SLNMAS 11.0

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Reporting and investigation of demining incidents in Sri Lanka

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Warning

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Introduction

The need to report and investigate demining incidents in a clear, comprehensive and timely manner is an essential part of mine action management.

The effective management and supervision of mine action programmes will reduce the likelihood of harm, but there will always be the potential for demining incidents to occur. There are legal and moral obligations on managers at all levels in mine action to ensure that the likelihood of harm is reduced to the lowest realistic levels. Effective reporting and the thorough investigation of demining incidents can play an essential part in meeting this objective. Information collected and presented in a clear and accessible format will contribute to the 'lessons learned' process, assisting emergency response, improving the quality of the demining process and reducing the likelihood of future demining accidents.

It is therefore very important that all demining incidents that occurred and may occur in the future in Sri Lanka are reported and investigated in a timely and structured manner to prevent reoccurrences and major accidents and injuries.

Reporting and investigation of demining incidents

1. Scope

This SLNMAS provides specifications and guidance to the NMAC, RMAOs and the demining organisations on the minimum requirements for the reporting and investigation of a demining incident. It includes definitions for categorisation of demining incidents, which should assist in drawing lessons that will benefit the wider demining community.

This standard is applicable only for the reporting and investigation of incidents that occur at the demining workplace. It is not applicable to incidents away from the workplace. Neither does it apply to investigations carried out to satisfy national or police requirements, though the relevant authority may choose to adopt elements as appropriate.

2. Terms and definitions

The terms and definitions below are listed to understand important terminology used in this standard.

The term 'accident' refers to an undesired event which results in harm.

The term 'incident' refers to an event that gives rise to an accident or has the potential to lead to an accident.

The term 'demining incident' refers to an incident at a demining workplace involving a mine or ERW hazard.

The term ‘demining accident’ refers to an accident at a demining workplace involving a mine or ERW hazard.

The term 'mine incident' refers to an incident away from the demining workplace involving a mine or ERW hazard.

The term ‘mine accident’ refers to an accident away from the demining workplace involving a mine or ERW hazard.

3. Incident reporting and investigation requirements

3.1. Incidents

3.1.1. General requirements

The following incidents shall be reported to the NMAC:

a. an accident in which a mine or ERW harms a demining employee, visitor or member of the local population at a demining workplace;

b. an incident in which a mine or ERW damages equipment or property at a demining workplace;

c. the discovery of a mine or ERW located in an area previously cleared, recorded as cleared or marked as cleared, regardless of whether harm has resulted from the missed mine or ERW;

d. where demining employees, visitors or the local population are exposed to intolerable risk that results from the application of documented standards or SOP, including the failure of equipment issued to employees;

e. any unplanned detonation of mine or UXO on a demining worksite irrespective of the cause or outcome; and

f. the theft or loss of explosives.

When the RMAO Operations Section receive reports of incidents that highlight inadequacies of equipment, standards or approved SOP, or that indicate the presence of new types of hazard, shall disseminate a general warning to all demining organisations applying the same equipment, standard or SOP, or likely to meet the same new hazards.

3.1.2. Reporting format

Demining incident reports shall follow two formats. A demining incident initial report and a demining incident detailed report.

3.1.2.1. Demining incident initial report

In the case of a demining accident in which a mine/ERW harms a demining employee or visitor the demining organisation responsible for the worksite shall report the accident to NMAC and the RMAO in which AOR the accident occurred within 30 minutes after the accident occurred. The initial reporting shall be done by fax, e-mail and/or telephone. The following information should be provided during this initial report if it is available:

a. Location of the accident.

b. Brief description of the accident.

c. Name(s) of the casualty(ies).

d. Is the Casevac underway?

e. Casevac destination.

f. Any assistance required.

If the accident was reported by telephone it shall immediately followed by a written fax or e-mail report.

All other incidents shall initially be reported to the NMAC and the applicable RMAO within two hours after it occurred or got known. These incidents are to be initially reported by fax or e-mail. Where an incident lead to major damage to third party property it should be reported as soon as possible to the RMAO by telephone if fax or e-mail facilities are not immediately available.

The following fax numbers and e-mail addresses shall be applicable:

a. NMAC: Fax: +94 1 2392851

b. Vavuniya RMAO: Fax: +94 24 2224303 e-mail: kapila.perera@undp.org

c. Jaffna RMAO: Fax: +94 21 2223887 e-mail: vartharajah.murugathas@undp.org

d. Batticaloa RMAO: Fax:

3.1.2.2. Demining incident detail report

The demining incident detailed report is the result of an internal investigation carried out by the demining organisation involved. The report shall be completed by an internal Investigation Officer (IO), but this shall not be any person directly involved with the incident. This report shall be initiated by the demining organisation involved and completed as soon as practically possible after the incident but not later than 5 days after the incident occurred.

The detail report shall be submitted to the NMAC through the applicable RMAO. The required IMSMA report forms shall form part of the detail report.

For some incidents of a minor nature the demining incident detailed report may constitute the formal incident investigation.

See Annex A for the contents of a demining incident detail report.

3.1.3. Reporting procedure

See Annex B for the demining incident reporting procedure to be followed by the demining organisations, RMAOs and the NMAC.

3.2. Investigations

3.2.1. General requirements

The aim of the demining incident formal investigation is to identify problems or opportunities to improve the safety and quality of the demining process. It is neither a criminal investigation nor an investigation to assist in the assessment of a current or possible future insurance claim. As such, all employees of demining organisations should be encouraged to provide complete and accurate information about the circumstances surrounding the incident and opinions on ways to improve procedures that may assist in preventing a similar incident occurring.

The following incidents should be subject to investigation by an appropriately qualified and experienced third party:

a. A demining accident resulting in injury or death.

b. A demining incident resulting in damage to property.

c. A demining incident causing damage that may result in a major claim for compensation from a member of the public.

d. A demining incident involving a major event causing significant damage.

e. A demining incident involving the discovery of a mine or ERW item in an area previously cleared, recorded as cleared or marked as cleared.

f. A demining incident where demining workers, visitors or the local population are exposed to intolerable risk that results from the application of approved standards or procedures including the failure of equipment.

g. A demining incident involving the unplanned detonation of a mine, ERW or explosives on a demining worksite.

h. A demining incident which could attract media attention or media report.

i. When considered necessary by the NMAC a non mine, ERW or explosive related accident on a demining worksite that requires the urgent evacuation of a casualty to an advanced medical facility for treatment.

Note: Mine and ERW incidents may also be subject to formal investigation in order to obtain operational information for the purposes of behaviour change analysis, or as a random sampling investigation of civilian accidents. Such investigations shall be directed by the NMAC and will be required to be carried out by an appropriately qualified and experienced third party.

3.2.2. Investigation procedures

A demining incident formal investigation may consist of one of three levels of investigation, a Board of Inquiry (BOI), an independent investigation and an internal investigation. Annex C provides a guide to the NMAC for selecting an appropriate level for a formal investigation.

BOI and independent investigations are initiated by the NMAC by the issuing of Terms of Reference (TOR) appointing personnel to carry out an investigation. Annex D contains the template TOR for a BOI or independent investigation.

Internal investigations are only carried out for demining incidents of a minor nature and the demining incident detailed report will constitute this investigation. Demining incident detailed reports shall be initiated by demining organisations for all reportable incidents (see clause 3.1.1 above) without reference to the NMAC. Where a BOI or an independent investigation is required the demining incident detailed report shall precede the formal investigation and form part of the formal investigation report.

The NMAC initiating a formal investigation shall ensure that:

a. The investigation commences as soon as possible.

b. The personnel selected to conduct a formal investigation had no involvement with the incident and have the qualifications, experience and skills needed to meet the requirements specified in the TOR for the investigation.

c. A copy of the TOR is provided to the demining organisation(s) that may be asked to assist with the formal investigation and the development of recommendations on improvements to the demining process under investigation.

d. The incident site is preserved as far as possible, until released by the BOI or investigating officer, in order to prevent loss of valuable information.

e. Photographs of the incident site are taken immediately.

f. Unless exceptional circumstances exist, the investigation report is submitted on time and that it is complete, clear, concise and accurate (including conclusions and recommendations for improvement).

Note: BOIs should comprise a minimum of three appropriately qualified and experienced members of the senior or technical management within the mine action programme. The principal member should be from the NMAC/RMAO, one member from a third party demining organisation and one member from the organisation involved with the incident, but this shall not be any person directly involved in the incident.

Note: The independent investigation shall be carried out by an appropriately qualified and experienced independent Investigation Officer (IO) appointed by the NMAC.

Note: The internal investigation shall be carried out by an appropriate qualified and experienced member of the demining organisation involved, but this shall not be any person directly involved in the incident.

3.3. Reporting and dissemination

The following information should be widely distributed:

a. the circumstances contributing to and harm resulting from the incident;

b. an analysis of the information collected during the investigation; and

c. the findings of the investigation (i.e. the conclusions and recommendations drawn from the investigation process).

The Director of the NMAC shall disseminate information on demining incidents. In the event of the identification of new hazards, the dissemination of information should be immediate and shall be done by the RMAO who received the initial report.

4. Responsibilities

4.1. NMAC

The NMAC shall:

a. establish and maintain procedures for the reporting and investigation of demining incidents. The procedures should be based on this standard;

b. appoint personnel to investigate demining incidents according to this standard;

c. disseminate the findings of all investigation reports to all demining organisations operating in Sri Lanka, and important to UNMAS, who can extract information for other mine action programmes; and

d. ensure that the results of any medical examination, post mortem or coroner's report are made available to the parent demining organisation.

Note: It is highly probable that this information will only be made available for public release after the completion of the formal investigation. Should the medical results cast any doubt on the findings of the formal investigation, then the NMAC shall re-open the investigation to take into account this new evidence.

4.2. Demining Organisations

Demining organisations shall:

a. report all reportable demining incidents to the NMAC through the RMAOs in a timely manner;

b. take immediate photographs of a demining incident site, and then preserve it until the site is inspected and released by the BOI or investigating officer;

c. provide access, and if necessary administrative support to incident investigation personnel;

d. make available for the investigation the original worksite records, SOPs, training records and radio log; and

e. assist staff appointed to investigate demining incidents.

4.3. Demining employees

Demining employees shall:

a. apply appropriate standards and SOPs designed to prevent demining incidents;

b. report perceived weaknesses in equipment training and procedures;

c. report reportable incidents; and

d. assist in the investigation of incidents.

Annex A
Demining Incident detail report

From: Demining organisation name. **See notes 1, 2 and 3** Date report submitted.

To: NMAC, Sri Lanka Mine Action Programme.

Subject: **Demining Incident Detailed Report**

References:

A. Demining incident initial report (copy attached).

B. Sri Lankan National Mine Action Standards.

C. Demining organisation SOPs.

Part one – background (This is a summary of some of the information from the initial report)

1. Demining organisation name.
2. Organisation sub unit, site office/project number, team name/number.
3. Name of Worksite Supervisor.
4. Location of incident (province, district, village, task no).
5. Date and time of incident.
6. Type of incident. (See clause 3.1.1)

Part two – details of incident

7. Provide a general description of how the incident occurred including locations; timings; demining personnel (demining teams, MDD teams and mechanical teams) and any non demining personnel involved; mines, ERW or explosives involved; and vehicles/equipment involved. Attach photographs, diagrams and incident plans (location plan and detailed site plan) as Annexes to the report to assist in clarifying the circumstances surrounding the incident. **See notes 4, 5 and 6.** Also attach the IMSMA Demining Incident/Accident report to the report as an Annex. See Annex E for the IMSMA Incident/Accident report.

Part three – incident site conditions

8. Describe the conditions on the incident site at the time of the incident in terms of worksite layout and marking, ground and terrain, vegetation and weather:

a. Worksite layout and marking. Describe the layout of the worksite in relation to the location of the incident covering control areas, general worksite markings and specific worksite markings in the location of the incident. Include dimensions and cross reference to SOPs where appropriate. Consider such things as the effects of the sun and weather on the worksite layout. Include details of the worksite layout on incident plans attached as an Annex to the report.

b. Ground and terrain. Describe the ground in terms of type of soil, density or hardness and moisture content. Describe the terrain in terms of flat, undulating or hilly. If required use slope ratios (i.e. 1 in 25) to identity maximum/minimum slopes.

c. Vegetation. Describe the vegetation in terms of type, density, size and root structure. Provide dimensions such as height of grass/crops/bush and maximum size of the vegetation stems. Indicate if the roots had an effect on the work or if the vegetation had been burned or cleared in any way

.

d. Weather. Describe the weather at the time of the incident.

9. Provide photographs of the site to highlight the incident site conditions.

Part four – team and task details

10. Team details. Provide details of the size and composition of the team (deminers, section leaders, team leaders, supervisors, medics etc), including MDD or mechanical teams; the qualifications (formal and refresher training) and experience (types of work carried out, locations, worksite conditions and mines or ERW encountered); the most recent refresher training and subjects covered; the last period of leave/stand down; the results of recent monitoring (both internal and external) carried out on the team; and any known problems with the team. Provide a comparison between the team in general and any individuals involved in the incident.

11. Task details. Provide details of the task to include the survey work carried out (general and technical); clearance plan for the task, which should include area to be cleared and depth of clearance; types and number (if known or able to be estimated) of mines or ERW expected to be found; any known mine laying techniques or patterns; the planned use of the land after clearance; time worked on the task; progress in terms of area cleared as a percentage of the total area to be cleared; types and numbers of items found; and any problems encountered with the task.

12. Include copies of training records, monitoring reports, survey reports, clearance plans, task progress reports or any other demining organisation or demining worksite administration documentation required as an Annex.

Part five – equipment and procedures used

13. Equipment used. Provide details of the equipment being used on the site relevant to the incident. This may cover detection equipment, Personal Protective Equipment (PPE), deminer's toolkits, demolition equipment, communication equipment, medical equipment, vehicles and mechanical equipment. For electronic detection equipment provide details of on site testing requirements. This may be referenced to SOPs.

14. Procedures used. Provide an overview of any procedures used related to the incident. This may be referenced to SOPs.

15. Work routines. Provide details of the work routines being followed on the task at the time of the incident and the number of hours worked by personnel (including those involved in the incident) on the day prior to the incident occurring. If work routines involve handovers between personnel, provide details of when the last handover occurred prior to the incident and the details of what is covered during handovers for example, detection equipment checks, briefings etc. This may be referenced to SOPs.

Part six – explosive hazards involved

16. Provide details of any mines, ERW or explosives that were involved in the incident:

a. for items that were located (mines or ERW), or explosives that were known to be used provide details such as; (1) mines/UXO/Abandoned Explosive Ordnance (AXO) - common names; (2) explosive devices - a detailed description of the components (name, type, size or weight) and construction details; (3) for known explosives – the names, type, size or weight of the items used. For items located also include the position in/on the ground (i.e. surface or buried and if buried depth and attitude in the ground) and whether item was trip wired, command detonated or booby trapped; and

b. for incidents involving a detonation provide details of blast holes (size and depth); mine/UXO/AXO or other debris located and any known or suspected items involved. Provide explanations as to why an item is either known or only suspected.

17. Provide photographs and technical details for any items located or photographs of blast holes and debris as an Annex to the report.

Part seven – details of injuries

18. Provide details of all personnel (including non demining workers) injured as a result of the incident. Include names, sex, age, occupation, details of injuries and cross reference the names to the activities that the personnel were carrying out at the time of the incident. All injured personnel no matter how minor the injuries they received are to be included. Also include copies of medical records and the IMSMA Casualty report as Annexes to the report. See Annex F for the IMSMA casualty report. The location of the injured personnel, immediately after the incident occurred, should be shown on the incident detailed site plan.

Part eight – equipment/property/infrastructure damage

19. Provide details of all equipment, property or infrastructure damaged as a result of the incident:

a. for equipment include detailed descriptions to include owner, make, model, age, serial numbers (where applicable), current value (if known), details of damage, insurance held by the owner/organisation and if possible an assessment of the cost of repair/ replacement. (See clause 20 below for the requirements covering PPE involved in the incident); and

b. for property and infrastructure provide details of the owner(s), damage incurred, insurance held by the owner(s) and if known the cost of restitution or repair.

20. PPE. Provide details of any PPE involved in the incident by type/function, make, model or any other identifying details. Describe any damage to the PPE and provide comment as to the effectiveness or otherwise of the PPE in preventing injury (or more serious injury) to personnel involved in the incident.

21. Include photos of damaged equipment, property or infrastructure and copies of any other supporting evidence (ownership papers, property deeds, insurance details, repair quotes etc) as Annexes to the report.

Part nine – medical and emergency support

22. Provide details of the medical and emergency support (communications and evacuation transport) available at the incident site prior to the incident occurring. This may be cross referenced to SOPs. Also if applicable to the incident, include details of the frequency of demining accident response plan practices and the date the last practice was carried out.

23. Provide timings for key activities during the casualty evacuation for example the evacuation of the casualty(ies) off the incident site, the arrival at the initial medical facility, departure from the initial medical facility and arrival at the final medical facility.

24. Comment on the effectiveness or otherwise of the medical and emergency support in terms of planning and preparation, medical equipment and supplies, communications, evacuation transport, medical treatment facilities and external support (from other mine action organisations) to the casualty evacuation. Where deficiencies were identified provide details and recommendations for improvements.

Part ten – reporting procedures

25. Comment on the effectiveness or otherwise of the initial incident reporting procedures carried out.

Part eleven – any other matters of relevance. See note 7

26. Include any other matters relevant to the incident that have not already been covered in this example.

Part twelve – discussion, conclusions and recommendations

27. Provide any additional discussion, conclusions and recommendations made.

_____
Signature of Investigating Officer
Name of Investigating Officer

Annexes:

A. Copy of the initial demining incident report.

B. Witness statements.

C. Incident location and detailed site plans.

D. Site photographs.

E. Training records, monitoring reports, survey reports, clearance plans, task progress reports or any other demining organisation or demining worksite administration documentation required.

F. Photographs and technical details of items located, blast holes or mine/UXO/AXO debris.

G. Medical records.

H. Photographs of damaged equipment, property or infrastructure.

I. Copies of equipment/property ownership documentation (ownership papers, property deeds, insurance details etc).Damage repair quotes/estimates.

J. IMSMA Demining Accident Report and Casualty Report. **See note 8**

Note 1 The demining incident detailed report shall be prepared as soon as practically possible after the incident has occurred. The report shall be completed by an appropriately qualified and experienced investigating officer (IO) from the demining organisation involved, but this shall not be any person directly involved in the incident.

Note 2 In some situations the demining incident detailed report may constitute the formal incident investigation.

Note 3 The demining organisation shall complete and submit the demining incident detailed report within five (5) days after the accident occurred.

Note 4 For an accident (see clause 4.1.1 a) include details of the activities being carried out when the accident occurred.

Note 5 For mine(s)/UXO(s)/AXO(s) located in a cleared area (see clause 3.1.1 c) include details of how the mine(s)/UXO(s)/AXO(s) was/were discovered, the type(s) of mine(s)/UXO(s)AXO(s) involved, the exact location(s) (by GPS or resection if it can be done safely), classification of the area where the mine(s)/UXO(s)AXO(s) were located and any known details of previous demining (technical survey or clearance) in the area.

Note 6 For a failure in standards or SOPs or a failure with equipment (see clause 3.1.1 d) provide details of the procedures or equipment involved, how the failure was discovered/occurred and potential consequences of the failure if not rectified.

Note 7 Not all of the parts in this example are applicable to all incidents required to be reported.

Note 8 IMSMA reports shall always be used but an IMSMA report is not a substitute for a ‘demining incident detailed report’.

Annex B
Demining Incident reporting procedure

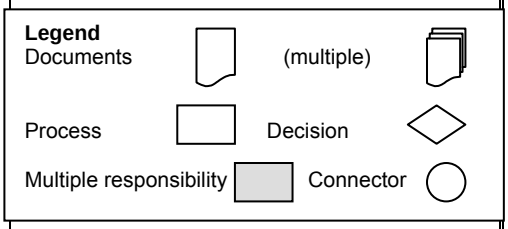
Title: Demining incident reporting	SLNMAS 11.0	Date: 28/09/10
Intent: Efficient and accurate reporting of demining incidents providing information required to assist in emergency response and initiation of investigation procedures	**Process user:** Operations Officer	
	Process owner: Director	

Process description	**Responsibility**			
	Site manager	Demining Org	NMAC/ RMAO	Other Authority
Demining Incident Implement demining organisation's emergency response SOP and incident-site preservation SOP.				
Collect data and prepare incident initial report See clause 3.1.21 for the information to be included in the incident initial report.				
Submit incident initial report (See note 1 below) Submit initial report by fastest practical means, follow up with written report by fax or e-mail.				(1)
Does incident identify an intolerable risk a. such as in documented standards or approved SOPs including the failure of equipment issued to employees? or b. an unforseen hazard (new device or technique used in minelaying or boobytrapping)?			ves	no
Send general warning message (See note 2 below) General warning message shall advise caution in relation to the unforeseen hazard (new device or technique used in minelaying or boobytrapping) or the application of the standards, SOPs or equipment..				
Is a formal investigation required? See Annex C for a guide on the decision making process. **See note 3 below**.			no	yes
Submit incident detailed report Compile and submit incident detailed report. See annex A for the contents of an incident detail report.				
Appoint a board of inquiry (BOI) or external investigation officer See Annex D for the contents of the terms of reference for a formal investigation.				
Investigate Incident Demining organisation shall assist with the formal investigation.				

.Note 1 Submit to police or other national authority as required or as appropriate.

Note 2 To all demining orgs applying the same equipment, standards or SOPs or likely to meet the same new hazard.

Note 3 If the NMAC decides than an internal formal investigation is all that is required then the incident detailed report shall constitute this investigation.



Annex C
Guide for selecting the level of formal investigation

	Type of formal investigation		
	Board of Inquiry	Independent Investigation	Internal Investigation
1. A demining accident resulted in:			
a. minor injury to a demining worker.			■
b. serious injury to a demining worker.		■	
c. death of a demining worker.	■		
d. any injury to a non-demining worker.		■	
e. death of a non-demining worker.	■		
2. A demining incident:			
a. resulting in damage to demining organisation equipment of value less than USD 5,000.00			■
b. resulting in damage to demining organisation equipment of value from USD 5001.00 to USD 50,000.00.		■	
c. resulting in damage to demining organisation equipment of value more than USD 50,000.00.	■		
d. causing damage that may result in a major claim for compensation from a member of the public.		■	
e. involving a major event that caused significant damage.	■		
f. that lead to the theft or loss of explosives or explosive components.	■		
3. A demining incident:			
a. involving the discovery of a mine or ERW item in an area previously cleared, recorded as cleared or marked as cleared.		■	
b. where demining workers, visitors or the local population are exposed to intolerable risk that results from the application of approved standards or procedures including the failure of equipment.		■	
c. involving the unplanned detonation of a mine, ERW or explosives on a demining worksite.		■	
d. which could attract media attention or media report.		■	
4. A non mine, ERW or explosive related accident:			
a. on a demining worksite that requires the urgent evacuation of a casualty to an advanced medical facility for treatment.		■	

Note 1: Boards of Inquiry (BOI) should comprise a minimum of three appropriately qualified and experienced members of the senior or technical management within the mine action programme. The principal member should be from the NMAC, one member from a third party demining organisation and one member from the organisation involved with the incident, but this shall not be any person directly involved in the incident.

Note 2: The independent investigation shall be carried out by an appropriately qualified and experienced independent Investigation Officer (IO) appointed by the NMAC.

Note 3: The internal investigation shall be carried out by an appropriate qualified and experienced member of the demining organisation involved, but this shall not be any person directly involved in the incident.

Annex D
Terms of Reference: Board of Inquiry

Sri Lanka NMAC
Ministry of Economic
Development
177 Galle Road
Colombo
Sri Lanka

File reference (incident serial number) Date

Name of recipient(s)
Address
Location

APPOINTMENT OF PERSONNEL TO CARRY OUT A FORMAL INVESTIGATION

Reference:

A. Sri Lankan National Mine Action Standards.

B. Demining incident detailed report. (Copy attached)

1. You (name(s) of organisation(s)) are hereby appointed by (name and appointment) of the NMAC to investigate the circumstances surrounding the demining incident that occurred on (time and date) at (location) involving (personnel from, if applicable to the incident) (organisation name).

2. This incident involved (a brief note as to what the incident was about for example 'a deminer detonating a mine whilst carrying out manual clearance'; or 'the discovery of a mine in an area previously cleared').

3. Your formal investigation and report are specifically to cover the following:

   a. details of the task(s) being carried out at the time of the incident;

   b. when and where the incident occurred;

   c. how the incident occurred including a description of the events that led up to the incident, personnel, equipment and procedures involved;

   d. the cause, nature and extent of injuries caused to personnel or damage to equipment, property or infrastructure as a result of the incident;

   e. why the incident occurred and whether the incident could have been avoided;

   f. any remedial action necessary to prevent future incidents of this nature occurring; and

   g. any other matters that the BOI/IO considers relevant to the incident.

4. In investigating the incident the following factors are to be considered:

   a. the level of training and experience of the personnel involved in the incident, including where applicable, supervisory and managerial staff. This should also cover the dates and subjects covered for the most recent refresher training for the team, including if the members involved in the incident attended that refresher training;

b. the work routines being followed prior to and at the time of the incident including work start and finish times and rest period routines. Investigate if any handovers were occurring between personnel working on the site and procedures followed for these handovers including any briefings involved;

c. the dates of the last leave period or day off work for personnel involved in the incident;

d. the dates and results of recent monitoring (internal and external) of the team involved in the incident;

e. the procedures being followed by the personnel involved in the incident for the activities being carried out at the time of the incident;

f. the safety equipment or protective clothing required to be used, or worn by the personnel involved in the incident, and whether the equipment or clothing was worn or used and if so, whether it was done so correctly. Also consider whether the use of safety equipment or protective clothing contributed to, or could have contributed to, a reduction in any injuries to personnel;

g. the medical and emergency support available to the team/personnel involved in the incident and whether this support was adequate or not in the circumstances of the incident. If the medical support was not adequate consider the possible affect this may have had on any casualties resulting from the incident;

h. whether the incident was contributed to or caused by any of the following;

i. any weakness in command and control;

ii. neglect, carelessness or misconduct by any of the personnel involved;

iii. personnel being given inappropriate or dangerous orders by supervisory or managerial staff;

iv. non-compliance with orders, instructions or procedures;

v. the use of alcohol, drugs or prescribed medication;

vi. deficiencies in standards or SOPs;

vii. incorrect use of equipment;

viii. any shortfall in training of personnel involved;

ix. injury or sickness to any personnel involved in the incident;

x. malfunctioning of equipment or materials, including explosives;

xi. the prevailing weather conditions; and

xii. any deficiencies in basic support to personnel on the site for example provision of primary health care, shelter, food and water.

5. The report is to summarise the results of the investigation, draw conclusions as to the factors that contributed to the incident and make whatever recommendations necessary to prevent a future incident of this nature occurring.

6. The following documents should be included with the report:

   a. a copy of the document appointing personnel to carry out a formal investigation (this document);

   b. a copy of the demining incident detailed report from the organisation involved in the incident;

   c. witness statements;

   d. sketches, diagrams, location and site plans as appropriate;

   e. photographs highlighting important aspects of the incident for example site conditions; mines, ERW or explosives involved; blast holes and blast debris; injuries to personnel; and equipment, property or infrastructure damage;

   f. task documentation, which may include survey reports, clearance plans, demining worksite plans or demining worksite documentation;

   g. extracts from standards and SOPs as required;

   h. medical records or coroner's reports; and

   i. any further documentary evidence gathered during the investigation.

7. The investigation report is to be submitted by (time and date). In the event that the completed report is not able to be submitted on the date indicated an interim report outlining progress with the investigation and the reason for the delay is to be submitted on that date and further interim reports provided every ( ) days until the completed investigation report is submitted.

_____ (Signature)
Name
Director of the National Mine Action Centre

Annex E
IMSMA Demining accident report

[1]General information:

[1.1] ID:	**[1.9]Confirmed:** ☐ Yes ☐ No
[1.2] Owner MAC:	[1.10]Reliability:Information: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐6
[1.3] Reported by:	[1.11]Source: ☐ A ☐ B ☐ C ☐ D ☐ E ☐F
[1.4] Position:	
[1.5] Organisation (Address & Tel):	
[1.6] Duty officer:	
[1.7] Data entry date:	[1.12]Date of report:
[1.8] Data entry by:	[1.13]Date report received:

[1.14]Date of demining accident:
[1.15]Kind of area where demin. acc. occurred:
[1.16]Identification of Area: _____
[1.17]Clearance in progress? ☐ Yes ☐ No

[1.18]Was area marked? ☐ Yes ☐ No
[1.19]Was mine/UXO marked? ☐ Yes ☐ No
[1.20]Number of persons involved: _____
[1.21]Number of casualties: _____

[1.22]Demining accident occurred as part of a tasked mine action activity: ☐ Yes ☐ No
If yes: ☐ Impact survey ☐ Technical survey ☐ Clearance ☐ Completion survey ☐ Quality control
☐ Other: _____ ID: _____

[2]Geographic reference

[2.1] Province:	[2.6] Coord. system:	[2.11] Map name:
[2.2] District:	[2.7] X/ Easting/ Long.:	[2.11] Map series:
[2.3] Sub district:	[2.8] Y/ Northing/ Lat.:	[2.11] Map edition:
[2.4] Nearest town:	[2.9] MGRS Coord[1].:	[2.11] Map sheet:
	[2.10] Coord. fixed by: ☐ DGPS ☐ GPS	
[2.5] Municipality:	Map with ☐ <30m ☐ >30m accuracy	[2.11] Map scale: **1 :**

[2.12]Demining accident coordinates description:

[3]Location of demining accident

[3.1]Distance from nearest town: ☐ Less than 500m ☐ 500 m – 5 km ☐ More than 5 km

[3.2]Direction from nearest town: ☐ North ☐ South ☐ North – East ☐ South – East
☐ East ☐ West ☐ North – West ☐ South - West ☐ Unknown

[1] MGRS provided when X/Y absent and vice versa.

3.3 Type of area

☐ City ☐ Field ☐ Pasture land ☐ On or near coastline ☐ Forest ☐ In/Near governmental building
☐ Near military installation ☐ In/Near residential building ☐ On/Near riverbank
☐ Roadside ☐ Road for vehicles ☐ Path ☐ Unknown ☐ Other

4 Demining accident details:

4.1 Cause of dem. acc.: ☐ Incorrect procedure ☐ Booby trap ☐ Mine/UXO malfunction
☐ Anti-lift device ☐ Equipment malfunction ☐ Unknown
☐ Other: _____

4.2 Property damage: US$ _____ 4.3 Equipment damage: US$ _____

4.4 Reference to inquiry report:

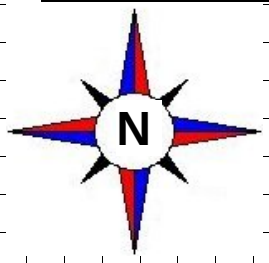
4.5 Demining accident description.

5 Device that caused the demining accident

☐ 5.1 Unknown

5.2 Device category (Landmines, bombs…)	5.3 Device type (AP, AT etc.)	5.4 Model	5.5 Qty	5.6 Anti-lift fitted	5.7 Booby trapped
				☐ Yes ☐ No	☐ Yes ☐ No
				☐ Yes ☐ No	☐ Yes ☐ No
				☐ Yes ☐ No	☐ Yes ☐ No

6 Attach explanatory map and/or sketch:



1 Square(5mm) = meters

Checklist

- Location of demining accident
- Main road
- Road condition
- Towns
- Provincial, District boundaries
- Airfields
- Railways etc.
- Mined Areas
- Legend

Drawn by: Date: Checked by: Date:

Annex F
IMSMA Casualty report

[2] Casualty data

[2.1] Casualty ID:	[2.2] Owner MAC:	
[2.3] Family name:	[2.5] Sex: ☐ Male ☐ Female	[2.7] Address:
[2.4] First name:	[2.6] Date of Birth:	
[2.8] Nationality:	[2.10] Organisation:	
[2.9] Position:	[2.11] Status: ☐ Civilian ☐ Military	

[1] General demining accident information:

[1.1] Demining accident ID:	[1.5] Data entry date:
[1.2] Date and time of dem. acc.:	[1.6] Data entry by:
[1.3] Reported by:	[1.7] Date of report:
[1.4] Organisation (Addr. & Tel):	[1.8] Date of report received:

Nearest city from demining accident

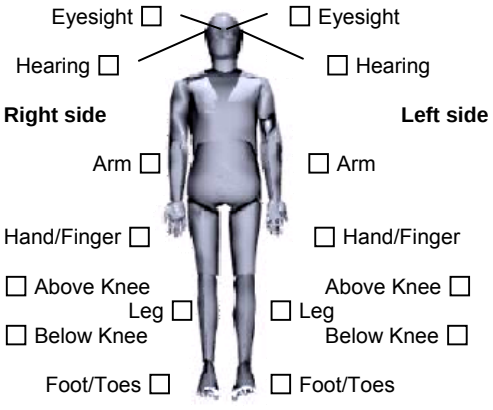
[1.9] Province:	[1.11] Subdistrict:
[1.10] District:	[1.12] Nearest city:
	[1.13] Municipality:

[3] Injuries:

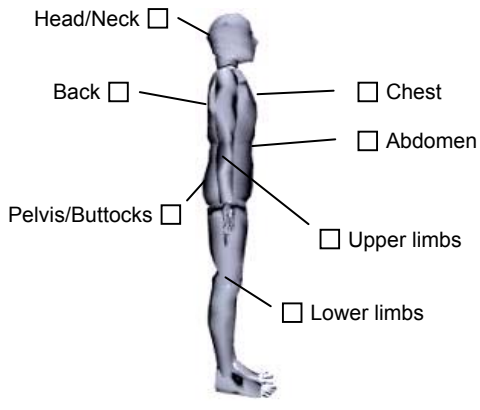
[3.1] Was the person injured or killed: ☐ Killed ☐ Injured

[3.2] If killed, manner of death:
☐ In site ☐ at health care facility
☐ During transport to health care facility
☐ other: _____

Loss of:



Other Injuries:



[4] Other Information:

[4.1] First medical facility reached: ☐ Dispensary ☐ Health Care ☐ Hospital

[4.2] Time until first facility reached: _____h

[4.3] Name of first hospital reached: _____

[4.4] Time until first hospital reached: _____h

4.13 Occupation:

☐ Mine action personnel	►	☐ Contractor ☐ Government ☐ MAC ☐ NGO ☐ UN
☐ Military	►	☐ Int. peacekeeper ☐ National
☐ Civilian	►	☐ IDP ☐ Local resident ☐ Passing through ☐ Pastoralist/nomad ☐ Refugee
☐ Aid worker		
☐ Civilian		
☐ Government official		
☐ International observer		
☐ Other		
☐ Unknown		

4.7 Did the person wear protective equipment? ☐ Yes ☐ No ☐ Unknown

4.8 Was the equipment effective? ☐ Yes ☐ No ☐ Unknown

4.11 Medical report reference (if available):

5 List of other Casualties

6.2 FirstName	6.1 Name	6.3 Status
		☐ Killed ☐ Injured
		☐ Killed ☐ Injured
		☐ Killed ☐ Injured

6 Device that caused the demining accident

☐ 5.1 Unknown

5.2 Device category (Landmines, bombs…)	5.3 Device type (AP, AT etc.)	5.4 Model	5.5 Qty	5.6 Anti-lift fitted	5.7 Booby trapped
				☐ Yes ☐ No	☐ Yes ☐ No
				☐ Yes ☐ No	☐ Yes ☐ No
				☐ Yes ☐ No	☐ Yes ☐ No

Amendment record

Management of SLNMAS amendments

Amendments to this document will be published periodically. An accurate record of amendments is to be maintained in the table below.

Any comments, suggestions or proposed amendments to this document should be addressed to: The National QA Coordinator, Sri Lanka National Mine Action Centre (NMAC), Colombo.

Serial No.	Date	Paragraph		Amendment	Remarks
		Old	New		