# *Healthy and sustainable cities: An Urban Public Health Approach – The Institute for Urban Public Health (I)*

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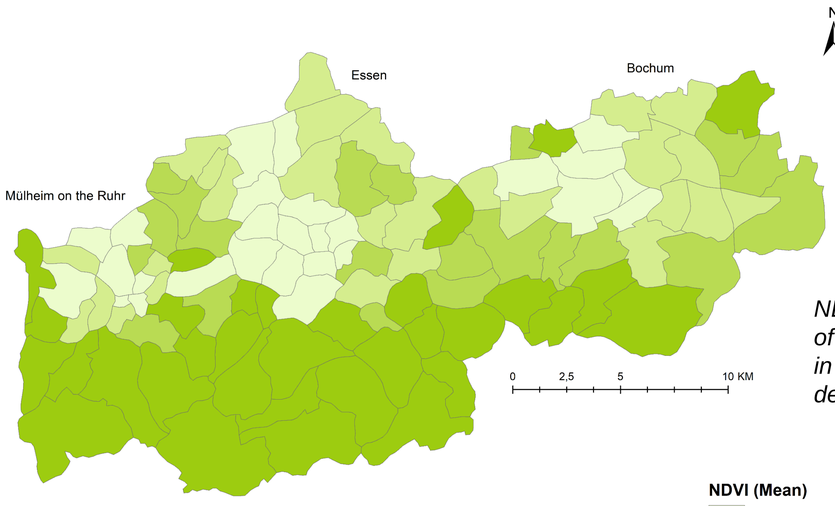
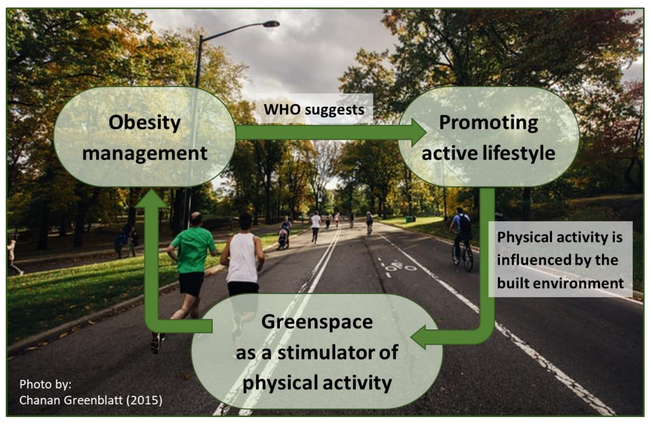


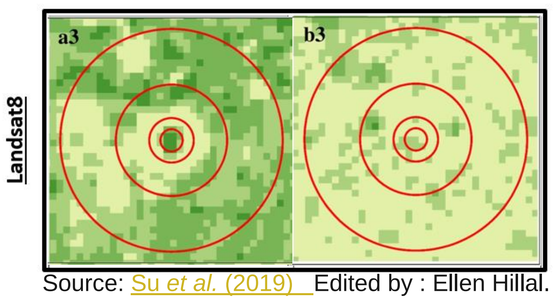

*NDVI (Index that decribes the level of greenness of an area) per District in Bochum, Essen and Mülheim an der Ruhr*

**Geodata:** Cities of Essen, Bochum, Mülheim on the Ruhr (2014);
**NDVI:** U.S. Geological Survey Landsat 8 Archive (2020)
**Map:** Salman Ahmed, Institute for Urban Public Health (InUPH), (October 2021)

*Greenspace Influence on Obesity*

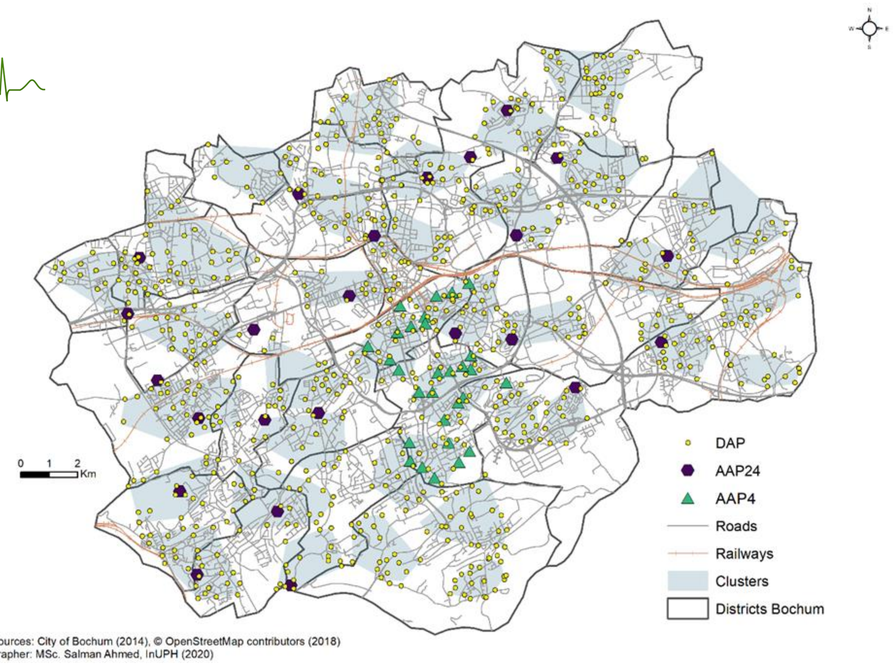



*NDVI surfaces in different buffer sizes for two neighbourhoods with high (a3) and intermediate (b3) vegetation cover. Spatial Resolution 30*30m*




Source: Su *et al.* (2019) Edited by : Ellen Hillal.

SALVE Project
In Bochum



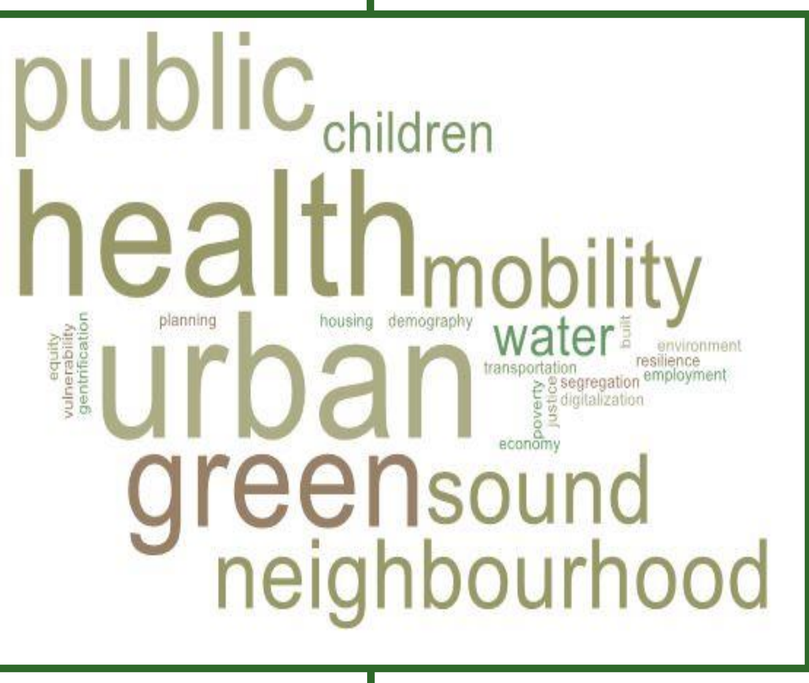

Data Sources: City of Bochum (2014), © OpenStreetMap contributors (2018)
Cartographer: MSc. Salman Ahmed, InUPH (2020)

*Map of all recording points of the SALVE study in Bochum. DAP stands for walkthrough recordings. AAP24 describes permanently installed recording devices. AAP4 are recording devices, which are differently located every 6 weeks.*


*Permanently installed recording device AAP*


*Researcher of the SALVE Project recording sound with the walkthrough recording device DAP*

**Nature-Based Solutions for Healthy and Sustainable Urban Regeneration**
By using data from the longitudinal Heinz Nixdorf Recall (HNR) cohort study InUPH explores the effects of different exposures to spatial characteristics of the urban environment (i.e. greenness) on different health outcomes.

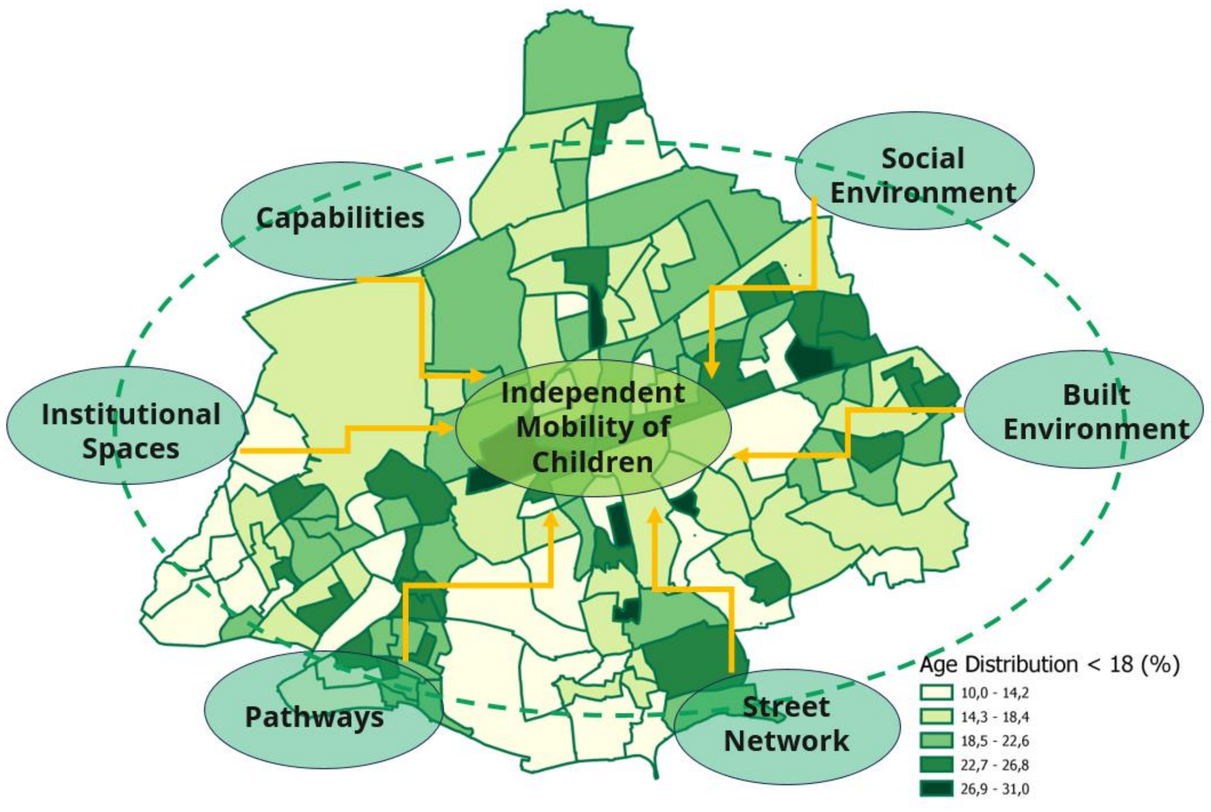



**Acoustic Quality and Health in Urban Environments project (SALVE)**
analyses sound data that represents the complex urban acoustic environment, e.g. during the COVID-19 pandemic as well as the whole frequency spectrum of the urban acoustic environment beyond noise.

**Capabilities in neighborhoods - Children's access to independent mobility**
focuses on the influence of street network and urban design on children's mobility and their use and evaluation of spaces in the city with an aim to identify opportunities and barriers for a health-promoting city for children.

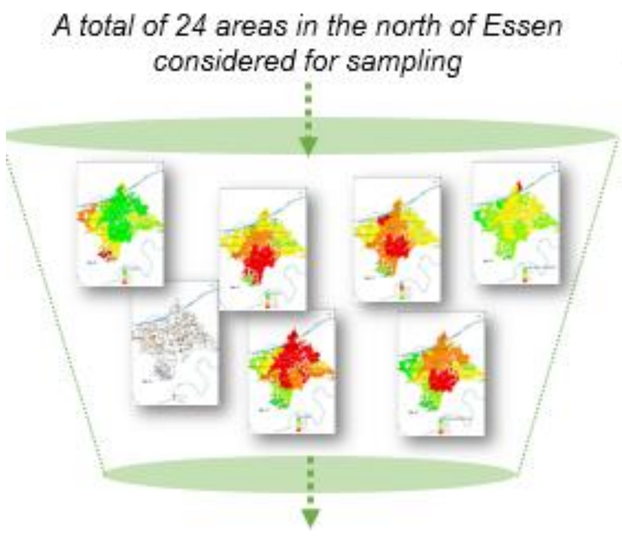
**Urban water flows - the case of SARS-CoV-2 detection** expands the Water, Sanitation and Hygiene concept in an interdisciplinary and systemic approach and develops methods for the assessment of innovative solutions for urban water flows in relation to environmental equity, urban health and sustainability.

*Age distribution under 18 in northern Essen and influencing factors on children's independent mobility*

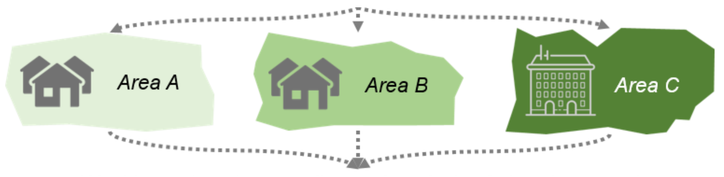



*Filling container with wastewater sample*

*Pumping Station and wastewater pipes*




*Selection of three socio-spatially different areas for sampling*




*Weekly wastewater sampling and analysis of abundance and virus variants of SARS-CoV-2 RNA over several weeks*

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Hamburger Symposium zur regionalen Gesundheitsversorgung

Konferenz „Stadt der Zukunft" - GESUNDE, NACHHALTIGE METROPOLEN