

June 2000

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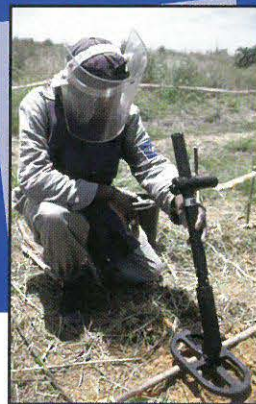
Recommended Citation

Stewart, Norman (2000) "Deminers, Manual Demining and Their Protective Equipment," *Journal of Mine Action* : Vol. 4 : Iss. 2 , Article 12.
Available at: <http://commons.lib.jmu.edu/cisr-journal/vol4/iss2/12>

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Deminers, Manual Demining & Their Protective Equipment

In Cambodia, a deminer was working in the prone position and set off an anti-personnel type 72 Chinese tilt mine. The resulting blast went over his head and did not damage his exposed hands. The blast over-pressure sucked air and dirt into his helmet visor and punctured his eye, which recovered fully. This over-pressure problem was caused by an air gap between the helmet visor and his protective jacket. Within seven days a new visor was dispatched from the manufacturer to my specifications, tested and found to remove the air gap problem. As part of the daily safety checks carried out on deminers it is necessary to ensure that helmet and protective jackets are properly fastened.



A deminer kneels in his cleared lane.

Photo c/o MAIC

by Norman Stewart,
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Introduction

There are many reasons that can be given for wanting to work in the field of humanitarian demining. Some of these reasons can come from the experience of living and working in mine-affected communities for periods of time. The results of a landmine explosion and the damage caused to humans have a devastating effect. This is especially true where children, unknowing of the danger, carry out normally accepted routines. On many occasions I have witnessed the effect first-hand, mainly on civilian casualties. People, usually relatives, trying desperately to reach victims in mined areas, have to be physically restrained to prevent them from becoming victims themselves.

Manual Demining

Understanding the basic safe and proven method of manual demining, gives an instant advantage in dealing with situations like those mentioned above. Manual demining has many advantages over other more mechanical interventions, many of which remain unproved. For instance, where mechanical access is restricted, a manual deminer may not experience this as a difficulty. When problems arise, information can be readily obtained from personnel. Through questioning, reasons for action can be discussed and studied, and plans can then be made for remedial action.

Training

Selecting and training of locals in affected countries has become the norm. This is successful when the training is carried out by properly qualified and experienced instructors. They have experience with the problems expected to be encountered in the selected country. The teams of manual deminers will only require basic equipment to enable them to carry out the tasks given to clear land.

To speed up the process of manual clearance, without a reduction in safety, requires extensive training of deminers. This ensures that the drills that are taught and the skills transferred produce confident, qualified personnel in the demining teams. These teams need to be continually monitored to ensure that the quality standards taught and practiced are maintained. With increased practice a natural process evolves within the teams, who with gained confidence, increase their capacity to clear land.

In some countries scrub results in a manual clearance problem. To produce the best detection capacity, it becomes necessary to remove scrub so that the metal detectors can be in close proximity to the ground. Scrub removal takes up to 80 percent of the time utilized to clear land and has to be removed before manual demining can take place. Mechanical scrub cutters that are available could help to reduce the time factor, and therefore, help to clear land quicker.

Training the Trainers

Selection and training of locals into mine-clearance teams in affected countries requires the supply of qualified and experienced instructors. These experienced instructors will be required to have an understanding of the local culture and a technical knowledge of the mines and associated unexploded ordnance that may be found in that country. It must be understood that a good base for training of expats has been the military engineering schools. Commissioned officers seldom gain this type of training, as they often become involved in the management of military programs, leaving their soldiers to deal with the clearance.

Military vs. Civilian Clearance Requirements

There is a big difference between military and civilian demining requirements, although the basic skills remain the same. The military requirement is to clear sufficient ground to permit movement of battle groups etc, and is known as breaching minefields. Casualties of an average of 15 percent from such military action are accepted. Protective equipment is normally worn by the military while carrying out such tasks.

Civilian requirements are quite different from those of the military. Cleared ground needs to be safe and accessible for production. To achieve "safe ground," it is necessary to search 100 percent of the mined area. Quality assurance needs to be applied to ensure that the clearance has been carried out effectively.

Protective equipment in the form of body armor and protective headgear should be issued to each deminer. In some countries, the lack of experience of some of the instructors results in them permitting deminers to crouch down to prod mines. This practice should be terminated. The correct position is prone and with the arms extended. Although not always comfortable, mats can be provided for comfort. Laying mats on the ground can also protect the deminers from sharp stubble.

Interpreters, Selection and Training

Selection of interpreters for ex-pat staff employed as instructors requires interpreters to have a good working knowledge of the instructors language. Time needs to be spent with interpreters to ensure that any instruction that may be given is fully understood. This needs to be carried out prior to training and selection of the locals. Experience gained in many countries provides a skill base. Combined with

the correct selection process, male and female deminers will develop their skills at the hands of qualified and experienced instructors. Time needs to be set aside for testing and practice during training. When necessary, extra training during operations must be given when techniques have to be adapted to fit the requirements, of safety. Standard operating procedures and safety orders need to be fully translated, taught and tested.

Increasing the Skill Base

Opportunities should be provided to increase the qualified deminer's capacity and skills base. During operational deployment, each and every team member should be given the opportunity, under supervised conditions, to lead the selected team. Each team member is assessed on his abilities by a qualified specialist and awarded merit points. A management committee carries out a selection process to determine which personnel should be given further training.

Courses of training may include:

- Supervisors Course
- Team Managers Course
- Leadership Course
- Medics Upgrade Course

The aim of these courses is to provide, given time and practice, an indigenous capacity in the selected country.

Manual demining can be routine, methodical and requires extreme concentration. From experience and comparison, female deminers have produced more daily output than their male counterparts and are suited to the conditions required. All deminers and training programs can benefit from an organized methodology for training and deployment in the field, which should be combined with protective gear that is adapted to the deminers needs. ■

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