

<b>Level of expertise required</b>	High
<b>Synergies with other indicators</b>	
<b>Connection with SDGs</b>	-
<b>Opportunities for participatory data collection</b>	
<b>Additional information</b>	
<b>References</b>	

## 8.16 Soil matric potential

**Project Name:** OPERANDUM (Grant Agreement no. 776848)

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Soil matric potential	Green Space Management
<b>Description and justification</b>	Soil matric suction increases soil strength and contributes towards strength and stability against landslides and erosion
<b>Definition</b>	The pressure dry soil and plant water uptake exerts on the surrounding soils to equalise the moisture content in the overall block of soil.
<b>Strengths and weaknesses</b>	Strengths: little suction provides large increase in strength Weaknesses: difficult to measure; changes rapidly; uncertain relationship with meteorological drivers
<b>Measurement procedure and tool</b>	Field tensiometer inserted in the soil at a certain depth.
<b>Scale of measurement</b>	Micro / point measurement
<b>Data source</b>	
<b>Required data</b>	Soil matric suction (in kPa)
<b>Data input type</b>	Electrical (voltage)

<b>Data collection frequency</b>	continuous
<b>Level of expertise required</b>	Low for collection, high for interpretation
<b>Synergies with other indicators</b>	Soil temperature, rainfall; aggregate stability; soil water flux; plant uptake; evapotranspiration; Hydro-mechanical stability and strength of soil materials
<b>Connection with SDGs</b>	11, 13, 15, 17
<b>Opportunities for participatory data collection</b>	Yes, citizen science
<b>Additional information</b>	
<b>References</b>	Gonzalez-Ollauri, A. and Mickovski, S.B., 2017. Hydrological effect of vegetation against rainfall-induced landslides. <i>Journal of Hydrology</i> , 549 (374–387) Gonzalez-Ollauri, A., Stokes, A., Mickovski, S.B., 2020. A novel framework to study the effect of tree architectural traits on stemflow yield and its consequences for soil-water dynamics. <i>Journal of Hydrology</i> , 582 (124448)

## 8.17 Soil temperature

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Soil temperature	Climate Resilience Natural and Climate Hazards Green Space Management
<b>Description and justification</b>	Soil temperature is intrinsically related to soil microbial activity and to biogeochemical and hydrological fluxes in the soil. Different soil temperatures would be preferred by different vegetation whose roots would provide strengths and resistance against erosion or sliding.
<b>Definition</b>	The degree or intensity of heat present in soil, especially as expressed according to a comparative scale and shown by a thermometer or perceived by touch.