



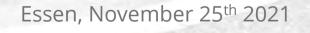




The Example of Nature-Based Solutions

Julita Skodra, Dr.-Ing.

Institute for Urban Public Health (InUPH), University Hospital Essen







Making a healthy city is not only about good design, but also about empowerment of people in the city-making process.

Jan Gehl













WHO Copenhagen Consensus of Mayors 2018





community participation in decisions that affect where and how people live, their common goods and services

- improved city spaces and services, based on the needs and assets in communities
- stronger accountability and governance for health and well-being
- empowered and resilient populations
- increased ownership over individual health and wellbeing

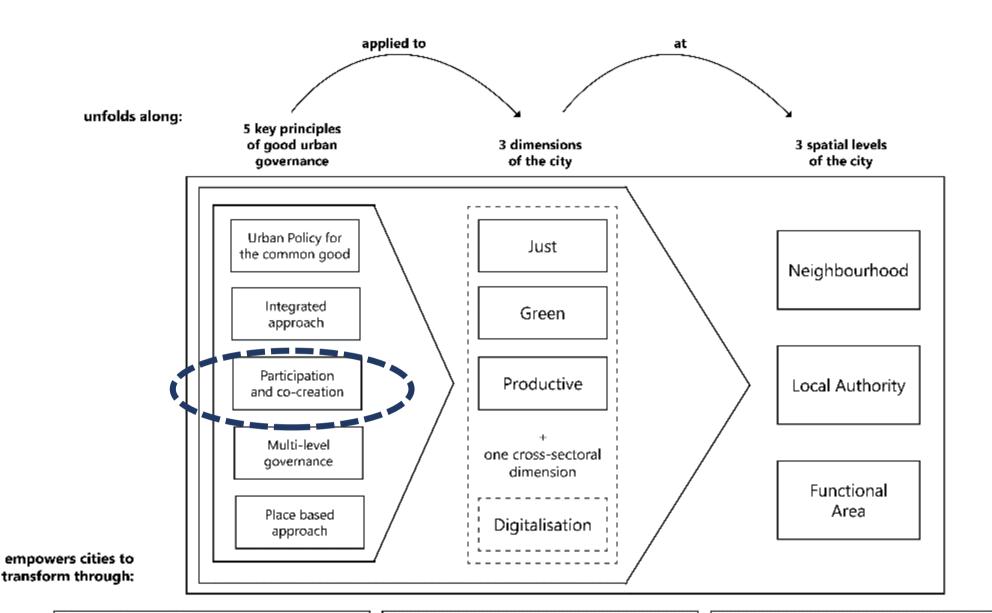




Source: WHO 2018

The new Leipzig Charter 2020





integrated approach - involvement of the general public and social, economic and other stakeholders to consider their concerns and knowledge

"New forms of participation should be encouraged and improved, including co-creation and co-design in cooperation with inhabitants, civil society networks, community organisations and private enterprises."

For strong urban governance to assure the common good cities need:

- Legal framework conditions
- Investment capacities
- Adequately skilled employees
- Steerability and shaping of infrastructure, public services/welfare

For strong urban governance to assure the common good cities need:

- Active and strategic land policy and land use planning
- Active shaping of digital transfor-

Adequate Policies and funding for cities:

- Powerful national urban policy framework and funding
- Coherent EU regulation and funding instruments

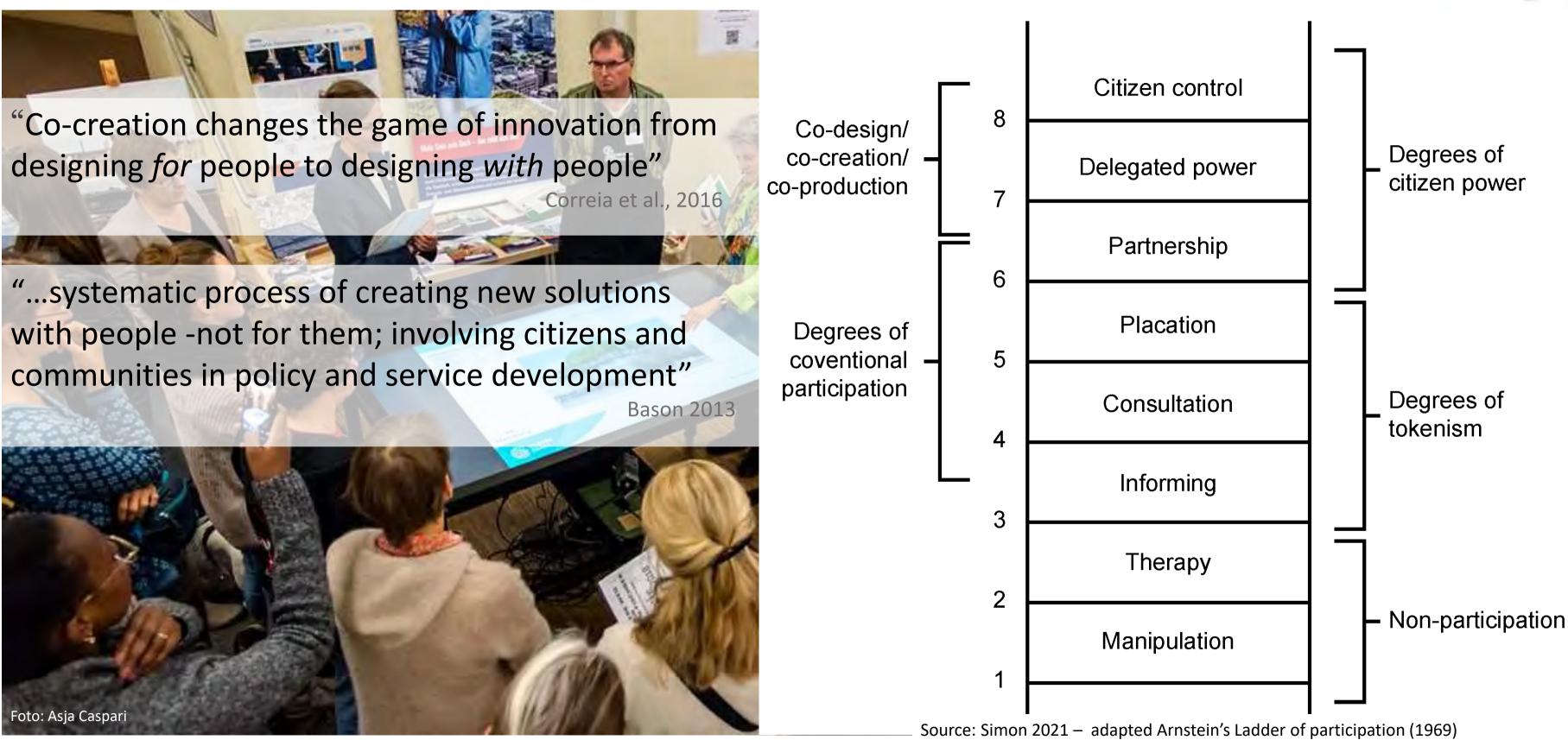
Source: BMI 2020





Co-Creation



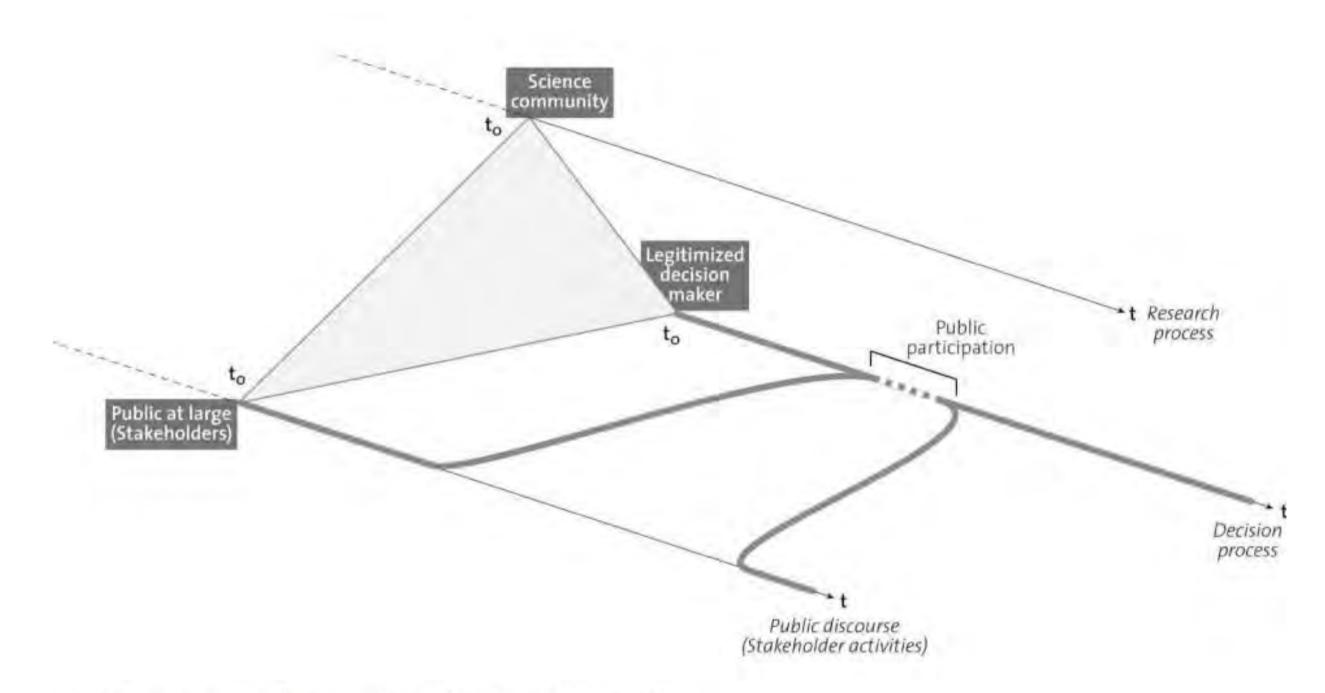






Participation





Governmental representatives keep control

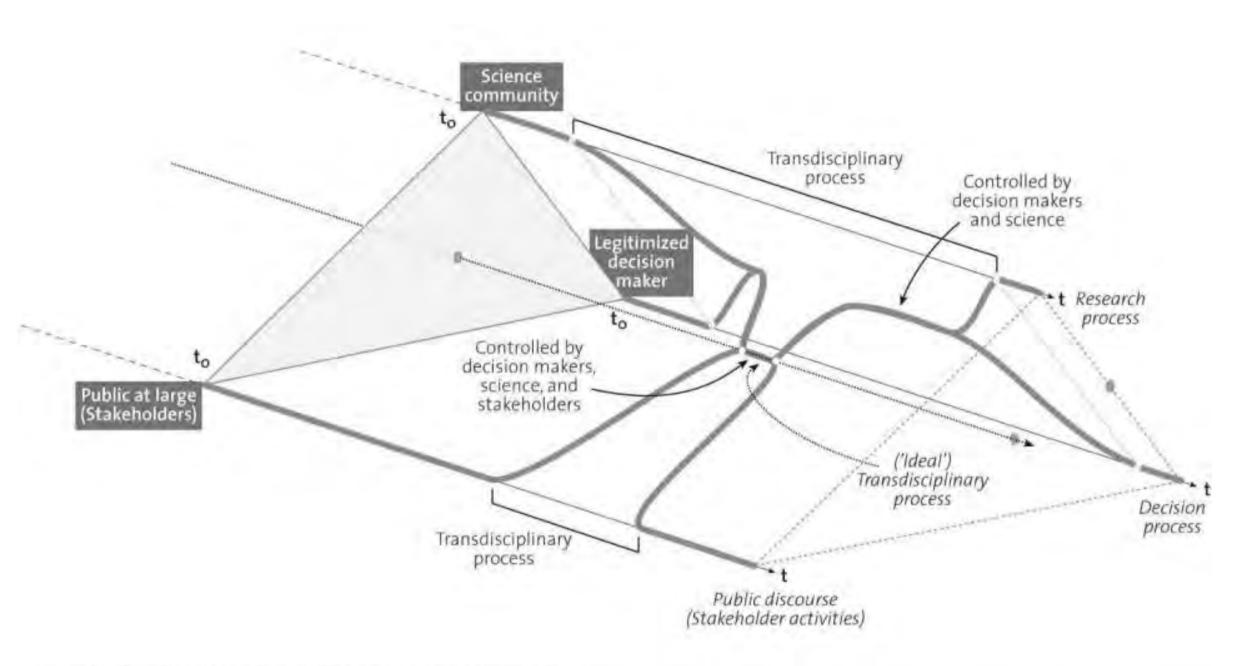




Source: Scholz 2015

Transdisciplinary Co-Creation, Co-Design and Co-Production





- Co-leadership among science and practice
- Mutual learning/knowledge integr. for socially robust solutions and groundbreaking research

Source: Scholz 2015

poststructuralist theories and methods:

all forms of knowledge and experience have value and can contribute to solving the problem(s) at hand.

expert + multiple, plural knowledge - hybrid forms of knowledge - transdisciplinary

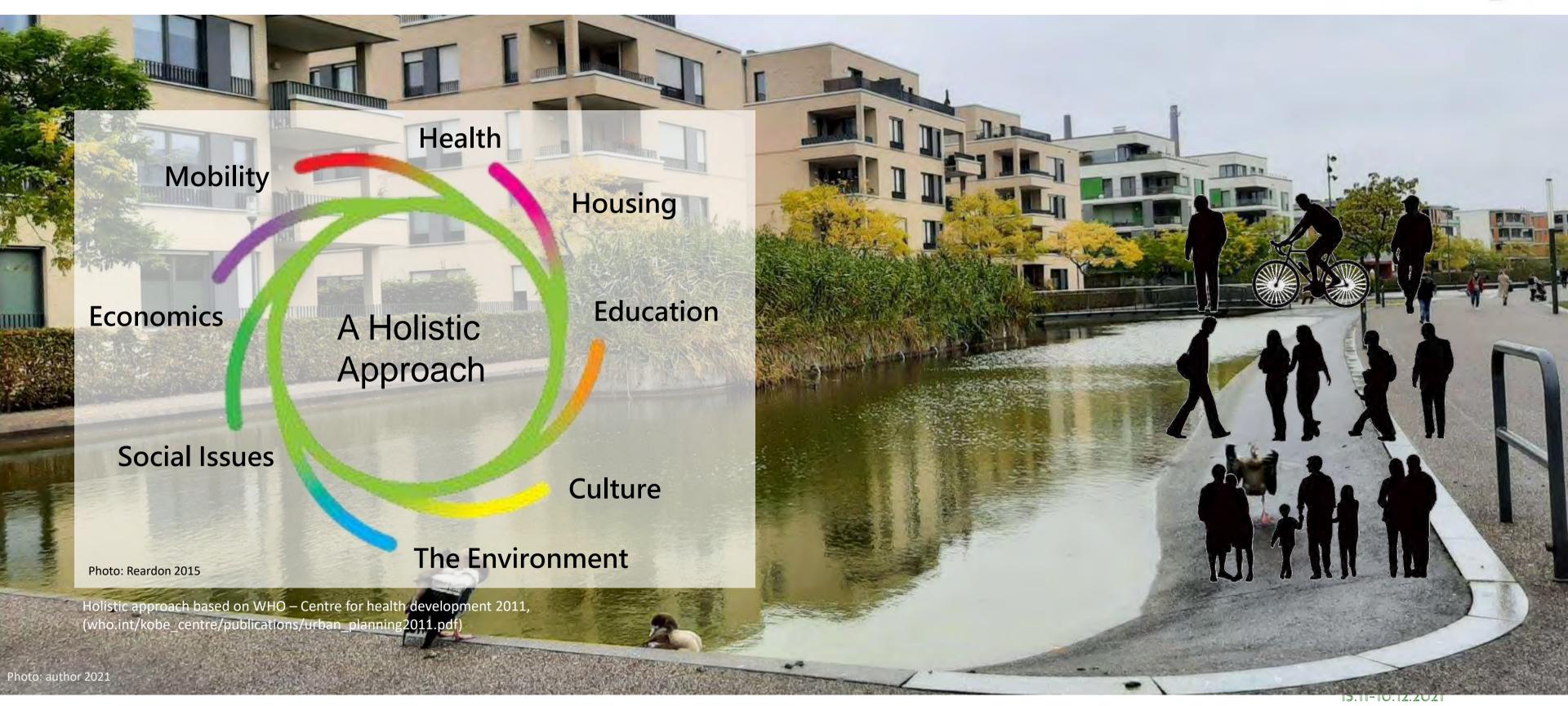
Source: Simon 2021





Co-creation for healthy and sustainable neighborhoods



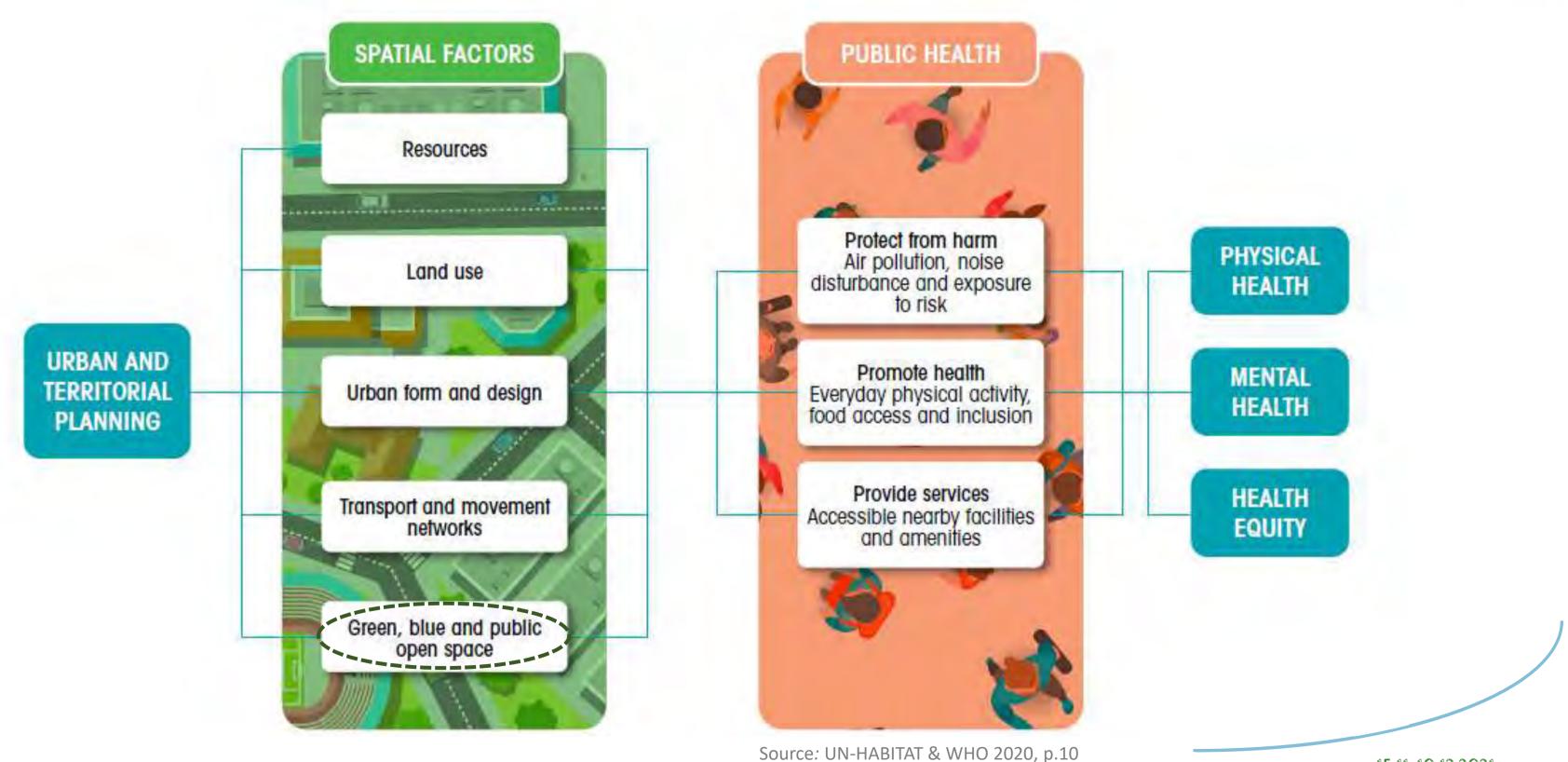






How do spatial factors affect health and health equity?









Natural settings and health



- environmental benefits
 - noise and air pollution mitigation

Mueller et al., 2020, Markevych et al. 2017

- mental well-being
 Sugiyama *et al.*, 2008, Barton and Pretty, 2010
- **active lifestyles**Sallis *et al.*, 2012, WHO 2017
- social cohesion
 van Dillen et al., 2012, de Vries et al. 2013



Salutogen®

- Lowers blood pressure
- Lowers heart rate
- Promotes wellbeing

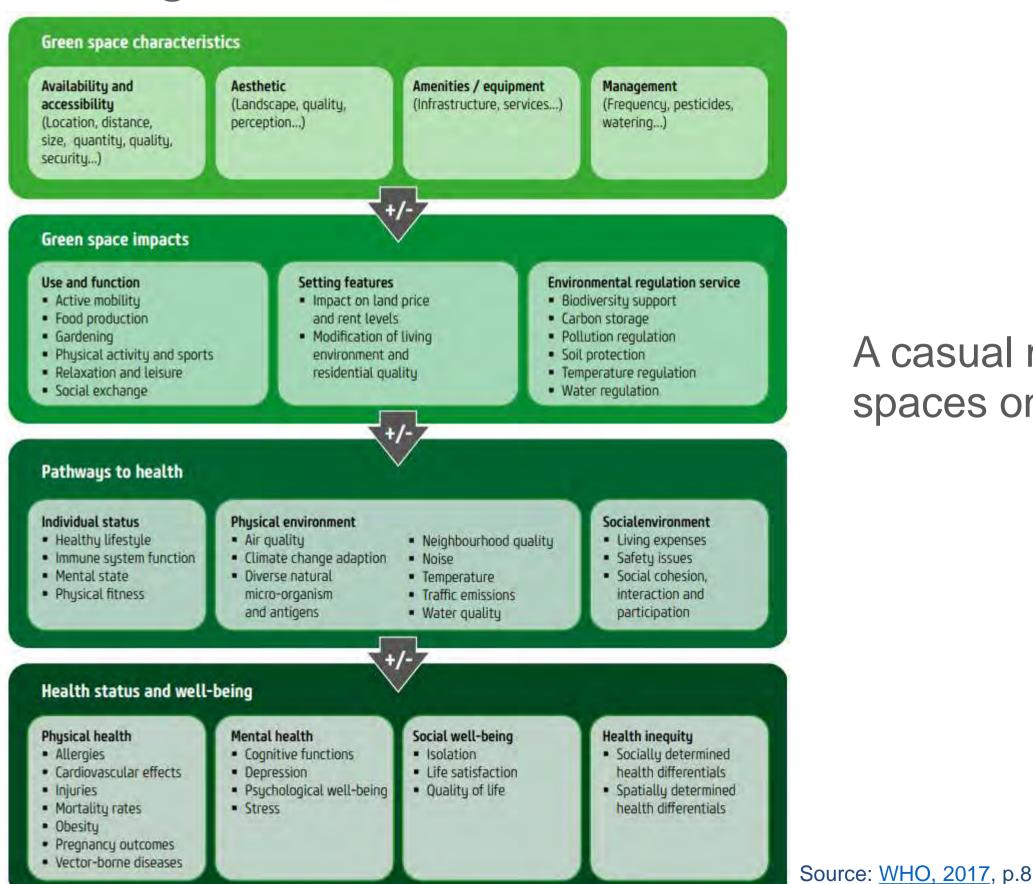
Available from all parks, seashores, forests or countryside near you.





Urban green and health





A casual model of the impacts of urban green spaces on health and well-being





London's public green space





- for each £1 spent by local authorities and their partners on public green space, Londoners enjoy at least £27 in value
- Londoners avoid £950 million per year in health costs due to public green space
- the value of recreational activities is estimated to be £926 million per year
- economic benefits are not spread equally across or within London borough's













Nature-based Solutions (NbS)



bring diverse nature as well as natural features and processes into cities, landscapes and seascapes through locally adapted, resource efficient and systemic interventions

European Commission, 2015

biodiversity and ecosystem services

Nesshover et al., 2017; Eggermont et al., 2015; European Commission, 2015

climate resilience and climate adaptation

Bush and Doyon, 2019

Kabisch et al., 2017a

wider societal challenges

Cohen-Shacham et al., 2016; Maes and Jacobs, 2017

health and wellbeing

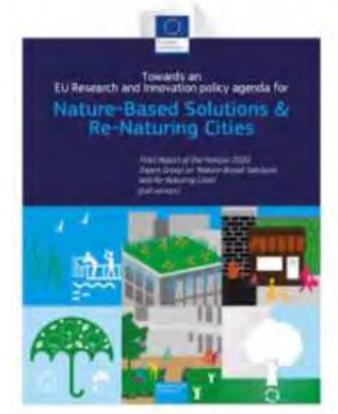
Kabisch et al., 2017b





Nature-based Solutions (NbS)





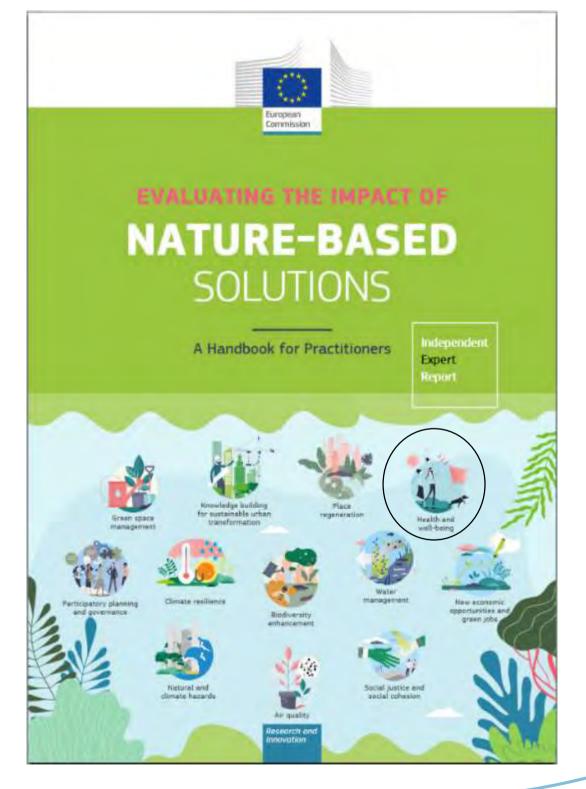












Source: Dumitru and Wendling 2021





Co-creation with people but also co-creation with nature



NbS deliver climate services while ensuring wellbeing and social cohesion only when they are co-produced

Raymond et al. 2017

NbS positively transform the sense of place of local communities when these communities are actively engaged in co-creating them

Frantzeskaki 2019, p.104







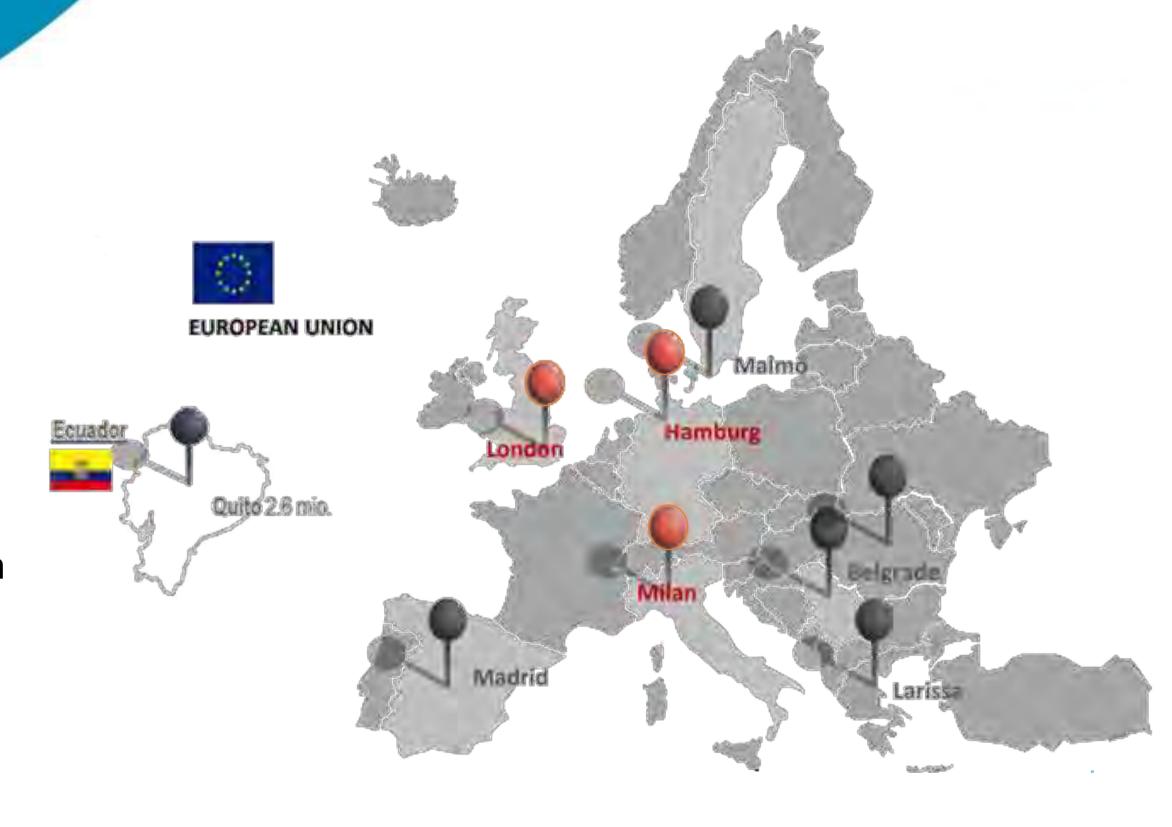




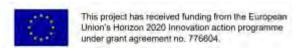


Co-designing Locally tailored Ecological solutions for Value-addEd urban Regeneration 2018-2023

- nature-based urban transformation in a multi-stakeholder, co-creation approach
- focus on health, socio-economic and ecological challenges













Co-designing of interventions

Co-developing NbS monitoring plans

Lead by CITIES Supported by Tecnalia

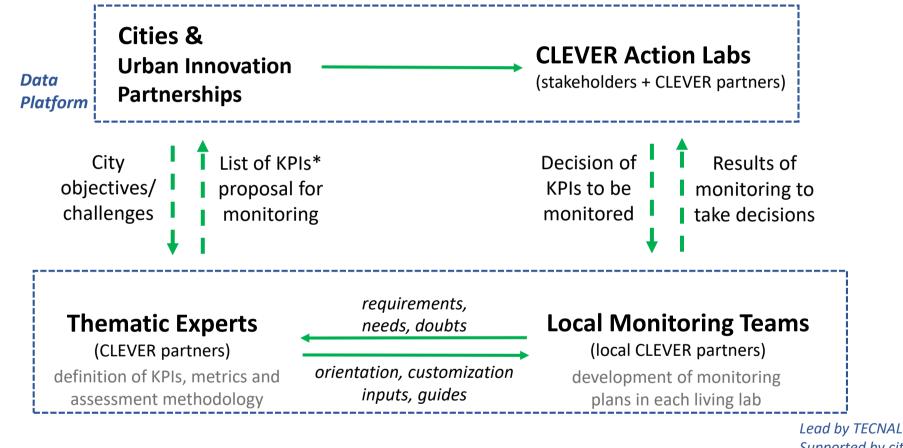
Urban Innovation Partnership (UIP)

city-wide or district-focused informal alliance of local and city authorities, community (groups), businesses, academics to promote the nature-based solutions (NBS) for regeneration or urban transformation, facilitate and drive the co-creation process.

UIP are defined at a city level - each supports one or more CLEVER Action Labs (CAL).

CLEVER Action Labs (CAL)

co-design, co-implement and co-manage NbS interventions in the deprived districts starting from specific place-based NbS technologies as impulses.

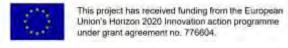


Lead by TECNALIA Supported by cities

*KPI - Key Performance Indicator

Source: Tecnalia 2018, adapted



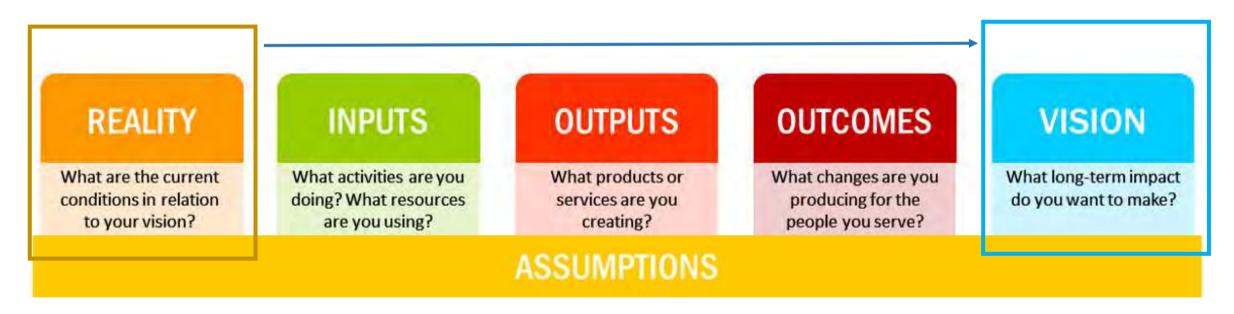








Theory of Change

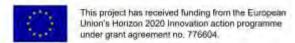


Source: Young Foundation









Urban Health digiSpace

Thank you very much!



Julita Skodra, Dr.-Ing.

Postdoctoral researcher

+49(0)201 723 77 244

julita.skodra@uk-essen.de

www.uk-essen.de/inuph





References



Almenar JB, Elliot T, Rugani B, et al. (2021) Nexus between nature-based solutions, ecosystem services and urban challenges. Land Use Policy 100: 104898.

Barton J and Pretty J (2010) What is the Best Dose of Nature and Green Exercise for Improving Mental Health? A Multi-Study Analysis. Environmental Science & Technology 44(10): 3947-3955.

BMI (2020) The New Leipzig Charter: The transformative power of cities for the common good, [online] available at: https://www.nationale-stadtentwicklungspolitik.de/NSPWeb/SharedDocs/Downloads/EN/the new leipzig charter.pdf; is ssionid=EBFEA1E6322786F31F7AC185EFC13083.live11312? blob=publicationFile&v=4, [accessed on Nov 11 2021]

Bush J and Doyon A (2019) Building urban resilience with nature-based solutions: How can urban planning contribute? Cities 95: 102483.

Cohen-Shacham E, Walters G, Janzen C, et al. (2016) Nature-based solutions to address global societal challenges. IUCN: Gland, Switzerland 97.

de Vries S, van Dillen SME, Groenewegen PP, Spreeuwenberg P. Streetscape greenery and health: Stress, social cohesion and physical activity as mediators. Soc Sci Med. 2013 Oct 1;94:26–33.

Dorst H, van der Jagt A, Raven R, et al. (2019) Urban greening through nature-based solutions – Key characteristics of an emerging concept. Sustainable Cities and Society 49: 101620.

Frantzeskaki N, McPhearson T, Collier M, et al. (2019) Nature-based solutions for urban climate change adaptation: Linking science, policy, and practice communities for evidence-based decision-making. BioScience 69: 455-466.

Frantzeskaki, N. (2019) 'Seven lessons for planning nature-based solutions in cities', Environmental Science & Policy, 93, pp. 101-111

Kabisch N, Korn H, Stadler J, et al. (2017a) Nature-Based Solutions to Climate Change Adaptation in Urban Areas: Linkages between Science, Policy and Practice. Theory and Practice of Urban Sustainability Transitions,. 1st ed. Cham: Springer International Publishing: Imprint: Springer https://doi.org/10.1016/j.envsci.2018.12.033

Kabisch N, van den Bosch M and Lafortezza R (2017b) The health benefits of nature-based solutions to urbanization challenges for children and the elderly - A systematic review. Environ Res 159: 362-373.

Maes J and Jacobs S (2017) Nature-Based Solutions for Europe's Sustainable Development. Conservation Letters 10(1): 121-124.

Markevych, I., et.al. (2017) 'Exploring pathways linking greenspace to health: Theoretical and methodological guidance', Environmental Research, 158, pp. 301-317, https://doi.org/10.1016/j.envres.2017.06.028

Mueller, W., et al. (2020). 'Urban greenspace and the indoor environment: Pathways to health via indoor particulate matter, noise, and road noise annoyance'. Environmental Research, 180, [108850]. https://doi.org/10.1016/j.envres.2019.108850

Sallis JF, Floyd MF, Rodríguez DA, et al. (2012) Role of built environments in physical activity, obesity, and cardiovascular disease. Circulation 125(5): 729-737.

Scholz, R. W. (2015) Transdisciplinarity as a method of science-practice collaboration: Definition(s), prerequisites and challenges in the start-up phase [online] available at: http://www.jpi-climate.eu/media/default.aspx/emma/org/10864891/Keynote Roland+Scholz.pdf , [accessed on Nov 11 2021]

Simon, D. (2021) "Co-Productive Tools for Transcending the Divide: Building Urban-Rural Partnerships in the Spirit of the New Leipzig Charter", Land 10, no. 9: 894. https://doi.org/10.3390/land10090894

Sugiyama T, Leslie E, Giles-Corti B, et al. (2008) Associations of neighbourhood greenness with physical and mental health: do walking, social coherence and local social interaction explain the relationships? Journal of Epidemiology and Community Health 62(5): e9.

UN-HABITAT & World Health Organization (2020) Integrating health in urban and territorial planning: a sourcebook, World Health Organization, https://apps.who.int/iris/handle/10665/331678

van Dillen SME, de Vries S, Groenewegen PP, Spreeuwenberg P. Greenspace in urban neighbourhoods and residents' health: adding quality to quantity. J Epidemiol Community Health. 2012 Jun;66(6):e8.

WHO (2018) Healthier and happier cities for all: A transformative approach for safe, inclusive, sustainable and resilient societies, [online] available at: https://www.euro.who.int/__data/assets/pdf_file/0003/361434/consensus-eng.pdf, [accessed on Dec 18 2018]



