

<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.

<b>Strengths and weaknesses</b>	Strengths: standard measurement methods exist; closely linked to air temperature; linked to complex soil biogeochemical processes; Weaknesses: high resolution intrusive investigation is needed; site-specific investigation needed to establish connections with other environmental variables and processes.
<b>Measurement procedure and tool</b>	Trial pits or boreholes excavated and samples taken or thermometer and/or thermocouples inserted and measurement taken in situ
<b>Scale of measurement</b>	Micro / point measurement
<b>Data source</b>	
<b>Required data</b>	Temperature
<b>Data input type</b>	Value (units of temperature)
<b>Data collection frequency</b>	continuous
<b>Level of expertise required</b>	Low
<b>Synergies with other indicators</b>	Soil strength, soil type, aggregate stability, soil matric suction, plant evapotranspiration, soil water flux, soil carbon flux
<b>Connection with SDGs</b>	11, 13, 15, 17
<b>Opportunities for participatory data collection</b>	Yes.
<b>Additional information</b>	
<b>References</b>	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)