Residual ERW Contamination and Risk
Overview

1. Definitions
2. ERW response
3. GICHD approach
4. Findings and recommendations

1. Definitions

1.1. Risk

1.2. Residual ERW contamination

1.3. Intended land use
1.1. Risk management

Risk Identification → Risk Analysis → Risk Evaluation → Risk Treatment

Risk Criteria

Controls

Residual Risk

Yes → Proceed → OK?

No

Risk Assessment Matrix

<table>
<thead>
<tr>
<th>Severity</th>
<th>Effect of Hazard</th>
<th>Loss of critical equipment; death of personnel</th>
<th>Significantly degraded equipment; severe injury of personnel</th>
<th>Degraded equipment; minor injury of personnel</th>
<th>Little or no impact to equipment; minimal injury of personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>A</td>
<td>![Red Square] 1</td>
<td>![Yellow Square] 2</td>
<td>![Blue Square] 3</td>
<td>![Green Square] 4</td>
</tr>
<tr>
<td>II</td>
<td>B</td>
<td>![Yellow Square] 2</td>
<td>![Blue Square] 3</td>
<td>![Green Square] 4</td>
<td>![White Square] 5</td>
</tr>
<tr>
<td>III</td>
<td>C</td>
<td>![Blue Square] 3</td>
<td>![Green Square] 4</td>
<td>![White Square] 5</td>
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<td>IV</td>
<td>D</td>
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<td>![White Square] 5</td>
</tr>
</tbody>
</table>

Risk Assessment Codes

1 - Critical 2 - Serious 3 - Moderate 4 - Minor 5 - Negligible

Probability

Frequency of occurrence over time

A  B  C  D

Likely  Probable  May  Unlikely

IMAS 9.60 pg. 14
1.2. Residual ERW contamination

http://www.theatlantic.com/static/infocus/wwi/century/
1.3 Intended land use
2. ERW response: Belgium

ERW response: Lao PDR

http://commons.wikimedia.org/wiki/File:Pha_That_Luang_Vientiane_Lao_P.D.R.jpg
ERW response: Japan

Tonnage and number of callouts in Japan. The result is almost four responses every day.
ERW response: Berlin

Annual tonnage (kg) of unexploded ordnance disposed of in Berlin 1947 – 2011

http://www.tourist-destinations.net/2013/01/berlin-travel-guide.html
3. GICHD Approach
Management of Residual ERW

- Risk management
- Ageing of munitions
- Legislation, policies and practices
- National ownership and transition

MORE
Focus Countries

> Belgium
> France
> Germany
> United Kingdom
> Cambodia
> Lao PDR
> Vietnam
Resources: MORE Library

- Catalogue of legislation and policies
- Index of stakeholders
- Risk management implementation
- Policy evolution timeline

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4. MORE: Findings and recommendations

No baseline survey for ERW

Differentiate depth for prioritization and risk management

Reactive, tailored response is sustainable
Safety is risk well-managed

http://www.20minutes.fr/marseille/900407-20120319-bombe-allemande-retiree

http://www.warhistoryonline.com/war-articles/bombs.html
Invitation to comment

www.gichd.org