Synergies with other indicators	
Connection with SDGs	3; 13
Opportunities for participatory data collection	
Additional information	
References	

8.9.3 Total Leaf Area

Project Name: Nature4Cities (Grant Agreement no. 730468)

Author/s and affiliations: Florian Kraus[1], Bernhard Scharf[1]

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Leaf Area (LA)	**Green Space Management** **Climate Resilience** **Air Quality**
Description and justification	The LA (Leaf Area) is a Key Performance Indicator of the GREENPASS® system. It expresses the sum of leaf area of NBS within project area. The Leaf Area is the operating surface of NBS and therefore decisive for climate regulation, carbon storage and air purification.
Definition	The LA (Leaf Area) describes the total amount of leaf area of all NBS in a project area.
Strengths and weaknesses	+ key performance indicator regarding biodiversity + easy for communication, understanding and decision-making + useful for design optimization + link the NBS performance to a single number - needs area analysis and calculation
Measurement procedure and tool	- NBS analysis of an area and calculation (eg with GREENPASS® system and tools) - numerical value in m^2
Scale of measurement	Object, neighbourhood and city scale
Data source	
Required data	- project area - NBS typologies and areas

Data input type	- numerical analysis of vegetation types incl. characteristics (eg LAI)
Data collection frequency	- one to several times in planning and optimization process
Level of expertise required	easy to understand – for planners and decision makers
Synergies with other indicators	-
Connection with SDGs	SDG 11 Sustainable Cities and Communities, SDG 13 Climate action
Opportunities for participatory data collection	-
Additional information	
References	Kraus, F.; Scharf, B. (2019): Management of urban climate adaptation with NBS and GREENPASS®. Geophysical Research Abstracts. Vol. 21, EGU2019-16221-1, 2019 EGU General Assembly 2019. Kraus, F.; Scharf, B. (2019): Climate-resilient urban planning and architecture with GREENPASS illustrated by the case study 'FLAIR in the City' in Vienna. OP Conf. Ser.: Earth Environ. Sci. 323 012087. Nature4Cities, D2.1 - System of integrated multi-scale and multi-thematic performance indicators for the assessment of urban challenges and NBS. https://www.nature4cities.eu/post/nature4cities-defined-performance-indicators-to-assess-urban-challenges-and-nature-based-solutions. Nature4Cities, D2.2 - Expert-modelling toolbox Nature4Cities, D2.3 – NBS database completed with urban performance data https://www.nature4cities.eu/post/applicability-urban-challenges-and-indicators-real-case-studies Nature4Cities, D2.4 - Development of a simplified urban performance assessment (SUA) tool