

**MEETING OF THE STATES PARTIES TO
THE CONVENTION ON THE PROHIBITION
OF THE USE, STOCKPILING, PRODUCTION
AND TRANSFER OF ANTI-PERSONNEL
MINES AND ON THEIR DESTRUCTION**

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REPORT OF THE EXPERT GROUP ON MINE ACTION TECHNOLOGIES¹

The present document is inspired by the outcome of two expert hearings in mine action technologies, chaired by Marc Acheroy (Royal Military Academy, Belgium) and which took place on the margins of the Standing Committee on Mine Clearance, Mine Risk Education and Mine Action Technologies in June 2005 and November 2005.

Introduction

During the June Meeting the expert group on Mine Action Technologies discussed the benefits for end-users of the International Test & Evaluation Programme (ITEP). ITEP issues test and evaluation reports available on the ITEP website (<http://www.itep.ws/>). These reports namely aim at helping end-users to select available technologies appropriate to their needs. In November, the expert group organised a workshop on Mine Action Technologies aiming at informing donors and end-users on the current status of technologies in use, ready to be used or to be fielded in a near future.

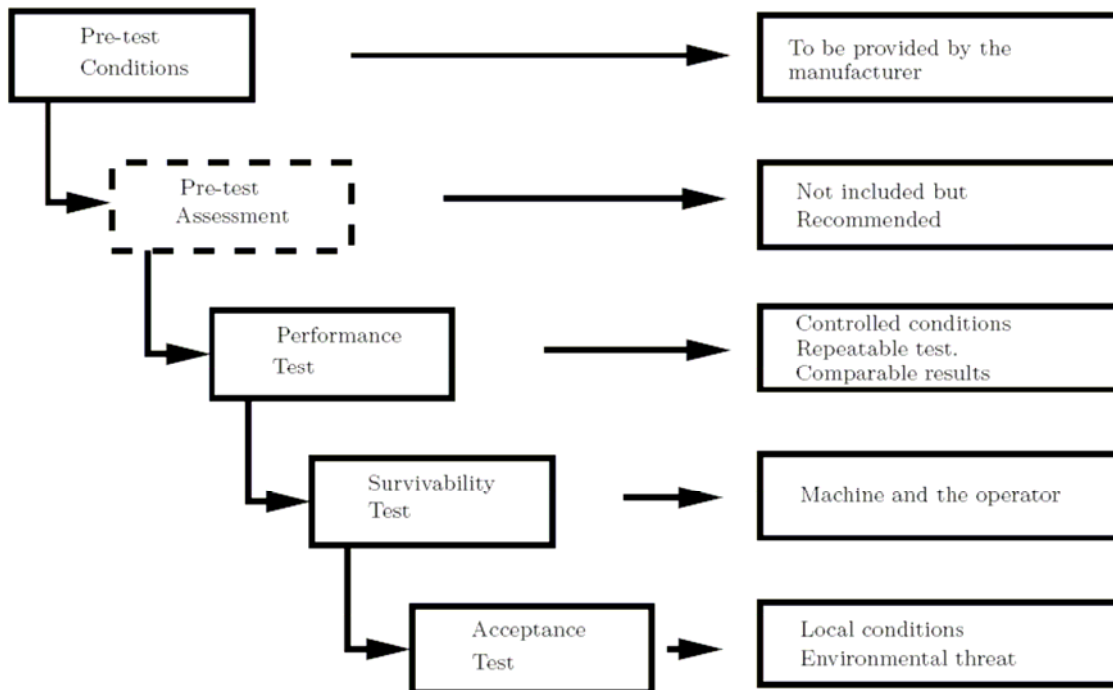
ITEP: a useful tool for donors and end-users

ITEP has organised the test and evaluation of a lot of materials and the corresponding test reports are available on its website (<http://www.itep.ws/>). This concerns:

- More than twenty different vegetation cutters and flails
- thirty different metal detectors
- two dual-sensor mine detectors
- protective equipment
- two ground Penetrating Radars
- two vapour Detectors
- and much more (e.g. Metal Detector Arrays).

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The scheme below represents the test and evaluation process as used by ITEP



This process focuses on:

- available technologies
- independent and authoritative testing by experts
- real world tests by working deminers
- getting existing equipment into the field

and less focuses on pure research of future technologies.

The testing of Tempest MK 5, developed by MAG and DTW is an example of this process (see figure). This mechanical system passed through pre-test conditions, performance test and survivability test, which allowed for a lot of enhancements.



MINEHOUND detector testing is an example of real world testing which includes:

- testing in live areas
- training of independent deminers working for NGOs to use the equipment, and measuring their performance
- testing as part of a REAL clearance operation.

Recommendation to donors

This initially costs time and money and slows clearance, but ...

We need to invest now in this test and evaluation to get the benefits of technology tomorrow.

It has taken a lot of work to develop products, processes and standards for testing and it is now time to work with donors and end-users in integrating already available technology into clearance operations. The expert group is convinced that a workshop with donors and end-users may help start this process.

Workshop on Mine action Technologies

This workshop, organised on the margins of 6MSP, aimed at presenting to the humanitarian demining community some of the best available technologies. The idea behind this event was to show to end-users and donors that demining technologies have made substantial progresses and that new tools are ready to be fielded in order to help deminers to fight against the dreadful threat of landmines. The programme included the following presentations:

- Test & Evaluation of Humanitarian Demining Equipment (performance, lessons learned, advantages and drawbacks) by Chris Weickert (ITEP EXCOM Vice Chairman). Particularly important are the lessons learned:
 - Collaboration saves resources and reduces duplication of effort
 - International Test & Evaluation Standards and Best Practices allows for the comparison of different equipments (manufacturer or machine type)
 - In-country acceptance testing, i.e. testing of equipment to determine suitability for a particular country/area/project, are particularly important
 - Involvement of Non-Governmental Organizations and Mine Action Centres is strongly recommended for acceptance tests (In-country) and Performance as well as for survivability tests
- The MINEHOUND Dual-Sensor (metal-detector and ground penetrating radar), lessons learned during trials in Cambodia, Bosnia and Angola) by David Daniels (ERA Technology)
 The project objectives include the reduction of false alarms by dual sensor technology, improvement of the detection of minimum metal mines and the development of an affordable and simple detection technology.
 Trials of MINEHOUND have been completed in Cambodia and Bosnia. The trials are now well underway in Angola. The deminers show a great interest in the new detector and rapidly acquire

the skills to use it. These trials are intended to bring the emerging multi-sensor detection technology into the hands of the deminers actually involved in clearance operations.

The detector itself is not in final production build standard, but is sufficiently mature to work in a real minefield. Trials at this stage will give an opportunity for feedback and lessons learned to be incorporated into a final production unit.

- Information Technologies (the PARADIS system and its possible connection with other systems), by Marc Acheroy (RMA).
The PARADIS system aims at improving the planning of humanitarian demining campaigns and at providing campaign managers (in MAC) and field operators (deminers) with user-friendly tools making use of maps (if they exist) and / or satellite images. The system is compatible with IMSMA (it may import IMSMA database and export information to IMSMA) and EODIS (explosive database and field management tool developed by SWEDEC in Sweden). It includes a desktop (or laptop) management system (MS) for the management at country and region level and a PDA (Personnel Digital Assistant) for the collection of field information (location and type of UXO, state of the roads, advancement of demining activities on a mine field, etc.). The MS and the PDA, both equipped with a geographic information system (GIS) may exchange and update information. This system, tested in Belgium, Laos and Mozambique, can be easily adapted to specific end-user's needs and is free of charge for the humanitarian demining community.
- Lessons Learned on Mine Action Technologies, by Dennis Barlow, (Director of MAIC) The useful lessons learned database developed by MAIC has been presented. This database:
 - utilizes a neutral, pre-existing clearinghouse
 - collects distilled LL separate from other AAR or SITREPs
 - uses a passive, voluntary method
 - uses a standard, simple form
 - collects and distributes primarily via Internet
 - institutes self-policing aspect (public comment)
 - basis for review of standards, best practices
