

Increasing the Impact of Mine-action Surveys

While mine-action surveys are an important tool in mine clearance, there are several challenges that must be overcome for survey results to be fully effective. Some of these changes include alterations in priority setting, information management and impact scoring. This article presents some potential obstacles to completing and evaluating mine-action surveys and proposes possible solutions to these challenges to increase their effectiveness and impact.

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Integration of landmine-impact assessment as the essential strategic component of mine-action survey has created the conditions for a qualitative advance in planning and management of mine action. This assessment is further supported by the spread of the Information Management System for Mine Action¹ as the core information system for mine-action country programmes. Landmine Impact Surveys provide a comprehensive assessment of the effects of landmines on local socioeconomic activities, through systematic interviewing of residents in all communities suspected by experts or the local population to be mine-affected. Governments use the landmine-impact-assessment results to obtain a better understanding of their national mine problem and to better allocate resources to respond based on a shift in strategic focus from the **mine-field** to the **community** and from **hazard/contamination** to **socioeconomic impact**.

While this shift has improved the ability to strategically plan and set priorities for mine action generally, it faces a number of challenges in areas where it is not necessarily well-adapted, including accurate estimation of Suspected Hazard Areas; the need for Technical Survey follow-up for operational planning; development of IMSMA as the comprehensive database for mine-action programme management; updating of national impact scores to reflect results of actions undertaken; community involvement in operational planning and priority setting; and measurement of the progress and impact of mine-action programmes nationally and globally.

Mine-action Surveys and Priority Setting

Priority setting is the most critical process in mine-action programme management. The approach to priority setting should support the goals of the respective programme. These include direct mine-action goals (rapid reduction of new victims, elimination of all landmines and effects of landmines) and support to local and national development (e.g., support to local economic development, support to regional road or electrical system rehabilitation).

Priority setting based on hazard alone may eventually lead to the elimination of all landmines and may permit more efficient clearance planning and logistics, although it may not provide much immediate relief to the population nor support government development activities. Priority setting based on community impact will respond better to perceived community needs, although it may not fully support national development. It makes a difference which communities are addressed first and which communities are left for later, and proper consideration of these opportunity costs requires appropriate priority setting. This is a management process that requires information, consultation and judgment—including periodic review of results and reassessment of the assumptions and decisions made.

General Approach to Landmine Impact Surveys

Feedback to government and communities. While Landmine Impact Surveys always begin with the agreement of the host government, actual commitment to the survey often is manifested only when the results begin to

be available and their usefulness becomes evident. It is important to provide feedback to the government and community during the survey process, including interim reports as provincial or other sub-areas are completed. This step should be followed with community consultation during the operational planning process, to reconfirm the nature of blockages² and the availability of the necessary resources for the community to make full use of the land once the blockages have been removed.

Use of existing minefield databases. Where minefield databases already exist, the LIS should utilise them as valid sources to identify known mine-affected communities and Suspected Hazard Areas while also searching for more. Full survey visits will still be required to obtain blockage data and update SHA and victim information; these will provide a far more complete understanding of the problem. Two Landmine Impact Surveys conducted this way (Afghanistan and northern Iraq) resulted in a total estimated contaminated area significantly lower than the total area estimated prior to the survey. Furthermore, because all mine-affected communities and known SHAs were visited and the earlier contamination estimates validated or denied by the new survey, the new databases superseded the previous ones.

Rapid appraisal bias. Landmine Impact Surveys utilise group interviews, key informant interviews, community mapping and visual verification. These are the typical tools of rapid appraisal, and the results have the strengths and weaknesses of the method.³ The data collected relies on local knowledge for a richer understanding of the impact of landmines on the community; however, this information collected is only as complete and reliable as the community sources providing it. It could be limited by the absence of displaced populations or by the lack of participation of women or others not available during the short visit. Problems may be overstated with the hope of obtaining greater assistance or understated to avoid interruption of relief assistance, tourism or travel. The possibility that information is biased or provided “strategically” reinforces the need to seek multiple data sources (“triangulation”) and to reconfirm the accuracy and completeness of the information during operational task planning.

Limits of community information regarding national priorities. There are inherent limits in the Impact-Survey methodology that exclude effective treatment of some national priorities. Focus on community impact does not adequately capture blockage data regarding projects that are important beyond the immediate community, such as regional or national roadways, electrification and water systems. These blockages need to be identified by other information-collection efforts and incorporated into the core mine-action database.

Gender issues in mine-action surveys. The relevance of gender issues has been recognised in mine-action surveys, and LIS teams usually make specific efforts to incorporate gender concerns. Some of these efforts include having women as well as men on the survey teams; conducting interviews at times and places suitable for participation by both women and men; conducting group meetings with women alone as well as with men and women together; collecting data disaggregated by gender for mine victims; and collecting and analysing the data with attention to the different daily experiences and risks of men and women.

Information Management

IMSMA limitations constrain programme management. The LIS results are recorded in the IMSMA database system. While this system was a major step forward, it has also presented some limitations. First, the IMSMA database was initially developed as a data repository and not as an instrument for operational management of mine-action programmes. As a result, each mine-action programme where IMSMA was deployed had to develop its own parallel software

to support operations, some of which have been incorporated into later versions of IMSMA. Second, there is a need to integrate other key data sets (e.g., bombing data, previous survey data requiring verification, Suspected Hazard Areas not associated with any community) into the single mine-action database, but neither the LIS nor IMSMA was designed to handle this need. Third, there is a need to incorporate impact on national development along with community impact. These technical issues create important challenges to effective information management for national mine action.

Obsolescence of LIS data. The database should be kept up-to-date. Ongoing analysis of survey results and programme progress requires ongoing investment in the information system staff as well as institutionalisation of the Impact-Survey process. The initial LIS, sometimes referred to as a “snapshot,” is better thought of as a starting point—an investment in comprehensive data collection that should be continued to reflect changing reality. As new mine-affected communities or SHAs are discovered, or new mine incidents occur, they should be added. The results of mine action to clear or mark areas to eliminate blockages should be updated into the database. A procedure is needed to remove victim data from impact calculations once the problems of a community have been fully treated, so that progress can be properly reflected. Finally, the strategic summary of community impact status should be updated and reported annually.

Use of Impact-Survey Data

Community impact scoring. Design of the LIS scoring system produced a simple system for ranking community impact as low, medium and high. The ranking system proved very powerful in directing attention to high-impact communities by highlighting them and their limited number, which presented a more “bounded” problem and thus an achievable solution. In most countries, the number of high-impact communities proved to be significantly lower than expected by those working in the country, which led to the concern that other communities with essentially the “same impact” were relegated to a lower category (and thus would get less attention) due to defects in the scoring system. While carefully considering the impact rationale, it is important to maintain international support to resolve all high- and medium-impact situations.

Utilising results for strategic and operational planning. “High impact” is not the same as “high priority.” “High impact” should lead to focused attention of expensive resources to analyse and determine how best to respond to the problem. “High priority” is a possible result of considering communities and SHAs within the framework of national priorities. The set of high-impact communities provides the core of a working list of communities warranting priority attention, initially through follow-up survey to confirm the blockages of specific communities, and subsequently to provide more precise boundaries and planning for clearance or marking as appropriate.

Overestimation of total SHA. The LIS data tend to overstate the extent of contaminated areas, since survey teams were neither expected nor trained to carefully determine boundaries. This apparent increase of the total contaminated area reduces the credibility of the survey results and creates the risk of a programme expending significant scarce resources to “clear the database” rather than to clear minefields. It is important to improve area estimation by applying the 2005 Survey Working Group protocol on “visual inspection,” supported by appropriate training, equipment and inclusion in the survey teams of members experienced in mine clearance.

Limited technical information on SHAs. The LIS collects less minefield information than clearance operators were accustomed to obtaining from minefield surveys. Furthermore, although the LIS teams produced sketch maps of the SHAs, IMSMA did not indicate

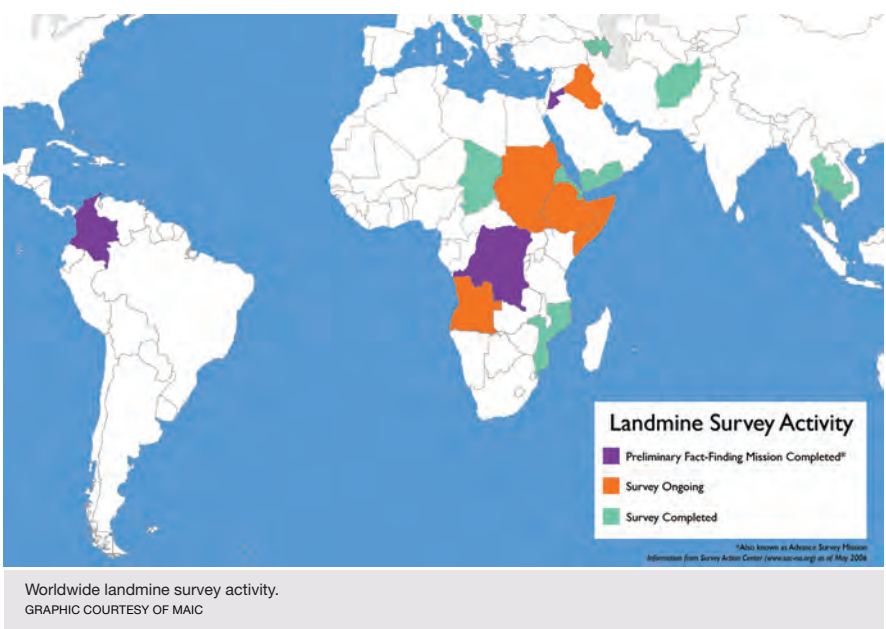
the SHA locations or boundaries, only providing circles sized in proportion to the estimated area. Even with more accurate estimation and careful mapping of SHA polygons, Impact Surveys will not be sufficient for operational planning. The purpose of the follow-up survey is to complete the technical information on the SHAs, confirm with the community the existence of blockages and their cause, and determine the plan of action to eliminate the blockages at the minimum cost.

Task assessment and community planning. Prioritisation of high-impact communities for clearance is meant to provide greater benefit for communities and the nation. However, while landmine blockages may have a high impact on the community, removing the blockage may not eliminate the effect—the community may not return to its previous normal activity. Thus, the likelihood of prompt use of the land should be assessed as part of the planning process, since lack of use for an extended period would cancel out most of the benefits of the clearance effort. This assessment process, involving community stakeholders in the operational planning process, was developed in the minefield-focused Task Impact Assessments of Norwegian People’s Aid⁴ and the Task Assessment and Planning methodology of the Survey Action Centre,³ and was carried out most effectively in the Bosnia and Herzegovina Mine Action Centre’s community mine-action plans.⁶

Assessing the Results of Mine Action

Post-clearance impact assessment. Programme managers, national governments, donors and the local community are all concerned with creating the greatest possible impact from mine-action programmes. Post-clearance impact assessments should be conducted following the clearance of blockages in order to determine the actual use of the cleared land and thus the benefits derived from the mine-action programme, as well as whether the assumptions that led to the prioritisation of the site were correct—and if they are not, to reconsider those assumptions to improve future planning.

Measuring the results of mine-action programmes. Most mine-action programmes report their results primarily in the traditional terms of square metres cleared and landmines/pieces of unexploded ordnance removed. While such indicators may be useful for measuring the efficiency of site operations, they are not meaningful indicators of programme results. The LIS has established meaningful country-specific baselines against which



progress can be measured. Among the success indicators to consider are:

- Number of blockages existing/removed
- Number of high- and medium-impact communities in a country
- Share of high- and medium-impact communities in annual work plan
- Number of high-risk SHAs
- Number of new mine victims
- Number of mine-affected communities
- Number of people living in mine-affected communities
- Total area contaminated
- Traditional output measures

Changes in any of these indicators will reflect progress against national mine problems, and they can be aggregated to estimate global progress toward solutions for the worldwide landmine problem.

Conclusion

The mine-action survey process today—with its focus on community impact—has developed far beyond the minefield surveys of the 1990s and the rapid appraisal approach of other development fields. Landmine Impact Surveys have been completed in at least 10 countries and regions as of May 2006 (as seen in the above map), and IMSMA is now the core database in most mine-action programmes. In this process, much has been learned, yet further challenges remain. ♦

This article is derived from a chapter in A Study of the Role of Survey in Mine Action³ and reflects on the case studies contained therein (Angola, Bosnia and Herzegovina, Laos, Mozambique), as well as case studies in Evaluation of the Global Landmine

Survey Process⁷ (Bosnia and Herzegovina, Cambodia, Chad, Ethiopia, Mozambique, Thailand and Yemen) and the author’s own experience, including discussions with colleagues in many countries and organisations around the world conducting or using the results of mine-action surveys.

See Endnotes, page 111



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