

## A Rose by Any Other Name: The Interrelationship of Landmines and Other Explosive Remnants of War

The author explores the vast diversification in landmine etymology, condemning efforts that sought to provide more information but only complicated an already difficult process. Dugger continues with a historical perspective on the progression of language and processes used to address problems posed by landmines and other explosive remnants of war.

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When I first became involved with unexploded ordnance and landmines in 1983, the terminology was more straightforward and perhaps a bit more descriptive than the tortured phrases we use today. We named our company “UXB” after seeing the long-running show on *Masterpiece Theatre* entitled “Danger UXB.” (UXB is a British acronym for “unexploded bomb” and the show that depicted the trials and successes of the elite British UXB teams was a phenomenal success.)

Most everything back in the early 1980s could be described as a mine, a rocket or a bomb. The more clever members of our group would at first enhance the descriptions with additional information such as a “little” mine or a “big” bomb. Whatever the “name *du jour*,” all of these things were potentially deadly and sometimes bore more of an impact upon the geopolitical landscape than their presence otherwise indicated.

While politicians may believe they are the facilitators of change, in most cases they are not. How refreshing it would be for politicians in some of the conflicted countries to decide to settle their disputes with a duel, as opposed to sending their military in harm’s way and exposing their populations to the threats of landmines and other explosive remnants of war. Since that sort of “gentlemanly” behavior is long gone, politicians almost universally come to rely upon their military as the primary facilitators of change.

Without question, the world’s military organizations are the primary catalysts for change, but they are followed in rapid succession by a host of others including, but not limited to, religious groups, activists, environmentalists, paramilitary organizations, militias, family groups and terrorists. There are immense variations in personnel, technology and application methodology resident within these groups, but we know each will use whatever technology and methodology available in an attempt to achieve its goals—taking what they have and making the very best use of it. It is at this point that the threads of the relationship between landmines and other ERW become enmeshed.

There is also no doubt that there are considerable degrees of capabilities in the military organizations of the world. We can weave threads to show a conclusive linkage between the low cost/low



Typical older anti-personnel landmines.

technology of landmines and the high cost/high technology usually found in other ERW, and how these current or legacy threats impact the world’s population and effect change.

Even the **suspected** presence of the “dangerous duo”—landmines and other ERW—can have a significant impact on how populations function. The effectiveness of any weapon depends upon two factors: its ability to damage or destroy men and materiel and the morale effect<sup>1</sup> of its use, or threat thereof, upon the enemy. In most cases, the threats posed by landmines and other remnants of war are not wholly independent of each other. Since this audience is knowledgeable on the specifics of both landmines and other ERW, I want to dwell more on the conceptual framework that seeks to categorize the sources of these two types of threats and how, even from differing sources, these threats have been commingled, coexist and cause problems in many countries throughout the world.

The earliest description of a pressure-operated landmine comes from the German military historian H. Frieher von Flemming, who described a *fladdermine* (a flying mine) in his 1726 book. He wrote, “It consisted of a ceramic container with glass and metal fragments embedded in the clay containing 0.90 kilos [2 lb] of gunpowder,

buried at a shallow depth in the glacia of a fortress and actuated by someone stepping on it or touching a low strung wire.”

The same basic low-cost, low-technology method is being used quite effectively today. In quantity, anti-personnel landmines can be procured for less than US\$3 each. They can be rapidly deployed by minimally trained personnel and provide a significant anti-intrusion capability even for the most advanced military opponents. Generally,



Typical older UXO, 90-mm items.

they are manufactured by a group of Second-World countries and are deployed by many Third-World countries that are pressed to make do with what they can afford.

Of course, few of these facilitators recognize the total lifecycle cost of deploying a single landmine, especially when accounting for the tremendous human cost. Locating and destroying a single hidden or buried landmine can cost upwards of US\$1,000,<sup>2</sup> but even that cost pales when you consider the unnecessary and dreadful cost of injuring a child or other unwary civilian.

Ordnance and other ERW are quite different from landmines. Ordnance predates landmines by over 400 years and is principally fired, but can be air-dropped or launched in more current periods; this term is used as opposed to “other remnants of war” for discussion simplicity.

Ordnance evolution may be divided into three segments. The earliest segment includes that period during which stone shot was employed; guns during the period 1313 to 1520 were mostly wrought-iron with a few early examples of more expensive cast bronze guns that have been documented. The second segment was that extending from 1520 to 1854, during which cast-iron round shot was routinely employed. In this segment, both bronze and cast-iron ordnance was actually used, but technology advanced little from the first period. The increase in power of the ordnance systems during this period was due primarily to the use of corn and an additive to serpentine powder, with some small technological increase due to better technical design of the guns toward

the end of this period. The third or current segment started in 1854 with the innovation of elongated projectiles and rifled gun barrels. Rapid progress has been made since then. Ordnance items are manufactured by most countries today, and they are deployed by virtually every country.

Ordnance is generally more powerful than landmines and the damage to men and materiel can be significantly more devastating. The morale effect of gunfire would be considered more or less constant today, as people all over the world are aware of artillery, bombs and the noise and destruction they can cause. However, the ordnance threat produces a morale effect quite different from landmines, mainly because of the detonations and visible destruction, but also because of the ever-present fear that one’s final moment will arrive without giving any advance notice.

“A rose by any other name would smell as sweet,” and while the “sweetness” of landmines and ERW may be somewhat evident to facilitators who employ their use, the



Typical 5" illumination rounds on Kaho'olawe, Hawaii.

thorns of the “rose” are all too real for the unwary who venture into their path.

In examining how these threats have become commingled and coexist, we need further investigation in each of the affected areas. There is no single answer. The reasons are varied, but time is often the enabling issue. If we take Afghanistan as an example, long before American troops ventured into Afghanistan, a host of other military and paramilitary operations had come and gone. The Russian occupation lasted a decade and their technology was on par with the American technology at the time. Local militant groups also injected their own creativity and we ended up with a cauldron of legacy issues commingled and coexisting in one location. That story has been repeated numerous times and in many countries,

so time is the enabling mechanism for the interrelationship between landmines and other remnants of war.

Knowing that the threats are commingled and coexist is but the start of the solution. We must now delve into how we are going to find the proper solution set for each affected area.

To mitigate population impact, many of the humanitarian-oriented world organizations have implemented various assessment programs with the goals to determine the following with some degree of scientific accuracy:

- The areas impacted by landmines and other ERW
- The physical properties of the contamination
- The concentration of contamination
- The impact on population masses exposed to the threat

These assessment programs have various names and sponsors, but they are primarily information- and data-gathering programs. One of the most daunting challenges assessment programs face is compiling the actual data supporting whether or not an actual threat from landmines and ERW exists. There are many reasons for this difficulty, but one need only remember that these threats are not always going to be obvious since most of them will be buried or otherwise concealed. The techniques generally employed for these assessments involve gathering data and information from all readily available sources including military, civilians, government personnel, United Nations agencies, nongovernmental organizations, intergovernmental organizations and others conducting similar assessments.

The voluminous data and information is often difficult to analyze, and it is equally difficult to assign proper weighting and confidence levels upon its accuracy. As a consequence, various ingenious methods are employed by these assessment personnel that then enable them to triage the various community threats and arrive at solution sets based upon the most thorough and documented data and information available. Despite the difficulty, once these organizations gather, compile and analyze the information and data, they are then able to target funding and begin the next phase of assistance. Regrettably, there can be a considerable time lag between assessors recognizing threats and the later activities (clearance) needed to mitigate the threat.

A major variation (and improvement) on the assessment program approach has been implemented by the U.S. Department of State’s Office of Weapons Removal and

Abatement, which utilizes country assessments. As an enhancement to the standard assessment process, the WRA program seeks to develop concurrent plans, in coordination with the various country hosts, to assist using a fast-track approach so that serious threats can be addressed much more expeditiously than with other methods. Under this methodology, as country assessments reveal threats, the information is shared with the host country and discussions include possible solutions to the threats. As the assessments continue, the solution sets are fine-tuned, and it quickly becomes obvious which option is best to mitigate the specific threats. Once the solution is mutually agreed upon by the Department of State and the host country, the same teams that are conducting the assessments can be expanded to handle the implementation.

The benefits of this improved approach are numerous but include faster response to identified threats, a more cost-effective mitigation of threats, a fast-tracked timeline (the same teams expand to handle the solution; there is a minimal learning curve for personnel) for response, and ongoing

host-country buy-in to the solution. The Department of State has done an admirable job in constructing a highly efficient, responsive, accretive and timely program for weapons removal and abatement.

In conclusion, there is an irrefutable relationship between landmines and other remnants of war. Their origins are completely independent; their technology and cost components are quite different; their general manufacturing and deployment sources are different; but both excel as weapons since the effectiveness of any weapon depends upon two factors:

1. Its ability to damage or destroy men and materiel
2. The morale effect of its use, or threat thereof, upon the enemy

Both of these threats have many names, and I am certain someone somewhere is thinking up a new name for landmines and other explosive remnants of war. Regardless of the new tortured phrases we will be forced to endure, let us not forget that “A rose by any other name would smell as sweet,” but these threats are the thorns of the rose. ♦

*See Endnotes, page 110*



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