

IMAS 09.10

Second Edition
01 January 2003
Incorporating amendment number(s) 1

Clearance requirements

Director,
United Nations Mine Action Service (UNMAS),
2 United Nations Plaza, DC2-0650
New York, NY 10017
USA

Email: mineaction@un.org
Telephone: (1 212) 963 1875
Fax: (1 212) 963 2498

Warning

This document is current with effect from the date shown on the cover page. As the International Mine Action Standards (IMAS) are subject to regular review and revision, users should consult the IMAS project website in order to verify its status at , (<http://www.mineactionstandards.org/>, or through the UNMAS website at <http://www.mineaction.org>)

Copyright notice

This UN document is an International Mine Action Standard (IMAS) and is copyright protected by the UN. Neither this document, nor any extract from it, may be reproduced, stored or transmitted in any form, or by any means, for any other purpose without prior written permission from UNMAS, acting on behalf of the UN.

This document is not to be sold.

Director
United Nations Mine Action Service (UNMAS)
2 United Nations Plaza, DC2-0650
New York, NY 10017
USA

Email: mineaction@un.org
Telephone: (1 212) 963 1875
Fax: (1 212) 963 2498

Contents

Contents	iii
Foreword	iv
Introduction.....	v
Clearance requirements.....	1
1. Scope	1
2. References	1
3. Terms, definitions and abbreviations	1
4. Specification of clearance quality.....	1
5. Responsibilities and obligations.....	3
5.1. National Mine Action Authority's (NMAA) responsibilities	3
5.2. Demining organisation's responsibilities	3
5.3. Monitoring body's responsibilities	4
5.4. Inspection body's responsibilities.....	4
Annex A (Normative) References	5
Annex B (Informative) Terms, definitions and abbreviations	6
Amendment record	8

Foreword

International standards for humanitarian mine clearance programmes were first proposed by working groups at an international technical conference in Denmark, in July 1996. 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 and the *International Standards for Humanitarian Mine Clearance Operations* were developed. A first edition was issued by the UN Mine Action Service (UNMAS) in March 1997.

The scope of these original standards has since been expanded to include the other components of mine action and to reflect changes to operational procedures, practices and norms. The standards were re-developed and renamed as *International Mine Action Standards* (IMAS).

The United Nations has a general responsibility for enabling and encouraging the effective management of mine action programmes, including the development and maintenance of standards. UNMAS, therefore, is the office within the United Nations responsible for the development and maintenance of IMAS. IMAS are produced with the assistance of the Geneva International Centre for Humanitarian Demining.

The work of preparing, reviewing and revising IMAS is conducted by technical committees, with the support of international, governmental and non-governmental organisations. The latest version of each standard, together with information on the work of the technical committees, can be found at <http://www.mineactionstandards.org/>. Individual IMAS are reviewed at least every three years to reflect developing mine action norms and practices and to incorporate changes to international regulations and requirements.

Introduction

The target of humanitarian demining is the identification and removal or destruction of all mine and UXO hazards from a specified area to a specified depth. The objective is to promote a culture where the demining community seeks to achieve this target by developing and applying appropriate management procedures, by establishing and continuously improving the skills of managers and deminers, and by procuring safe, effective and efficient equipment.

The beneficiaries of humanitarian demining programmes must be confident that cleared land is safe for their use. This requires management systems and clearance procedures which are appropriate, effective, efficient and safe. The local community should also receive regular briefings and explanations during the clearance operation as this acts as a very effective confidence building measure. Community liaison is an integral part of the demining process and can be achieved by the services of a Mine Risk Education (MRE) team, or by suitably trained members of the demining organisation.

This standard adopts a two-stage approach. Stage 1 Quality Assurance (QA) involves the accreditation and monitoring of the demining organisation before and during the clearance process. To achieve this, demining organisations must establish an effective management organisation, develop and maintain procedures, and apply these procedures in a safe, effective and efficient manner. Management procedures should be transparent and auditable. Community involvement in the demining process should be an area that is monitored as part of the QA process. Stage 2 Quality Control (QC) involves the process of inspection of cleared land before it is formally released to the beneficiary for use.

This combined application of QA (before and during the clearance process) with post-clearance QC will contribute to achieving an acceptable level of confidence that the land is safe for its intended use. The quality of clearance must be acceptable to both the National Mine Action Authority/Authorities (NMAA) and the local community that benefits, and it shall be measurable and verifiable.

Clearance requirements

1. Scope

This standard defines 'clearance', and specifies the quality system (i.e. the organisation, procedures and responsibilities) necessary to determine that land has been cleared by the demining organisation in accordance with its contractual obligations.

2. References

A list of normative references is given in Annex A. Normative references are important documents to which reference is made in this standard and which form part of the provisions of this standard.

3. Terms, definitions and abbreviations

A list of terms, definitions and abbreviations used in this standard is given in Annex B. A complete glossary of all the terms, definitions and abbreviations used in the IMAS series of standards is given in IMAS 04.10.

In the IMAS series of standards, the words 'shall', 'should' and 'may' are used to indicate the intended degree of compliance. This use is consistent with the language used in ISO standards and guidelines:

- a) 'shall' is used to indicate requirements, methods or specifications that are to be applied in order to conform to the standard.
- b) 'should' is used to indicate the preferred requirements, methods or specifications.
- c) 'may' is used to indicate a possible method or course of action.

The term National Mine Action Authority (NMAA) refers to the government department(s), organisation(s) or institution(s) in each mine-affected country charged with the regulation, management and coordination of mine action. In most cases the national Mine Action Centre (MAC) or its equivalent will act as, or on behalf of, the NMAA'. In certain situations and at certain times it may be necessary and appropriate for the UN, or some other recognised international body, to assume some or all of the responsibilities, and fulfil some or all of the functions, of a NMAA.

The term 'demining organisation' refers to any organisation (government, NGO or commercial entity) responsible for implementing demining projects or tasks. Demining organisations include headquarters and support elements, and comprise one or more sub-units.

The term 'monitoring body' refers to any organisation which monitors the work of the demining organisation and its sub-units on behalf of the NMAA.

The term 'inspection body' refers to any organisation which conducts post-clearance QC on behalf of the NMAA by applying random sampling procedures, or other appropriate and agreed methods of inspection.

4. Specification of clearance quality

Land shall be accepted as 'cleared' when the demining organisation has ensured the removal and/or destruction of all mine and UXO hazards from the specified area to the specified depth.

The specified area to be cleared shall be determined by a technical survey or from other reliable information which establishes the extent of the mine and UXO hazard area.

Note: The priorities for clearance shall be determined by the impact on the individual community balanced against national infrastructure priorities.

The specified depth of clearance shall be determined by a technical survey, or from other reliable information which establishes the depth of the mine and UXO hazards and an assessment of the intended land use. In the absence of reliable information on the depth of the local mine and UXO hazard, a default depth for clearance shall be established by the NMAA. It should be based on the technical threat from mines and UXO in the country and should also take into consideration the future use to which the land is to be put.

Note: For buried mines and UXO this depth should normally not be less than 130mm below the original surface level; this figure is based on the effective detection depth of the majority of metal detectors. It may be refined by the NMAA dependent on the type of metal detector that they currently use based on the results of the International Pilot Project for Technology Co-operation *Final Report on the Evaluation of Commercial Off The Shelf Metal Detectors* (EUR 19719 EN) (available from the EU JCR Ispra).

The removal and/or destruction of all mine and UXO hazards in the specified area to the specified depth shall be ensured by:

- a) using accredited demining organisation(s) with operationally accredited capabilities, such as manual clearance, MDD teams, mechanical systems and community liaison teams;
- b) using appropriate management practices, and applying safe and effective operational procedures;
- c) monitoring the demining organisation and its sub-units; and
- d) conducting a process of post-clearance inspection of cleared land.

The contractual arrangements should specify the area to be cleared, the clearance depth, and the requirements for monitoring and inspection. These should be specified by the NMAA, and agreed during the contractual arrangements.

Note: Specifying clearance depths will depend on the intended land use, the likely mine or UXO hazard in the area to be cleared and other environmental factors. For example:

- Mines and UXO may be on the surface of the ground. In this case, the specification may call for the removal and or destruction only of surface laid mine and UXO hazards.
- Clearance in urban areas may require the removal or many meters of rubble as part of the clearance process.
- In situations where large bombs and missiles have been used, the depth of clearance may be several metres.
- Shifting sands in desert areas or coastal areas may require clearance to a depth of 1.0m or 2.0m to locate and destroy mines which were originally laid at a depth of no more than 10cm.

Note: If the ground level has changed since the mines and UXO were originally emplaced, then the contractual arrangements shall be written in such a way as to ensure that there is no misunderstanding over the required clearance depth.

Note: The required clearance depth may be adjusted as clearance work progresses. Any amendment shall be agreed between with the NMAA and the demining organisation, and shall be formally recorded.

Note: The process should be repeated if there is a change to the land use.

Note: There may be circumstances where a demining organisation is funded to operate in an area with a mandate to identify its own clearance tasks based on general priorities provided by the donor and/or NMAA. In such circumstances, the demining organisation should, in advance of clearance, formally record the area and depth of the intended clearance.

Note: Community liaison is intended to ensure the mine action programmes are sensitive and respond to community needs and priorities. It should also ensure that the mine affected communities understand and support mine action.

5. Responsibilities and obligations

5.1. NMAA's responsibilities

The NMAA, or an organisation acting on its behalf, shall:

- a) specify the area to be cleared and depth of clearance in contracts and agreements;
- b) specify the standards and guidelines for QA and QC to be applied to clearance contracts and agreements;
- c) accredit demining organisations as fit to undertake clearance; and
- d) maintain a registry of cleared and uncleared land showing the clearance status for each mined area.

5.2. Demining organisation's responsibilities

The organisation undertaking clearance shall:

- a) gain (from the NMAA) accreditation to operate as a clearance organisation;
- b) apply the NMAA clearance standard. In the absence of national standards, the clearance organisation shall apply the IMAS standards, or such standards as are specified in their contract or agreement;
- c) maintain and make available documentation of clearance as specified by the NMAA; and
- d) apply management practices and operational procedures which aim to clear land to the requirements specified in the contract and agreement(s).
- e) ensure that the mine affected community is fully cognisant of all demining activities in the area and the implications for the community.

In the absence of a NMAA or authorities, the demining organisation shall assume additional responsibilities. These include, but are not restricted to:

- a) for each mined area, and prior to any clearance, agree the requirement and formally document:
 - (1) the area of the intended clearance; and
 - (2) the depth of the intended clearance;
- b) establish and apply a system of monitoring the clearance activities, and post-clearance inspections of cleared land; and
- c) assist the host nation, during the establishment of a NMAA, in framing national standards for clearance quality.

5.3. Monitoring body's responsibilities

The monitoring body shall:

- a) gain (from the NMAA) accreditation to operate as a monitoring body;
- b) monitor the demining organisation and its sub-units in accordance with IMAS 07.40 and the requirements of the NMAA; and
- c) maintain and make available documentation of monitoring inspections as specified by the NMAA.

5.4. Inspection body's responsibilities

The inspection body shall:

- a) gain (from the NMAA) accreditation to operate as an inspection body;
- b) apply sampling procedures in accordance with IMAS 09.20 and the requirements of the NMAA; and
- c) maintain and make available documentation of inspections as specified by the NMAA.

Annex A (Normative) References

The following normative documents contain provisions, which, through reference in this text, constitute provisions of this part of the standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of the standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid ISO or EN:

- a) IMAS 07.10 Guide for the management of demining operations;
- b) IMAS 07.30 Accreditation of demining organisations and operations; and
- c) IMAS 09.20 The inspection of cleared land: guidelines for the use of sampling procedures.

The latest version/edition of these references should be used. GICHD hold copies of all references used in this standard. A register of the latest version/edition of the IMAS standards, guides and references is maintained by GICHD, and can be read on the IMAS website (<http://www.mineactionstandards.org/>). NMAA, employers and other interested bodies and organisations should obtain copies before commencing mine action programmes.

Annex B (Informative) Terms, definitions and abbreviations

B.1.

cleared area

cleared land

an area that has been physically and systematically processed by a demining organisation to ensure the removal and/or destruction of all mine and UXO hazards to a specified depth.

Note: Cleared area may include land cleared during the technical survey process. This may include boundary lanes or cleared lanes.

demining organisation

refers to any organisation (government, NGO or commercial entity) responsible for implementing demining projects or tasks. The demining organisations may be a prime contractor, subcontractor, consultant or agent.

B.2.

hazard

potential source of harm. [ISO Guide 51:1999(E)]

B.3.

inspection body

an organisation which conducts post-clearance QC on behalf of the NMAA by applying random sampling procedures, or other appropriate and agreed methods of inspection.

B.4.

intended use (land)

use of land following demining operations.

Note: intended use: use of a product, process or service in accordance with information provided by the supplier. [ISO Guide 51:1999(E)]

Note: intended land use should be included in the clearance task specification and clearance task handover documentation.

B.5.

monitoring body

an **organisation**, normally an element of the **NMAA**, responsible for management and implementation of the national monitoring system.

B.6.

National Mine Action Authority (NMAA)

the government department(s), organisation(s) or institution(s) in each mine-affected country charged with the regulation, management and coordination of mine action.

Note: In most cases the national MAC or its equivalent will act as, or on behalf of, the 'NMAA'.

Note: In certain situations and at certain times it may be necessary and appropriate for the UN, or some other recognised international body, to assume some or all of the responsibilities, and fulfil some or all of the functions, of a NMAA.

B.7.

reliable (mine action) information

information deemed acceptable and reliable by the NMAA for the conduct of demining operations.

B.8.

risk

combination of the probability of occurrence of harm and the severity of that harm. [ISO Guide 51:1999(E)]

B.9.

safe

the absence of risk. Normally the term tolerable risk is more appropriate and accurate.

B.10.

tolerable risk

risk which is accepted in a given context based on current values of society. [ISO Guide 51:1999(E)]

Amendment record

Management of IMAS amendments

The IMAS series of standards are subject to formal review on a three-yearly basis, however this does not preclude amendments being made within these three-year periods for reasons of operational safety and efficiency or for editorial purposes.

As amendments are made to this IMAS they will be given a number, and the date and general details of the amendment shown in the table below. The amendment will also be shown on the cover page of the IMAS by the inclusion under the edition date of the phrase *'incorporating amendment number(s) 1 etc.'*

As the formal reviews of each IMAS are completed new editions may be issued. Amendments up to the date of the new edition will be incorporated into the new edition and the amendment record table cleared. Recording of amendments will then start again until a further review is carried out.

The most recently amended IMAS will be the versions that are posted on the IMAS website at www.mineactionstandards.org.

Number	Date	Amendment Details
1	01 Dec 2004	1. Formatting changes. 2. Minor text editing changes. 3. Changes to terms, definitions and abbreviations where necessary to ensure that this IMAS is consistent with IMAS 04.10.