

An aerial perspective of a modern urban development. The scene features several multi-story buildings with light-colored facades and flat roofs. Interspersed among the buildings are lush green spaces with mature trees, smaller trees, and landscaped lawns. A winding river or canal flows through the center of the development. In the foreground, there are circular public spaces with people walking and sitting. The overall atmosphere is one of a well-planned, green, and sustainable city.

Renaturing Cities for Sustainable Urbanisation

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Arup | Foresight + Research + Innovation | June 2015

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An aerial architectural rendering of a city park. The scene features a large, multi-story building on the left, a winding path through a lush green area with many trees, and a series of circular, tiered seating areas in the foreground. People are depicted walking along the paths and sitting on the tiered areas. The overall atmosphere is bright and modern, with a focus on urban greenery and public space.

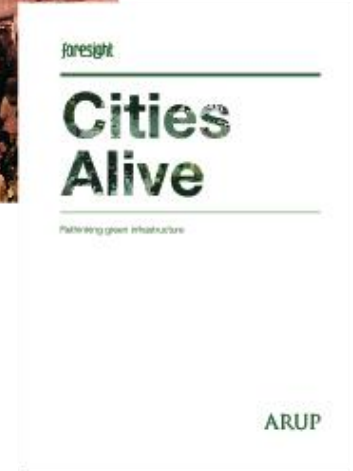
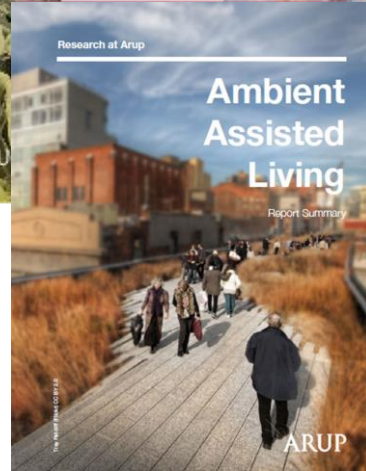
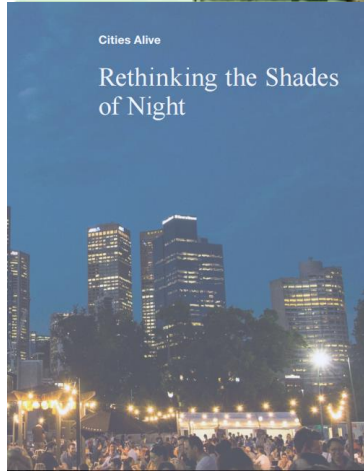
Arup Drivers Benefits Actions



2012 Olympic Park



Olympic Park, London



What will our future cities look like?

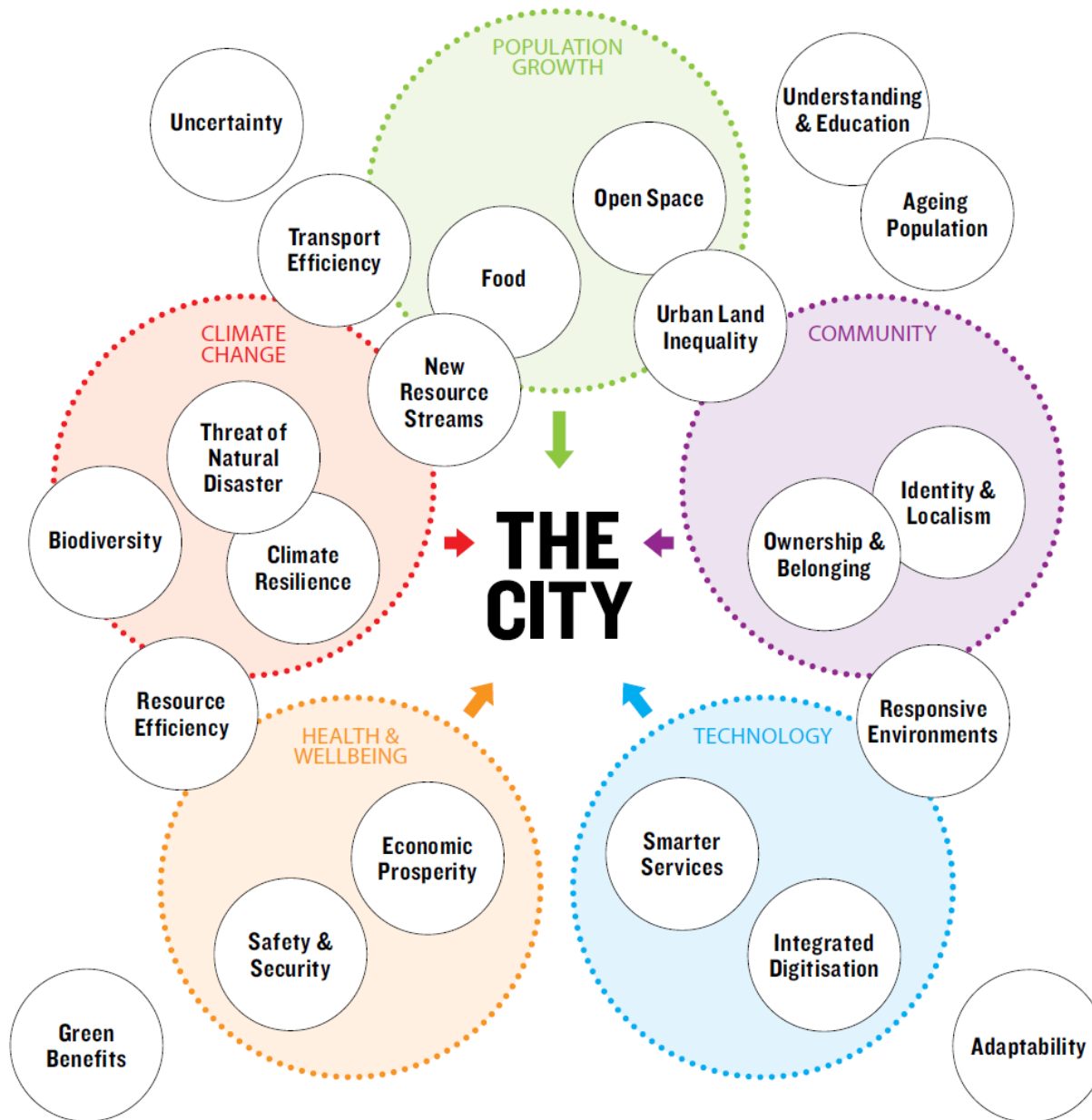


Nature-Based Solutions: Sustainable Urbanisation

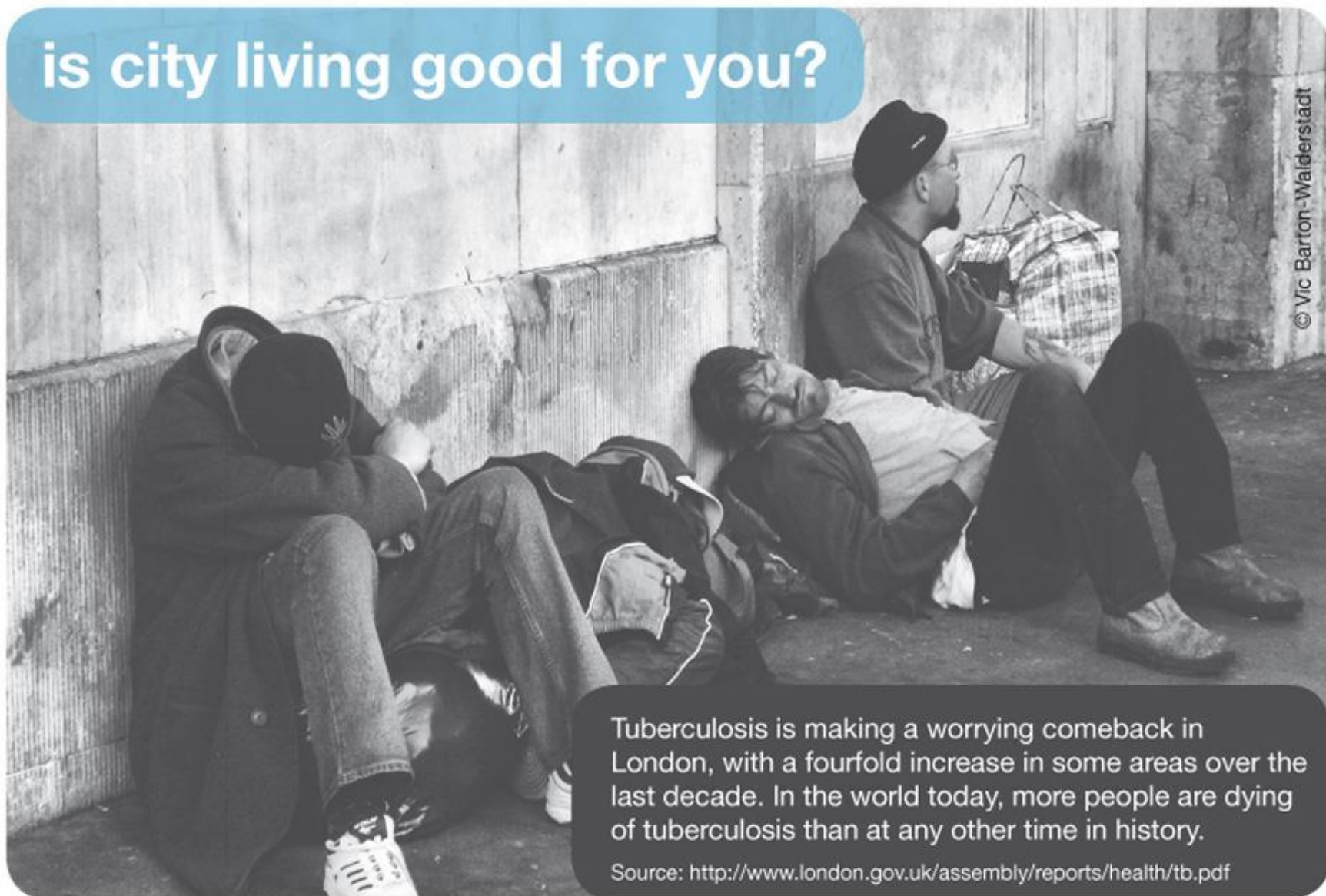


Drivers

An aerial architectural rendering of a modern urban development. The scene features several multi-story buildings with light-colored facades and dark window patterns. A large, central green space is filled with mature trees and a winding path. To the left, there's a colorful, abstract sculpture or playground structure. In the foreground, a paved area with circular tables and chairs suggests an outdoor cafe or seating area. The overall atmosphere is one of a well-planned, green urban environment.



is city living good for you?



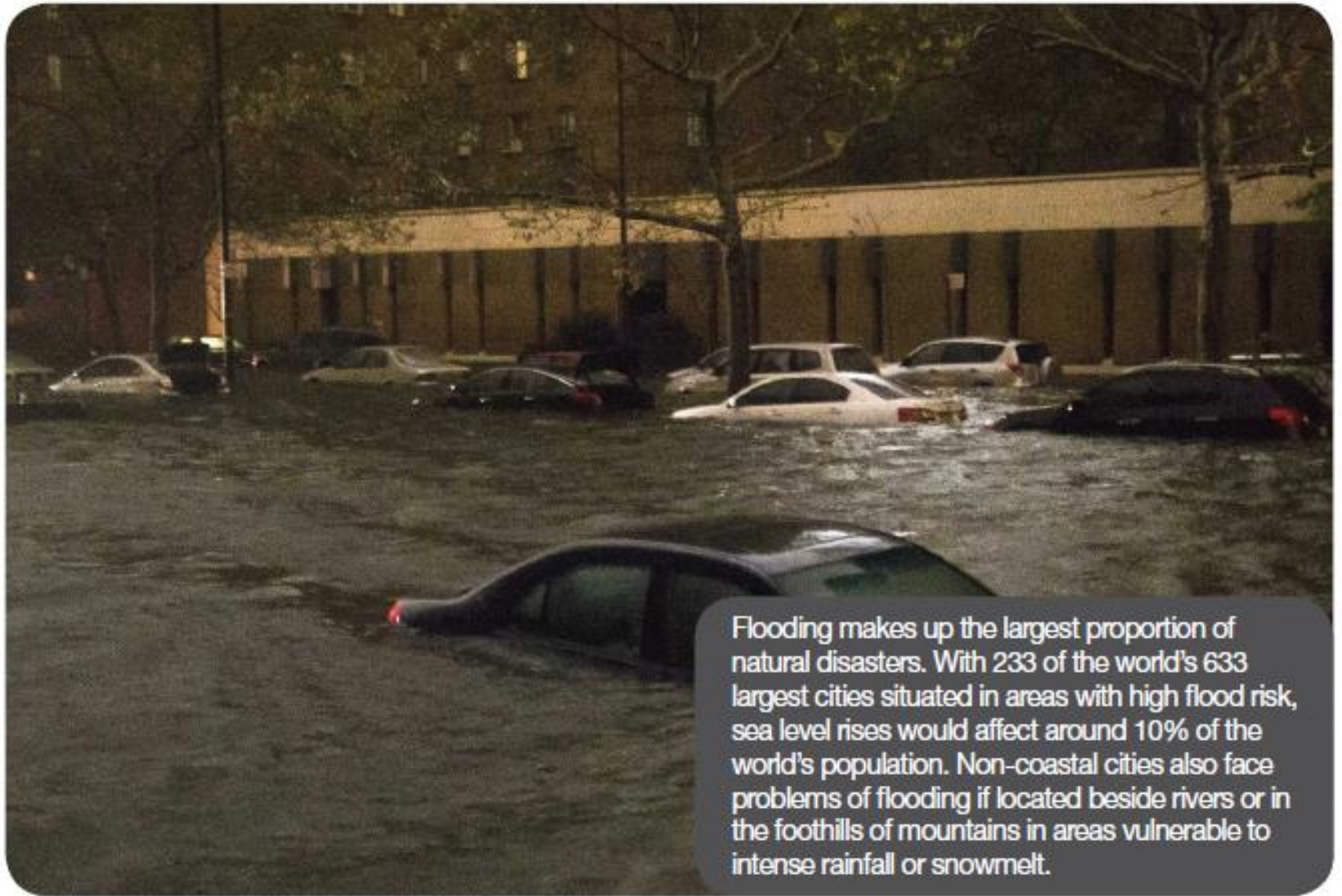
© Vic Barton-Walderstadt

Tuberculosis is making a worrying comeback in London, with a fourfold increase in some areas over the last decade. In the world today, more people are dying of tuberculosis than at any other time in history.

Source: <http://www.london.gov.uk/assembly/reports/health/tb.pdf>

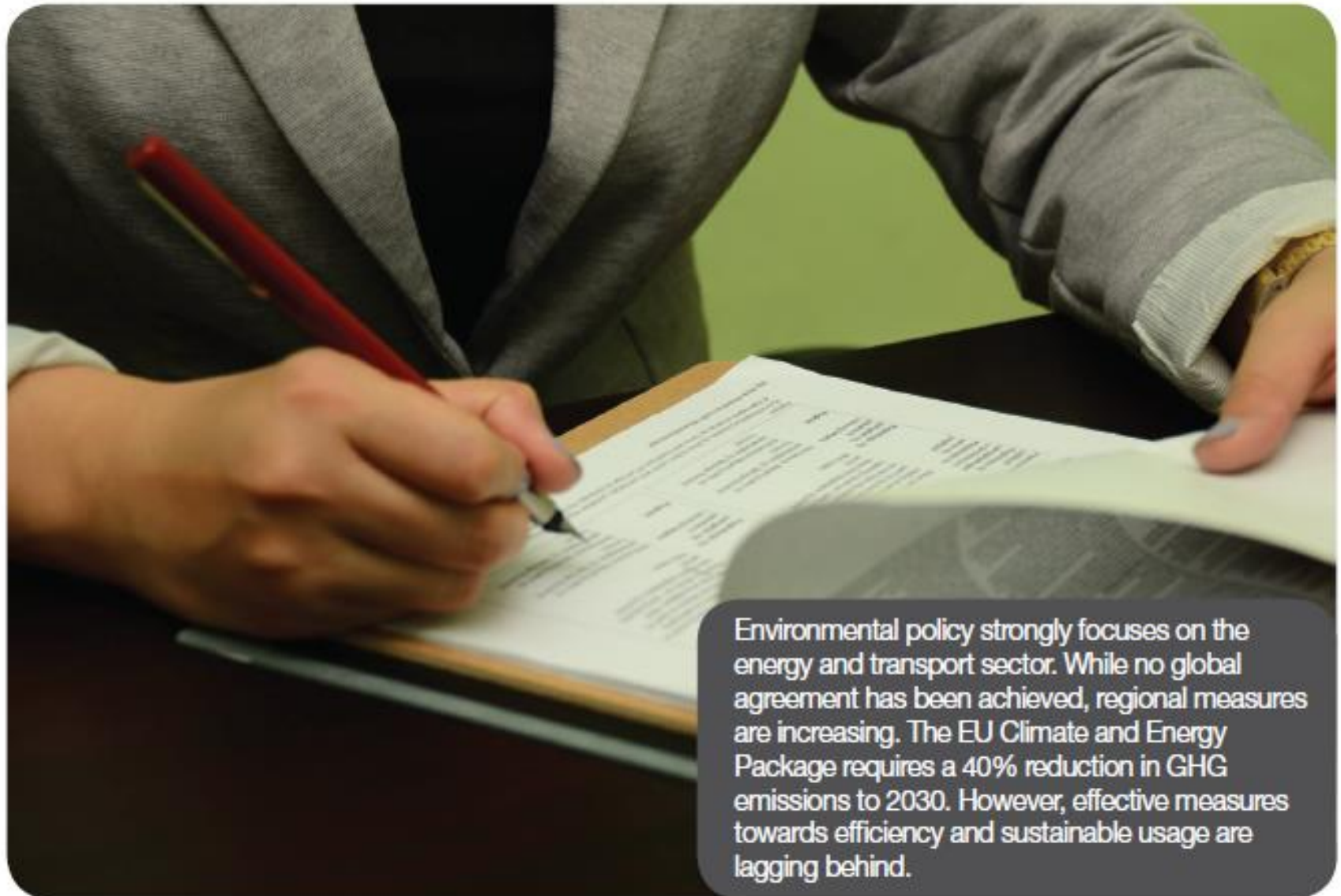
health

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flooding

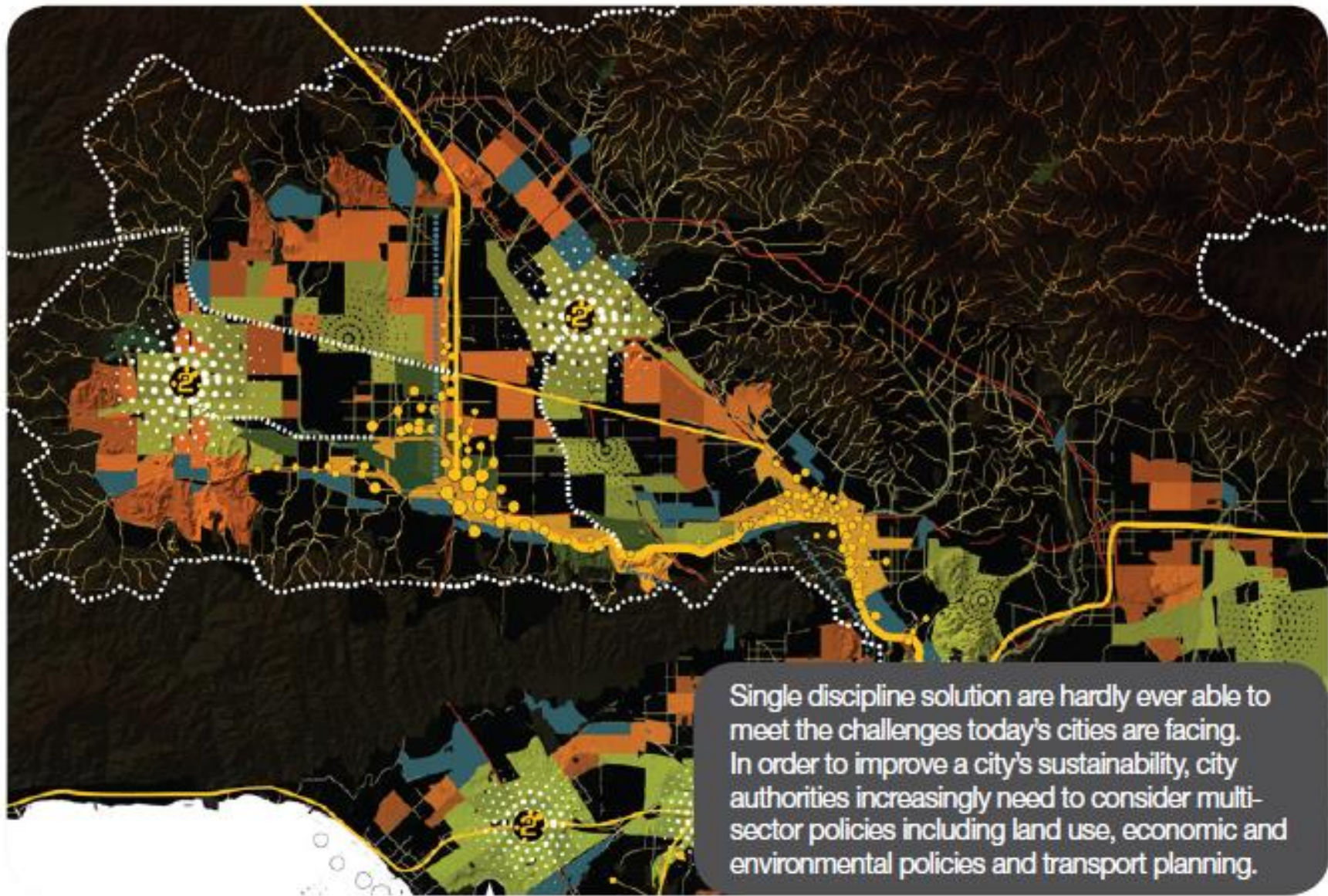
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Environmental policy strongly focuses on the energy and transport sector. While no global agreement has been achieved, regional measures are increasing. The EU Climate and Energy Package requires a 40% reduction in GHG emissions to 2030. However, effective measures towards efficiency and sustainable usage are lagging behind.

environmental policy

ARUP



integrated planning

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Benefits

An aerial architectural rendering of a modern urban development. The scene features several multi-story buildings with light-colored facades and dark window patterns. A large, central green space is filled with mature trees and a winding path. To the left, there's a colorful, abstract sculpture or playground structure. In the foreground, a paved area with circular tables and chairs suggests an outdoor cafe or seating area. The overall atmosphere is one of a well-planned, green urban environment.

A large crowd of people is gathered on a grassy hill, sitting and standing, enjoying the outdoors. In the background, the London 2012 Olympic Stadium and the ArcelorMittal Orbit sculpture are visible under a blue sky with white clouds.

1

Social Benefits: Rethinking Urban Communities

**Encouraging Healthy and
Sustainable Lifestyles**

**Supporting Urban
Communities**

**Investing in
Liveable Spaces**



the sooner you park your car,
the sooner you can stop thinking

Community-led regeneration:
Strength identity of the area



Public interventions Park(ing) Day:
Highlight issues of car-dominant spaces



2

Environmental Benefits: Smart and Resilient Environments

Enabling Long-Term
Climate Resilience

Creating Smart and
Connected Landscapes

Fostering Urban
Biodiversity

Traffic calming measures:
Create illusion of speed





Designing for future climate change: Design for heat expansion and water permeability

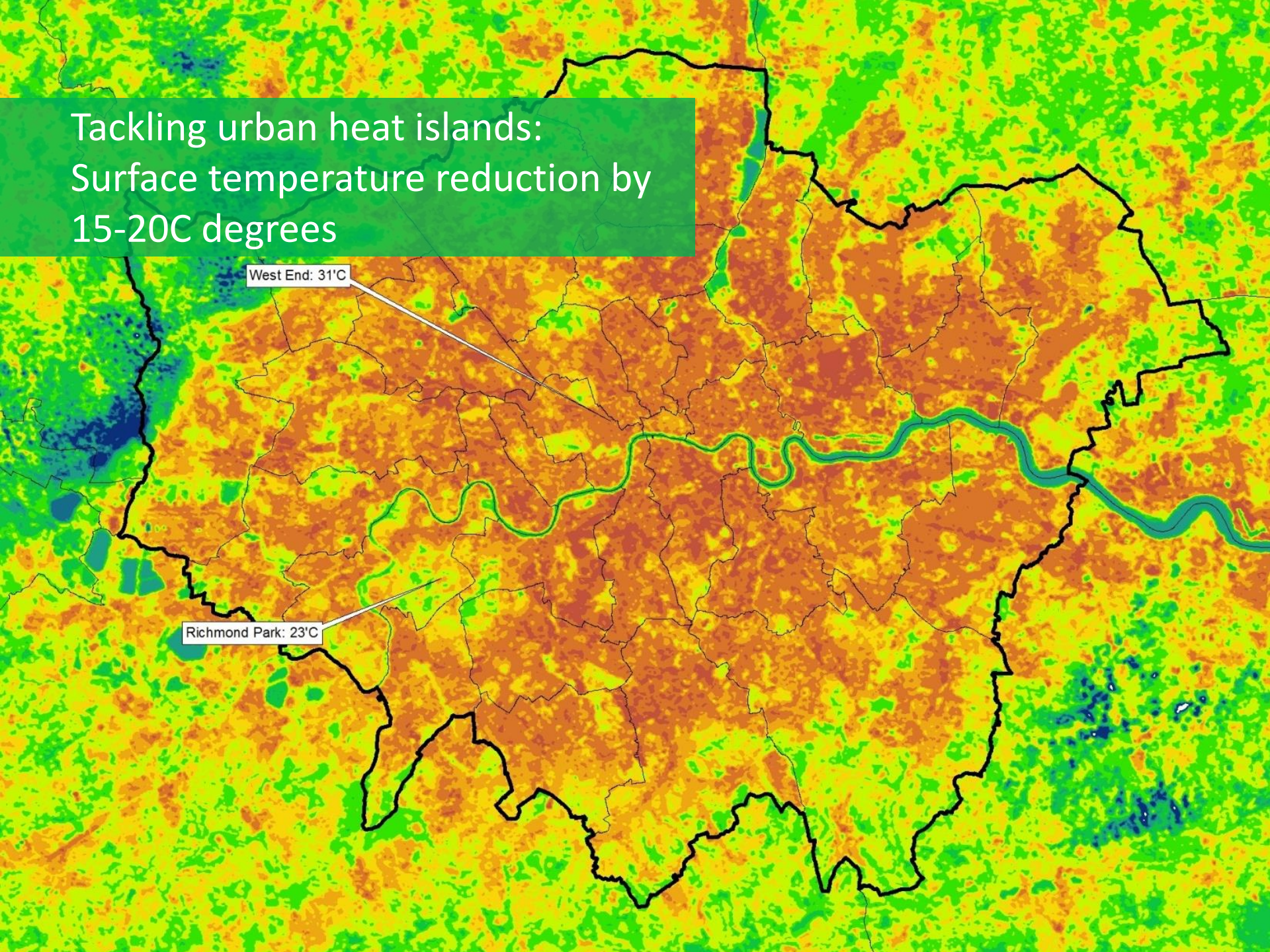
**“Existing urban green can
slow down and reduce storm
water runoff by 4 to 8%”**

Herrera Environmental Consultants, The Effects of Trees on
Storm Water Runoff (2008)

Tackling urban heat islands: Surface temperature reduction by 15-20C degrees

West End: 31°C

Richmond Park: 23°C



The background image shows a wide river flowing through a city. In the foreground, a modern bridge with a unique, sculptural design spans the river. The bridge has a green, tree-like structure on its left side. In the background, a city skyline is visible, featuring various buildings, including a prominent church with a tall spire. The sky is blue with some white clouds.

3

Economic Benefits: Urban Resource Streams

Integrating Urban Food

Renewing Urban Spaces

Enabling Energy and
Resource Efficiency

i-Tree Eco software: Placing a value on natural assets

"City trees raise property values by 5-18%"

Cabe Space 2005

Maximising the opportunities of infrastructure:
Improve city environment



Cheonggyecheon River in Seoul



Renewing urban spaces:
30-50% land price increase



An aerial architectural rendering of a modern urban park. The scene features several multi-story buildings with light-colored facades and dark window patterns. A large, central green space is filled with mature trees and a winding path. In the foreground, there are circular paved areas with people walking. To the left, a colorful, abstract sculpture is visible. The overall atmosphere is bright and modern, with a focus on integrating nature and urban architecture.

Actions

Recommended Research and Innovation actions

Sustainable Urbanisation

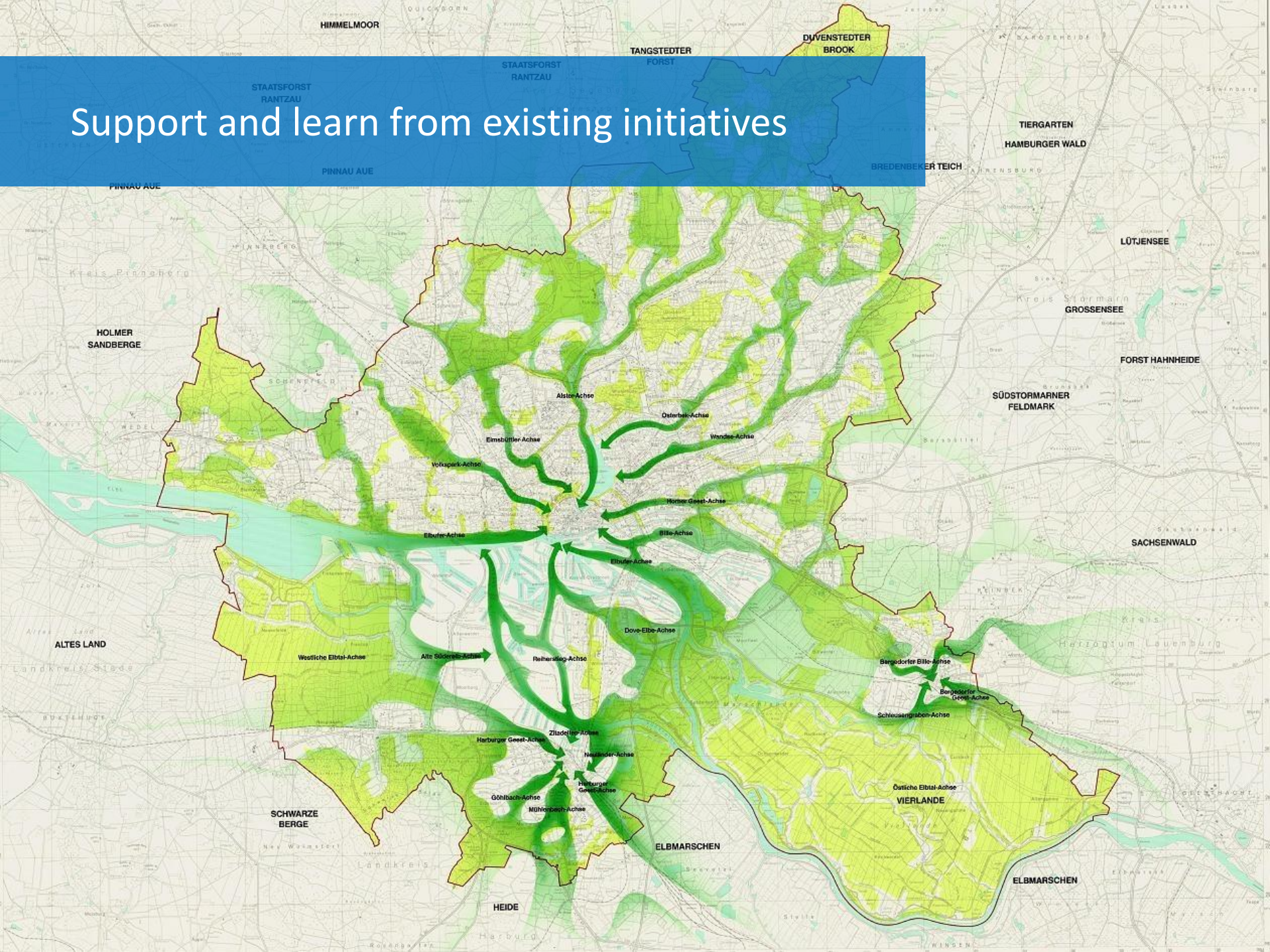


Urban regeneration through
nature-based solutions



Nature-based solutions for
improving well-being in urban areas

Support and learn from existing initiatives



BAF

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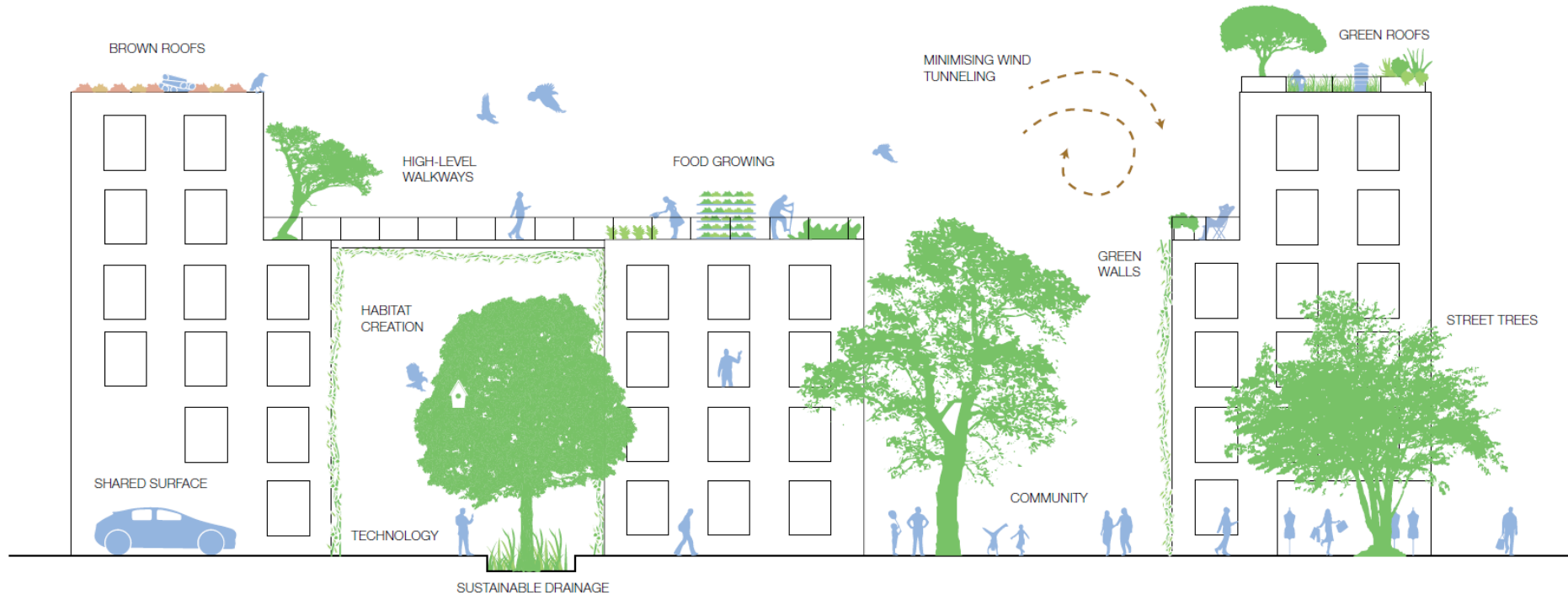
Ecologically effective surface areas

Total land area

Development of effective policy



Support large scale pilots to generate evidence for developers and local authorities





foresight

Cities Alive

Rethinking green infrastructure

Report and illustration
available at arup.com

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