HALO Laos Area of Operations

HALO Survey Target Villages 2018 - 2022

Legend
- HALO Office
- 538 Survey Target Village
- District
- Province

Scale: 1:1,000,000
Technical Survey
Form to Database/Map  to IMSMA
Data Collection - Survey

M&E
- Survey Assessment
- Landowner Identification
- UXO Accident Report

Operations
- Technical Survey
- EOD Roving Task
- RE Record
- CHA Handover
- Quality Control
- Demolition Plan
- Tasks recces
- New UXO Report

Support
- Logistics Equipment Request
- Fleet and equipment Failure Report
- CASEVAC Exercise
Data Processing – Work time

**Paper Form**
- 480 hours

**Mobile Data Collection**
- 96 Hours - 80% Increment in Efficiency

### Technical Survey
- IMSMA Reporting
- Data QC
- Data Entry (h)

### EOD Roving Tasks
- IMSMA Reporting
- Data QC
- Data Entry (h)

### Landowner Details
- IMSMA Reporting
- Data QC
- Data Entry (h)
Technical Survey Report on Fulcrum App
Maps on Fulcrum App
Laos Demolition Planner

- Status: Submitted or Authorized
- Task Description
- Demolition Management
- Safety
- Comms and CASEVAC plan
- Item(s) identification and hazards (+ photos)
- Demolition calculations
- Protective works
- Evacuation
- Initiation Method and Charge Placement (+photo)
- Sketch Map (photo)
- Team and Equipment
- Supervisor Authorisation (with signature)
Laos Demolition Planner - Photos

Identification

Planning

Charge Placement

Result
UAV in UXO Survey/Clearance Operations

- Confirmation of Demolitions
- Robustness
- Recce for Access
- Regulations
- Skilled Operator
- Surveillance During Demolitions
- Flight Time
- Updating Imagery

[Image of a drone]
Reconnaissance, Surveillance and Confirmation
UAV in UXO Survey/Clearance Operations
Primorsky – Ammunition Dump Explosion August 2017

- Old Soviet ammunition dump
- Estimated 2,001 tonnes of ammunition (500,000 pieces)
- Items up to 12km out
- Main area of 1.3km radius of crater
Primorsky Ammunition Dump Explosion
Drone – West Bank

- All minefields mapped by drone prior and during clearance.
- Detailed planning possible
DGPS – West Bank

- All programme GIS information is logged by DGPS.
- Digital reports are shared with INMAA and PMAC during and by completion of task.
- Synchronizing DGPS with Drone2map.
Sri Lanka – UAV for Monitoring Mechanical Clearance
Questions?