

Integrating soil into planning curricula: existing resources from soil science and soil-inclusive practices

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Abstract Announced in 2011 and confirmed in 2020 with the Green Deal, the adoption of the No Net Land Take (NNLT) by 2050 objective at the EU level has prompted member states to integrate soil-related objectives into their planning frameworks, focusing on strategies to monitor land take and mitigate its impacts through measures such as limiting urban sprawl, preventing soil sealing, and enhancing soil quality. Despite the critical role of planning in organising human activities, and its direct impact on soil quality, quantity and performance, spatial planners often lack the tools and specialised knowledge needed to address soil related issues effectively. This contribution reflects on how planning education must evolve to include a comprehensive understanding of soil-related policy objectives, regulatory frameworks, and practical tools for sustainable soil management.

The current spatial planning education and curricula focus primarily on sustainable planning and does cover concepts such as land use, land cover, artificialization, and soil sealing, but it fails to delve into the underlying reasons (ESS) and methodologies (preserving soil functions tied to quality and quantity) that are essential for soil conservation.

Spatial planners are key actors to address the anthropogenic drivers of soil degradation (unsustainable land management, soil sealing, contamination, over-exploitation, etc.); as such, current and future practitioners need to be trained to do so. Upgrading educational curricula is therefore key to ensure the next generation of planners is equipped with a systemic and proactive perspective on soil.

A critical review of knowledge from both soil science (tools and methods to perform soil assessment, soil monitoring, etc.) and existing soil-inclusive urban planning practices (sponge city concept, green-blue infrastructure, etc.) will contribute to identify the most relevant and useful resources for increased soil literacy of the next generation of planners.