



UNITED STATES DEPARTMENT OF DEFENSE

# HUMANITARIAN DEMINING R&D PROGRAM

## HSTAMIDS

Leveraged from the U.S. Army's proven handheld mine detector combining GPR and metal detector technology

Equipment described herein is subject to US export regulations and may require a license to export.

### STATUS

Operational field evaluations (OFE) are ongoing in:

- Afghanistan (The HALO Trust)
- Cambodia (MAG and The HALO Trust)
- Kosovo (The HALO Trust)
- Sri Lanka (The HALO Trust)
- Zimbabwe (The HALO Trust)

MAG completed an OFE in Angola in Dec 2018 where it was used to clear 1,116 mines from 1.46 million square meters of land.

The HALO Trust performed an HSTAMIDS OFE in Mozambique from Apr 2012 - Dec 2014, helping Mozambique become mine safe by 2015.

The U.S. Army's Handheld Standoff Mine Detection System (HSTAMIDS) is a dual sensor mine detector that utilizes ground penetrating radar (GPR) and metal detector (MD) technology. Its data fusion algorithms combine the sensor outputs enabling the system to reliably and consistently discriminate mines from clutter. Through numerous comprehensive tests in diverse soil types and environments, HSTAMIDS has demonstrated excellent probability of detection with low false alarm rates. As the operator advances, the algorithms continuously update the terrain model, enabling the system to automatically adapt to varying soil conditions. Potential mine detections are provided to the operator via audio alert signals. Ongoing development efforts include integration of a more sensitive metal detector, de-coupling the metal



detector from the GPR for improved performance against deep buried mines, and further improving GPR deep search capability with a low frequency antenna and wideband frequency spectra transceiver. Operational field evaluations (OFEs) are underway in five countries: Afghanistan with The HALO Trust; Cambodia with the Mines Advisory Group (MAG) and The HALO Trust; and Kosovo, Sri Lanka and Zimbabwe all with HALO. These OFEs are providing groundbreaking results and revolutionary demining procedures that are changing the future of humanitarian demining.

Cutting-Edge Solutions  
DEMINING TECH

# MINE DETECTION



## FEATURES

- Dual sensor, handheld mine detector combines metal detector and GPR to detect low metal mines
- Real time data algorithms for mine-clutter discrimination
- HSTAMIDS Decoupled adds incremental capability against deep buried low metallic mines



Sri Lanka: The HALO Trust



Cambodia: Mines Advisory Group



Kosovo: The HALO Trust



Dense Mine Line in Cambodia

## APPLICATIONS

- Dense or highly cluttered minefields where highly accurate metal vs. mine discrimination provides greater efficiency and clearance rates

### OPERATIONAL FIELD EVALUATION RESULTS

| DATES             | SEARCH AREA (M <sup>2</sup> ) | MINE CALLS | CLUTTER CALLS | TOTAL DETECTIONS | CLUTTER REJECTION (%) | MINES FOUND |
|-------------------|-------------------------------|------------|---------------|------------------|-----------------------|-------------|
| Mar '06 – Jul '21 | 29,515,173                    | 1,816,199  | 33,621,137    | 33,437,336       | 95.04%                | 56,907      |



Extensive clutter



Extreme Conditions

US Army RDECOM CERDEC NVESD  
 info@nvl.army.mil  
 10221 Burbeck Road  
 Fort Belvoir, VA 22060-5806  
 USA  
 www.humanitarian-demining.org