



Goal oriented soil mapping: applying modern methods supported by local knowledge: A review

Paulo Pereira (1), Eric Brevik (2), Marc Oliva (3), Ferran Estebanz (4), Daniel Depellegrin (1), Agata Novara (5), Artemi Cerda (6), and Oleksandr Menshov (7)

(1) Mykolas Romeris University, Environmental Management Centre, Vilnius, Lithuania, (2) Dickinson State University, USA, (3) Institute of Geography and Spatial Planning, University of Lisbon, Portugal, (4) Sec. Zoologia i Antropologia, Dept. de Biologia Evolutiva, Ecologia i Ciències Ambientals, Facultat de Biologia, Universitat de Barcelona (Spain), (5) Dipartimento di Scienze Agrarie e Forestali, University of Palermo, Palermo, Italy, (6) Department of Geography, University of Valencia, Spain, (7) Institute of Geology, Taras Shevchenko National University of Kyiv, Ukraine

In the recent years the amount of soil data available increased importantly. This facilitated the production of better and accurate maps, important for sustainable land management (Pereira et al., 2017). Despite these advances, the human knowledge is extremely important to understand the natural characteristics of the landscape. The knowledge accumulated and transmitted generation after generation is priceless, and should be considered as a valuable data source for soil mapping and modelling. The local knowledge and wisdom can complement the new advances in soil analysis. In addition, farmers are the most interested in the participation and incorporation of their knowledge in the models, since they are the end-users of the study that soil scientists produce. Integration of local community's vision and understanding about nature is assumed to be an important step to the implementation of decision maker's policies. Despite this, many challenges appear regarding the integration of local and scientific knowledge, since in some cases there is no spatial correlation between folk and scientific classifications, which may be attributed to the different cultural variables that influence local soil classification. The objective of this work is to review how modern soil methods incorporated local knowledge in their models.

References

Pereira, P., Brevik, E., Oliva, M., Estebanz, F., Depellegrin, D., Novara, A., Cerda, A., Menshov, O. (2017) Goal Oriented soil mapping: applying modern methods supported by local knowledge. In: Pereira, P., Brevik, E., Munoz-Rojas, M., Miller, B. (Eds.) Soil mapping and process modelling for sustainable land use management (Elsevier Publishing House) ISBN: 9780128052006