



## **Three dimensional resistivity survey in a complex karstic area**

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3D Electrical Resistivity Tomography (ERT) survey was carried out to assess the feasibility of geophysical investigations to map the underground stratigraphy of shallow karstic aquifers, in order to help in the prevention of both groundwater pollution from agricultural activities and risk of ground surface collapse. This preliminary study was carried out in a test area located few kilometres north-west of Lecce (Italy).

The main characteristics of this area is the high density of superficial karstic formation (dolines and sinkholes) and, therefore, the significant hazard of ground surface collapse.

3D ERT profiles were acquired in an area 115 x 115 m, using 24 long parallel profile 5 m spaced (24 electrodes, 5 m electrode spacing). Earth models generated from field data acquired by the Wenner-Schlumberger array indicated significant horizontal and vertical resistivity variations. The 3D visualization provide to better understanding the geology and hydrogeology of the surveyed area.