



Cambodian Mine Action Standards (CMAS)

Chapter 6

Clearance Requirements Demining

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Introduction

The target of demining in Cambodia is the identification and removal or destruction of all mine and UXO hazards from a specified area to a specified depth and quality. The specified area to be cleared and the depth of clearance shall be determined by an assessment of the post clearance land use, a technical survey or from other reliable information, which establishes the extent of the mine and/or UXO hazard area and the depth of the hazard.

Clearance requirement assessment aims to ensure that appropriate tasks are selected for clearance; that the post clearance land use and beneficiaries are defined; the specific hazards, technical details and extent of a task are identified and accurately recorded and that effective clearance and quality management processes are applied.

The beneficiaries of humanitarian demining programmes must be confident that cleared land is safe for their use. This requires management systems, clearance procedures and well documented QA/QC processes which are appropriate, effective, efficient and safe. It must also be established that cleared land is appropriate for its intended use through consultation with the beneficiary community and the Provincial Mine Action Committee (PMAC), Mine Action Planning Unit (MAPU) and Cambodian Mine Action Authority (CMAA). The local community should also receive regular briefings and explanations during the clearance operation from the demining organisation; 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. Community involvement in the clearance process is an activity that shall be monitored and recorded as part of the quality management process.

The external quality management of mine action activities in Cambodia involves the accreditation, licensing and monitoring of the demining organisation before and during the clearance process, it will also be necessary for the CMAA to oversee the internal quality management systems of the clearance organisation. 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. The aim of the quality management process is for the CMAA to achieve an acceptable level of confidence that cleared land is safe for its intended use. The quality of clearance must be acceptable to the both the CMAA and the local community that benefits, and it shall be measurable and verifiable and accurately recorded.

The combined process of the identification of land use requirements and the quality management of clearance tasks will contribute to achieving an acceptable level of confidence that the correct land is cleared to the highest standard, and that it is safe for its intended use.

Clearance Requirements

1. Scope

This standard defines 'clearance', and clearance requirements for mine clearance operations. Clearance requirements for ERW are contained within CMAS 07. It also describes the process to ensure that the land identified for clearance has been carefully selected; that the clearance method is appropriate to known hazards and to planned land use; and that the quality of clearance provides high confidence to beneficiaries, authorities and partners.

2. Terms and definitions

A complete glossary of all the terms and definitions used in the CMAS series of standards is given in CMAS 30.

3. Specification of clearance

Land shall be accepted as 'cleared' when the demining organisation has ensured the removal and/or destruction of all mines and ERW hazards from the specified area, to the depth specified in the clearance contract, agreement, or work plan, and all quality management processes have been carried out and fully recorded. The specific area to be cleared shall be determined by a technical survey and an assessment of the intended post clearance land use. The specified depth of clearance shall be determined by a technical survey, or from other reliable information which establishes the depth of the mine hazards and an assessment of the intended land use but must be to a minimum of 13cm for AP mines and 30cm for AT mines. ERW clearance depths should be determined based on the expected hazard and the intended land use. In the absence of reliable information on the depth of the local mine hazards these requirements shall be adopted.

Note 1: For buried mines the minimum depth of 13cm for AP and 30cm for AT mines is the distance from the original surface level to the top of the mine.

Note 2: If non-technical or technical survey establishes, or if the intended land use requires, a clearance depth greater than 13cm (or 30cm for AT mines) then appropriate methods of clearance should be applied.

Note 3: Demining organisations shall ensure that equipment has the capability to achieve the clearance depths required in Cambodia. Detectors must be tested and recorded daily to ensure they meet these depth requirements.

4. Clearance Planning

The planning process for clearance aims to ensure that appropriate tasks are selected for clearance; that the post clearance land use and beneficiaries are defined; the specific hazards, technical details and extent of a task are identified; and that effective clearance and quality management processes are applied.

4.1. Validation of clearance task and task selection

It is necessary to ensure that land cleared is consistent with national and provincial priorities, and has a positive socio-economic impact on local communities. Appraisals in consultation with the beneficiary community and the Provincial Mine Action Committee (PMAC), Mine Action Planning Unit (MAPU) shall be carried out to ensure that the cleared land is to be used in an effective, fair and sustainable manner, and that the post clearance land use has been defined.

4.2. Clearance task planning

Technical survey should provide sufficient technical information to enable the efficient and safe clearance or verification of those areas identified. Specific information such as mine and ERW types and depths; terrain; soil characteristics, particularly ferrous content; scrap metal contamination; and vegetation levels, shall be key factors for managers to consider when designing clearance plans.

During clearance planning, operational managers must have a clear understanding of the post clearance land use and the clearance depth requirements. The clearance requirement shall depend on an assessment of the intended post clearance land use and the depth of the mine and ERW hazards. Clearance plans shall include the clearance and verification methods to be applied to sections of a task that may have varying hazards and clearance depth requirements.

It may be that a clearance task is implemented before a technical survey can be carried out. In this case the demining organisation shall gain the technical information as clearance progresses and adjust clearance methods, processes and depths as information is gained. This process is to be accurately recorded.

5. Community liaison

The beneficiaries of clearance programmes must be confident that cleared land is safe and appropriate for their intended use. Community involvement in the identification of high impact and high benefit land shall be implemented through consultation with the beneficiary community, the Provincial Mine Action Committee (PMAC), Mine Action Planning Unit (MAPU) and development agencies. The local community should also be kept informed of clearance activities and progress through regular briefings and explanations from the clearance organization during the clearance operation. community involvement in the clearance process is an activity that shall be monitored as part of the quality management process. If the community is not satisfied with the clearance process, the matter shall be referred to the MAPU for resolution.

6. Clearance quality

The quality of clearance shall be ensured by:

- a) Using accredited demining organisation(s) with licensed capabilities
- b) Using equipment that can conform to the clearance requirements and ensuring all detectors are tested and recorded daily
- c) Effective planning of clearance tasks based on defined technical criteria and clearance depth requirements.
- d) Using sound management practices and applying safe, appropriate and effective operational procedures.

- e) Internal quality management, monitoring and recording by the demining organisation and its sub-units.
- f) External quality management and monitoring by the CMAA
- g) Conducting a post-clearance QC inspection of cleared land in accordance with CMAS 03.

7. Clearance contracts and agreements

Clearance contracts and/or agreements should be drafted after the post clearance land use has been defined, beneficiaries have been identified and, if possible, after technical survey has been carried out. Contractual arrangements or agreement should specify the area to be cleared, the clearance depth, and the requirements for monitoring and inspection. These requirements should be specified in consultation and concurrence with the CMAA during the preparation of agreements or contracts.

Note 4: Specifying clearance depths will depend on the intended land use, the likely mine hazard in the area to be cleared and other environmental factors. For example:

- Soil movement in swamps, riverbanks or flood areas may cause a deep hazard from mines that were originally laid at a depth of no more than 13cm.

Note 5: If the ground level has changed since the mines 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. If mines are found at a greater depth than contractually specified then after consultation with CMAA the depth shall be increased.

Note 6: The required clearance depth may be adjusted as clearance work progresses and this should be allowed for in the clearance contract or agreement. Any amendment shall be agreed in consultation with the CMAA, the PMAC/MAPU and if necessary, the donor. Any changes to the original clearance agreement or contract shall be formally recorded.

Note 7: The clearance depth requirement shall be reviewed if there is a change to the planned land use.

8. Responsibilities and obligations

8.1. CMAA's responsibilities

- a) Advise on the standards and guidelines for quality assurance and quality control to be applied to clearance contracts and agreements.
- b) Accredite and licence demining organisations
- c) Monitor and record the clearance activities of demining organisations.
- d) Maintain a registry of cleared land and of uncleared land showing the clearance status for each hazardous, mined or suspect area.
- e) Monitor the demining organisation and its sub-units in accordance with CMAS 03 and to the requirements of the relevant clearance agreement or contract.
- f) Maintain and make available to legitimate interested parties documentation relating to site visits and inspections.

8.2. Demining organisation's responsibilities

- a) Gain (from the CMAA) accreditation and the appropriate licences
- b) Apply clearance procedures in compliance with Cambodian Mine Action Standards and organisations SOPs.
- c) Maintain and make available documentation of clearance in a timely manner as specified by the CMAA.
- d) Apply management practices and operational procedures, which aim to clear land to the requirements specified in the clearance contract(s) or agreement(s).

8.3. Donor responsibilities

Donor agencies have a responsibility to ensure that the projects they are funding are managed effectively and safely in accordance with CMAS. Donors are also responsible for ensuring, through the CMAA and PMAC/MAPU, that the tasks and projects to be funded are consistent with national and provincial priorities. This involves strict attention to the identification of clearance projects, creation of agreement documents and ensuring that demining organisations chosen to carry out such agreements meet the accreditation, licensing criteria and standards of the CMAA.

8.4. Clients responsibilities

- a) Use only accredited clearance organisations with the required licenses.
- b) Ensure liaison with the national authority CMAA on clearance requirements.
- c) Ensure clearance reports and certificates are passed to CMAA in a timely manner to ensure records are maintained in the national database.

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Secretary General

PRUM Sophakmonkol