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Land Release: Best Practice and Bad Practice.

This short document has been published by The HALO Trust in response to its growing concern regarding some misinterpretation of the Land Release International Mine Action Standards (IMAS) and associated bad practice within the sector.

The aim of the document is to explain what best practice in Land Release means, and how bad practice can be recognised and avoided. HALO hopes this will help to raise standards and increase demining efficiency across the sector.

Introduction

'Land Release' as a concept arose because it was realised that some mineclearance operators were wasting millions of dollars through conducting poor quality survey and then applying clearance in areas that did not require it.

The stated aim of Land Release is described as the process of accurately identifying and then clearing minefields as efficiently and cost effectively as possible.

However, Land Release is nothing new; it is not a new miracle system. Land release proposes nothing that competent operators are not doing already, or have not been doing for well over a decade.

There are three IMAS that HALO believes are workable and useful guides if interpreted as originally agreed by the IMAS review board.

Sadly, Land Release as currently interpreted by some is still allowing some bad practice to continue and in some cases is being used to justify it.

Best Practice

The basics of good minefield clearance (or land release) are very simple:

1. Conduct a thorough non-technical survey to deliver a defined Confirmed Hazardous Area (CHA).
2. Clear the CHA as efficiently as possible.
3. Hand over the cleared area to local people and the national authority.

Non-technical survey

As stated in the IMAS, non-technical survey should be conducted by trained personnel. It is one of the most difficult things in mine action to do well and takes tenacious questioning and careful analysis of information to build a picture of what went on in a given area. However, it is eminently

possible to do well and every effort should be made by operators to achieve high standards. It is unusual for a good survey officer not to be able to define a minefield accurately.

A good non-technical survey report should include:

1. Defined minefields and clear 'polygon' sketch maps showing the minefield boundary.
2. Names and contact details for several informants.
3. Details of the history of the reasons for mines being laid: By whom? Why? When? What types of mines? How many? Where? And accident details.

Most minefields can be pinned down and confirmed, it just needs effort on the part of the survey officer. There are a small minority of minefields for which there just is not sufficient evidence to be able to define them accurately; it is a minefield but the boundaries are difficult to draw. In these cases the survey officer should still report the area but indicate that further investigation is needed.

Clearance

There is nothing complicated about clearing a minefield. There are varying levels of information about different minefields – those for which you have excellent information at the outset, through to those for which the information is poor. For the former there might be reliable information about the pattern, quantity and type of mines but for the latter (the more common) only information that there are definitely mines but with no known pattern and no known quantity.

The best practice approach to clearing all types of minefield is exactly the same:

1. Direct the early stage breach lanes into the minefield to build on the non-technical survey information. This is also referred to as technical survey but it is really just part of clearance. The aim is to find mines; to find more information.
2. As information is gathered (and recorded onto a large scale map) clearance can be directed into the area, or areas, most likely to have, or confirmed to have, mines.
3. Clearance and technical survey continues until the operator is satisfied that the entire threat has been removed. This might mean clearing less than the original CHA, all of the CHA or even more than the original CHA: it depends on the information.
4. The cleared minefield is then formally handed over to local people and to the national authority.
5. The whole process is documented and the task dossier is archived.

For the first type of minefield where information is plentiful and reliable, it is probable that the mines will be found easily and that only a small, 'surgical' amount of land within the CHA will need to be cleared. The rest of the CHA can be 'released through technical survey' – i.e. it can be released without any further action because technical survey and clearance in other areas confirms that the threat has been removed.

For the second, more common type of minefield it is almost impossible to be sure that the threat is removed without clearing the whole of the CHA.

In between there are innumerable scenarios, some in which less and some in which more of a CHA has to be cleared. The key is that information is being built up at every stage and that information directs the clearance plan which continues until an operator can be confident no threat remains.

Technical Survey – best practice; what is it?

Technical survey is a part of clearance and a technique used mostly at the beginning of the clearance of a CHA but also during the process. Both technical survey and clearance are information gathering processes. Technical survey differs in two ways from clearance:

1. It can be a full clearance technique, but spread at intervals across a CHA (gridding and sampling) to penetrate quickly into the CHA and hopefully start finding mines and therefore help to focus full clearance.
2. It can be a semi-clearance technique, such as dogs, rollers or flails that do not clear ground fully, but move quickly into a CHA and find mines and therefore can help to focus follow-on full clearance.

Technical survey is a very useful tool for entering quickly into a CHA and gathering more information and thus targeting clearance assets more accurately.

The better the information at the start, the easier it is to get useful information from technical survey. Where information is poor, technical survey may still have a place, but is less likely to deliver useful information.

The Handover – what is it?

The handover of a completed minefield (or released CHA) is a crucial phase in the whole process. If local people are not fully involved then there is a real possibility that uncertainty about the area will linger. Good operators involve the community throughout the survey and clearance phases, often employing, as deminers, women and men who live there.

The handover should be a formal documented process that includes walking in the cleared minefield and around its perimeter to ensure that the people understand what has been done and that they are satisfied the area is safe.

What to do about large suspect areas with very little information?

If the situation is that a confident and competent survey officer is left facing a large area for which there is very little information (and by this we mean no livestock or human accidents, no reliable first or second-hand information about minelaying and no physical evidence but only unreliable reports of mines) then there is insufficient justification for any further action except revisiting the area in the future. This is the case even if there are aid agencies who want to use the land.

If asked to re assess an area, the right approach is to question the quality of the original non-technical survey and re survey the area. This may produce better information and a more defined CHA, allowing clearance to be both justified and focused correctly. However, tough decisions sometimes have to be made and without sufficient justification, whatever the pressure, clearance should not be started.

In HALO's experience minefields do come with a history and local people in particular know where they are. In a country with a genuine mines problem, finding and defining minefields is not difficult

for a competent survey team. There are thousands of well-defined minefields around the world that need clearing and these should be the priority target for donors' funds.

Operators and donors should also bear in mind that there are some CHAs for which there is genuine evidence to justify clearance, but when the area is completely cleared no mines are found. It was still right to clear the area. However this does not justify clearing an area for which there is no cause for further action at the survey stage.

To summarise: areas where survey indicates there is a mine threat should be cleared (however difficult that clearance turns out to be) and areas for which there is only the most tenuous justification should not be cleared. If new evidence arises to alter that position the area can be reviewed.

What to do in a situation when local people are using a recorded CHA.

Local people sometimes decide to use land even though they know there is a mines risk, though usually that risk is one they consider to be low compared to other minefields. People start to cultivate the area and simply remove a mine when it is found. This is common in Cambodia and it is referred to as 'land reclamation'. The exact criterion for land reclamation varies from country to country but usually the use of the land for three or more years constitutes 'land reclamation' and the CHA is then re designated/cancelled on the database.

Nomenclature and Statistical measurement – best practice:

An area that is resurveyed (by non-technical survey) and found not to be a minefield is cancelled NOT released.

For a CHA that is resurveyed (by non-technical survey) and defined as a smaller CHA, the area now outside the redefined CHA is cancelled, NOT released.

Area released by technical survey can only be calculated after clearance is complete for an entire CHA and is equal to the total area of the CHA minus the area actually cleared.

Reporting the number of whole CHAs released and handed over is important as this is a key statistic indicating progress towards Mine Ban Treaty compliance. If an operator clears part of a CHA then abandons it, the problem is still there albeit reduced; operators must complete whole CHAs.

Area and roads verified or threat reduced should be reported separately from CHA clearance figures.

A completed CHA is one that has been cleared or partially cleared and the remaining area released through technical survey and/or cancelled, and the whole area handed over to local people and the national authority.

Bad Practice

Bad practice in mineclearance (or Land Release) includes, but is not limited to the following:

1. Poor quality non-technical survey resulting in areas with no mine threat being recorded as minefields,
2. Poor quality non-technical survey resulting in areas that are minefields being recorded as being much larger than a thorough non-technical survey would have revealed,
3. Misapplication of technical survey and thus partially clearing a minefield and declaring it clear when there is no evidence to conclude this is the case,
4. Applying technical survey and clearance to areas that with good non-technical survey would have required no further action,
5. Reporting areas that should be declared as 'cancelled' from the database as "released" and claiming benefit to local people,
6. Clearing excessively large areas where there is no evidence of a requirement to do so, and
7. Poor data management.

Poor quality non-technical survey

Poor quality non-technical survey is simply the result of failing to complete established non-technical survey forms correctly because of a lack of effort on the part of survey officers and a lack of supervision and due diligence on the part of their managers.

The common result of poor quality survey is an overestimation of the size of the problem which leads to inappropriate clearance and thus funding being wasted on undeserving causes. In due course more money then has to be spent to survey properly and get it right.

Misapplication of technical survey

This is the most serious and damaging of all bad practice within mine action. Alarming, some interpret the new IMAS as endorsing this bad practice.

The bad practice is as follows:

Areas of a CHA are technically surveyed (i.e. gridded or sampled) or semi-cleared (i.e. by dogs, flails or rollers) and nothing is found. The whole CHA is then declared safe and 'released'.

This is unsafe practice. Consider the analogy: you are tasked to find products containing chocolate in a supermarket. A supermarket is a place where it is reasonable to expect there will be chocolate but you don't know where it is on the shelves or displays. If you searched aisles 3, 5 and 12 of the twenty aisles in total and found no chocolate, would it be reasonable to conclude that there is no chocolate in the supermarket? Very obviously not, but this is how technical survey is sometimes applied in mine action and adopted as standard, acceptable practice.

A good example of a minefield where technical survey alone could not "release" the CHA is Goose Green MF11 minefield in the Falkland Islands. This is a well defined, marked and fenced CHA for which there is a strong belief that minimum metal anti tank mines were laid. The area will have to be cleared, using good technical survey techniques and full clearance, to an extent where either the

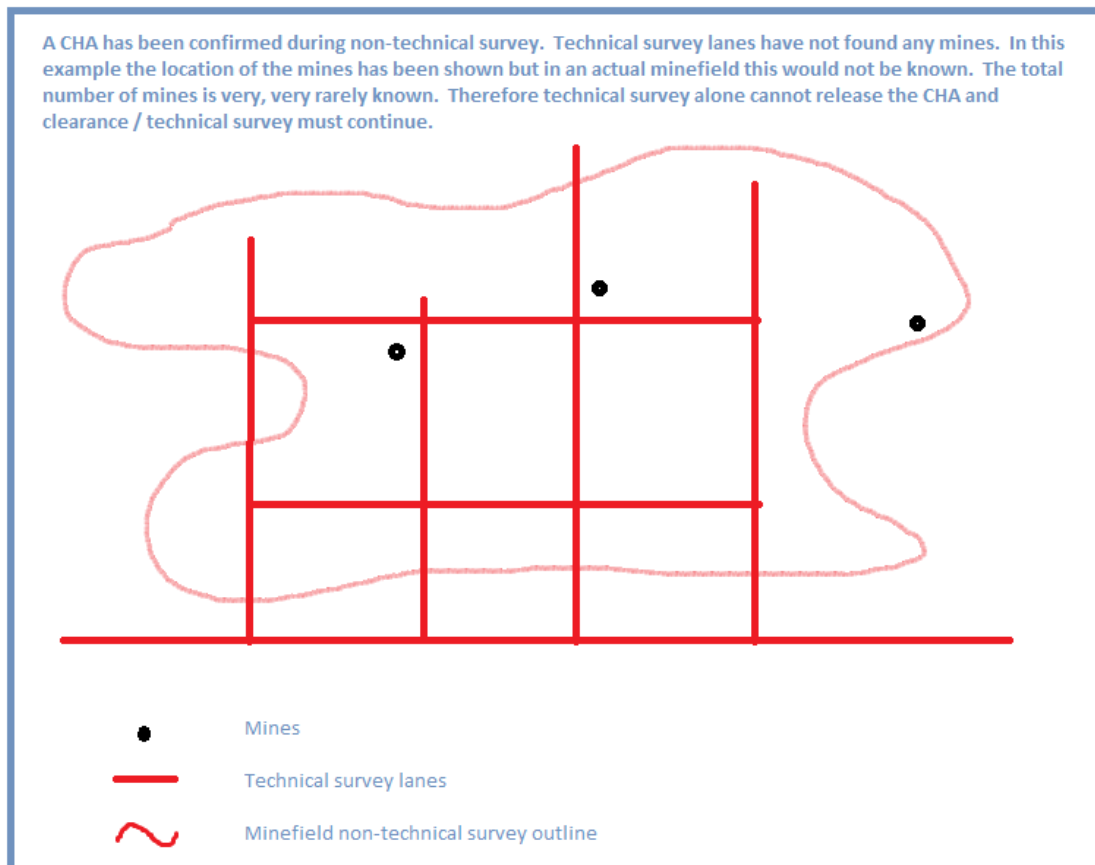
whole CHA is cleared or where the mines found and the pattern (if there is one) combined with non-technical information allows clearance to be halted. There is no way that this area can be gridded, nothing found and the area then declared safe and “released” for families to live, work or walk on.

In a nut shell, if you search part of a CHA and find nothing, you know no more than before and must therefore keep searching.

Advocates of this form of bad practice disagree with the sentence above and argue that to grid or sample an area is equal to ‘all reasonable effort’ and is therefore justified. They even argue that mathematical probability supports their case. Both arguments are wrong, and practice, time and again, proves this.

Two clear passages in the IMAS make the point and were inserted to prevent this bad practice: ‘absence of evidence does not necessarily denote evidence of absence’ and ‘technical survey can only release land when combined with other evidence’.

Technical survey alone cannot release part or all of a CHA as the diagram below demonstrates:



Technical survey in “suspect” areas – it looks good but isn’t

This is the second way in which technical survey is misused and has the effect of making it appear to be a feasible technique in mine action when it is not. The bad practice is for an operator to apply technical survey to ‘suspect’ areas where there is very limited or no evidence that the area is a CHA at all. I.e. in an area that a competent operator would not record as a CHA or part of a CHA.

At its worst this bad practice is (at considerable expense to the global taxpayer) often applied on road verges and ahead of reconstruction projects where there is no evidence of mines. It is little more than a scam – declare an area suspect then technically survey it and claim land release. Donor beware.

Operators whose non-technical survey is poor are faced with a large CHA. They use technical survey as their solution to “releasing” areas of an oversized CHA. While it is allowed within the IMAS it is unnecessary and expensive, but also, as we have seen, not really a valid result, as finding nothing tells you nothing. Within the overall scheme of things, where the aim is to clear minefields as efficiently as possible, it is wasteful and removes funds from where they are urgently needed.

Also allowed by the IMAS, but inefficient as an approach to clearing a CHA, is the technique that some operators prefer which is to use technical survey to try and identify first areas of a CHA that are probably not mined, and then clear the resulting ‘defined hazardous area/s’ second. It is a weak approach because it has the danger of discounting an area when it should not be discounted and assumes a logical distribution of mines which is rarely the case. It is much easier and much less wasteful to take a positive approach and try to find mines (and therefore more information) from the outset.

Referring to area cancelled as area released

Bad database management and poor survey practices have left huge areas recorded as suspect on databases. To remove them a survey team has to visit the site and will cancel all or part of the suspect area. The information to do so comes from local people who are already using the land. Therefore there are no beneficiaries, just a tidier database. Nothing has been released.

Correcting poor survey and muddled databases does cost money, but it is wrong to claim that there are beneficiaries – the erroneously suspect area is cancelled, nothing more.

Clearing more area than is necessary

When working in a real minefield, it is natural to err on the side of caution, but there must be a thought process and logic behind the application of clearance assets. If there is not, clearance could be extended over an area greater than necessary. This is probably the least bad of the common bad practices, but operators should guard against it and senior staff must regularly get out into minefields and scrutinise operations and clearance plans in order to ensure that clearance is in the right place and stops at the right time.

Poor data management

Badly maintained databases lead to a build-up on the database of duplications and minefields that are open on the database but completed in reality. Eventually this leads to a serious problem that can only be rectified with expensive re-survey. Therefore basic data management and data base management are as important as correct survey.

Over-complicating the database and burdening operators with unnecessary and lengthy reporting requirements do not help either. The database needs to be kept simple and run well.

Nomenclature and Statistical measurement: misleading statistics

The only genuine indicator of progress is area cleared, combined with the number of CHAs completed or cancelled.

Area cancelled, on its own is relative to the quality of the first survey, thus it is not an indicator of success or progress.

Area “cancelled” reported as area “released” misleads donors and is potentially *fraudulent*.

Area released through technical survey is difficult to define and has limited value as an indicator. If it is area that better non-technical survey would have cancelled, then it is not a valid figure and, sadly, as this practice is going on, it makes the statistic irrelevant. Secondly, when it is calculated as the difference between the original CHA area minus the area cleared, it is still relative to the original surveyed CHA area, which can vary in accuracy and could be abused.

As ‘area released’ is currently so loosely defined and open to abuse it would be very wrong to use the cost per square metre “released” figure as an indicator. A cost per square metre cleared, with attention being given to the number of CHAs successfully completed, is the best indicator.

The HALO Trust
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