Legacy soil maps from Brazil: organizing and providing layers in an interactive WebGIS

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Digital soil maps at appropriate scales are essential information for land use planning. Nevertheless, Brazilian soil information is scattered in several institutions and stored in several formats. In adition to that, this information have faced an interruption of its systematic soil survey program, providing difficult access to decision makers. In order to organize and safeguard the spatial data produced at the Brazilian Agricultural Research Corporation (Embrapa), a spatial data infrastructure was developed (IDE-Embrapa) where thematic collections related to soil have been gathered and published in a web environment. The objective of this work is to present the initiative of organizing the spatial data of Embrapa related to soil information through the development of the IDE-Embrapa. In order to achieve this goal, the spatial data that were stored in a previous geoinformation infrastructure developed by Embrapa Soils were shifted to the IDE-Embrapa infrastructure. The implementation of the IDE-Embrapa was performed using open source software, based on the Open Geospatial Consortium standards. The IDE-Embrapa infrastructure uses GeoNode platform, which integrates a geospatial database (PostGis) with a map server (GeoServer) and a metadata catalog (PyCSW), and is controlled by a Content Management System in the Web environment. Currently, 100 information layers and 60 documents were catalogued in the IDE-Embrapa Soils (geoinfo.cnps.embrapa.br). These data and metadata are already available for download. Maps represented by various territorial boundaries and scales were registered. The main maps of Embrapa Soils are already catalogued and are available to the user with their own color pattern (styling) for each type of thematic map, allowed by incorporation of a file with the styled layer descriptor (SLD) format to each map. Soil maps, for example, are presented with the colors established according to the Brazilian Soil Classification System, which facilitates users to visualize the spatial distribution of soils in a given region. Currently, the IDE-Embrapa infrastructure is making available the Brazilian soil information available to any external user. This work is under construction and we hope soon to have all maps prepared by Embrapa Soils catalogued and available, in order to safeguard data and metadata, for ready use of these by society.

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