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Alan Childress  
*U.S. Central Command*

Pete Owen  
*U.S. Central Command*

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by Dr. Alan Childress and Lieutenant Colonel Pete Owen

Summary

Directed mainly at policy makers and leaders in mine-plagued nations and government and non-government mine action planners, the article argues for holistic mine action strategies, coordinated priorities, and best management practices. The authors establish the need for nations to take charge of their mine action organizations and present strategic management methodology to implement self-determination concepts. They insist that humanitarian demining must start with the end in mind, an integrated and nationally prioritized requirements analysis of each of the mine action areas—mine awareness, mine field assessment and surveys, mine and UXO clearance, victim assistance and land rehabilitation management. They also suggest that nations should consider reconstruction and development programs, as well as mine action, when contemplating resource mobilization. With nationally prioritized programs, and mine action centers managed by host nation-dedicated managers, nation’s can expect to achieve optimum resource allocation and, most importantly, to look after their people as a first priority. The author's recommend that nations look to industry for dedicated, first tier mine action program managers.

1. Introduction

By way of introduction, we relate Andy Smith's description of the beginning of a typical humanitarian demining effort. At present, Smith writes in the October 1998 Journal of Humanitarian Demining, humanitarian demining in most affected areas begins with a U.N.-led emergency response, which is controlled by ex-pats, who usually have a military background and are largely paid for by "ear-marked" donations from U.N. countries. At the same time, as the U.N. arrives, the speciality charity-funded clearance groups, which are funded by an individual government's aid budget or by trusts and donor charities, tend to move into the area. Following the charitable groups come the commercial companies, some of them non-governmental organizations, who may appear regionally based but are actually initiated by profit-takers outside. Further, while a few newly charity-funded demining groups still exist, most of the new players are commercial companies. For example, with the massive funding available for work in the former Yugoslavia, European groups are anxious to get involved and new alliances and companies arise yearly.

Our point in relating Smith's scenario is to highlight the apparent lack of holistic strategic planning and management processes that would help coordinate and manage scarce humanitarian demining resources. While planners and resource suppliers have increased dramatically since the early 90s, we find no apparent corresponding management strategies to coordinate planners' and suppliers' intentions.

Humanitarian demining documents suggest that governments, non-governmental organizations (NGOs), and other donor organizations have entered the demining operation with a desire to help synergize their donated resources and have become immune to the cry for help. Our experience in humanitarian demining, combined without a strategy to coordinate plans, results in low efficiency. While donors and NGOs have a right to be critical of international response to humanitarian demining, the ability must be developed in which case the host nation's or their designated authority of the host nation must be given the focal point within the mine action program. Perhaps Lokey's most important point, relevant to our argument for centralized strategic management, is that donors and other resource agencies must recognize the authority of the host nation or their designated representatives. Too frequently, development activities take on a paternal characteristic that minimizes the role of the host nation in the process of clearing landmines.

We suggest later in the article how host nations can achieve a mine action upper hand through indigenous, strategic management competencies, led by a professional general manager.

In the Wintergarden Conference Proceeding Henry Thompson discusses donor influence on safety and productivity in humanitarian demining, based on Bosnia and Herzegovina's experience, and suggests that involves donors early on in the mine action processes and ties them to safety and productivity aspects throughout the mine action stages. While humanitarian demining is donor-driven at the macro level, he concludes, the micro level donors have not been adequately accountable for the efficiency or safety of their programs. We agree with Thompson that donor countries should play a key role in humanitarian demining and that they should be more active. We're concerned, however, that the host nation must be equally involved in planning from the beginning in formulating and implementing the humanitarian demining strategy. He also addresses the notion that demining should be approached under the overall economic and social development context, a provision we strongly concur with.

Major Colin King, in a Journal of Humanitarian Demining article, suggests we need to study investigations before investing in technology, and that the host nation participation in the mine action planning process, he argues that there is in adequate communication between the

Strategic management, in our context, expresses a commitment to identifying, prioritizing, and implementing the optimum mix of available mine action resources for a given mine-plagued nation. The key to strategic mine action mixes is which is a process, recognizing that the resource equation to address mine problems will most likely differ from one mine-infected geographic or political area to another. That is, mine action resource mixes, not constants, must be tailored to the environment and an evaluation of the host nation’s ability to sustain a long-term commitment.

Our strategic management process starts with the end in mind—a host nation, U.N., or NGO-supported Requirement Analysis of the mine-infected environment—then works back examining all resources available to help achieve the host nation’s mine action goals, irrespective of mine action agendas not indigenous to the host nation.

The first part of strategic management focuses on a clear understanding of the host nation’s vision, goals and objectives and an understanding of what other donors will bring to the table. The host nation, in developing its strategic plan with the help of the lead donor, selects the optimum mix of available mine action resources based on a requirements analysis of the mixed environment. All components of mine action—reconnaissance, training, surveys, mine and UXO clearance, victim assistance, and information management—must be examined in the requirements analysis and reflected in the resource mix. The final step in the process is selecting the action and is the government able to support long a long-term commitment? What type of equipment is employed and what is its cost? What is the cost to the host nation?

Relative to the mine action organization, will the military and civilian sectors cooperate, with the civilian sector leading the policy decisions and the military implementing? This is generally a condition for U.N., World Bank, and NGO support. What is the structure of their existing humanitarian demining organization? What is their demining experience?

The second part of the strategic management process is implementing the strategic plan (the resource mix), through a cyclical process of planning, organizing, resources, controlling and sustaining the mine action program. It’s not enough to develop the optimum resource mix. To fully exploit, host nations must effectively and efficiently manage the allocation of those resources, through a national mine action center, to achieve their mine action vision. We believe that obtaining or developing an independent, host nation-dedicated, specialized general manager to manage the mine action center for the long term is as important as developing the strategic plan. Indeed, it is part of it and we will address this challenge in our conclusions.


In this section we discuss our two-part model, the strategic planning phase followed by the implementing management cycle. Strategic Planning Phase

We suggest host nations start by studying the contaminated areas concurrently with establishing a mine action center or organization. Typical questions might be asked during the strategic planning phase: Has a National Level One Survey been considered? What types of mines are present or suspected? Casualty data? What is the soil content? The foliage! The culture of the people in the mine polluted region? What is the land used for? Urgency of mine clearance? Economic implications? Political considerations? How much resource action and is the government able to support long a long-term commitment? What type of equipment is employed and what is its cost? What is the cost to the host nation?

For example at our organization, U.S. Central Command, when we enter a nation that has sought U.S. mine action assistance, the planning matrix (similar to a schedule) we use is designed to help stand up the new organization and teach the host nation how to manage their humanitarian demining operations. The matrix we construct is relatively simple, listing the activities required to stand-up the organization on the left side and deep diving all aspects of what the mine action challenges—mine awareness, minefield assessment and surveys, mine and UXO clearance, victim assistance, and information management—for each mine-infested region, then aggregate the data and efficiently manage the allocation of those resources, through a national mine action center, to achieve their mine action vision. We believe that obtaining or developing an independent, host nation-dedicated, specialized general manager to manage the mine action center for the long term is as important as developing the strategic plan. Indeed, it is part of it and we will address this challenge in our conclusions.

Management Model

Our thesis is that mine-plagued nations must manage all aspects of their mine action challenges—mine awareness, minefield assessment and surveys, mine and UXO clearance, victim assistance, and information management—for each mine-infested region, then aggregate the data and efficiently manage the allocation of those resources, through a national mine action center, to achieve their mine action vision. We believe that obtaining or developing an independent, host nation-dedicated, specialized general manager to manage the mine action center for the long term is as important as developing the strategic plan. Indeed, it is part of it and we will address this challenge in our conclusions.

Two significant events occur during the Planning phase that might also serve as examples. Following the Department of State Policy Assessment Visit, which is a detailed, lengthy, and demanding duty request for demining assistance, we begin developing the U.S. Humanitarian Demining Country Plan. This plan, which we draft in continuous consultation with the host nation, mine action trainers, et al., serves as our resource strategy. It is written to accurately capture all resources and direct them toward the required support of the host nation. This plan, in turn, is designed to eliminate redundancy, inefficiencies, high-demand military training assets, and helps coordinate the myriad activities carried out by different U.S. organizations. It defines the host nation’s mine problems and requirements as well as the U.S. commitment. We suggest Mine Action Center (MAC) general manager’s develop a similar resource holistic plan, in particular to depot help eliminate redundancy, identify, for budgeting purposes of NGOs and other donor organizations.

Organizing

Developing the organization to establish resource management (and humanitarian demining committee organizations) will largely determine successful ex-
ecution of the plan. How do we arrange our human resources to best accomplish the objectives we set out while planning? Also, defining processes is extremely important—how does work get done at the national MAC and regional MAGs? Among donors within the MAC?

We recognize many aspects of "organizing." The host nation establishes their national humanitarian demining Committee, national MAC, and regional MAGs. The donors committee organizes donor support to best address host nation requirements, problems and needs and the U.S. organizes its support to provide its part of the required support. In our case, we write a Country Plan and ensure that our planned support complements how the host nation assets and donor support to the host nation. If a military-only organization exists, we will recommend some sort of a civilian-led, military-implemented hybrid organization that all donors can support.

If some sort of donor organization is not in place, we attempt to facilitate support to better coordinate efforts. Part of our Requirements Determination Site Survey (actually a requirements analysis) is designed to determine who is doing what in the host nation, who has the lead, and where the U.S. fits in the big picture (our aim is a viable self-sufficient program). This also includes helping organize donor support to the host nation.

Resourcing

Resourcing provides funding and personnel to support the MAC and RMACs and should be coordinated while developing a Country Plan. Based on the Requirements Analysis, all aspects of the mine action program must be considered in the resource plan, providing donor organizations not already part of the nation’s demining plans an opportunity to fill in needed funding or resource gaps.

At U.S. Central Command, we start resource planning in earnest during the Requirements Determination Site Survey while we’re confering with the host nation and NGOs interested in helping the host nation. We then draft the U.S. Country Plan, staffed with all interested agencies involved in the host nation, an updated draft plan to host nation representatives, U.S. humanitarian demining program managers and force providers (trainees) for approval. The briefing is conducted at what is called a Resource Allocation Planning Meeting. The end result is a resourcing plan (the Country Plan) that is, again, technically approved by the multiple humanitarian demining organizations and the host nation (although committee owner does not yet sign). The agreed-upon plan is then signed by the U.S. Ambassador to the host nation and sent to the decision authority within the U.S. government to provide resources. U.S. resources are approved through the Interagency Working Group, which represents upper-level decision-makers from several U.S. Government agencies. In the event that approved resources are less than required, the plan is reworked to account for shortages, and coordinated once more with all involved agencies supporting humanitarian demining, including especially the host nation to help eliminate shortfalls.

Control

We would caution general managers regarding establishing control measures for programs and operations. Evidence suggests that control programs produce two kinds of invalid data: invalid data about what can be done and invalid data about what has been done. Military dentists, perhaps unsophisticated about mine action management, may find it pleasant to please their organizations more than report data accurately. Quality Assurance management (systemic quality) should be practiced through rigorous demining training and actively enforced safety practices. Quality Assurance, in addition to Measures of Effectiveness, are techniques we would recommend host nations establish for controlling the quality of reporting progress, thus helping ensure effective and consistent U.S. and other donor support. Regarding the importance of reporting progress, we reiterate here the necessity of Mine Action Centers and reporting incremental progress on a consistent basis.

In general, the U.S. does not attempt to control the host nation mine action program. Accounting procedures are established and cover everything from accounting for equipment to the quality of the instruction being conducted in any of the elements of mine action. Measures of Effectiveness (MOEs) are established for measuring two things—how well the host nation is conducting humanitarian demining and how well the U.S. support is assisting the host nation. These MOEs are often different from the host nation’s or other donor’s Measures of Effectiveness. The general manager must gather the appropriate information to assess MOEs and adjust his program as necessary to sustain and improve U.S. and other donor support.

Sustain

We repeat Patron’s warning that donor fatigue at some point is going to set in among donor nations. General managers’ tendency to resist and decline the donor resources for the long term, anticipating that public and private sector focus, awareness, and vigilance may wane over time.

In this phase, the U.S. focus changes from intensive, daily support of the new organization to maintaining, consulting and looking more long-term for new technologies and techniques that might help speed efficiency and improve safety for the host nation. Our presence is scaled back to 30-45 days per quarter, usually focused on specific elements of mine action such as mine awareness. For example, our mine action assistance program conducts a formal annual visit called the Requirements and Verification Visit specifically designed to review and update the host nation’s humanitarian demining requirements, what the U.S. support is doing, and then verifying that equipment previously donated is being used properly and effectively. Obviously, we spend considerable time in the host nation throughout the year but the Requirements Analysis Verification Visit is conducted to work with the highest levels of the host nation government and to ensure the host nation understands we hold them responsible for the supplies and equipment provided. The results of the Requirements Analysis Verification Visit are then used to update the Country Plan, changing or modifying U.S. support to the host nation in light of the status of their goals and objectives as well as what other donors intend to provide. Our Country Plans cover two years and are coordinated with all agencies associated with humanitarian demining in the host nation (including the host nation). U.S. Country Plans are posted on the web at www.centcom.mil.

Coordination

In our view, coordination in mine action is continuously communicating within and among all players associated with the host nation’s mine action program, to include players who may have a contribution but are unaware of it. Reinforcing the holistic approach, coordination starts from day one and never stops—it is the key to efficiency and success. Coordination brings the players to the table to achieve the host nation’s demining vision and helps break down bureaucratic "stove-pipes." Coordination is central to the five management steps discussed above. In situations where there are competing desires and agendas between donors and the host nation, vigorous and open coordination is absolutely critical.

In our program, the establishment of a formal donor committee and good lines of communication with the host nation is essential. The donor committee must be chaired by an organization that can help ensure all donors support the host nation with minimal redundancy or waste. The donor committee provides the forum for coordinating donor plans and de-conflicting resource arguments. Coordination is the key success factor for managing coordination in the MAC—indeed, achieving a degree of cooperation among the mine action functions—may be the general manager’s greatest challenge.

5. Conclusions and Implications

a. While we suggest that strategic planning for mine action is distinct from management planning, in practice management leaders generally combine the functions—thus, the Strategy was developed in the Planning phase of the management cycle. We made the distinction to emphasize the importance of determining a country’s total mine action requirements before contemplating resources, which most countries tend not to do. Our Strategic Management logic would also apply to countries that decide to undertake their mine action operations. Host nations should lead the Requirements Analysis phase and provide a general manager to lead their Mine Action Centers. Host nations would do well to advertise their general management needs to international management consultant firms. The investment...
the many different donor agencies involved. We note that as a development agency the World Bank supports member country programs that help lead to the eradication of poverty and to the promotion of sustainable development. Its support of mine action is based upon the recognition that mine pollution is, for many affected countries, a significant obstacle to the reestablishment of normal development activities. In this context, it shares with UNDP a perspective which views mine pollution as a development problem with long term consequences and, necessarily, with long-term solutions which extend far beyond initial humanitarian concerns. Also, it is recognized that the Bank shares responsibility with UNDP for convening donor groups in reconstruction situations and thus has a major role in resource mobilization and in setting long term agendas for international support for mine action and other needs. Similar to UNDP mine action policies, land mine clearance in Bank-financed projects must be carried out under the auspices of civilian authorities, an incentive for civilian-led national Mine Action Committees, setting policy for Mine Action Centers.

c. Implications for continuous Quality Assurance, not necessarily Quality Control, systems are well designed, properly taught and rigorously enforced is a function of the general manager, not off-handedly delegated to subordinates. In addition, it is the responsibility of the general manager to establish Measures of Effectiveness for his Mine Action Center, which tell his boss or the Prime Minister how the mine action program is progressing. Donors will also need data for their own agendas, which the general manager must accommodate if he expects continuous donor support. Having established its own Measures of Effectiveness, the U.S. will assist general manager's in establishing data collection methods to meet their (and other donors') data needs. The point is that general managers need to realize the importance of regularly reporting mine action data to donors, helping ensure their long-term support.

d. As we suggest throughout this article, our research and experience indicates that worldwide mine action remains fragmented and uncoordinated. Holistic national approaches to their mine action problems would appear to help sustain stable and generous donor support. Regarding competition for demining resources, holistic approaches may tend to prioritize donor support to regions enduring the most humanitarian suffering, rather than those with the most political influence.

An Application of Strategic Management and Lessons Learned

In the June edition of Journal of Mine Action the authors will demonstrate their strategy and management model through a fictional nation that contains many of the mine action problems in existence today. They will also present an organizational model and several of the lessons they learned during their experience in Horn of Africa and Middle East mine afflicted countries.

Biography

Lieutenant Colonel Pete Owen, USA, is the Program Manager for U.S. Central Command's humanitarian demining program. He is responsible for all U.S. mine action operations in the Middle East and in African nations that comprise Central Command's area of responsibility. Much of this article is based on lessons he learned while establishing and managing the program.

Dr. Alan Childress, a management consultant for Bass-Allee & Hamilton, is currently engaged as U.S. Central Command's humanitarian demining Country Manager for Ethiopia, Eritrea and Djibouti. He specializes in international management while earning his business administration doctorate at Nova Southeastern University.

The authors acknowledge the contributions of John Johnson, the U.S. Central Command's humanitarian demining Country Manager for Jordan, Egypt, Afghanistan and Oman. His extensive mine action knowledge and his compassion for people affected by the worldwide landmine affliction are unparalleled.

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The European Union in Humanitarian Demining

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destructive testing, signal/image processing, remote sensing, Geographic Information Systems and medical imaging.

Existing vs. new technologies

Several national demining campaign sponsors brought up that less emphasis should be put on development of new technologies. The "improvement of existing technology will resolve the problem faster." Some point out the need for improved technology whose limitations are well-known as compared to a new technique that is not yet trusted. The need for complete solutions, taking into account all aspects was stressed by many NGOs - Mine Action is indeed not only about demining.

(Global) R&D trends

Much of the R&D effort for humanitarian demining has gone toward the detection of individual mines. Two approaches seem to be the most predominant: the use of a multi-sensor system, or the combination of a detection sensor. Some research is currently done on wide-area confirmation methods. Airborne mine field delineation or explosive vapor/trace detection to complement—or partially replace—dogs, in order to save precious time by concentrating on areas which really need to be demined. Evolution should be governed by a set of keywords (NPA): "Safer, Faster and Cheaper.""Sensor technology maturity"

Consider: we have to rely on indirect evidence due to the absence of well-established definitions of equipment performance; most of the results of independent performance tests are not publicly available; we have not conducted performance tests ourselves and we do not share the practical experience of deminers working in the field. We nevertheless think that Table 2 is useful in fixing the large tendencies in technology maturity and equipment costs.

Airborne mine field detection/remote sensing

The role of remote sensing vs. ground-based methods has not yet been fully identified. For airborne mine-field detection on nulistic surfaces (100-1000 km²), terabytes (1000 gigabytes) of digital data have to be analyzed. Setting-up a measurement campaign is a complex and expensive operation. Although for civilian applications on-board processing might not be a primary requirement, even off-line analysis requires huge computing facilities. The development of remote sensing systems has been primarily done in the military context and it is unlikely that these systems will be operational for civilian applications in the near future. Several platforms have been tested, like airships, aircrafts, drones and helicopters. The privileged sensors are the optical and the IR image, although UWB-SAR seems to yield promising results for the future. On certain soil types and non-vegetated areas the airborne mine field delineation results are reported to be successful (e.g. deserts).

Testing and evaluation

The implementation of specifications for testing protocols is again an international mission. The existence of several ad hoc protocols is a well-known fact after this survey, but they remain proprietary information, which is inaccessible for the research community. In order to test or compare new technologies that are in the development phase or have been developed, a possibility should exist to gain confidence by application in the field. The establishment of a joint working group, focusing on the development of testing methodologies and the design of standards for sensor and system assessment, is currently ongoing. On the European side, the existing Committee of Advisers: Detection of Mines based on Operational Standards (CADMOS) workgroup promoted by JRC, acts as the core group.

EUDEM started in December 1998 and ended in July 1999. The survey was conducted by EPFL (Ecole Polytechnique Fédérale de Lausanne) and VUB (Vrije Universiteit Brussel). It was funded by EU; DG XIII.

Contact Information

Karim Des meny, Claude Bouchnich, Hichem Sahli, Jan Cornelis VUB-ETRO, Department "Electronics and Information Processing" Pleinlau 2, B-1050 Brussels, Belgium Tel. +32 (0)2 629 2930 Fax +32 (0)2 629 2883 E-mail: kdesmethods@vub.ac.be