

## Services

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- [LISUJA \(Interdisciplinary Laboratory of Soils of the University of Jaén\)](#)
- [GNSS Service](#)
- [Natural Heritage Unit](#)

**CEACTEMA consists of the following attached services:**

- **LISUJA (Interdisciplinary Soil Laboratory of the University of Jaén)**

The *Interdisciplinary Soil Laboratory (lisuja)* is a space for interaction between scientists who study widely differing environmental and agroforestry problems but ones in which soil processes and soil-plant relations play a basic functional role. This allows for integrated studies of the “soil” system by pooling capabilities and knowhow for its analysis in terms of flows and transformations of nutrients/pollutants (biogeochemistry and ecophysiology), morphological and geochemical aspects (soil science) and of microbial / micro-fauna / rhizosphere communities (ecology, biodiversity). The *lisuja* provides analytical support and advice for researchers and professionals working with soil. This laboratory provides novel services for opening up access to, among others, biomolecular approaches in applications relating to the health and restoration of soils requiring microbial communities to be characterized and bioassays to be conducted (ecotoxicological, relating to biological activity, metabolic profiles, etc.).

- **GNSS service**

The *GNSS Service* for monitoring the Betic-Rif System is a project started in January 2017. It's part of the *State Programme for the Promotion of Talent and its Employability in R&D&i, 2015 Technical Support Staff Subprogramme* of the *Ministry of Economy, Industry and Competitiveness (MINECO)*.

- **Natural Heritage Unit**

Documenting, preserving and disseminating the heritage, both natural and cultural, of the province of Jaén is the objective of the Natural Heritage Unit of the University of Jaén, through the combined application of terrestrial and aerial photogrammetry techniques through the use of unmanned systems (UAS) and its integration in a GIS for the documentation and monitoring of places of geological interest (LIG).