

8.15.4 Soil carbon decomposition rate

Project Name: PHUSICOS – According to Nature (Grant Agreement no. 776681)

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Soil carbon decomposition rate		Climate Resilience Green Space Management
Description and justification	Indicators of Carbon Sequestration in Soil sub-criterion will assess the carbon sequestration in soil.	
Definition	Decomposition of Carbon is a part of the Carbon cycle and is essential for recycling the finite matter that occupies physical space in the biosphere. Decomposition is the process by which organic substances are broken down into simpler organic matter. One can differentiate abiotic from biotic decomposition (biodegradation). The former means "degradation of a substance by chemical or physical processes, e.g., hydrolysis" (Water Quality Vocabulary. IShaO 6107-6:1994). The latter means "the metabolic breakdown of materials into simpler components by living organisms", typically by microorganisms.	
Strengths and weaknesses		
Measurement procedure and tool	Model/Sampling/Survey	
Scale of measurement	%	
Data source		
Required data		
Data input type	Quantitative	
Data collection frequency		

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

8.16 Soil matric potential

Project Name: OPERANDUM (Grant Agreement no. 776848)

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