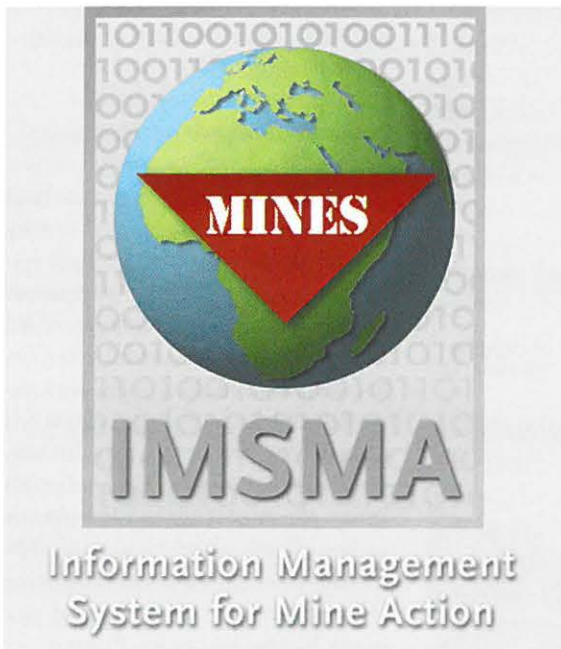


IMSMA and Its Use in Nicaragua

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.



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

by Nicole Kreger, MAIC

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 (FSK) 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

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 trans-

ferred to the Headquarter Module, as well as other tools, such as the Database of Mine Action Investments. 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/acci-

idents, lessons learned and a daily log. The three levels of survey are:

- **Level 1: Assessment** – measures the socio-economic impact of mines/UXO in a given area.
 - **Level 2: Technical** – defines the exact boundaries of mine fields.
 - **Level 3: Completion** – declares an area mine free.
- The system is structured so that

improvements and adjustments can be made as needed, so that it may grow and develop with new innovations in the field of mine action.

The first field module was installed in Kosovo in June 1999. Since then, a number of other countries have implemented use of the IMSMA. The system is currently up and running in Chad, Yemen, Azerbaijan, Ethiopia, Somalia, Estonia, Eritrea, Thailand and Lebanon. Nicaragua was one of the most recent locations added to this list, with system installation completed in November 2000.

Use in Nicaragua

With current estimates of land mines in Nicaragua exceeding 100,000, the country's need for a system such as the IMSMA is apparent. Hurricane Mitch hit the region hard in 1998, causing mines to migrate from mapped-out areas into unknown locations and putting the country's demining efforts back at square one. In October of the same year, an emergency plan was launched in response to the effects of the hurricane. The damage caused by Mitch set demining efforts back about two years, and estimates by the Assistance Program for Demining in Central America (PADCA) predict that mine clearance efforts should be completed in 2004.

The Nicaraguan field module is supported by the Organization of American States (OAS) and is currently being used by PADCA—a division of the OAS—as well as by the National Commission of Demining (CND). PADCA's office in Managua currently uses the system to gather and process data specifically for Nicaragua. In the near future, however, the OAS hopes to expand the reaches of the IMSMA to include other Central American countries.

Before using the system, the staff underwent a two-month mandatory training period. Two levels of training

are 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

- Mapping out locations of victims and minefields using the ArcView-GIS software
- Using stored data to create new reports on specific mine action needs

Also, the system has already been deemed the official source for mine action information in Nicaragua.

In addition to the internal functions of IMSMA, this system also aids in focusing other mine-related projects for its users. In Nicaragua, it will help mine action organizations to plan a campaign before implementing it. Also, PADCA is currently working on a national guide to mine awareness, and plans to use IMSMA to provide assistance in making and using this guide.

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 “prioritizing objectives to The National Commission for Demining.” More specifically, he hopes to use IMSMA to:

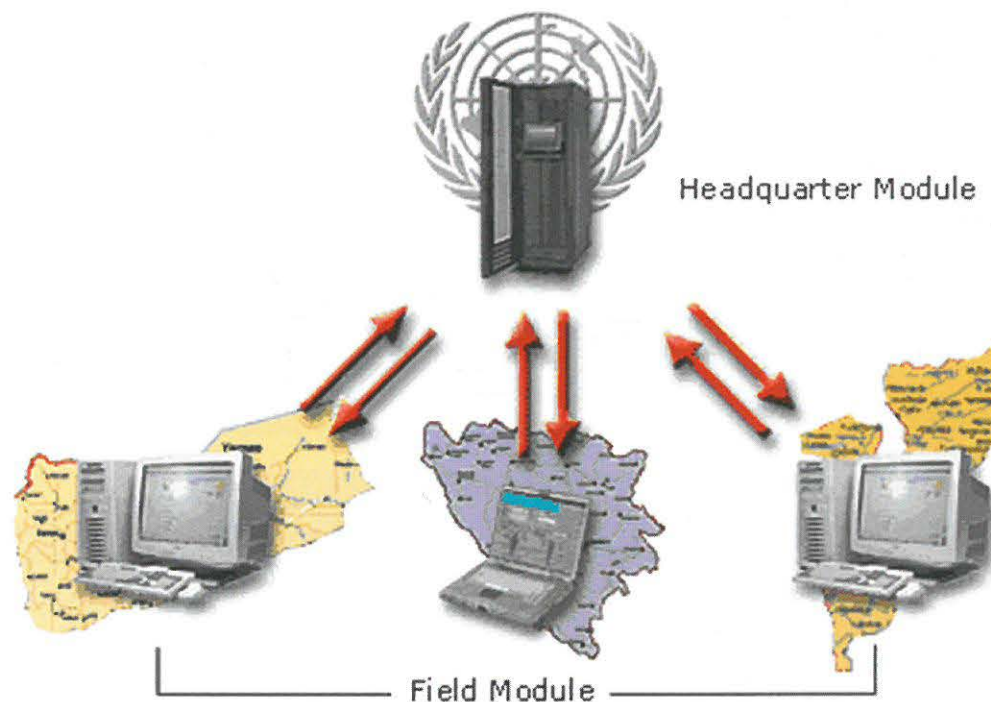
- Give demining organizations a better idea of the scope of the problem
- Keep updated records on mine victims
- Improve rehabilitation processes
- Monitor demining activities in order to develop more efficient strategies and policies to assist the affected population
- Help prioritize the objectives 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. ■

**All graphics c/o IMSMA*

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■ The flow of information between the Headquarter and Field Modules.

ferred 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