

THEMATIC FOCUS: RISK MANAGEMENT IN MINE ACTION

PROBLEM STATEMENT 1

Topic: Improving the accuracy of estimating explosive ordnance hazardous areas

Effective explosive ordnance risk reduction typically starts with a general mine action assessment¹ based on primary and initial sources of information such as military maps, community reports, and accident data. More recently, open-source information collected from the media has also been used. To estimate the size of potentially hazardous and safety buffer areas, expert judgement is often used, supported by historical records, known patterns of contamination per type of explosive ordnance, analysis of the terrain, and satellite imagery analysis.

By improving the accuracy of the estimation of the initial location and of the size of potentially hazardous areas (for example, adopting quantitative statistical models), mine action programmes could more efficiently allocate the resources required to conduct non-technical survey (NTS), technical survey (TS), clearance and/or confidence building.

The general mine action assessment is a continuous activity, defining where land release process starts. The outputs of land release will feed back into the assessment.

How might the mine action sector more accurately estimate the size of potentially explosive ordnance hazardous areas, during the general mine action assessment, improving evidence-based planning and NTS/TS resource allocation?

Rationale and impact

The adoption of consistent quantitative statistical models (e.g. AI-assisted) that can help identify hazardous areas can meaningfully contribute to address the following challenges:

- Enhancing operational efficiency by defining the initial scale of the problem more efficiently and by allowing a systematic feedback cycle, based on the outputs of the land release process.
- Standardizing general mine action assessment methodologies to align with international standards, ensuring consistency, transparency, and accountability under the treaties.
- Preventing that areas where the risk of EO contamination is very low remain inaccessible or unused before NTS/TS is conducted.

Such models may indirectly facilitate better socio-economic impact assessment associated with those hazardous areas and prioritization efforts.

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¹ For more information on the general mine action assessment, please refer to <u>IMAS 07.10 - Guidelines and</u> requirements for the management of land release and residual contamination operations, and <u>TNMA 07.11/03 - All reasonable effort</u>