

LAO PDR NATIONAL UXO/MINE ACTION
STANDARDS (NS)



Chapter Nineteen
Quality Management (QM)

**National Regulatory Authority for
the UXO/Mine Action Sector in Lao PDR**

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Contents

Contents	2
Amendment Record	3
Quality Management (QM)	4
1. Introduction	4
2. Scope	4
3. Statutory Requirements	4
4. Elements of Quality Management (QM)	4
5. Definitions	5
5.1. Non-Conformities	5
5.2. Preventive and Corrective Action	5
6. Concept of QM in UXO/Mine Action in Lao PDR	5
7. Internal QM of UXO/Mine Action Organisations	6
7.1. UXO/Mine Clearance Operations	6
7.1.1. Internal Quality Assurance (QA)	6
7.1.2. Internal Quality Control (QC)	7
7.2. UXO/Mine Risk Education (UXO/MRE) and UXO/Mine Victim Assistance (VA)	7
7.3. Management of Deficiencies Identified During Internal QM	7
7.4. Recording and Reporting of Internal QM Inspections and Non-Conformities	7
8. External QM Inspections of UXO/Mine Action Organisations	8
8.1. External QA Inspections	8
8.1.1. External QA for UXO/Mine Clearance Operations	8
8.1.2. External QA for UXO/MRE and UXO/Mine VA	8
8.2. External QC Inspections	8
8.2.1. External QC for UXO/Mine Clearance Operations	8
8.2.2. External QC for UXO/MRE and UXO/Mine VA	8
8.3. Qualifications and Experience of External QM Inspection Personnel	9
8.4. Restrictions on the Activities of External QM Teams	9
8.5. Frequency of External QM Inspections	9
8.6. Notification of External QM Inspection Visits	9
8.7. Action on Identification of a Non-Conformity	9
8.8. Corrective Action	10
8.9. Post External QM Inspection Procedures	10
8.10. Authority of External QM Inspection Teams to Halt Operations	10
8.11. Redress	10

Quality Management (QM)

1. Introduction

The effective management of UXO/mine action is achieved by developing and applying appropriate management processes, by establishing and continuously improving the skills of managers and personnel, by applying safe and effective procedures, and by using appropriate and efficient equipment. But management is not just about planning and supervising current tasks. It is also about continually reviewing current practices and procedures to improve safety, effectiveness and efficiency.

The process and procedures that aim to achieve a continuous improvement to an organisation's management system and operational practices are commonly referred to as Quality Management (QM).¹

The Lao PDR National Regulatory Authority (NRA), as the authority for UXO/mine action within the country, is responsible for developing the requirements for QM of UXO/mine action in Lao PDR and for ensuring these requirements are met by UXO/mine action organisations.

2. Scope

This chapter describes the requirements for QM within UXO/mine action in Lao PDR.

3. Statutory Requirements

The document '[Resolutions of the Lao PDR Government on National Strategic Plan for the UXO Programme in the Lao People's Democratic Republic 2003 – 2013](#)' provides the framework for the establishment of the NRA with the responsibility for the external Quality Assurance of all UXO/Mine Action activities.

In addition, Article 2 of the Lao PDR '[Prime Minister's decree 33/PM of 17/3/2004](#)' on the establishment of the NRA for the UXO Programme in Lao PDR states:

"The National Regulatory Authority will have the following responsibilities:

6. The external Quality Assurance of all UXO/Mine Action activities."

4. Elements of Quality Management (QM)

QM refers to coordinated activities to direct and control UXO/mine action with regard to quality. QM comprises both Quality Assurance (QA) and Quality Control (QC):

- a. The purpose of QA in UXO/mine action is to confirm that management practices and operational procedures for UXO/mine action are appropriate, are being applied and will achieve the stated requirement in a safe, effective and efficient manner.
- b. QC is the part of QM focused on fulfilling quality requirements. QC relates to the inspection of a finished product. In the case of UXO clearance, QC relates to the inspection of land that is cleared or otherwise released for use.

When the abbreviation 'QM' is used in this NS it is to be taken as covering both QA and QC. If only QA or QC is being referred to, then the abbreviations 'QA' and 'QC' will be used.

1. Adapted from IMAS 07.10 Guide for the management of UXO clearance operations, introduction.

5. Definitions

The key terms used within QM of UXO/mine action in Lao PDR are below.

5.1. Non-Conformities

A non-conformity is the “non-fulfilment of a requirement, i.e. a need or expectation that is stated, generally implied or obligatory”.²

In terms of UXO/mine action in Lao PDR, the requirements to be fulfilled are those detailed in the Lao PDR National UXO/Mine Action Standards (NS) and in the approved operating procedures (SOPs) or project plans of an individual organisation.

As such a non-conformity is ‘the non-compliance with a requirement of NS or an organisation’s documented and approved operating procedures or project plan’.

5.2. Preventive and Corrective Action

‘Preventive action’ aims to prevent a non-conformity from occurring while ‘corrective action’ aims to remedy the cause of a non-conformity once it has occurred. The explicit definitions of these terms are:

- a. ‘Preventive action’ is proactive action to eliminate the likelihood of a nonconformity or other undesirable situation occurring.
- b. ‘Corrective action’ is reactive action to eliminate the cause of a detected nonconformity or other undesirable situation.³

In addition to the corrective action indicated above to eliminate the cause of a non-conformity, it may also be necessary on UXO/mine action operations to ‘put right’ any deficiencies caused by the non-conformity. This will depend on the nature of the non-conformity and type of UXO/mine action being carried out. Action to ‘put right’ a deficiency may include:

- a. Reclearing of areas of land.
- b. Correcting any misleading or erroneous messages delivered during UXO/Mine Risk Education (UXO/MRE).

6. Concept of QM in UXO/Mine Action in Lao PDR

QM in UXO/mine action in Lao PDR is built upon two mutually supporting components. These are:

- a. Internal QM by UXO/mine action organisations.
- b. External QM by the NRA.

2. EN ISO 9000:2000 Quality Management Systems – Fundamentals and vocabulary.

3. Both definitions adapted from EN ISO 9000:2000 Quality Management Systems – Fundamentals and vocabulary.

7. Internal QM of UXO/Mine Action Organisations

As part of the accreditation process described in [Chapter 2 of NS 'Accreditation of UXO/Mine Action Organisations'](#), all UXO/mine action organisations are to provide documented detail of their internal QM system. This QM system is to cover both internal QA and QC procedures. It may be either a stand-alone document or part of the organisation's SOPs.

The documented QM system should include the following:

- a. Details of the appointment or person in Lao PDR with the overall responsibility for quality within the organisation.
- b. A description of the process and responsibilities for internal QA and QC checks within the organisation, including:
 - (1) The responsibility for internal QA checks on the organisation's worksites by persons other than the worksite supervisor.
 - (2) The responsibility of worksite supervisors to conduct internal QC checks on their own tasks.
 - (3) Detail of the scope and frequency of checks to be conducted for each UXO/mine action activity undertaken by the organisation and for each operational asset employed by the organisation.

Note: Normally organisations will develop standard check lists for each type of check it conducts. The check lists developed by the NRA and included in the NS Support Document '[NRA Quality Management Procedures for Lao PDR](#)', are available to UXO/mine action organisations, and organisations are free to adapt them for their own use.

- c. Detail of the criteria used to determine 'Pass/Fail' for each type of internal inspection. If standard QM check lists are used, these criteria are to be clearly indicated on the check list.
- d. The organisation's procedures for responding to and managing non-conformities should they arise.
- e. The requirement for records of internal QA and QC checks to be retained on worksites for the duration of the task.

7.1. UXO/Mine Clearance Operations

7.1.1. Internal Quality Assurance (QA)

Internal QA inspections should be carried out both by clearance supervisors and clearance organisation management staff, but as a minimum are to be carried out by clearance supervisors. Informal QA inspections should be a normal part of a clearance supervisor's duties.

Formal internal QA inspections are to be carried out on a weekly basis on all clearance worksites. Inspections are to check that the UXO/mine clearance activities are being carried out in accordance with the organisation's approved operating procedures.

7.1.2. Internal Quality Control (QC)

Clearance organisations are to implement internal QC procedures appropriate to the UXO/mine clearance operation being conducted. The minimum requirements for such QC are detailed below:

- a. UXO area clearance and mine clearance, including technical survey. A minimum of 10% of the total area cleared or surveyed is to be physically checked by the clearance supervisor using the same detection equipment that is being used during the task. These checks are to be carried out to cover the entire area being worked.
- b. Explosive Detection Dog (EDD) operations. Each area searched by EDD is to be covered by a minimum of 2 EDD. In addition to this, clearance organisations conducting EDD clearance or technical survey are to conduct internal QC on at least 10% of the area cleared or surveyed. The 10% is to be spread over the total area worked.
- c. Mechanical UXO clearance. For mechanical UXO clearance operations using machines that have been tested and evaluated as leaving no residual risk, a minimum of 10% of the ground processed in any day is to be reprocessed as a QC check. For mechanical UXO clearance operations where ground is physically removed for processing, 10% of the processed ground is to be reprocessed as a QC check.

Note: The risks associated with putting a clearance machine into a UXO contaminated area are well understood, however that does not preclude a mechanical system, with good risk assessment and operating procedures being used in Lao PDR in the future.

7.2. UXO/Mine Risk Education (UXO/MRE) and UXO/Mine Victim Assistance (VA)

Details of the requirements for internal QM for UXO/MRE or UXO/mine Victim Assistance (VA) are included in the relevant chapters of NS.

7.3. Management of Deficiencies Identified During Internal QM

When internal QM identifies any deficiencies with the management or conduct of a UXO/mine action activity, the organisation concerned is to take appropriate action to correct these deficiencies.

7.4. Recording and Reporting of Internal QM Inspections and Non-Conformities

Records of all internal QM inspections are to be retained at the worksite for the duration of the task and are to be made available to the NRA, relevant NRA Provincial Office (NRAPO) or external QM inspection teams on request.

Non-conformities identified during internal QM inspections are to be recorded with clearance worksite documentation. The records are to include:

- a. Detail of the non-conformity.
- b. The corrective action taken to ensure the non-conformity does not occur in future.
- c. The action taken to 'put right' any deficiencies that may have been caused by the non conformity.

8. External QM Inspections of UXO/Mine Action Organisations

External QM inspections will be carried out by staff from or controlled by the standards section of the NRA and involve both QA and QC being carried out concurrently.

Inspections will be conducted against standard QM check lists. Copies of the standard QM checklists are included in the NS Support Document '[NRA Quality Management Procedures for Lao PDR](#)' included with these NS.

Note: Costs for conducting external QM inspections are to be borne by the NRA.

8.1. External QA Inspections

External QA inspections will be carried out by observing the work of the organisation concerned and checking that the work is in accordance with operational procedures or project plans.

8.1.1. External QA for UXO/Mine Clearance Operations

External QA inspections will be carried out on clearance organisations to confirm that they are applying their approved operational procedures in a manner that will result in the safe, effective and efficient clearance/release of land and/or disposal of UXO.

8.1.2. External QA for UXO/MRE and UXO/Mine VA

External QA inspections will be conducted on UXO/MRE and UXO/mine VA organisations to ensure that activities are being carried out effectively and in accordance to the project plan approved/endorsed by the NRA.

8.2. External QC Inspections

8.2.1. External QC for UXO/Mine Clearance Operations

All clearance organisations carrying out UXO/mine clearance, including technical survey, will be subject to external QC inspections. These inspections will involve the physical inspection of samples of cleared or surveyed land to determine if clearance requirements are being achieved.

These inspections may be carried out using the clearance team's own detection equipment and cover no less than 2% of the area cleared or surveyed, representative of the whole area worked at the time of the inspection. All signals detected by the inspection team will be investigated to the extent necessary to ensure that clearance requirements are being achieved.

8.2.2. External QC for UXO/MRE and UXO/Mine VA

External QC for UXO/MRE and UXO/mine VA activities is linked to an external evaluation of a project, both in the effectiveness of the project in achieving its objectives (outcomes), and the impact that the project has. Further aspects of a project may also be examined during evaluation.

The requirements for UXO/MRE and UXO/mine VA organisations to include external evaluation as part of their project design and development are included in the respective UXO/MRE and UXO/mine VA chapters of NS. Further guidance on the scope of evaluations is also provided in these chapters.

The results of external evaluations of UXO/MRE and UXO/mine VA are to be forwarded to the NRA.

The NRA reserves the right to carry out other external QC activities on UXO/MRE and UXO/mine VA activities as required.

8.3. Qualifications and Experience of External QM Inspection Personnel

The NRA will ensure that all personnel carrying out external QM inspections have qualifications and experience relevant to the type of UXO/mine action operation being inspected.

Such experience must include practical work within Lao PDR in the sub sector concerned, UXO/mine clearance, UXO/MRE or UXO/mine VA.

Independent organisations conducting external QA / QC operations which involve detection and excavation activities are required to be accredited by the NRA in accordance with [Chapter 2 of NS, Accreditation of UXO/Mine Action Organisations](#)

In addition, inspection teams carrying out external QM inspections on UXO/mine clearance tasks are to have available within the team one person with a Level 4 EOD qualification in accordance with [Chapter 8 of NS, 'Explosive Ordnance Disposal \(EOD\)'](#).

8.4. Restrictions on the Activities of External QM Teams

When conducting external QC inspections on UXO/mine clearance tasks, external QM teams are to ensure that they only carry out inspections on land that has been presented to them by the clearance organisation concerned as 'cleared'. Under no circumstances are external QM teams to carry out inspections on uncleared land.

8.5. Frequency of External QM Inspections

The frequency of external QM inspections will be determined by the NRA dependant on the resources available and the work commitments of the standards section of the NRA.

Specific visits to confirm that corrective action to remedy non-conformities has been effectively implemented will be in addition to routine inspections.

8.6. Notification of External QM Inspection Visits

The NRA will generally notify organisations of external QM inspections, however it retains the right to make unannounced inspections, as it deems necessary.

8.7. Action on Identification of a Non-Conformity

Should a non-conformity be identified during an external QM inspection, the external QM inspection team is to note the details on the relevant external QM check list to include the following:

- a. Details of the non-conformity.
- b. The corrective action to be taken to ensure the non-conformity does not occur in the future.
- c. The action taken to 'put right' any deficiencies that may have been caused by the non conformity.

- d. A time limit within which the action required is to be completed. This is to be agreed between the external QM inspection team and the inspected organisations senior management.

8.8. Corrective Action

If the non-conformity involves a critical safety matter, then the action required is to occur before work continues on site. All other non-conformities identified by external QM inspections are to be remedied by the UXO/mine action organisation as a matter of urgency.

Note: Critical safety matters are included on the inspection check lists.

8.9. Post External QM Inspection Procedures

On completion of the external QM inspection, the external QM inspection team leader is to debrief the supervisor of the worksite being inspected before leaving the site. The debrief will be against the inspection check list. The supervisor is to acknowledge having been debriefed by signing the check list.

Note: When training monitoring is carried out, the course manager is to be debriefed.

After completion of inspections, the external QM inspection team leader will forward a copy of the standard check list and any other relevant documentation to the headquarters of the UXO/mine action organisation concerned and arrange briefings as necessary.

Original copies of all external QM inspection documentation, including that of any follow-up action, is to be retained by the NRA.

8.10. Authority of External QM Inspection Teams to Halt Operations

An external QM inspection team has the authority to halt UXO clearance operations if a non-conformity is identified that either currently or potentially affects safety and it cannot be immediately corrected. Should it be necessary to halt operations, the external QM inspection team is to notify the NRA standards section as soon as practically possible, describe the action taken and provide justification for doing so.

UXO clearance operations at the worksite are not to recommence until the non-conformity has been remedied.

External QM inspection teams are to exercise this authority with discretion and in a spirit of co-operation rather than confrontation.

8.11. Redress

UXO/mine action organisations may seek redress if they feel the assessments or actions of an external QM inspection team are unwarranted. Requests for redress are to be submitted in writing to the Director of the NRA within 30 calendar days of the organisation receiving the inspection report.