Land release

Purpose, Principles and Practice

Mike Creighton
Land Release/Operations
GICHD

Efficiency in Mine Action?

- In the Past:
  - Clearing all areas right
  - But often clearing the wrong areas
- To increase efficiency:
  - Clearing the right areas!
Need for change?

- **Mine action resources are scarce**
  - Mismatch between resources and the problem
  - The problem – therefore rated as long term

- **Large mine free areas cleared - Why?**
  - Operator conservatism – better stick to what we know
  - Faulty operator decision making mechanisms
  - Fear of liability

- **Limited donor pressure**
  - Flawed education of donors (by Mine Action Industry)
  - Flawed (in part) indicators of efficiency
  - Fear of liability

- **Also: we regularly inflate the mine problem**
  - Faulty survey processes and concepts

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The challenge

**Stop:** inflating the landmine problem

**Start:** releasing land more efficiently
The challenge

Stop: Inflating the landmine problem
- Improve survey methodology
- Improve training of survey teams
- Define the requirements for survey

Start: Releasing land more efficiently
- Develop methodology that facilitates more appropriate land release decision making at all levels
- Release more land by survey

APMBC 9th SP meeting

or other explosive hazards and did not or do not require clearance. Three main actions can be undertaken to release land that has been identified and reported as “mined areas” as defined by the Convention:

(i) Land can be released through non-technical means, such as systematic community liaison, field based data gathering and improved procedures for cross-referencing data and updating databases.

(ii) Land can be released through technical survey, that is, through a detailed topographical and technical investigation of an area to more precisely identify a smaller area requiring clearance, thus enabling the release of the balance of the area investigated.

(iii) Land can be released through clearance, that is, physically and systematically processing an area manually or with machines to a specified depth in accordance with existing best practices to ensure the removal and destruction of all mines and other explosive hazards.
Purpose of land release

- Enable clearance of the right areas
  - Provide a framework for more appropriate decision making about where to use demining resources
  - Enable release of land by other efforts than clearance
- Prevent future inflation of the problem
  - Encourage more accurate prediction of real mined areas (improved survey process)

Land Release

- Mainly an effort to encourage more efficient use of resources at field levels
- Methodology is more applicable in some countries while less applicable in others
- More applicable to some organisations than others
Definition of land release

- The term “Land Release” describes the process of applying all reasonable effort to remove a claim of mines through survey and/or clearance.

- Land can be released when:
  - A sufficiently detailed and reliable process has been applied.
  - Result: high confidence there is no evidence of mines in an area.

- Land release – evidence based rejection of suspicion.

Principles of LR

- A suspicion (or claim) of mines can be rejected by:
  - Conducting non-technical survey
  - Conducting technical survey
  - Conducting full clearance

- Aim: Same high confidence in all released land.
IMAS – land Release

- 3 Draft IMAS being developed:
  - 08.20 Land release
  - 08.21 Non-technical survey
  - 08.22 Technical survey
- Inclusive process involving most operators and organisations
- The final draft version to be distributed to the IMAS review board this month
- A short process before final endorsement
- Guidance to national Authorities and organisations
The Land Release Process

Non-technical Survey

- Def: a survey activity which involves collecting and analysing new and extant information on specific SHA
- Aim: identify the actual SHA or release all, or parts of, a SHA without physical intervention.
- NTS does not involve the use of clearance or verification assets.
Non-technical Survey

- **Purpose**
  - Either: Identify previously suspected land that can be released as a result of applying a non-technical survey
  - Or: Identify new HA from new claims
  - In both cases:
    - Assist priority setting
    - Identify the requirement for technical survey
    - Identify the requirement for full clearance if possible
    - Identify the requirement for marking/MRE

Technical survey

- Detailed technical intervention by using clearance or verification assets in a SHA

- Although clearance assets are used, they are used for the purpose of collecting information

- Some assets may be poor clearance tools while good technical survey tools e.g. Flail
Technical survey?

- *Nothing new* - “we have done technical survey for many years”
- *Well understood* - “What is the point of making something simple and straightforward more complex than it needs to be?”

Technical Survey not new but:

- The methods of TS can be improved
  - Scope for significant improvement in efficiency
  - More land can be released by TS
  - Can more precisely define the boundaries of real mined areas

- *What then is clearance?*
  - Only applied in areas where the real boundaries have been clearly defined
  - Anything else is survey
SHA – Old survey

CHA – Base line survey

Part 1

SHA – Old survey

No Mines (NM)
Medium Confidence (2)

CHA

No Mines (NM)
Low Confidence (1)

Mines (M)
Low Confidence (1)

Mines (M)
Medium Confidence (2)

No Mines
High Confidence (3) – Released land

SHA – Old survey

No Mines (NM)
Low Confidence (1)

Mines (M)
Low Confidence (1)

Mines (M)
Medium Confidence (2)

No Mines
High Confidence (3) – Released land
<table>
<thead>
<tr>
<th>Techniques</th>
<th>Agreed capabilities</th>
<th>Value as survey tools (confidence)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual mine clearance</td>
<td>• Is considered full clearance</td>
<td>Very High confidence</td>
</tr>
<tr>
<td>MDD, one dog</td>
<td>• Very reliable clearance tool</td>
<td>High confidence</td>
</tr>
<tr>
<td>• One dog detects almost 100% of all mines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Two dogs required for full clearance</td>
<td></td>
<td></td>
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<tr>
<td>Flail (including visual inspection and recording of detonations)</td>
<td>• Will miss out mortars/UXO/POMZ</td>
<td>High/Medium confidence</td>
</tr>
<tr>
<td>• Destroys/detonates 95% of all mines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Detonates 80% of all mines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Re-flails approx 75% of potentially missed mines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Almost 100% of missed mines will be visible on the ground</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large loop</td>
<td>• Will detect POMZ/OZM/UXO</td>
<td>Medium confidence</td>
</tr>
<tr>
<td>• Will detect large percentage of AT mines</td>
<td></td>
<td></td>
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<tr>
<td>• Will miss normal AP blast mines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tiller</td>
<td>• Will miss out mortars/UXO/POMZ</td>
<td>Medium confidence</td>
</tr>
<tr>
<td>• Destroys/detonates 95% of all mines</td>
<td></td>
<td></td>
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<tr>
<td>• Detonates 50% of all mines</td>
<td></td>
<td></td>
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<tr>
<td>• 50% of missed mines will be visible on the ground</td>
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<td></td>
</tr>
<tr>
<td>Flail and large loop</td>
<td>See above</td>
<td>High confidence</td>
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### Conclusions

- An improved methodology for releasing land has the potential to significantly increase efficiency.
- This will better ensure that mine clearance resources are used on mined areas.
- Efficient release of land is mainly a question of efficient decision-making processes.
- Land release by survey **should** be encouraged by state parties and does not contradict the treaty.
- IMAS on land release will soon be available to provide guidance to authorities and organisations.
- The responsibility for the implementation of efficient land release lies with authorities, organisations, and donors.
Thank you

Technical Survey Dogs