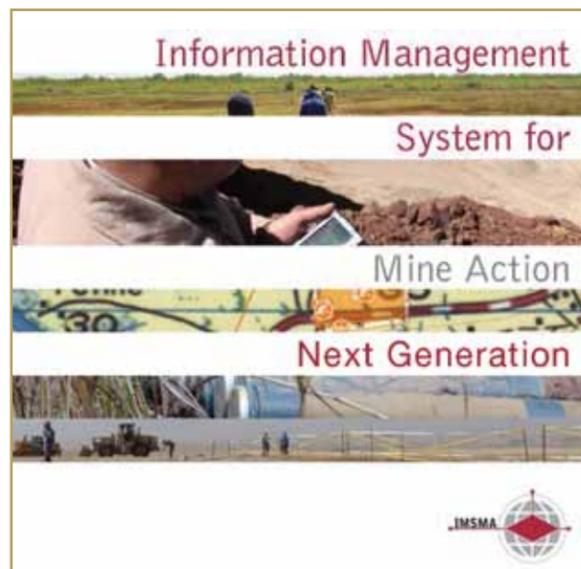# Modifying IMSMA Training: The Mine Action Information Management Qualification Scheme

The Mine Action Information Management Qualification Scheme (MIQ) is a new training tool for the Information Management System for Mine Action. It was created in response to the Next Generation version of IMSMA, the newest version of the system. The Geneva International Centre for Humanitarian Demining eliminated the rigid and unnecessary parts of the training system in order to make MIQ more user-friendly. The MIQ scheme is currently being incorporated into several countries' information-management programs, but it still needs input as it is being refined and implemented.

by Aurora Martinez and Daniel Eriksson [GICHD]

IMSMA^NG administrators from Chile, Colombia, Ecuador and Peru at the Level A1 training in Bogotá, October 2010.
Photo courtesy of Gabriela Parra Martinez.

The Geneva International Centre for Humanitarian Demining created the Information Management System for Mine Action to help mine-action organizations arrange and analyze their data. This data-processing system has helped with faster and more transparent decision making. The first IMSMA system was launched in Kosovo in 1999 and has undergone several revisions, and has now reached the point where no more major software developments are needed. Starting in 2011, only minor updates will address bugs and technical-context changes, such as updates to the Microsoft operating system.

To help users navigate their way through the IMSMA system, the GICHD also offered a training program. As IMSMA has undergone revisions, the training program had to evolve as well. The newest information-management system version, IMSMA–Next Generation (IMSMA^NG), has sparked the development of a restructured training system, the MIQ, which the GICHD launched in August 2010.

Built on experience gained during IMSMA^NG deployment and users' feedback, the MIQ scheme aims to make mine-action information-management training more effective. Standardizing the core information-management roles of mine-action programs using IMSMA^NG can help achieve this (See Figure 1).

Revising the Past Training System

The past training system's learning objectives were based on step-by-step instructions on IMSMA's standardized technical features. Users were taught how to create IMSMA reports by filling out the standardized IMSMA forms and following the defined workflow's steps and related business rules. In IMSMA Legacy, IMSMA's older version, the workflow and its related forms were fixed. For instance, "Survey Level 1" was the first workflow process. This process could result in one or more "mined areas," which were forms to contain information on hazardous areas with the lowest confidence level.

For a number of years this training method proved effective for IMSMA Legacy systems. However, IMSMA Legacy did not fit the information-management needs of its users. The organizations using IMSMA Legacy were often forced to adapt their activities to IMSMA because of the program's rigid workflows and forms. IMSMA^NG was designed to be more flexible. It addressed these shortcomings and enabled the mine-action programs to define their own workflow and forms upon software installation. In addition, IMSMA^NG includes functionality for the system administrators to define standard statistical reports that users can easily retrieve. Examples include progress reports, victim statistics and project tasking statistics.

However, all of this customization put a new form of responsibility on the mine-action programs. In the past, organizations used the rigid workflows and forms available to simply do **what IMSMA told them to do**. Advanced mine-action programs developed **add-ons** to work around the IMSMA Legacy limitations. Now, because the system no longer inhibits flexibility and functionality, organizations are responsible for making a comprehensive plan that aligns their information management with their overall strategic aims and objectives. This new responsibility requires the redesign of IMSMA training.

IMSMA^NG Information-Management Procedures

Training efforts have had to address a wide range of mine-action information-management activities that must take place whether IMSMA is used or not. To produce a good-quality report, such as a transparency report according to the Ottawa Treaty, the data-collection forms and workflows leading up to the quantitative-data production for the report need to be planned in advance.

While MIQ training still focuses on IMSMA^NG use, information-management practices taught in this training can also be partly applied to the information-management design of any information system. In comparison with other proprietary software, IMSMA^NG has the benefit of combined technologies, a ready-to-use mine-action framework, the compatibility with other proprietary software for additional data analysis, and best of all, it is free of charge.
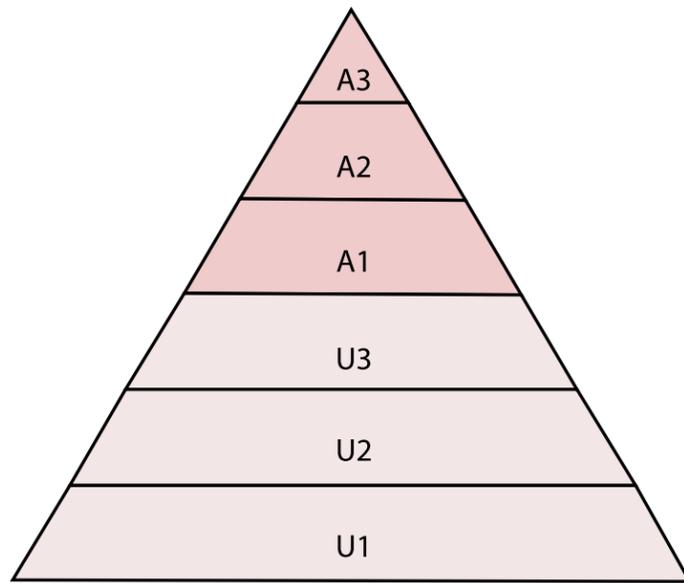
Figure 1: Summary of MIQ levels for national staff. Administrators are trained at three increasingly difficult levels, with A3 requiring the most skills. Users are also trained to three levels, with Level U3 being the most difficult.
Graphic courtesy of GICHD/CISR.

Teaching the Right Skills to the Right Person

During the IMSMA[NG] deployment, it became obvious that all users could not be trained in all information-management elements. Consequently, a new approach was adopted, focusing on what the users need to know, thereby not burdening them with unnecessary information on technical features. For instance, end users in an operations department do not need to know how to apply advanced customization features; administrators will have that knowledge.

The information manager plays the key role in information management for mine-action programs. This manager is responsible for planning how the program gathers and manages information, continuously ensuring it is in line with the program's overall strategy. For most programs, the information manager is also the system administrator. The system administrator makes adjustments to information systems, like IMSMA, to ensure that forms and reports reflect the organization's needs as defined by the information manager in discussion with senior management. The system administrator also performs maintenance tasks like backups and user-account management.

Though not yet a widespread practice, roles and procedures for information management should be documented in a national mine-action standard. This standard should include a comprehensive set of workflows, definitions, forms and reports.

A comprehensive standard should start with information-needs analysis for a mine-action program's identified decision-makers and clients (e.g., operations officers, victim-assistance specialists, donors, governments and international organizations). This needs analysis then sets the way for the subsequent phases of data collection, storage, analysis and dissemination. The planning is repetitious, and after information is used in the dissemination phase, the lessons learned feed into another needs analysis to improve service in the subsequent cycle.

Different Installation-Complexity Levels

The MIQ scheme specifies basic prerequisites for target participants and is designed to achieve outcome competencies based on each participant's information-management role. For national staff, the training levels are divided into two groups: users (three sub-levels) and administrators (three sub-levels).

The GICHD measures a mine-action program's current information-management capacity through analysis that highlights a program's specific needs. The needs are not simply determined by size, such as the number of staff or amount of contaminated land. Instead, the program's maturity and resources determine the skill level their information manager requires. For example, all information managers should pass the foundational, two-week Level-A1 Administrator course offered by the GICHD. In mature mine-action programs with more complex information-management standards, administrators are recommended to take higher training levels, A2 and A3. A complex information-management standard could include distributed data entry, linking to external systems, recurring data imports and spatial-data analysis. The vast majority of programs will suffice with one or two administrators trained at Level A1.

A new IMSMA[NG] guide will be available in early 2011. This will support some of the aspects covered by Level-A1 Administrator course content. An e-learning curriculum for mine-action spatial analysis is in development and is expected to launch in spring 2011. It targets English-speaking students who have passed the Level A1 training but only have basic geographic information-system skills. It enables users to link Esri ArcGIS, a powerful stand-alone tool for GIS, to IMSMA[NG], print large-format maps and overlays, and conduct spatial analysis and prioritization.

End-users Training

The national administrator staff best conducts *in-situ* training for end users. National administrators are those with the greatest understanding of all local data-entry forms, workflows, and language and terminology. Administrators with Level A1 qualification are expected to not only train all three user levels but also write locally adapted manuals and standards. GICHD provides guidance and templates for administrators to do this. Learning objectives for end-user training are expected to be achieved within three to five days depending on computer literacy and targeted user level.

Training Dates for 2010–11

A regional Level A1 training course has been delivered in Latin America. The mine-action programs in Chile, Colombia, Ecuador and Peru now have one or more Level A1 trained staff. In addition, in November 2010, information managers from four national mine-action programs also received Level A3 training.

For 2011, the tentative training schedule is as follows:

- 11–21 April, A1 course in Geneva
- 19–30 September, combined A1 and A2 course in Geneva
- 24 October–3 November, combined A3 and Expert-level course in Geneva

The GICHD website's event calendar will have complete details. All 2011 centralized courses will be conducted in English. ⬧

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