD specialists is just as dangerous and tireless as humanitarian demining. Sometimes people do not understand the phrases such as “noses other than APLs” or try to make a distinction between “landmines and not landmines.” All explosive devices present equally serious threats to humans. Field EOD operators face the same danger on a daily basis; therefore, they need appropriate methodologies, effective projects, international standards, reliable equipment, etc.

International Experience

Ukrainian deminers and technicians learned their most important lessons during the UN mission in south Lebanon at the United Nations Interim Force in Lebanon Mine Action Task Force (UNIFIL-MATF). During the mission, they were strictly bound to IMAS and practiced mine detection, using a variety of provocative equipment that met international standards. So far, the domestic demining operations have also adhered to national rules and standards. In the case of international demining operations, we had to pick detecting facilities as well as provocative and demining equipment on the basis of IMAS requirements. Using the design of various foreign and domestic equipment available, our experts have been testing and developing the new equipment at our Humanitarian Demining (HD) Training Centers.

Mine Detection

To identify detectors suitable for the upcoming demining mission in south Lebanon, we have been testing several different devices. In-soil and in-air testing was conducted in clay, sand and stony areas, resembling Lebanese climatic conditions. In-soil tests were conducted for the purpose of quantifying certain aspects of detector performance (sweep speed, calibration, drift, scan profile, sensitivity). The ergonomic factors, such as ease of use, weight, robustness and comfort were also tested. Unfortunately, the testing deadlock did not emerge due to unfavorable circumstances prevented us from completing this research and forced us to pick an “old-fashioned” former Soviet army mine detector. Using the devices that were well-known among Ukrainian deminers. In spite of its ergonomic deficiencies, the mine detector still performed adequately.

Protective Equipment

In choosing the personal protective equipment (PPE), we also decided to use domestic products. The support’s protective set (“Shell-300 m” flak jacket and flak shorts made from Kevlar) proved to be comfortable, provided protection for vital parts of the body, and was rather light and reasonable in cost. It provides frontal protection of the head, body, groin and hip joint from a distance of two to four m. Working in this flexible protective equipment at temperatures in excess of 35 degrees Celsius, our deminers felt comfortable, except maybe for the exceedingly heavy helmet and 5-mm, three-layer visor.

Demining Tools

To provide low-cost equipment aids to our deminers in mine clearance operations, a Manual Demining Tool (MDT) was produced. The set is flexible and changes depending on terrain, weather and other conditions. Taking into account the desires of the deminers, an R&D laboratory is currently testing a new tool set containing a tripwire ficker, pick prod and profile probe, mini-spatula, demining brushes, shovels, root cutters, etc. Whenever possible, this set should include a blue flag for the back, robeus and not separate into components during mine detonation.

Mechanical Assistance

Until now, only the former Soviet Union’s mechanical applications were used in interior demining operations. In view of the recent requirements of HD, some laboratories that were well-known among Ukrainian deminers. In spite of its ergonomic deficiencies, the mine detector still performed adequately.

Equipment We Want to Have

Detectors

In response to modern HD demands, we are currently seeking a portable, ergonomic and low-maintenance device or system for detecting and imaging landmines and UXO, which is capable of detecting and identifying shallow buried metallic and non-metallic munitions. Depending on terrain and other conditions, this unit would also ideally be able to be used by the deminer in a standing, kneeling or prone position. At the same time, this device must be easy to use and reasonably priced. Currently, several domestic laboratories that are developing pilot models attained adequate results, but the work was still rather time-consuming. Thus, we are planning to cooperate with foreign partners. So far, overseas devices have either been lacking some required characteristics or are too expensive. The ideal detector we would like to see would:

- Have a range of length adjustment
- Be light weight (up to 1.2 kg) and well-balanced
- Be easy to set up and simple to operate
- Have a detailed troubleshooting guide
- Be rugged and waterproof
- Be capable of use in shallow water
- Have versatility provided by several attachments for demining operations:

PPE

The principal criterion for protective equipment is its reliability in shielding the deminer while operating in a minefield. The flexibility, light weight and the comfort of the deminer are also integral parts of the criteria. Equipment that provides protection for only the front and sides of the body, legs and toes, but leaves the back exposed (to reduce heat stress, weight or for whatever reasons) do not fully satisfy us. It is unacceptable to have the back exposed because in the case of a blast when a deminer is thrown and falls on a neighboring mine with an unshielded back, he has no chance of surviving. Ukrainian deminers still operate in helmets with short visors, covering the gap between face and visor with a protective collar. Now we are leaning toward abolishing the helmets and designing a wide and long visor mounted on an absorbent headband. The PPE that Ukrainian deminers want is ideally reliable and flexible and has a light modular design (including protective footwear) allowing the deminer to select additional rigid and soft ballistic components, depending on site requirements. It must provide protection against fragmentation mines and sufficient air circulation around covered portions of the body.

Conclusion

Launching our own national demining program in the Ukraine and taking part in demining projects abroad, we are looking forward to keeping on par with the international demining community. Strict adherence to IMAS and the implementation of the newest technologies and methodologies are of paramount importance to us. Along with the development of the domestic technologies and cooperation with national manufacturers, the Ukraine is interested in collaboration with foreign partners. I would like to inform you of our intention to restart the Ukrainian Mine Action Information Center (UMAIC) project Mine Action Technology Bulletin, which will highlight the tendencies and implementation policy for new technologies in Ukrainian domestic and foreign mine clearance operations. Each interested organization is encouraged to put in its comments, notes and reviews as well as any product advertisements. Terms and conditions of the proposed project will be given out upon request.

*All photos courtesy of the author.

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A group of deminers investigates a mine incident.

Have a low battery indicator
Have minimum cable connections
Have a detailed troubleshooting guide

A group of deminers investigates a mine incident.