PROGRAMUL DE COOPERARE ELVEȚIANO-ROMÂN
SWISS-ROMANIAN COOPERATION PROGRAMME

Instruments for the sustainable management of active and ancient salt mining areas

Starting Date **01.01.2013**

Duration 36 Months

Discipline Applied and environmental geoscience

Main Goals

In the area of Ocna Mures (Romania) tools will be developed that allow the representation and efficient use of 3D hydrogeological information in active or abandoned salt mining areas. The tools will form the basis for process models that are able to evaluate different scenarios to face problems related to land subsidence and aquifer contamination and to develop sustainable development strategies for mining areas.

Activities

The main tasks are: (1) The development of a data-management system. The GIS-based system can incorporate the different types of information (e.g. geological, hydrological and geotechnical). (2) To improve the data base a geophysical and hydrogeological data collection campaign will be carried out. (3) A digital geological 3D model of the mining region will be developed and (4) out of it for scenario development a coupled 3D groundwater flow and transport model will be established. (5) The results from the proposed tasks will lead to an integrative evaluation of the hazards in the Ocna Mures mining area. Hazard maps will support strategies and planning procedures for future sustainable land development.

Expected results

The outcome of the different tasks is the establishment of an instrument for the sustainable management of active and ancient salt mining areas.

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