

STEMD

SYSTEMATIC TEST & EVALUATION OF METAL DETECTORS

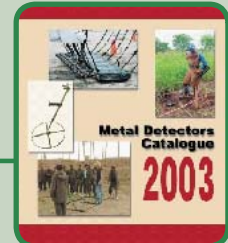
BACKGROUND

The Geneva International Centre for Humanitarian Demining (GICHD) is publishing annually Metal Detector (MD) catalogues. Information available is mainly based on manufacturer's data or on previous tests. Already last year GICHD requested provision of systematic Test & Evaluation (T&E) results based on standards. Recent publication of the CEN Workshop Agreement "CWA 14747.2003", chaired by the Joint Research Centre (JRC) on T&E of metal detectors. T&E of metal detectors is a key element to allow the prediction of performances & weaknesses in particular geographical conditions & scenarios (mine threat).



AIMS

Enable mine action programme managers to make informed choices over metal detector selection.
Provide training to deminers, mine action centres & test agencies on the use of the CWA methodology.
Provide T&E results to GICHD for integration to next issues of their metal detector catalogue.



PLANNING

SYSTEMATIC TESTS IN LABORATORY CONDITIONS

- METAL DETECTORS (THE LIST OF METAL DETECTORS TO BE TESTED WILL BE AGREED BETWEEN THE PROJECT PARTNERS)
- USING THE CWA PROTOCOL IN ORDER TO ASSESS PERFORMANCES & DRAWBACKS

REGIONAL TEST CAMPAIGNS IN LIMITED NUMBERS OF MINE AFFECTED COUNTRIES

- TRAINING OF USERS INTO THE CWA PROTOCOL
- TEST OF METAL DETECTORS IN REAL ENVIRONMENTAL CONDITIONS
- COLLECT RELEVANT LOCAL ENVIRONMENTAL INFORMATION

OUTPUT

- UPDATE OF THE GICHD CATALOGUE UNDER MANDATE OF THE UNITED NATIONS MINE ACTION SERVICE (UNMAS)
- LESSONS LEARNED TO UPDATE CWA

SPONSORS

This project will be funded by the European Commission
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Technically managed by the JRC

United Nations
Mine Action Service



Geneva International
Centre for
Humanitarian Demining



European Commission



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TEST & EVALUATION CAMPAIGN

In laboratory conditions

Detection performance

- In air / in soil sensitivity, footprint, etc.
- Sweep speed, location accuracy, etc.

Environmental stresses

- Vibration / drop test
- Temperature / humidity
- Electromagnetic compatibility (EMC)

Logistics

- Mechanical & electrical set up
- Weight & dimensions
- Lifetime of batteries

Ergonomics

- Fatigue (weight, balance, inertia)
- Alarms (sound level, frequency)

In field conditions

- Systematic training of regional demining experts on the use of the CWA
- In field test in several mine affected regions (e.g. south east Europe, Mozambique, Cambodia)
- Using the fleet of locally used metal detectors + new ones previously tested
- Collection of local environmental data (soil, mine, etc.)
- Collection of lessons learned and user feedback

