Humanitarian Demining
as a Precursor to Economic Development

Using three specific examples—Mozambique, Eritrea and Iraq—the author shows clearly how demining and development go hand-in-hand. He shows how clearing mines to restore power lines, rail service and agricultural land helps communities become economically viable again.

by John Lundberg [RONCO Consulting Corporation]

Humanitarian demining programs are often aimed at quickly safeguarding people living with the threat of landmines. Some of the most beneficial operations RONCO Consulting Corporation engages in, however, are carried out with the less visible, longer-term goal of development in mind. While the repercussions of clearing farms or a power-line trace may not immediately affect the majority of a country's population, the ultimate effect of such operations on a country's economic development can be enormous, and building host-country capacity to continue and expand upon operations only furthers this effect. Three recent RONCO operations in Mozambique, Eritrea and Iraq, all funded by the U.S. Department of State, demonstrate the impact that a demining operation can have on a country's productivity, economy and quality of life.

Mine clearance grids are set up along a section of the Sena Railway Line following vegetation removal.

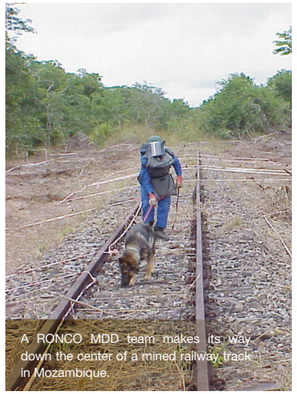
Refurbishing the Sena Railway Line in Mozambique

In the spring of 2000, the Mozambican National Institute for Demining (IND) tasked RONCO to clear the Sena railway line. Prior to Mozambique's civil war, the line had been a vital transportation link, threading from the busy port of Beira through some of the country's most resource-laden provinces into neighboring Malawi. During the war, the railway was mined and rendered useless, severely curtailing trade with Malawi and the transportation of goods to and from Mozambique's northern provinces. The loss of the railway, in effect, cut the heart out of the Mozambican economy.

RONCO began the difficult task of demining the Sena in August 2000, using a company of Mozambicans it had trained earlier that year as an emergency demining force. The unit employed an integrated demining approach, including a vegetation clearance machine to prepare the terrain, manual deminers, and mine detection dogs to follow up and conduct quality assurance. RONCO deminers had to overcome a number of obstacles during the two-year operation. Thick vegetation on the rail line impeded progress and heavy rains flooded the roads, making transport impossible for long stretches and often stranding the deminers. The sodden conditions were a breeding ground for disease. At one point, more than half of the deminers suffered from malaria and five of the team's 12 MDDs died of tick fever. Despite these difficulties, clearance was completed in September 2002, with RONCO having cleared over 450 kilometers (280 miles) of railway, opening the way for subsequent rehabilitation work funded by the United Nations.

One example of how Mozambique stands to gain from the refurbished rail line is in Tete province, which was among the areas hardest hit by the railroad's loss. Tete's economy—and the welfare of its inhabitants—depends almost entirely on mineral resources, such as coal and iron, which are transportable only by rail. Prior to the war, Tete's inhabitants either worked in the mines, on the rail lines, or in services supporting the miners. When the railroad closed, the extraction and exportation of resources effectively came to a halt. Though the railroad is not yet fully operational, its rehabilitation has already reinvigorated the province's economy, putting it on a course toward becoming one of the most profitable in the region. Tete's stockpiled and immovable coal alone, for example, is estimated to be worth at least $2.25 million (U.S.). Foreign investors have been quick to recognize the province's potential, and investments in Tete's mining industry have been burgeoning. Industry experts estimate that once the railroad reopens, over one million tons of coal will be exported each year, along with unexploited deposits of diamonds, copper and graphite.

Zambezia, another province along the rail line, boasts unusually rich soil and a high yearly rainfall, giving it extraordinary agricultural and economic potential. Extensive cotton, sugar and tea plantations dot the province, but despite government efforts to bolster production, it lags far behind pre-civil war levels. Experts estimate that, in spite of the province's increasing growth rate, its output is less than 75 percent of its potential. Sugar production is a mere 12 percent of its pre-war total, and cotton production is at less than 64 percent.[1] The principal constraint to further growth is that while some access to roads and waterways is available, a large portion of Zambezia's crops can only be transported via the Sena. Until rehabilitation is complete, excess crops will rot in the fields. As in Tete province, now that rehabilitation is underway, foreign investors are returning, which has already resulted in thousands of new jobs.


A RONCO MDD team makes its way down the center of a mined railway track in Mozambique.

RONCO deminers continue to accompany railroad reconstruction, allowing it to proceed uninterrupted. A cement factory on the line between Dondo and Muanza that had been inoperable for years is producing again, thanks to renewed rail access to a limestone quarry. In July 2005, RONCO's Quick Reaction Demining Force, under contract to the U.S. Department of State, completed clearance of an 80-kilometer (50-mile) stretch of the line from Inhamitanga to Marremeo, which brought new investors to area sugar factories. The QRDF also recently completed clearance of the Ressano Garcia Railroad, which links Maputo to the South African border, and that line is now in service again. Experts agree that Mozambique has only scratched the surface of the rebuilt rail system's potential economic benefits—the World Bank recently released $110 million in funding for the railroad's rehabilitation. The project now employs more than 400 Mozambicans. As one consultant working on developing the Zambezia valley put it, "The railroad has the potential to reinvigorate the heart of central Africa."[2]

Revitalizing Agricultural Production in Eritrea

In 2001, RONCO began training 50 manual deminers and 10 MDDs to conduct landmine clearance in Eritrea. A main goal of the program was to resurrect agricultural production in the region by clearing rural villages and the surrounding farmland. RONCO's newly trained deminers first deployed to the village of Tisha, which had been home to more than 250 families—about 1,500 people—before the war forced them to evacuate. The village was heavily mined during the fighting, leaving most of it uninhabitable. When RONCO arrived, most of Tisha's former residents were living at the edge of the nearby village of Senafe in a squalid refugee camp. Villagers who had risked the return to Tisha lived with the constant threat of landmines. Farming, in particular, was highly dangerous. By the time RONCO began operations, landmines had wounded or killed 15 people and over 500 cattle and goats.

RONCO's clearance operation had an immediate impact. Even as deminers were completing their work, villagers were returning to rebuild their homes. The long-term impact of the operation has proven significant. It is safe to farm again—since the clearance there have been no casualties to villagers or livestock—and Tisha is thriving. An elementary school that had been closed due to mines now enrolls more than 360 students.

In June 2002, RONCO began clearing a swath of land near the village of Tserona. During the war, the land served as a no-man's-land between Ethiopian and Eritrean forces and was suspected of being heavily mined. Local farmers wanted assurance that the land was safe, as it was highly fertile and had the potential to sustain a number of the surrounding villages. RONCO deminers worked for six weeks and verified almost a half-million square meters (about 124 acres) of ground to confirm the area as mine safe. As in Tisha, locals began utilizing the land the moment RONCO completed clearance, even before the deminers had a chance to leave the village. Once the land was accepted by the host country government's mine action center, farmers were sufficiently confident to plow not only the confirmed land, but the entire valley, encompassing approximately 6 square kilometers (2 square miles). The valley now serves the needs of thousands of families living in the surrounding villages, boosting agricultural production in the region significantly.

Since the initiation of the Eritrea program, RONCO's clearance operations have benefited more than 29 villages, allowing for the return of more than 20,000 refugees and providing a resurgence of agriculture and herding in the region. Through resettlement and a return to normalcy, impacted villagers are playing an integral role in revitalizing the local economy and ultimately stabilizing the country as a whole. RONCO continues to play a key role in this process. Today, its technical advisors continue their work in Eritrea with 150 manual deminers and a team of 15 MDDs. In July and August 2005 alone, they cleared over 1 million square meters (247 acres) in the villages of Shilalo and Adi Hakin, and farmers are already plowing and seeding the land.

Reconstruction Efforts in Post-war Baghdad

In May 2003, following the end of major hostilities in Iraq, RONCO dispatched the U.S. Department of State-funded Quick Reaction Demining Force to Baghdad to aid in the rehabilitation of the country's infrastructure. The U.S. government and the Iraqi Office of Reconstruction and Humanitarian Assistance, which served as the governing body of Iraq until a transitional government was established, sought to restore electricity and other vital resources to Baghdad's civilians as quickly as possible; this required demining and unexploded ordnance clearance. It was determined that RONCO's QRDF, a force of four eight-man demining teams and eight MDDs, was right for the job. The force was designed for emergency deployments worldwide and boasted successful deployments to Sudan, Sri Lanka and Nigeria. Within two weeks of notification, the QRDF arrived in Baghdad following a 36-hour deployment from its headquarters in Beira, Mozambique, via charter aircraft. Its flight was only the third civilian plane to land at the newly reopened Baghdad International Airport. Faced with an extremely chaotic operational environment, the unit set up a tent headquarters in the ORHA compound's gardens. Within three days of arrival, it was acclimatized and had begun demining at a nearby site. The QRDF served as one of the first high-profile demonstrations of ORHA's efforts to benefit the Iraqi population.


QRDF deminers work at the site of a power line supplying electricity to most of Baghdad.

Perhaps the most important task the QRDF carried out in Iraq involved clearing the way for the restoration of power lines to downtown Baghdad for the Iraqi Electrical Office. RONCO deminers cleared a safe lane to allow for the repair of two 400-kilovolt power pylons. The repaired pylons increased the flow of electric power into Baghdad by an estimated 50 percent, providing desperately needed electricity to a large portion of Baghdad's inhabitants. The QRDF also carried out extensive clearance in agricultural areas around the city, ridding fields of UXO and freeing up land for use during the next planting season.

Despite working in difficult and often dangerous conditions, the QRDF proved remarkably effective, clearing over one million square meters (247 acres) of land and locating and destroying over 2,000 landmines. It also played a significant role in getting the development process started again, and under the auspices of the U.S. Department of State, RONCO continues to contribute to the economic restoration and development of Iraq. RONCO trained and is currently advising hundreds of deminers under the direction of the Iraqi National Mine Action Authority and National Mine Action Center. Both of these organizations, along with two regional mine action centers and the Iraq Mine/UXO Clearance Organization represent the first-ever nationwide Iraqi demining and clearance capability. RONCO has also trained more than 350 bomb disposal personnel for the Multinational Security Transition Command-Iraq. All of these organizations are expected to significantly contribute to the restoration of infrastructure and economic activity in Iraq for years to come.

Conclusion

RONCO's operations in Mozambique, Eritrea and Iraq attest to the crucial role humanitarian demining can play in securing natural resources, revitalizing a nation's economy, and, in the case of Iraq, legitimizing a fledgling government. And in all three countries, RONCO is establishing the capacity for the country to further develop demining operations on its own. In both Mozambique and Eritrea, RONCO continues to train deminers to operate independently. In Iraq, RONCO has trained over 200 Iraqi deminers and organized them into national demining and clearance units.

The Department of State's support for the development of a long-term view of demining under its Integrated Mine Action Support contract has resulted in assistance to national mine action centers in at least 12 countries during the past six years. The planning, organizing and management skills provided to the MACs help to integrate the role of demining and clearance into national economic planning. The true end and benefit of humanitarian demining and UXO clearance, therefore, may go far beyond preventing injuries and death. Clearance has the potential to restore economic and social activity, resettle refugees and internally displaced persons, provide jobs and incomes, and improve quality of life on a national scale.

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Endnotes

1. Dique, Jorge. "Mozambique Government to Revive Coal Mines and Port," *South Africa Mail and Guardian,* Feb. 27, 1997.
2. *SA Looks for Rich Pickings in the Valley.* Oct. 29, 2003. Text obtained from http://www.eprop.co.za/news/article.aspx?idArticle=2686. Accessed Oct. 25, 2005.