

Supplementary materials

Reliability of used data

The most reliable databases used are:

- 1) Geological map. Initially the existing geological map of the system was digitized in GIS. Field mapping was obtained and verified the reliability of the geological formations.
- 2) DEM. During field measurements, a GPS was used to verify the reliability of the used DEM. Several points were extracted and the difference was $\pm 0.01\text{m}$.
- 3) Karst formation. The karst formations were obtained from air photographs using remote sensing techniques and many of them were verified with field observations.