	for improving the tools Ideas for new tools The consortium who led the development of this toolkit has handed over the responsibilities for co-ordinating future work to the Green Infrastructure Value Network (GIVaN). Further information on the network can be found at: www.bit.ly/givaluationtoolkit
Additional information	
References	URBAN GreenUP Deliverable D5.3: City Diagnosis and Monitoring Procedures https://www.urbangreenup.eu/insights/deliverables/d5-3-city-diagnosis-and-monitoring-procedures.kl http://www.merseyforest.org.uk/services/gi-val/ Nowak, McPherson and Rowntree, Chicago's urban forest ecosystem: results of the Chicago urban forest climate project, USDA,1994 Air Pollution in the UK 2015. https://uk-air.defra.gov.uk/library/annualreport/index Bottalico, F., Chirici, G., Giannetti, F., De Marco, A., Nocentini, S., Paoletti, E., Salbitano, F., Sanesi, G., Serenelli, C., Travaglini, D., 2016. Air pollution removal by green infrastructures and urban forests in the city of Florence. Agric. Agric. Sci. Procedia 8, 243–251. doi:10.1016/j.aaspro.2016.02.099. SDG indicator 3.9.1 https://unstats.un.org/sdgs/metadata/files/Metadata-03-09-01.pdf SDG indicator 11.6.2. https://unstats.un.org/sdgs/metadata/files/Metadata-11-06-02.pdf

2.5. Soil Temperature

Project Name: OPERANDUM (Grant Agreement no. 776848)

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Soil temperature		**Climate Resilience** **Natural and Climate Hazards** **Green Space Management**
Description and justification	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.
Definition	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.
Strengths and weaknesses	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.
Measurement procedure and tool	Trial pits or boreholes excavated and samples taken or thermometer and/or thermocouples inserted and measurement taken in situ
Scale of measurement	Micro / point measurement
Data source	
Required data	Temperature
Data input type	Value (units of temperature)
Data collection frequency	continuous
Level of expertise required	Low
Synergies with other indicators	Soil strength, soil type, aggregate stability, soil matric suction, plant evapotranspiration, soil water flux, soil carbon flux
Connection with SDGs	11, 13, 15, 17
Opportunities for participatory data collection	Yes
Additional information	
References	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. Journal of Hydrology, 582 (124448)