Citizen science for climate adaptation governance in European cities

Urban challenges

Heat, flooding, heavy rain, water and air pollution

an emerging opportunity for citizens to enhance urban resilience, both as

- **providers** of locally situated data (e.g. bacteria levels in drinking-water, infrastructure damage or ecological changes)
- **receivers** of specific recommendations of how to respond to climate-related challenges

This research because:

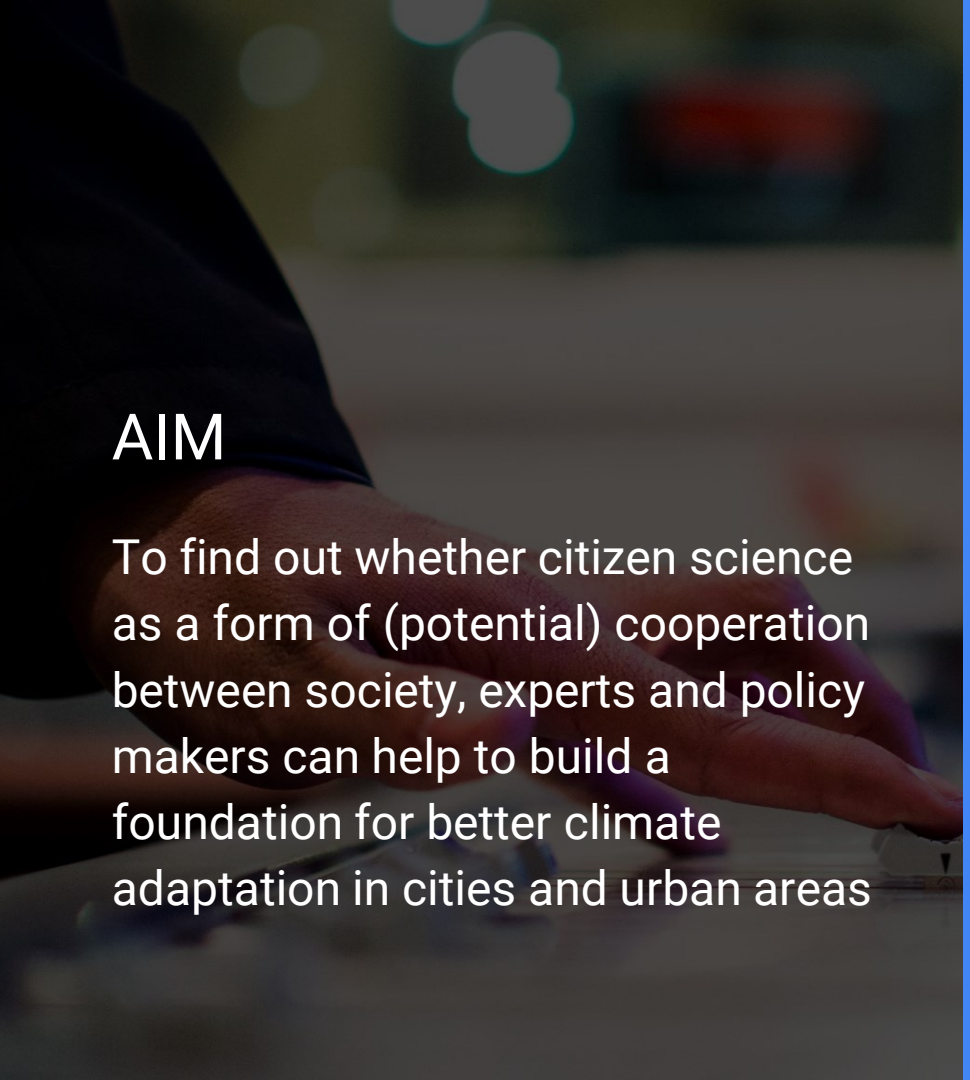
1) New urban governance approaches needed

- A new way how to engage with climate adaptation
- Citizen science might bring climate risks and effects closer to the society

2) Citizen science is not much explored in the area of climate adaptation

"the motivation for the cities to engage in citizen science should be the belief that building a culture of citizen engagement can foster empowerment as a knowledgeable, effective citizen and improve resources, knowledge and learning capacities for climate adaptation governance that upholds accountability and legitimacy of the resulting adaptation plans and actions"

3) So far assessment of outcomes only for individuals and scientific research



AIM

To find out whether citizen science as a form of (potential) cooperation between society, experts and policy makers can help to build a foundation for better climate adaptation in cities and urban areas

HOW?

Assess the impact of citizen science on adaptive capacity of the cities

Analysis of the citizen science project

Central aim
Sub-goals (short-term, long-term)

Inputs

Scientists, staff, technology, infrastructure, funding, knowledge, skills, time, interest, motivation, training and support,...

Activities

Develop project design, protocol, educational materials, collection and analysis of data, observations in the field, communication of results

Outputs

Immediate deliverables such as gathered data, produced knowledge, open database, exposure of project to wider audience

Outcomes

Scientific literacy, improved sense of place, impact on policies, increased public understanding of the topic,...

Impacts

Improved science-society relationship, resilient communities, increased public support of science, more informed citizenry

Assessment framework

LOW - MEDIUM - HIGH

Indicators of adaptive capacity

SCIENCE

credibility
legitimacy
salience

POLICY

Institutional

accessibility of information with institutional memory
ability of institutions to foster social capital
trustful and collaborative relationships between actors
flexibility to changing conditions

Political

impact on policies and politics
political participation

SOCIETY

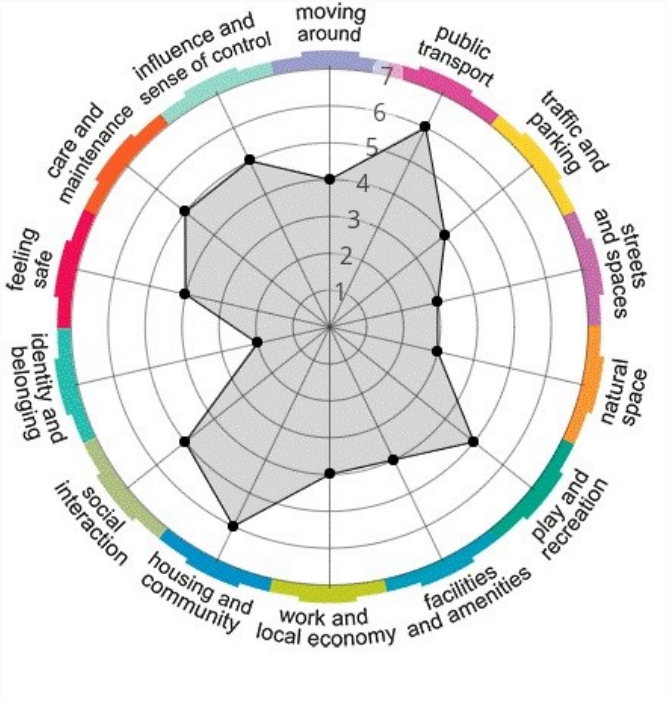
Human

scientific literacy, behavior and attitude
empowerment

Social

collective capacity
knowledge and risk competence

What then?



See where citizen science is most contributive

See where it has some limitations

Recommendations provided

Case studies