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IMSMA and Its Use in Nicaragua

The Information Management System for Mine Action (IMSMA) was created to coordinate and manage information pertaining to land mine activity. The system was designed to be the source for establishing international standards on mine-related information in order to assist humanitarian demining efforts worldwide.

by Nicole Kreger, MA/C

Background

Recognizing the need for a centralized source for mine-related information, the Geneva International Center for Humanitarian Demining (GICHD) created the Information Management System for Mine Action (IMSMA) in April 1998, assisted by the Center for Security Studies and Conflict Research (PfF) at Zurich’s Institute of Technology (ETH). The United Nations (UN) approved the IMSMA Field Module in January 1999, accepting it as the standard for gathering demining information on an international level.

The primary objective of the GICHD is the promotion of international cooperation in the field of mine action, something it hopes to improve by implementing the IMSMA. The system strengthens the UN’s role—and in particular the role of the UN Mine Action Service (UNMAS)—as the primary international resource for information and decisions related to landmines. It is used as a reference by mine action organizations and individuals and as a method for setting the standards for their projects.

The system offers its users a number of benefits, including:

• Expediting a mine action center startup with the Field Module “Starter Kit”
• Collecting and evaluating information from many sources
• Improving worldwide resource allocation
• Facilitating the exchange and expansion of knowledge

• Creating international standards for demining activity
• Providing general information as well as technical support
• Enhancing overviews and management of projects
• Aiding proper monitoring, planning and implementation of programs
• Increasing options for personnel distribution
• Improving the safety of deminers and the general public
• Reducing costs for Mine Action Centers (The GICHD provides the international mine action community with the Field Module for free.)

The System

The system is constructed as a network through which organizations can provide input and assess mine-related data. It was developed based on previously existing mine action programs and the necessary support tools. The IMSMA consists of two autonomous but integrated information management systems, namely the Field Module and the Headquarter Module. The two modules process information on different levels.

The Field Module is based on standard software such as Microsoft Access and ArcView and combines a relational database with a geographical information system (GIS). Organizations enter data into their Field
Module, which manages the information locally. The Field Module can produce a number of reports useful to those on the mine action front. Such reports include:

- Mines/UXO located and destroyed
- Areas cleared
- Hours spent per clearance and in total
- Accident and incident statistics
- Digital picture displays and printouts of mine-infected areas
- Printed mine and UXO hazard maps

Additionally, the data is transferred to the Headquarter Module, where it is compiled with other information and analyzed by the system. The Headquarter Module functions as a decision support system, managing information from all the Field Modules and creating a database for Field Module users. The Headquarter Module itself is comprised of two modules, an information processing module and an information dissemination module, as well as other tools, such as the Database of Mine Action Information. Through this system, results from the Headquarter Module can be accessed by individuals in the field, organizations, governments and others to aid in future mine activity.

The system is multilingual and can be customized to suit the user. It handles four basic kinds of information: technical, operational, strategic and political. Topics processed by the system include dangerous areas, three levels of information-gathering survey, mine fields, clearances, incidents/accidents required—user level and administrative level. The user-level training teaches users the basic operation of the system. Administrative-level training involves learning about the structure and design of the system as well as how to create reports, install applications, back up information and program language access. IMSMA users are also trained in using the ArcView software, which includes learning how to manage the system's digitalized maps.

IMSMA aids Nicaragua in carrying out regional efforts and reporting information to the government. PADCA National Coordinator, Carlos Orozco, explains that it is also beneficial in helping to "keep a flow of information with the National Commission of Demining." Currently, efforts in Nicaragua are focused on completing the database. PADCA has run into a few glitches with the system, particularly in using the maps, but these should be ironed out very soon. Even in the short time since the module was installed, users have been able to accomplish a number of tasks, including:

- Working with the army to complete Level 1 surveys
- Recording Level 2 minefield data
- Monitoring the progress of ongoing demining tasks
- Keeping track of accidents/incidents used to identify victims and provide assistance

Conclusion

What does the future hold for Nicaragua now that the IMSMA has been implemented? Orozco hopes the system will help in "implement[ing] more efficient strategies and policies for the affected population" and "prioritize objectives to The National Commission for Demining." More specifically, he hopes to use IMSMA to:

- Give demining organizations a better idea of the scope of the problem
- Keep updated records on mine victims
- Improve rehabilitation processes
- Monitor demining activities in order to develop more efficient strategies and policies to assist the affected population
- Help prioritize the objectives of The National Plan of Demining
- Measure the socio-economic impact of mines on the country as accurately as possible

With these objectives in mind, PADCA hopes IMSMA will help in getting a better handle on the mine situation in Nicaragua and bring peace—and peace of mind—to the country's people.

Headquarter Module

Field Module

Headquarter Module

Field Module

The flow of information between the Headquarter and Field Modules.