Geophysical Research Abstracts
Vol. 19, EGU2017-19088, 2017
EGU General Assembly 2017

Local soil classification and crop suitability: Implications for the historical land use and soil management in Monti di Trapani (Sicily)

Margarita Garcia-Vila (1), Rocco Corselli (1), María Teresa Bonet (2), Giuseppe Lopapa (3), Valentina Pillitteri (3), and Elias Fereres (1)

(1) University of Cordoba, Cordoba, Spain (g82gavim@uco.es), (2) Arqueoandalusi, Granada, Spain, (3) Università degli Studi di Palermo, Palermo, Italy

In the past, the lack of technologies (e.g. synthetic fertilizers) to overcome biophysical limitations has played a central role in land use planning. Thus, landscape management and agronomic practices are reactions to local knowledge and perceptions on natural resources, particularly soil. In the framework of the European research project MEMOLA (FP7), the role of local farmers knowledge and perceptions on soil for the historical land use through the spatial distribution of crops and the various management practices have been assessed in three different areas of Monti di Trapani region (Sicily). The identification of the soil classification systems of farmers and the criteria on which it is based, linked to the evaluation of the farmers' ability to identify and map the different soil types, was a key step. Nevertheless, beyond the comparison of the ethnopedological classification approach versus standard soil classification systems, the study also aims at understanding local soil management and land use decisions. The applied methodology was based on an interdisciplinary approach, combining soil science methods and participatory appraisal tools, particularly: i) semi-structured interviews; ii) soil sampling and analysis; iii) discussion groups; and iv) a workshop with local edafologists and agronomists. A rich local glossary of terms associated with the soil conditions and an own soil classification system have been identified in the region. Also, a detailed soil map, including process of soil degradation and soil capability, has been generated. This traditional soil knowledge has conditioned the management and the spatial distribution of the crops, and therefore the configuration of the landscape, until the 1990s.

Acknowledgements
This work has been funded by the European Union project MEMOLA (Grant agreement no: 613265).