Progress status of technology

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Introduction

In 1997, at the workshop which accompanied the signing of the Ottawa Convention, concern was expressed at the lack of international **coordination** and **cooperation** in mine action technology. It was noted that there were no **universal standards** for technology, no common view on where resources should be directed, and **inadequate dialogue** and understanding existed within and between the research and development communities.

Some examples of enhanced / new technologies

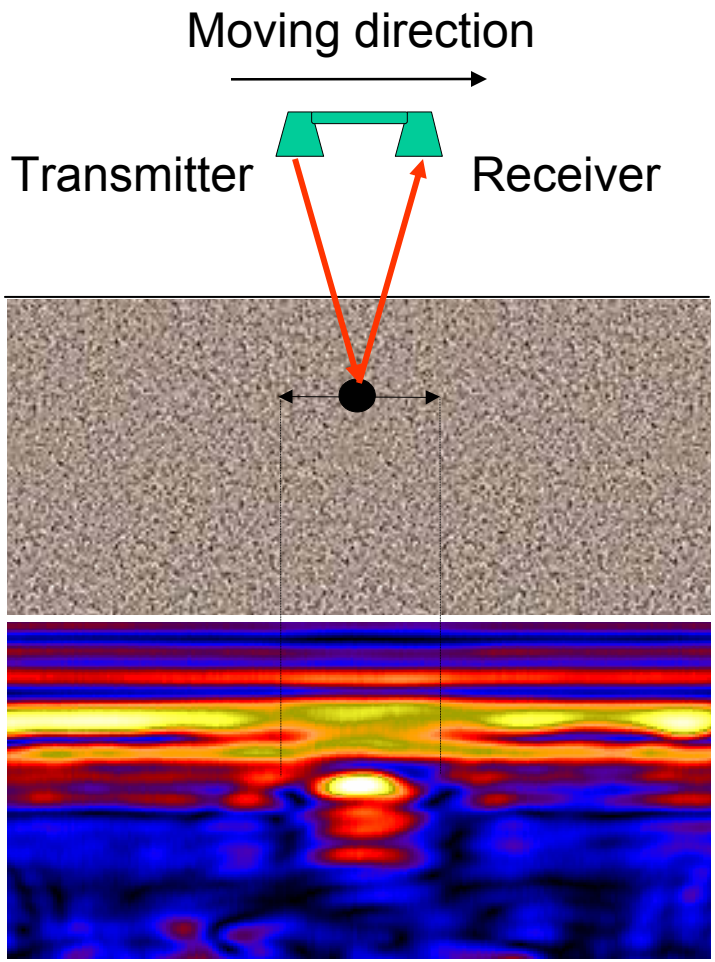
(1) Metal detector

"We are still using the technology of world war II"

This claim is not true ! These last years, manufacturers and scientists have largely enhanced the capabilities of current metal detectors (much better sensitivity and resolution, much better behaviour in magnetic soils, etc)

Not all soils are convenient for metal detectors. There are dangerous cases where it is impossible to detect metallic objects because of the soil characteristics. In order to solve this safety problem, an analysis of the soil characteristics is undertaken under the umbrella of the International Test and Evaluation Programme (ITEP).

Some examples of enhanced / new technologies



(2) Handheld Dual sensor mine detector

Metal detector + Ground Penetrating Radar

In 2002, mine detectors have been tested successfully in Bosnia and in Lebanon.

In 2003, operational tests will be performed with 24 mine detectors in 4 different mine affected countries. Lessons learnt will be collected and enhancements will be applied if needed

benefit: *enhanced detection and reduced false alarm*

Some examples of enhanced / new technologies

(3) Information technology

IMSMA is still evolving. It includes standard reporting facilities (reporting obligation of Art 7), can exchange information with Geographical Information Systems (GIS) which allows the use of digitized map and satellite images.

Satellite images with appropriate legend can be used as maps.

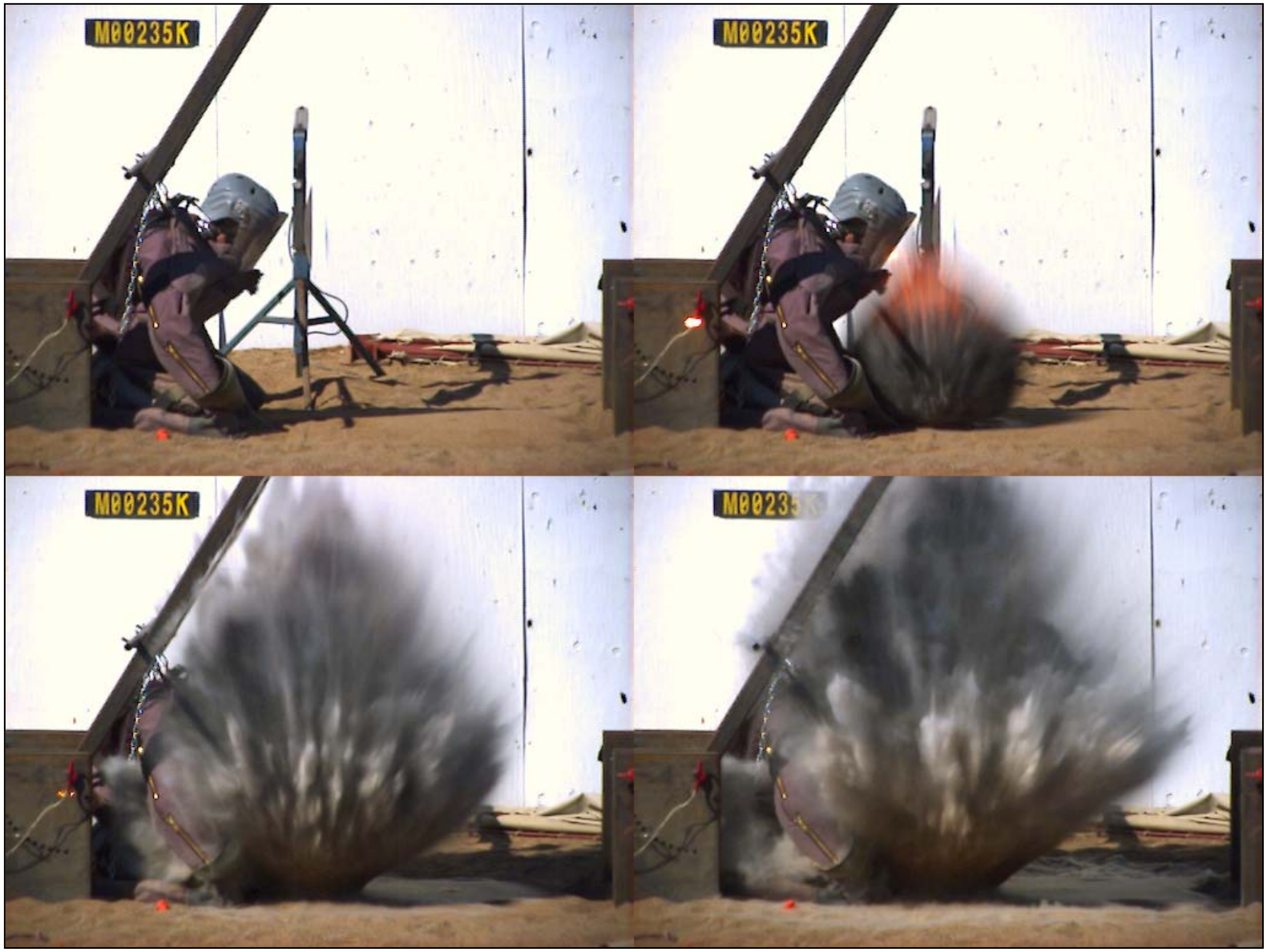
Managerial tools are developed or in development (e.g. planning of demining campaigns, cost-benefit analysis regarding the introduction of specific equipments, definition of a strategy at country / region level)

Some examples of enhanced / new technologies

(4) Personal Protective Equipment

Development of a test methodology based on in-depth analysis of the physics of mine blast damage mechanisms (CCMAT – US)

Standards will be developed for personal protective equipment under the umbrella of the International Test and Evaluation Programme (ITEP)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Some examples of enhanced / new technologies

(5) Prosthetic feet (CCMAT)

- Greater comfort for wearer (energy storage and return)
- Much longer lifetime, low cost maintenance
- Better cosmetic features

Some examples of enhanced / new technologies

(6) Educated Rodents (APOPO)

In 2002, rats have been tested successfully in Tanzania and prove to be reliable.

In 2003, operational tests are foreseen in 6 different afflicted countries

A message to donors

"Technologists" need your support to establish a sound procurement process for fielding new technologies in order to have a more cost-effective mine action

The International Test and Evaluation Programme (ITEP)

- What is ITEP ?

  ITEP is an international programme

  - *favouring collaboration* of participating countries (to avoid duplication of efforts)
  - dedicated to *Test and Evaluation* of all forms of equipment, systems, and methods for used in humanitarian demining

The International Test and Evaluation Programme (ITEP)

- Why ITEP ?

  It can be *dangerous* to rely on data sheets distributed by manufacturers to select an equipment and/or to assess their real performances.

  Therefore, test and evaluation against agreed standards are very important for safety and operational effectiveness.

  For these reasons, the two main activities of ITEP are:

  - *Test and Evaluation*
  - *Development of standards*

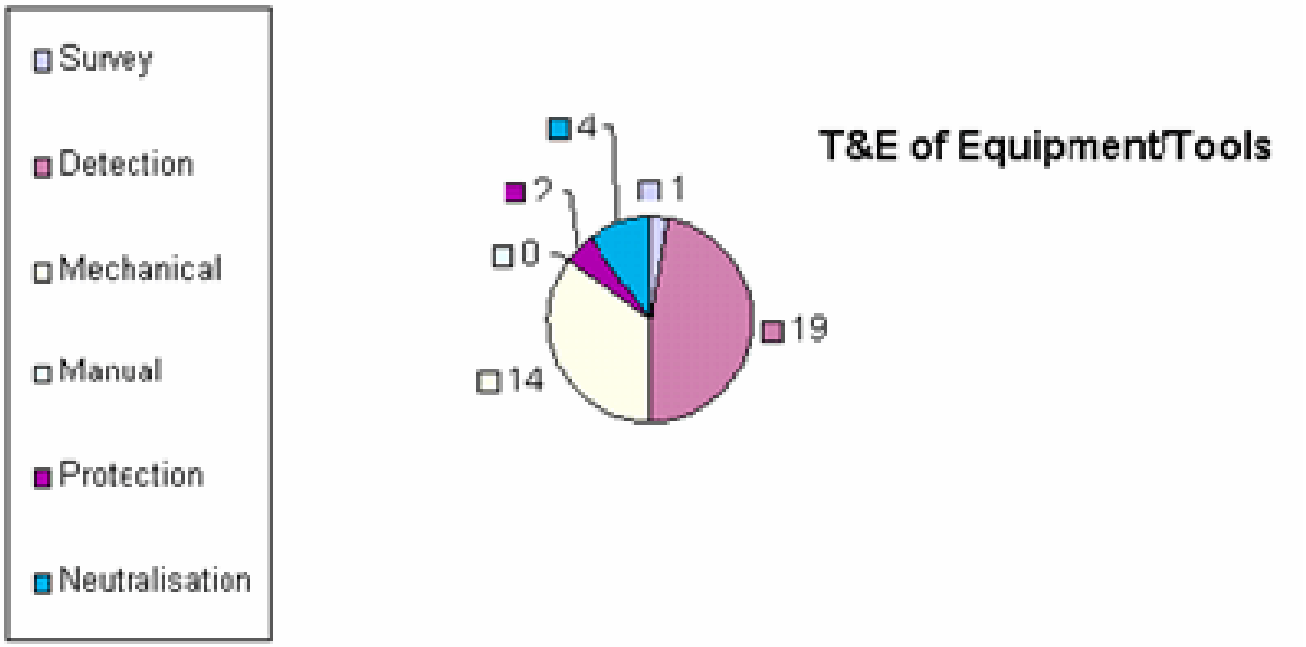
The International Test and Evaluation Programme (ITEP)

- Achievements of ITEP
  - Development of standards (living process)
    - Agreed standards on metal detector testing will be published in the beginning of March 2003 and presented at the annual meeting of MAC directors and UN advisers in March 2003.
    - The process of developing standards for ground penetrating radars (GPR) has been launched in 2002.
  - Elaboration of a Workplan for test and evaluation activities

ITEP Workplan:
A systematic approach to test & evaluation

- Technologies grouped into six Technical Programmes:
  - Survey
  - Detection
    - Metal Detectors
    - Ground Penetrating Radar
    - Vapour Detection
    - Multi-sensors
  - Mechanical Assistance
  - Manual Tools
  - Personal Protection
  - Neutralisation

ITEP Workplan Characterisation



- Total T&E projects - 37
- Three or more participants - 28
- Two Participants - 6

ITEP Workplan Timeframes

- Project Initiation
  - Before July 2002 - 30 in progress
  - By end of 2002 - 5
  - In 2003 - 2
- Project Completion
  - By July 2002 - 1
  - By end of 2002 -6
  - By July 2003 - 17
  - By end of 2003 - 5
  - By end of 2004 - 8

The future

- Many research and development activities are still ongoing. The results of them will come soon. We need therefore the collaboration of end-users and donors in order to develop equipment and tools based on real needs and not assumed needs.
- Don’t forget:

  “*Finding all mines in the ground without false alarm is a challenge comparable to sending a man to the moon but with much less money”*