Data input type	Quantitative
Data collection frequency	
Level of expertise required	High
Synergies with other indicators	
Connection with SDGs	13
Opportunities for participatory data collection	
Additional information	
References	

6.29 Soil Type

Project Name: OPERANDUM (Grant Agreement no. 776848)

Author/s and affiliations: Slobodan B. Mickovski[1], Alejandro Gonzalez-Ollauri[1], Karen Munro[1]

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Soil type	Natural and Climate Hazards
Description and justification	Different soil types would have different strengths and resistance against erosion or sliding.
Definition	Systematic categorization of soils based on distinguishing attributes as well as criteria that dictate choices in use.
Strengths and weaknesses	Strengths: standard classification and description methods exist; it is possible to generate digital soil maps with a relatively reduced amount of data inputs; it is intrinsically related to soil hydrological properties relevant for landslides and erosion control. Weaknesses: high resolution intrusive investigation is needed
Measurement procedure and tool	Trial pits or boreholes excavated and samples taken. Description and classification done to existing European Standards (e.g., Eurocodes).

Scale of measurement	Micro / point measurement
Data source	
Required data	Laboratory and in situ test results
Data input type	Category/type and value (particle size distribution, soil organic matter, soil pH, and electric conductivity)
Data collection frequency	Once (very low frequency)
Level of expertise required	Low
Synergies with other indicators	Soil temperature, aggregate stability, soil matric suction, soil strength, soil water flux
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. Ecological Engineering, 106 (154-173) Mickovski, S B and Thomson, C S. 2016. Innovative Approach in the Stabilisation of Coastal Slopes. Engineering Sustainability, 171(1): 15–24

6.30 Soil strength

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Soil strength	**Natural and Climate Hazards**
Description and justification	Different soil types would have different strengths and resistance against erosion or sliding. Soil strength is a key variable in slope stability analysis.
Definition	Soil strength depends on the angle of internal shear (mostly granular soils) and cohesion (mostly fine grained soils)