

Indicator: Historical and cultural meaning

Naturvation challenges: Cultural heritage and cultural diversity

SDGs: 11

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Indicator description

The indicator describes the significance of historical and cultural aspects within urban green spaces (UGS) covering artistic expression such as graffiti, arts and murals written, drawn or painted as forms of communication (either from past times or present). Through stories of the surrounding users of UGS might dignify the historical understanding of transformation and development (1). Also, diverse elements generate thoughts about symbols and metaphors existing between one's life and nature as well as places of identity, memory and belonging (2). The indicator perfectly matches with the challenge cultural heritage and diversity. Cultural heritage can be seen as the intermingling of past and present practices and represents thus bridges between different periods, cultures, localities and the natural environment. Cultural heritage and diversity enrich human life with meaning and emotions, enhance the quality of the lives of citizens and is a precious and irreplaceable resource (3). Different literature approaches people perceiving greenery and diverse flora and fauna as beautiful and also culturally & historically meaningful. Green outdoor environment and cultural heritage is rather preserved in this sense. In conclusion, cultural assets might have a little monetary value but immense culture significance to the local community (4).

The indicator is measured through the quantity of cultural assets and symbols/elements (e.g. graffiti, arts, murals, stickers etc.) or qualitatively when measuring the impressions or feelings of users of UGS. Qualitative research covers photograph analysis (1), behavioural observations (1, 3), questionnaires, consultation meetings and workshops (3) as well as a variety of interview methods (e.g. semi-structured interviews) (1, 3, 4). One paper (2) described the usage of theory triangulation and post-occupation evaluation (POE), which examines the effectiveness of occupied designed environments for human users (e.g. patterns of use, benefits of use, design goals and garden features). Quantitative approaches include site surveys (3, 4) and geographical data (i.e. digital elevation model, DEM, GIS data, (historic & current) land use) (4).

Indicator scoring

Values used for Historical and Cultural meaning scoring were based on empirical data (1, 2, 3), modelling studies (2) and literature reviews (2, 4).

The proportion of studies that showed positive benefits for an NBS were used as a base for the scoring and distributed between scores ranging from 1 to 5 according to the proportions of positive impacts. Indications of negative impacts were noted here in the score document as a proportion of studies. When data for benefits of an NBS was not present in the literature it was denoted as no values found.





Scores, historical and cultural meaning		
Nature-based solution	Score	Proportions of positive /negative impact (number of studies)
Parks and (semi)natural urban green areas	5	1 / 0 (n = 4)
Urban green areas connected to grey infrastructure	5	1 / 0 (n = 4)
Blue areas	3	0.5 / 0 (n = 4)
External building greens	3	0.5 / 0 (n = 4)
Allotments and community gardens	4	0.75 / 0 (n = 4)
Green areas for water management	4	0.75 / 0 (n = 4)

References

- (1) Auyeung, D.N., Campbell, L.K., Johnson, M., Sonti, N.F. and Svendsen, E. (2016) Reading the landscape: citywide social assessment of New York City parks and natural areas in 2013-2014.
- (2) Bengtsson, A. and Grahn, P. (2014) Outdoor environments in healthcare settings: A quality evaluation tool for use in designing healthcare gardens. *Urban forestry & urban greening*, 13(4), pp.878-891.
- (3) Rostami, R., Lamit, H., Khoshnava, S.M., Rostami, R. and Rosley, M.S.F. (2015) Sustainable cities and the contribution of historical urban green spaces: A case study of historical Persian gardens. *Sustainability*, 7(10), pp.13290-13316.
- (4) Vojinovic, Z., Keerakamolchai, W., Weesakul, S., Pudar, R.S., Medina, N. and Alves, A. (2016) Combining ecosystem services with cost-benefit analysis for selection of green and grey infrastructure for flood protection in a cultural setting. *Environments*, 4(1), p.3.