



## HuMUS - WP4 pilot projects

### **Publishable summary**

The CresConSMin Pilot (ID 318) part of HuMUS project “Healthy Municipal Soils” (HORIZON-MISS-2021-SOIL-02 Project number:101091050) aimed to raise awareness of soil contamination by post-mining activities such as tailing dams and abandoned quarries in the Jiu Valley microregion in Romania. The Project was developed in five phases: (1) Pre-diagnosis, (2) Sociogram Development, (3) Diagnosis, (4) Territorial Management Agreement and (5) assessment of CresConsMin replication potential.

During Pre-diagnosis (1), the sites and lands that have been affected by mining activities were identified and located, the level of soil contamination with heavy metals and other toxic substances from mining activity were investigated, to establish the degree of ecological risk. Afterwards, a series of soil management strategies and measures were proposed to reduce risks to public health and the environment.

The Sociogram development (2) identified and mapped the main relevant stakeholders’ categories such as institutional, education, social and economic actors.

The Diagnosis (3) phase consisted of different local public workshops, with the active participation of the previously identified stakeholders. The workshops’ goal was to complement the results of the Pre-Diagnosis with additional reflections on the current and future state of soil-related issues and challenges. Thus, within the scope of the CresConMin project, the implementation of the EU Soil Mission at local and regional levels in Romania was supported by raising awareness in the Jiu Valley microregion, by organizing engaging workshops. These events brought together Quadruple Helix stakeholders’ categories (such as public authorities, the research and education, business environment and civil society – local communities, non-governmental organizations) to foster collaboration and impactful dialogue. The 1st workshop was dedicated to stakeholder consultation, followed by a second workshop showcasing successful local practices implemented in the local community, TMA content, documentation transparency and analysis of the replication.

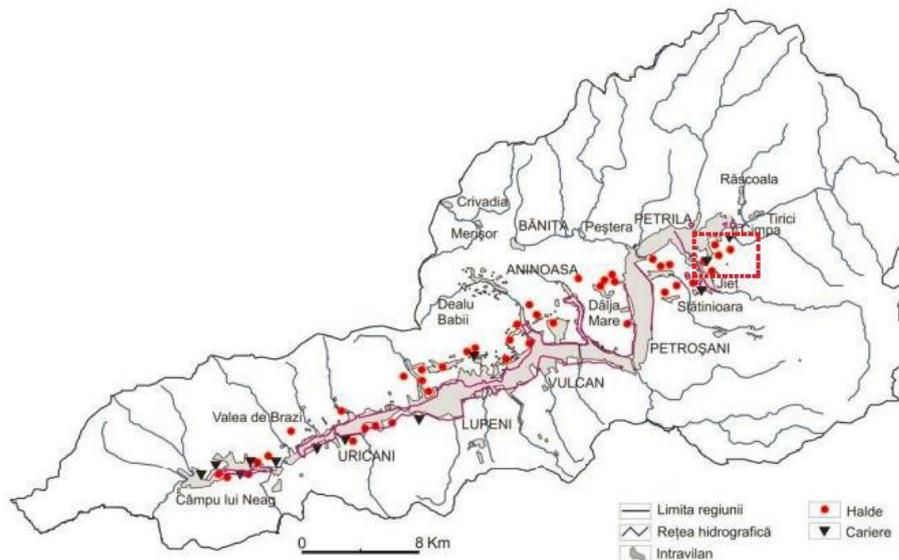


Territorial Management Agreement (4) emphasized the conclusions of the workshops framework for collaboration that support the restoration and maintenance of soil health of the Jiu Valley microregion affected by tailing dams, while promoting sustainable agriculture and land use practices, with a long-term vision of improving ecosystem services, biodiversity and community resilience.

The Replication potential (5) was assessed during the last workshop where reflections and recommendations were collected.

## 1. Introduction

The Petrila Territorial Administrative Unit (TAU) in Hunedoara County, Transylvania, is located on the east part of Jiu Valley, being the richest area of Romania in hard coal resources (Fig. 1). The total surface of the coal-bearing layers in the Jiu Valley Basin, which was of economic interest, occupied approximately 170 km<sup>2</sup>. The coals in the Jiu Valley were of Tertiary age and were found at Lupeni, Uricani, Vulcan, Petrila, Aninoasa, Lonea, Paroşeni, Livezeni, Taia, etc.



**Figure 1** Distribution of underground mining, quarries and tailings dumps

The mining area within the Petrila TAU was an important hard coal production center, having a significant impact on the economic and social development of the microregion. The city of Petrila is known for its hard coal underground mines, especially the Petrila Mine, one of the most important mining units in the Jiu Valley. Hard Coal exploitation in this area began in the 19th century and experienced rapid development, becoming one of the largest and most productive mines in Romania.

