

# Sustainable urban Europe



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European Environment Agency



The background of the slide is a satellite-style aerial photograph of a rural or semi-rural area. It shows a dense network of green fields, some with darker patches indicating crops or trees. Several winding, light-colored paths or roads are visible, creating a sense of organic growth and natural patterns.

What does  
urban  
mean for Europe's environment

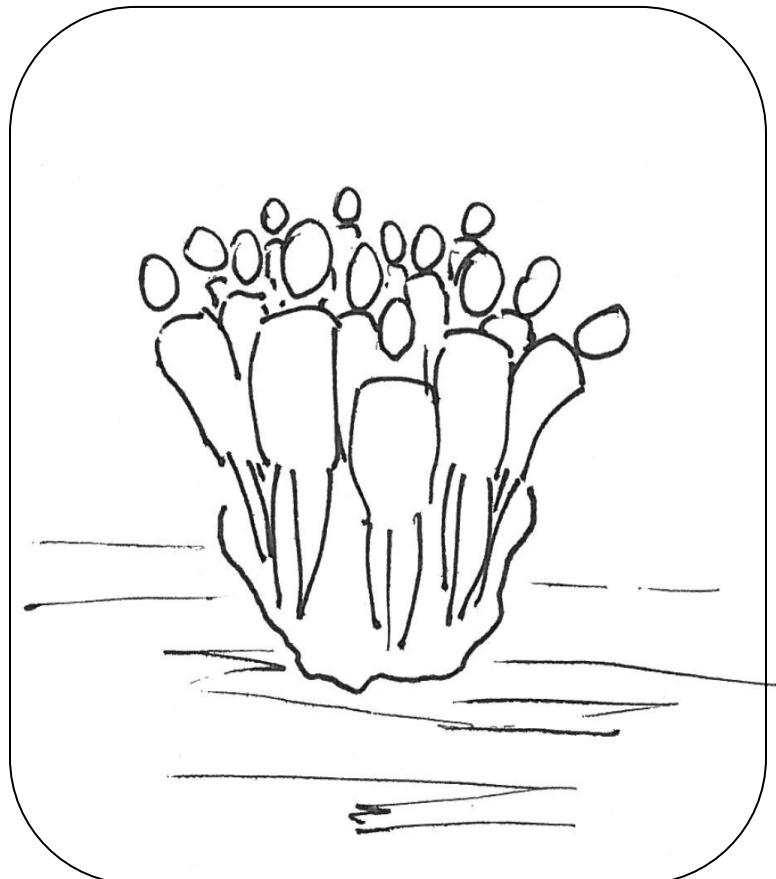


# Cities in Europe ...

**4% area**



**75% people**

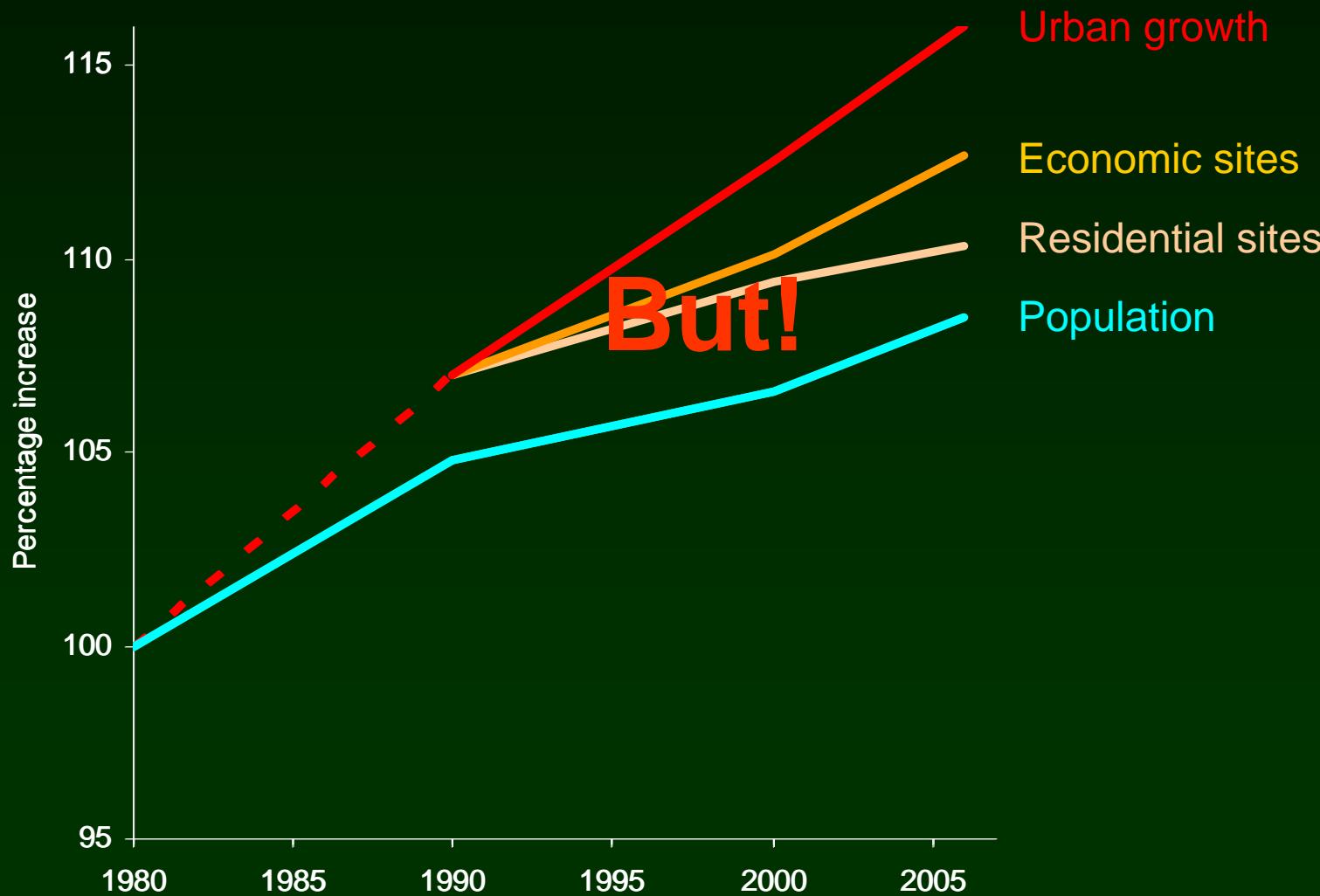


1990 → 2000 → 2006

Land use changes *slow down*



# Urban Growth in Europe

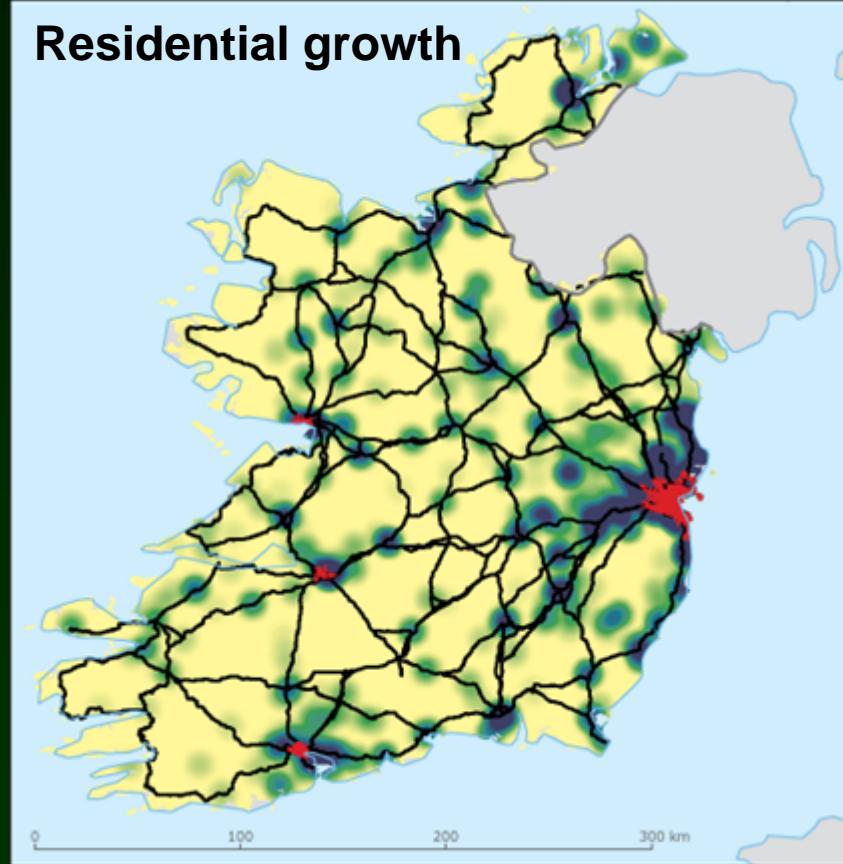


# Baltic States, 2000-2006

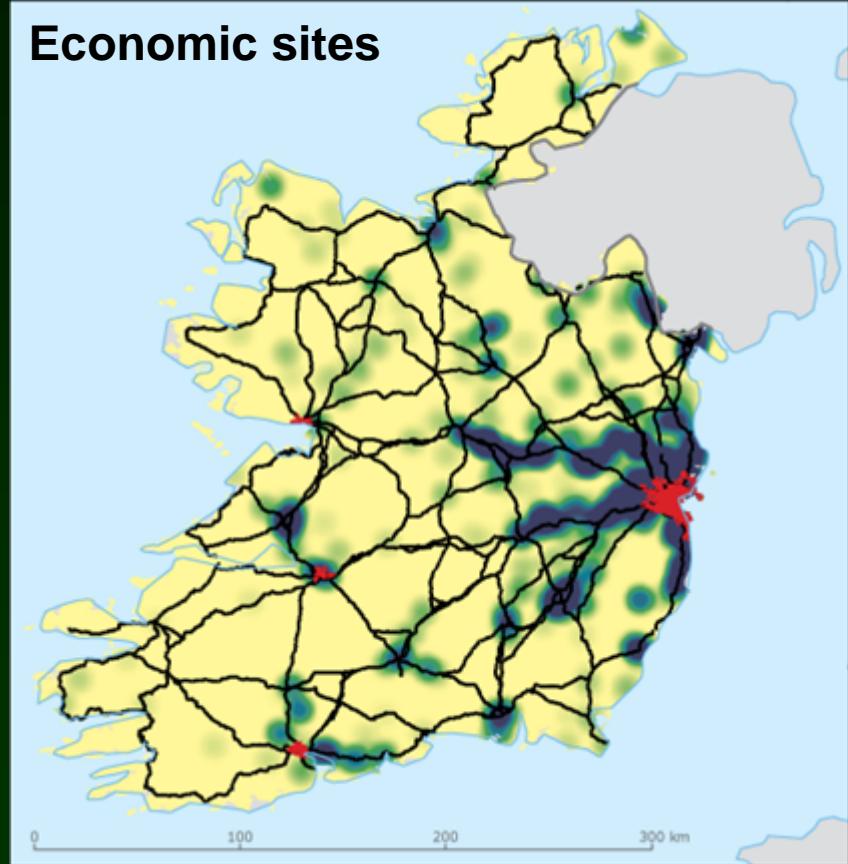


# Ireland, 2000-2006

Residential growth



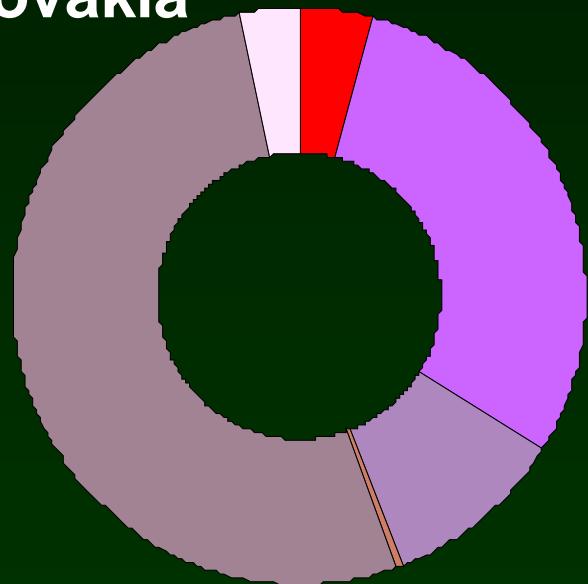
Economic sites



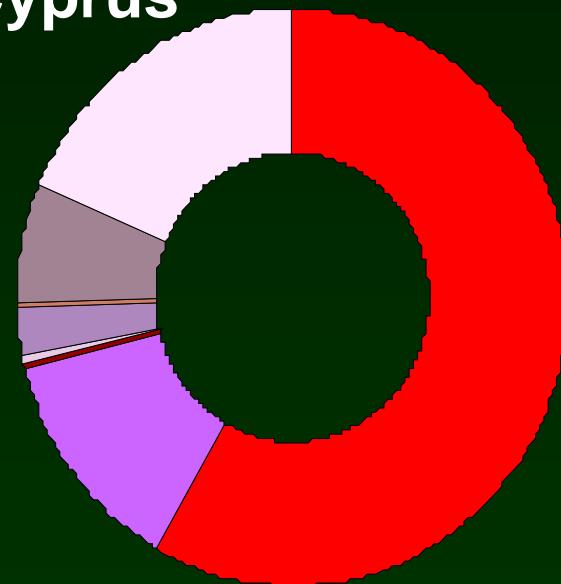
# What grows?

Formation by artificial land take 2000-2006 [% of total]

Slovakia



Cyprus



- █ urban
- █ industrial / commerce
- █ mineral extraction

- █ construction
- █ sport / leisure



The Hague

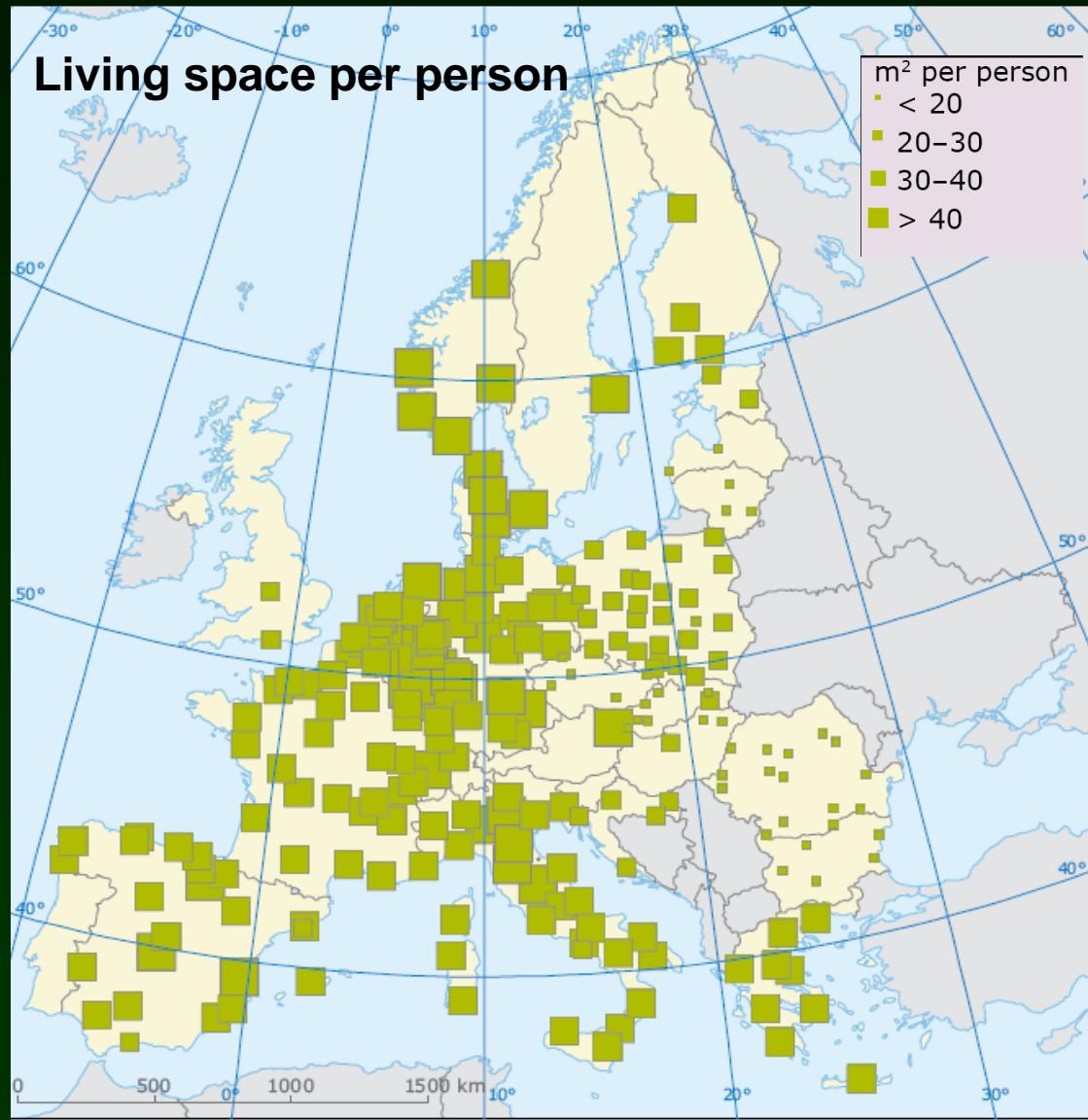
Utrecht

Rotterdam

**NETHERLANDS**

's-Hertogenbosch

# Will the East catch up?

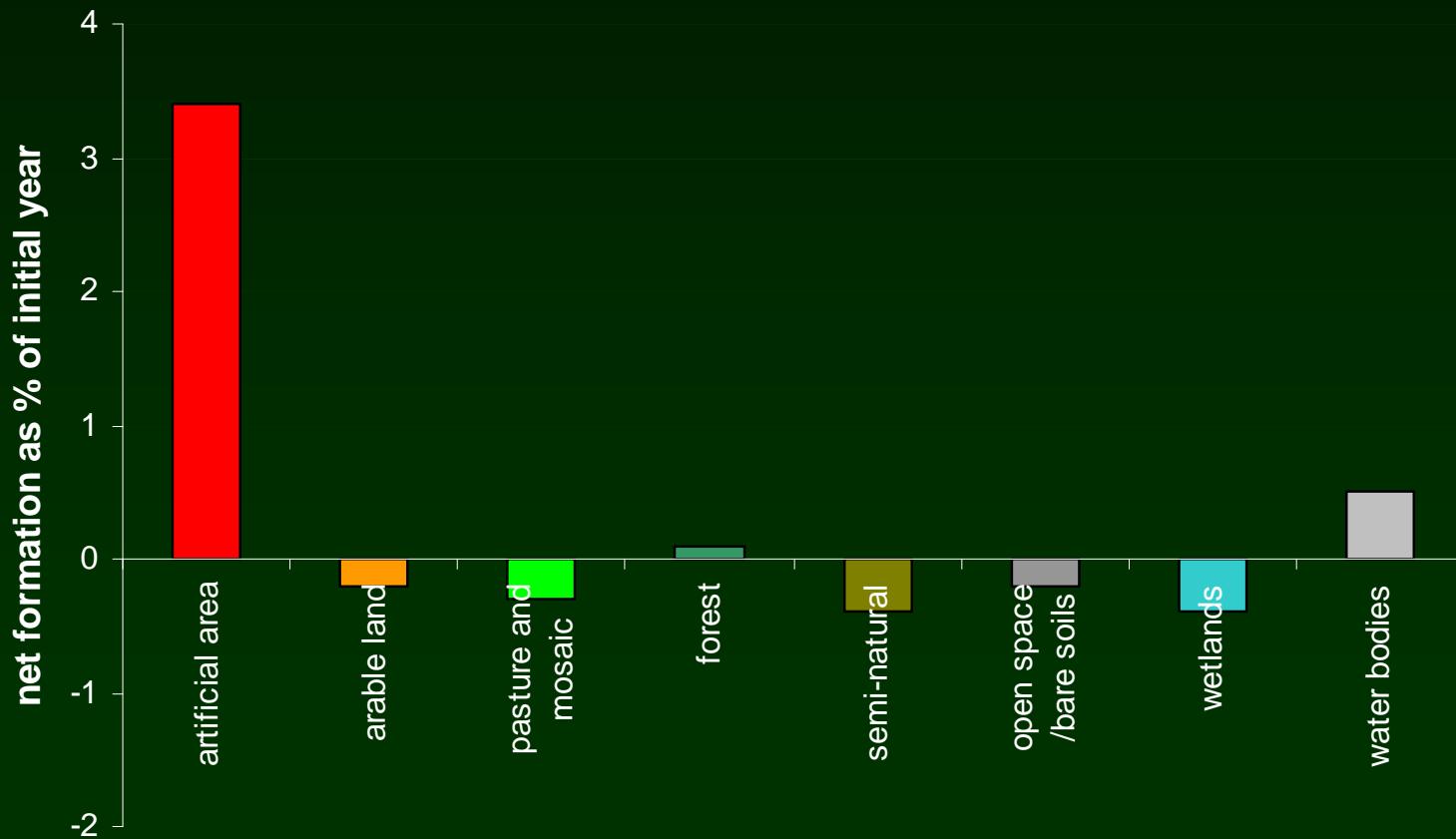


# Land use conflicts



# Land cover changes

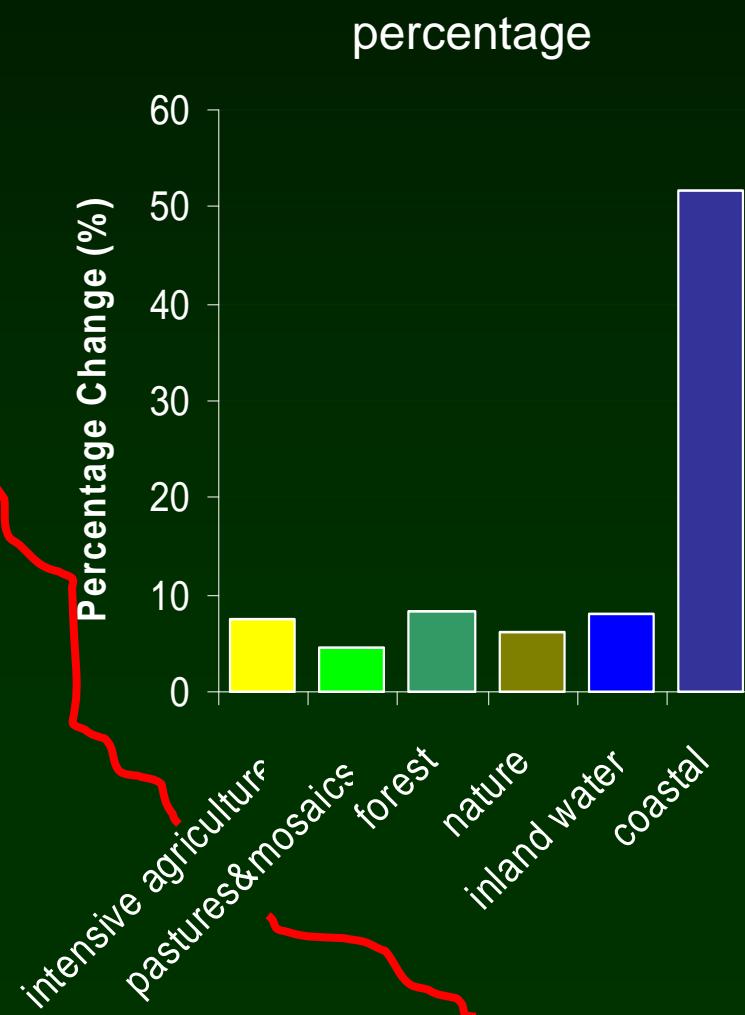
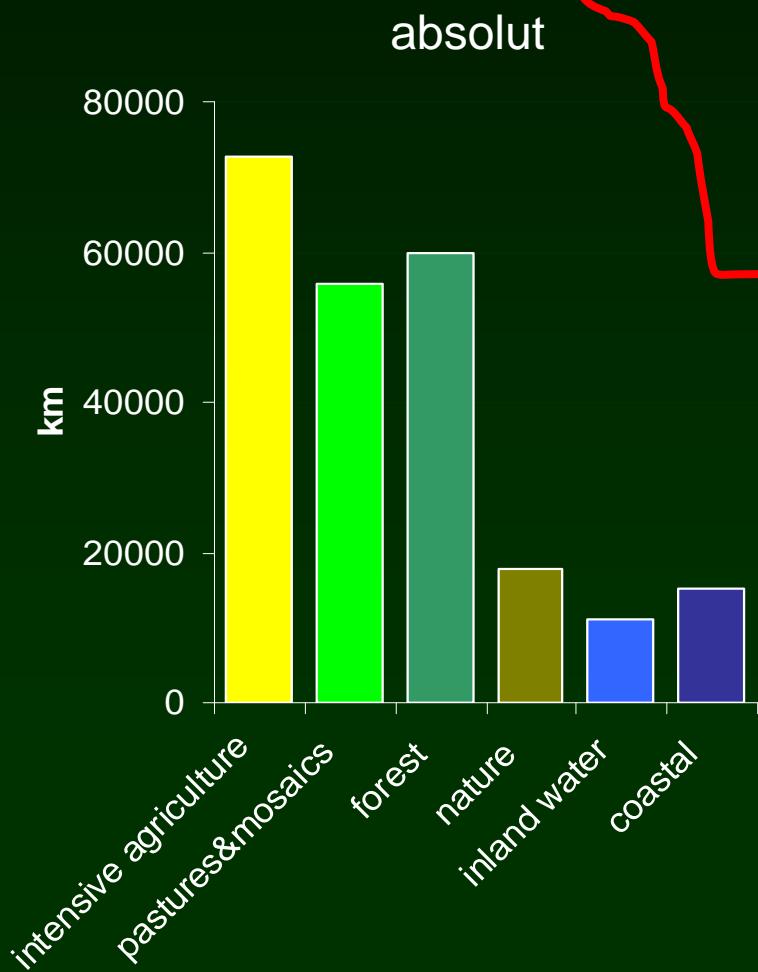
2000-2006



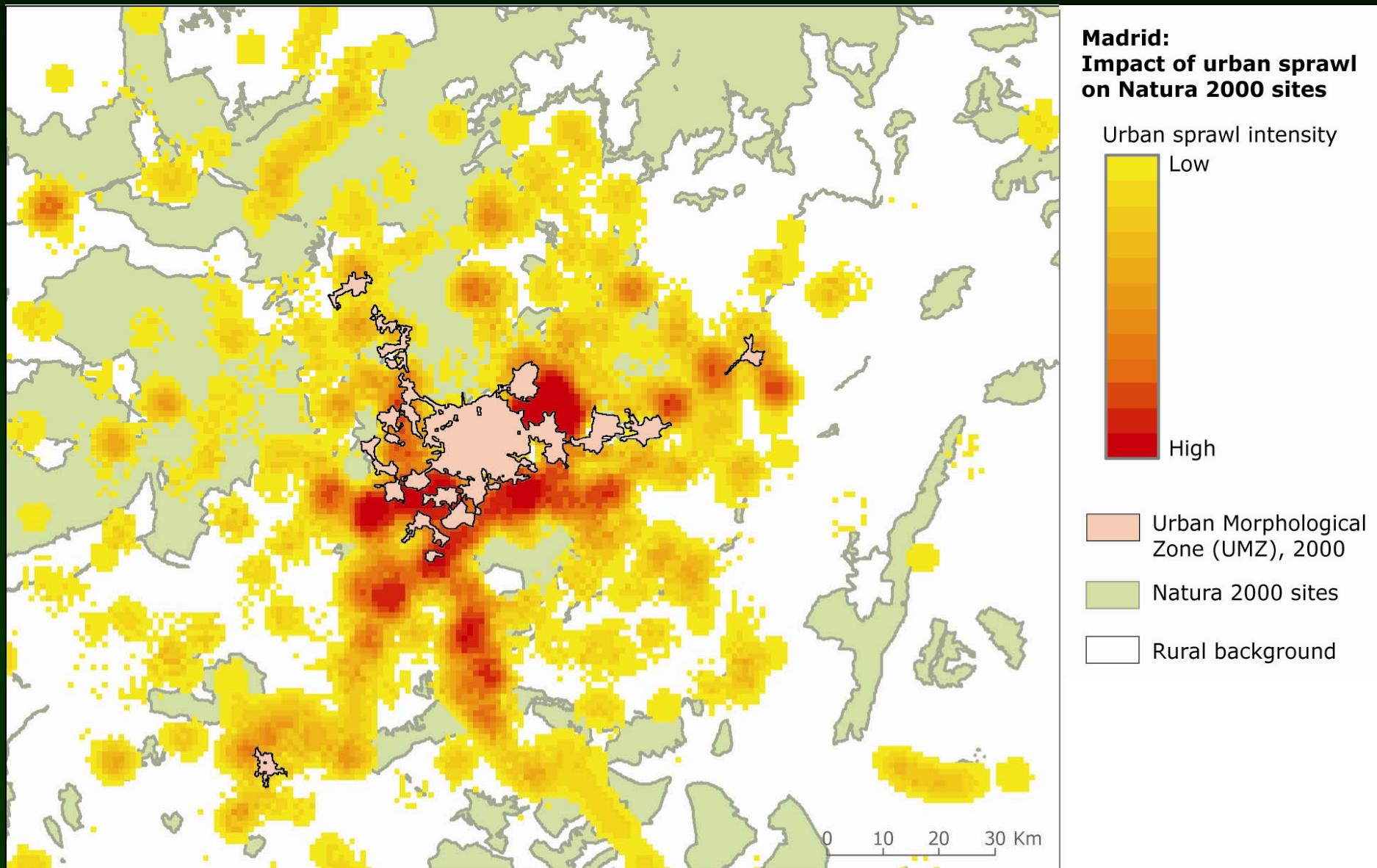
# Changes of ecotones

## urban/rural, 1990-2006

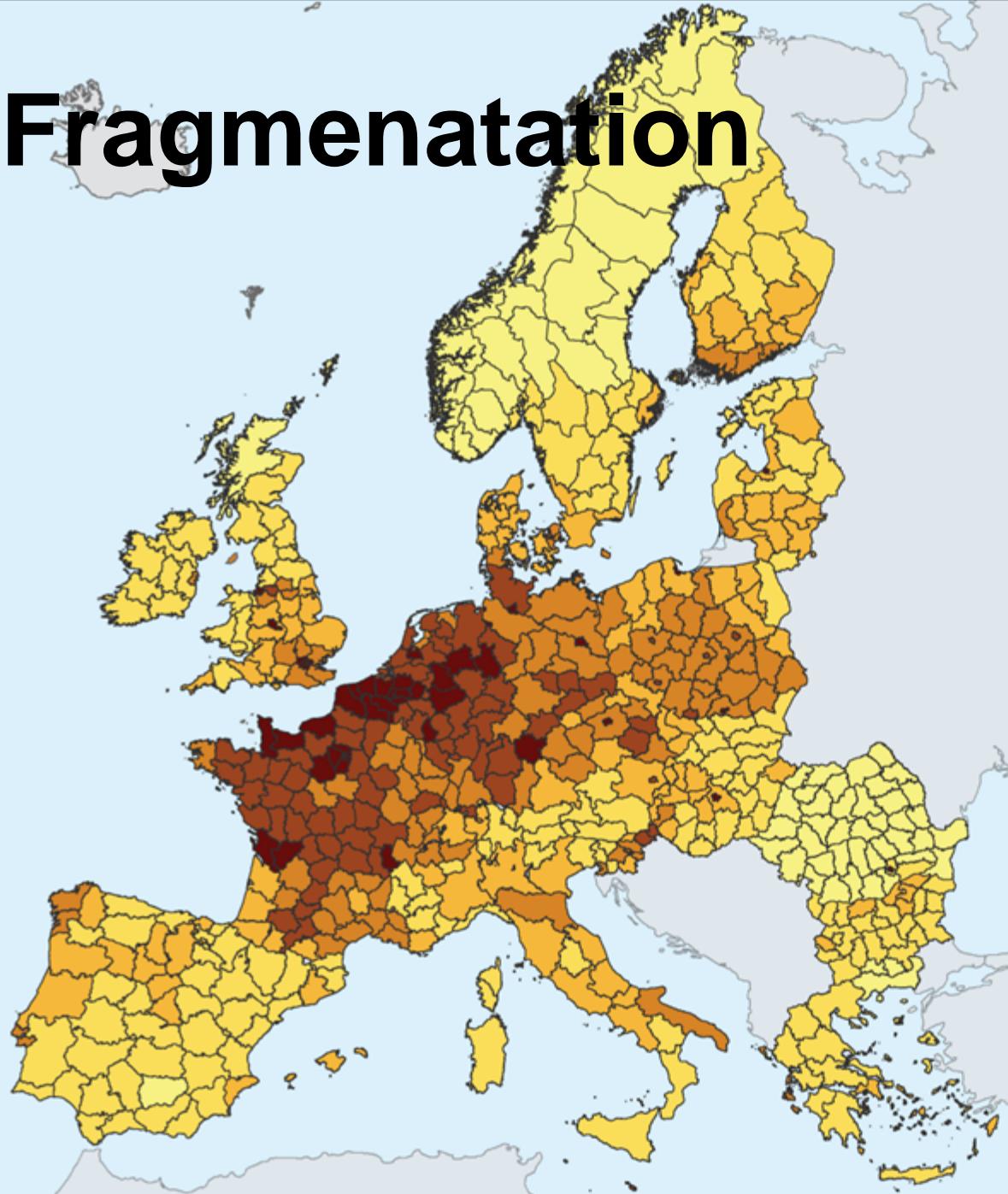
23 European countries



# Proximity to nature



# Fragmenatation



**Degree of landscape fragmentation 2009 in the NUTSX regions (for non-mountainous land areas)**  
**Effective mesh density (number of meshes per 1000 km<sup>2</sup>)**

- < 2.00, Remote or low pop. density
- 2.01–10.0, Rural rangeland
- 10.01–20.0, Rural agriculture
- 20.01–50.0, Semi-rural
- 50.01–100.0, Ex-urban
- > 100.01, Urban
- Outside data coverage

# **Loosing Density & Compactness**

Differences urban – rural are  
**blurring**

# Loosing Efficiency

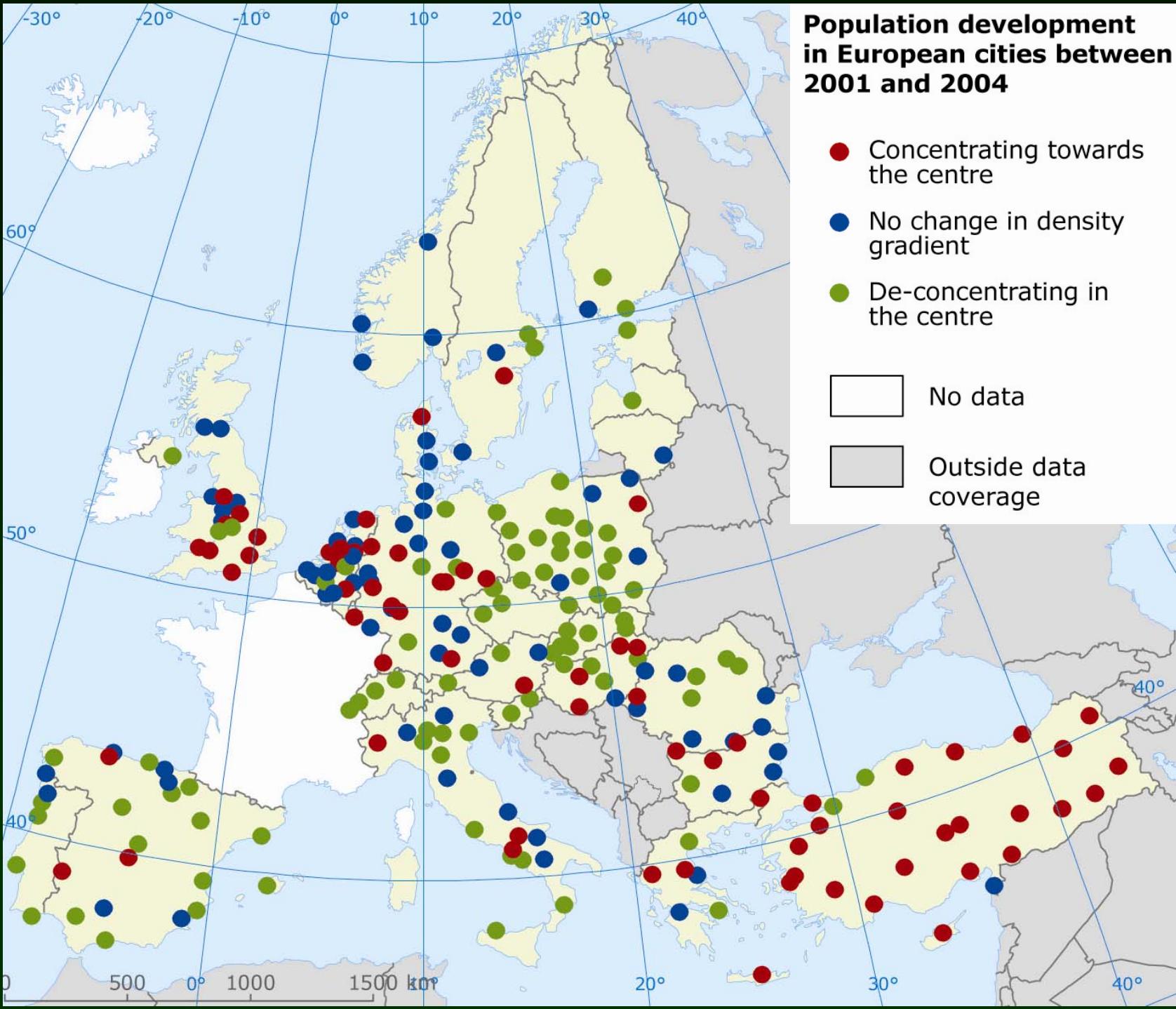


**city resident**

tonnes of oil equivalent / year in Europe



**rural resident**



# Back to compactness ?



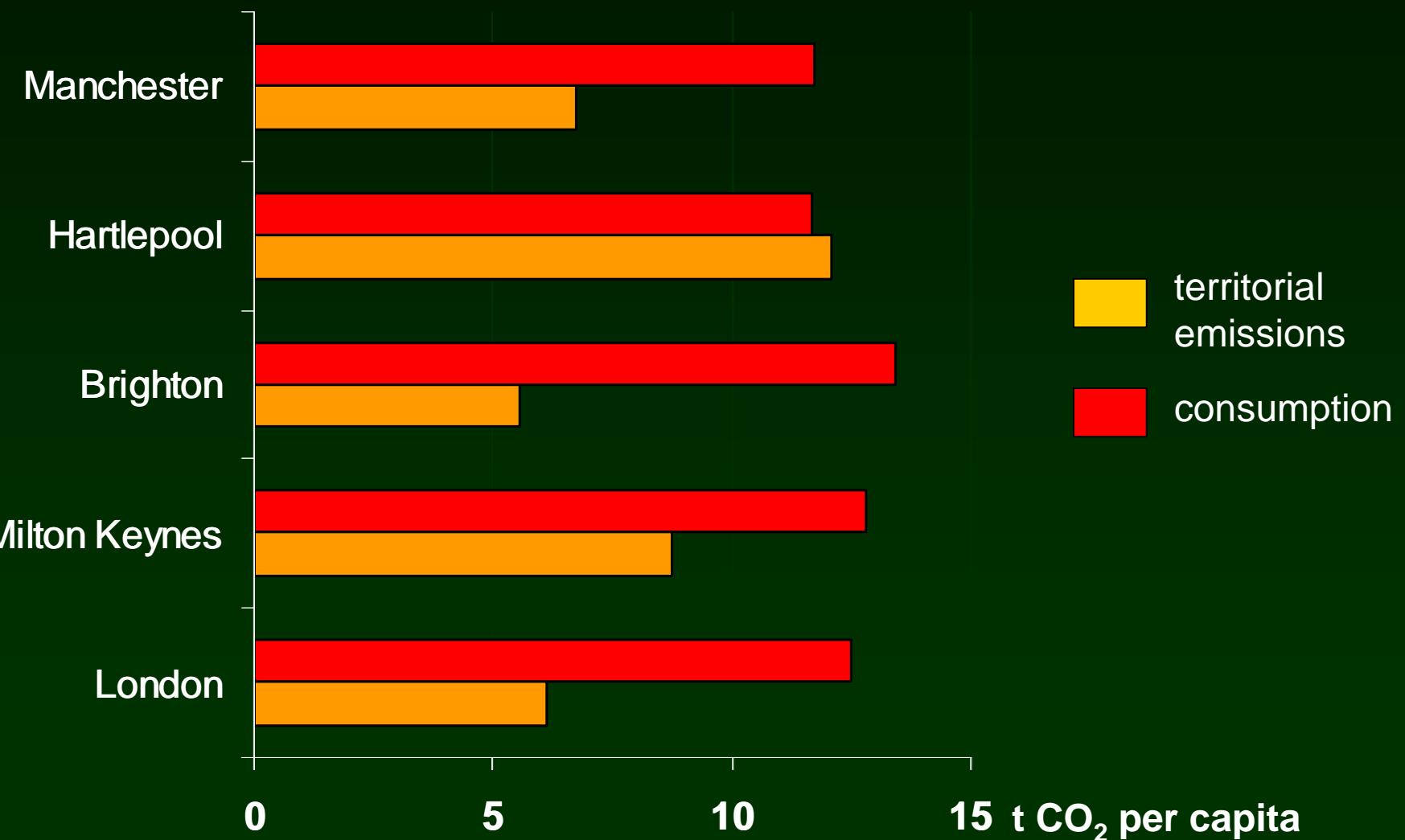
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# European compactness

Each city resident consumes ...

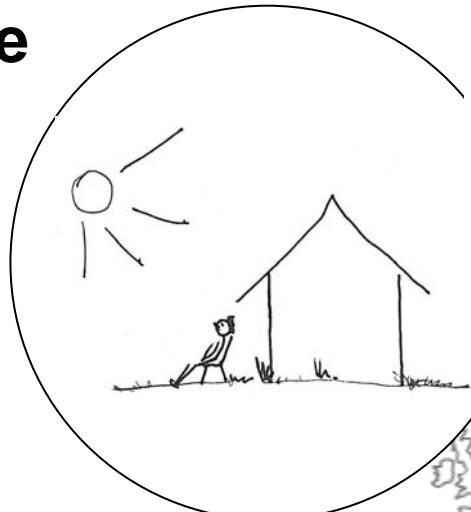


# What is the urban impact ?

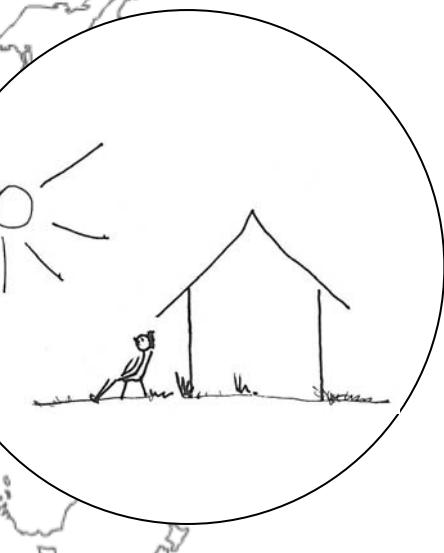
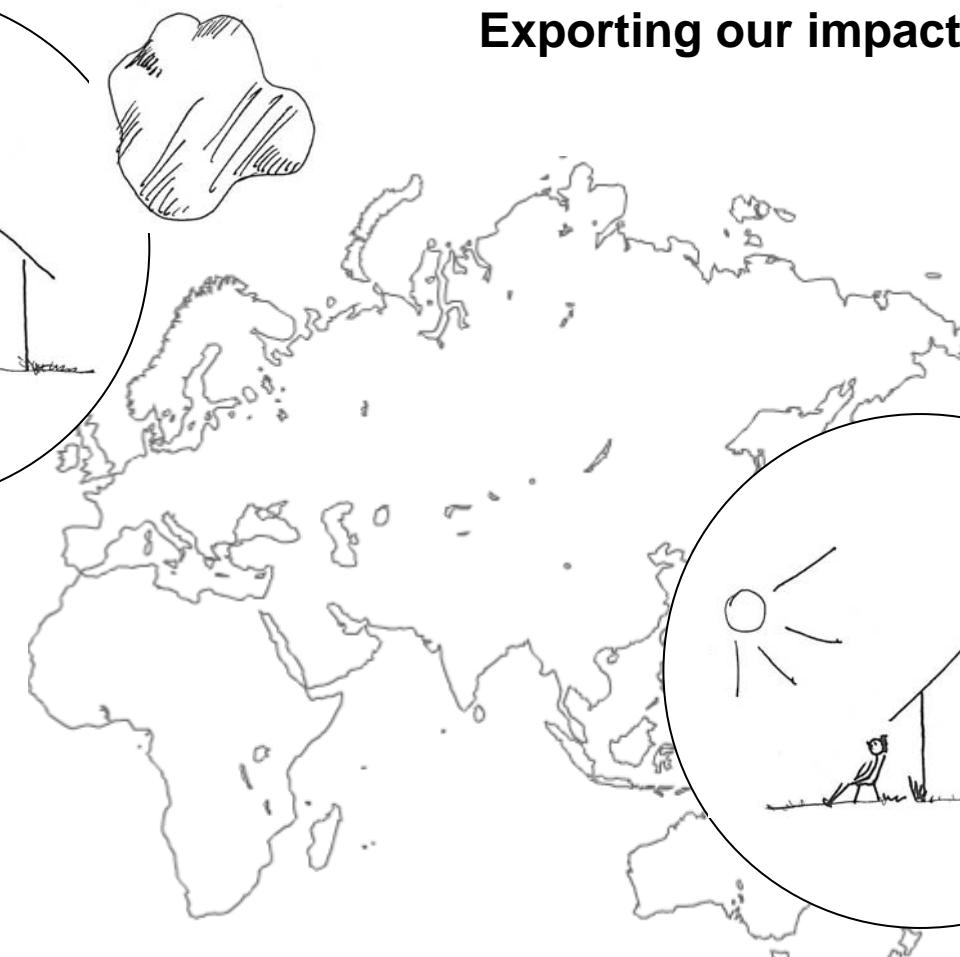


# Quality of life

here

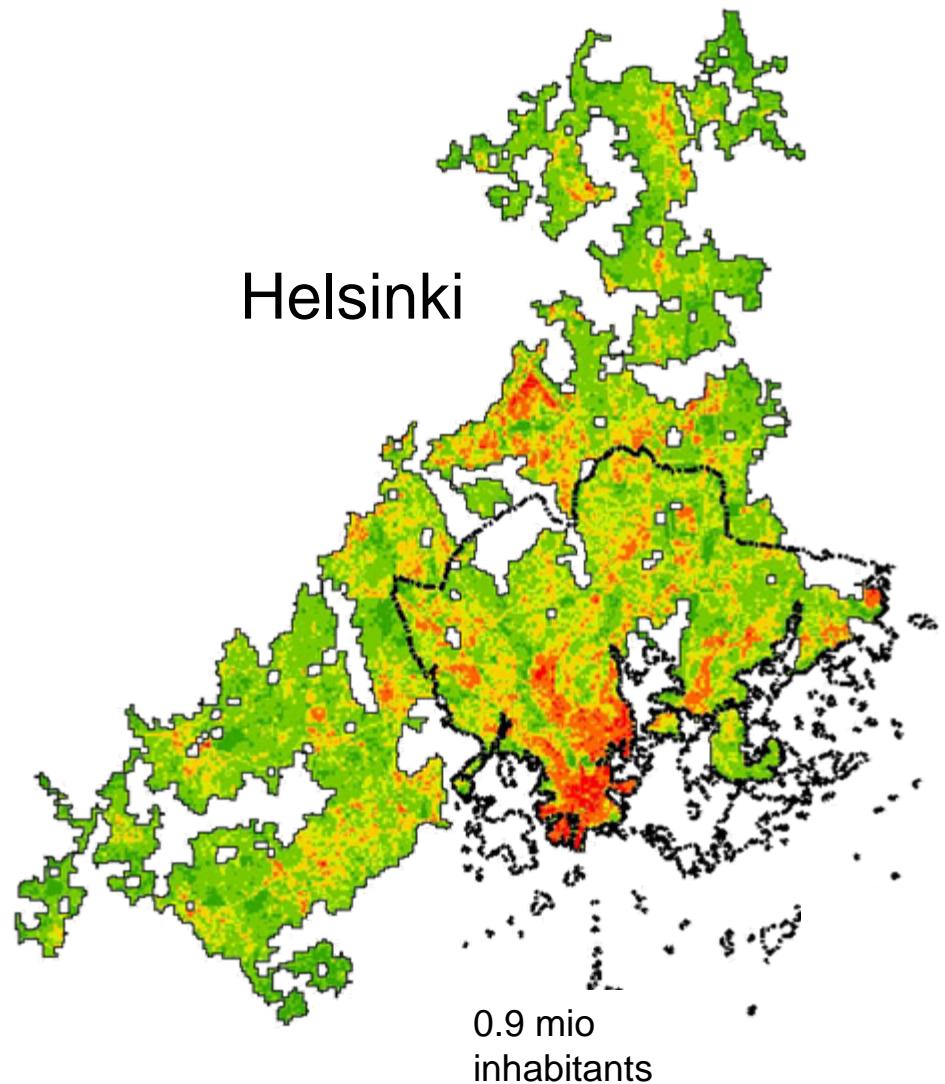
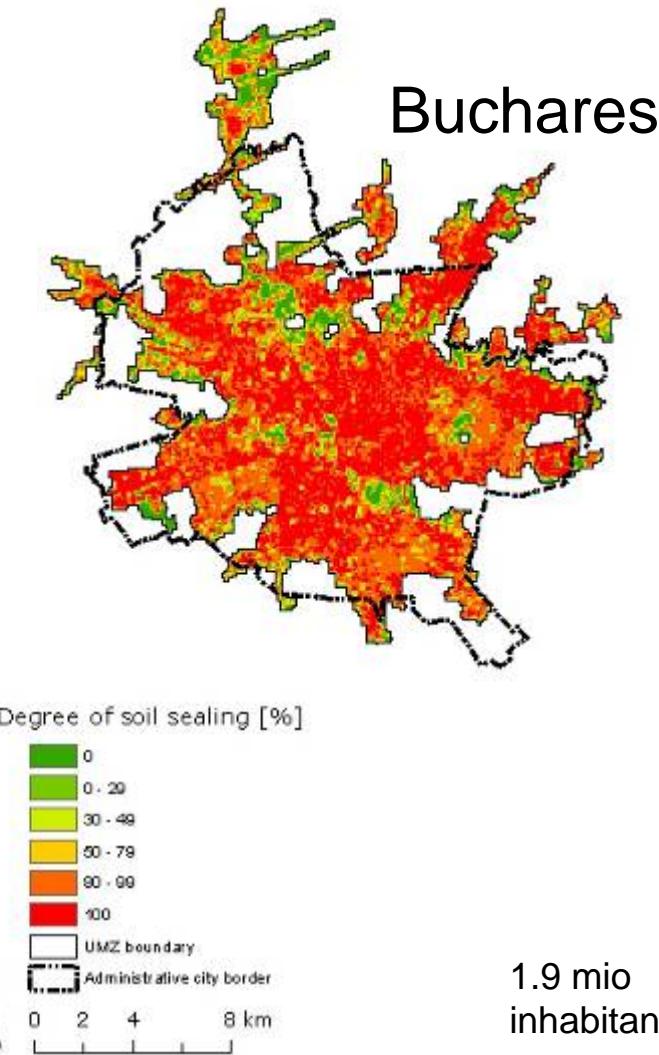


Exporting our impacts?



... and there

# Compact **versus** sprawled



# Density & Quality



Frederiksberg, Denmark

110 inh/ha

Image © 2009 COWI A/S, DDO

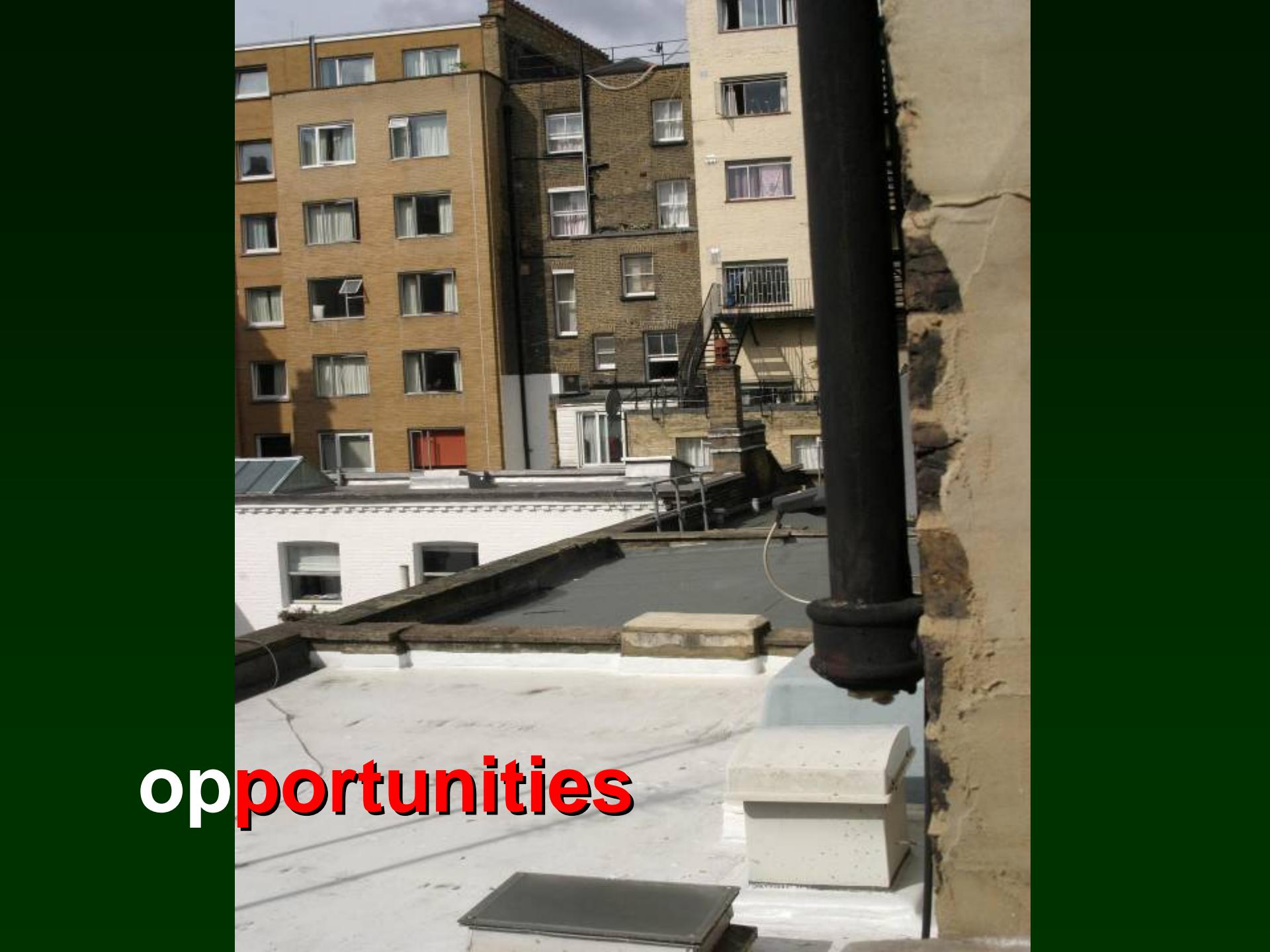
Google

No space for *green* ?



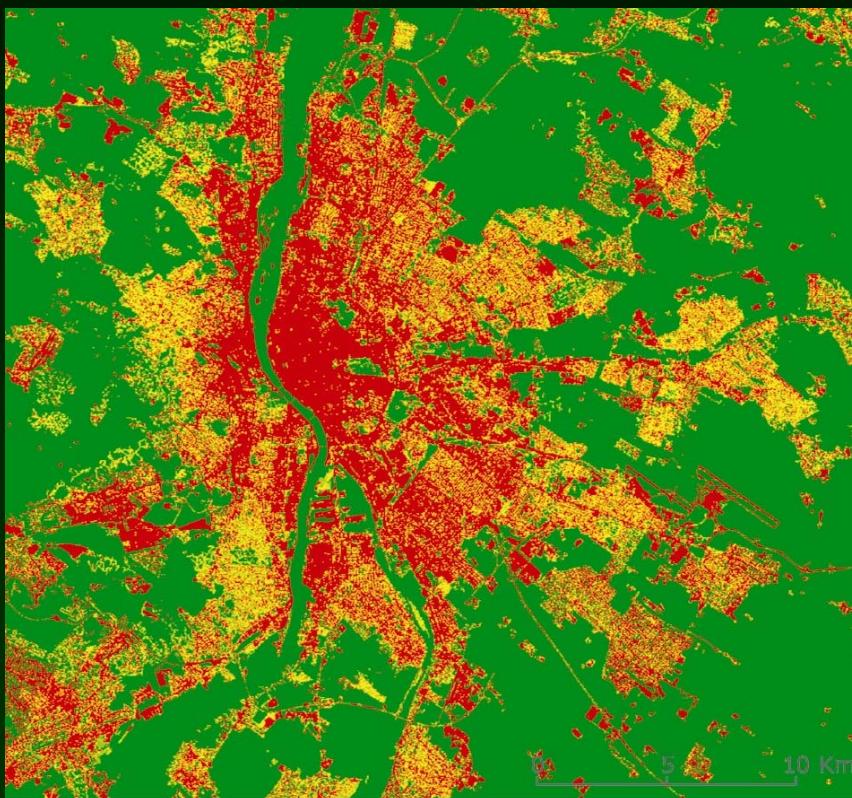
Go vertical



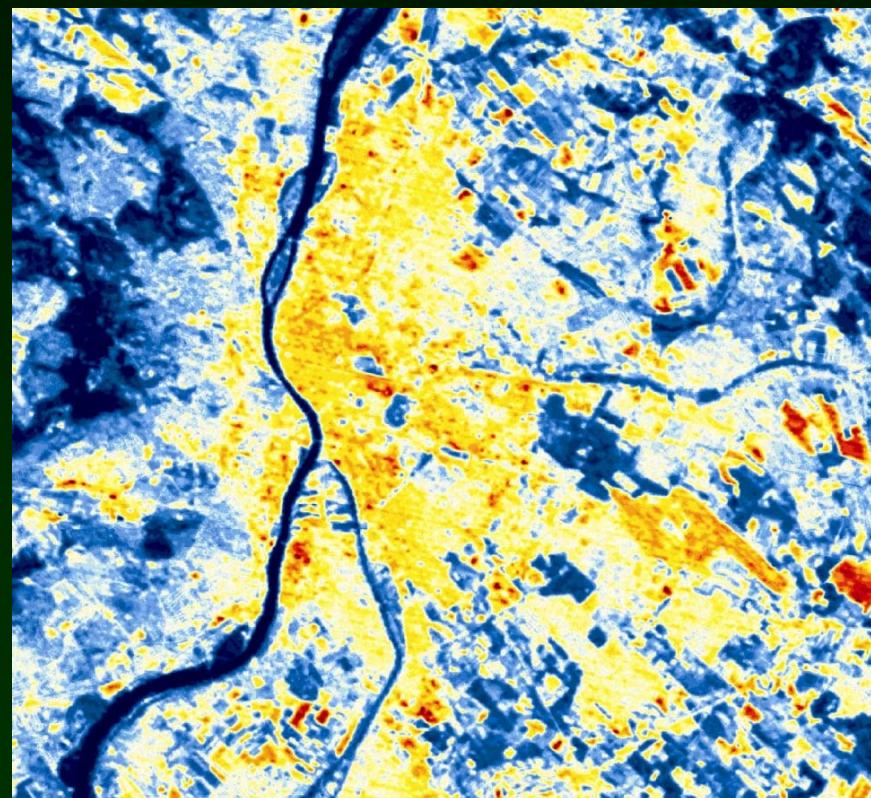
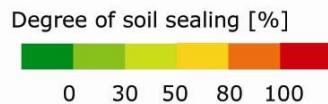


**opportunities**

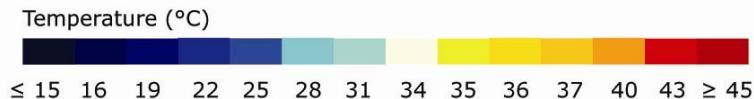
# *Nature* makes a difference

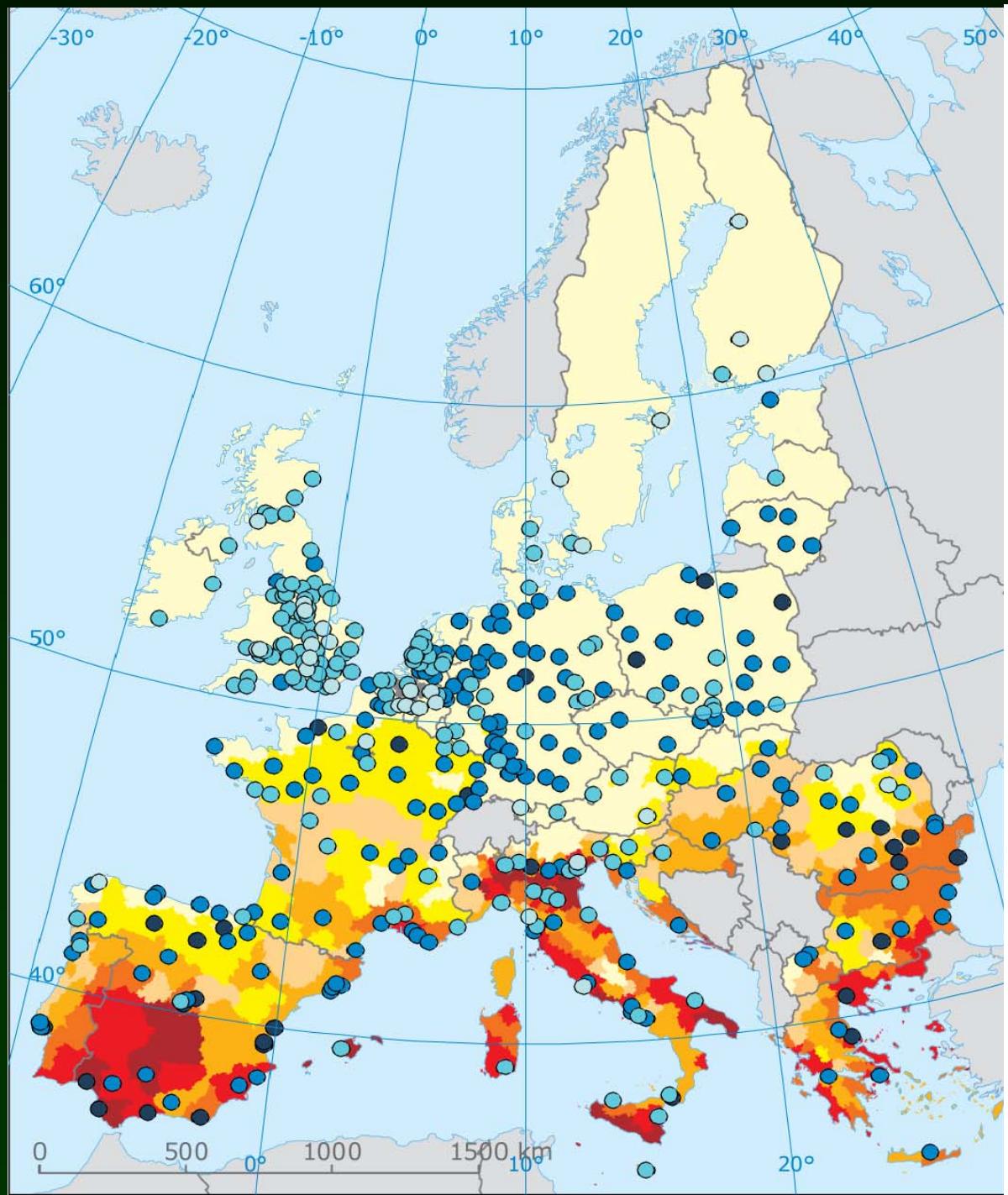


Degree of soil sealing (impermeability) of Budapest



Surface temperature of Budapest, 1 August 2005, 9:30 CET





**Mean soil sealing in Europe's cities (UMZ) in 2006 and modelled changes in number of tropical nights during summer between 1961–1990 and 2010–2040**

Mean soil sealing in UMZ

- < 35 %
- 35–50 %
- 50–65 %
- > 65 %

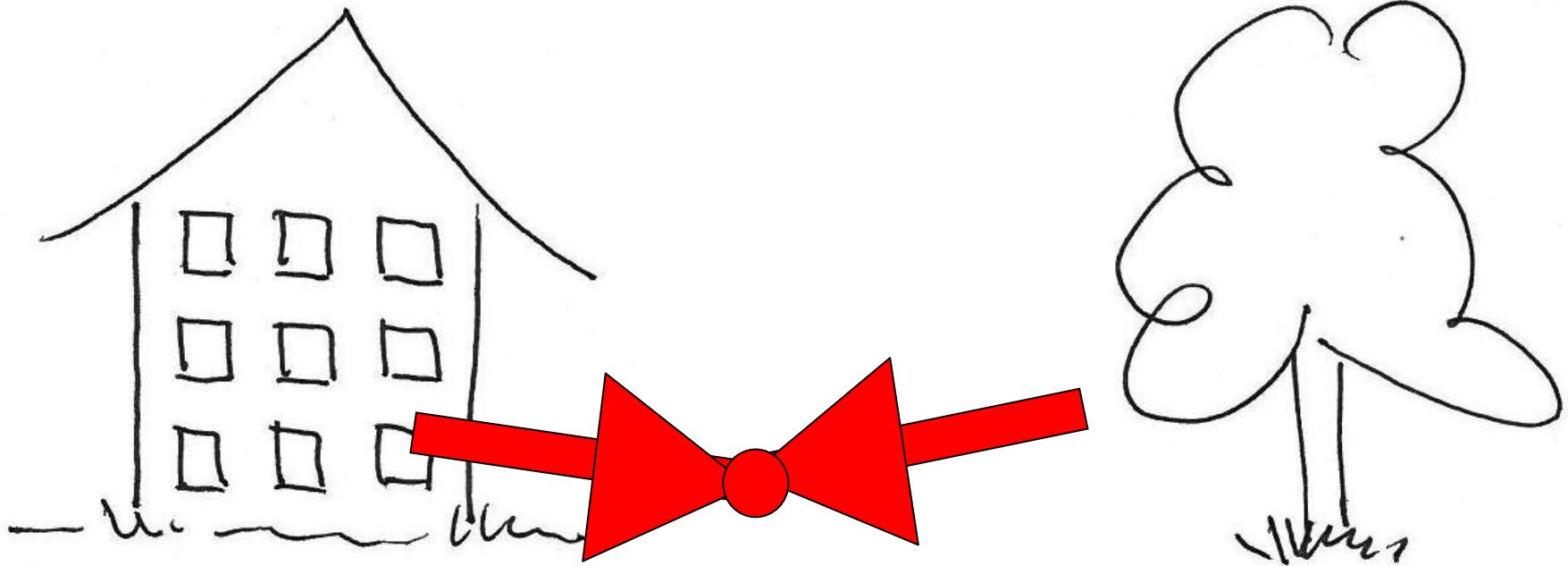
Change in number of tropical nights

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- Outside data coverage

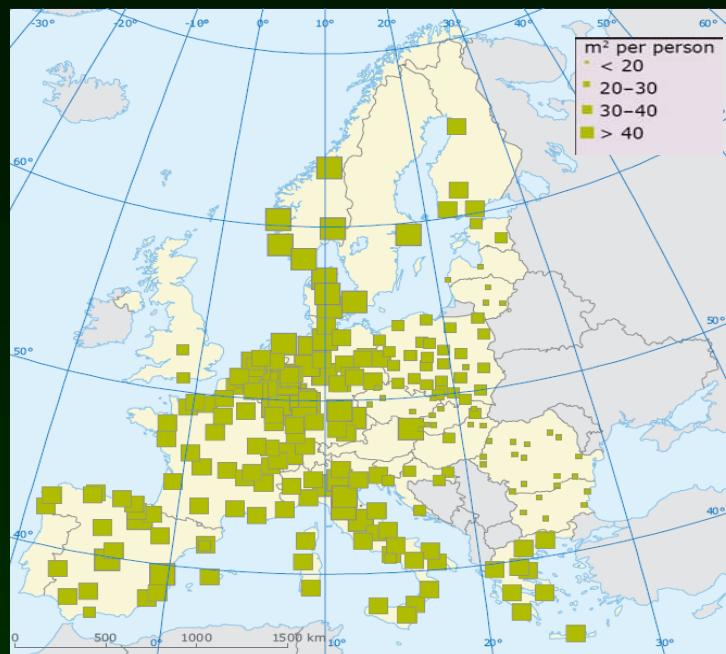
**urban**

**&**

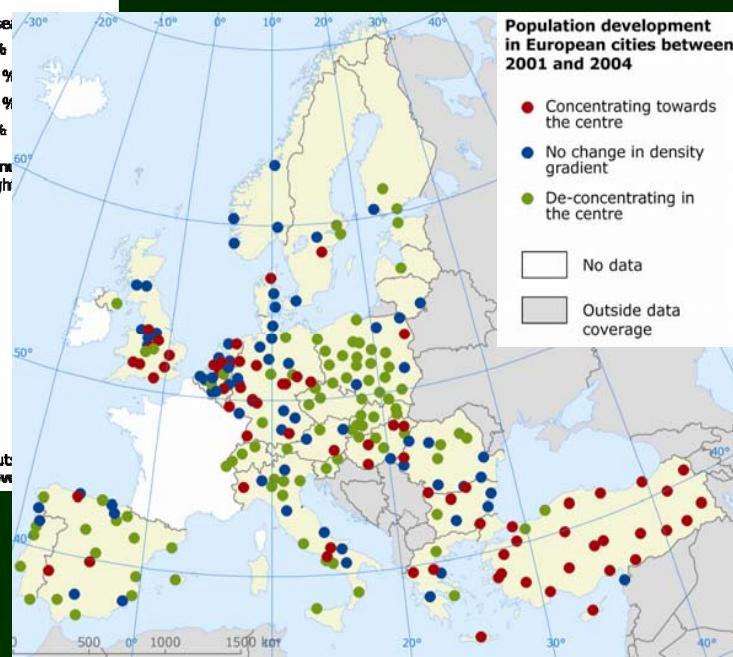
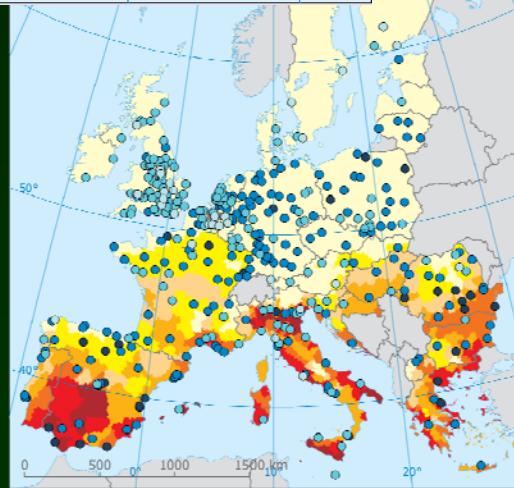
**rural**



# One size does not fit all



Mean soil sealing in Europe's cities (UMZ)  
In 2006 and modelled changes in number of tropical nights during summer between 1961–1990 and 2010–2040

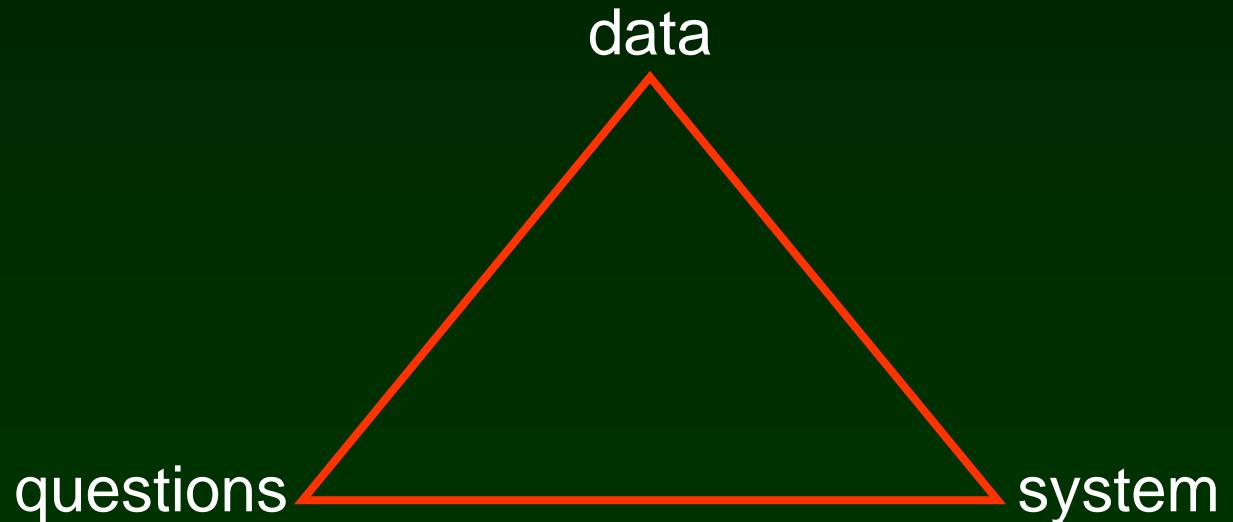


# Territorial cohesion

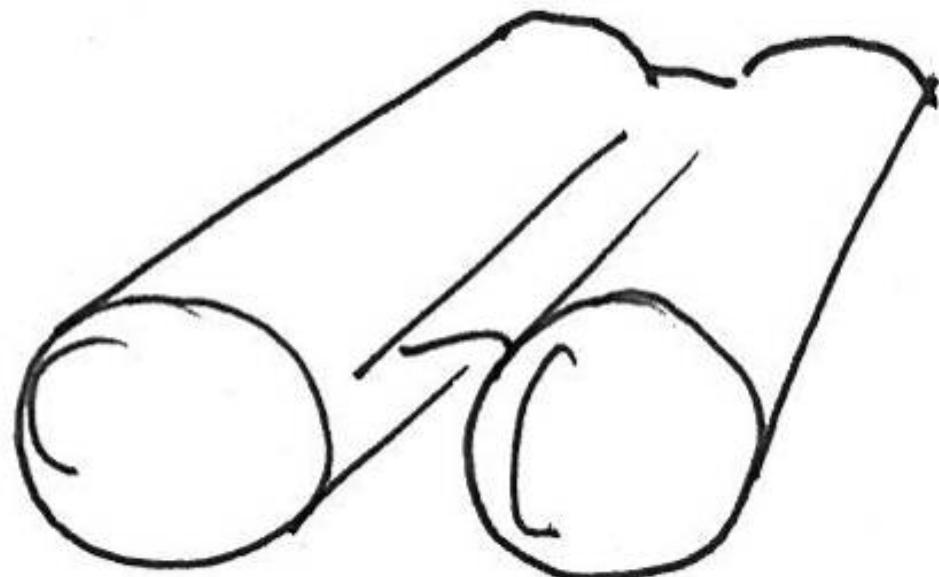
## Europe 2020

# We need data

IUME  
Integrated Urban Monitoring in Europe



**We need  
outlook & scenarios**



# Information

EEA Report | No 5/2009

Ensuring quality of life in Europe's cities and towns  
Tackling the environmental challenges driven by European and global change

ISSN 1725-9177



European Environment Agency

European Commission  
DIRECTORATE-GENERAL  
Joint Research Centre

EEA Report | No 10/2006

Urban sprawl in Europe  
The ignored challenge

ISSN 1725-9177



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