

ITEP Test and Evaluation of Humanitarian Demining Equipment, 2007

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The ITEP Work Plan 2007 was published at the ITEP website in March 2007. It compiles all test and evaluation activities that will be carried out during 2007 by, or with, ITEP member countries. Compared to previous years there are fewer projects planned, reflecting the reduced interest of a number of ITEP member countries in test and evaluation of humanitarian demining equipment. On the other hand, ITEP has decided to try and increase efforts in building test and evaluation capacity by assisting third parties that need advice and guidance on test and evaluation methodologies.

The full ITEP Work Plan 2007, as well as a summary list of all 2007 projects is available at http://www.itep.ws/activities/itep_workplan/activities.html. All activities with trials scheduled prior to the end of September 2007 are shown in the list below. The article further includes some project highlights and a list of published ITEP test reports since December 2006.

ITEP Work Plan Project Highlights

More information on the highlighted projects, as well as contact details can be found in the associated ITEP Work Plan project descriptions.

CEN Workshop on Test and Evaluation of Metal Detectors/Part 2 (2.4.1.2) and Part 3 (2.1.1.1)

Both CEN Workshop activities, of which Part 2 has already started, are a follow-up to the CEN Workshop on Test and Evaluation of Metal Detectors which was carried out during 2002 – 2003, and resulted in the publication of the corresponding CEN Workshop Agreement (CWA 14 747) in June 2003.

Part 2 is looking into soil characterization issues to assess the metal detection performance. In view of the possible future use of dual-sensor detectors, incorporating a metal detector and a ground penetrating radar (GPR), the Workshop is also tackling soil characterization for GPR. The Workshop intends to publish a practical soil measuring and classification system by the end of 2007.

Part 3 has as main objective to update the CWA 14747 taking into account lessons learned from three years of metal detector testing (see for example the STEMMD project). The update will consist of a separate document (Field User Guide for CEN Workshop Agreement 14747) providing clarification on how the CWA 14747 should be used, identifying key performance tests, and listing guidelines on how the obtained test results can be used.

Both Workshops envisage delivering final documents by the end of 2007.

Evaluate the performance of dual-sensor detectors in humanitarian demining as compared to the stand-alone metal detector (2.4.2.12)

The trial, which is scheduled for October 2007, will consist of a reliability trial in which the performance (probability of detection and false alarm rate) of available dual-sensor detectors will be independently assessed as compared to the corresponding stand-alone metal detector. The tests will be carried out at the HCR-CTRO Benkovac test site in Croatia where nine Commercial-Off-The-Shelf (COTS) metal detectors were also tested in 2006 (see STEMMD project, last phase). At the moment the test methodology is being developed, and a first proposal is available at the ITEP website for input from interested parties.

Note that the HSTAMIDS dual-sensor detector has completed an operational field trial and

demonstration (2.4.2.6), and is currently undergoing a long term operational evaluation as the primary and sole detector in minefields while being used by deminers in Thailand and Cambodia (2.4.2.11). The long term operational field evaluation for Afghanistan is complete. The MINEHOUND™ dual-sensor detector was evaluated in real minefields during 2005 (2.4.2.4).

Test and evaluation of Personal Protective Equipment (5.2.3)

To main objective of this project is to support the development of the CEN Workshop Agreement on Test and Evaluation of Personal Protective Equipment (PPE), and to validate the published agreement. The CEN Workshop to draft a CEN Workshop Agreement (CWA) on Test and Evaluation of PPE (5.1.2) started last year and aims at publishing the final agreement in Autumn 2007. Trials on the position of the deminer to be adopted in the CWA test protocol were already carried out during 2006. Blast and ballistic tests on visors, using the draft CWA testing guidelines, will start in summer 2007.

Test and evaluation of mechanical demining equipment according to the CWA 15 044 (3.2.10, 3.2.43)

Two performance trials according to the CEN Workshop Agreement on Test and Evaluation of Demining Machines (CWA 15044) are planned during 2007. The Mini MineWolf will be evaluated at the German Military Technical Centre 91 (MTC 91) in Meppen, while the Digger D-2 will be tested at the SWEDEC Norra Kulla test range in October.

Test and evaluation of STORM (3.2.40)

This activity includes modification and testing of the COTS [Menzi Muck high mobility mechanical excavator](#). The modifications include an armoured cab, blast resistant tires and a suite of commercial attachments. The suite of tools will include vegetation removal, soil sifting, soil grinding, and material handling attachments. STORM is currently undergoing armoring of the cab and an initial assessment of the attachments is pending. It is projected that STORM will be ready for an operational field assessment in 2007.

Non-explosive high-order mine neutralisation (6.2.12)

This project is developing and testing a new high-order surface laid or buried mine neutralization device using two non-explosive chemical compounds that can be initiated without an electric detonator. The chemicals are non-toxic, non-explosive, environmentally friendly and low cost. The devices developed are now being evaluated for detonation pressure, velocity, density, in confinement and non-confinement states to down select to the best device.

Follow up on requests for advice on test and evaluation procedures (7.2.1)

Capacity building in test and evaluation of humanitarian demining equipment is considered to be opportune for ITEP, especially in the light of the approaching end of ITEP's lifespan (July 2010). Capacity building is proposed as a logical evolution within ITEP moving from the development of best practices, and the execution of test and evaluation activities, to a transfer of this knowledge. Therefore, ITEP plans to engage more in training and advice on test methodologies to demining entities in mine affected countries. Please direct your inquiries for support during your test and evaluation of demining equipment to the ITEP Secretariat or the ITEP contacts listed in the project description file.

Test reports on ITEP activities, published since December 2006

- [Test and evaluation results for an ALLU bucket fitted to an armoured front end loader.](#)
- [South-East Europe Interim Report Field Trial Croatia \(STEMD - continuation\).](#)
- [Report on the Mine Clearing Rake Test](#)
- [Digger D-2 Pre-Trial Assessment report](#)
- [Tests and evaluation of dual sensor mine detectors based on a combination of Metal Detector and Ground Penetrating Radar \(TEDS\)](#)
- [APOPO-PARADIS trial report, October 2006](#)
- [HSTAMIDS with acoustic vibration sensing](#)
- [Systematic Test & Evaluation of Metal Detectors \(STEMD\): Interim Report Laboratory Tests Italy](#)
- [Metal Detector Trials - Test Results and Their Interpretation](#)