

Information management systems, data integration and priority setting

Problem statement

How can current mine action information management systems be enhanced to support priority setting of demining activities and resource allocation, assisting the definition of prioritization criteria and implementation of transparent and evidence-based decision-making?

Key challenges include the lack of comprehensive data integration from various socio-economic and environmental datasets, the balance between simple design and the complexity of factors that must be weighted in the definition of priority-setting criteria and indicators.

Key factors/requirements

- Clear criteria: prioritization guided by economic value, ecological impact, social factors, and safety concerns. Specific criteria and indicators must be tailored to national contexts.
- Data integration: standardized, reliable data from diverse sources (e.g. cadastral data, population statistics).
- Human oversight: ensure ethical, context-sensitive resource allocation with human accountability.
- Collaboration: engage political support, experts, institutions, and local stakeholders.
- Scalability: develop an adaptable, open-source system for diverse regions, that could be tailored for specific country contexts.

Proposed response

Development of an AI-assisted prioritization system to standardize multiple datasets in varying formats, reflect pre-defined priority-setting criteria and indicators, perform sensitivity analysis of such criteria and indicators and recommend priorities for mine action activities.

Road map for implementation

- Phase 1 – Develop priority-setting systems: secure multi-stakeholder engagement to define context-specific priority-setting criteria, indicators, and weights.
- Phase 2 – Data and protocols: define data needs, collection methods, and standardization protocols.
- Phase 3 – Framework development: develop and test AI-supported applications.
- Phase 4 – Pilot testing: conduct pilot testing in multiple regions and gather feedback.
- Phase 5 – System refinement: refine the system and prepare for broader deployment.
- Phase 6 – Training and support: establish training and support mechanisms for national mine action authorities and operators.