

**The University of Western Australia
Department of Mechanical and Materials Engineering
Demining Project**

Deminer Needs Survey

Survey Number: _____

Date of interview: _____

Location of interview: _____

Name of interviewer: _____

Deminer Needs Survey

Brief

This survey is intended to ascertain first hand, the needs of deminers. Although mine action is a global activity, it seems likely that even if similarities in trends exist for the "big picture", specific needs will be different for the various programs and regions around the world. Thus, the broad objective of the survey and analysis of the material collected is to attempt to identify not only the key issues, but to also isolate some of the more urgent specific needs and problems in an attempt to facilitate overall mine action productivity in the long-term.

The specific aim of this survey is to collect from as many locations around the world as is practically possible the information from participants of demining organisation. By compiling the information collected into a database, the findings should produce a picture of demining activity and indicate the basic needs of deminers. This could then be used to assist in allocating the scarce resources and also in directing some of the research effort.

It is critically important that the entire process be conducted in a manner that is principally objective and without bias to determine the true needs of the individuals that are involved in the clearing of landmines at the cutting edge of Mine Action

Survey Structure

The survey is divided into two main parts. Part one contains questions designed to uncover problems and issues relating to demining activity that are as yet unknown. This intention dictated the structure of this part of the survey, in that it makes little sense to ask specific questions about demining issues that are currently recognised as problematic. To avoid this, part one asks broad questions in the hope that as yet unrealised issues will emerge.

A survey that asks very general questions might appear directionless, to avoid this perception part one has been divided a number of sections. Each section contains one or two broad questions that are designed to inquire into a facet of demining activity.

Part two contains questions designed to collect demographic information on participants in demining activity.

Instructions to Survey Administrators

- Wherever possible the survey should be administered in private, to respect the confidentiality of the interviewee and to encourage candour in their responses.

- It is unacceptable to discuss the interview with or play any part of a recorded interview to anyone other than a member of the UWA Demining Project.
- While it may not be possible to record everything said by the subject during the interview, it is important that as much information as possible is recorded. In particular, make note of any topics or issues that arise a number of times during the interview and that are unexpected, or that the interviewee has raised without prompting.
- If the interview is to be taped, it is essential to first obtain the consent of the interviewee.
- It is important to consider the language skills of the interviewee when administering the survey. Questions should be tailored to suit the interviewee's language skill.
- Part one of the survey is divided into two main sections: general and specific. The General Section is to be administered to all interviewees and is divided into eight sections, each of which contains one or two main/broad questions. These questions are not intended to elicit responses that encompass all issues covered by the questions but rather are intended as a starting point for discussion, a catalyst for issues to arise, which may then be taken further with prompting by asking more specific questions. A number of specific questions have been provided in each section to further this end. However, these questions are not essential and are simply guides to prompt conversation about issues in the area of discussion. The Specific Section is to be administered only to interviewees who are Technical Advisers or Mine Action Centre Staff (or equivalent).
- Given the intention of the survey and the style of questions that are being asked, it is very important to encourage the interviewee to speak at length, 'chat and 'ramble'. Even though not all of the interviewees responses may not appear to be of relevance to the survey, in feeling free to discuss issues they may respond with candour and may broach issues of importance of which we are currently unaware.
- Space has been provided in each section to record the responses of the interviewee. These responses can be recorded under the headings provided. Although these headings reflect the general area of discussion, issues arising that do not fit into these heading may be recorded under the heading "Other issues"
- An outline of the topics raised in each of the sections is set out below. The type of general information that is sought in each of the sections is listed below. While part one of the survey is not designed to illicit answers to specific questions, it might be useful in attempting to uncover deminer needs to prompt for answers to the questions below.

General Section

Section One – Stakeholders

- a) What is the interviewee's view on where they are located in the maze of demining stakeholders?
- b) What relationship does the interviewee have with other stakeholders?
- c) Is there any regular contact?

Section Two – Minefield equipment and techniques

- Does the interviewee have any views on deminers' personal protective equipment, including helmet/visors, protective vests/aprons, hand protection and boots?
 - What is the interviewee's opinion of the workability and effectiveness of the standard field issued equipment, including hand tools and mechanised equipment (including flails and ground excavators)? Are the tools used for activities other than the purpose for which they were issued?
 - Does the interviewee have any views on the impact of vegetation clearance on the mine clearance effort and how it is dealt with? What type of vegetation is it?
 - Does the interviewee have any comments on the practicality or ergonomics associated with the use of metal detectors in the field?
- d) Does the interviewee have any opinions on the use of dogs in demining activity?
 - e) How is the interviewee's time allocated when working.
 - f) How much time is devoted to work and how much to resting?
- Other issues that are raised.

Section Three - Minefield and Landmine Data

- Determine the interviewee's opinion regarding the adequacy and accuracy of minefield data that is provided to teams to work with. This includes data that is presented to the teams to work with and data that is expected of the teams in the forms of reports.
- Do these reports present a burden?
- Other issues that are raised.

Section Four - Training

- Determine the significance that the interviewee places on training. Are they satisfied with the level and quality of training that they are given? This includes: Induction Training, Process Specific Training, Refresher Training and Issue Specific Training. Does the interviewee have specific training requirements needs that have not been met?
- Is the training relevant to the conditions in which the interviewee is working
- Other issues that are raised.

Section Five - Technical support, communication and leadership

- What is the interviewee's attitude towards Technical Advisers. What support do the technical advisers provide, and does this meet the interviewees needs and/or expectations? Is the provision of technical support adequate, too much, misdirected, etc?
- Is the interviewee satisfied with the level of communication and how it is carried out within the organisation? Is feedback on performance adequate?

- Does the interviewee meet with other colleagues to discuss their work?
- Determine if the interviewee considers leadership within their organisation to be adequate and effective. Is the organisation's leadership generally visible and approachable? How can the supervision be facilitated to better address demining activity?
- Any other issues that arise.

Section Six - Basic needs, logistic support and social and political stability

- Determine the interviewee's views and perceptions on the efficiency of field type services to support field activity. These include: supplies of tools and miscellaneous equipment, transport, reliability and efficiency of supply. How does the logistical support effect the productivity of the team?
- Does the interviewee find the basic provisions of food, water and shelter satisfactory? What is the general feeling in the camps?
- Is local social and political stability of any significance to the work of the interviewee? If there is unrest, how does it affect the demining program?
- Any other issues that arise.

Section Seven - Medical services, safety awareness and remuneration

- Determine the interviewee's confidence in the First Aid facilities that are available within their program? Include: adequacy of the facilities; proximity to the minefield; and training and competence of trained medical staff and unit medics.
- What are the most common injuries sustained? What are the reporting mechanisms that are in place to track incidents?
- Attempt to determine the level of deminer satisfaction towards the financial benefits that they receive for the work that they do in comparison to local living standards. It is also important to assess if the financial reward is the only motivator for their involvement in demining.
- How much significance does the interviewee believe deminers place on safety for individual and team? Is the attitude towards personal safety influenced by religious and cultural factors? Does the interviewee have any views relating to safety and safeguards to the process and equipment?

Section Eight - Motivation

- What factors does the interviewee believe will tend to motivate or demotivate individual deminers and their teams?

Specific Section

Section One – Programme organisation

- What is the interviewee's view of how the programme is organised?
- Who do they recognise as setting goals and objectives?
- Who allocates the work needed to be done?
- Other issues raised

Section Two – Personal and Programme Performance

- How does the interviewee measure their own performance?
- What is their view on the overall performance of the programme?
- Is it achieving its objectives in the most efficient manner?
- Other issues raised.
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Section Three – Wasted Resources

- Is the interviewee conscious of wasted time, effort or resources in the programme?
- Is this concern widespread in the organisation?
- Other issues raised.

Section Four – Changes to the programme and the organisation.

- Does the interviewee have any suggestions for change and improvement in the operation of the organisation or the programme?
- Other issues raised.

Section Five

- What does the interviewee believe would be the impact of the technological changes listed.

■ The Stakeholder diagram required for the first question of the survey is the very last page of the survey. This should be removed and given to the interviewee to look at. So that the interviewee is better able to related to and so comment on the diagram it may be useful to write-in some names of relevant local organisations in the boxes that contain only generic label. For example, if administering the survey in Bosnia, the Norwegian People’s Aid(NPA) could be written into the box labelled NGOs.

■ Part two of the survey is designed to obtain demographic information about the subject, in particular, information about the subject's: age, family, religious background, ethnic background, education, employment history and position in the demining organisation. Part two contains seven broad questions to elicit this information in the interview that can then be recorded in the section entitled ‘responses’. Some information may be recorded by ticking boxes; other information may need to be written. It may not be necessary to ask all of the questions if the interviewee has provided the necessary information in answers to previous questions.

■ This survey can be administered to the following members of a demining organisation: deminers; demining team leaders; technical advisers; and mine action center staff or equivalent.

Deminer Needs Survey – Part One

General Section

Section One – Stakeholders

Main Question

Please look at this picture(*Stakeholder diagram*) and tell me where you fit in.

Specific Questions

Do you have contact with any of the other organisations in the diagram.

Do you have regular contact with them.

What do you think is the effect on demining efforts of having so many stakeholders(organisations)?

Responses

Stakeholders

Other issues

Section Two – Minefield equipment and technique

Main Question

Tell me everything that a deminer does on a minefield, from when he arrives to when he leaves.

Specific questions

Personal Protective Equipment

Is the standard issue clothing appropriate and comfortable to work in?

May I see the personal protective equipment that you have been issued with?

Do you find the gear comfortable to wear all year round?

Where do you think improvements can be made to the Personal Protective Equipment?

Hand tools

Please show me the range of hand tools that you were issued?

Please explain to me how you use them and where any problems arise with their use?

Do you use the tools for purposes other than demining?

What is the most common terrain that you work in with these tools?

Vegetation clearance

Tell me about the vegetation that you most often need to clear?

Mechanised Equipment

Tell me about the types of mechanised equipment you have seen used for clearing landmines and cutting vegetation.

Would you like to see them used within your demining program?

Detectors

What type of detector do you use, and what is it that you like/dislike about it?

Dogs

Have you used or observed dogs working to detect mines?

What is your opinion of their usefulness?

Are you aware of the training that was provided to these dogs?

Time schedule

Tell me how long you work for before you have a break? How long is the break?

When it is time for you to take a break do you just leave the line or does the supervisor tell you?

Where do you take your breaks?

When do you maintain your equipment?

Responses

Personal protective equipment

Hand tools

Vegetation

Mechanised equipment

Detectors

Dogs

Time schedule

Other Issues

Section Three – Minefield and Landmine Data

Main Questions

Describe the minefield that you are working on at the moment?

Do you have any photos or maps of your work?

Specific Questions

Landmine information

Can you list for me the type of mines that have been found in the minefield where you are currently working?

If you were to come across a mine or a UXO that you do not recognise, what is the procedure that you would follow?

Minefield data

Show to me the minefield maps and information that you are given to work with for a particular minefield.

Tell me about the technical survey data supplied to you before you stated mine clearance.

How was the minefield perimeter defined for you?

How do you think this information can be improved for you to use?

Please tell me about the reports that you have to write and how you do it?

Minefield conditions

Have your team ever spent a long time working in an area where no mines were found? Tell me about that.

Responses

Adequacy and accuracy of minefield data.

Filling out Reports

Knowledge of landmines and UXO

Minefield conditions

Other issues

Section Four - Training

Main Question:

Tell me about the last training course that you attended?

Specific Questions

Tell me about the training that you have been given so far?

Where was the training course run? Were the training areas similar or different to the areas you are clearing now?

How can training for your team be improved?

Personally, what kind of training would you like to receive?

Do you think everyone has the opportunity to attend the training that is offered?

Responses

Training

Other Issues

Section Five – Technical support, leadership and communication

Main Question

Describe what happened at the last meeting of team leaders and technical advisers? Who contributed? Who kept quiet ?

If appropriate

(Do the deminers in your team ever have meetings to discuss work? Is your supervisor present?)

Specific Questions

Technical Support

Explain to me how the Technical Advisers work with your team?

How often does the Technical Adviser get involved in your work?

Generally, what are issues that Technical Advisers get involved with?

How long do you think it takes for TAs' to understand your work and program from when he arrived?

Is the language difference a problem when working with TAs'?

What do you think is the role of the Technical Adviser? What should it be?

Communication

Please explain to me the mechanisms that exist for communication between your team and head office?

How do you think communication can be improved to give you better insights as to what is expected of you and your team?

How often are the meetings with your team?

What do you usually talk about?

When you or the team have something important that needs to be reported, how is it conveyed to your leaders? Do they listen?

Leadership and supervision

Please explain to me how you are instructed to carry out tasks that are assigned to you?

When a task is delegated to you to carry out, are you generally given the necessary information that you need?

When there are important issues that affect the demining program, how are these issues conveyed to you and your team?

How much time do you think your group leader should spend in the field with the teams?

When the program manager is visiting your team do you get the opportunity to discuss the issues that are important to you?

Responses

Technical support

Leadership and supervision

Communication

Other issues

Section Six – Basic needs, logistics support, social and political stability

Main Question

Tell me everything that happens in a day at work for a deminer.

Specific Questions

Basic Necessities

Please explain to me what you like/dislike about the demining camps that you live in?

While your team is in the camp, explain to me who provides the food and water?

How do you think life in the camp could be improved for everyone in your team?

Logistics support

If your team were in urgent need of special supplies or tools, how would you organise to obtain it and transport it to the site?

Please tell me how your team is transported to the minefield site?

Social and Political stability

How do you think the current political instability affects the mine action effort that you work with?

Do you ever feel unsafe or threatened by social or political instability while working to clear mines?

Tell me about some of the difficulties your family has to face in their daily lives (food, water, housing , clothing, education)

Tell me about the opportunities that you would like your children to have. What do you think they will do when they grow up?

Responses

Basic necessities

Logistics support

Social and political stability in the area

Other issues

Section Seven – Medical services, safety, remuneration and insurance

Main Question

Tell me about the last accident

Specific Questions

Field Medical Services

What type of injuries do you find to be the most common within your team or other demining teams?

Following an accident what sort of investigation occurs, who conducts it and what records are kept?

What do you think is the one thing that could be done to improve the first aid response?

Remuneration

Considering the risk that you face as a deminer, do you consider the salary that you earn to be adequate?

Other than the financial incentives, what do you think motivates your team members?

What kind of effect would docking pay have on deminers if they were not following procedures?

Safety Awareness

Please explain to me the general attitude of the team towards the safety procedures that are in place.

How do you think safety performance can be improved for your team?

In your team is there ever any competition (Who can work the fastest, or clear the most ground)?

Responses

Medical services

Safety Awareness

Remuneration

Insurance

Other Issues

Section Eight- Motivation

Main Question

What happens on days when the conditions do not allow the team to work?

Specific Questions

Please explain to me what factors/issues are important to maintain your spirit and that of your teammates?

Demining is dangerous work, so why are you doing it?

What would you consider to be some important things that the organisation can do to improve your outlook towards the work?

What is the one thing that most upsets your team members?

What makes for a good day at work?

What makes for a bad day?

Responses

Motivation

Other Issues

Deminer Needs Survey – Part One

Specific Section

(For Technical Advisers and Mine Action Centre Staff)

Section One – Programme organisation

Main Question

Tell me how the programme is organised? Who sets the goals and objectives and how do you decide on what jobs need to be done?

Responses

Programme organisation

Goals and objectives

Other issues

Section Two – Programme performance

Main Question

Tell me how you measure your performance?

Specific Questions

How do you know when you have done a good job?

How do you know how well the programme as a whole is working?

Responses

Personal performance

Programme performance

Other issues

Section Three – Wasted Resource

Main Question

**Are you conscious of wasted time, effort or resources? Tell me about this.
Who else gets concern about this?**

Responses

Wasted resources

Other issues

Section Four – Changes to the Programme and the Organisation

Main Questions

What sort of changes would you like to see in the programme or the Organisation?
How do you think that they could be implemented?

Responses

Changes

Other issues

Section Five – Possible technological improvements

Main Questions

Please comment on the effect that the following would have on your demining operations, if they were available to you.

- a) Explosive “sniffing” sensor or detector with equal or better sensitivity than a mine dog. (Would also detect explosive fragments remaining in the soil)
- b) Improved metal detector with low false alarm rate, that is it can ignore small pieces of shell fragments, etc.
- c) Trip-wire detector which consists of rope with a sensor on the end. The sensor can be thrown out up to 20 meters and pulled back to the operator. The sensor can detect any metal trip wire it passes over. Up to 5cm above the trip-wire and it will still indicate.
- d) Ground preparation machine for vegetation cutting. What sort of conditions must the machine be capable of withstanding? (Slope, width, cutting capacity, etc).
- e) Ground milling machine. For example, a mini-breaker, rhino.
- f) Back hoe excavators and front end loaders, possibly armoured.
- g) High resolution aerial photos of work sites, which can be viewed in stereo with a resolution of 2mm. That is, trip wire could be seen on photos if they are visible from above.
- h) Field data recording equipment, recording: areas cleared, material moved, working hours (start, stop, etc).
- i) Q A detector. A device which when left in a cleared area will detect the presence or absence of explosives in approximately 500sq meter areas in about 10-14 days.
- j) Low insertion force prodder.
- k) Crusher to process rubble from buildings. I would have a magnetic separator to remove UXO and some mines before entering the crusher. The crusher could withstand an AP mine exploding inside it.
- l) Improved personal protective equipment and /or mine proof boots.
- m) Scratch proof film for visors.
- n) Explosive sensor (or sniffer) which does not require vegetation clearance before use. This could take the form of rigid plastic tubing, in sections, which can be inserted into moderate or heavy vegetation, up to a distance of 20 meters or more.
- o) High quality internet access. Typically a field office for a MAC, even a main office, needs 3-4 minutes to download a single page. This means the internet is of limited use for field staff. Email can work OK, but web access to search for information requires 3-4k bytes per second download speeds.
- p) GIS which can register maps with different grid systems – eg, UTM, Lat/Long, Gauss Krieger etc. Also scanned aerial photographs.
- q) Means of distributing database and updates in timely manner to field offices.
- r) A scientific understanding or measurement method which would identify the likely effectiveness of dogs. Tests have shown dogs to be less effective in some conditions, possibly completely ineffective. However, no one in the field seems to be able to predict this, measure this, or explain it. An optimisation of the MEDDS system.
- s) A replacement for the current 99.6% requirement which is soundly based and can be specified and monitored in the execution of a demining contract. The current requirement cannot be verified without knowing how many mines are buried and only then if a large number of mines are present.

- t) A means of monitoring the progress of demining work to ensure that demining teams work at a speed appropriate for the terrain. Working too fast is thought to decrease the reliability of clearance.

Responses

Deminer Needs Survey - Part Two

Questions

1. Tell me about yourself
2. Tell me about your family
3. Where do your family live
4. Where is your mother's/father's family from?
5. Tell me about your education
6. What jobs have you worked in?
7. What is your position in the demining organisation?

Responses

(Tick appropriate box)

1 Age

- 10-19 years 20-29 years 30-39 years
- 40-49years 50-59 years 60+ Years

2 Married?

- Yes No

3 Number of children.

- Nil 1-2 3-4 5-6
- 7+

4 Children's ages.

5 Guardianship of elderly parents or relatives or children other than ones own.

- No Yes -children Yes - adult/s

6 Number of people financially supported by the interviewee.

- 1 2 3 4 5 6 7 8 9 10

7 Place of birth.

Country _____ Province _____

8 *Ethnic background.*

Mother _____ Father _____

9 *Languages spoken.*

10 *Membership of a religion.*

Christian Muslim Jewish Baha'i Buddhist
 Hindu No religion Other (specify) _____

11 *Completion of any formal education.*

Yes No

12 *Highest level of education completed.*

Did not complete primary school Completed primary school
 Completed high school Completed Military School
 Completed Tertiary Education Completed Post-Graduate Study

13 *Completion of a trade certificate or any further studies after leaving school?*

No No, still studying for first qualification
 Yes, trade certificate Yes, other qualification

14 *Main field of study in these qualifications?*

15 *Jobs held since leaving school?*

16 *Served in the armed forces?*

No Yes Which country? _____ What Rank?

17 *Description of own income?*

Below average Average Above average

18 Means of support other than demining?

No Yes. Specify _____

19 If not employed in demining, what other job would this person be doing?

20 Why chose to work in demining?

21 Position in the demining organisation/operation?

22 Suffered displacement because of mines being planted where interviewee lived?

No Yes. Specify _____

23 Describes own level of health?

Very good Good Poor Very poor