

Deliverable D1.1

Framework of key indicators to assess and categorize different types of nature spaces and their impact for therapeutic indications



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DOCUMENT REVIEW

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ABBREVIATIONS

Abbreviation	Definition
CO	Carbon monoxide
D	Deliverable
DF	Demonstrator Fellows
DSR	Daylight and Solar Radiation
ES	Experimental Sites
GIS	Geographical Information System
HWC	Health, Well-being and Comfort
IEQ	Indoor Environment Quality in buildings
NBS	Nature-Based solutions
NBT	Nature-Based Therapies
NO₂	Nitrogen dioxide
O₃	Ozone
OEQ	Outdoor Environment Quality
PM_{##}	Particulate Matter that is smaller than ## microns
SO₂	Sulphur dioxide
T	Types of nature spaces (T1; T2; T3)
TESSA	Toolkit for Ecosystem Service Site-based Assessment
WHO	World Health Organisation
WP	Work Package

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Executive Summary

Deliverable D1.1 provides a framework of key indicators of green space characteristics that have a high potential to be relevant regarding their impact on health and well-being. These indicators comprise the characteristics of a nature site, and its context, including the variables that can impact health and well-being, and also the requests that ensure people can have comfort and their basic needs attended to. Moreover, NATURELAB's holistic strategy seeks to offer also indicators that go beyond health and well-being, enhancing the resilience of the sites and the population therefore boosting communities' sustainability.

Since the topic of this document is wide, the work was done by a comprehensive team of experts. All authors used for this work their know-how and previous experience. This framework of scientific and practical background was supported with literature review, in order to ensure using state-of-the-art knowledge and the integration of health, well-being, and sustainability and resilience of communities (Chapter 3).

There is evidence showing positive associations between green spaces and health and well-being outcomes. Despite this, there has been little research into which components of green spaces benefit people's well-being and health, and how they can be categorized. To address this gap, a proposal of key indicators of natural and infrastructural characteristics that have a high potential to be relevant for health and well-being is presented in Chapter 4. The following four categories of indicators are proposed: Spatial characteristics, design, and conditions; Infrastructural characteristics; Natural characteristics and Cultural Ecosystem Services.

The interconnectedness of health and well-being with sustainability best practices is explored by Chapter's 5 key indicators. Sustainable sites should promote cleaner air and water, reducing exposure to pollutants and to poor environmental conditions. Moreover, green and blue spaces and sustainable communities have been linked to improved mental health. Access to nature, greenery, biodiversity and well-maintained environments can reduce stress, anxiety, and depression while enhancing overall well-being. Reducing environmental hazards and ensuring water management strategies are pathways to increase biodiversity, greenness, mitigate and adapt to extreme precipitation and temperature that are connected to climate changes, thus contributing to sustainable, inclusive and resilient living spaces and communities. The indicators related to the sustainability and resilience of the sites and the population are divided in three categories: (i) climate and geophysical context which include the management of water cycle, solar radiation and climate region; (ii) air quality and (iii) noise.

D1.1 is a thorough and comprehensive report. The indicators will be applied, tested and validated at all Experimental Sites (ES) through T1.2. During this implementation, a clearer awareness of the intrinsic value of each indicator, the easiness and effectiveness of measuring or establishing it, as well as the need of monitoring and updating each indicator will be recognised, allowing the development of future outcomes and deliverables under WP1.

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