

COPERNICUS SERVICE IN SUPPORT OF GEOHAZARD ASSESSMENT AND REGIONAL PLANNING IN THE REGION RHINE-MOSELLE (RHINELAND-PALATINATE, GERMANY)

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ABSTRACT:

Federal and State authorities for geology and mining have the responsibility to follow up relevant geological issues, to provide advice in the context of geohazard potential risk and to perform supervisory duties. Up to now, geologists working in the civil service sector preferential use ground-based methodologies for investigation and monitoring. Methods of remote sensing, in particular satellite based techniques, are only secondarily used.

The aim of the project is to develop the further acceptance of airborne and satellite-based remote sensing applications for public tasks in the national and international context, further to support the sustainable implementation in public work processes. A service concept is developed and tested for geologic-geotechnical tasks of Rhineland-Palatinate. This concept and methodology shall be applicable to a wide range of public tasks in the geology sector. The project will stimulate further use of remote sensing data for the fulfillment of public tasks.

The service concept will be developed and tested based on the public task for geohazard assessment and regional planning in the federal state Rhineland-Palatinate to improve and support public tasks with modern remote sensing data. Earth observation data from different remote sensing sensors like radar satellites, multispectral satellites with medium and high resolution and airborne systems are investigated in an integrated analysis for the identification and geological interpretation of moving areas in the region Rhine-Moselle. First interim results of the ground motion mapping based on ERS-1/-2 and Envisat data will be presented.