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Availability of spatial distributed environmental information throughout Web services for Online GIS environmental modeling: Case study Colombia.

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The demand for spatially distributed environmental information by the various sectors is growing every day, both for the development of environmental studies, habitat, sustainable development, conservation and natural resource management, among others. It is also true that not all organizations or institutions interested in distributed environmental information have neither adequate infrastructure for spatial information management, nor the technical skills or knowledge to manage this data to produce useful results for support decision makers. With the support of a research project RENATA - Colombia (National Academic Network of Advanced Technology), the objective of this project is to provide a Geo-portal to offer spatially distributed environmental information to Colombia in almost real time, centralized it in a single Website, been adapted, processed, and organized for the geographic area of the country, with the condition of being the latest available freeware sites. With the portal seeks to put in the hands of researchers and community with needs of current environmental information, both spatial data and management tools through Web services to query processing, display and interaction with other spatial data through the same platform, or for download for use on your personal computer. This is accomplished through the use, processing and refining of free access environmental data (MODIS satellite imagery, GOES and spatial databases, geospatial data from Geo-portals-) to available and offer a degree of processing (geometric correction, standardization units, clean images by various abnormalities or clouds, etc.) for the window of Colombia. The Geoportal offers precipitation data hourly, daily and monthly, cloud cover, thermal anomalies, surface temperature, humidity, vegetation cover and base mapping data for geo-referencing of thematic information. It also offers information based on water balance model using the same information updated, in order to determine the moisture content in the soil for the whole country, with 1km2 spatial resolution and daily temporal resolution. The Geoportal brings allows to include their own environmental information to improve the modeling results and the modeled data can be downloaded for use on personal computers. The portal is located at http://gismodel.univalle.edu.co/renata/renatacol/portal.php