

Mediterranean mountain (eco)hydrology, badland geomorphology and land degradation in the Llobregat basin

This fieldtrip, sponsored by the Commission on Land Degradation and Desertification of the International Geographical Union, will explore the Vallcebre research catchments and other key sites of geographical research and environmental interest distributed within the Llobregat basin.

The Vallcebre experimental catchments, managed by the surface Hydrology and Erosion group of the IDAEA-CSIC since 1988, are located in the headwaters of the Llobregat river (Catalan Pre-Pyrenees, 100 km north of Barcelona). This exceptional site, which encompasses a set of small (from 17 ha to 4 km²) instrumentalized catchments, has supported more than 30 years of intense research devoted to improve the understanding of hydrological processes and the analysis of (eco)hydrological consequences of land abandonment in headwater Mediterranean catchments, as well as the study of the geomorphology of badlands and their sediment yield behaviour in Mediterranean mountain areas.

The fieldtrip will also explore, in a more extensive regional context, the characteristics and distribution of mountain badlands of the upper Llobregat basin, which constitute the main source of sediments in the territory and the principal cause of siltation for the main water reservoir of the region, La Baells. Last, this fieldtrip will also provide the participants with the chance to explore the Cogulló spoil tip, a massive bank of salty spoils derived from potash mining activities that constitutes a localized hotspot of land degradation and water salinization in middle Llobregat basin.

This fieldtrip will be developed by members of the Mediterranean Research Group (UB), the Surface Hydrology and Erosion group (IDAEA-CSIC) and the BarcelonaTECH group (UPC). The activity, programmed as a full day fieldtrip on Friday, September 8th, will be limited to 30 participants due to logistic reasons.

This is a medium to high mountain environment (1.500 – 1.800 meters above sea level). We will do some hiking and it is recommended to bring hiking shoes, sun block cream, raincoat, hat and water.



Badlands in the Vallcebre experimental catchments. © M. Moreno de las Heras