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Mine Detection Dogs: An Integral Tool in RONCO Mine Clearance Operations

Mine detection dogs (MDDs) have become an important tool to mine action organizations in many programs across the globe. For about 15 years, RONCO has been one such organization. This article describes the role of MDDs in RONCO’s operations.

**Introduction**

Brenda sits, alerting her handler that she has located the training mine. Her handler retrieves a red rubber ball from his pocket, throws it, and praises Brenda after she has chased it down and obediently returned to his position. Brenda is easily satisfied with the positive reward she receives; her handler, Jaron Josipovic, is pleased with her performance over the past week of refresher training. He trusts her keen ability to detect mines; she trusts him to lead her to the lane and care for her after a long day in the field. Together, RONCO’s bonded MDD team of Brenda—a Belgian Tervuren (a cross between a Belgian and German Shepherd)—and her handler work—almost all over the world, preventing injuries and fatalities from landmines and UXO.

In the past, the team has deployed to the Balkans, Cuba, Namibia and Albania to tackle mine clearance tasks. However, their most challenging is their most recent demining task in mine-laden Afghanistan, where the RONCO MDD teams searched more than two million square meters of land for mines and UXO in the past year. During their deployment, Brenda and Jaro—with along with RONCO’s other 15 MDD teams—were overwhelmingly surprised in a country considered to be one of the most dangerous and severely-mined in the world. For example, while verifying the clearance of an area near Kandahar Air Base allegedly free of mines, Brenda detected the presence of an explosive device that had previously been overlooked. The service dog’s highly sensitive and well-trained nose alerted Jaro to the mine, thus precluding any chance of tragedy and safeguarding U.S. soldiers stationed at the air base.

**An Integrative Approach**

Brenda and Jaro’s success over the past six years, working at challenging tasks such as their present one in Afghanistan, results from both the precision of MDD training techniques and the integration of MDD teams into demining operations. Beginning in the late 1980s, RONCO and its partner, Global Training Academy (Global), developed an innovative and highly effective method of detection, clearance and verification of minefields that is still used today. By integrating MDDs into clearance operations, RONCO quickly developed the capacity to vastly increase productivity in the field, and more importantly, to prevent the risk of casualties to deminers. The integration of MDDs into mine clearance and quality assurance (QA) tasks has evolved into an industry-standard method of demining, making RONCO a leader in the innovation and design of MDD programs. RONCO began incorporating dogs into demining operations in Afghanistan in 1989, following the departure of Soviet forces. In a country highly burdened with landmines, a trained dog’s sharp ability to pinpoint and alert handlers to the location of mines, as well as the speed with which it can cover large areas of ground, became a valuable asset to manual demining teams.

Utilizing the dogs’ fine-tuned skill set to detect mines and integrating the dogs into manual demining operations proved to be a highly accurate, safe and cost effective development in humanitarian demining. Today, some 15 years later, trained and experienced dogs like Brenda are still the most precise method of mine detection.

**A Tested and Proven Technology**

In 1995, the U.S. Army conducted a field test to assess the value and accuracy of 30 different demining technologies, including RONCO’s Global MDDs. The assessment concluded that dogs were “the top of the list, in terms of finding mines and tripwires… They detected every tripwire set and discovered more mines than any other system.” Further, the Army found that the cost-effectiveness and timelessness of utilizing MDDs in mine clearance operations were enhanced when coupled with appropriate vegetation clearing machinery, and/or manual deminers with detectors and personal protective equipment (PPE). Based on its testing, and as its current experience working with RONCO MDD teams in Afghanistan, the U.S. Army has recently decided to establish its own organic MDD program. Bonding training of the first class of six MDDs and their handler was scheduled to begin in mid-March 2003.

**RONCO’s MDD Programs**

MDDs alone, however, are an insufficient approach to humanitarian demining. Rather, it is their integration with manual and, when possible, mechanical mine clearance operations that is both the most effective employment of MDDs and a fundamental feature of RONCO’s programs. With more than 14 years of training and field experience, RONCO’s MDDs, including Brenda, have become an important tool to mine action and are critical to the clearance of UXO and other munitions. In the most recent operation, the integration of a team of MDDs and their handler was scheduled to begin in mid-March 2003.

**Deminizing the Sena Railway Line in Mozambique**

In 2000, RONCO began providing on-site technical support and assistance to the Mozambican National Institute of Demining (IND) under the U.S. Department of State (DOS) Office of Humanitarian Demining Program’s Integrated Mine Action Support (IMAS) contract. In total, RONCO has employed 12 MDDs in support of the IND. In efforts to locate and clear demining reaction areas in Mozambique, the IND quickly charged RONCO with its highest priority task: to clear a stretch of the Sena Railway Line. Despite severe flooding and extreme working conditions, RONCO continued mine clearance operations in this major task throughout 2001 and 2002.

In comparison with 2001, in 2002 RONCO experienced ideal weather conditions for demining on the Sena Railway Line. With successful coordination of the demining teams, optimal productivity from the existing team of six MDDs and their Army handler was scheduled to begin in mid-March 2003.

**Ronco’s Mine Detection Dog Programs**

RONCO’s Mine Detection Dog Programs were designed to train and deploy teams of skilled dogs and handlers through African and worldwide mine clearance operations. Utilizing manual, MDD and mechanical components, RONCO’s Mine Detection Dog Programs have become an important tool to mine action organizations in many programs across the globe. For about 15 years, RONCO has been one such organization. This article describes the role of MDDs in RONCO’s operations.

**Integrating MDDs Into Demining Operations in Afghanistan**

In 1995, RONCO created the Afghanistan Mine Detection Dog Center (MOD) at the Afghan non-governmental organization (NGO) with 92 MDDs and about 270 Afghan employees. Although RONCO completed its fieldwork on the railway line early in 1994, the Center continues to operate effectively today; it currently employs 244 dogs, includes an MDD breeder program and supports and supervises both MDDs and the entire UN demining effort in Afghanistan.

In 1993, RONCO-trained teams found 22,000 mines and UXO in Afghanistan, more than one-fourth of the 80,000 pieces of railway line have been cleared through integrated mine clearance operations utilizing manual, MDD and mechanical components.
significant number of AT mines, however, were detected ahead of the flails, since flail operators, when processing land suspected of containing AT mines, requested that the MDD teams precede them to minimize possible damage to their equipment.

Partnering With MLI in Eritrea

In 2001, RONCO began providing assistance to the Eritrean Demining Program (EDP) by establishing an MDD capability to support national demining objectives. In addition, RONCO participates in the Marshall Legacy Institute’s (MLI’s) Mine Detecting Dog Partnership Program (MDDPP) in Eritrea. This program combines the resources of the U.S. and Eritrean governments, MLI, RONCO/Global and private-sector contributors to develop an indigenous MDD capacity in Eritrea. The partnership has resulted in the deployment of certified dogs bonded with local handlers into an integrated mine clearance process to accelerate the pace of mine clearance operations.

To date, RONCO technical advisors assisting the EDP have trained two demining companies of three platoons each and an MDD section currently consisting of 12 MDD teams. Both companies and the MDD section operate independently in the field with periodic resupply, maintenance and supervisory visits from Eritrean army headquarters. The MDD section supports the demining platoons in their survey, clearance and QA operations.

In June 2002, the EDP assigned the RONCO-trained companies and MDD section to clear a site vital to the local agricultural economy and to the resettlement of internally displaced persons (IDPs) in the area of Tserona, along the Eritrea-Ethiopia border. Successful and accurate clearance was vital in the assigned 900,000-square-meter site, since the Eritrean government had not allowed its tractors to plow the land for fear of landmines, local villagers had not been allowed to plant crops or graze animals on the suspect land either. As of December 2002, approximately 800,000 square meters had been cleared, representing almost 90 percent of the total assigned area. Despite high temperatures and difficult terrain, the individual MDD teams have been clearing a daily average of 1,300 square meters. In this work, following the initial clearance of assigned areas by both deminers and MDDs, two additional MDD teams conduct a QA check before the area is deemed mine safe.

As a result of this successful operation, a large agricultural and grazing area vital to Eritrea’s economy has quickly and safely been brought back into production.

Combining All Three Demining Components in Thailand

With technical support and oversight from RONCO and with support from both the U.S. DOS and Department of Defense (DoD), the Thailand Mine Action Center (TMAC) has effectively combined all three methods of mine clearance: manual, MDD and mechanical. This unique capacity and experience in integrating all three demining components is the first of its kind in the Asia region.

In total, RONCO has provided 32 MDDs to TMAC under the DOS’s IMAS contract. During RONCO’s 22-month period of assistance to TMAC,
humanitarian mine action unit (HMAU) #1 underwent intensive training and integration work with its own MDD teams and three mechanical systems—the Tempest, the Survivable Demining Tractor and Tools (SDTT) and the BDM 48—conducting demining operations in both the wet and dry seasons. The development of a fully integrated humanitarian demining capacity is a significant and noteworthy accomplishment for TMAC, considering the extent and severity of Thailand’s landmine and UXO problem, particularly along its border with Cambodia.

TMAC is faced with the daunting task of both creating an effective humanitarian demining program (to date, two HMAUs are in full operation, a third has begun manual demining and a fourth was recently established) and conducting field integration and training, mechanical equipment training and trials, and live clearance operations in high-priority areas. TMAC is also charged with quickly and effectively transforming mine- and UXO-contaminated farmland to productive fields in order to resettle IDPs and ease population pressure along the border with Cambodia. This land, furthermore, is mostly highly ferrous laterite soils that is both heavily contaminated with metal (particularly in areas previously used as refugee areas by the Khmer Rouge and other Cambodian resistance groups) and has heavy jungle vegetation in former guerilla base areas and battlefields. As a result, the integration of MDD teams with both manual and mechanical demining has been vital to the success of TMAC’s operations to date and to the early reversion of previously denied lands to villagers in the border area. Since 2000, TMAC has cleared almost six million square meters of mine-affected land through the use of this integrated manual, MDD and mechanical demining system.

In all of the above examples, the success of RONCO and the host country is due to the integration of MDD programs into manual mine clearance operations. These programs are even more effective when combined with both manual and mechanical operations, bringing the full range of clearance technologies to the task of clearing landmines and UXO from economically important, but denied, lands.

**Conclusion**

Brenda sits again, alerting Jaro that she has found another training mine. Just days after a week-long trip to the United States where they were honored as Mine Detection Dog Team of the Year at the Champions for Children Awards and Benefit Gala, Brenda and Jaro are both reacclimated to the terrain and environment of Afghanistan. The May 2002 event was co-hosted by MLI and the U.S. Fund for the United Nations Children’s Fund (UNICEF), and honored other mine action pioneers, including Queen Noor of Jordan, Senators Chuck Hagel and Patrick Leahy, and America Online (AOL) Chairman James Kimsey. Of the award recipients, Brenda and Jaro are, by far, the closest to the action. Both have spent the majority of their time over the last six years in live minefields, dedicated to the removal of landmines in mine-affected countries.

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