

Enhancing Environmental Management of Mining Legacies: Database, Mapping, and Monitoring Insights from COST Action REMINDNET

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**Paper objective:** Aligns with REMINDNET's Working Group 3 (WG 3), focusing on mapping best practices for mine rehabilitation.

**Historical context:** Metals and minerals have been extracted from the Earth's crust since the beginning of human history.

**Environmental impact:** Mining activities leave behind environmental residues, such as tailings, waste dumps, and contaminated water, making mine closure and post-closure management increasingly significant.

**Global challenge:** Many regions, especially in Europe, struggle with managing old mine sites due to a lack of resources and expertise.



Figure 1. Environmental residues left by the Lojane Mine



Figure 2. REMINDNET Action members visited Ostrava, Czech Republic

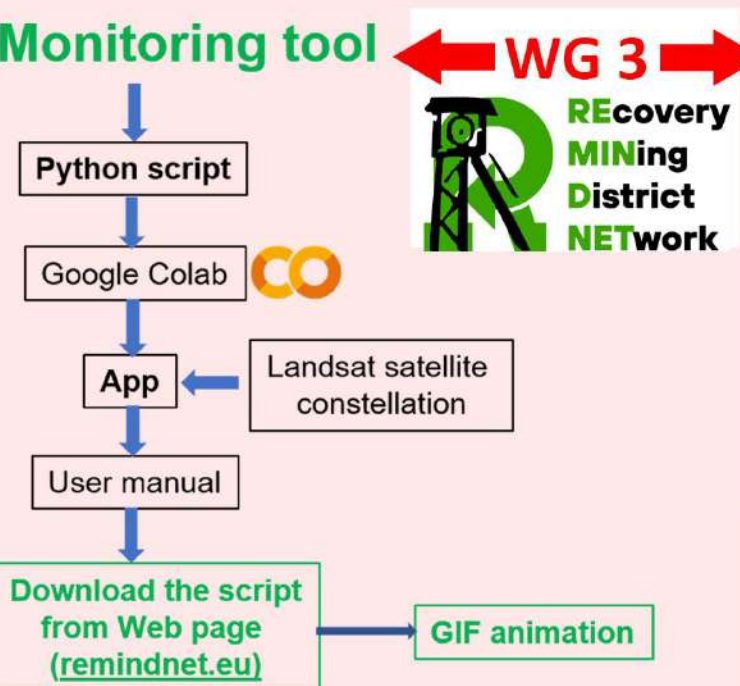


Figure 3. Monitoring mining locations using Landsat satellite data

**Monitoring and risk management:** Provides cost-effective methods and tools for monitoring and managing environmental risks in mining regions.

**QGIS database:** Continuously updated during the COST Action, showcasing best practices for mining rehabilitation.

**Web GIS app:** Utilizes GeoServer and MapStore (open-source software) to visualize the QGIS database.

**Python script:** Developed for monitoring mining locations using Landsat satellite data, enhancing Europe's capacity for tracking and managing mining legacies.

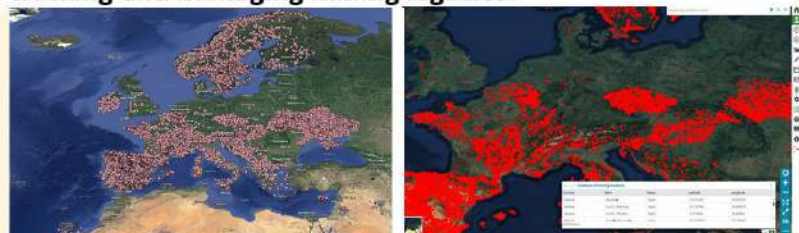


Figure 4. QGIS database and Web GIS app

Acknowledgments:

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