Geophysical Research Abstracts
Vol. 14, EGU2012-8413, 2012
EGU General Assembly 2012

Analyzing existing conventional soil information sources to be incorporated in thematic Spatial Data Infrastructures

J. A. Pascual-Aguilar (1), J. L. Rubio (1), J. Domínguez (2), and V. Andreu (1)

(1) Centro de Investigaciones sobre Desertificación-CID (CSIC, UV, GV), Degradación y Conservación de Suelos, Moncada (Valencia), Spain (juan.a.pascual@uv.es), (2) Geography Department, University of Valencia, Valencia, Spain

New information technologies give the possibility of widespread dissemination of spatial information to different geographical scales from continental to local by means of Spatial Data Infrastructures. Also administrative awareness on the need for open access information services has allowed the citizens access to this spatial information through development of legal documents, such as the INSPIRE Directive of the European Union, adapted by national laws as in the case of Spain.
The translation of the general criteria of generic Spatial Data Infrastructures (SDI) to thematic ones is a crucial point for the progress of these instruments as large tool for the dissemination of information. In such case, it must be added to the intrinsic criteria of digital information, such as the harmonization information and the disclosure of metadata, the own environmental information characteristics and the techniques employed in obtaining it. In the case of inventories and mapping of soils, existing information obtained by traditional means, prior to the digital technologies, is considered to be a source of valid information, as well as unique, for the development of thematic SDI.
In this work, an evaluation of existing and accessible information that constitutes the basis for building a thematic SDI of soils in Spain is undertaken. This information framework has common features to other European Union states. From a set of more than 1,500 publications corresponding to the national territory of Spain, the study was carried out in those documents (94) found for five autonomous regions of northern Iberian Peninsula (Asturias, Cantabria, Basque Country, Navarra and La Rioja). The analysis was performed taking into account the criteria of soil mapping and inventories.
The results obtained show a wide variation in almost all the criteria: geographic representation (projections, scales) and geo-referencing the location of the profiles, map location of profiles integrated with edaphic units, description and taxonomic classification systems of soils (FAO, Soil taxonomy, etc.), amount and type of soil analysis parameters and dates of the inventories.
In conclusion, the construction of thematic SDI on soil should take into account, prior to the integration of all maps and inventories, a series of processes of harmonization that allows spatial continuity between existing information and also temporal identification of the inventories and maps. This should require the development of at least two types of integration tools: (1) enabling spatial continuity without contradictions between maps made at different times and with different criteria and (2) the development of information systems data (metadata) to highlight the characteristics of information and connection possibilities with other sources that comprise the Spatial Data Infrastructure.

Acknowledgements
This research has financed by the European Union within the framework of the GS Soil project (eContentplus Programme ECP-2008-GEO-318004).