The HALO Trust Activities in Kuando Kubango, Angola

The HALO Trust employs over 900 national staff with eight expatriate managers in Angola. In 2008 HALO was responsible for 47 percent of the mined area cleared and 87 percent of the mines cleared in Angola. Its recent focus has been Kuando Kubango province—one of the most heavily mined areas of Angola and also one of the least economically developed provinces. This article begins with a case study to demonstrate the local mine problem, elaborates upon the full scope of HALO's activities, analyzes HALO's statistical achievements toward mine reduction, and concludes with HALO's recent successes and future prospects.

by Rory Forbes, Marie Demulier and Andrew Genung [The HALO Trust]

n a recent Thursday afternoon, while his little sister Tina held her mother's hand and hid shyly behind a tall white stick, Daniel Antonio posed proudly with his family on their farm. The result is no typical family picture, however, and if you look closely, you can see that the entire family is standing in a rather large crater with a single stalk of corn growing in the middle. Zoom in even closer, and you'll notice that the white stick in front of Tina has writing on it that says, "1 x MON-200." Daniel knows exactly what this means.

"HALO destroyed several MON-200s here," Daniel says, referring to the large Soviet directional fragmentation mines, each of which contains over 12 kilograms (26 pounds) of high explosives. "The Cubans laid them underneath anti-personnel mines, and linked them to boxes of TNT buried a few meters away." The reason Daniel is so familiar with the mine clearance on this particular piece of ground is that he works as a local paramedic for The HALO Trust demining team and was part of the effort here that removed over 2,400 mines from 10 hectares (25 acres) before the task was completed in late 2009.

When the mines were laid in 1986 as part of a Cold War proxy battle that turned this small, remote Angolan village into one of the most heavily mined areas in the world, Daniel's grandfather was told to leave the land and was given a smaller plot in a crowded area closer to



Daniel Antonio (left) posing with his family.

town. Now, with a growing extended family and a desire to start moving beyond their current subsistence farming and begin selling their extra produce in the local market, Daniel's family is incredibly grateful to both him and HALO for the safe return of their land. With his own family plot secure, Daniel continues working with HALO's demining team less than one kilometer (0.62 miles) away, clearing ground for his neighbors in Cuito Cuanavale.

Angola's Mine Problem

To understand Daniel's family's situation in Kuando Kubango province, it is important to understand the broader context of Angola's mine legacy. Mines were laid in Angola during 27 years of bitter conflict that followed independence from Portugal in 1975. Government and Cuban forces laid extensive minefields around their bases in and around towns. Mines were laid around inEven though Angola is a large country with wideopen spaces, the vast majority of mines were laid in or around towns and villages that are now growing economically and in population; thus, there are concentrations of mines where there are concentrations of people. HALO has conducted surveys of the four provinces in which it operates and has found there are 840 confirmed minefields remaining to clear.

Seven Years of Local Clearance

Since its initial entrance into Angola in 1995, HALO worked primarily in the Planalto provinces of Benguela, Bié and Huambo. After the fighting ended in 2002, the



A woman walks through a HALO-cleared minefield carrying water and her belongings. On both sides of the path, white-tipped sticks mark where HALO found and destroyed anti-tank mines.¹

frastructure such as airports, pylons, water sources and bridges. During the course of the war, positions were often taken and re-taken, and more mines were laid at each stage. *União Nacional para a Independência Total de Angola*, known locally as UNITA, and other factions laid mines when they took a permanent position or before withdrawing from a captured post. Both sides laid mines on roads, in low density, and in locations that years later no longer look significant. The conflict ended in 2002, and to this day anti-tank mines on roads are a significant problem. program expanded into the previously inaccessible province of Kuando Kubango and HALO started clearance there in 2003. HALO's clearance priorities are the towns of Caiundo and Cuito Cuanavale, where it is actively supporting the return of refugees and internally displaced persons.

Due to the scope of required mine clearance and the 199,049 square kilometers (76,853 square miles) of Kuando Kubango province—or about the same size as the U.S. state of South Dakota—HALO built a base in Menongue, the provincial capital, to support opera-

| Area Cleared | AP | AT | UXO | SAD* | SAA** | Area Cleared in m ² |
|-------------------------|--------|-------|-------|-------|--------|--------------------------------|
| Total Clearance | 19,801 | 9,961 | 6,459 | 4,314 | 16,049 | 2,409,724 |
| US Dos-Funded Clearance | 1,908 | 609 | 219 | 5 | 8 | 366,900 |

 Table 1: Kuando Kubango Statistics 2003–10

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tions, as well as a smaller base farther south in Cuito Cuanavale. Then, in 2009, the Vice-Governor of Huila province requested HALO's help to conduct surveys and clear mines in the province. HALO's area of operations in Angola now covers five provinces, with a total area of 1,246,700 square kilometers (481,353 square miles). HALO works with both the national mine-action authority, *Comissâo Nacional Intersectorial de Desminagem e Assistência Humanitária*, and the provincial government to formulate yearly work plans that ensure HALO assets are working on tasks of the highest priority and according to the development plans of the local authorities and other nongovernmental associations.

HALO is currently demining around the city of Cuito Cuanavale, site of the "turning point" battle between the *Movimento Popular de Libertação de Angola* and * Stray Ammunition Destroyed ** Small Arms Ammunition

the population has grown and IDPs have returned to the area, and the need for farmland, access to water and timber have pushed people near and through the mine belts ringing the city of Cuito Cuanavale.²

Kuando Kubango Statistics

Kuando Kubango is the province where HALO removes the greatest number of AP and AT mines in Angola. Table 1 below shows the number of AP and AT mines, pieces of unexploded ordnance, stray ammunition destroyed and small arms ammunition items removed, as well as the total area cleared in square meters from 2003 to March 2010.

The Office of Weapons Removal and Abatement in the U.S. Department of States' Bureau of Political-Military Affairs (PM/WRA), the U.S. Department of

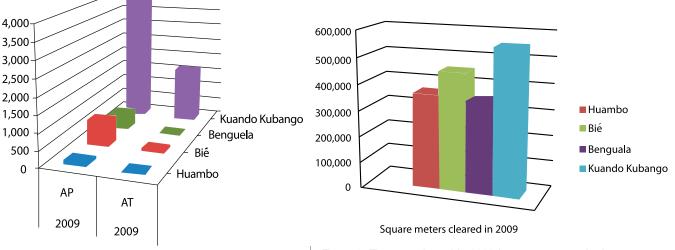


Figure 1: The number of AP and AT mines HALO removed in Angola in 2009.

Figure 2: The area cleared in 2009 in square meters in the provinces of Huambo, Bié, Benguala, and Kuando Kubango.

UNITA.² It is one of the few areas in Angola where you can find what the layperson thinks of as a true mine-field—organized parallel lines of mines originally laid to protect a military position.² There are multiple rings of minefields and within each mine belt you can find between one and 10 rows of anti-tank and anti-personnel mines spaced scant meters from each other.² The minefields present a huge humanitarian problem, because as

Defense, and private U.S. donors provide strong support to HALO, both globally and in Angola. Table 1 also shows the results of mine clearance funded by PM/WRA in the province of Kuando Kubango.

Figure 1 (above left) shows the number of AP and AT mines removed by HALO in Angola in 2009, and clearly illustrates how heavily mined Kuando Kubango remains compared to the other provinces. The number of



A vehicle belonging to a Portuguese international NGO that hit an anti-tank mine in Kuando Kubango province on 3 October 2009. The vehicle's two occupants were only slightly injured despite the fact that the vehicle was carrying barrels of fuel.

mines remaining here not only is due to the high degree of mine contamination in the area, but also reflects the fact that HALO has been performing clearance in the provinces of Benguela, Bié and Huambo for over a decade while operating in Kuando Kubango for a relatively short period.

Figure 2 on the previous page shows the area cleared in square meters in 2009 in the four provinces. The figure from Kuando Kubango is significantly higher mainly due to the fact that almost half of HALO Angola's mineclearance assets are deployed in that province.

The latest Kuando Kubango minefield status is as follows:

- 9 active
- 7 cancelled
- 62 completed
- 272 surveyed
- 11 suspended

The 62 completed minefields consisted of 154 hectares (381 acres) while the 272 minefields remaining for future clearance total 2,291 hectares (5,661 acres). The 11 suspended minefields are awaiting assistance in manual mine clearance from HALO mechanical assets.

Opening the Roads in Kuando Kubango

During the civil war AT mines were used extensively to close roads to military and civilian traffic. The presence of AT mines on roads, or even their suspected presence, has a crippling effect on the local economy, transport of produce to and from farms, movement of people, and ability of NGOs and the government to implement development projects.

One of HALO's highest priorities since the end of hostilities has been to make roads safe for travel. Since 2002, HALO has opened 804 kilometers (500 miles) of road in Kuando Kubango (see Figure 3, next page) and 4,922 kilometers (3,058 miles) nationwide.

The opening of roads has been achieved mainly through the deployment of HALO's Road Threat Reduction system. HALO uses a trailer to reduce road threats following a check using a metal detector since the metal detector will not be able to locate minimum-metal or

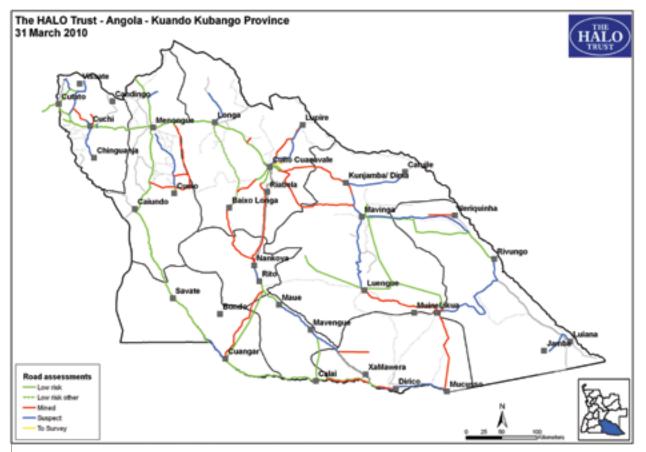


Figure 3: Since 2002, The HALO Trust has opened 804 kilometers (499.6 miles) of road in Kuando Kubango and 4,922 kilometers (3058.4 miles) nationwide.

plastic anti-tank mines. The weights on the trailer simulate a heavy vehicle so HALO can be sure the road is safe for trucks and buses. The cab for the operator is armored for protection in case of an uncontrolled explosion. RTR has two parts: a metal detector and "sacrificial wheels."

On the sandy roads of Kuando Kubango province, detonation trailers are not viable since they quickly get

bogged down. In addition, the presence of plastic AT mines renders the front-mounted metal detector useless. As a result, HALO is testing two new systems—both developed and funded by the Humanitarian Demining Research and Development Program in the U.S. Department of Defense's Night Vision and Electronic Sensors Directorate—the Rotary Mine Comb and the Minestalker. The Rotary Mine Comb has two metal rotors that plow and



The Rotary Mine Comb.



"Sacrificial wheels" mounted on a weighted trailer detonate plastic anti-tank mines.



Using a front-mounted metal detector, an armored tractor locates metal-bodied anti-tank mines.

excavate the soil in front of the machine, bringing the AT mines to the surface. It can clear 1 kilometer (0.62 mile) of road every two days. The Minestalker is a ground-penetrating radar system that can find anomalies, including plastic AT mines, under the soil. HALO and HD R&D carried out field trials in Cuito Cuanavale from May to June 2009. Trials will continue during 2010.¹

Much humanitarian mine-clearance work remains to be done in Angola as a whole and within Kuando Kubango in particular. With the generous support of PM/WRA and other donors, The HALO Trust is working toward helping Angola achieve mine-free status as soon as practicably possible. \blacklozenge

See Endnotes, Page 81



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Andrew Genung has been working for The HALO Trust since early 2008. He did his initial mine-clearance training in Mozambique and Nagorno-Karabakh, and then became Location Manager at HALO's Angola headquarters in Huambo. He has also worked as a HALO Field Officer in Cuito Cuanavale, Angola, and is currently the Expatriate Operations Officer for central Afghanistan, based in Kabul. Before joining HALO, Genung worked for NGOs in Brazil, Nepal, Peru and the U.S. He graduated from the University of New Hampshire with a dual major in anthropology and international affairs.

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