AMAS 12

Second Edition
November 2009

Concept of Operations

Mine Action Coordination Centre of Afghanistan
Post Box: 520 Kabul – Afghanistan
Tell: +93(0)799212142/ +93(0)798212142
E-mail: info@unmaca.org

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Programme Director
United Nations Mine Action Centre
Kabul - Afghanistan
Email: mapa@MACCA.org

Amendment Record

Management Of AMAS Amendments

The AMAS series of standards are subject to formal review on a yearly basis; however this does not preclude amendments being made within the year for reasons of operational safety and efficiency or for editorial purposes. As amendments are made to this AMAS 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 AMAS 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.

Amendment Number	Amendment Date	Amendment to Section #	Amendment Details
01	November 2009	Complete revise	Whole chapter

12.1 Introduction

12.1.1 Concept of operations refers to a systematic, coordinated and well managed methodology of conducting demining operations in Afghanistan, incorporating effective and efficient use of demining tool kit. It also covers the way of implementing MRE operations as educational activities which seek to reduce the risk of injury from mines and ERW by raising awareness and promoting behavioral changes amongst 'at risk' groups.

12.2 Scope

12.2.1 This chapter covers the concept, methodology and tenets that all demining operations carried out within Afghanistan are to incorporate within planning and execution.

12.3 Concept of Operations

12.3.1 The overall objective of this concept of operations is to achieve operations that are effective, efficient and safe. Demining operations within Afghanistan are based on an operational principle of confirming the existence of hazard, delineating the shape of hazard, elimination of the hazard, then reorientation to bring closure to the current operation in readiness for the next. The phases of operation in terms functional terminology is listed as follows;

a. FIND,

b. SHAPE,

c. DESTROY,

d. COMPLETE

12.3.2 The phases are cyclic, specific and provide the foundation on which all site planning can be based on.

An understanding of, and adherence to the following tenets is fundamental towards ensuring effective operational planning occurs which in turn leads to efficient operations being carried out. During operational planning and task execution, every attempt is to be made to ensure that;

a. Clearance assets deploy into ground that is confirmed to contain hazard, as expeditiously as possible,

b. Clearance only occurs in ground that is confirmed to contain hazard,

c. The type of clearance asset selected to bring about clearance is chosen on the basis that it will bring about the desired outcome in the quickest manner,

d. Measures are applied that give rise to confidence that all hazard has been identified and addressed, and

e. Quality is not traded for speed.

12.3.3 In effect, this means the deployment of manual deminers, should always be considered as the last option to bring about an outcome.

12.4 Default Depth

12.4.1 Ultimately, the clearance methodology applied to a task must be one that is capable of achieving clearance to the depth at which the hazard is known to be at. The default depth to achieve clearance within Afghanistan is 13cm meaning all clearance methodologies applied in the field are to be capable of achieving this depth as a minimum requirement.

12.5 Terminology

12.5.1 High Threat Area (HTA) A HTA is ground confirmed to contain hazard. Generally an area extending 10m or more, in any direction from a known hazard is regarded as a HTA. HTA's require clearance.

12.5.2 Low Threat Area (LTA) A LTA is ground not confirmed to contain or not thought to contain hazard but still situated in the general area of a HTA. LTA's come about through survey, appreciation processes, local knowledge, intrusive mechanical application, operational templating and field observations. Generally a HTA will have a fade out boundary surrounding it's periphery to a width of 15m or more, depending on the topography. This boundary is a LTA. This is to guard against 'hazard creep' and the imprecise nature of hazard identification. This comes from operational templating. Ground designated as a LTA does not need clearance but does need an activity carried out that gives confidence that clearance does not need to be carried out.

12.5.3 Cleared ground In terms of minefield operations, cleared ground is ground that has been covered by manual deminers or MDD using approved clearance and quality checking procedures. Cleared ground can also arise from mechanical based ground processing supported by manual deminers, mechanical based sifting, and intrusive mechanical application without follow up if confidence exists that the machine can bring about the required outcome.

12.5.4 Verification is the practice of confirming that ground does not contain hazard. Verification operations are carried out using intrusive capable machines. Verification operations are not carried out within a HTA unless it is undertaken after a clearance asset has cleared the ground, and is carried out as part of a QA regime. Verified ground is not handed back to the community as cleared but handed back due to no perceived requirement to clear.

12.6 Integrated operations

12.6.1 Manual demining is the backbone of demining operations although it can be slow. Productivity can be increased by incorporating specialist machines and animals to work along side or in front of manual deminers, whilst minimizing danger to manual deminers. This is called a 'Tool Box' approach. A tool box approach allows an organization to select and use the best tool or combination of tools to address a problem in an expedient manner. Caution must be applied when using this approach to ensure assets are gainfully employed and not just on site 'in case they are needed'. Ideally, assets within a tool box should be held within a pool to be deployed in situations where their deployment positively impacts achievement of an objective.

12.6.2 The structure of an asset should reflect closely, what its specialist role is. Team structures that group specialist assets together as core to their structure, limit flexibility in deployment options. Rarely does ground exist where all assets are gainfully employed, all of the time. Efficiency in demining operations is realized through having the flexibility to concentrate specialist effort when required then able to redeploy the asset to another task where their output is required.

12.7 Types of Operations

12.7.1 All demining operations carried out within the MAPA will fall into one of the following categories;

12.8 Technical Survey

12.8.1 A technical survey is the detailed investigation of a known or suspected hazardous area. The purpose of a Technical Survey is to collect sufficient information to more accurately define the clearance requirement in terms of; what area(s) require clearance, what the hazard is, to what depth clearance needs to occur to, and what asset or combination of assets would bring about clearance in the most efficient manner. Use of operational template methodology that includes fade out provision, provide margins for error and ensure clearance effort is not wasted. A technical survey is an intrusive activity meaning if the ground allows, assets selected to undertake the operation should be selected on their ability to move forward at an adept pace and be capable of verifying that ground does not contain hazard. A technical survey can contain area reduction and mechanical outputs that support area reduction. Time spent canvassing local knowledge and researching historical data can be considered time well spent.

12.9 Clearance

12.9.1 A clearance operation is carried out in ground confirmed to contain hazard otherwise known as a HTA. The purpose of clearance is to eliminate all forms of harm caused by landmines, unexploded ordnance and other remnants of war. A favorable indicator in terms of effectiveness of the technical survey carried out prior to clearance is a low area count with a high number of hazards reported destroyed by the clearance asset. Assets suited to this type of operation are manual deminers on their own or manual deminers supported by non-intrusive mechanical team(s). Clearance of large areas previously prepared by intrusive mechanical teams should be planned very carefully in terms of the method selected to effect clearance. Manual demining on its own is typically slow due to safety distance requirements and the type of work required to clear flailed or tilled ground. A more efficient approach would utilize a mechanical sifting arrangement able to move at least as fast as the intrusive item that carried out the ground preparation operation.

12.10 Technical Survey + Clearance

12.10.1 A technical survey plus clearance operation is an operation where the technical survey transits seamlessly into clearance or continues to run parallel to a clearance operation. This paragraph outlines the latter. Although this type of operation is the most common, the tenets that promotes efficiency within each operation need to be considered and adhered to. The objective of the clearance asset is to deploy into ground known to contain hazard as expeditiously as possible. The objective of the technical survey asset is to confirm then delineate ground that contains hazard. During technical survey plus clearance operations, effective planning and continued review needs to occur to ensure demining activity does not occur at cross purposes with each other and the objective of each operation remains focused.

12.11 Battle Area Clearance (BAC)

12.11.1 A BAC operation is an operation carried out in order to clear ground of unexploded ordnance and other remnants of war. Due to the requirement to walk over the ground being searched during a BAC operation, the need for the area being to be free from AP landmines is essential. A BAC operation can consist of both surface and sub-surface search activities, the clearance depth being dependant on the assessment of depth of threat, client requirement and the future land use. Surface searching can be carried out using visual means whilst sub-surface searching is carried out using detection equipment accredited as fit for purpose in terms of being able to locate the expected hazard at or below the specified clearance depth. Any ground that has

been stripped using mechanical means as part of a BAC operation is to be processed prior to being put back into its original position. BAC tasks are best carried out using a systematic gridding system that allows effective management of the operation to take place and to ensure no ground is missed. BAC operations should include fade out provision to ensure all hazard is captured.

12.12 Assets

12.12.1 Demining assets carrying out operations within the MAPA will fall into one of the following categories;

12.13 Demining Teams

12.13.1 Manual demining lies at the heart of all demining operations. Manual deminers are the most costly asset in a demining operation as well as the most precious. The application of manual deminers to an operation is effective only when all other methods that can achieve the required outcome have been appreciated and dismissed on feasibility or inefficiency grounds. Manual demining teams are often the 'lead asset' meaning the MDD and MDU play a supporting role. Whilst this is true in terms of site management, the demining team leader group should not lose sight of the fact that if a supporting asset can bring about the required end state quicker than manual deminers can, then this asset is supported by manual deminers and not the other way around. Every effort must be made to ensure assets are used most effectively and the operation is run in a safe and efficient manner.

12.14 Mine Detection Dogs

12.14.1 Mine Detection Dogs (MDD) are dogs specifically trained to indentify explosive vapour. MDD's exist in specialist teams and work in pairs. MDD's can cover ground faster than manual deminers, create minimal negative environmental impact but are constrained by environmental and terrain factors. MDD need to have their indications checked by a deminer. Ground covered by MDD's using approved procedures is accepted as cleared ground. The key to effective MDD field operations is that they need to be undertaken by qualified personnel, experienced in being able to tell if the dog is searching properly.

12.14.2 MDD are susceptible to becoming confused when confronted with explosive vapour emanating from several different sources at the same time. This could likely occur in a HTA that is littered with both seen and unseen hazard. This can lead to false indications occurring and hazard being missed. False indications degrade operational efficiency and engender a lack of confidence that can lead to careless drills occurring brought on by complacency. Missed forms of hazard pose significant exposure to harm. To mitigate against these circumstances from occurring, it can be surmised that MDD use can bring efficiencies to a clearance operation by being employed in ground thought not known or not believed to contain hazard but ground that still requires checking. This type of ground is commonly known as a LTA. This is in effect, a similar role carried out by an intrusive capable machine conducting verification. MDD's used in this role will create efficiencies by discounting ground that would otherwise have to be searched. MDD teams should be managed within a pool to allow flexibility in deployment.

12.15 Mechanical Teams

12.15.1 Mechanical Demining Units (MDU) are teams that provide specialist support to demining operations by providing mechanical assistance. MDU's can bring about efficiencies in operations by preparing difficult ground for following clearance assets, processing ground with the assistance of a clearance asset and by supporting operational decisions on whether to commit clearance assets or not. MDU's are categorized as being intrusive or non-intrusive. The term 'intrusive' machine refers to those machines designed and used forward of a baseline in un-cleared ground,

while the term ‘non intrusive’ machine refers to those designed and used from behind a baseline on safe ground. Intrusive mechanical operations can have negative impact on the environment and need to be monitored closely. Intrusive machines are well suited to technical survey operations whilst non-intrusive machines are more suited to static operations such as supporting clearance in difficult ground.

12.16 New Technology

12.16.1 The once hoped-for breakthrough by highly advanced technologies suddenly transforming demining appears to be less and less likely as time goes by. This said, there has been new detector technology introduced that discriminates against metal fragmentation and targets items of interest. The HSTAMIDS is one such detector that is an improvement over today's metallic handheld mine detectors in that it employs an advanced state-of-the-art metallic detector in addition to ground penetrating radar (GPR). Additionally, there is a growing census that a more universal application of mechanical demining technology can enable mine clearance (and other elements of mine action) to be conducted more effectively, cheaply, quickly, and with less risk. For example, the use of suitably sized intrusive mechanical asset to quickly determine the existence of hazard in a piece of ground potentially saves weeks or months in time and money. This technology exists in most programs but due to lack of understanding and underuse, the true impact MECH could bring about has not been realized.

12.16.2 It is felt that in conjunction with keeping abreast of new developments, organizations carrying out demining operations should concentrate on promoting efficiencies in current operations. This comes about from meticulous record keeping, continual review and a driven desire for continuous improvement.

12.17 Quality

12.17.1 Ground that is free from hazard caused by landmines, UXO and other remnants of war is the sought after outcome of a clearance operation. The consequence of getting it wrong can be catastrophic. Organizations conducting demining operations within the MAPA do so after undergoing a rigorous accreditation process. The processes presented for accreditation are owned by the organization meaning, the product good or bad - is owned by the organization.

12.17.2 Quality checks carried out during the process of demining need to be carried out rigorously, routinely and without compromise. Quality is about prevention, you cannot ‘inspect’ quality into a product. It has to happen during the process. A non-conforming product shows up the fact that personnel charged with ensuring a product conforms, have not been doing their job. All demining organizations are required to implement and maintain a quality assurance regime designed to identify and prevent non-conforming products moving forward to a next process.

12.18 Safety

12.18.1 Demining is a dangerous job often carried out in a harsh environment. The room for error is minimal and the penalty for mistakes, potentially extreme. Safety is an attitude. It is an expectation that personnel will conduct approved drills using approved tools with diligence and care. It is an expectation personnel will wear personnel protective equipment (PPE) supplied to them in a proper manner. It is the responsibility of the organization to ensure attitudes towards safety discipline are rigorously enforced, personnel effectively supervised and, non compliance dealt with decisively, in an appropriate manner. Organizations simply cannot work on the principle that demining is dangerous and accidents will occur. Whilst accidents do occur, needless injuries to parts of the body afforded protection by PPE can be minimized if worn in a proper manner. Effective supervision, constant monitoring and ownership of safety at all levels underpin safe and effective demining operations.

12.19 Information Management

12.19.1 The national database is at the heart of reporting and generates mine action statistics. The national database is the ultimate source for reporting progress against international treaty obligations, donor, contract and all progress requirements. The importance of maintaining the integrity of the national database is of overriding concern meaning, it is imperative that all information entered into the national database is checked for accuracy at all levels. Timeliness in reporting is also of fundamental importance to allow up to date information extraction to occur. Currently the information management system used to support, facilitate, coordinate and report mine action activity for Afghanistan is IMSMA V3.

12.20 Mine Risk Education

12.20.1 Mine Risk Education (MRE) operations within Afghanistan are based on an operational principle of understanding the landmine/ERW threat to community and individuals, identifying vulnerable or target groups, providing appropriated and targeted messages, and confirming new knowledge. The phases of operation in terms functional terminology is listed as follows;

a. UNDERSTAND,

b. IDENTIFY,

c. EDUCATION,

d. ASSESS

12.20.2 The phases are cyclic, specific and provide the foundation on which all MRE planning can be based on.

12.20.3 An understanding of, and adherence to the following tenets is fundamental towards ensuring effective operational planning occurs which in turn leads to efficient operations being carried out. During operational planning and task execution, every attempt is to be made to ensure that;

a. MRE assets deploy into communities with confirmed hazard, as expeditiously as possible,

b. MRE messages, materials, and methodologies are appropriate to target groups considering age, gender, literacy and education levels and access,

c. MRE activities reach all sectors of the community in particular women and girls,

d. MRE activities are provided at times convenient to community ensuring minimal disruption to community life,

e. MRE activities are reported and recorded within the National Database and consider number of beneficiary, type of MRE activities, location gender, age.

f. Measures are applied that give rise to confidence that MRE messages have been communicated well and understood, and

g. Quality is not traded for speed or convenience.

12.21 Terminology and Types of MRE Operations

12.22 Community Based MRE

12.22.1 The Community Based Mine Risk Education (CB MRE) Programme is designed to respond to the needs of impacted communities through Emergency Response, Community Based and Volunteer networks, teacher training and community monitoring of risk (victim and incident data collection) and MRE impact.

12.23 Mobile Cinema Programme

12.23.1 Delivers MRE and disability awareness messages predominately in schools and community gatherings. MRE and VA training activities are coupled with video presentations of MRE and disability awareness dramas and are projected on large screens in the impacted communities.

12.24 Mobile Mini Children's Circus

12.24.1 Delivers MRE to large general audiences through theatrical production focused on communicating MRE messages to children. MRE and disability awareness theatre activities are part of an activity that utilizes music, singing, skits, circus acts and materials distribution.

12.25 Teacher Training

12.25.1 Is an integral part of the MRE programme supported by the Ministry of Education. Teachers are provided MRE and disability awareness training skills and materials to support activities in their classrooms.

12.26 Radio

12.26.1 Is used to transmit MRE messages to remote or insecure areas. These activities are developed to provide outreach to the general public and are broadcast at different times and days to ensure coverage of all sectors of community.

12.27 Data Collection

12.27.1 Provides information on incidents, ammunition and hazardous areas reporting, along with critical new victim data essential for MRE emergency response and programme development, planning and implementation.

12.28 Returnee Mine Risk Education Programme

12.28.1 Targets the repatriating Afghans through MRE activities provided at the UNHCR encashment and transit centers near the Afghanistan borders of Pakistan and Iran. This programme provides an introduction to the risks associated with mines and ERW and promotes safe behaviors to assist with travel through unsafe environments and the possible resettlement in communities with a mine/ERW risk.

12.29 Landmine Safety Programme

12.29.1 Is directed at the Aid Worker community in particular the UN, government and NGO actors. This country specific programme utilizes Afghanistan information and the international guidelines to ensure the particularities of the Afghan context are included in the training. The programme has a training of trainer's guideline, training manual and PowerPoint presentation that

is augmented by posters, activity cards, country specific information and the international Landmine Safety Handbook.

12.30 MRE Assets

12.30.1 MRE assets carrying out operations within the MAPA will fall into one of the following categories;

12.31 Community Based MRE (CB MRE) Teams

12.31.1 Are preferably male/female team structures. The CB MRE team is responsible for understanding the threat to a community, identifying those most vulnerable and providing targeted as well as general mine risk education within a community. The team is also responsible for collecting victim data as well as ammunition, mines and ERW reporting. The CB MRE team should ensure materials provided to community members are appropriate for the target group and that they have sufficient numbers to ensure all participants receive them. CB MRE team is required to work with community leadership to ensure access to vulnerable groups, women and girls. CB MRE teams may recruit volunteers to do follow up activities where applicable.

12.32 Mobile Cinema (MC) Teams

12.32.1 Who like the CB MRE teams are responsible for understanding the threat to a community, identifying those most vulnerable and providing targeted as well as general mine risk education within a community. To do this the team utilizes cinema activities as well as direct training of participants to ensure safety messages are understood. The team is also responsible for collecting victim data as well as ammunition, mines and ERW reporting. The MC MRE team should ensure materials provided to community members are appropriate for the target group and that they have sufficient numbers to ensure all participants receive them. MC MRE team is required to work with community leadership to ensure access to vulnerable groups, women and girls.

12.33 Mobile Mini Children's Circus

12.33.1 Is comprised of a variety of actors, singers, musicians and circus players. MRE is provided through a child focused comedic theatre component of a circus show.

12.34 Teacher Training

12.34.1 Is implemented through the Ministry of Education Child Protection Department. Child Protection Officers located in each province train teachers and monitor their activities as well as respond to emergencies themselves. Teachers in schools provided MRE and disability awareness activities within their class rooms on a regular basis.

12.35 Radio

12.35.1 Messages are developed through NGO partners and broadcast through local public and private radio stations.

12.36 Data Collection

12.36.1 Particularly victim data is implemented by all mine action field operators in particular MRE actors as part of their community activities.

12.37 Returnee Mine Risk Education Programme

12.37.1 Teams provide MRE at UNHCR encashment and transit centers near the Afghanistan borders of Pakistan and Iran. The team members have both men and women to ensure all members of returning families have access to MRE activities. The activities include safety demonstrations, viewing a MRE film, one on one question and answer opportunities and materials distribution.

12.38 Landmine Safety Programme

12.38.1 Is implemented by one or two trainers. The MACCA as well as some NGO partners implement this activity upon request.

12.39 MRE Quality

12.39.1 Quality checks carried out during the process of MRE need to be carried out rigorously, routinely and without compromise. Quality is about prevention, you cannot 'inspect' quality into a product. It has to happen during the process. A non-conforming product shows up the fact that personnel charged with ensuring a product conforms, have not been doing their job. All MRE organizations are required to implement and maintain a quality assurance regime designed to identify and prevent non-conforming products moving forward to a next process.

12.39.2 The MACCA will periodically implement a Knowledge Attitude Practice and Belief Survey to review the impact of MRE activities in the field.

12.40 MRE Safety

12.40.1 MRE activities are carried out in mine/ERW impacted communities. It is the responsibility of the MRE organization to ensure attitudes towards safety discipline are rigorously enforced, personnel effectively trained and supervised to ensure staff safety.