

	<p>Base de Données SOLHYDRO: Une Première Proposition Combinant Le Type d'horizon, Sa Texture et Sa Densité Apparente." Etude et Gestion Des Sols 11: 3–323.</p> <p>Nature4Cities, D2.1 - System of integrated multi-scale and multi-thematic performance indicators for the assessment of urban challenges and NBS. https://www.nature4cities.eu/post/nature4cities-defined-performance-indicators-to-assess-urban-challenges-and-nature-based-solutions</p> <p>Nature4Cities, D2.2 - Expert-modelling toolbox</p> <p>Nature4Cities, D2.3 – NBS database completed with urban performance data https://www.nature4cities.eu/post/applicability-urban-challenges-and-indicators-real-case-studies</p> <p>Nature4Cities, D2.4 - Development of a simplified urban performance assessment (SUA) tool</p>
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8.20 Vegetation Wilting Point

Project Name: OPERANDUM (Grant Agreement no. 776848)

Author/s and affiliations: Slobodan B. Mickovski¹, Alejandro Gonzalez-Ollauri¹, Karen Munro¹

¹ Built Environment Asset Management Centre, Glasgow Caledonian University, Glasgow, Scotland, UK

Vegetation wilting point	Green Space Management
Description and justification	If vegetation is to thrive in the soil it will need a certain moisture in the soil. Thriving vegetation can prevent/mitigate against shallow landslides or erosion.
Definition	Minimum moisture content in the soil that the plant requires not to wilt. Sometimes defined as the soil water content when the soil is under a pressure of –15 bar.
Strengths and weaknesses	+ : can be obtained from predictions using soil survey data. - : can be difficult to measure directly
Measurement procedure and tool	Measurement: soil sample needs to be brought to matric suction of 15 bar, after which a sub-sample is taken, mass measured, put in an oven at 110C, and then dry mass measured. The moisture content at wilting point will be the mass of evaporated water from the sub-sample divided by the mass of dry soil. Prediction: using pedotransfer functions (e.g., Bouma, 1989; Gonzalez-Ollauri and Mickovski, 2017)
Scale of measurement	micro

Required data	Soil type, particle size distribution, soil moisture, matric suction
Data input type	Numerical, category
Data collection frequency	once
Level of expertise required	Low for sampling/measurement; high for prediction
Synergies with other indicators	Moisture content, soil strength, vegetation cover
Connection with SDGs	11, 13, 15, 17
Opportunities for participatory data collection	yes
Additional information	
References	Gonzalez-Ollauri, A. and Mickovski, S.B., 2017. Plant-Best: A novel plant selection tool for slope protection. <i>Ecological Engineering</i> 106 (154–173) Bouma, J. (1989). "Using soil survey data for quantitative land evaluation". <i>Advances in Soil Science</i> . 9: 177–213.

8.21 Soil water flux and degree of soil saturation

Project Name: OPERANDUM (Grant Agreement no. 776848)

Author/s and affiliations: Slobodan B. Mickovski¹, Alejandro Gonzalez-Ollauri¹, Karen Munro¹

¹ *Built Environment Asset Management Centre, Glasgow Caledonian University, Glasgow, Scotland, UK*

Soil water flux and degree of saturation	Water Management Green Space Management
Description and justification	Soil water flux – is the transport of water into the soil from the atmosphere, into the atmosphere from the soil and within the soil, establishing the soil water mass balance. It is intrinsically related to the stress state of the soil and to ecohydrological processes occurring at the plant-soil-atmosphere continuum (e.g., plant uptake and evapotranspiration).