



Nordregio Forum  
Nordic Bioeconomy and Regional Innovation  
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# Green growth: A territorial approach

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## Overview of the presentation

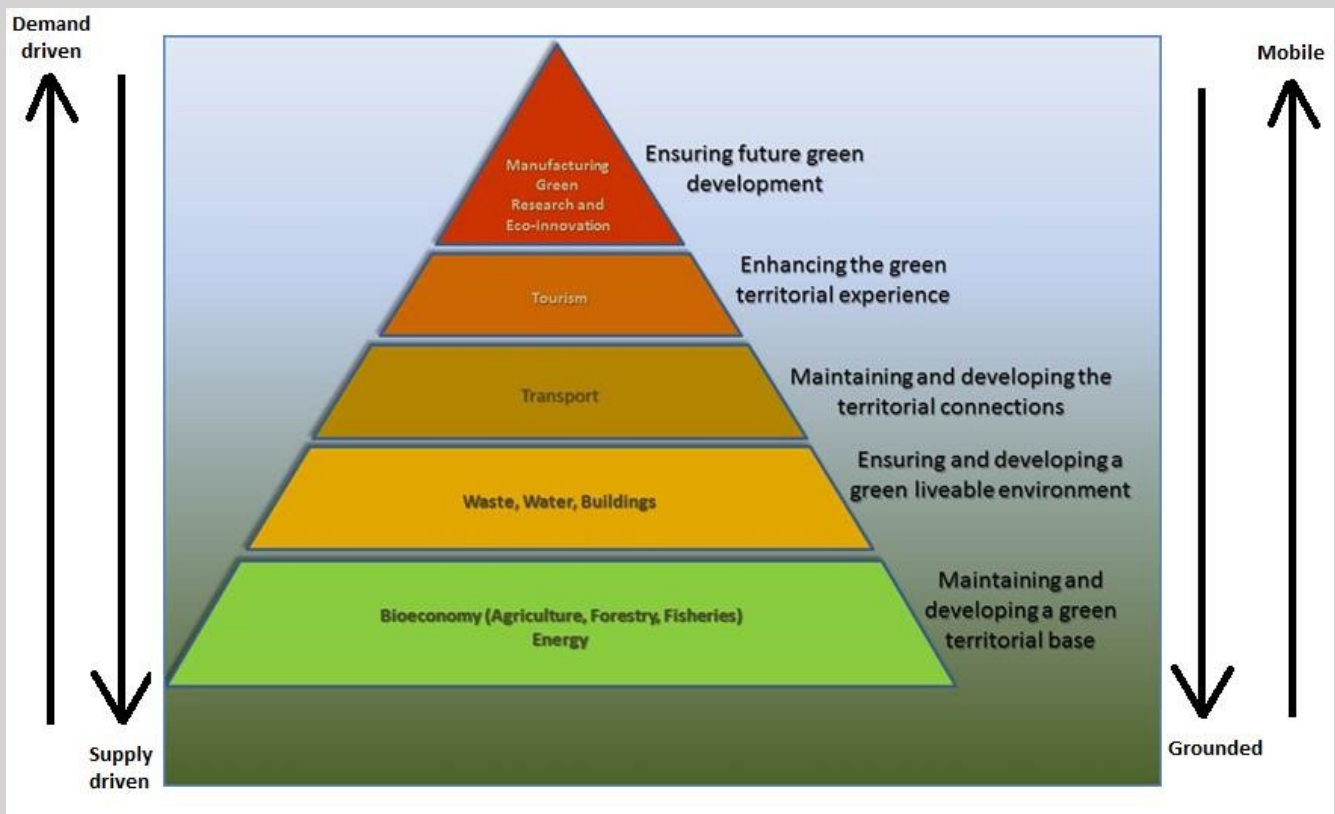
Green Growth: Sector Perspectives

Green Growth: Territorial Perspectives

Green Growth and regional performance  
in Europe

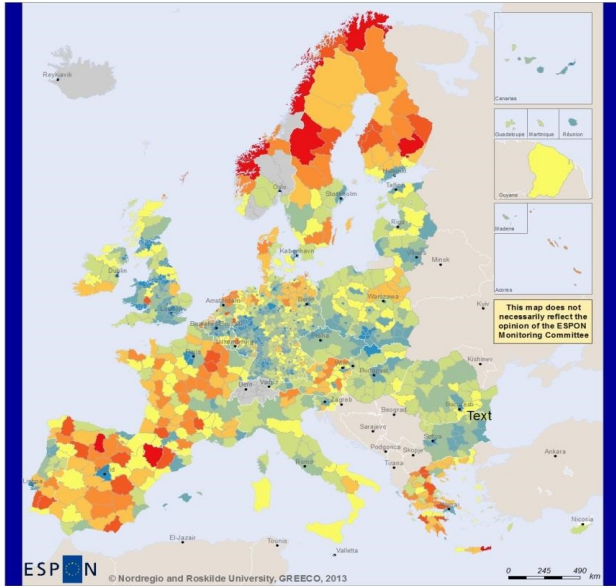


# Territorially relevant sectors in the green economy

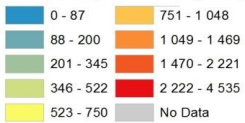


## Regional economic specialisation -GVA per capita-

### Sector A: Agriculture, forestry and fishing



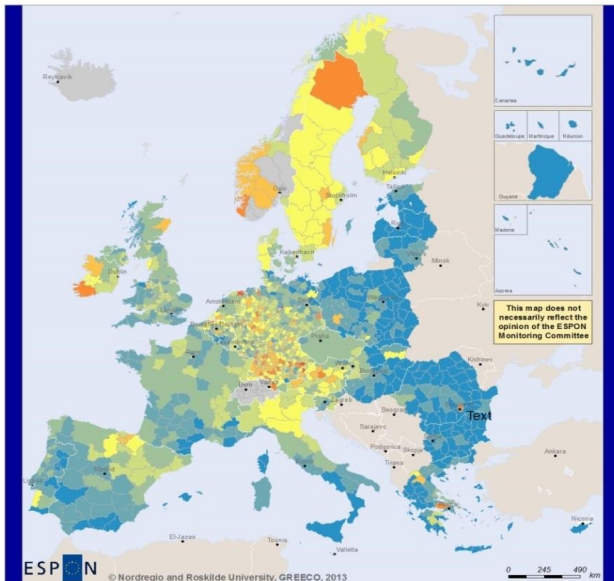
#### GVA per capita in Euro (2010)



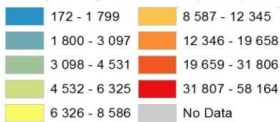
The primary sector has developed mainly in the direction of the more remote parts of Europe, stressing the key importance of the natural resource potentials in these regions.

## Regional economic specialisation -GVA per capita-

### Sector B-E: selected industrial branches\*

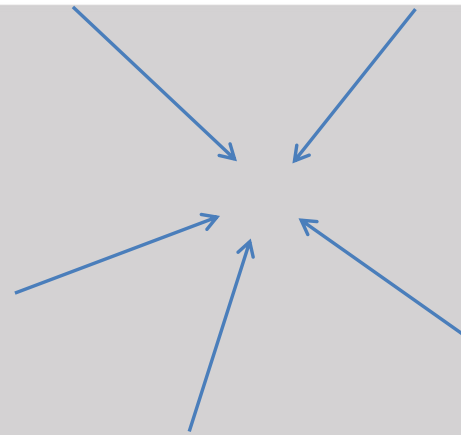


#### GVA per capita in Euro (2010)



\*Consisting of: B (Mining and quarrying); C (Manufacturing); D (Electricity, gas, steam and air conditioning supply); E (Water supply; sewerage; waste management and remediation activities)

Regional Development Fund

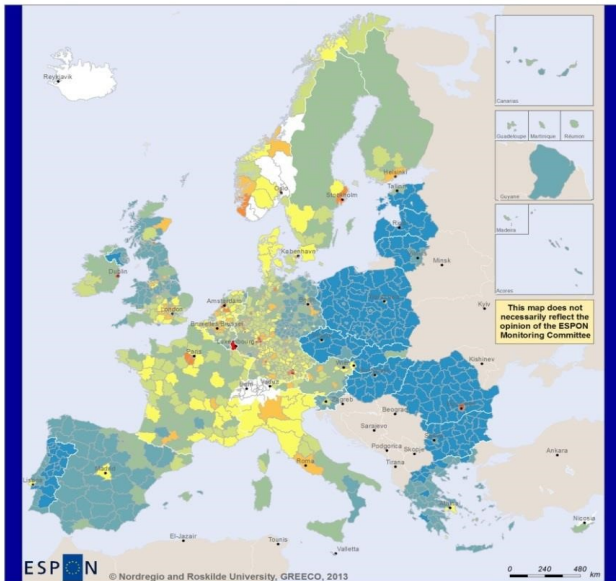


The process of concentration and centralisation due to extensive availability of workforce has dominated the sectors: Mining and quarrying, Manufacturing, Electricity, gas, steam and air conditioning supply, as well as Water supply, sewage, waste management and remediation activities.

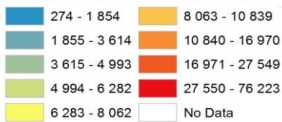
## Regional economic specialisation

-GVA per capita-

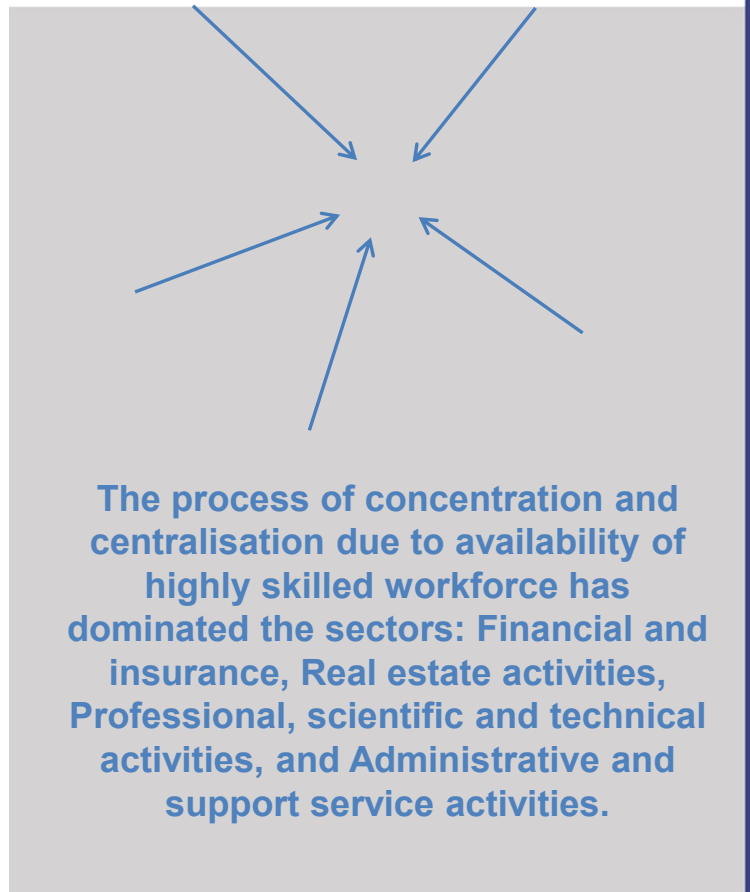
**Sector K-N: financial sector, real estate and professional services**



### GVA per capita in Euro (2010)



\*Consisting of: K (Financial and insurance activities); L (Real estate activities); M (Professional, scientific and technical activities); N (Administrative and support service activities)



## The key topics in relation to greener development of the economic sectors reflect:

- **key environmental relation** and the way we consume natural resources (e.g. supporting biodiversity, re-use of waste, improving water quality, minimizing environmental impact);
- **responsiveness to changes** (e.g. climate change adaptation and mitigation, developing green transport modes, sustainable waste and water management, technological innovations, changes in product design);
- **energy relations** (e.g., improving energy efficiency, renewable energy use, innovative technologies);
- **management and planning** (e.g. certification, land use planning, community involvement, demand management);
- **'green footprint'** or visible impacts and outcomes of changes (e.g. organic agriculture, carbon sequestration, improving water quality, improved productivity);
- **user behavior** (e.g. food habits and waste, use of wood as construction material, improved health security at a workplace).

## Main drivers and enablers to greening of the sectors include:





## Territorial factors in green growth

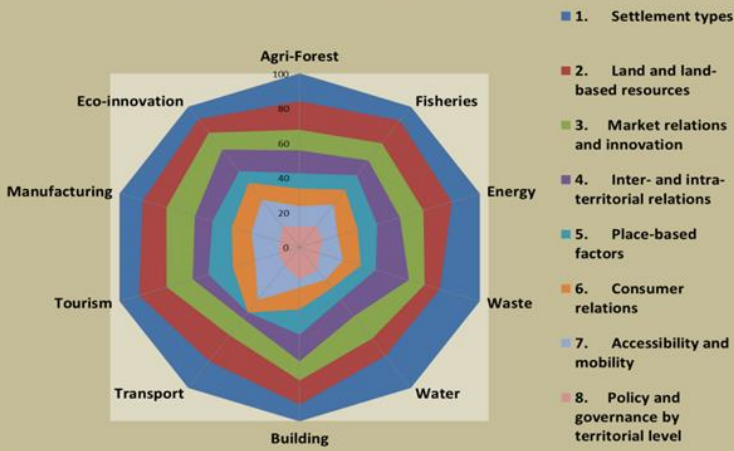
- are territorial dimensions that drive, enable or hinder the development of the green economy;
- they are place-based and depend on the local societal, cultural and political contexts;
- they account for the basis of how regions differ in their “pre-conditions” for a transition towards a green economy;
- and they can act as drivers of the green economy in some or all sectors, hindrances to it in some or all sectors, and/or have differential effects between sectors.

## Analytical framework

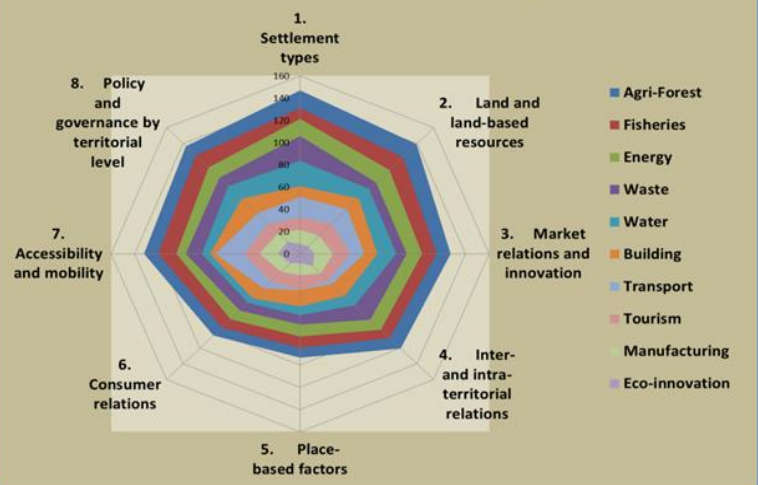
- What are **the most important territorial dimensions** that need to be acknowledged in order to achieve policy-led development of a greener economy?
- To what degree are the territorial dimensions **sector-specific or crossing sectors**?
- **What territorial factors appear to complement the development** of the green economy in *multiple* sectors?
- What territorial factors are **conflicting** - in that they show conflicting trade-offs - between promoting green development in one or more sectors while restricting green development in one or more other sector(s)?
- To what extent are **place-based or a space-blind** development models best suited to address regional growth challenges?
- What are the territorial **implications of a paradigm shifts** for instance **from “brown” to “green” development**?

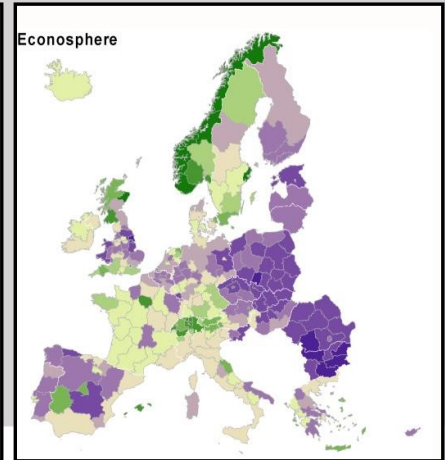
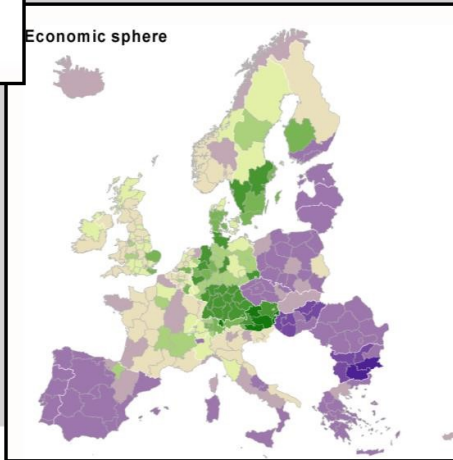
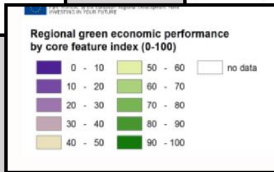
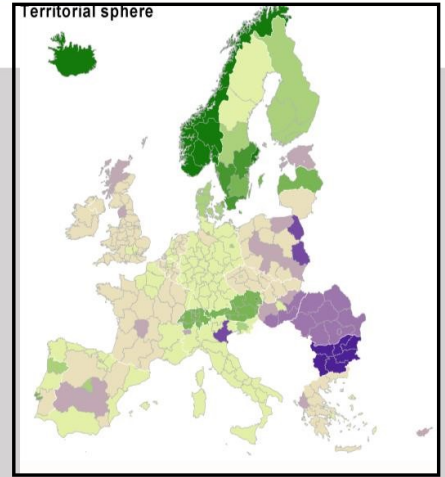
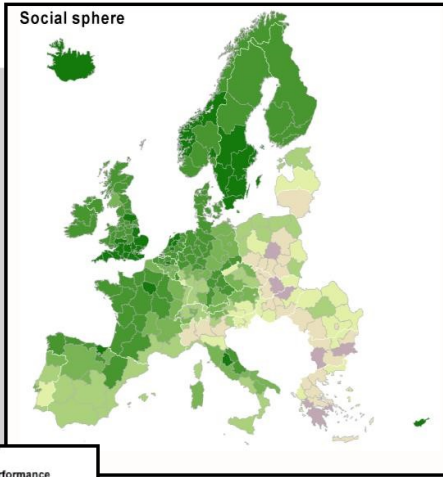
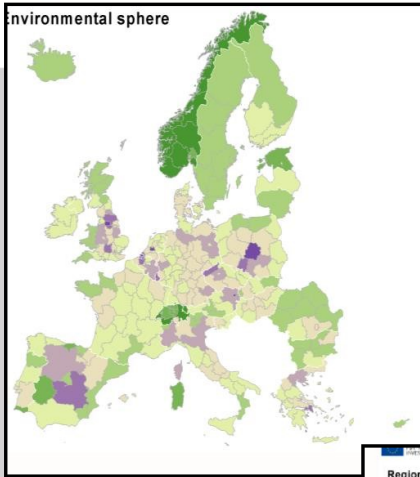
# The importance of the identified factors and outcomes

**Distribution of categories on sectors**



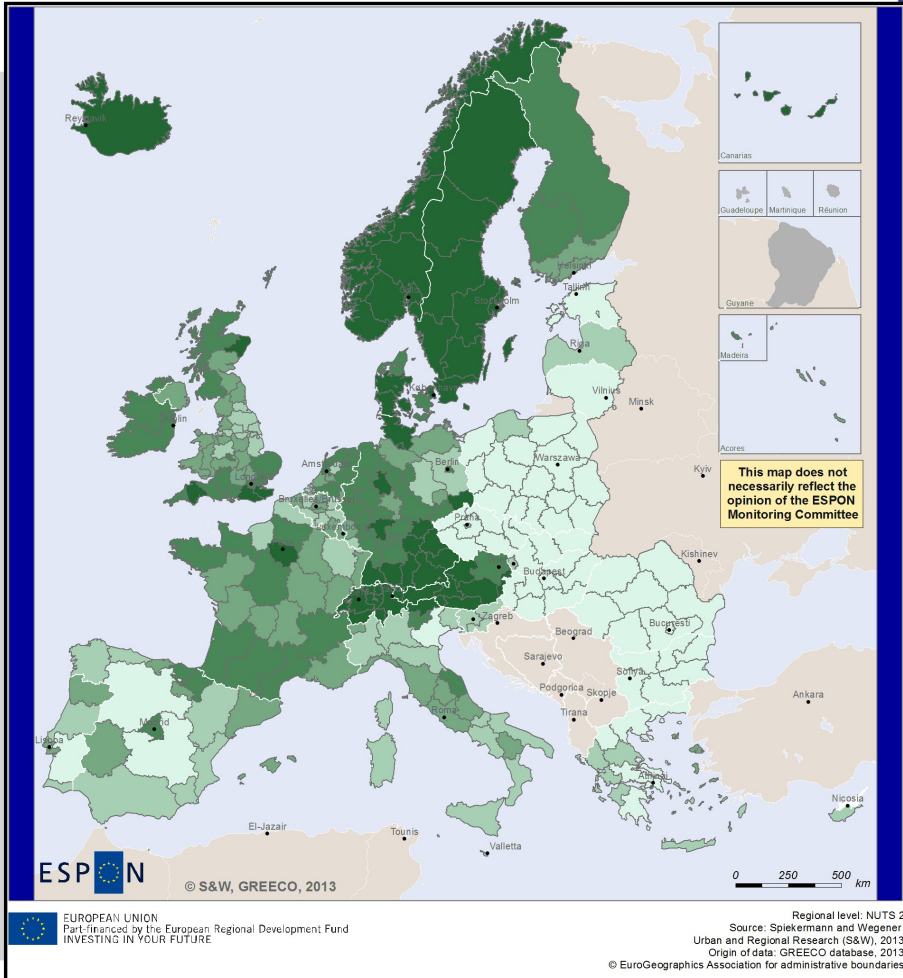
**Distribution of sectors on categories**





Green economy spheres	Component	Headline indicator
Environmental sphere	Source function	Environmental and natural assets (EEA)
	Sink function	Emission of air pollutants
Social sphere	Health	Life expectancy
	Environmental risk	Exposure to air pollution
Territorial sphere	Territorial capacity	Renewable energy production
	Spatial efficiency	Land take per GDP unit
Economic sphere	Green supply	Green products and services offered
	Green technology	Green patents
Ecosphere	Energy productivity	GVA per energy unit
	CO2 Productivity	GDP per CO2 unit

### Green economy performance through a multi-criteria assessment



#### Regional green economic performance Aggregate typology (quantils)

- 24.1 - 42.3 (very low GE performance)
- 42.4 - 51.4 (low GE performance)
- 51.5 - 56.5 (average GE performance)
- 56.6 - 62.3 (high GE performance)
- 62.4 - 84.0 (very high GE performance)
- no data

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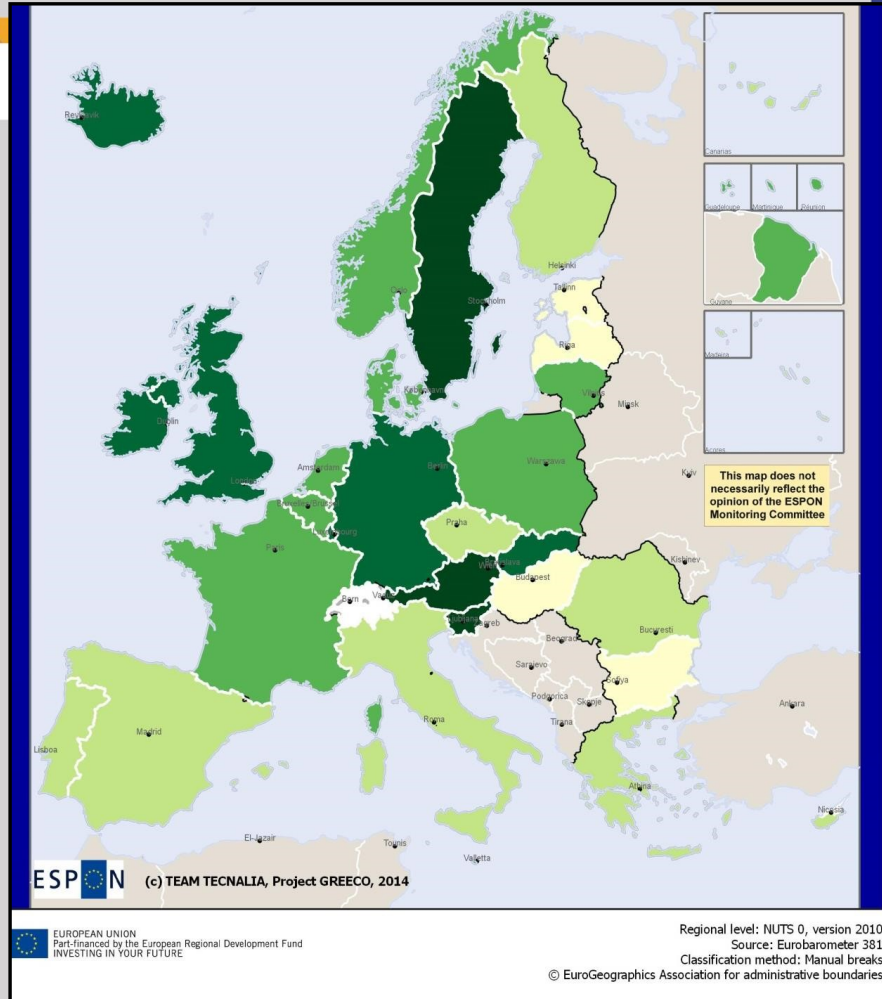
Regional level: NUTS 2  
Source: Spiekermann and Wegener  
Urban and Regional Research (S&W), 2013  
Origin of data: GRECO database, 2013  
© EuroGeographics Association for administrative boundaries

## Share of SMEs offering green products and services

Share of SMEs that offer green products and services (2013)

- < 20
- 20 - 25
- 25 - 30
- 30 - 35
- > 35
- No data available

The map shows the share of SMEs offering green products or services, as reported by Flash Eurobarometer 381 (September 2013): SMEs, Resource Efficiency and Green Markets.



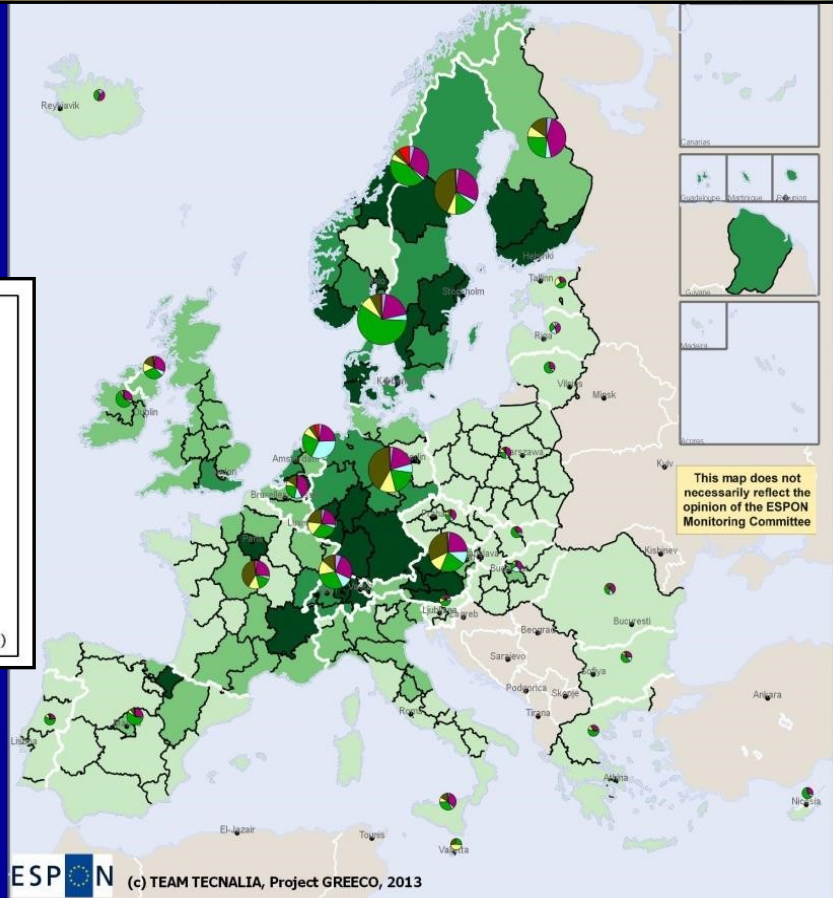
# The role of Greentech offering green products, innovation and services

Accumulated patents in environmental technologies per million inhabitants (2005-2010)

- < 25.0
- 25.1 - 60.0
- 60.1 - 100.0
- > 100.1
- No data available

Breakdown of environmental technologies by category at NUTS0 level

- Technologies specific to climate change mitigation
- Technologies for emissions abatement and fuel efficiency in transportation
- Technologies with potential or indirect contribution to emissions mitigation
- Technologies for energy generation from renewable and non-fossil sources
- Patents in energy efficiency in buildings and lighting technologies
- Technologies for general environmental management (air, water, waste)
- Combustion technologies with mitigation potential (e.g. using fossil fuels, biomass, waste, etc.)



ESPON (c) TEAM TECNALIA, Project GREECO, 2013

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Regional level: NUTS X, version 2011  
Source: OECD Regions and Cities Database  
Classification method: Manual break  
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## Summary of key messages

- 1. Greening strategies should be sector-specific;**
- 2. Greening strategies should be place-based;**
- 3. Policy support should ensure long-term transformative approaches;**
- 4. As territory is dynamic new spatial realities are created along with spatial structures determined by multi-functionalities;**
- 5. The ultimate goal should be decoupling economic and employment growth from environmental degradation, resource depletion, energy consumption and generation of greenhouse gasses.**



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**Thank you for your attention!**