

LAO PEOPLE'S DEMOCRATIC REPUBLIC
PEACE INDEPENDENCE DEMOCRACY UNITY PROSPERITY



LAO PDR
NATIONAL UXO/MINE ACTION
STANDARDS (NS)

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

15 October 2012

Warning

The Lao PDR National UXO/Mine Action Standards (NS) series of documents is current with effect from the date shown on each of the standards. As the NS are subject to regular review and revision, users are advised to check that the versions they are using are current. This may be done by contacting the Lao PDR National Regulatory Authority (NRA). Contact details are shown below.

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Amendment Record

Management of Lao PDR National UXO/Mine Action Standards (NS) Amendments

The Lao PDR NS series is 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 NS they will be given a number, and the date and general details of the amendment shown in the table below.

As formal reviews of each NS 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.

Number	Date	Amendment Details
1	30 Jun 12	Page ii, change to NRA address and contact details. Page iii, inclusion of an amendment page. Page iv, change to title of NS Chapter 23. Page v, change to the signature block under the foreword. Glossary, definition no 8, change to definition. Glossary, definition no 14, change to definition. Glossary, definition no 21, change to definition. Glossary, definition no 24, new definition. Glossary, definition no 31, (was 30) change to definition. Glossary, definition no 35, (was 34) change to definition. Glossary, definition no 42, (was 41) minor change to definition. Glossary, definition no 45, (was 44), inclusion of a note under the definition. Glossary, definition no 49, (was 48), significant changes to the definition. Glossary, definition no 54, (was 53) minor change to definition.

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Foreword

The Lao People's Democratic Republic with the assistance of the United Nations Development Programme (UNDP), donors and all UXO/mine action organisations operating in the country, has made considerable progress towards ridding itself of the scourge of Unexploded Ordnance (UXO). However, Lao PDR is still one of the most UXO-affected countries in the world. The Government of Lao PDR (GOL) recognises the impact of UXO and highlights the importance of the UXO/mine action programme in removing the constraints of UXO on land and people in the National Growth and Poverty Eradication Strategy (NGPES).

Despite the progress made, much work still remains to be done before the GOL's strategic vision for "people in the most highly impacted communities to live free from the impacts of landmines and UXO",¹ to be realised; a vision of a country free from the risks from UXO, where individuals and communities live in an environment conducive to development and where UXO victims are fully integrated into society.

In the past, humanitarian UXO/mine action within Lao PDR has been principally carried out by the Lao National UXO Clearance Programme (UXO LAO); however recent restructuring of the UXO/mine action sector has led to significant changes in how UXO/mine action is carried out. UXO/mine action operators now carry out UXO/mine action independent of UXO LAO providing more resources to solve the UXO problem. The restructuring also led to the establishment of a Lao PDR National Regulatory Authority (NRA) to control and regulate UXO/mine action.

The development of these National UXO/Mine Action Standards (NS) is one of the many initiatives implemented by the NRA to improve the effectiveness of UXO/mine action in Lao PDR. Other initiatives, such as the expansion of UXO/mine action into all the UXO-affected provinces of Lao PDR and the development of a UXO/mine action database are also ongoing. This is only the start and during the coming months the NRA will continue to develop systems and procedures and its capacity to manage UXO/mine action in Lao PDR. At the national strategic level other initiatives are being implemented to develop legislation to regulate UXO/mine action in Lao PDR and a review of the UXO/mine action sector strategic plan is underway.

The National Standards are a significant advance in UXO/mine action in Lao PDR. They are the foundation regulations that will help free us from the impacts of UXO.

I would like to gratefully acknowledge the assistance of the Government of Australia whose generous support to the UXO/mine action sector in Lao PDR enabled the development of these standards.

Name
Principal Title
Chairman
National Regulatory Authority

Date:

1. Resolutions of the Lao PDR Government on National Strategic Plan for the UXO Programme in the Lao PDR 2003 -2013, paragraph 6.

Introduction

Articles 2 and 3 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 details the responsibilities of the NRA and assigns the NRA to issue regulations for UXO/mine action in Lao PDR. This is the authority under which the NRA has developed and implemented the accompanying Lao PDR National UXO/Mine Action Standards (NS).

These NS detail the minimum standards and requirements for all UXO/mine action conducted in Lao PDR. They conform to the requirements of relevant Lao PDR national legislation and the International Mine Action Standards (IMAS). The NS have been developed in a participatory manner with assistance and input from the UXO/mine action community in Lao PDR.

The purpose of NS is to ensure safety, efficiency and effectiveness in UXO/mine action within Lao PDR. The NS deal with the accreditation of UXO/mine action organisations, the prioritisation and planning for UXO/mine action tasks, the conduct of UXO/mine action activities, the handover of released land, quality management requirements, the training and qualification of UXO/mine action personnel, the management of UXO/mine action information, the health and safety of UXO/mine action personnel, environmental considerations and supporting and logistic activities.

The NS are applicable to all UXO/mine action organisations operating in Lao PDR and organisations are to use the NS as the basis for the development of their projects and Standard Operating Procedures (SOPs). Any current SOPs that do not conform to the requirements in the NS are to be amended to do so.

The NS are dynamic documents that will evolve to meet changing situations, circumstances and the introduction of new technologies and methodologies. The NS will be formally reviewed by the standards section of the NRA at least every three years to ensure they remain valid for the existing conditions and all UXO/mine action stakeholders will be invited to participate in these reviews. However, UXO/mine action organisations and other UXO/mine action stakeholders are encouraged to make recommendations for changes to the NS at any time. These recommendations are to be submitted in writing to the NRA. On receipt of such a recommendation, the NRA will circulate the recommendation to stakeholders to seek input. It will then convene a fully participatory review board to consider the recommendation and the inputs received. Amendments to the NS will then be presented to the NRA Board for final approval.

Every attempt has been made to develop NS to meet the needs of UXO/mine action in Lao PDR. Should an unforeseen situation arise that is outside the scope of these standards, UXO/mine action organisations are to apply judgement and common sense in the application of NS, and where necessary, seek the advice of the NRA before implementing measures to meet the situation.

Glossary of Terms and Definitions

This section of the introductory pages to the NS provides a list of the important terms and definitions used in the NS.

1. **Accident**

An undesired event that results in harm.

2. **Accreditation**

The procedure by which a UXO/mine action operator is formally recognised as competent and able to plan, manage and operationally conduct UXO/mine action safely, effectively and efficiently.

3. **Anti-Personnel Mine (APM)**

A mine designed to be exploded by the presence, proximity or contact of a person and that will incapacitate, injure or kill one or more persons.

4. **Anti-Vehicle Mine (AVM)**

A mine designed to be exploded by the presence, proximity or contact of a vehicle.

5. **Area Reduction**

The process through which the initial area indicated as contaminated is reduced to a smaller area.

6. **Barricaded**

Used in reference to an Explosive Store House (ESH). Effectively screened from other buildings, roads or tracks by a natural or artificial barrier capable of minimising the destructive effects of a detonation within a specified danger radius.

7. **Benchmarks (BMs)**

Benchmarks (BMs) are fixed points of reference used to locate the points on the boundary of a clearance area.

8. **Clearance**

Tasks or actions to ensure the removal and/or the destruction of all Explosive Ordnance (EO) from a specified area to the specified depth.²

9. **Clearance Organisation**

A UXO/mine action organisation that carries out UXO clearance operations.

10. **Clearance Supervisor**

A clearance technician who directly supervises UXO clearance operations.

2. Adapted from the definition in IMAS 04.10.

11. Clearance Technician/Clearance Personnel

An individual(s) with an EOD qualification(s) in accordance with **Chapter 8 of NS, Explosive Ordnance Disposal (EOD)**, employed carrying out UXO clearance operations.

12. Clearance Worksite

Any worksite where UXO clearance operations are carried out including sites where EOD roving tasks or UXO disposal is carried out.

13. Cleared Land

An area that has been physically and systematically processed by a clearance organisation to ensure the removal and/or destruction of all UXO to a specified depth and a specified quality of clearance.

14. Community Liaison

“The processes, techniques and information exchange that encourage UXO/mine action actors to develop a better understanding of affected communities and their existing assets, needs, and priorities.”³

15. Disposal Site

A worksite where EOD takes place. Disposal sites may be temporary for one-of EOD tasks (EOD roving tasks) or permanent.

16. Disposal Task Supervisor

The person in charge of a UXO disposal task. This person must be a clearance technician with the relevant level of qualification for the disposal tasks being carried out.

17. Explosive(s)

All items of an explosive nature; this includes detonators, detonating cord, safety fuze and all types of igniters.

18. Explosive Ordnance (EO)

All munitions containing explosives, nuclear fission or fusion materials and biological and chemical agents. This includes bombs and warheads; guided and ballistic missiles; artillery, mortar, rocket and small arms ammunition; **all mines**, torpedoes and depth charges; pyrotechnics; clusters and dispensers; cartridge and propellant actuated devices; electro-explosive devices; clandestine and improvised explosive devices; and all similar or related items or components explosive in nature.⁴

19. General Survey

A survey of an area to provide information about UXO hazards, the effect of any hazards on communities and the gathering of general planning data. General surveys do not involve the searching for UXO using metal detection equipment, or any excavation for or movement of UXO.

3. Adapted from IMAS 12.10 Mine and ERW Risk Education, section 4.3.4.

4. Definition from IMAS 04.10.

20. Ground Preparation

The preparing of ground in a contaminated area by mechanical means by reducing or removing obstacles to clearance e.g. vegetation, metal contamination and hard soil to make subsequent UXO clearance operations more efficient.

Note: In the context of the Lao PDR UXO/mine action programme, ground preparation may also include vegetation cutting as part of worksite preparation in advance of UXO area clearance.

21. Handover of Land

The release of land through UXO clearance operations to the land owner, land user or other relevant authority or entity.

22. Incident (UXO)

An event that gives rise to an accident or has the potential to lead to an accident.

23. Intermediate Point (IP)

A survey marker placed in a direct line between two Turning Points (TPs) if the distance between the two TPs is more than 50 m.

24. Land Release

The term given to the release for use of known or suspected UXO contaminated land on completion of UXO clearance operations.

Note: See definition of UXO clearance operations at section 49 below.

25. Local Communities

The communities that own or control the land on which UXO clearance operations are carried out or are located in the immediate vicinity of UXO clearance operations.

26. Machine

A unit of mechanical equipment used on UXO clearance operations.

27. Mine Clearance Operations

The systematic locating and clearing of hand laid mines in known or suspected mined areas.

28. Multiple Item UXO Disposal

UXO disposal where UXO are placed together for disposal and the explosive charge is fired using one initiation system.

29. National UXO/Mine Action Standards

A series of documented standards, authorised by the NRA that detail requirements, procedures or guidelines for the conduct of UXO/mine action within Lao PDR.

30. Non-Conformity

The “non-fulfilment of a requirement, i.e. a need or expectation that is stated, generally implied or obligatory”.⁵

31. On the Job Training (OJT)

Training carried out while the trainee is undertaking operational duties commensurate with their current level of knowledge and skill.

32. 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.⁶

33. Quality Management (QM)

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.

34. Reference Point (RP).

A fixed point of reference usually located a suitable distance outside the clearance area. The RP is to be a permanent and easily recognisable landmark or feature in the general area. The position of the RP must be such that Bench Marks (BMs) are able to be located from it.

35. Released Land

Land that has been identified for clearance, subjected to the survey process and if required, clearance and then released to the land owners/users or other relevant authority for its intended use. Released land is not necessarily cleared land.

36. Risk

The combination of the probability of occurrence of harm and the severity of that harm.⁷

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

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

7. Definition from IMAS 04.10.

37. Splinter Proof Shelter (SPS)

A shelter designed to provide total protection to the occupants from the blast and fragmentation hazard produced by UXO disposal operations. Total protection includes protection from falling fragmentation or debris.

38. Standard Operating Procedures (SOPs)

Instructions which define the preferred or currently established method of conducting an operational task or activity.

39. Start Point (SP)

A Turning Point (TP) on the boundary of a clearance area from which the survey of the boundary starts.

40. Support Staff

Staff who work on a clearance worksite and provide direct support to UXO clearance operations. Support staff include medics and drivers, but specifically exclude casual labourers carrying out vegetation clearance.

41. Tasking Authority

The authority that directs the UXO clearance tasks that are to be carried out by UXO clearance teams.

42. Technical Survey

The detailed technical investigation of known or suspected contaminated areas that have been identified for UXO clearance. Technical survey normally involves the physical checking of areas of land using metal detection equipment and excavation for UXO.

43. Training Management Package (TMP)

A training package developed for a particular course of instruction that includes all necessary instructional and administrative requirements for the management of the course.

44. Turning Points (TPs)

All the points on the boundary of a clearance area where the boundary changes direction.

45. Unexploded Ordnance (UXO)

Explosive Ordnance (EO) that has been primed, fuzed, armed or otherwise prepared for use or used. It may have been fired, dropped, launched or projected yet remains unexploded either through malfunction or design or for any other reason. (See definition of EO.)⁸

Note: The definition of EO as taken from IMAS (see section 18) also includes mines; however these NS make a clear distinction between UXO clearance and mine clearance and UXO clearance does not include the clearance of hand laid mines. Therefore for the purposes of these NS, UXO does not include hand laid mines but it may include disposal of 'one off' mines located during EOD roving tasks.

Note: Also, for the purposes of these NS, UXO does not include clandestine and improvised explosive devices.

8. Definition from IMAS 04.10.

46. UXO/Mine Accident

An accident away from a clearance worksite involving a UXO or mine hazard.

47. UXO Clearance Accident

An accident at a clearance worksite involving a UXO hazard.

48. UXO Clearance Incident

An incident at a clearance worksite involving a UXO hazard.

49. UXO Clearance Operations

Activities which lead to the removal of UXO hazards and/or the release of known or suspected UXO contaminated land; including survey; recording; marking; clearance (including mechanical and Explosive Detection Dog (EDD) clearance); UXO disposal; community liaison; and the handover of released land.

UXO clearance principal activities are Survey and Clearance. Clearance involves EOD roving or area clearance tasks:

- a. Survey is a process that leads to land being released for use or designated as requiring full clearance. For land identified as requiring full clearance, the type and extent of clearance is determined and information to assist with planning obtained.

Note: Survey involves a graduated response from general to technical survey and therefore may involve some clearance work. Risk management is a critical component of Survey.

Note: Full clearance is where UXO clearance must fully achieve the clearance requirements. This means that the whole area identified to be cleared must be cleared to the required depth of clearance and to the required quality of clearance.

- b. EOD roving tasks target items of UXO, not areas of land.

- c. Area clearance is the systematic clearance of specific UXO contaminated areas where the hazards are known not to include mines. Depth of area clearance is dependent on the intended land use. Area clearance that clears land to depths in excess of the 25 cm default depth is categorised as deep area clearance.

Note: When physical inspection of cleared land is carried out as part of the Quality Control (QC) process, this also falls into the category of UXO clearance.

50. UXO/Mine Incident

An incident away from a clearance worksite involving a UXO or mine hazard.

51. UXO/Mine Action

Activities which aim to reduce the social, economic and environmental impact of UXO and mines. In Lao PDR UXO/mine action comprises three complementary groups of activities:

- a. UXO/mine clearance operations.
- b. UXO and Mine Risk Education (MRE).
- c. UXO and mine Victim Assistance (VA).

52. UXO/Mine Action Operator

Any organisation or individual, whether national or international, accredited by the NRA to undertake UXO/mine action in Lao PDR.

Note: The term 'UXO/mine action organisation' has also been extensively used in the NS.

53. Victim

A 'victim' is an individual who has suffered harm as a result of a UXO accident.⁹ It thus includes those killed by UXO.

Note: In the context of victim assistance, the term victim may also include dependants of a UXO casualty.

54. Victim Assistance

All aid, relief, comfort and support provided to victims with the purpose of reducing the immediate and long-term medical, economic, social and psychological implications of their trauma.¹⁰

9. Adapted from IMAS 04.10.

10. Adapted from IMAS 04.10.