In response to the problem of landmines around the world, the United States has created a Demining 2010 Initiative that is "a U.S.-led initiative to develop, marshal and commit the resources" to end the landmine threat to civilians by the year 2010 [1]. One aspect of this initiative is the Demining 2010 Initiative Conference, to be held in the summer of 1998. This conference offers an opportunity to standardize data collection methods to more accurately assess the landmine problem.

Most initial estimates concentrated on the number of landmines in affected countries and the costs for removing each landmine. Two recent publications have raised concerns about the value of these estimates for considering the problem as it is today. In the Summer 1997 edition of this journal, Peter Hager interviewed Colonel Lawrence Machabee, USMC, who was one of the central figures in the development of the U.S. State Department publication Hidden Killers [2,3]. Hidden Killers is often cited as one of the authoritative sources for landmine numbers data, yet Colonel Machabee expressed reservations about the validity of this 1994 data for estimates in 1997. In addition, in a February 1998 Washington Post "Outlook" article, Laurie Boulden questioned what she termed "official" statistics on landmine numbers saying that professional deminers had told her that "the 'official' numbers vastly overstate what they [the deminers] have found" [4].

Even if we could accurately estimate mine numbers, it would be difficult to accept them as effective measures for two reasons. First, landmines are not the only problem. Unexploded ordnance (UXO) is at least as dangerous as landmines. In addition, improvised explosive devices (IEDs) and various other harmful leftovers of military conflict pollute the landscape of many former war zones. All of the leftovers from a conflict that deminers face--landmines, UXOs, IEDs--should be measured. Second, estimating the numbers is not an effective measure of the resources required to implement a solution. Contaminated areas may be more or less densely populated with explosives, but that information is insignificant to a deminer. For example, if a 100 square meter field is presumed to contain explosive devices, the number of explosives is irrelevant. Whether it contains 50 devices or 100 devices, the entire field needs to be surveyed with the same care.
Instead, discussions of the problem should center on the area of land contaminated and the cost and time required to clear the area. By and large, demining organizations already make their own estimates based on land area. Efforts already are underway in most polluted countries to survey the number of contaminated square meters of land and could provide a more realistic estimate of the magnitude of the problem. In addition, estimating the cost for clearance by square meter would give a far more accurate description of the cost and likely duration of clean up. These estimates are not easy to produce, nor are they uniform across countries. For example, professional deminers are skeptical of estimating the size of minefields because it demands extensive and, thus, expensive surveying. They say that simply demining the field without estimating its size is more cost effective. Additionally, they point out that cost and time per square meter for clearance vary with the type of land. Sand, farmland, rice paddies, and brush all are demined with different levels of difficulty and require different amounts of money and time.

However, estimating the problem according to land area holds promise for two important benefits. The first benefit of this method is prioritizing critical areas for demining, such as roadways, wells, voting areas, bridges, etc. By compelling removal of the landmine obstacles from these critical areas first and demarcating the remaining contaminated land, such prioritization would allow a quick return to more normal daily conditions for local populations. The second benefit is changing our perception of the landmine problem from impossible to approachable. For example, it has been estimated that at the end of 1995 there were 488 square kilometers of contaminated area in Afghanistan [5]. During that year, the United Nations mine clearance program for Afghanistan spent US$25,050,000 and cleared 44 square kilometers of land [6]. According to these figures, if funding levels were maintained, the problem in Afghanistan could be resolved in about ten years. While Afghanistan contains more areas to be surveyed and, therefore, the size of the contaminated area is likely to grow, an estimate such as this is far more promising than estimates based on numbers of mines. This method would make demining an approachable issue rather than a process that could take "more than a millennium" [7].

In short, the demining community needs to establish a common data collection method based on land area. An effective, agreed-upon, and widely used method of measurement and data gathering would move the entire field closer to a resolving the landmine problem by providing more accurate estimates of the problem. Because one purpose of the Demining 2010 Initiative Conference is to "develop ways to improve the international exchange of and access to demining information," I recommend that the conference include specific agenda activities designed to establish a consensus on data collection methods and publish a schema of definitions based on the results [8].

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References


