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JOINT RESEARCH CENTRE
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M306 EN

MANDATE TO THE EUROPEAN STANDARDISATION BODIES ON TECHNOLOGIES FOR HUMANITARIAN DEMINING

I MOTIVATION

- Anti-Personnel Landmines (APL) create appalling casualties in many of the poorest parts of the world and are an obstacle to the implementation of a range of European Union programmes. Over the past six years there has been a growing international awareness of the tragic impact of APL on the populations in many regions of the world struggling to recover from the effects of armed conflict. In addition to the continuous toll of victims, economic and social recovery has been impeded by the actual or suspected presence of APL. Mine Action has therefore become an urgent priority in post-conflict situations in order to prevent casualties and facilitate the return to normality.
- With the incentive of entry into force of the Ottawa Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and their Destruction, the challenge for the international community is to overcome the landmine problem in the next 10-15 years. Based on its contribution to date, the European Union is expected to be a major player in this activity. Success will only be achieved if the international political and resource commitment is sustained, if international co-ordination is improved, if effective national capabilities are established in all of the most seriously mine-afflicted countries, and safer and faster demining techniques are introduced.
- The Commission Communication and proposed European Parliament and Council regulation concerning action against anti-personnel landmines (COM/2000/0111 final) calls for the establishment of international standards and their implementation, in close co-operation with CEN, ISO, and the UN. It observed that the well-tried, labour-intensive techniques of manual mine clearance are too slow and hazardous. As regards certification, any testing should be performed in accredited sites following standard procedures to be established.

- The Joint Research Centre of the European Commission hosts a test and evaluation facility for demining technologies. This is part of an international network for assessment of demining tools that is being established to promote the quick deployment of useful and affordable technologies for mine action. This network involves at its launch European Union Member States, Canada, USA, and the Commission as launching members. Other countries, especially those that face a mine problem will join soon. The UN and the Geneva International Centre for Humanitarian Demining (GICHD) will act as observer.
- The programming mandate emphasizes the importance of the development of a common terminology, with the creation and regular update of a reference manual for common testing standards for demining technology, as well as overcoming an obstacle to harmonization, that will contribute to the opening of barriers to trade and reduce the likelihood of unsafe practices. It will establish a disciplined, scientific and multinational test, evaluation, and certification programme to address demining equipment, processes, procedures and technology.

II. DESCRIPTION OF THE MANDATED WORK

- The European Commission is requesting the European Standardisation Bodies in close collaboration with it and with the United Nations and to establish standard methodologies in the context of humanitarian demining, specifically for mine field survey, close-in detection and identification of anti-personnel land mines (APL), for information fusion and information management, for quality assurance in the whole process of mine clearance, and especially for test and evaluation of any tool in support to humanitarian demining.
- Such standards will support the development of new tools and methods, will support the comparison of different tools and products, and will significantly improve the safety of the deminers in the field. The benefit of agreed on standards is worldwide acknowledged and urgently requested. However, a systematic and stepwise approach is recommended.
- First, it will provide the bases for comparing present techniques and instrumentation and also for improving and optimising existing technologies (in terms of sensor efficiency and effectiveness, reduction of false alarm rate, time required for operations, etc). However, standards are seen as a crucial aspect also for the development of new technologies and it is recognised that they would positively contribute to increase the credibility when a new prototype is introduced on the market.
- Second, reference standards would provide objective input for the creation and the validation of simulation models in support to the measurement campaigns.
- Last, but not least, standards will help users to find the key technique or the key combination of techniques most adapted to given mine detection and identification operations.

- The importance of standards has thus been stressed in terms of a collaborative effort to be conducted between developers and end users. It is for this reason that both sensor manufacturers and in-field operators must be invited to participate actively to the discussions. Concerning the actions to be anticipated, participating experts to the process will have to be asked to consider on the following important aspects in order to obtain a workable bases:
 - provide a suggested selection of standard test targets and soil backgrounds for each class of sensors;
 - provide a preliminary set of definitions, parameters to be controlled and standard test conditions for characterisation and assessment tasks;
 - investigate the possibility of developing a performance effectiveness measure for mine detectors corresponding to the three key technologies;
 - specify a measurement system to ensure standard test conditions; *and*
 - provide an uncertainty estimate for the measurement process.
 It may be advisable to concentrate at the beginning on existing technologies.

III. EXECUTION OF THE MANDATE.

- The European Standardisation Bodies shall submit within nine months from the date of acceptance of this mandate, a workprogramme indicating the subjects for standardisation, the appropriate types of deliverables (such as European standards - EN - and other types of agreements when appropriate), with associated target dates for adoption.
- The European Standardisation Bodies shall elaborate and adopt the deliverables foreseen in this workprogramme on the planned dates.
- The European Standardisation Bodies shall notify the Commission of any further standards projects, which it approves for addition to its workprogramme, that may fall within the area of technology covered by this mandate.
- The European standards EN adopted shall be transposed into national standards and differing national standards shall be withdrawn from the catalogues of the national standards organisations in the Member States within six months of their adoption.
- Acceptance by the European Standardisation Bodies of this mandate starts the standstill period referred to in Article 7 of Council Directive 98/34/EC.