



Soil consumption: An innovative system for better planning and managing soil in urban planning context

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Soil is a key natural resource and most crucial ecosystem services and the most important environmental benefits to humankind and the environment depend by its properties. However, soil is a delicate resource.

Urbanization is the most impactful use of soils because it can cancel all its ecosystem functions and ends forever its life cycle since soil is removed completely and/or sealed with a cement/bitumen layer.

The absence of an adequate soil culture led common urban planning to do not consider the reality of soil as living multifunctional system.

In such framework, this work – performed under the project LIFE + SOILCONSWEB - aims to illustrate a different approach for soil management in spatial planning using a Spatial Decision Support System operating through the web (w-SDSS) to evaluate soil consumption.

The system - already operating in an area of Southern Italy (Telese valley, 20,000 ha) - allows - in real time - to provide answers such as (i) the use of land (type and size) on different dates, (ii) mapping and statistics on the sprawl at the municipality scale, (iii) detailed mapping of land fragmentation (and statistical fragmentation) on different dates, (iv) quantification of loss of ecosystem services after potential new urbanization.