

World first: landmine clearance along power line uses specialist detector



Background

The power line that supplies power to Mozambique's capital, Maputo, stretches some 80km from Maputo to Ressano Garcia on the border with South Africa. During the country's civil war, mines were laid around the pylons by government forces to protect them against attack. These mines caused human and livestock accidents. They hampered maintenance of the line and those living beside the pylons lived in constant fear of injury or death.

As a key piece of national infrastructure providing power to a population of over 1.2m people in Maputo, the government believed clearance of the line was of the highest priority. From 2009 – 2014 The HALO Trust provided support to local people and the national electricity company **Electricidade de Moçambique** (EDM) by clearing the mines around 171 electricity pylons along the power line.

Innovative solutions – a world first

Clearance of the line was challenging when searching for mines with a very small metal signature in areas where electrical interference and mineralised soils were present. It was also challenging where mines were buried deep in piles of soil. To address these issues HALO had to consider innovative solutions using techniques and technology, some of which had never been used before in humanitarian demining.

In a world first, mines with a very small signature were found using a specialist detector originally designed to find gold. Significantly, this detector, the **Minelab GPX5000**, could also cope with the line's electrical interference and mineralised soil. To find mines that were buried deep, HALO used a diverse array of armoured excavators and mechanical sifting machines.

Minelab's Hugh Graham, General Manager of its Counter-mine division said:

"The HALO Trust's constant use of innovation to improve safety and minefield clearance rates has challenged Minelab to provide ongoing detection solutions. In this instance, combined experience and cooperation between HALO and Minelab enabled a timely solution to a specific detection problem. HALO's willingness to seek solutions to problems rather than accept the status quo clearly contributes to its commitment of 'Getting Mines Out of the Ground, For Good'."

"Minelab takes great pleasure in its cooperation with The HALO Trust and is extremely proud to be able to contribute to HALO's vitally important work".



Brent Stirton / Getty Images

Results

HALO's work on the power line is estimated to have benefitted in excess of 13,000 people. Now that demining is complete, staff of the national electricity company **Electricidade de Moçambique** (EDM) can work on the line and local people can cultivate the cleared land around each pylon without fear of accidents.

In total, HALO's teams cleared 1,172,361m² around the 171 pylons. 3,206 mines and 37 items of ammunition were found and destroyed.

Following 22 years of work in Mozambique, HALO has cleared 171,000 mines (around 80% of the total) and 1,100 minefields. This has unlocked agricultural land, helped lift rural communities out of poverty and enabled the development of major infrastructure. Now the people of Mozambique can live safer lives, free from the fear of mines.

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