Land Release/Risk Management

Discussion paper

Background

Over recent years, there has been increased focus on risk management as part of land release in mine action.

A number of countries are applying risk management principles at various stages of the land release process. These procedures range from structured, formal processes through to informal methodologies.

The aim of the workshop to be held 20/21st June is to clarify some of the thinking of the key stakeholders in the business and to assist GICHD to focus its efforts in future research.

Risk Management and the Ottawa process

The Ottawa treaty states clearly that States parties… "*undertake to destroy or ensure the destruction of all anti-personnel landmines under its jurisdiction or control, as soon as possible but not later than ten years after the entry into force of {the} convention*".[1]

This clear requirement has begun to pose problems for many States parties, who are now approaching the deadline defined by the treaty, with few having any prospect of completion within the deadlines. While there are provisions for extensions, there is still an imperative to achieve a completion as soon as possible.

Applying risk management approaches does not directly go against the principles of the treaty, but there is a problem we shall consider later. The principles of RM in a pure sense allow for prioritisation of assets in a far more effective way (in other words to those locations where the risk to the population is higher), and the reduction of casualties more expediently. The problem from a treaty political perspective is that if donors see that casualties have been reduced significantly,

[1] Article 5, para 1.

there may be a temptation to stop funding before the State concerned is able to achieve its obligations under article 5 of the treaty. Whilst this is indeed a political issue, it is one which the operational planners should be aware.

There will be a short presentation by John McBride, future Co-Chair of the Convention's Standing Committee on Mine Clearance.

A statement by the ICBL is attached.

Specific cases:

Laos

The GICHD has undertaken a limited amount of specific work on risk management – most specifically the Risk Management study for UNDP Lao PDR, a copy of which can be found at the bottom of the web page at http://www.gichd.org/operational-assistance-research/risk-management/

The Laos model targeted 2 specific elements. At the strategic level, the model attempted to utilise extant data to undertake a thorough analysis of the factors that pose a threat to the local populations. Previous planning had been based primarily on the survey undertaken in 1997 by Handicap International which was undertaken in 9 of the 18 provinces of Lao PDR. Current deployment is almost entirely within these provinces and does not take into account casualty data, and other key factors.

The new approach attempted to undertake an analysis of all available data to develop a map that showed the exposure of the population to the threat from UXO in Lao PDR. These factors included:

- Density of population
- Density of cluster munition strikes (based on US bombing data)
- Density of "big" bomb strikes (based on US bombing data)
- Type of land use

By analysing these factors, a risk map was developed and an example is given below[2]:

[2] Note that this version is NOT complete and is illustrative only

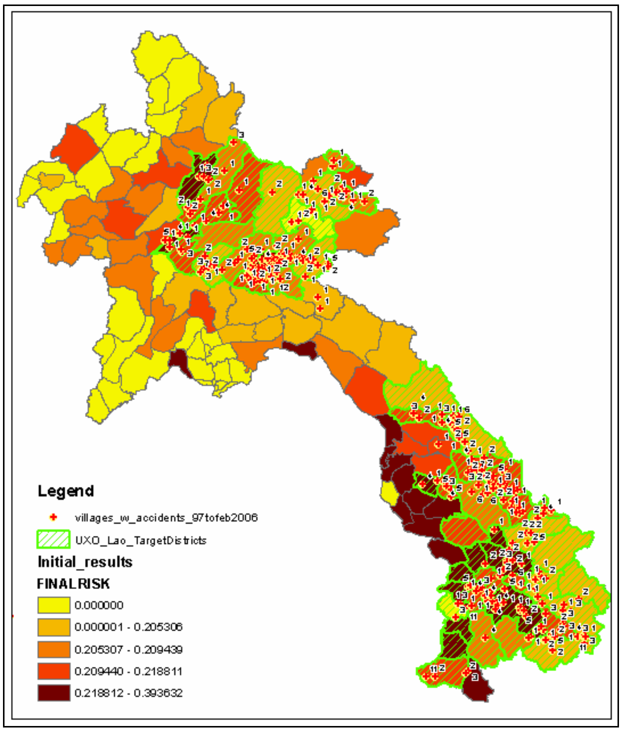

Figure 1 - Risk map for Lao PDR

While it is not intended that the map form the absolute basis for tasking and deployment of resources throughout the country, it is important to review the data from a strategic perspective and reconsider the way that the programme operates at the moment.

The second element of the project looked at operational deployment. In many programmes, there is a tendency (through human nature, inevitable innate conservatism and languor) to err on the side of caution when clearing land. It is far easier to make a decision to spend weeks clearing land where there is a small possibility of finding something than it is to make a decision NOT to clear the land – with the perceived possibility of missing something and perhaps having to live with the guilt of having made a decision to leave something that subsequently causes injury or death to someone.

A tool was developed by the team to attempt to draw on the experiences of risk management processes in other industries and define the local level of risk. That level could then be defined at national level and that would subsequently provide the protection required to allow the operator to make decisions on marginal sites with the knowledge that, whilst the decision they are making is rational, if there are any failures afterwards (i.e. there are items of UXO left behind), they will be protected by a national authority who have given them authority to release that land because, to all intensive purposes, the level of risk is below the nationally acceptable tolerable level of risk.

In practical terms, the model is fed with data following the standard technical survey process that an organisation would undertake. This data provides a linear level of the degree of risk that there is on that particular site. Two levels are set – the top one at the level above which, the level of risk is high enough to absolutely require clearance – and the bottom one at which below, the level of risk is low enough to be tolerable to the government of Lao PDR. Thus, we have three classifications:

1. Top band. At this level, the national authority **requires** the clearance of this site.
2. Middle band. At this level, the national authority **require** further investigations to be undertaken to move the land into either the top or bottom band.
3. Bottom band. At this level, the national authority allows the land to be released with no further actions.

Final adjustments are still being made on the model and there is clearly a specificity for the Lao (or at least UXO in Laos) environment, but we believe there is cross-applicability that could be drawn into other environments.

There will be a short presentation by Tim Horner on the Laos issue and a copy of the GICHD report for UNDP Loa PDR is attached.

Cambodia

At the strategic level, Cambodia made a major decision recently with the promulgation of the national "Area Reduction Policy". This policy, legitimised by the government of Cambodia in 2006, allows land that has been in use by the local population for three years without there being any accidents to be reclassified and effectively removed from the list of priority clearance tasks. This is a huge step forward and has allowed significant tracts of land that had previously been classified as mine suspect land to be removed from the records.

There will be a short presentation by Mao Vanna on the Cambodia issue

Albania

In Albania, the national standards specify clearly that the requirement for clearance around a cluster munition strike (from either Serbian or NATO munitions) shall clear out to 25 metres beyond what appears to be the last munition of the area. This standard was arrived at after much discussion with various actors and based on experience gained in the region. Whilst this has been clearly promulgated by the national authority, and the sole operator in country has been part of the process of discussions and acceptance, the ground reality is different.

In numerous cases, the field operator, when clearing the area, continue beyond this 25m limit set by the national authority. This effectively utilises assets on areas where the national authority have defined and accepted that a tolerable risk is in place. While it is easy to see WHY the operator undertakes such actions, this is clearly drawing on resources that could be utilised on other tasks. In turn this causes difficulties in terms of national strategic planning. In no cases in Albania have UXO been found beyond the 25m boundary.

Bosnia and Herzegovina

Bosnia and Herzegovina have laid in place a very detailed mechanism for prioritising based on assessment of the levels of risk to the population. It is based on a 3 stage approach

STAGE 1

Analysis of the factors are undertaken in a matrix to define a “level of threat” for each particular location based on the extant knowledge of each location.

LEVEL OF THREATH MATRIX		TO DATE CONSEQUENCES OF MINE ACCIDENTS AND INCIDENTS			POTENTIAL CONSEQUENCES OF MINE ACCIDENTS	
		Death	Injury	Without any consequences	Death	Injury
PROBABILITY OF EXISTENCE OF MINE FIELD	Almost certain	**VH**	**VH**	**H**	**VH**	**H**
	Probable				**H**	**M**
	Not probable				**L**	**L**

Table 2: Level of threat matrix

- **Almost certain**: The area used to be between the confrontation lines; the land is not in use; there are records of minefields and visible traces of possible mine hazard
- **Probable**: The area used to be between the confrontation lines; land not in use; there are **no** records of minefields or visible traces of possible mine hazard
- **Not probable**: Land is either not used, or partially used; there are **no** records of minefields or visible traces of possible mine hazard
- **VH** = Very high
- **H =** High
- **M** = Medium
- **L** = Low

STAGE 2

The second stage involves analysis of the communities and the threat posed to them. This is based on a statistical breakdown of the affected groups (A, B, C) against the relative size of the group. In other words, if a group is in class A (defined as: approx 10-30% of groups whose share is approximately 60-80% of all mine impacts) but is small (defined as less than 5% of the total number of residents in the community) then it will be classified as being medium impact. If large, it will be classified as very High.

MATRIX OF IMPACT ON MINE AFFECTED GROUP		AFFECTED GROUPS (Pareto diagram)		
		A	B	C
RELATIVE SIZE OF AFFECTED GROUP	LARGE	**VH**	**M**	**L**
	MEDIUM	**H**	**M**	**L**
	SMALL	**M**	**L**	**L**

STAGE 3

The final stage combined the two outputs from the previous two processes and comes out with an overall level of risk.

LEVEL OF RISK MATRIX		**LEVEL OF THREAT**			
		very high	**high**	**medium**	**low**
LEVEL OF IMPACT ON MINE AFFECTED GROUP	**very high**	**1**	**2**	**3**	**3**
	high	**2**	**3**	**3**	**4**
	medium	**4**	**4**	**4**	**5**
	low	**5**	**5**	**6**	**6**

Table 4: Level of risk matrix

LEVEL OF THREATH MATRIX		TO DATE CONSEQUENCES OF MINE ACCIDENTS AND INCIDENTS			POTENTIAL CONSEQUENCES OF MINE ACCIDENTS	
		Death	Injury	Without any consequences	Death	Injury
PROBABILITY OF EXISTENCE OF MINE FIELD	Almost certain	VH	VH	H	VH	H
	Probable				H	M
	Not probable				L	L

Table 2: Level of threat matrix

MATRIX OF IMPACT ON MINE AFFECTED GROUP		AFFECTED GROUPS (Pareto diagram)		
		A	B	C
RELATIVE SIZE OF AFFECTED GROUP	LARGE	VH	M	L
	MEDIUM	H	M	L
	SMALL	M	L	L

LEVEL OF RISK MATRIX		LEVEL OF THREAT			
		very high	high	medium	low
LEVEL OF IMPACT ON MINE AFFECTED GROUP	very high	1	2	3	3
	high	2	3	3	4
	medium	4	4	4	5
	low	5	5	6	6

Table 4: Level of risk matrix

Discussion

The workshop will aim to be open and should allow free discussion under the Chatham house rule.

Annex – Initial invitation

As part of the process of understanding various positions better, the GICHD will host a small workshop focussed on the following issues during the period 20-21st June in Geneva.

- Terms and definitions currently in use and for future use.
- Principles of land release and risk management.
- Development of a framework from which to develop…
    - Tools for national programmes to release land in a justifiable manner (if possible).
- Tolerable risk – who can and should define it and what is it?
- Delineation of phases –
    - LIS
    - LIS – clearance
        - Area cancellation
        - Area reduction
- Does IMAS need revising?
- GICHD seeking advice on future direction.

Outputs