

# **Review and Revision of Mine Clearance Standards and Quality Assurance**

(Terms of Reference - Version 3)

## **Introduction**

### **Background**

1. In July 1996, international standards for humanitarian mine clearance programmes were proposed by working groups at a conference in Denmark(1). Criteria were prescribed for all aspects of mine clearance, standards were recommended and a new universal definition of 'clearance' was agreed. In late 1996 the principles proposed in Denmark were developed by a UN-led working group into International Standards for Humanitarian Mine Clearance Operations. The document was formally issued and circulated by the UN Mine Action Service (UNMAS) in March 1997.

2. At the time these standards were issued it was acknowledged that they should be reviewed every two years to reflect developing mine action practices and procedures. The requirement for such a review and revision in 1999 is included in the UNMAS Cost Plan(2) and in the UN Portfolio of Mine-related Projects dated April 1999.

3. The UN has proposed(3) that the review of mine clearance standards forms part of a wider international review and revision of mine action standards and guidelines. Over the past two years the concept of mine action has developed, international interest and funding has increased, and there is an expectation of improved cooperation, coordination and unity of effort. The UN has recommended that a framework be established to provide structure and coherence to the growing number of standards and guidelines. The review and revision of International Standards for Humanitarian Mine Clearance Operations will therefore form part of this framework.

4. The Government of the United Kingdom, hereinafter referred to as the 'Project Donor', has agreed to meet the anticipated costs(4) of the review and revision. The Geneva International Centre for Humanitarian Demining (GICHD) will act as project manager for the review under the overall guidance and direction of UNMAS(5).

### **International Mine Clearance Standards**

5. The document *International Standards for Humanitarian Mine Clearance Operations* included standards for mine survey and hazard marking, clearance procedures and clearance levels, communications and management information systems, training, site safety and medical requirements. These standards, which address mainly procedures and processes, detail the manner in which mine clearance operations are to be conducted. They provide a reference and a benchmark for the production of national and local standards and standard operating procedures (SOPs).

### **Imperatives for Change**

6. Mine clearance practices and procedures have developed and continue to develop. In the two years since the issue of *International Standards for Humanitarian Mine Clearance Operations*, there has been a greater acceptance of equipment in particular 'ground processing' systems such as flails, rollers, mulchers, ploughs and sifters. The use of dogs in Level 2 survey and QA has also become much more common. Mine clearance standards must reflect the systems, practices, procedures and tasks of mine clearance today, and must be responsive to future developments.

7. Field users frequently comment that the existing standards are too prescriptive and that insufficient guidance is provided on their interpretation and application. There is evidence that some standards are inappropriate, unnecessary and/or are unenforceable, and therefore lack credibility. A review and revision of the standards is therefore required.

## **Structure and Scope**

8. The existing *International Standards for Humanitarian Mine Clearance Operations* address two categories of subject matter:

a. **Functions** such as survey, minefield marking, clearance and EOD which together constitute the mine clearance process; and

b. **Enabling subjects** such as safety, training, medical support, information management and communications.

Some issues are dealt with in great detail and standards are defined with little or no allowance for regional, national or local variations; other issues are much less prescriptive. The difference between standards and guidelines is not always apparent in the current document.

9. The review should consider whether the overall structure and scope of the document adequately addresses all the tasks and functions which together constitute the mine clearance process. The level of detail addressed in the revised document should be consistent and balanced across the subject areas, and the distinction between standards and guidelines should be more explicit and obvious to the field user.

10. Detailed issues which should be addressed in the review are discussed below.

## **Safety Standards**

11. The safety standards included in the document address the minimum safety requirements for personnel involved in all aspects of humanitarian mine and UXO clearance operations. This includes the minimum requirements for protective equipment, safety distances, procedures for survey, mine and UXO clearance, site layout and discipline, standards for the construction of field stores, storage and the transportation of explosives.

12. It is impossible in any profession or occupation to guarantee absolute safety, and some occupations will necessarily be more dangerous than others, for example the construction industry or off-shore oil exploration. Health and safety at work standards ensure that employees are exposed to a level of risk deemed to be appropriate and achievable. The degree of risk can be assessed from accident statistics and by analysing practices and procedures; but risk also has a subjective dimension. Thus the safety standards for mine clearance operations, such as the requirements for personal protection equipment, must not only satisfy national legal requirements and demonstrate best safety practice, they must also satisfy the needs (i.e. perceived risk) of the field users. This perceived risk will be dictated by local circumstances such as culture, community leadership and recent local accident statistics.

13. The revision of safety standards must demonstrate a better understanding of national and international health and safety at work requirements. Guidelines should be given for the proper examination of accidents and incidents. There should also be a clearer distinction between absolute safety standards and safety guidelines.

## **Training and Qualifications**

14. The document addresses in general terms the international and national training standards for personnel involved in all aspects of humanitarian mine and UXO clearance operations, mine awareness and medical support. It draws attention to the need for the UN to define the qualifications and experience required for UN-sponsored mine clearance programmes; such standards are not part of the current document. The review should

consider their development, and reflect the recommendations of the UNDP study of mine action management training.

## **Medical**

15. The document addresses the medical support requirements of humanitarian mine and UXO clearance operations. It defines the minimum standards of casualty resuscitation and stabilisation, and subsequent evacuation to a facility where emergency surgery can be undertaken. These are based primarily on the standards prescribed in the *Medical Support Manual for United Nations Field Operations*. There is evidence that some of these prescribed medical standards, such as the aspiration to evacuate a casualty within one hour and 40 minutes from the field to a hospital with a '... life and limb saving surgical capability', are not achievable at mine clearance sites in rural areas of many mine affected countries. Furthermore, some of the recommended resuscitation methods are also being questioned in medical circles. This section of the document will require very careful revision to ensure that the standards proposed are both appropriate and achievable.

## **Information Management**

16. The document defines standards for management information, including preferred software applications to be used at field level, and by UN and national mine action centres. Few of these standards are applied in practice. This section needs to be completely re-written to reflect the standards adopted by the UN's Information Management System for Mine Action (IMSMA).

## **Communications**

17. The document addresses in general terms the communications requirements for the safe and effective management of mine clearance programmes. This section needs to be reviewed to reflect the increasing availability of satellite phones, mobile phone networks, Internet access and e-mail in some mine affected countries. The communications requirements of IMSMA should also be addressed.

## **Survey**

18. The document defines Level 1 survey as the process of identifying and mapping all suspected mined areas. There is no reference to collecting relevant information on victims and the socio-economic impact of landmine contamination. A new definition has been developed by the Survey Action Centre (SAC), and national Level 1 Impact survey is now considered to be '... an information/data gathering process designed to collect information on areas contaminated, suspected to be contaminated by mines or UXO. This process is intended to provide a basis for analysis to measure the impact of the national mine/UXO problem and to identify critical planning criteria.' The SAC has developed a methodology, and has established a set of standards and guidelines which govern the conduct of national Level 1 Impact surveys planned and coordinated by the SAC and its partners.

19. There is a need to produce new agreed standards for survey (Levels 1, 2 and 3) to reflect developing procedures and practices. It is proposed that standards and guidelines for national Level 1 Impact surveys be addressed in a separate document.

## **Minefield Marking**

20. The document establishes international standards for minefield marking, signage and symbology. It also acknowledges the requirements for improvised marking methods which are applied through community mine awareness programmes, yet may not necessarily be consistent with international standards. The revision should reflect the use of temporary mine and UXO signage detailed in Paragraph 3.33 of the UN's *International Guidelines for Landmine and Unexploded Ordnance Awareness Education*.

## Mine Clearance

21. The document establishes standard procedures for mine detection, destruction (render safe procedures), recording and reporting. The distinction between mandatory standards and advisory guidelines is unclear. The revision needs to reflect developing practices, procedures and drills, including the increasing use of mechanical equipment and dogs.

22. One standard which requires very careful revision is the definition of 'clearance'. The document states that:

*An area is cleared when all mines and munitions have been removed and/or destroyed. All debris from mines and explosives such as fuzing systems, percussion caps and other items that constitute an explosive hazard, is to be removed.*

*The area should be cleared of mines to a standard and depth which is agreed to be appropriate to the residual/planned use of the land, and which is achievable in terms of the resources and time available. The contractor must achieve at least 99.6% of the agreed standard of mine clearance. The target for all UN-sponsored clearance programmes is the removal of all mines and UXO to a depth of 200mm.*

There are many problems with this standard. First, no guidance is given on how to assess what is 'appropriate'. Second, no prodders and few hand held mine detectors will safely detect minimum-metal anti-personnel mines down to 200mm. Third, 99.6% must be translated into something which can be verified by quality assurance; there are currently no common guidelines for interpreting how 99.6% can be measured or objectively verified in different circumstances.

23. There is a need to establish a standard of 'clearance' which is understood, which can be applied by the mine action community at field level, which can be verified during the QA process, and which is consistent with the requirements of the Ottawa Convention(6).

## Explosive Ordnance Disposal

24. The document establishes standards for the identification, removal where necessary, and disposal of items of ordnance found in mine and UXO clearance operations. In general, they are consistent with military EOD standards, are well proven and are followed by field users. As with other sections, however, the distinction between EOD standards and guidelines should be more explicit and obvious.

## Review and Revision

### Structure of Review and Revision

25. The review should be conducted in four stages:

a. Enabling Activities. The first stage will involve enabling activities such as selecting a project manager, recruiting an assistant, and establishing a Steering Group and Users' Focus Group.

b. Scoping Study. The second stage will be a scoping study to confirm the scope and constraints of the review and subsequent revision. A detailed work plan of the review and revision process is to be prepared by the project manager and, if necessary, revised TORs will be issued. The plan and revised TORs should be approved by the Steering Group.

c. Revision of Standards. The third stage will involve the revision of each section of the document to reflect best-practice and to remove obsolete, irrelevant, inaccurate, unenforceable and unverifiable standards. The Users' Focus Group will be involved closely with this stage of the revision.

d. Publication and Outreach. The final stage will involve briefing the Steering Group, and promulgation of the revised standards and guidelines. This may include seminars and workshops.

## **Enabline Activities**

26. Once there is agreement on the funding arrangements, the GICHD is to nominate a project manager and recruit an assistant. The assistant must have substantial experience at field level of applying the existing standards. The appointments should be agreed between the Director GICHD and Chief UNMAS.

27. A Steering Group is to be established. It should comprise representatives of concerned parties and field users as required and as selected by UNMAS. The role and responsibilities of the Steering Group are defined in [Annex A](#). It is envisaged that the Steering Group will meet formally only once; all other meetings will be given, and decisions will be taken, using electronic mail.

28. A Users' Focus Group is to be established with the purpose of providing the review process with informed and authoritative opinions on the practical application of humanitarian mine clearance standards and QA at field level. It should comprise representatives of national mine action centres, NGOs and commercial contractors. The composition of the Users' Focus Group should be agreed by UNMAS. The role and responsibilities of the Users' Focus Group, which involves consulting widely with those users who will be applying the revised standards, are defined in [Annex B](#).

## **Scoping Study**

29. The purpose of the scoping study is to clarify the scope, constraints, timings and resources required for the review process and subsequent outreach programme, including management training.

30. A questionnaire is to be issued to all mine action centres, major demining NGOs and commercial contractors, and other organisations who apply existing mine clearance standards. The replies will be collated and analysed by the project manager (and assistant) to identify common concerns, observations and proposals which may influence the scope and conduct of the review. This part of the review is critical and sufficient resources, time and thinking must be devoted to understanding the field users' needs and the practical application of international standards.

31. The project manager will be expected to prepare a detailed plan with costs for the review process and propose changes to the TORs as necessary. The plan and revised TORs should be approved by the Steering Group.

## **Review of Standards**

32. The third stage will start with a meeting of the Users' Focus Group, UNMAS and the project manager (and assistant) to discuss the results of the questionnaire, and to achieve a consensus on the needs of the field user community. Detailed changes and proposed solutions will not be discussed at this stage.

33. Some of the revision process will be merely editorial, but there may be some difficult legal and technical issues which need to be addressed. It is envisaged that expert advice and assistance will be required, for example on topics such as risk management, medical support, management training and quality management.

34. The third stage will end with a meeting of the Users' Focus Group, UNMAS and the project manager (and assistant) to discuss the proposed changes and agree the revised document. The proposed changes should also be briefed to the national directors and project managers at the annual UNMAS meeting in Geneva on 20 - 22 March 2000. Agreement on the relevance, accuracy and utility of the revised document is essential at this stage.

## **Briefing and Outreach**

35. The final stage of the review involves preparing and staffing the revised standards document. The document should be briefed to the Steering Group by 28 April 2000, and subsequently posted on the UNMAS web site. It should be briefed to the wider mine action community through a programme of seminars and workshops, ideally at regional locations.

## **Funding and Coordination**

### **Funding**

36. This review of mine clearance standards has been included in the UNMAS Cost Plan for 1999 and the UN Portfolio of Mine-related Projects dated April 1999. The UK Government has agreed to fund the cost(7) of the main review and revision process.

37. Funding for the review and revision will be transferred from the Project Donor into a special fund which will be established by the GICHD. The fund will operate in accordance with Swiss law.

### **Provisional Schedule**

38. The provisional schedule for the review is given in Annex C. There are five milestones:

15 October 1999	Project manager and assistant selected, Steering Group and Users' Focus Group established
29 October 1999	Users' Focus Group agrees questionnaire on existing International Standards for Humanitarian Mine Clearance Operations
31 March 2000	Users' Focus Group agrees revised standards
28 April 2000	Revised standards briefed to the Steering Group
29-31 May 2000	First seminar on the revised standards

## **Management Structure and Responsibilities**

39. Steering Group. As stated in Paragraph 27, a Steering Group is to be established. It should comprise representatives of the United Nations(8), the Project Donor, the World Bank, GICHD, a victim state and field experts as required and as selected by UNMAS. The role and responsibilities of the Steering Group are given in [Annex A](#).

40. Project Management. GICHD will manage the review on behalf of UNMAS. A project manager is to be appointed by the Director GICHD. The role and responsibilities of the project manager are given in [Annex D](#). The role and responsibilities of the project assistant are given in [Annex E](#).

41. Users' Focus Group. As stated in Paragraph 28, a Users' Focus Group is to be established with the purpose of providing the review process with informed and authoritative opinions on

the practical application of humanitarian mine clearance standards and QA at field level. The responsibilities and composition of the Users' Focus Group are defined in [Annex B](#).

## Terms of Reference

42. These TORs are to be reviewed during the scoping study, and at each milestone. All proposed changes are to be agreed by the Steering Group.

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Annexes:

[A. Role and Responsibilities of Steering Group.](#)

[B. Role and Responsibilities of Users' Focus Group.](#)

C. Provisional Schedule of Work.

[D. Role and Responsibilities of the Project Manager.](#)

[E. Role and Responsibilities of the Project Assistant.](#)

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1. The International Conference on Mine Clearance Technology co-sponsored by UN DHA and the Government of Denmark, held at Elsinore on 2-4 July 1996; often referred to as the Copenhagen Conference.
2. UNMAS 1999 Cost Plan, April 1999 draft.
3. UNMAS 4/12/1 dated 26 July 1999.
4. DFID letter dated 26 February 1999.
5. DPKO/UNMAS/5/30 dated 15 February 1999.
6. The Ottawa Convention's Standing Committee of Experts on Mine Clearance has requested that the revised standard of 'clearance' be briefed to the Second Meeting of States Parties in Geneva in September 2000. The meeting will be invited to endorse the revised standard's consistency with the requirements of the Convention.
7. The target cost of the review is \$165,000.
8. The United Nations representation will be coordinated by UNMAS.