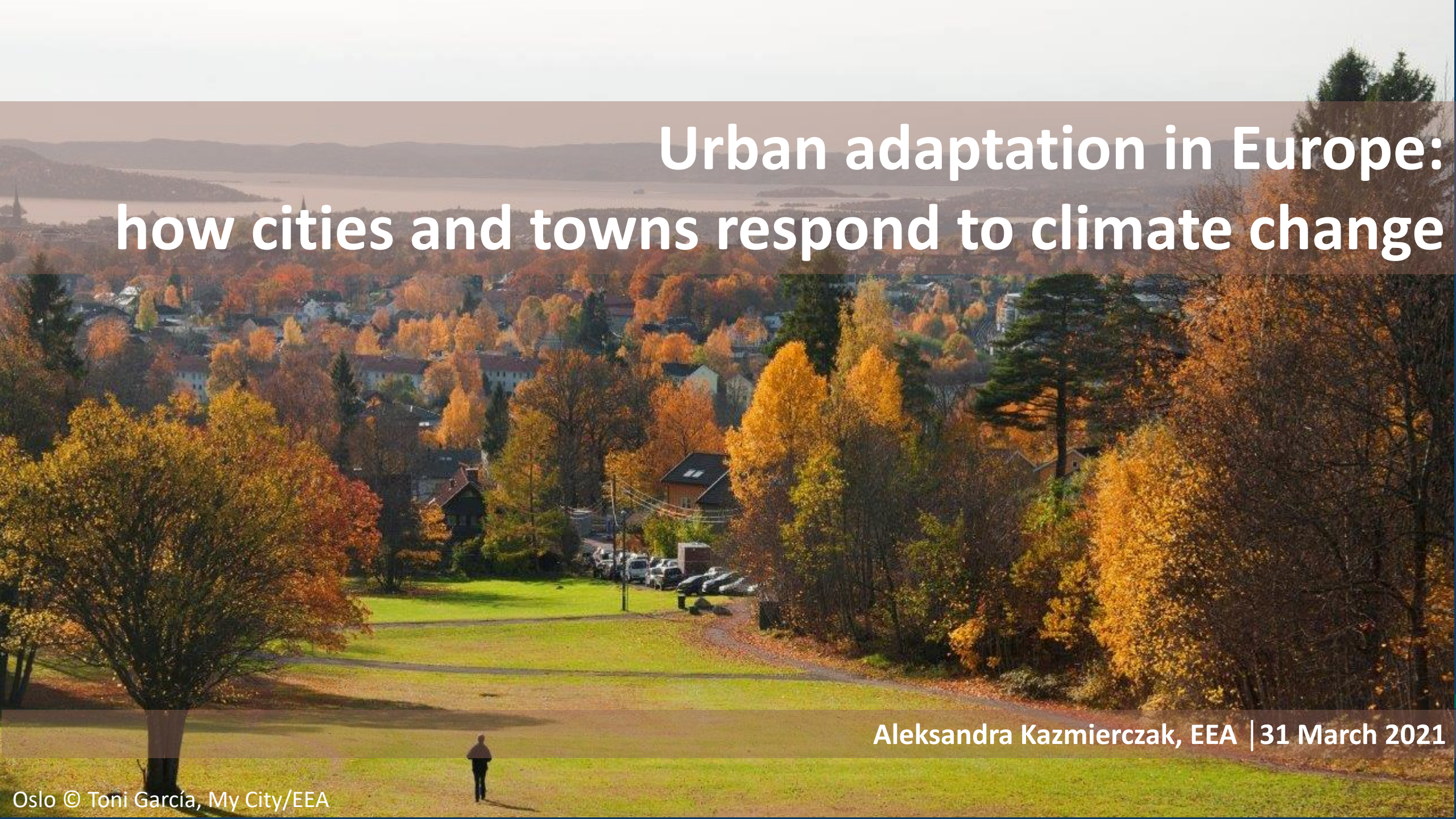
Urban adaptation in Europe: how cities and towns respond to climate change

Aleksandra Kazmierczak, EEA | 31 March 2021



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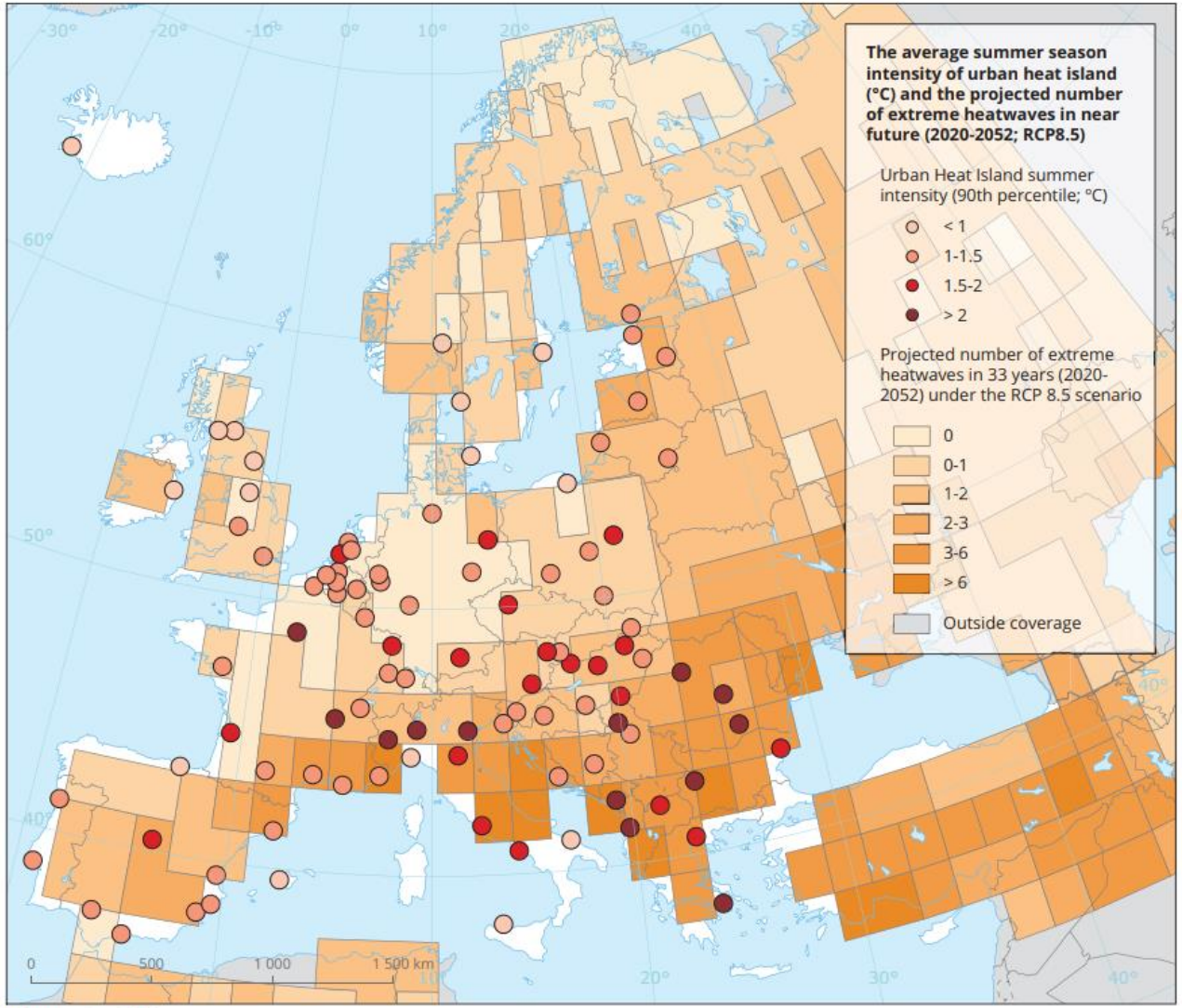
EEA report *Urban adaptation in Europe*

- Climate change is our reality
- Urgent need to adapt cities and towns
  - 75% Europeans live in urban areas
  - Cities are economic hubs
  - Social and physical characteristics exacerbate climate impacts
  - Local authorities have relevant competences to implement adaptation

European Environment Agency

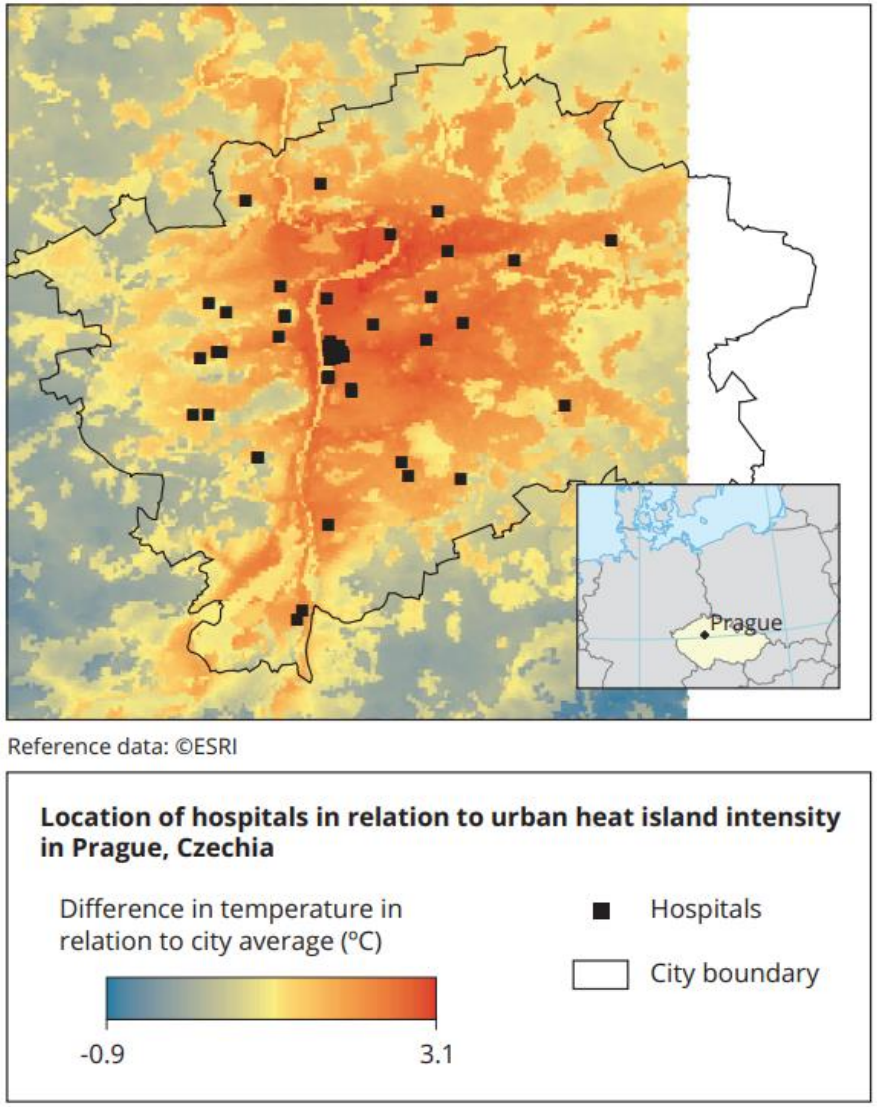
Climate risks to European cities: heat

The summer season intensity of urban heat islands (°C) and the projected number of extreme heatwaves (2020-2052; RCP 8.5)



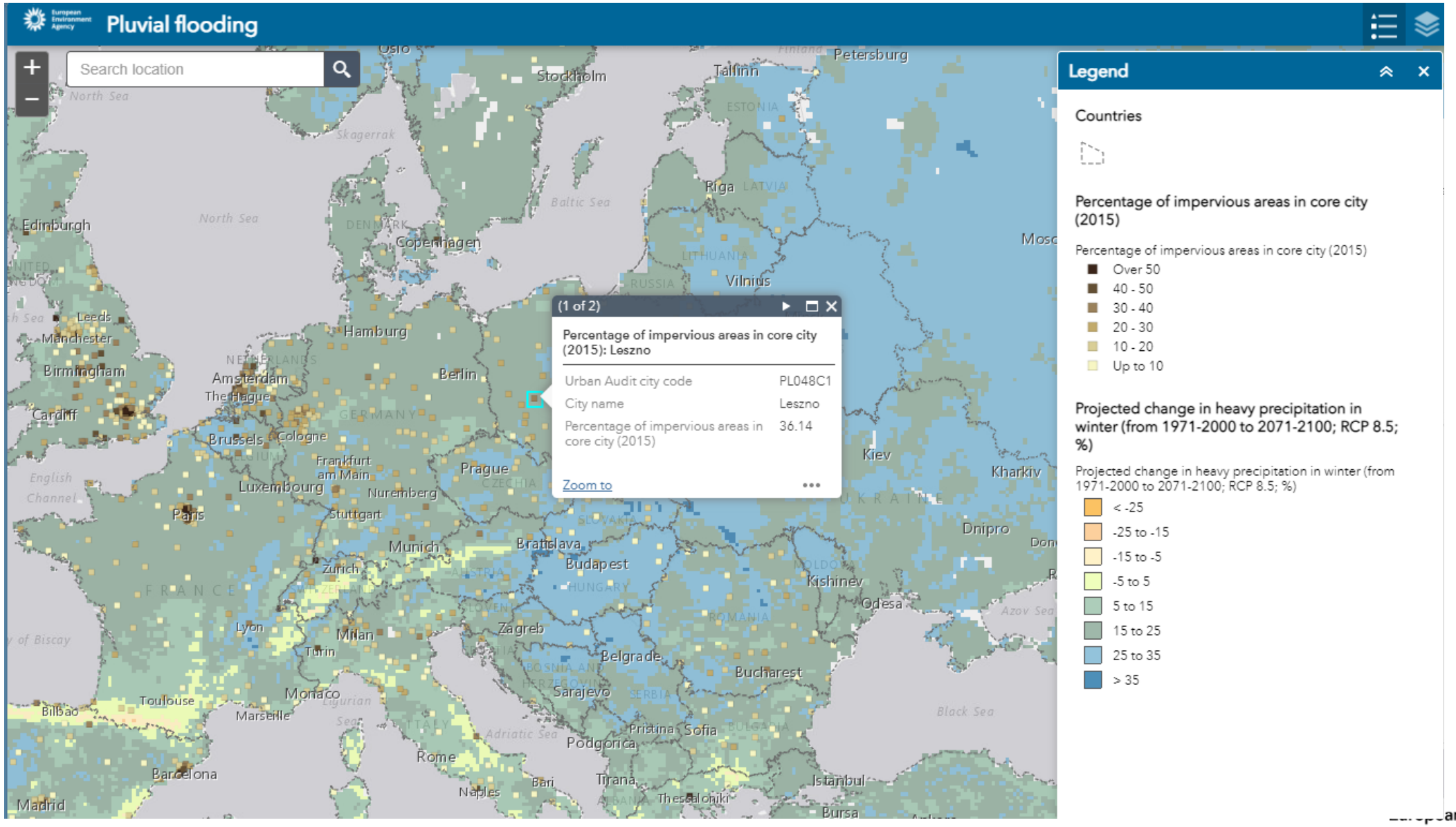
Reference data: ©ESRI

Location of hospitals in relation to urban heat island intensity in Prague, Czechia



Reference data: ©ESRI

Climate risks to European cities: pluvial flooding



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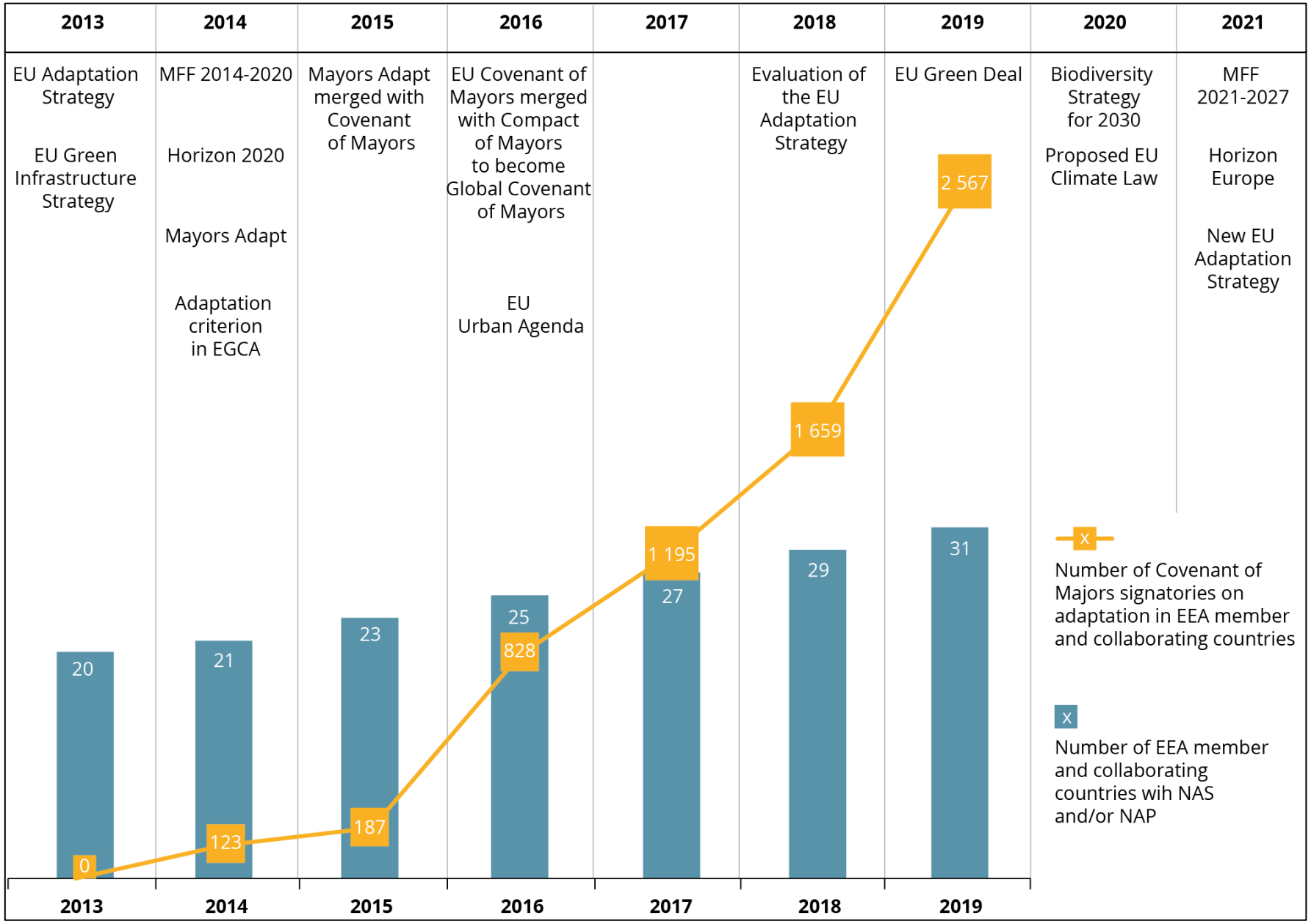
https://climate-adapt.eea.europa.eu/knowledge/tools/urban-adaptation

Progress in urban adaptation in Europe

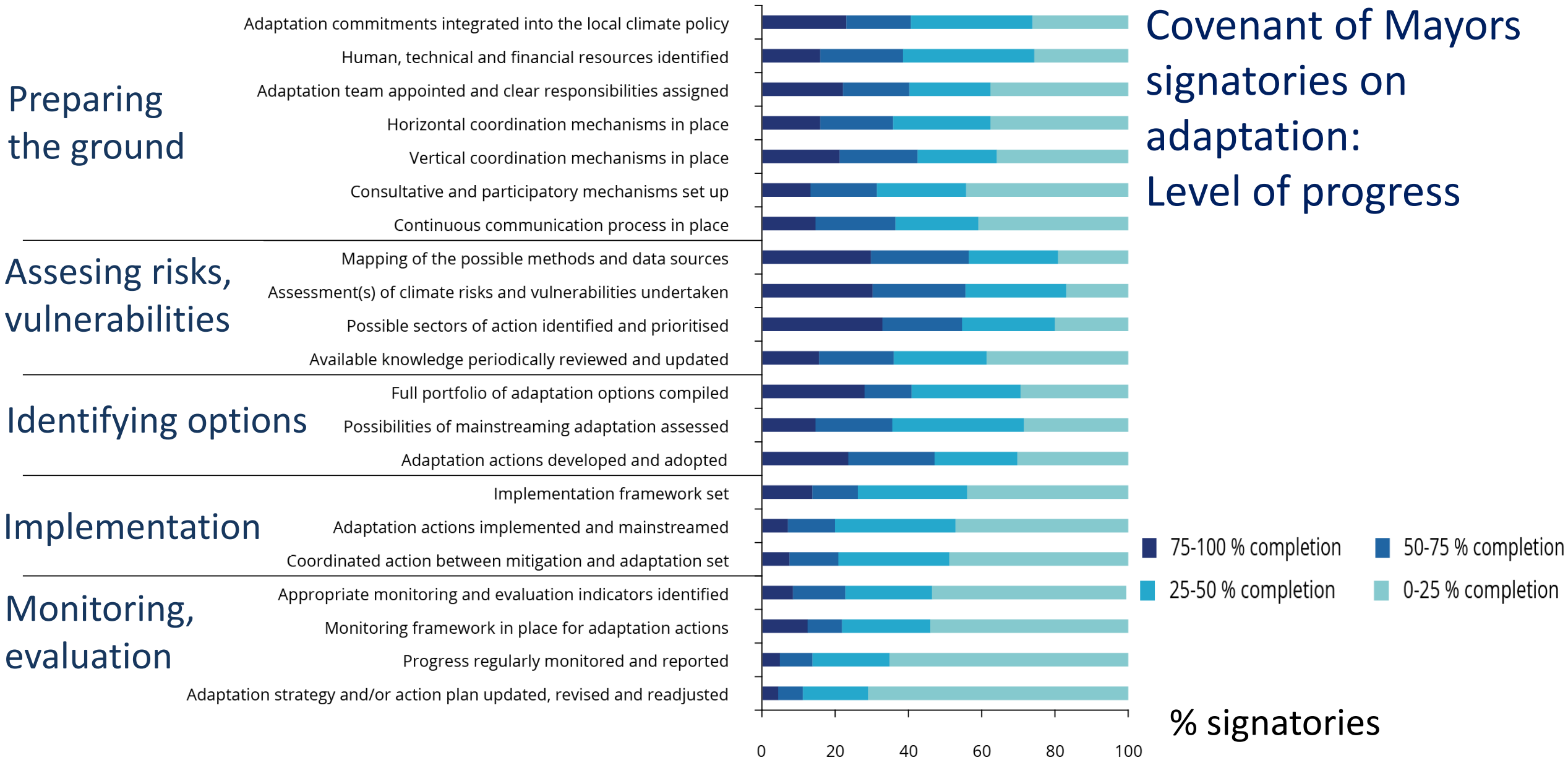


"The local level is the bedrock of adaptation, so EU support must help increase local resilience"

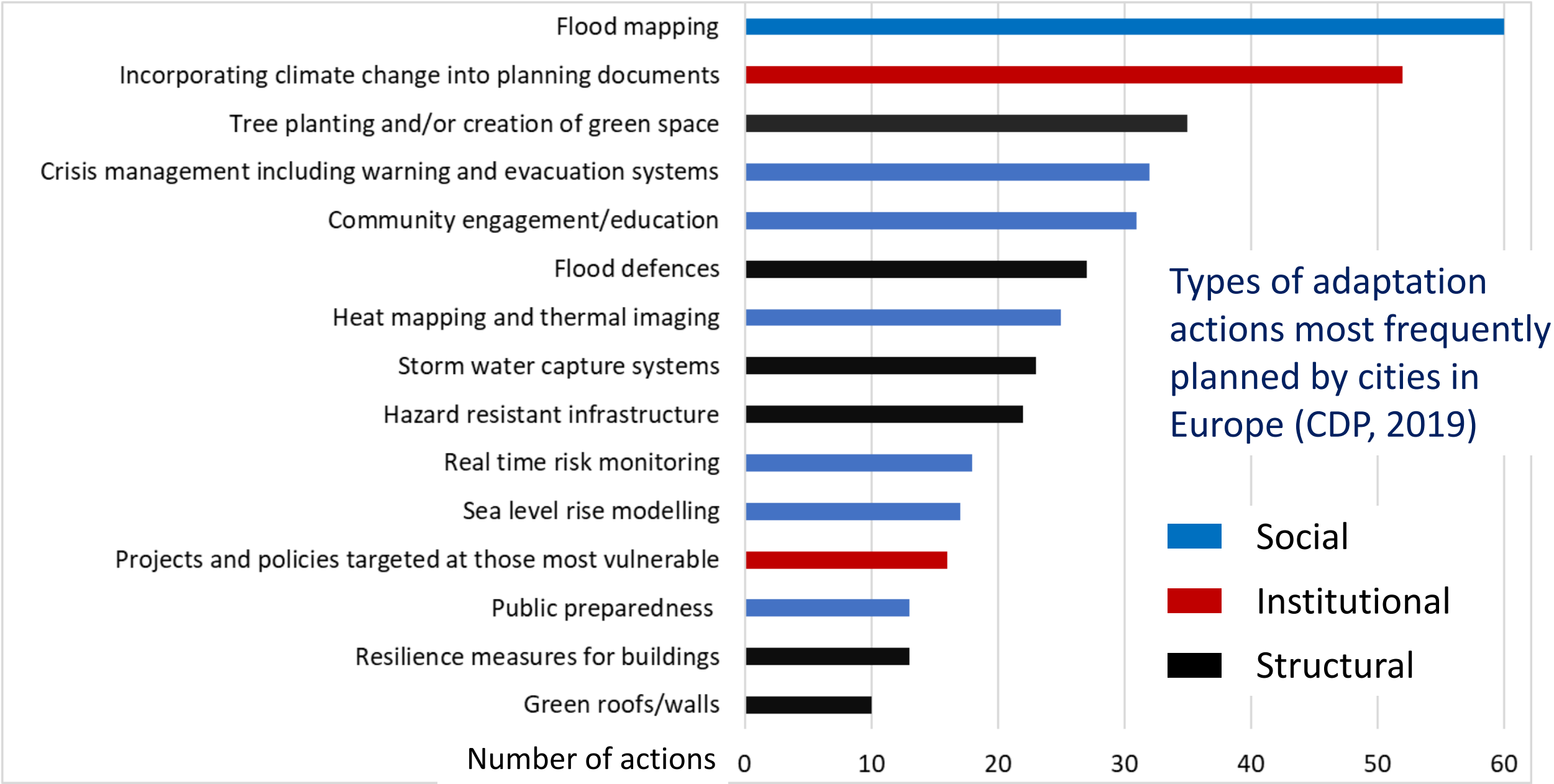
Forging a climate-resilient Europe - the new EU Strategy on Adaptation to Climate Change, 2021

European Environment Agency

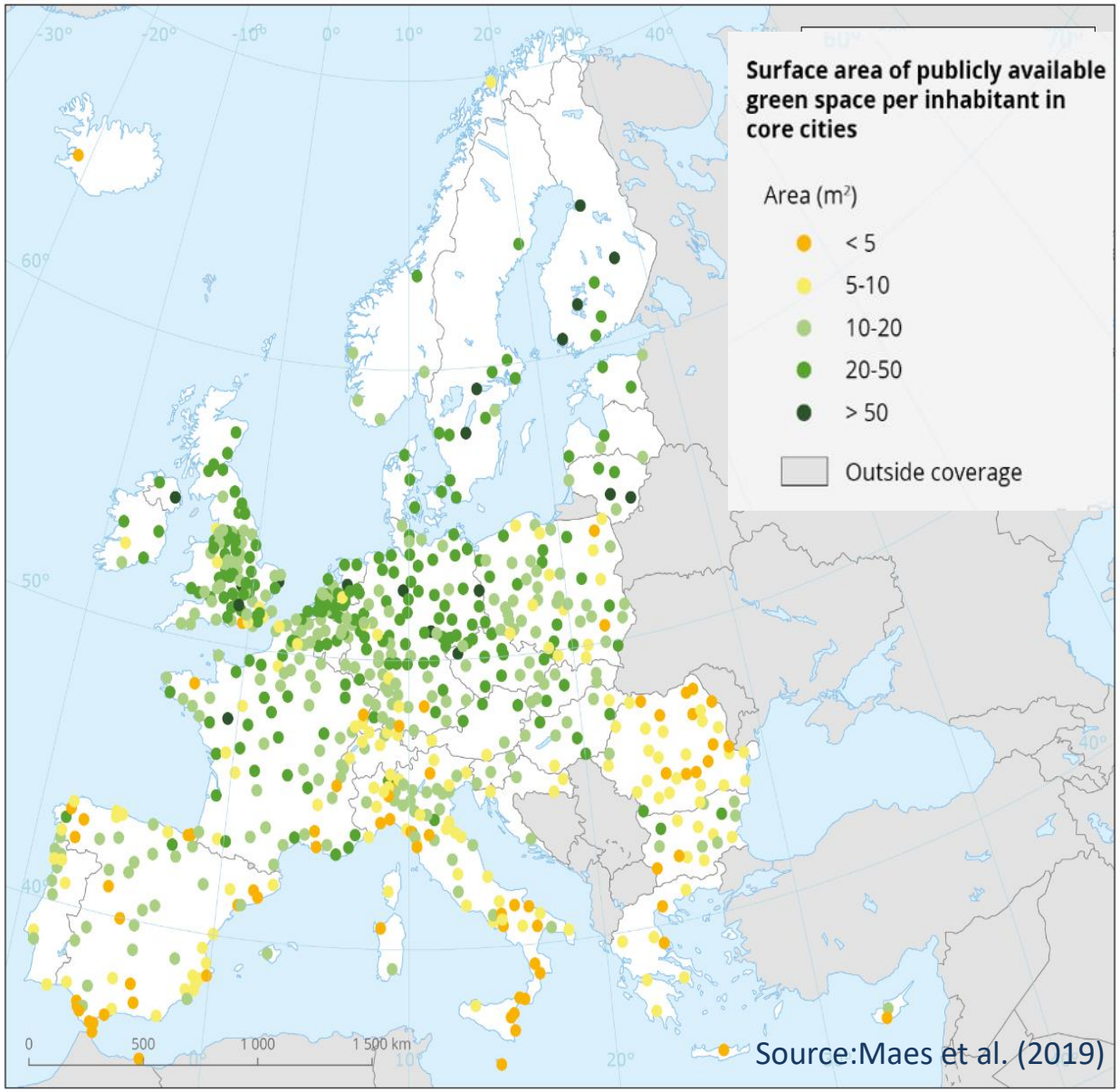
Time for IMPLEMENTATION and MONITORING of actions



Few structural actions are planned by cities



We need to change the way we plan and construct our cities



Children playing in water spraying area in Paris © Jean-Baptiste Gurliat

Szinwa Terrace in Miskolc © Alensha

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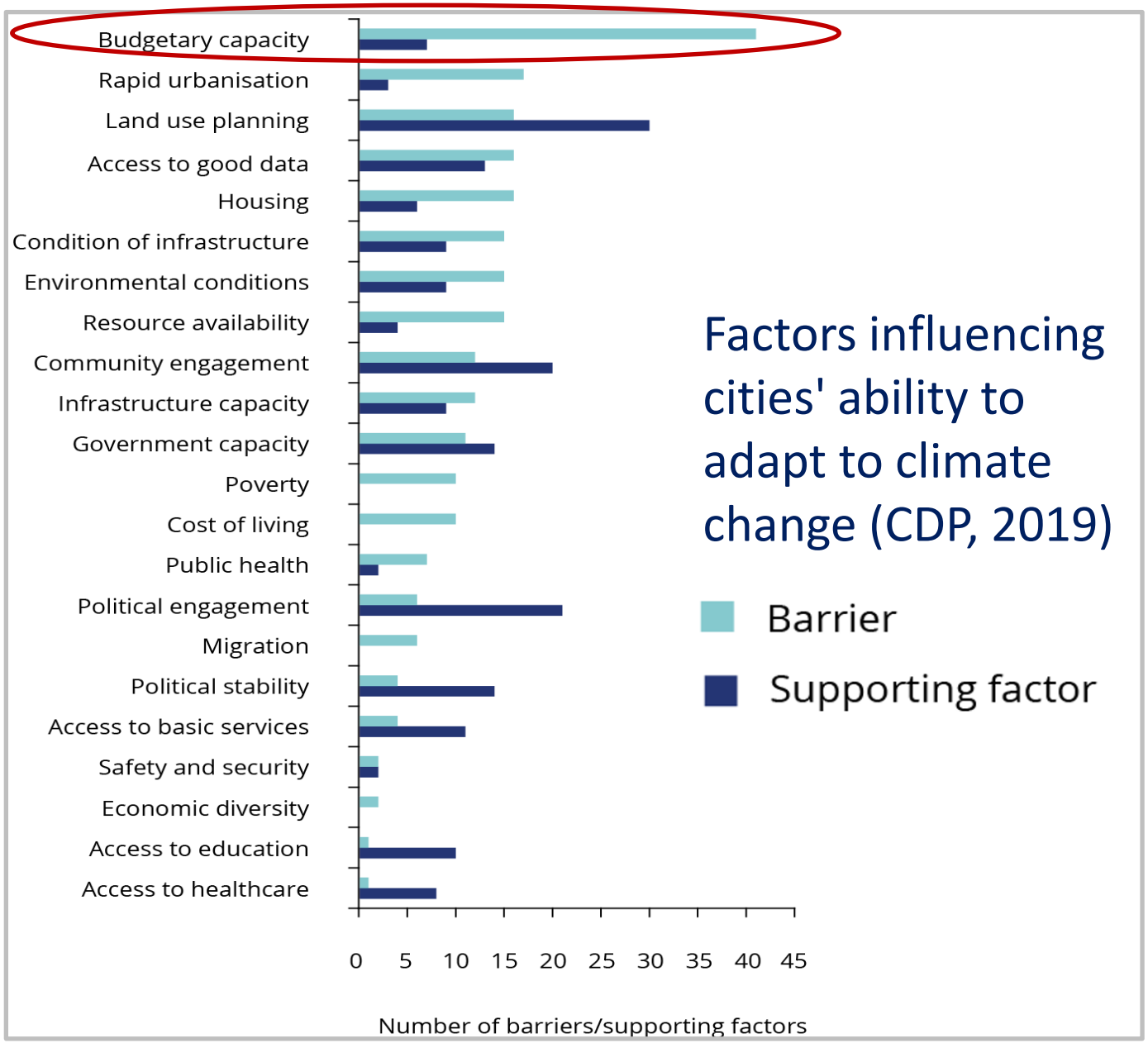
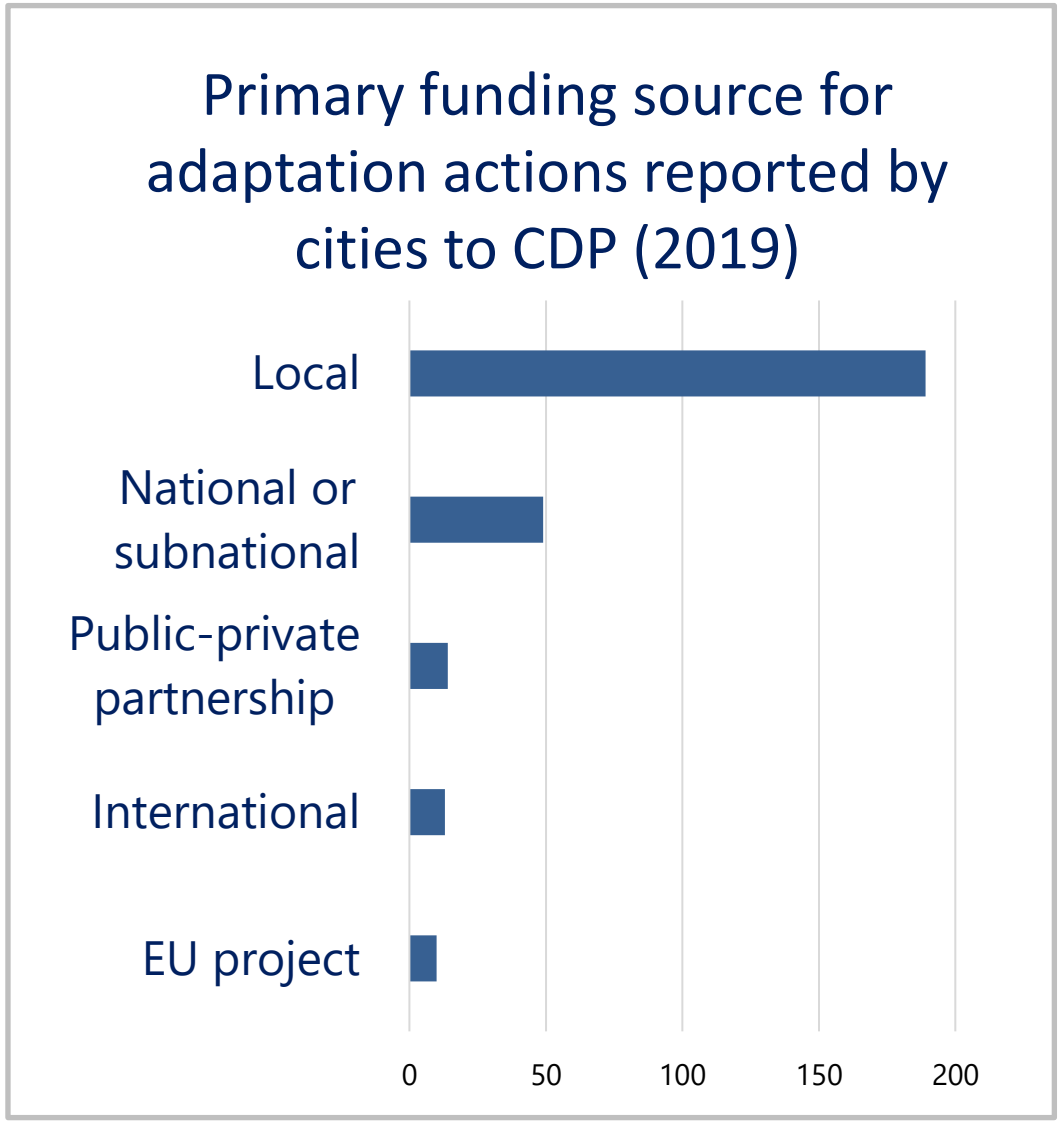
Acute need for funding of local adaptation





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Little known about the effectiveness of adaptive actions

- Various ways of measuring success
- Research into effectiveness and cost efficiency is limited
- Monitoring needs to be designed in
- Engagement of researchers, citizens and private sector to collect information

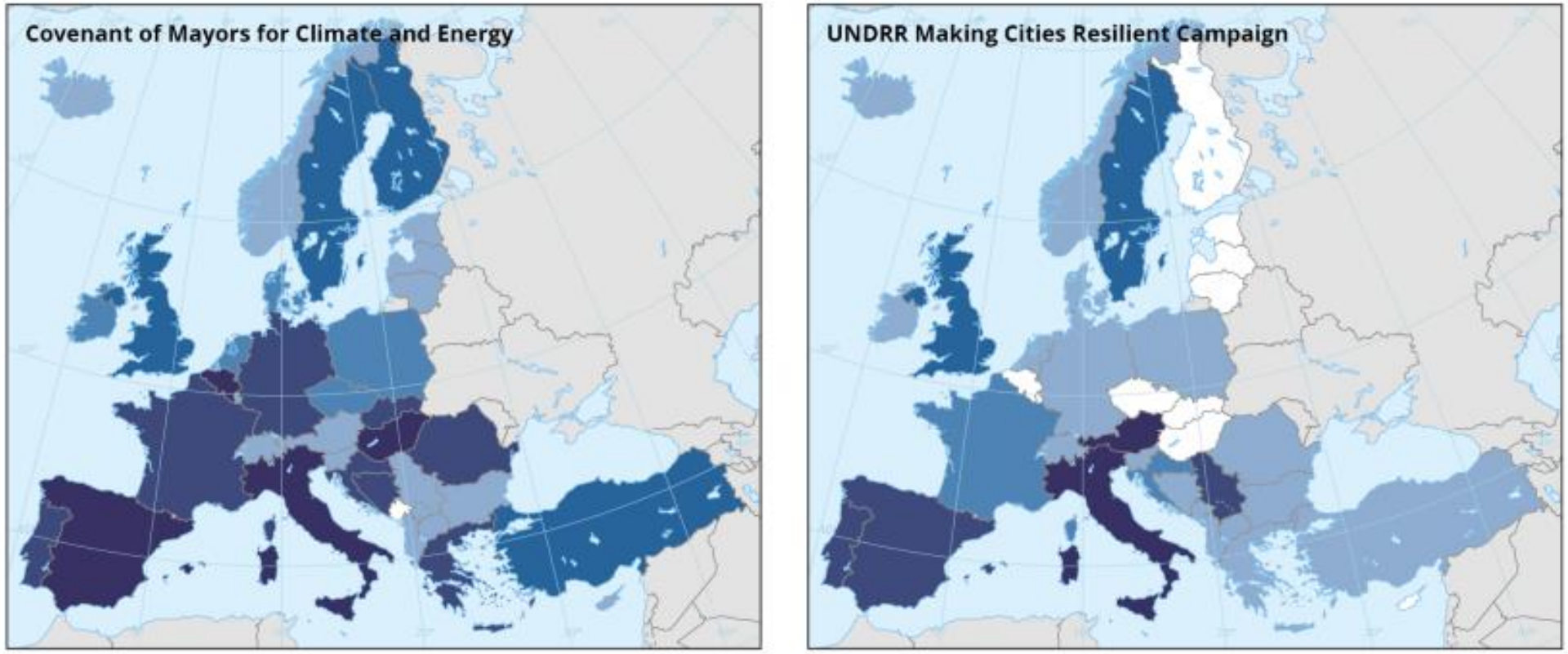
Overview of effectiveness of adaptation measures: high temperatures (excerpt)

Based on RESIN library of adaptation options

Support to urban adaptation from national level

- Engagement of cities and local authority associations in NAS design
- Regulations requiring adaptation planning or risk assessments
- Focus on climate change in spatial and urban planning
- Funding and capacity building
- Climate knowledge portals

Encouraging local action through international initiatives



Reference data: ©ESRI

Spatial distribution of local authorities committed to adaptation and disaster risk reduction through international initiatives across Europe

Number of local authorities

0 | 1-5 | 6-10 | 11-20 | 21-100 | > 100

Outside coverage

0 500 1 000 1 500 km

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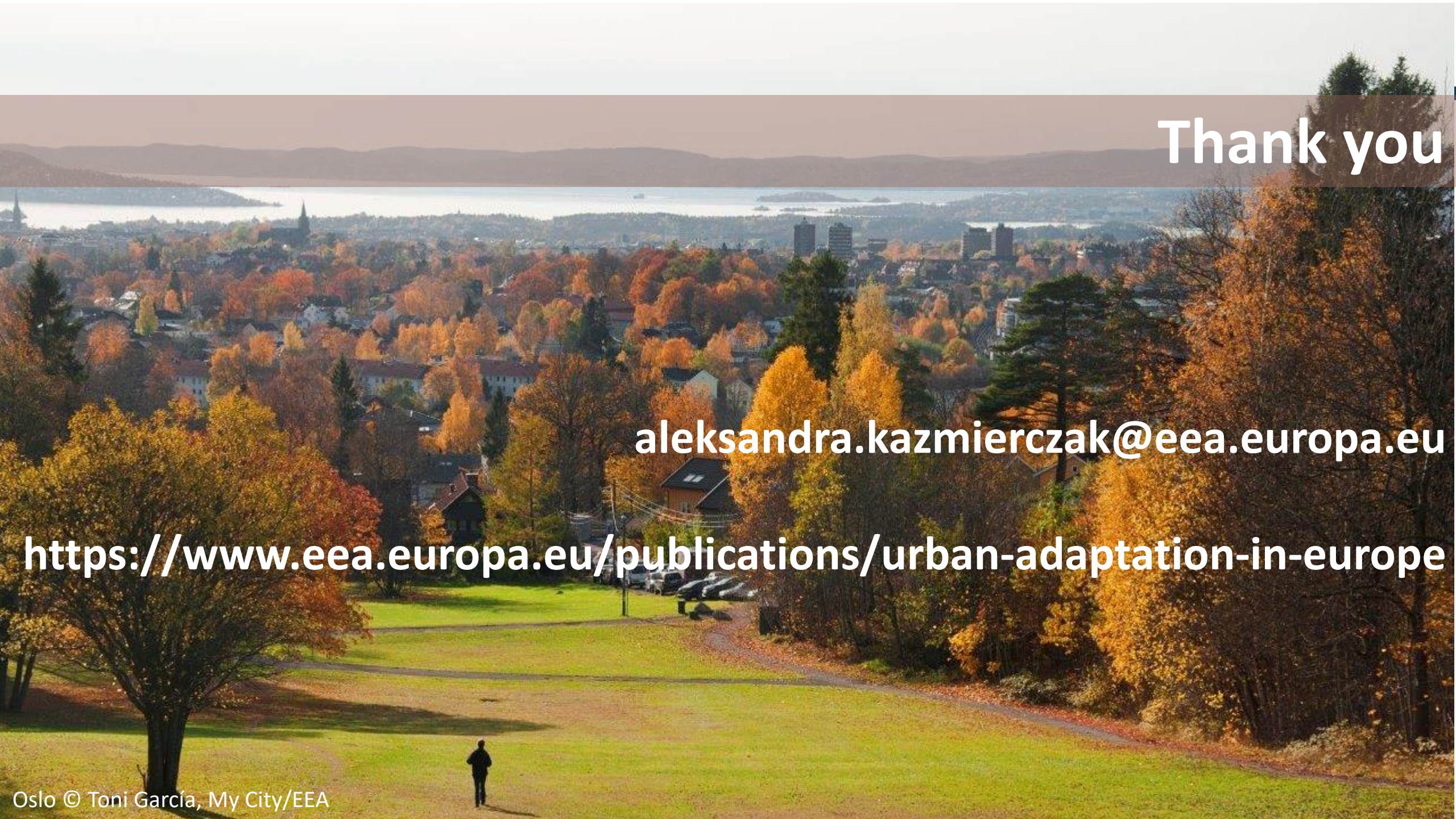

Thank you

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https://www.eea.europa.eu/publications/urban-adaptation-in-europe

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