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ITEP Work Plan

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ITEP

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The author presents an overview of Test and Evaluation (T&E) projects within the International Test and Evaluation Program for Humanitarian Demining (ITEP). ITEP is involved in testing and evaluating equipment, systems and methods.

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One of the major objectives for participants in ITEP is to share information and to join efforts in the area of T&E of humanitarian demining equipment, systems, and methods, in order to leverage resources and promote the use of commonly agreed upon test protocols. An important instrument needed to obtain active collaboration in ITEP is the ITEP Work Plan. The following is an overview of ongoing and planned national and international collaborative T&E projects within the ITEP. It aims to increase the efficiency of T&E activities by avoiding duplications, providing easy access to tested equipment and test results, and lessons learned. Different stakeholders might be consulted during this process.

"Methodology" includes T&E support activities such as identification and definition of test parameters (e.g., related to mine threat, climate, soil, vegetation, etc.) and development of best practices and interim T&E protocols, which could, at a later stage, be developed into full standards.

T&E covers strict T&E of demining equipment and procedures, in which developed methodologies are validated and lessons learned are fed back into ITEP.

"Output" refers mainly to the activities encompassing the production and distribution of reports, data and information on T&E. It may also cover the establishment of T&E standards, an activity that may be led by a number of organizations such as ISO, CEN, UNMAAS and GICHD.

Examples of How ITEP Works

The ITEP Work Plan was first drafted in 2002 and is continuously updated whenever new national or collaborative efforts are set up. Participants report new projects to the ITEP Secretariat, who incorporates them into the Work Plan. A yearly major revision and update of the Work Plan is organized by a standing ITEP Work Plan Working Group, which includes representatives of all participants. They report on the progress and status of the projects and provide feedback on the finalised T&E activities. Some examples of how ITEP works and how this is reflected in the ITEP Work Plan are given as follows.

The plan has highlighted duplications of efforts, and where this has occurred participants have been encouraged to collaborate. Such was the case in the currently planned T&E of Commercial Off-the-Shelf landmine neutralisation devices, Sweden, Canada and the United States were all planning a similar project and have decided to combine their efforts, which resulted in ITEP project 6.2.1, Comparative T&E of Individual Mine Neutralisation Devices. The project will carry out testing at a Swedish test range this summer and should bring the interested ITEP participants to consider statistically valid and comparable.

As the tests involved equipment under development, only summary test information has been made available on the ITEP website. Details of the reports may be consulted by the relevant companies or test persons from the respective companies under a non-disclosure agreement.

An important methodology-related T&E activity is currently ongoing. The applicability of reliability measures in developing non-destructive testing to the detection of mines using metal detectors is being investigated (ITEP project 3.2.1.2, Test of the Mechanical Equipment ARTRAC 190). This means that interested ITEP participants were asked for input on the test protocol and for participation in the trial. Canada, Sweden, and the European Commission (EC) all provided support. The resulting T&E report is available on the ITEP website. The test determined the number of varieties, targets, operators, etc. that are needed to get reproducible results when executing metal detector performance tests. Furthermore, the test determines detector performance and rank the performance results obtained in controlled laboratory tests and blind trials are also being evaluated.

A new project related to the evaluation of metal detectors is planned to start in the second half of 2003. It will cover several detector types, which are used within the ITEP community, to assess soil characteristics in order to evaluate the performance of metal detectors. Canada has decided to join efforts with the EC and Belgium and start an experimental study in Bosnia and Herzegovina (ITEP project 3.1.1.1, T&E Guidelines for Metal Detector Evaluation). The goal is to draft a CWA for distribution and revision by the end of 2003. The 2003 goal must be met in order to deliver an agreed CWA to CEN (and later to IMAS) by 2004.

Two prototype handheld electro-sensor mine detectors, developed for the United Kingdom and tested for the United Kingdom's Department for International Development, were evaluated under the ITEP umbrella as a bilateral T&E of Commercial Off-the-Shelf hand-held mine detection equipment, Sweden, Canada and the United States were all planning a similar project and have decided to combine their efforts, which resulted in Fort A.P. Hill, Virginia, were available for blind tests against a large number of mines and clutter targets. The detectors were tested against a standard protocol and the obtained results were considered statistically valid and comparable. As the testing involved equipment under development, only summary test information has been made available on theITEP website. Details of the reports may be consulted by the respective companies under a non-disclosure agreement.

A comparative T&E activity on various Commercial Off-the-Shelf protective footwear is taking place as a collaborative effort between the United States and Canada, the two main players involved in T&E of protective footwear. The ITEP project 5.1.1. Methodology for T&E of Personal Protective Equipment. The main objective is to develop and validate a test that can be used to test the effectiveness of shock/blast and to evaluate and rank the performance of personal protective equipment. The test will be made available on the ITEP website. The established test protocol and lessons learned will also constitute important input for the standardisation community. Furthermore, this activity could perform the function of a response T&E programme by including products on request by the user and/or producer.

A systematic inventory of T&E activities, capabilities and testing needs in south east Europe (SEE) was finalized in November 2001. The project, under the leadership of the EC, and with input from Belgium and the United Kingdom, produced a detailed overview of ongoing projects and existing T&E capabilities that could be used in testing efforts in the SEE region. Deficiencies in the current T&E operations and requirements were also identified and a project proposal was submitted to the ITEP website. Although this project took place before the ITEP Work Plan came in existence, it is mentioned here because it was the first collaborative effort executed under the ITEP umbrella.

Drafting the first version of the CEN Workshop Agreement (CWA) on T&E of metal detectors is an important collaborative effort achieved under the ITEP umbrella (ITEP project 2.1.1.1, CEN Workshop Agreement on T&E of Metal Detector Performance). The EC performs a leading role in this T&E activity, with the availability of a full-time Secretariat at JRC. Full details on the first results of this project and the future activities will appear in the provisional T&E activity under the next issue of the Journal of Mine Action.

ITEP works in close relationship with United Nations Mine Action Programme as well as with other initiatives.
we will be concentrating on the second half of the year include seeking to underline the importance of providing information that is as broad and diverse as possible, giving examples from the field to explain the reality of clearance and risk education work, and explaining the strengths of the clearance community.

Conclusion

The next meeting of the GGIE on ERW is 17–24 November 2003. Shortly after, there will be a meeting of States Parties to the CCW on 27–29 November, to consider the next step on this issue. While it is unclear what the States Parties will decide, there are two probable outcomes: an agreement to create a legally binding protocol or a non-legally binding “statement of best practice” for ERW. Discussions on ERW continue, possibly because the States Parties cannot decide on the legal status of the proposal or due to the demands in any paper being unacceptable to the States Parties. Perhaps the greatest danger is a legally binding document that has been so weakened to achieve agreement that it does little if anything to alleviate the acknowledged humanitarian impact of ERW.

The GICHD’s Role

The GICHD will continue to play an active role in negotiations. Two recently published reports on information requirements and warnings and risk education were not only to provide delegates to the meetings with a better understanding of the issues involved. The Center’s mandate is to provide technical advice to the States Parties involved in the discussions. Areas

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by Rolf Oschsln, RUAG Munition and Jorgen Schneider, Dyno Nobel

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Introduction

The humanitarian disaster caused by landmines and other explosive remnants of war (ERWs) continues to have a significant impact on the lives of those who live in the affected areas. The clearance of ERWs is essential for the safe and effective management of these areas. In some cases, the clearance of ERWs can be a complex and challenging task, requiring a combination of technical expertise, logistical support, and coordination. This article will focus on the challenges and opportunities associated with the clearance of ERWs and will provide examples of how these challenges are being addressed in the field.

Cost, safety, and compliance with international regulations are among the most important factors with respect to shipping explosives. The following article gives detailed insight into the transport and storage of explosives necessary for destroying mines and UXO.

Cost

Transport of Explosives

To understand the transport of explosives, a few things must be clear. First, explosives are classified as dangerous goods. The dangerous goods covered by the classification are defined on the basis of their properties. The assignment of Class 1 explosive substances and articles has been assigned to a division and a compatibility group. The division is based on the results of the tests described in UN regulations. Listed below are the transport division requirements and compatibility groups into which Class 1 explosive substances and articles are subdivided.

Table 1: Classification of compatibility groups.

<table>
<thead>
<tr>
<th>Group</th>
<th>Compatibility Group</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>Article containing a primary explosive substance and not having two or more effective protective features. Some articles, such as detonators for demolition of buildings, are classified as class A.</td>
</tr>
<tr>
<td>B</td>
<td>Article containing a secondary detonation explosive substance. In each case, without means of ignition and without a triggering charge, or an article containing a primary explosive substance and having two or more effective protective features.</td>
</tr>
<tr>
<td>C</td>
<td>Substance or article so packed or designed that any hazards arising from accidental functioning are confined within the packaging unit only. The packaging must be designed to prevent significant hazards to life and health.</td>
</tr>
</tbody>
</table>

References

1. The official title of the CCW is the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Chemical and Biological Weapons Which May be Used for Terrorism.


3. Ellis et al.

4. A legally binding protocol might be adopted, it would become the fifth Protocol to the CCW. For details of the other four protocols, see Ellis et al.

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Logistics-Explosives-Safety

Class 1: Explosive Substances and Articles

Division names give information on how the explosives can be transported. Explosives typical for demining can be put into one of the following divisions:

- Division 1: Substances and articles that have a mass explosion hazard (a mass explosion is an explosion that affects almost the entire load instantaneously).

- Division 1: Substances and articles that present only a slight risk of explosion in the event of ignition or initiation during carriage. The effects are largely confined to the package and no projection of fragments of appreciable size or range is to be expected. An external fire shall not cause an instantaneous explosion of the contents of the package.

Compatibility Groups

Compatibility groups inform you about how to store a container and how it can be transported. Definitions of compatibility groups of substances and articles for demining are listed in Table 1 on the top right.

When storing a container with explosives, you are allowed to have normal goods in the container as well; but under no circumstances can it contain other dangerous goods. Table 2 shows what is possible to mix when storing a container.

By putting division number and compatibility group together, it is possible to store and transport the explosives by sea or air in accordance with International Maritime Organization (IMO) regulations (transporting by ship) or in accordance with the International Air Transport Association (IATA) dangerous goods regulations (transporting by air) as in Table 3.

Table 3 is rather theoretical and can be difficult to understand. All explosives will be listed as Class 1. In addition, they will have a division number, a compatibility group, a UN number and a proper shipping name. Typical explosives for demining can be as Table 4 depicts.