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Humanitarian Demining: Ten Years of Lessons

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RONCO is an international professional services firm that provides public and private sector clients with advisory, training, implementation, and management assistance. Founded in 1974, the firm has worked in developing countries on over 300 development projects. RONCO has been involved extensively in humanitarian demining for over ten years and has no relationship of any kind with the ordnance manufacturing industry or its distributors. The company's business is sustainable development.


Under a US Agency for International Development (USAID) contract, RONCO provided commodity procurement, technical assistance, as well as logistics services and training to the Afghan resistance then fighting the Soviet Army. Under this contract, RONCO first introduced the concept of using dogs for mine detection as part of a durable, affordable, indigenous institutional capacity to manage demining. Capitalizing on prior US Army involvement in creating a mine dog capacity within a Royal Thai Army unit operating on the heavily mined Cambodian border, contacts were made with the Government of Thailand to arrange for 14 demining dogs and Thai Army handlers to train Afghans in demining techniques. This was done under RONCO auspices in resistance-controlled areas.

With less than a one-year pilot, two years of operations, and a one-year transition period, the Afghan Mine Dog Detection Center (AMDDC) was created by RONCO as a fully independent Afghan non-government organization (NGO). Once the NGO was fully operational, US Government (USG) funding ceased and the United Nations (UN) assumed sponsorship in 1994. By the time of the handover, 36,000 anti-tank mines, anti-personnel mines, and other ordnance had been detected and destroyed. As reported by the UN, these numbers accounted for one fourth of all mines destroyed worldwide at the time. Furthermore, no casualties were sustained in demining activities throughout the company's involvement in Afghanistan. RONCO trained dogs and handlers to continue to clear mines in Afghanistan under AMDDC.
The sustainable local capacity built for the Afghans has served not only as a prototype for subsequent demining efforts elsewhere but also as a wellstone of policy and operational lessons that have been refined over the years.

Putting the Afghanistan Experience to Work

**Mozambique**

RONCO began another USAID-sponsored effort in Mozambique in November 1993. The Afghan-based approaches proved highly effective. RONCO trained 90 Mozambican deminers, 32 dog handlers, and an equal number of dogs. They all formed 12 separate teams. The effort quickly cleared over 2,000 km of roadways, making it possible to reconnect nearly one million people to their local economies in the Sofala, Manica, Zambezia, and Tete Provinces.

**Angola**

Under a subcontract to a South African firm, RONCO's "free running" dogs cleared and certified as safe over 3,000 km of road. Some 4,000 km were surveyed and certified safe. The dogs provided quality assurance for all the roadways by pinpointing the location of the mines previously sensed by capital intensive mechanical means.

**Rwanda**

Under Department of Defense and USAID funding, RONCO began in October 1995 with US Special Operations Forces to develop a Rwandan capacity to manage, supervise, and support on a long-term basis a fully independent entity for humanitarian demining. Work is still underway with 24 highly trained dogs and handlers working in tandem with deminers.

**Bosnia**

A contract was signed in March 1996 with the Department of State to build local capacity to identify and remove mines placed along the confrontation lines. A Mine Action Center has been created and staffed with trained local personnel. A computerized geographic information system has been established. An awareness program was created and information disseminated. Three regional centers were developed in Muslim, Serb, and Croat areas where locally recruited personnel were trained to operate with RONCO demining dogs. Through 89 discrete
demining tasks, transportation has resumed; refugees have returned to areas where political and security circumstances have permitted; and a semblance of normalcy has been created. Demining activities continue, and RONCO has entered into business partnerships with demining companies it created under the initial contracts.

**Some Operational Lessons**

**Affordable, Sustainable Local Capacity**

RONCO has undertaken a few highly discrete demining contracts of 3 to 5 months duration. Without exception, each activity has engendered a follow-on contract. Unfortunately, these scarce resources were not all used to the maximum extent due to repeated mobilization and demobilization costs. Some duplicative expenses could have been avoided with a modification of the operational concept: the development of affordable and sustainable local capacity rather than the numbers of mines and unexploded ordnance (UXO) detected and square meters or miles cleared generally required by the short term arrangements.

**Capital Costs**

RONCO has been involved in research and development of new landmine detection and clearance technologies and remains committed to the use of the best and safest available methods. Yet the company believes that, at the present time, the exclusive use of relatively expensive, capital-intensive methods has only limited application to many, if not most, humanitarian demining scenarios. Moreover, the costs are frequently such that the host country cannot afford to purchase and operate the equipment on a sustainable basis. The combination of dogs and locally trained handlers and deminers with appropriately tailored equipment offers the best combination of inputs to create a "technology" that works. This approach allows a relatively low front-end investment and an acceptable recurrent cost burden on local authorities. The latter point is especially critical after external financing dissipates and the mining threat continues to command the attention and resources of the host country.

**Technology that Works**

Mine-detecting dogs have a sense of smell that is at least 1,000 times more sensitive than humans. Dogs can be trained to detect the scent of explosives and their containers (metal or plastic) embedded beneath the earth. Thus, dogs add an important safety factor to nearly any demining activity because they can detect the odor of nonmetallic or plastic-encased, deeply embedded mines as well as those found on steel reinforced bridges or railroad tracks, where metal detectors are
essentially useless. In 1995, the US military conducted a field test of 30 discrete demining technologies. RONCO demining dogs were described by test authorities as follows: "At the top of the list, in terms of finding mines and trip wires, are dogs. They detected every trip wire set and discovered more mines than any other system." Demining dogs are able to prove negative areas quickly and offer an extremely high level of quality assurance.

**Setting, Timing, and Sequencing of Resource Allocations**

Depending on the threat level, landmine issues can significantly and negatively influence the ability to initiate development projects in previously contested areas. Yet, depending on the nature of the local and international entities involved (highly politicized, neutral, commercially driven, idealistic, or a combination), humanitarian demining has not always been afforded an appropriate priority level. While difficult to attain, demining resources should be allocated commensurate with the threat in populated or vacated areas that are to be repopulated soon. Where significant population movements are concerned, a participatory approach involving local leaders should be used. In making resource allocations, timing and sequencing of all humanitarian activities should be considered at the outset. In other words, education activities should not be funded in areas that cannot be repopulated due to an overriding mine threat. Conversely, demining should not be financed in sparsely populated areas when there is a telling health issue elsewhere.

**Division of Labor**

Host countries, international organizations, bilateral governments, NGOs, quasi-NGOs, and commercial firms alike are all working on demining. Some work in concert, but others are clearly at odds. When international efforts are viewed as a whole, there appears to be not nearly enough consistency between approaches and methods taken in similar settings by different players. In any event, short-term, high-cost walk-away programs should be avoided, especially those that leave no legacy of strengthened local institutions.

**Some Policy Lessons**

**Need for a Generally Agreed-upon Road Map**

To RONCO's knowledge, no road map or generally agreed-upon humanitarian demining strategy exists within the international community. Such a road map would synthesize

- an agreement on the extent of the worldwide problem,
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- cost effective and sustainable operational programs,
- known and proven technologies,
- lessons learned from ongoing operations,
- the most promising research and development efforts,
- the best practices for mine awareness programs, and
- preferred victim assistance interventions into a cohesive and defensible strategy. More to the point, newly undertaken humanitarian demining activities sometimes include response mechanisms that appear more keyed to political perceptions than proven field realities.

Focussed International Efforts

While there is room for improvement and renewed efforts by all players, greater consistency and coherence in design and approach are needed by international organizations such as the World Bank, UN, OAS, ADB, and others. Bilateral government programs can be quite influential in this arena, but they also need coherent and consistent approaches.

Standardized and Integrated MIS

While there are many humanitarian demining information systems, few are complimentary or even compatible, and not all are credible. Important data fields in those systems are being questioned by political entities and deminers alike—for example, the numbers of mines in specific countries. Lack of compatibility and credibility makes it difficult to mature the policy process. This is especially critical for developing widely agreed-upon measures of effectiveness. The focal point should be economic well-being and quality of life indicators. In short, measurement of positive beneficiary impact should be the primary gauge of successful humanitarian demining operations.