Area Reduction: A Solution Whose Time has Come

Collectively, the mine action community has spent over $1.7 billion (U.S.) since 1992,[1] yet it remains uncertain how much closer we are to the goal of a mine-free or even a mine impact-free world.

by Bob Eaton, *Executive Director, SAC*

A 100-Year War?

Reports from seven typical mine-affected countries in 2002 indicate that, at current rates of clearance and expenditure, it will take 135 years and $20 billion to do the job in those countries alone. The math is simple, the policy and operational implications not so.

The countries in Table 1 were chosen because the data they reported under Article 7 of the Mine Ban Treaty was extensive and comparable. However, the table does not rise to the level of analysis because the data is too general to sustain a detailed analysis. Nevertheless, a clear tread line emerges from the data and it stretches far into the future.

Hard Realities, Soft Data

What was good enough five years ago is no longer so acceptable. Improved management capabilities on the part of national authorities have led to demands for better data and longer-term planning. Donors increasingly request reporting based on strategic planning. The Mine Ban Treaty review conference in Nairobi next year will focus attention on progress, or lack thereof, in meeting Article 5 obligations of States Parties to clear all mines in the ground by as early as 2009. All these developments raise the demand for more accurate data.

Most mine action authorities acknowledge that current database reports of areas of suspected hazard are overstated. Croatia has one of the better organized mine action programs. Yet, the Croatia Mine Action Center (CROMAC) Plan for 2003 states that "the mine-affected area stretches across Croatia, ... covering 1,630 sq km, and within this area, ... it is estimated that 10 percent is actually affected."

The Survey Working Group, at its meetings this year, has agreed that it will no longer publish area figures in its printed reports because the confidence level in area estimates based on current general survey techniques is simply too misleading. Landmine Impact Survey interviewers will continue to carry out visual inspection and record estimates of areas and define polygons where possible, but this data will be recorded in the database as provisional.[3]

In the early days of mine action as an industry, humanitarian mine action was inventing itself—working hard, making many mistakes and learning from some of them. General surveys and analysis of conflict zones produced maps and databases that generally defined the problem and provided a basis for general planning and resource mobilization. It was good enough at the time. But we now know that this early data collection systematically overstated the problem. This is not surprising. Landmines are instruments of terror, and reasonable and honest people will usually err on the side of caution and overstate the size of the problem—lives and livelihoods are in the balance.

So Much Data, So Little Time

Without a capacity to reduce these reported areas to realistic clearance, fencing and marking tasks and to prioritize these tasks, the struggle to contain the terror and restore community livelihoods will stretch far into the future and, arguably, well beyond the endurance of the donor community.

The problem confronting Croatia confronts most mine action authorities: how to reduce exaggerated area estimates to realistic, prioritized clearance, fencing, and marking tasks—and how to do this with an intellectual and moral certitude. From a logical point of view, it is impossible to prove a negative. It is simply impossible to prove that something does not exist. A properly conducted clearance operation can practically demonstrate that an area is safe. But this is not a solution by itself; as Table 1 indicates, it takes too long and costs too much.

CROMAC notes that if the 1,630-sq km suspected hazard area can be reduced to 10 percent, then at current rates of clearance, the country will be mine-free in eight years.[4] The cost would still be prohibitive at 240 million Euros.

As the mine action community matures and requires increased and better long-term planning, we must develop a positive approach to defining the minimal tasks necessary to contain the crisis and we must simultaneously reduce the error that has entered into too many databases in the early days of our formation.

	In 2002			Needed for completion	
Hazard Area (sq km)	**Area Cleared** (sq km)	**Funding** (millions of $)	**Cost** ($/sq m)	**Money** (millions of $)	**Time** (in years)
11,840	86	140	1.62	20,000	135

Table 1: Mine clearance projection for Afghanistan, Bosnia-Herzegovina, Cambodia, Chad, Mozambique, Thailand and Yemen.[2]

Accentuate the Positive, Eliminate the Negative

The International Mine Action Standards (IMAS) define area reduction as "the process through which the initial area indicated as contaminated (during the general mine action assessment process) is reduced to a small area. Note: Area reduction may involve some limited clearance, such as opening of access routes and the destruction of mines and UXO which represent an immediate and unacceptable risk, but it will mainly be as a consequence of collecting more reliable information on the extent of the hazardous area...."[5]

This definition generally falls short of a technical survey. It basically calls for a more detailed general survey. A distinction to be made between general and technical survey is that the technical survey requires trained deminers fully equipped and supported as if they were on a clearance operation. A technical survey usually involves entering into the mined area. A general survey seeks better information while remaining outside the mined area. Thus, the requirements for a general survey are considerably less in terms of personnel, training, equipment and, finally, money.

Given the expense of technical surveys, most area reduction will depend upon better general survey methods. Rune Engeset's article provides new approaches to better define suspected hazard areas and is a valuable contribution to increasing the accuracy of area reduction through general survey and re-survey. It will provide the basis of a new Survey Working Group protocol to improve the accuracy of Landmine Impact Survey area estimates. If utilized by the broader general survey community to reassess existing data, it will go a long way to help eliminate the negative—reducing the exaggerated area claims of many suspected hazard areas.

Classic area reduction, as defined by IMAS, tells us where we don't have to deploy mine action assets. This is a vital and time- and money-saving procedure. We need to know in a positive sense where to go on a priority basis so that risk to life and livelihood is reduced as quickly as possible.

The solution of the area reduction problem is critical to the measured success of mine action on a country and global level. Generally speaking, we have not been very good or systematic at this process, yet success is largely dependent upon it. The articles in this issue of the *Journal of Mine Action* advance the process, by further refining our measurement tools so that reported areas can be reasonably reduced in size with general survey techniques while at the same time focusing on task assessment and selection so that the impact of mines in the ground can be neutralized through clearance, fencing or marking.

For additional information on area reduction see "Priority Setting for Mine Action" by J.J. van der Merwe and "Suspected Hazard Area Mapping in Non-Technical Landmine Surveys" by Rune V. Engeset online at the Journal of Mine Action, http://maic.jmu.edu/journal/7.3.

**All photos courtesy of the author.*

Visual inspection of area in Bosnia-Herzegovina.

References

1. International Campaign to Ban Landmines, *Landmine Monitor Report 2003*, p 51.

2. Source: Standing Committee on Mine Clearance, Mine Risk Education and Mine Action Technologies, "Progress in Implementing Article 5: An Overview of the Mine-Affected States Parties' Problems, Plans, Progress and Priorities for Assistance," draft. 22 October 2003: http://www.gichd.ch/pdf/mbc/5msp/5MSP_SCMC_Progress_in_Art_5.pdf.

3. Survey Working Group, Minutes of Meeting, May 2003. "SWG-03-06 Protocol Six—Visual Inspection."

4. CROMAC Plan for 2003.

5. http://www.mineactionstandards.org/IMAS_archive/Final/04.10.pdf; para 3.14.

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