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## 8.23 Soil Erodibility

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

**Author/s and affiliations:** Gerardo Caroppi<sup>1,2</sup>, Carlo Gerundo<sup>2</sup>, Francesco Pugliese<sup>2</sup>, Maurizio Giugni<sup>2</sup>, Marialuce Stanganelli<sup>2</sup>, Farrokh Nadim<sup>3</sup>, Amy Oen<sup>3</sup>

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Soil Erodibility	Green Space Management
<b>Description and justification</b>	Indicators of Soil Physical Resilience sub-criterion will assess if the project scenarios enhance the ability of a soil to resist or recover their healthy state in response to destabilising influences.
<b>Definition</b>	Soil erodibility is a parameter of the soil profile reaction to the process of soil detachment and transport by raindrops and surface flow. The soil erodibility is expressed as the <i>K</i> -factor in the widely used soil erosion model, the Universal Soil Loss Equation (USLE) and its revised version (RUSLE). The <i>K</i> -factor, which expresses the susceptibility of a soil to erode, is related to soil properties such as organic matter content, soil texture, soil structure and permeability. With the Land Use/Cover Area frame Survey (LUCAS) soil survey in 2009 a pan-European soil dataset is available for the first time, consisting of around 20,000 points across 25 Member States of the European Union.
<b>Strengths and weaknesses</b>	
<b>Measurement procedure and tool</b>	Model/Survey
<b>Scale of measurement</b>	Unit of measure: mm <sup>3</sup> /ha
<b>Data source</b>	
<b>Required data</b>	Soil properties
<b>Data input type</b>	Quantitative

<b>Data collection frequency</b>	
<b>Level of expertise required</b>	High
<b>Synergies with other indicators</b>	
<b>Connection with SDGs</b>	13
<b>Opportunities for participatory data collection</b>	
<b>Additional information</b>	
<b>References</b>	

## 8.24 Total Predicted Soil Loss (RUSLE)

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Total Predicted Soil Loss (RUSLE)		Natural and Climate Hazards Green Space Management
<b>Description and justification</b>	Indicators of Soil Physical Resilience sub-criterion will assess if the project scenarios enhance the ability of a soil to resist or recover their healthy state in response to destabilising influences.	
<b>Definition</b>	RUSLE is widely applied to estimate the rate of soil loss by water. The landscape profile is defined by a slope length, which is the length from the origin of overland flow to the point where the flow reaches a major flow concentration or a major area of deposition. The soil loss is an average erosion rate for the landscape profile.	
<b>Strengths and weaknesses</b>		