



Klaus Spiekermann
Accessibility evidence:
TEN-T and air transport

ESPON transnational conference
Southern Europe at the crossroads
3rd October 2017, Rome, Italy



Inspire policy making by territorial evidence

What is accessibility?

- Main '**product**' of a transport system
- Determines the **locational advantage** of an area relative to all areas
- Indicators of accessibility measure the **benefits** households and firms in an area enjoy from the existence and use of the transport infrastructure relevant for their area.
- areas with **better access** to the locations of input materials and markets will, ceteris paribus, be **more productive, more competitive and more successful** than remote areas

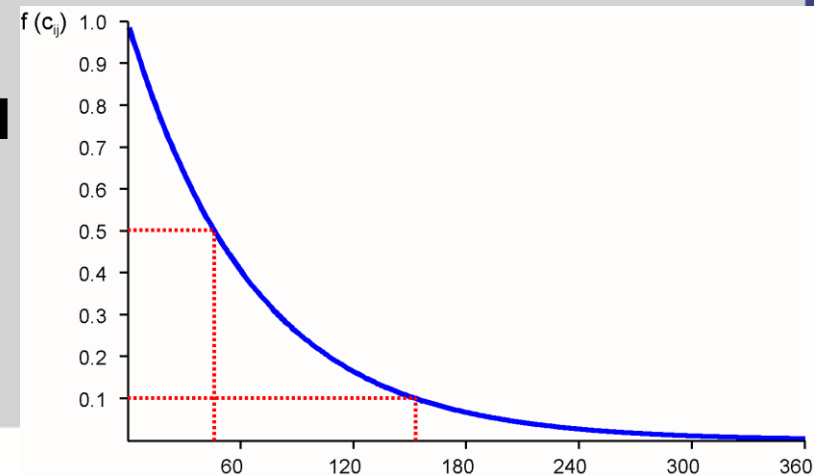
Accessibility concept

- Two components of accessibility:
 - Opportunities of interest
 - Effort to reach opportunities

Basic accessibility indicator types

- **Travel cost:**
-> Travel cost / time to a predefined set of activities
- **Cumulated opportunities:**
-> Activities in a given travel cost
- **Potential accessibility:**
-> Activities weighted by a function of travel cost

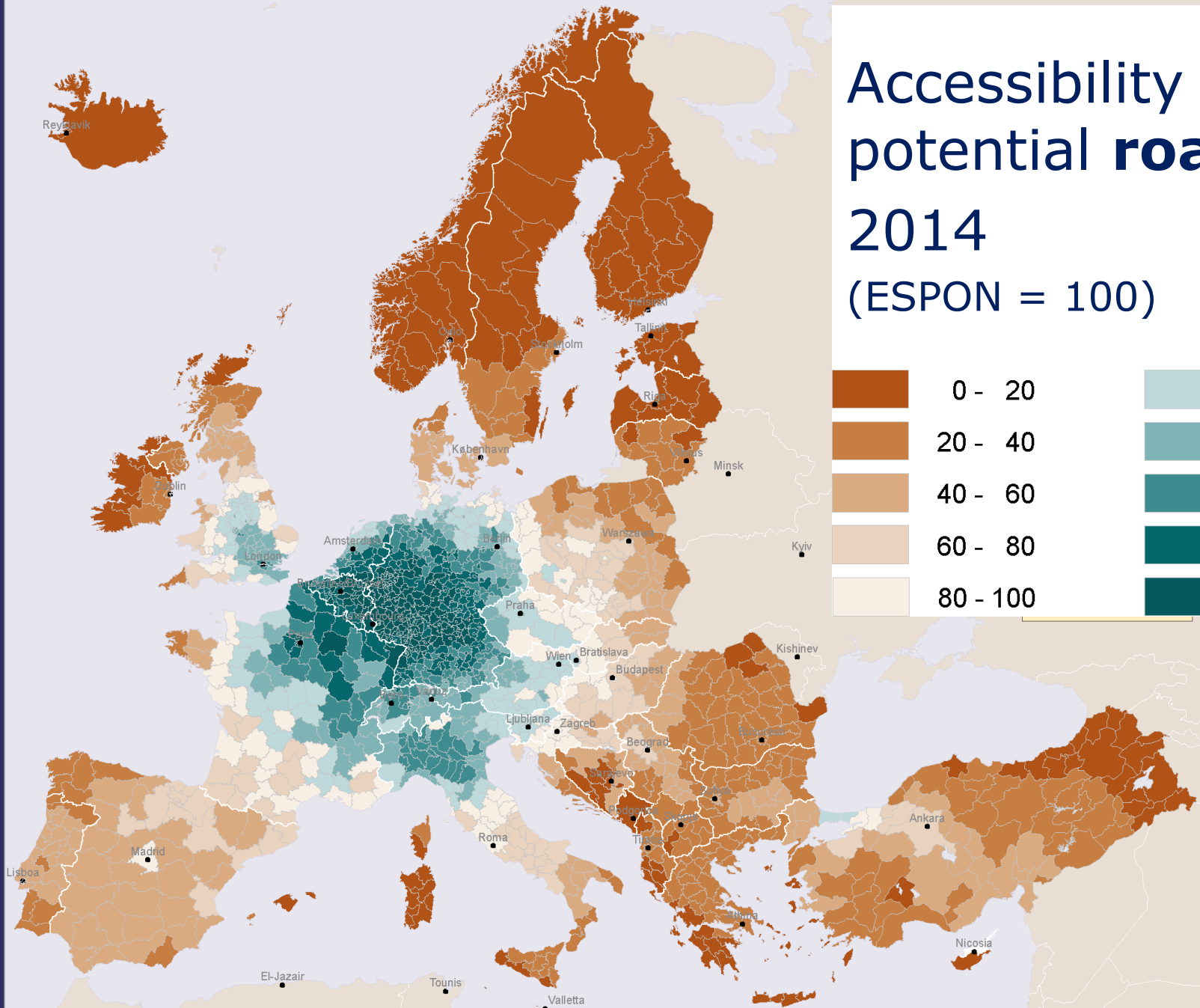
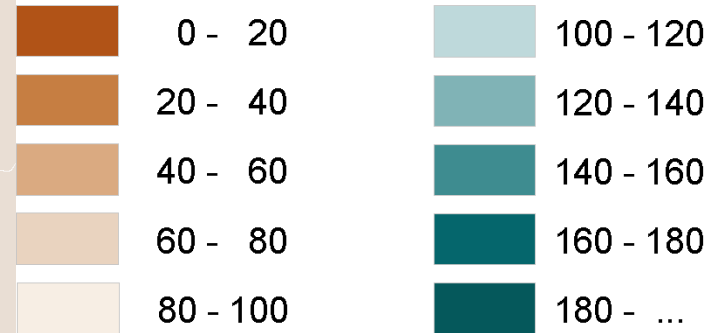
ESPON acc potential standard
population in all regions
weighted by travel time



Accessibility potential **road**

2014

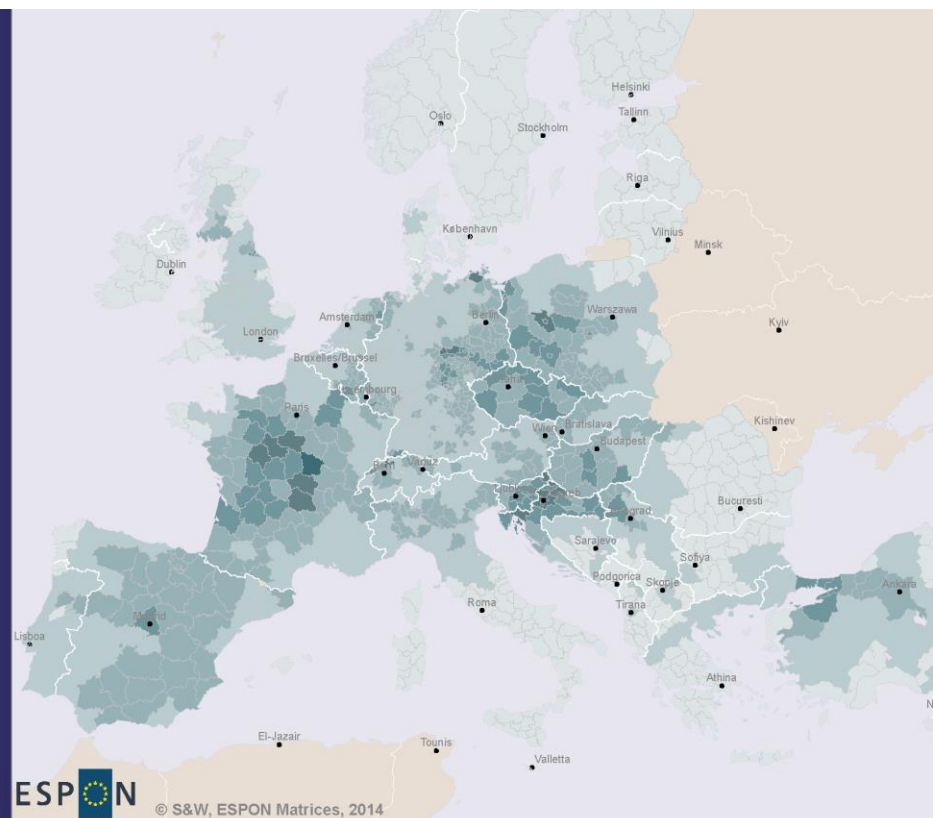
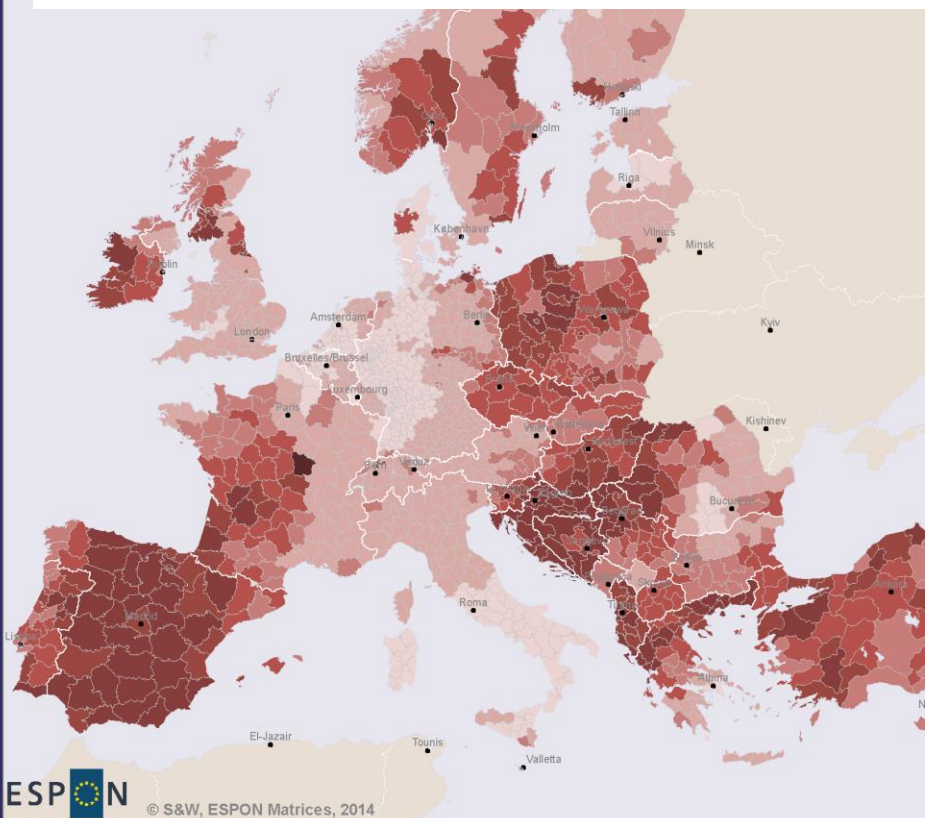
(ESPON = 100)



Accessibility potential road 2001-2014

Relative change

absolute change



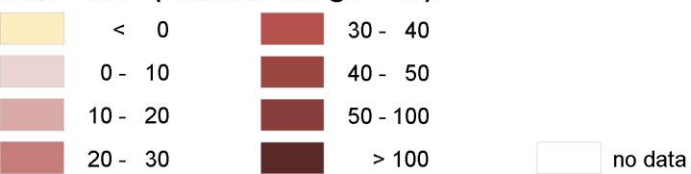
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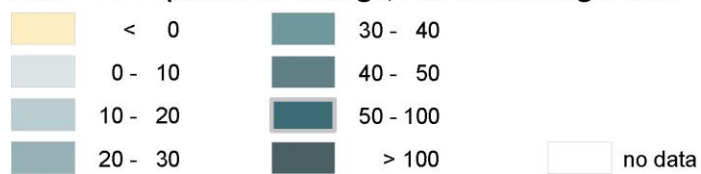
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Accessibility potential, road
2001 - 2014 (relative change in %)

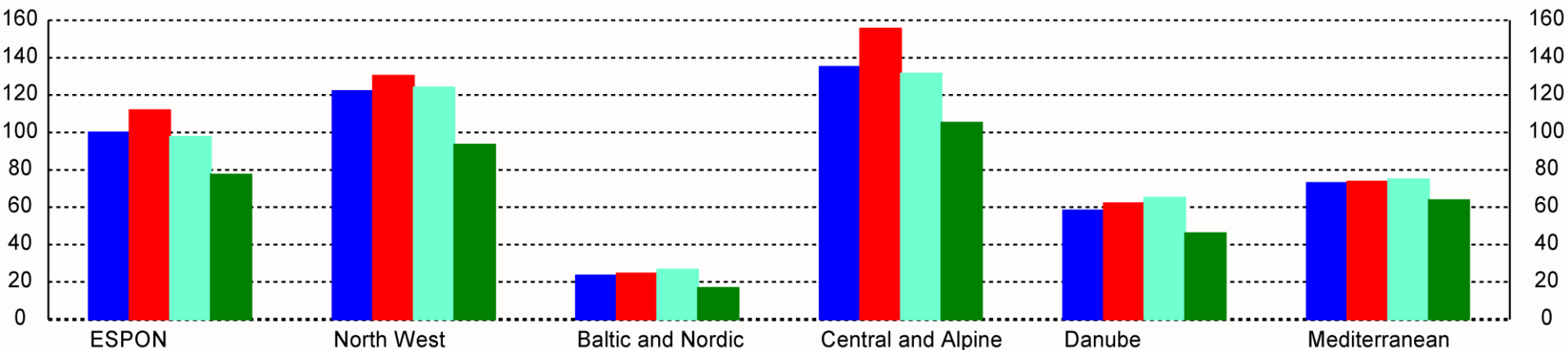


Accessibility potential, road
2001 - 2014 (absolute change, ESPON average 2001 = 100)

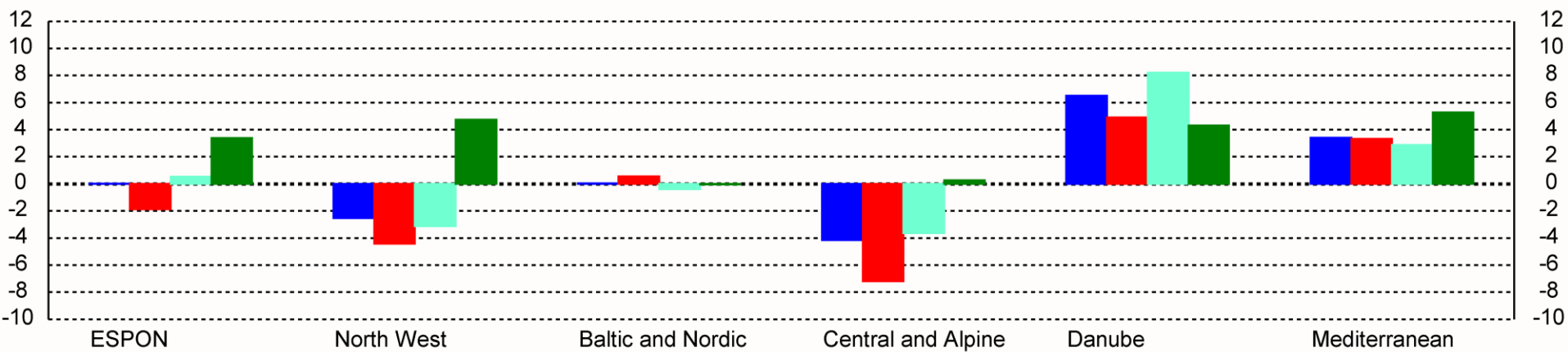


Road, by macro region and regional typology

Accessibility potential, road, 2014
 (ESPON = 100)



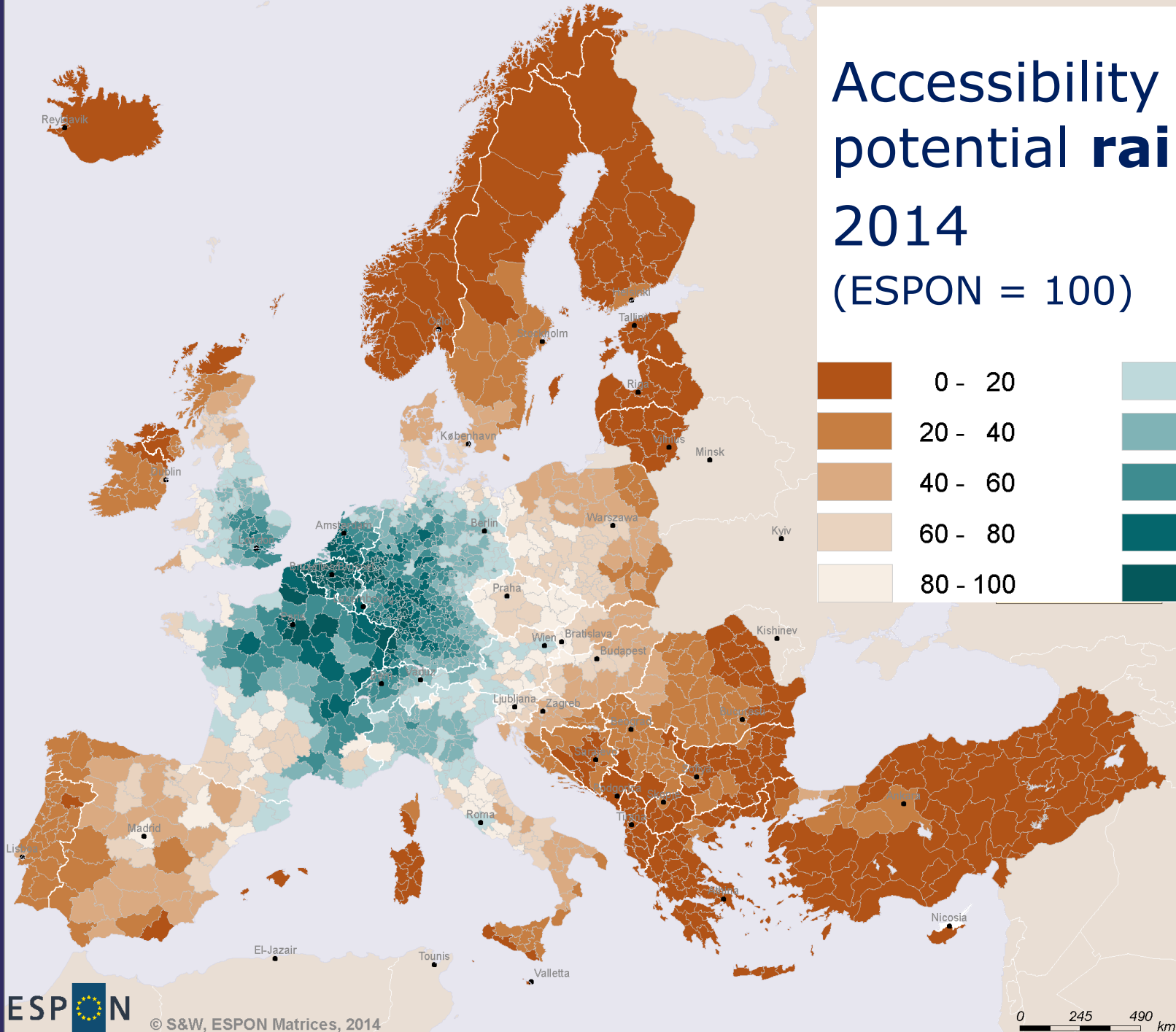
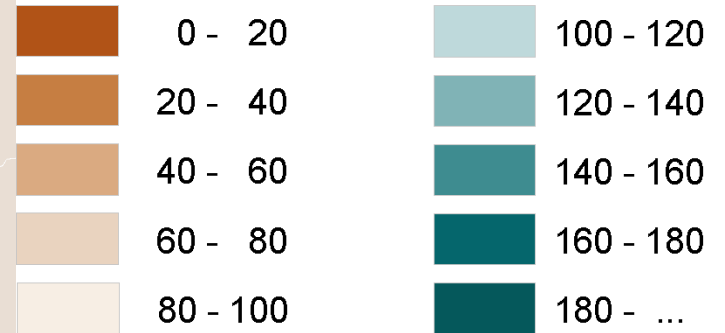
Accessibility potential, road, 2001-2014
 (Index change related to ESPON = 100)



Accessibility potential **rail**

2014

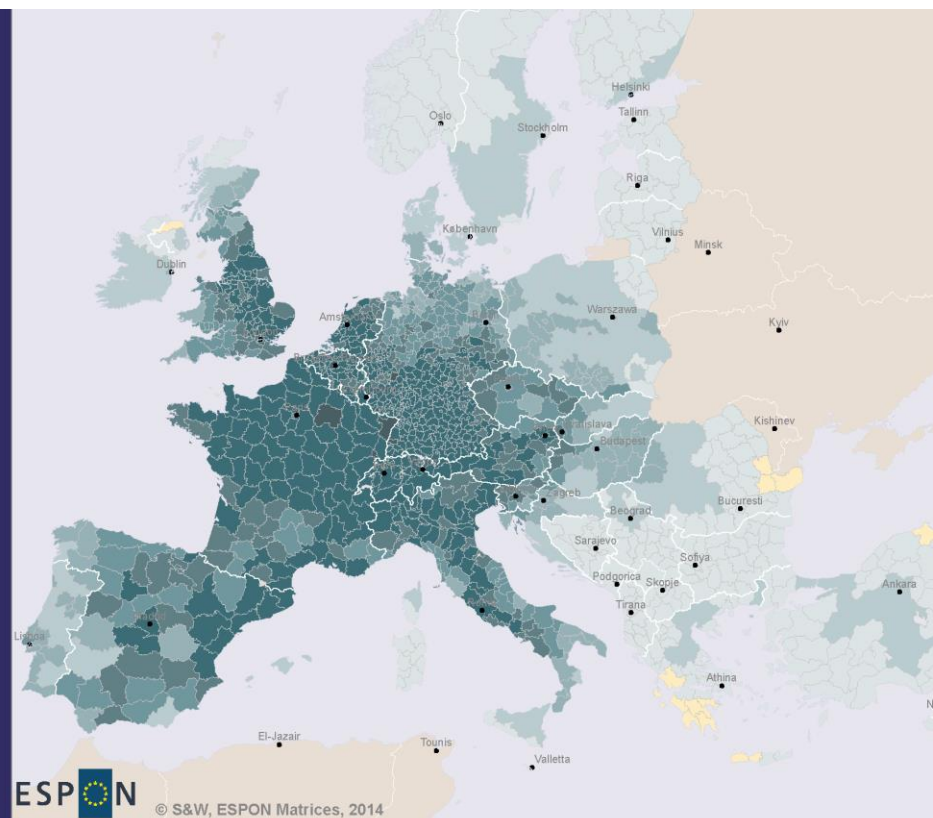
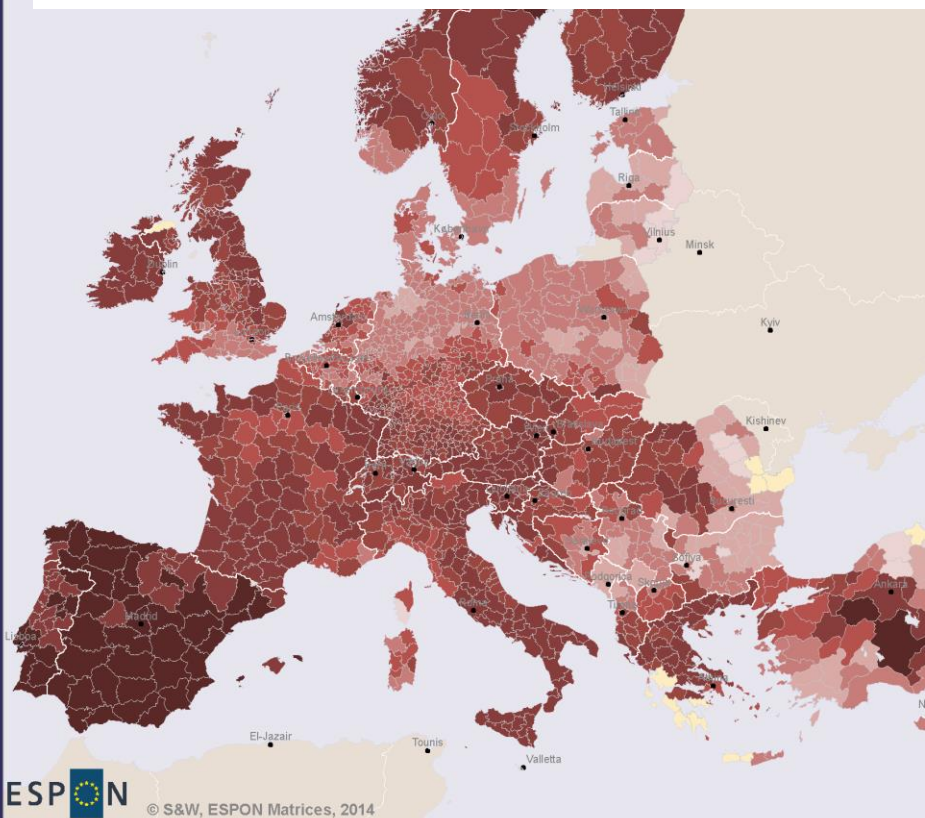
(ESPON = 100)



Accessibility potential rail 2001-2014

Relative change

absolute change



ESPON © S&W, ESPON Matrices, 2014

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Accessibility potential, rail

2001 - 2014 (relative change in %)



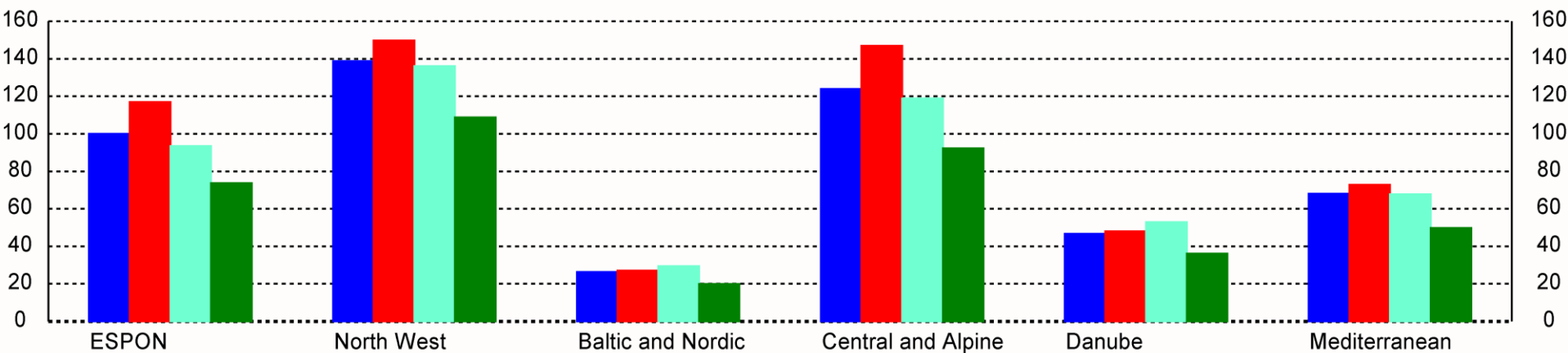
Accessibility potential, rail

2001 - 2014 (absolute change, ESPON average 2001 = 100)

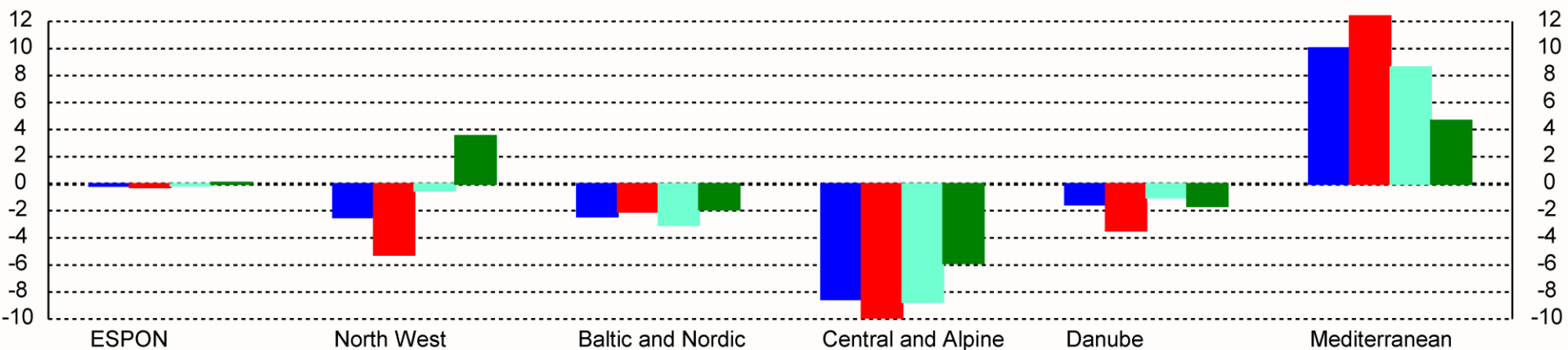


Rail, by macro region and regional typology

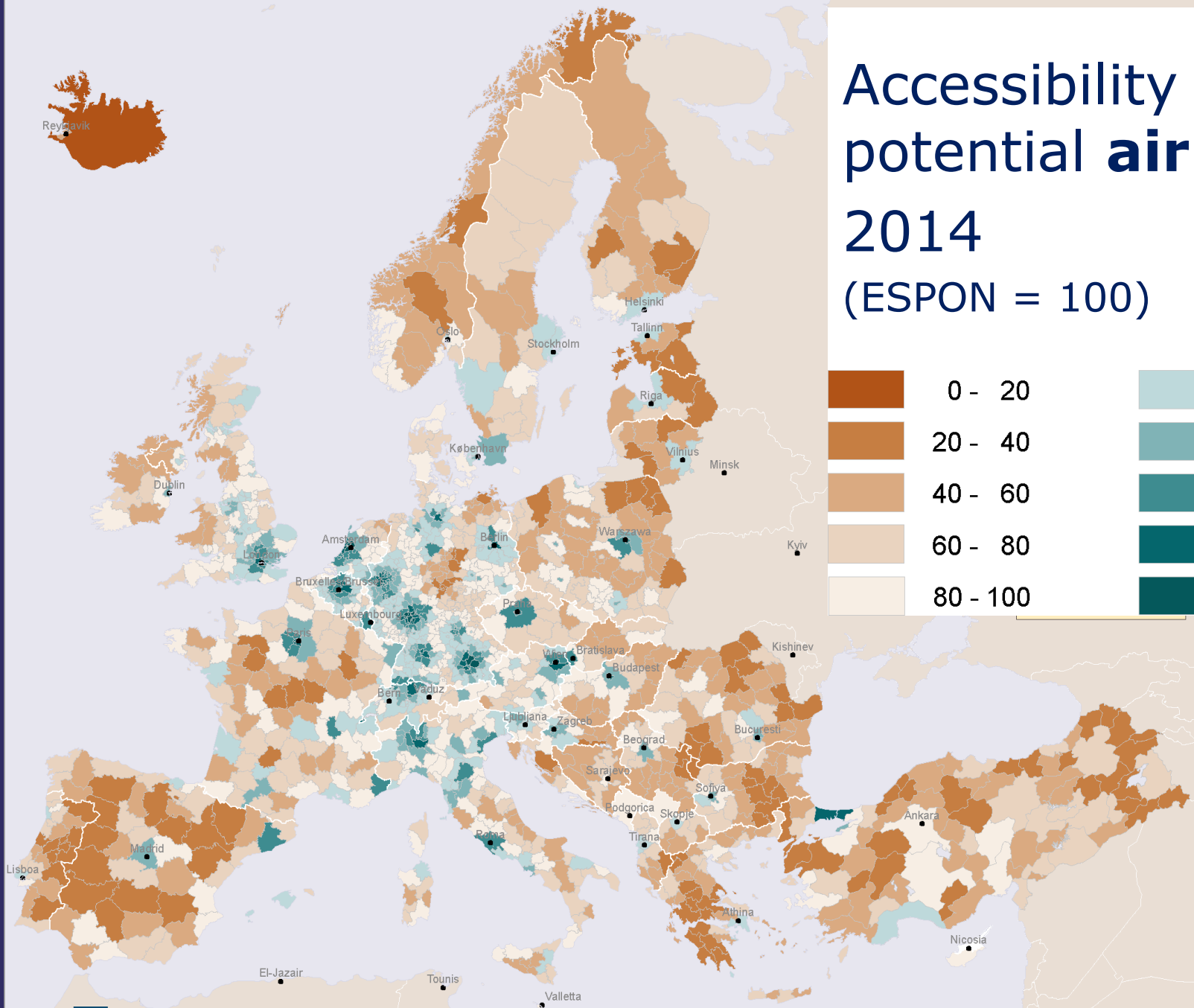
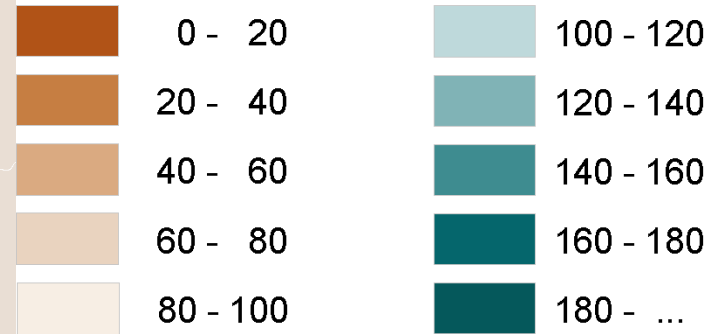
Accessibility potential, rail, 2014
 (ESPON = 100)



Accessibility potential, rail, 2001-2014
 (Index change related to ESPON = 100)



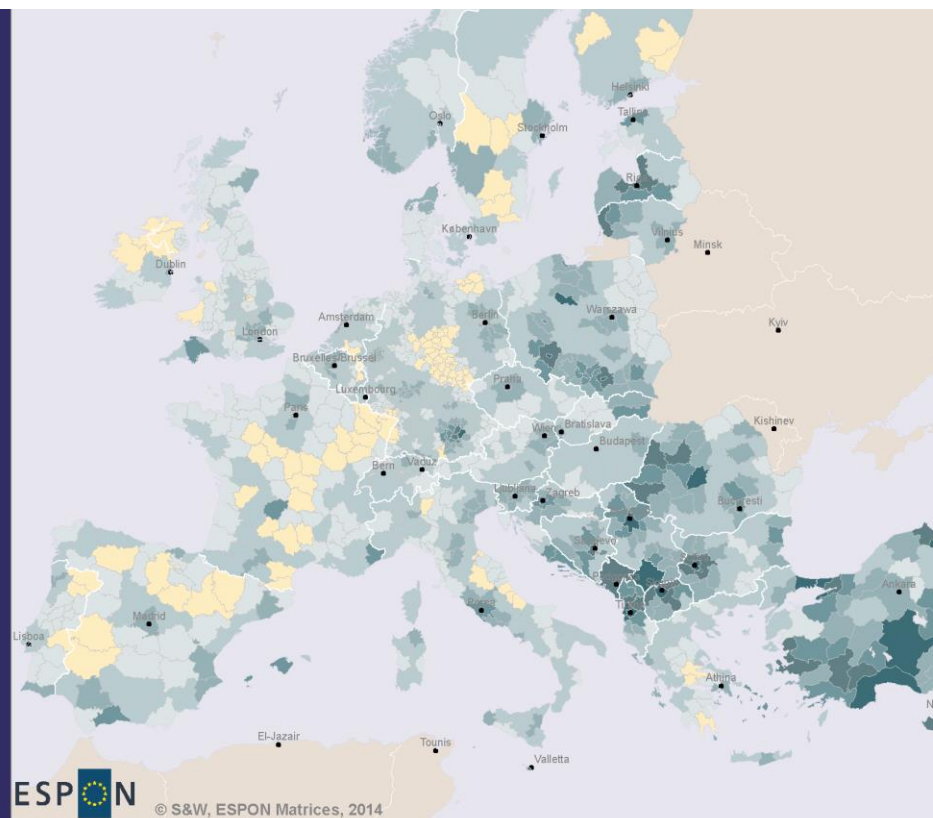
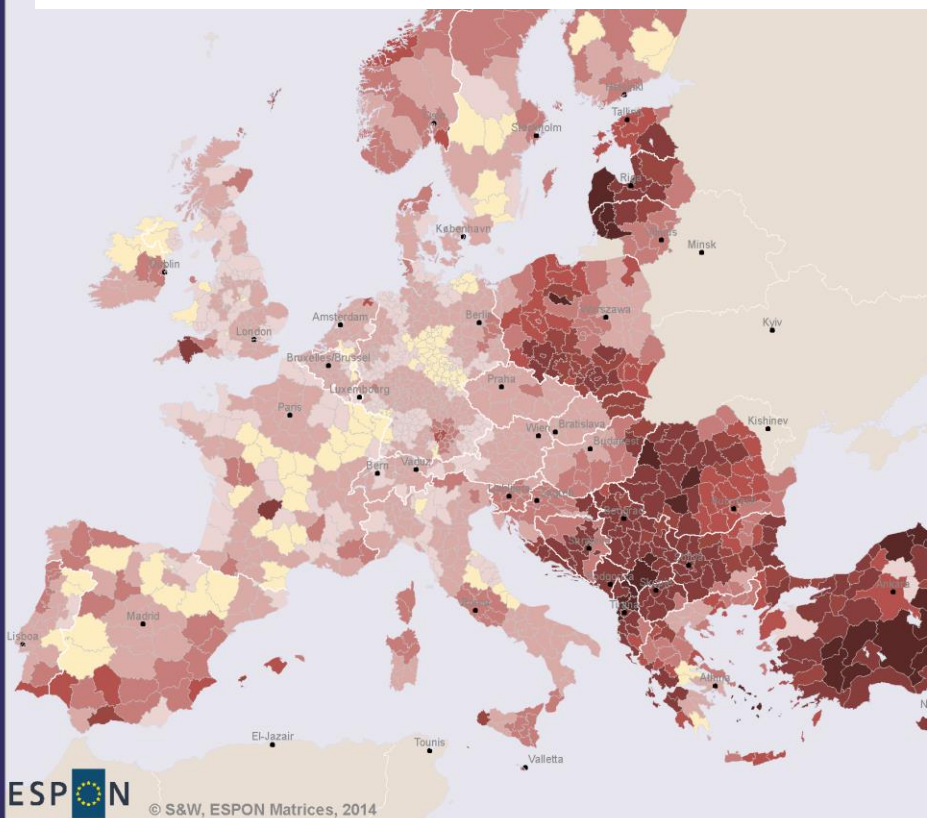
Accessibility potential **air** 2014 (ESPON = 100)



Accessibility potential **air** 2001-2014

Relative change

absolute change



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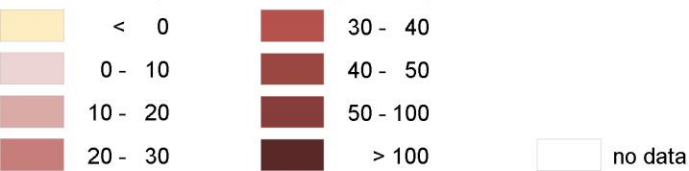
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Accessibility potential, air

2001 - 2014 (relative change in %)

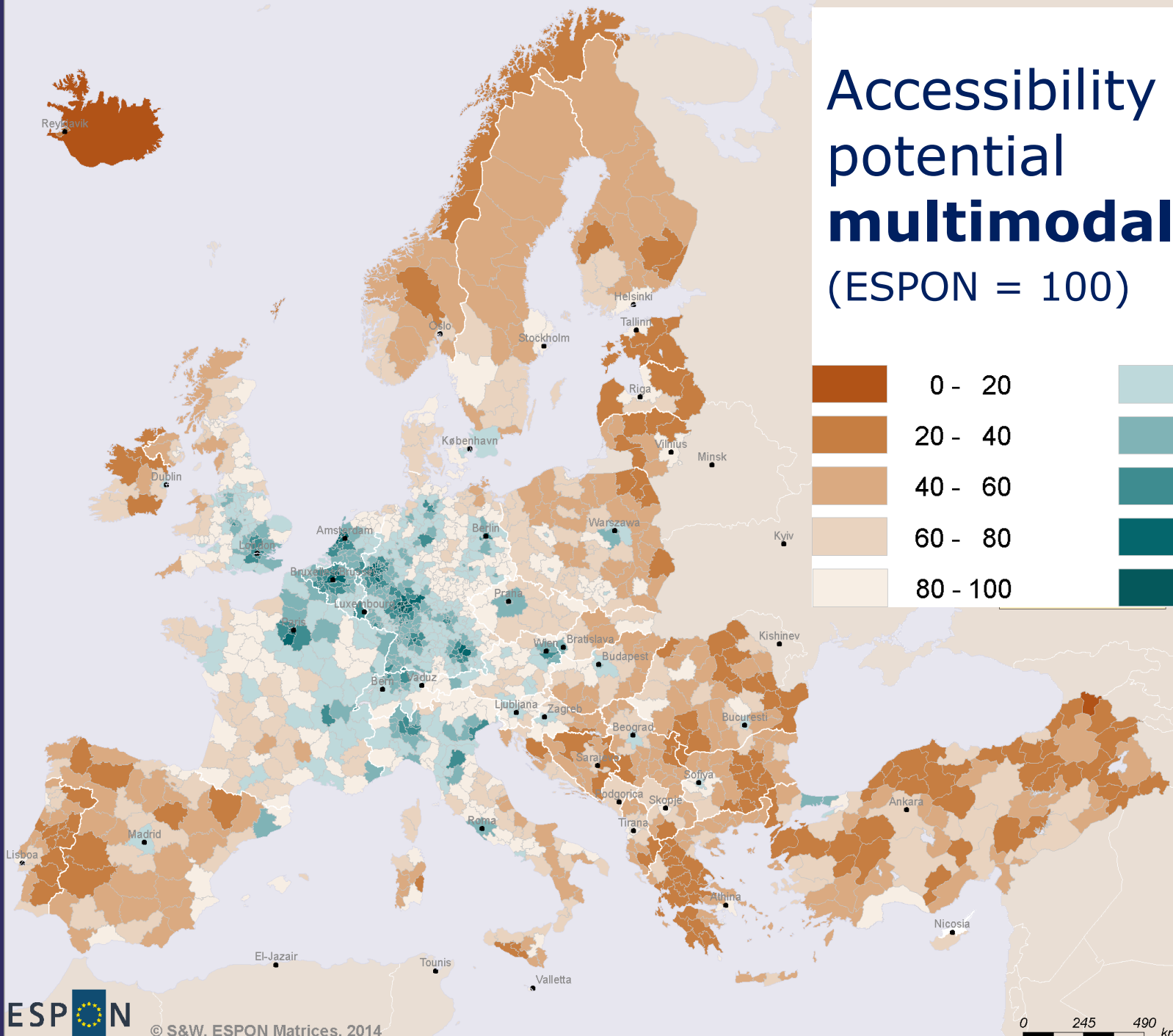


Accessibility potential, air

2001 - 2014 (absolute change, ESPON average 2001 = 100)



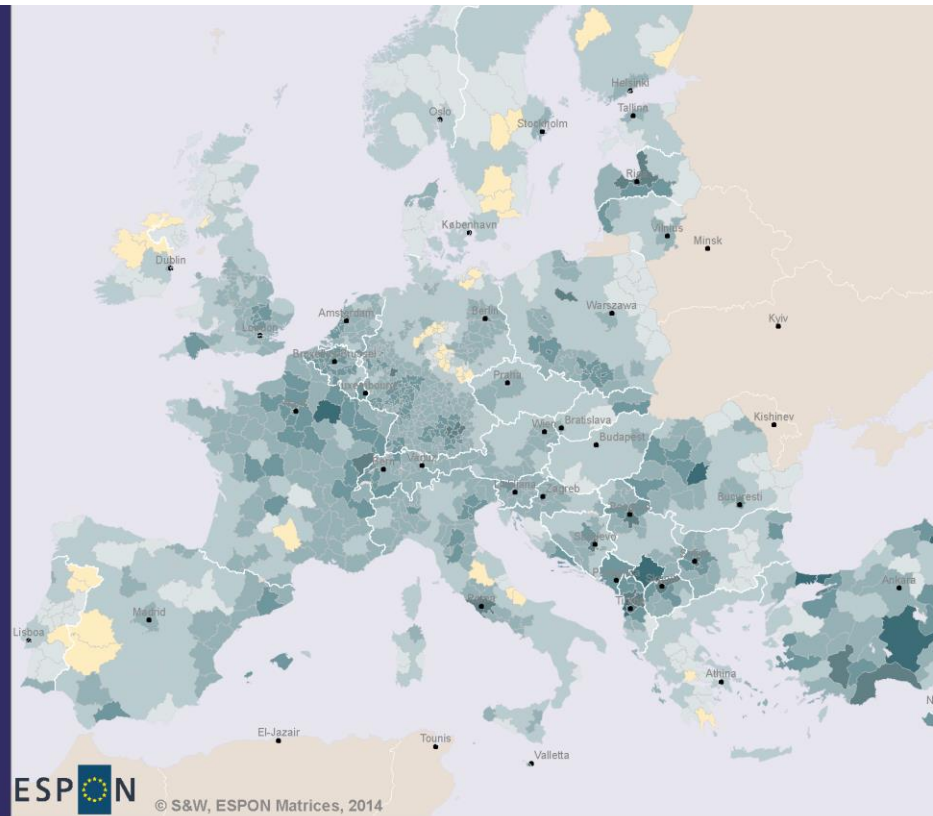
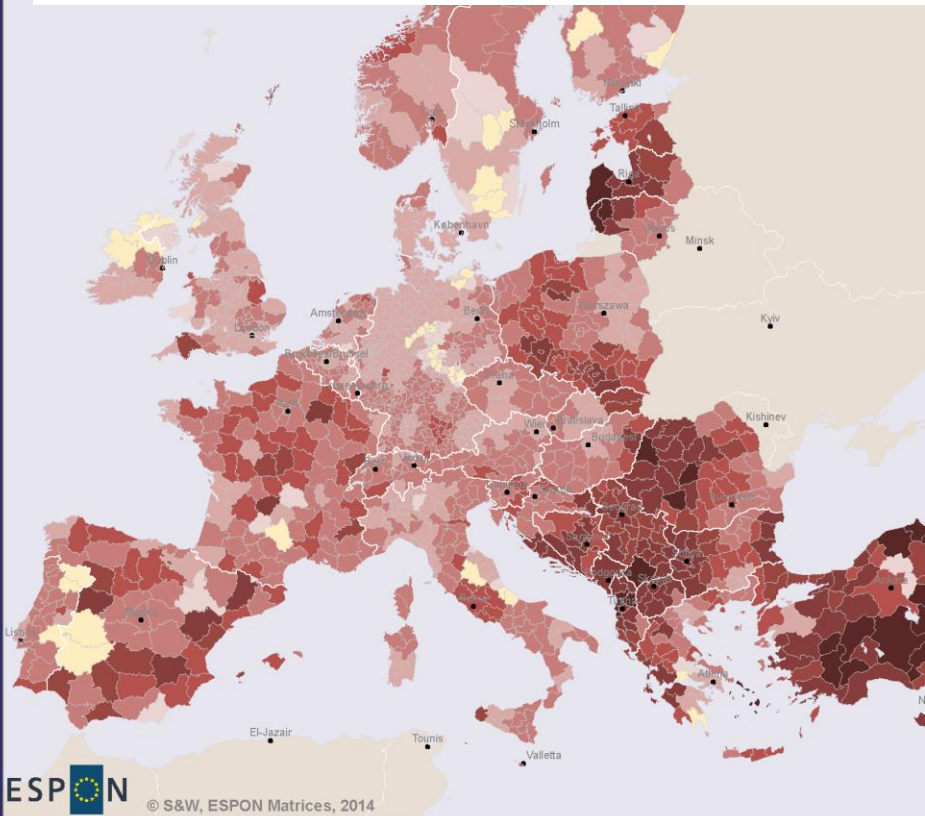
Accessibility potential multimodal 2014 (ESPON = 100)



Accessibility potential **multimodal** 2001-2014

Relative change

absolute change



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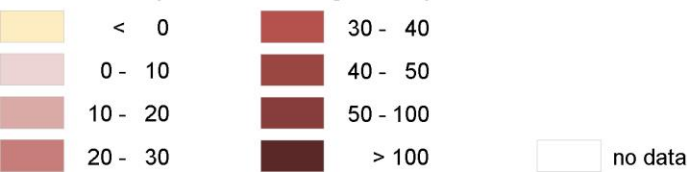
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Accessibility potential, multimodal

2001 - 2014 (relative change in %)

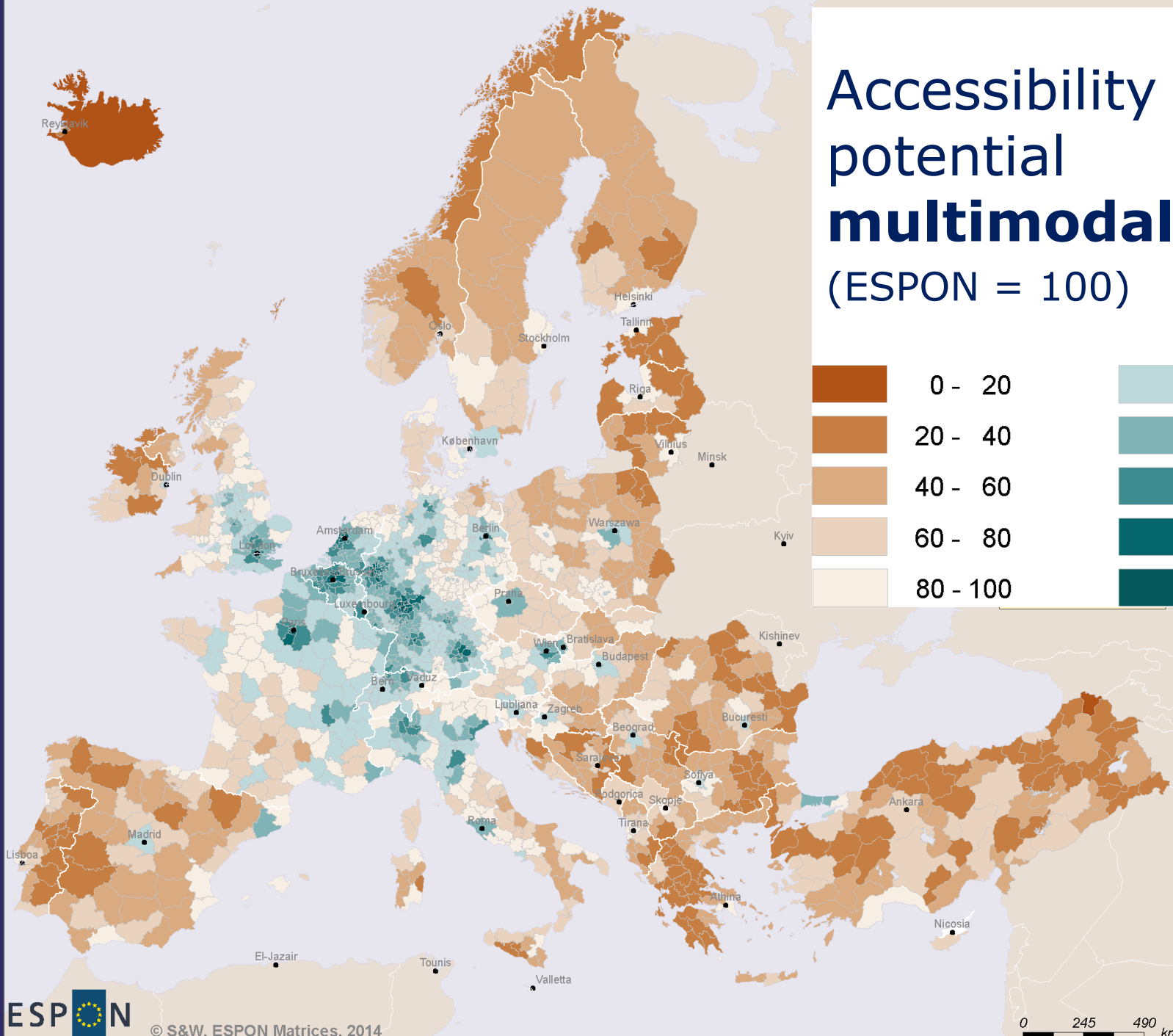


Accessibility potential, multimodal

2001 - 2014 (absolute change, ESPON average 2001 = 100)

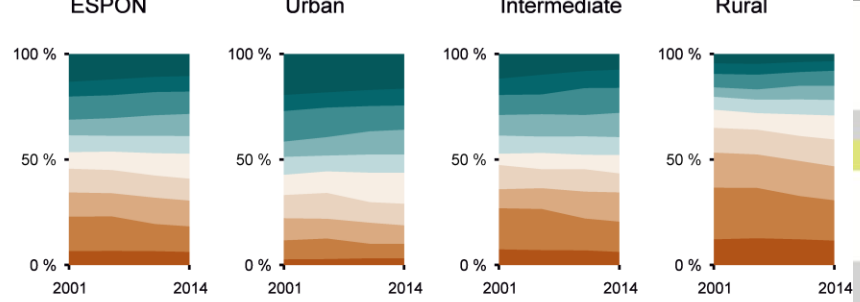


Accessibility potential multimodal 2014 (ESPON = 100)

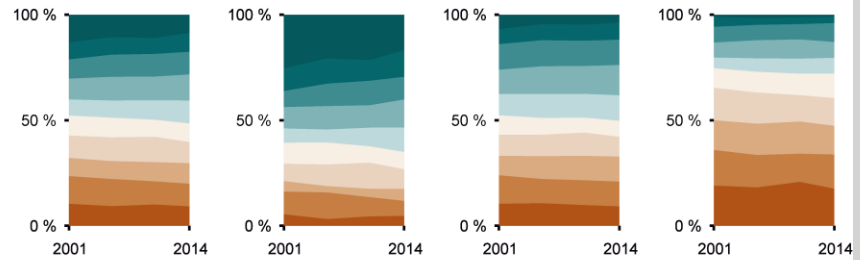


Multimodal accessibility by regional typology

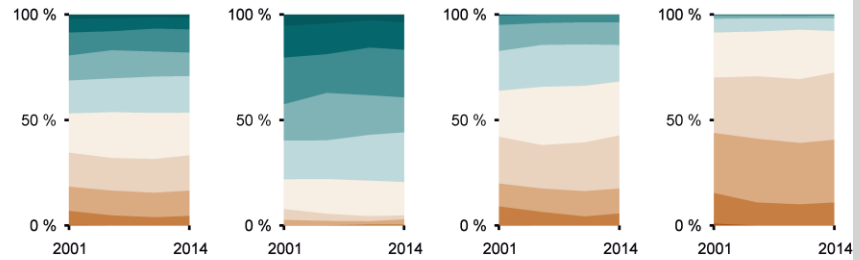
Road



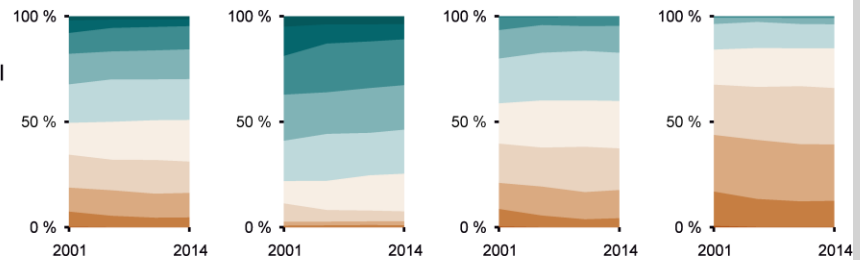
Rail



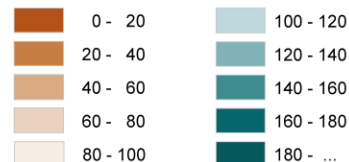
Air



Multimodal



Share of population that live in regions with an accessibility potential (ESPON = 100) of:



Multimodal accessibility by development status

Road

Rail

Air

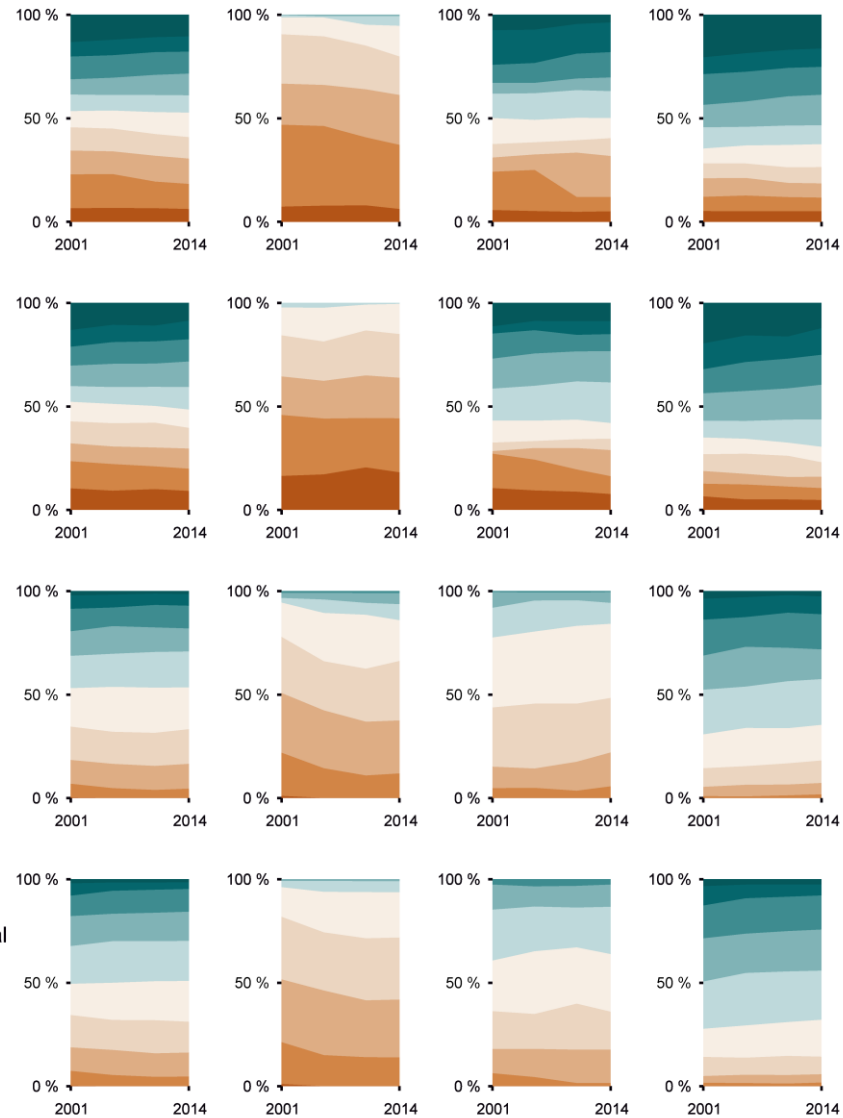
Multimodal

ESPON

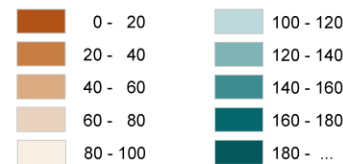
Less developed

Transition

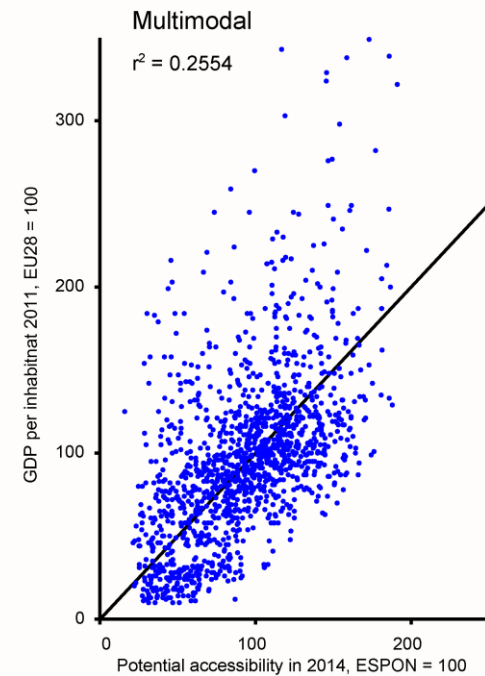
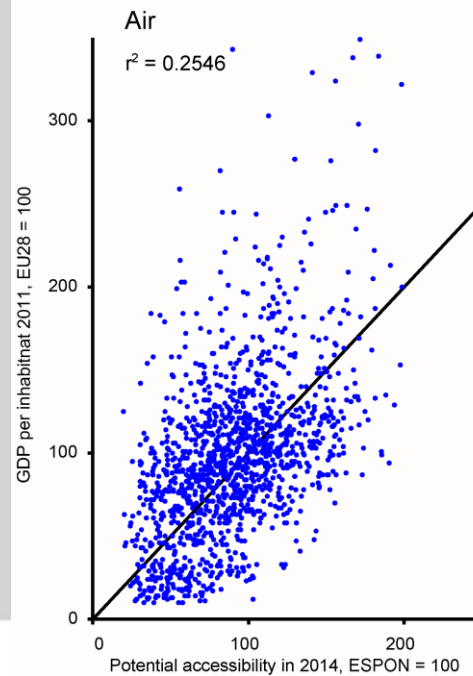
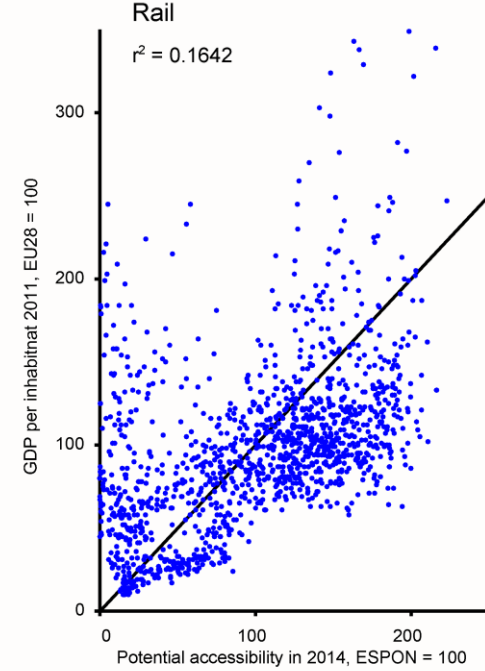
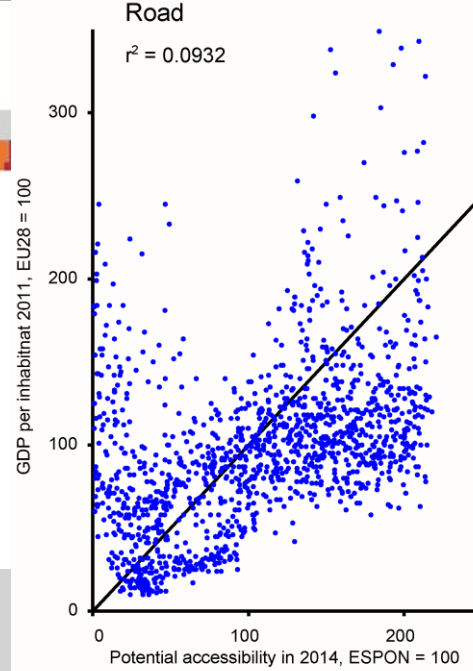
More developed



Share of population that live in regions with an accessibility potential (ESPON = 100) of

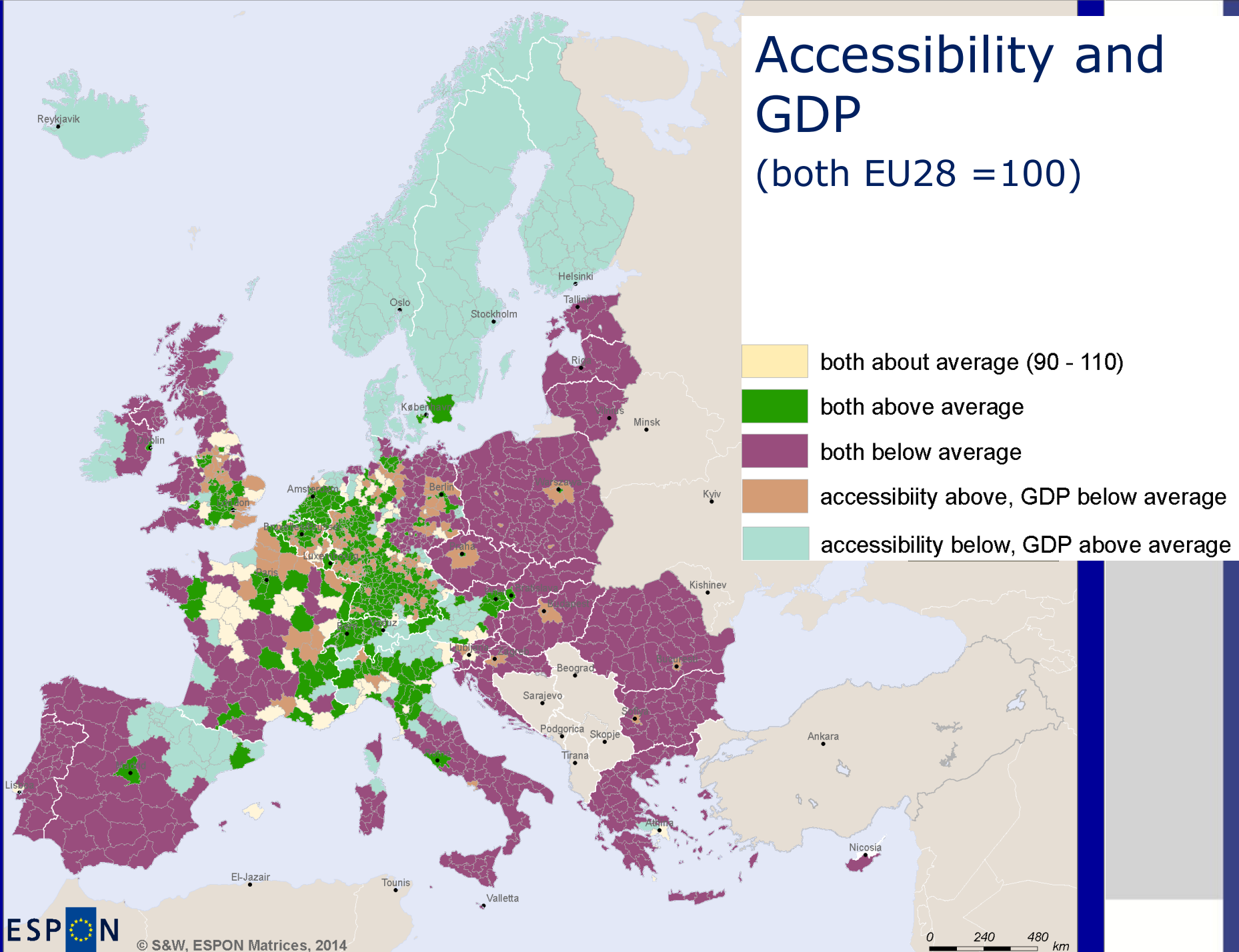


Accessibility and economic performance



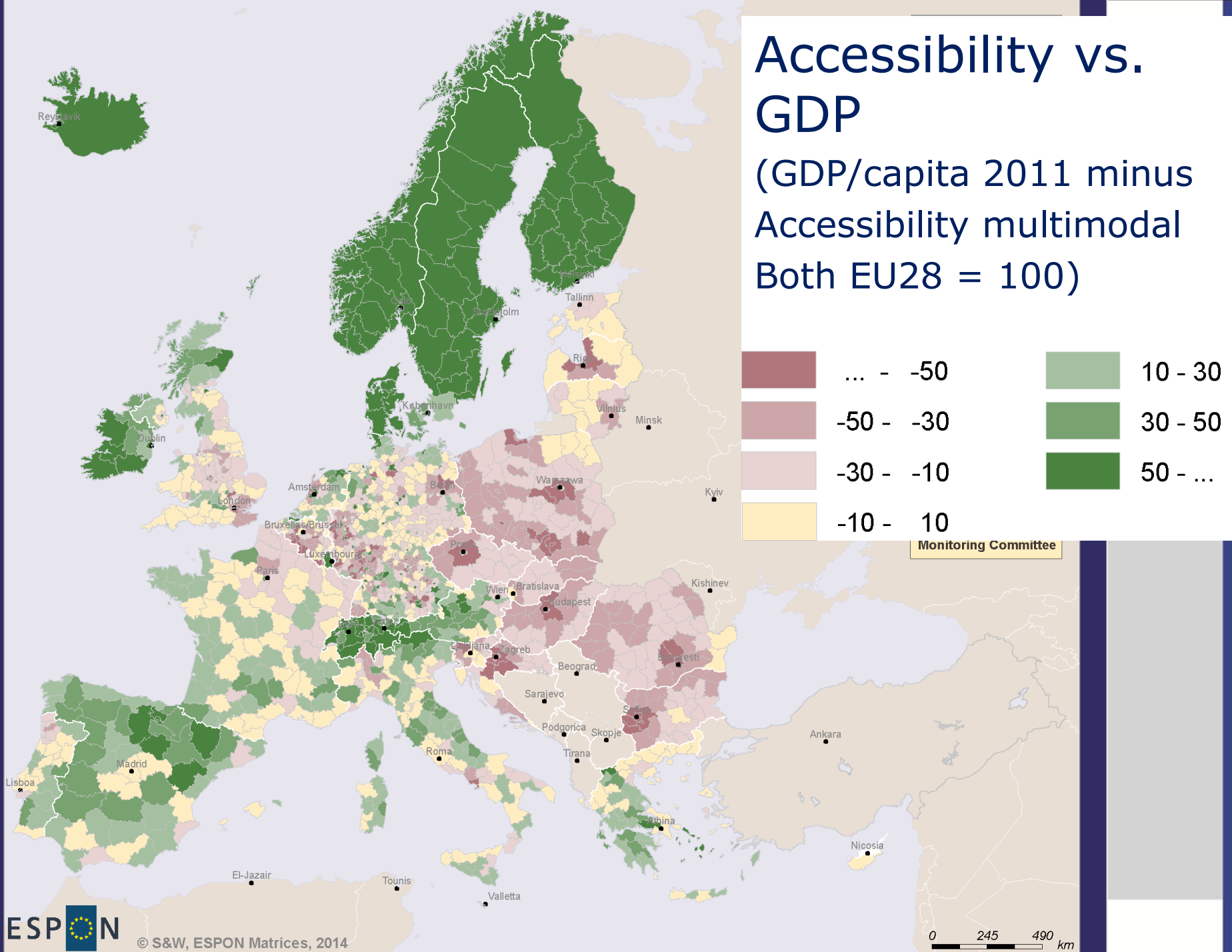
Accessibility and GDP

(both EU28 = 100)



Accessibility vs. GDP

(GDP/capita 2011 minus
Accessibility multimodal
Both EU28 = 100)



Opportunities and challenges

- Slightly changing patterns of locational advantages in terms of accessibility
- Opportunities:
 - potentials for peripheral regions
 - potentials for intermodal hubs
 - new gateway cities and regions
- Challenges:
 - increased transport volumes
 - negative environmental effects
 - some focus on road transport
 - risk of economic “tunnel effects”
 - territorial cohesion

Further information

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