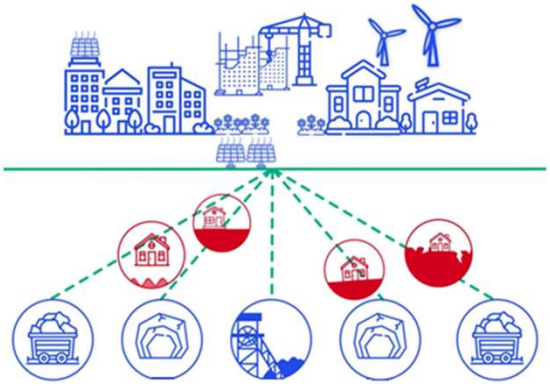
PoMHaz

Find us online:
https://www.pomhaz-rfcs.eu/
Project's Video



About the project

Duration: 3/10/2022 – 02/01/2026

The POMHAZ project, rooted in Europe's transition towards **decarbonization** and the closure of coal and lignite mines, seeks to enhance methodological understanding of **hazard analysis** and **risk assessment**. **Post-mining areas** undergo transition as mines cease operations. So, they are often susceptible to multiple hazards, which may interact or occur simultaneously, referred to as **"multi-hazard"**.

The primary objective of the project is to identify and assess the multi-hazard conditions prevalent in these post-mining areas.

The project aims to calculate the overall *risk*, known as **"multi-risk"**, by integrating *multi-hazard* analysis with socio-economic considerations and assessing the *vulnerability* of post-mining areas and *exposed elements*.

Risk = Hazard x Vulnerability x Exposure

Implementing this methodology in real case studies in Europe will enhance the management and land planning of the territories in transition, utilizing decision support systems to mitigate multi-risk.

The project is structured in five work packages:

- WP1: Coordination and dissemination
- WP2: Post-mining hazards and multi hazards assessment methodology
- WP3: Post-mining risk assessment methodology and Decision Support Systems
- WP4: GIS development
- WP5: Application on real case studies

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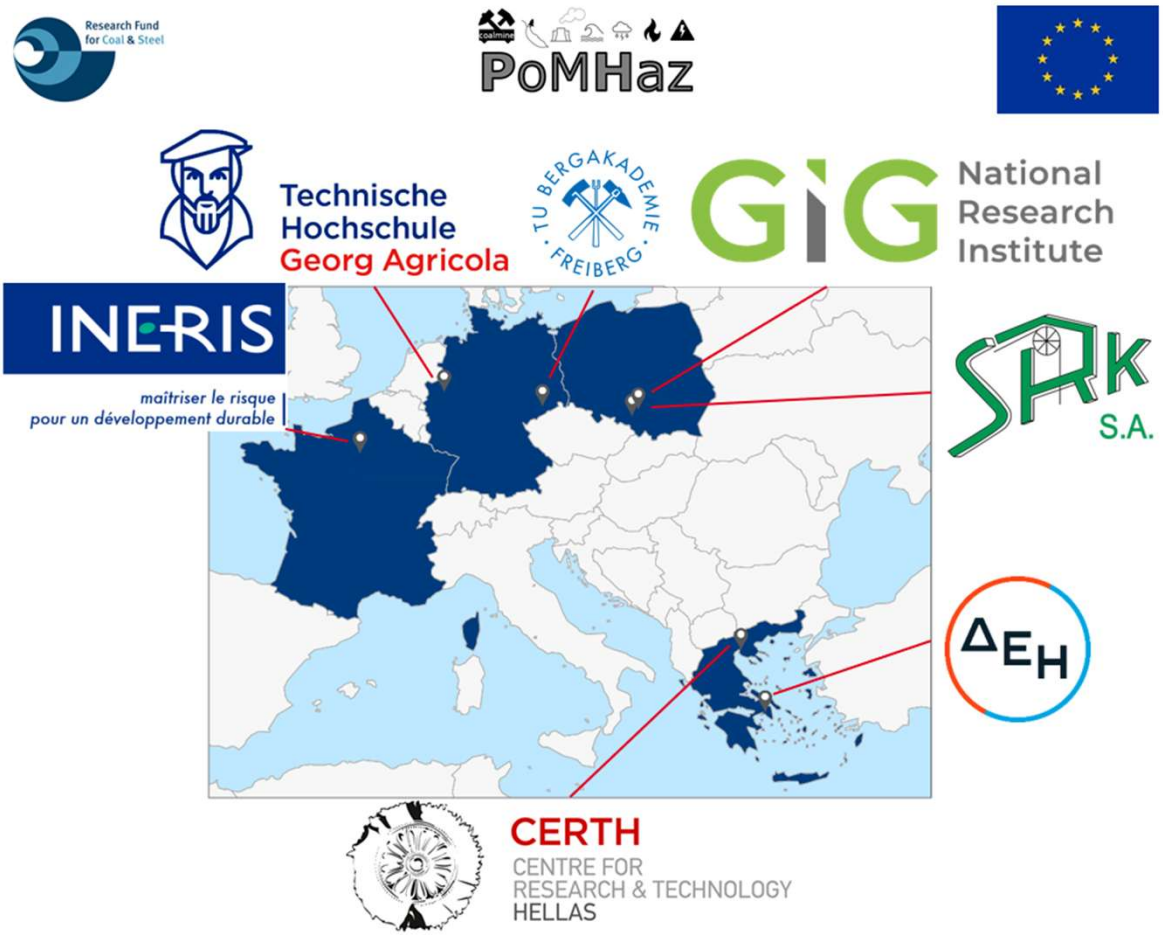
Partners



- National Institute of Industrial Environment and Risks (Ineris, France)
- Centre for Research and Technology Hellas (CERTH, Greece)
- Public Power Corporation (PPC SA, Greece)
- Central Mining Institute (GIG, Poland)
- Spółka Restrukturyzacji Kopalń S.A. (SRK SA, Poland)
- Technische Hochschule Georg Agricola (DMT-THGA, Germany)
- TU Bergakademie Freiberg (TU BAF, Germany)

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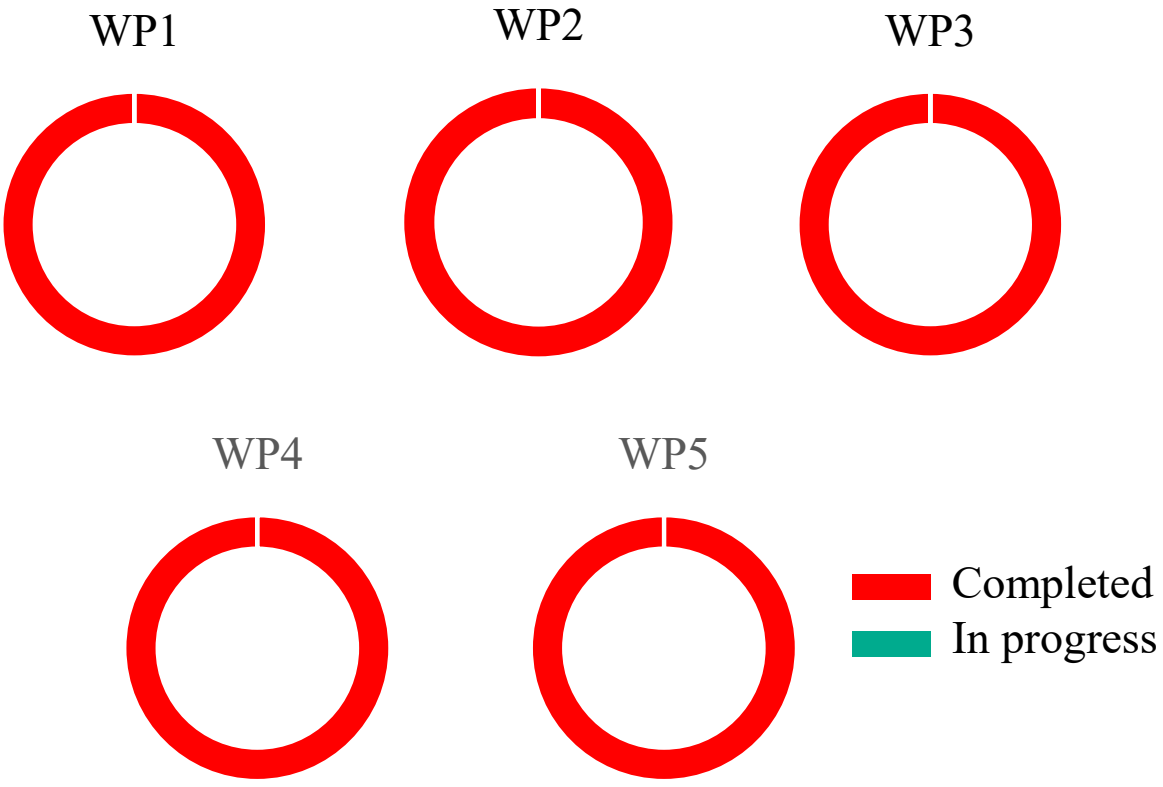
Work progress

Completed

- Data base of hazards related to closed and abandoned coal and lignite mines in Europe (WP2)
- Information collection of existing tools related to multi-hazard methodologies (WP2)
- Development of a methodology for post-mining hazards interaction identification (WP2)
- Development of the multi-hazard risk assessment methodology and the development of the Decision Support System (DSS) specifications for post-mining areas (WP3)
- Development of GIS and Decision Support System (DSS) (WP4)
- Application on real case studies in Europe (WP5)



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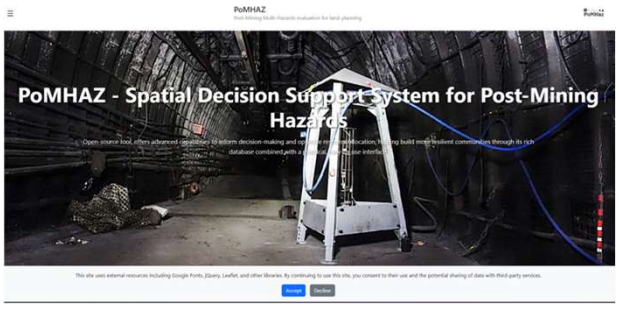
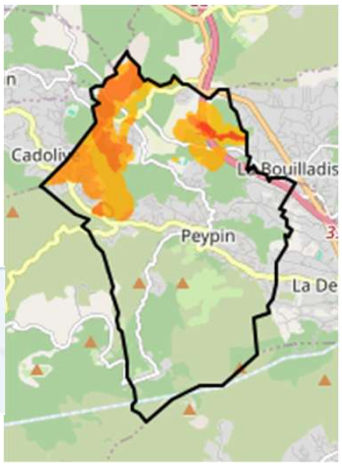
Work results

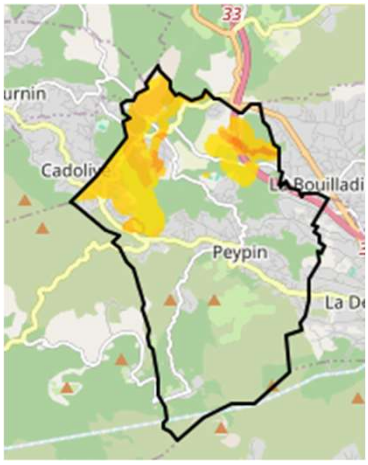
The main results of the last period is the application of the DSS, https://dss.fzn.thga.de/dss/api, on different case studies from France, Germany, Greece and Poland. At the end of the project, a final update also introduced the option to create and evaluate your own areas investigation for all users.



DSS applied on the DSS case studies

Peypin (France): Subsidence and landslide hazard interaction





Multi-hazard index (MHI) for two scenarios: low interaction and high interaction between the two hazards.

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Dissemination and exploitation (2024-2025)

Workshops

7 workshops were organized (Poland, Germany, France and Greece) by the partners for stakeholders and end-users.

Walbrzych May 2025

The workshop was attended by 22 participants. During the workshop; short lectures presented a general information about the project, collection of the necessary data for carrying out the simulation using the DSS tool and the application on real case studies.

Bochum June 2025

The workshop was attended by stakeholders, mining authorities, mining compagnies, etc. The workshop addressed different topics, mainly risk factors and risk analysis of land planning and how one can use the DSS to improve the management of coal regions in transition.

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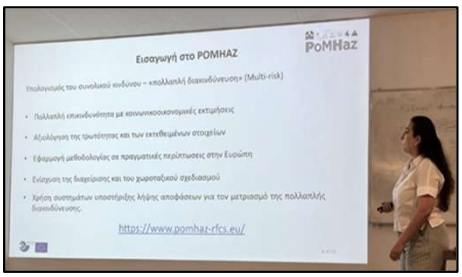
Newsletter No.3

Athens June 2025

The workshop was attended by 35 participants. The event featured technical presentations on multi-hazard conditions and the risk assessment methodology, as well as a live demonstration of the GIS and DSS tools.



Dissemination and exploitation (2023-2025)

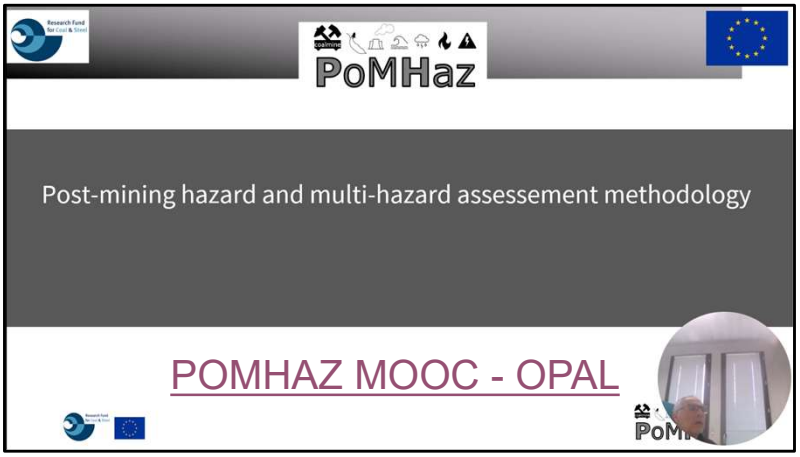
Media

A video presenting the project, objectives, and the main post-mining hazards and the potential interactions is available using simple words to reach the different end-users.

pomhaz-rfcs.eu/sites/default/files/2023-12/POMHAZ_V7_SStitresGB2.mp4

Post-Mining Hazards MOOC

A MOOC (Massive Open Online Course) is open for all potential persons who would like to know about post-mining hazards and the assessment of multi-hazard.



The **MOOC** is structured through **4 modules and 6 videos** very well illustrated allowing to learn step by step workflow, from hazard and multi-hazard assessment to the using of the DSS tool with application on concrete case studies, prepared by the partners of the projects.

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