



# **EuroGeographics products meeting EU user needs**

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GISCO team**

**Eurostat**

**E4-Regional Statistics and Geographic  
Information**

**ESTAT-GISCO@ec.europa.eu**

# Content of the presentation

- 1. Why the Commission uses EuroGeographics products*
- 2. Role of GISCO*
- 3. The main EuroGeographics products for the Commission*
- 4. Applications of importance*
- 5. Advantages and disadvantages of EuroGeographics products*
- 6. Our wish list for the future*

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# Eurostat yearbook 2004

The statistical guide to Europe

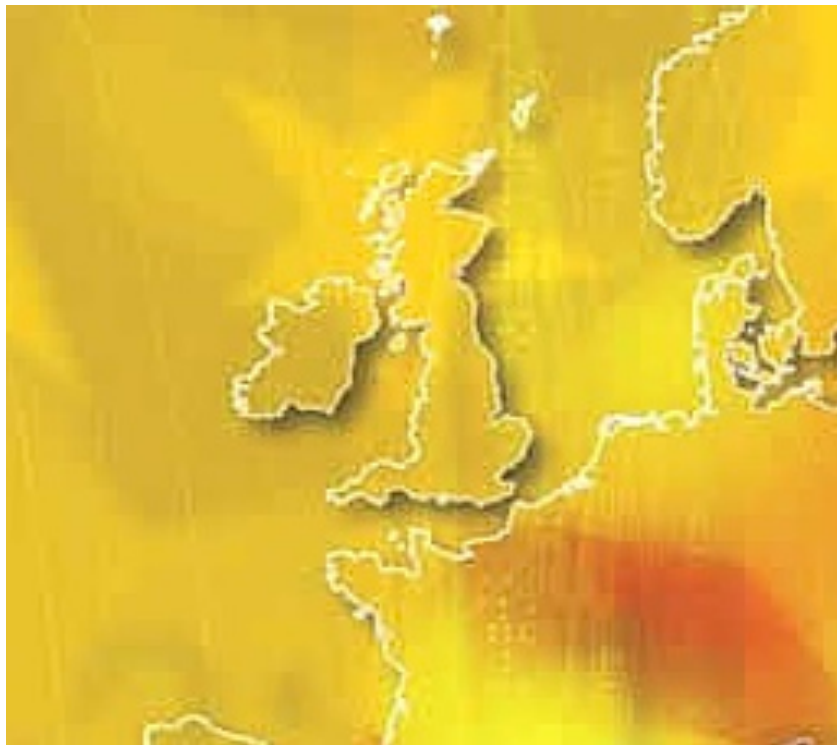
Data 1992-2002



**A good reason  
to use reliable  
/authoritative  
geographic  
information**



# The reactions



## FINANCIAL TIMES

### Wales disappears from map of Europe

Simon Briscoe OCTOBER 5, 2004

The omission of Wales from a new European Union reference book has sparked an outpouring of grief from the principality.

## WalesOnline

### Eurocrats accused of going nuts

#### Eurocrats leave Wales off EU map

**A bureaucratic blunder has left Wales off a map of Europe on the cover of a prestigious EU reference book.**

The Eurostat Statistical Compendium has all the facts and figures on Europe.



All EU member states, and the rest of Britain, are accurately represented on the cover - but Wales has disappeared and been replaced by the Irish Sea.

Where's Wales? Well, it used to be between England and Ireland...

**BBC  
NEWS**

# Content of the presentation

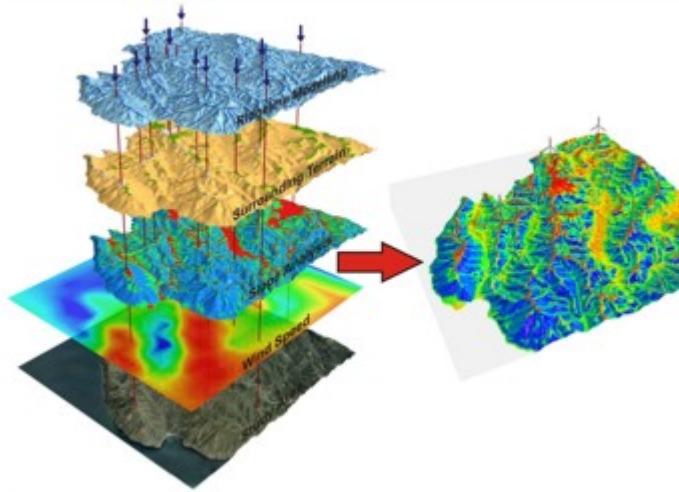
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# GISCO - the Geographic Information System of the Commission

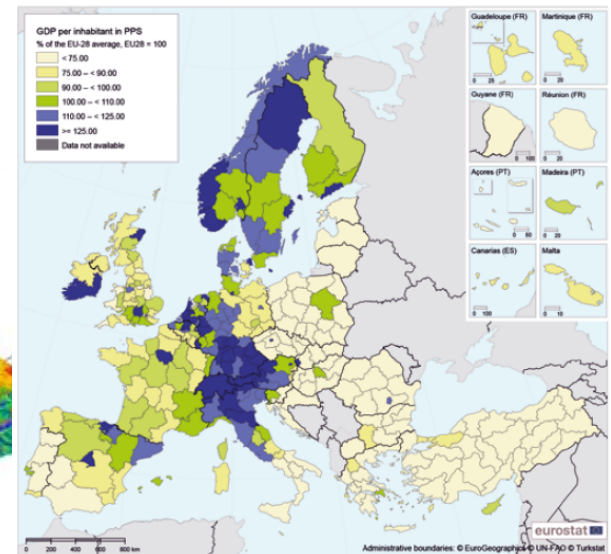
*visualise*

*analyse*

*localise*

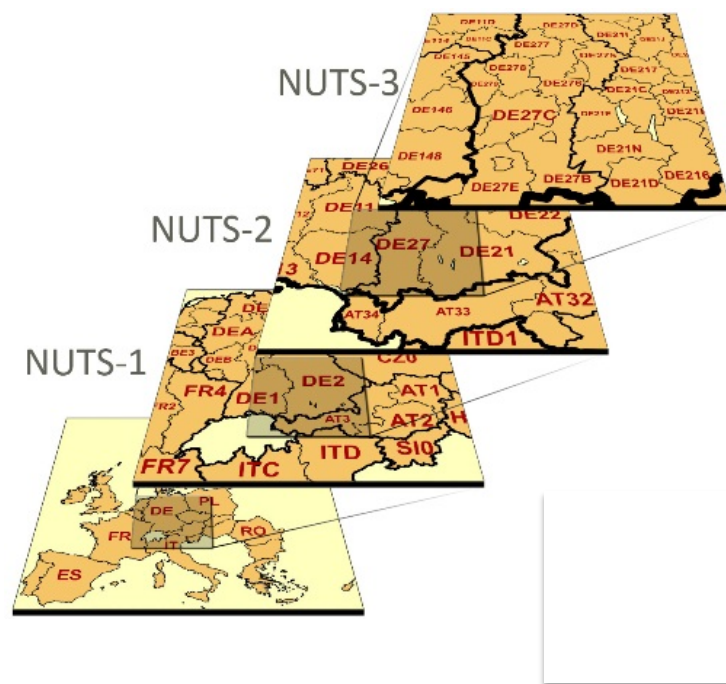


Map 1: Gross domestic product (GDP) per inhabitant, in purchasing power standard (PPS), by NUTS 2 regions, 2011



# GISCO is service provider to Eurostat and the European Commission+

- *Map making*
- *Spatial analysis projects*
- *Support of statistical production*
- *Provision of Commission wide geospatial data, software and services*
- *GISCO as coordinator of geospatial information use within the European Commission and Agencies*
- *Promoting the integration of statistics and geospatial information in Europe*





# Geospatial data is essential for statistics

***Location*** - just as time - is a key factor in statistics for:

- collecting,
- processing,
- storing,
- analysing and
- aggregating data.

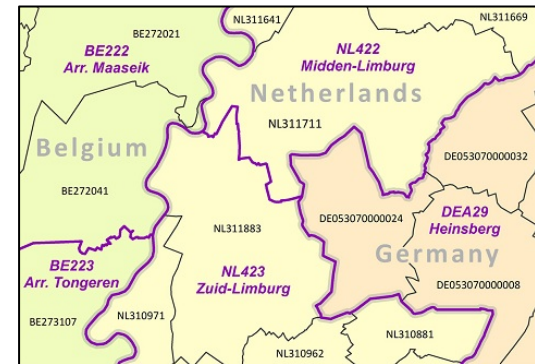
*Statistics on a specific area help understanding the relevance of information.*

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# Pan-European data: Current usage

- ***EBM (1:100 000)***
  - For cartography, spatial analysis, statistical units
- ***ERM (1:250 000)***
  - For cartography, EU-wide transport network analysis
- ***Other datasets:***
  - GAUL, TomTom Multinet©, CLC, OpenStreetMap, etc.



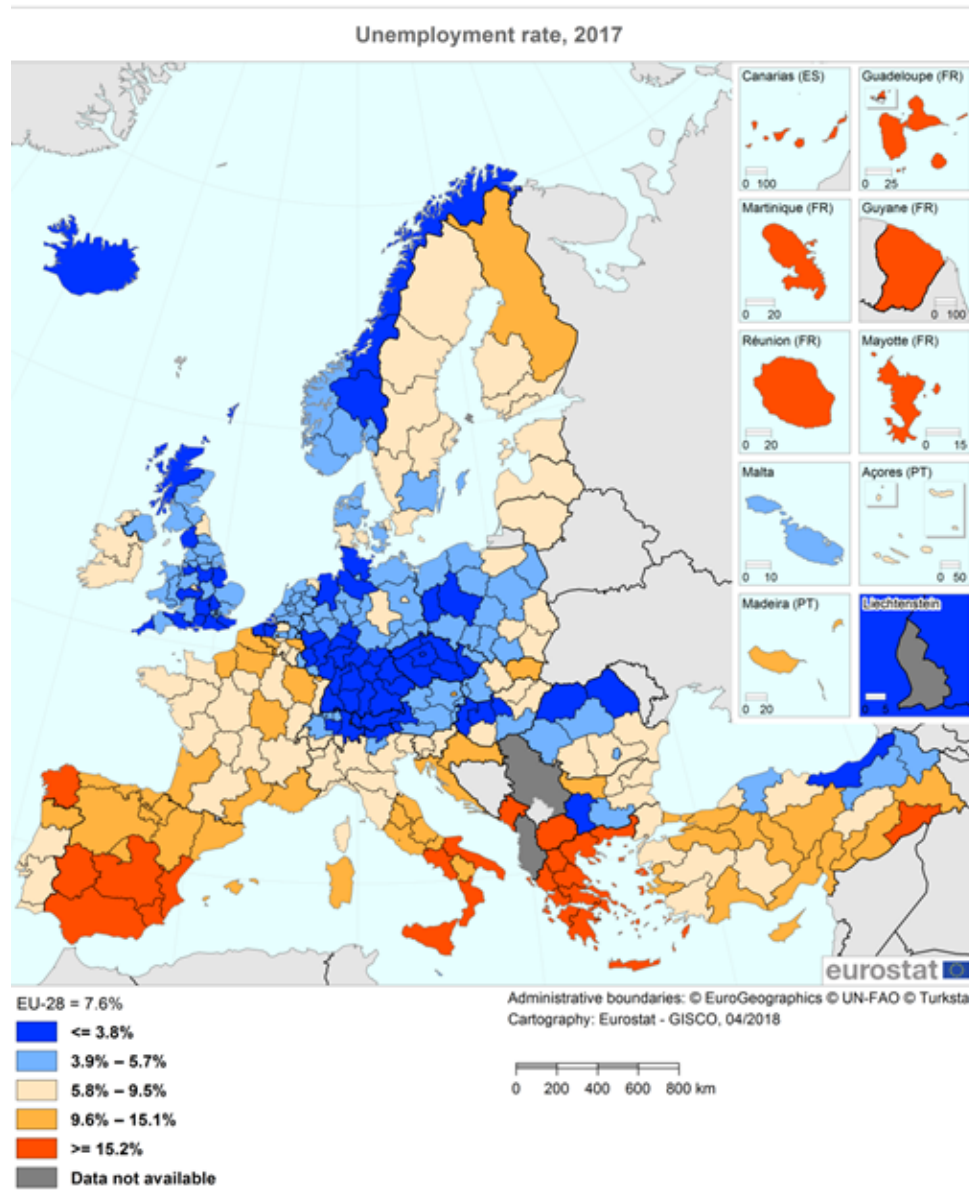
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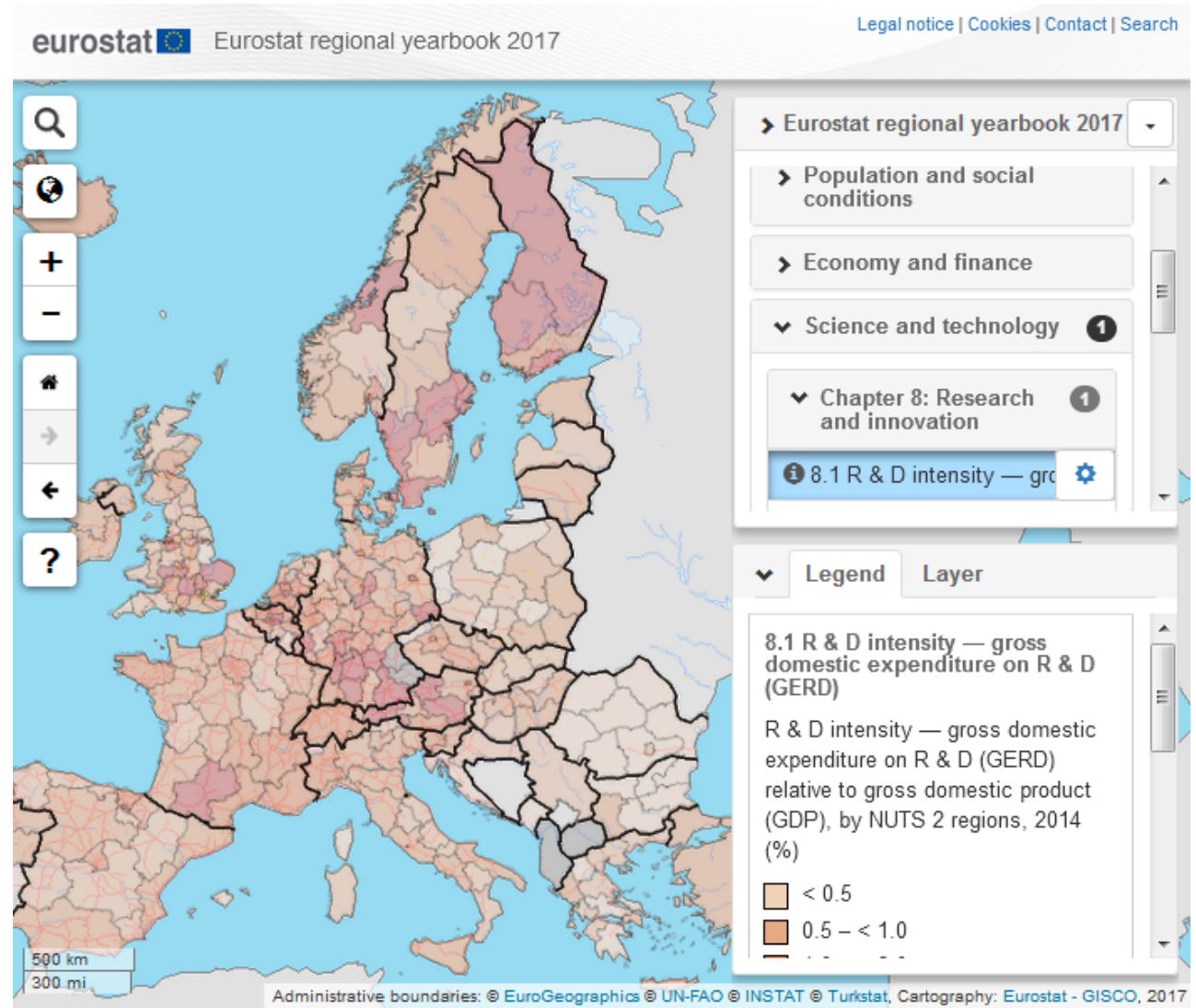
*... in Eurostat*

# Map making



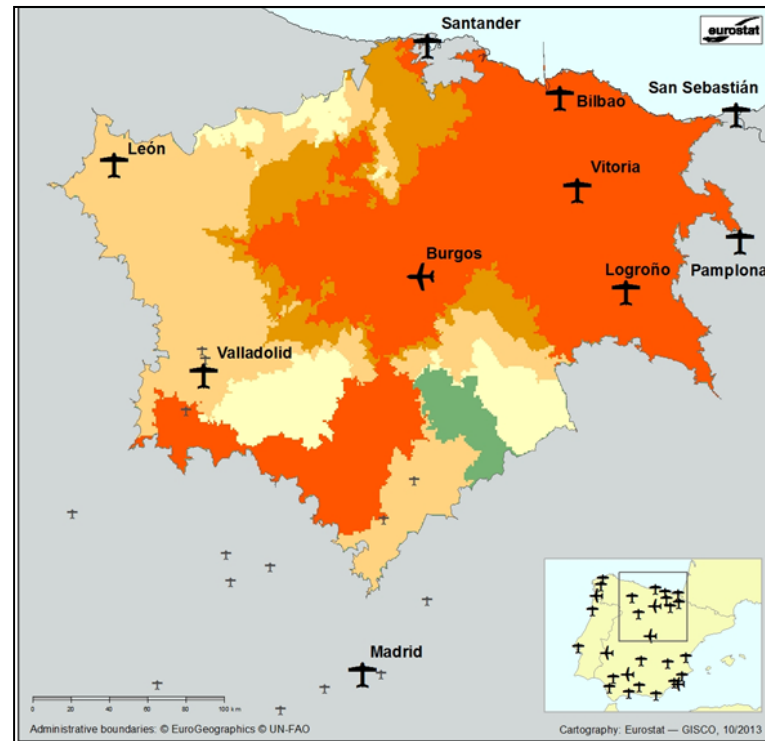
**Eurostat's  
statistical maps**

# Eurostat's Statistical Internet Atlas



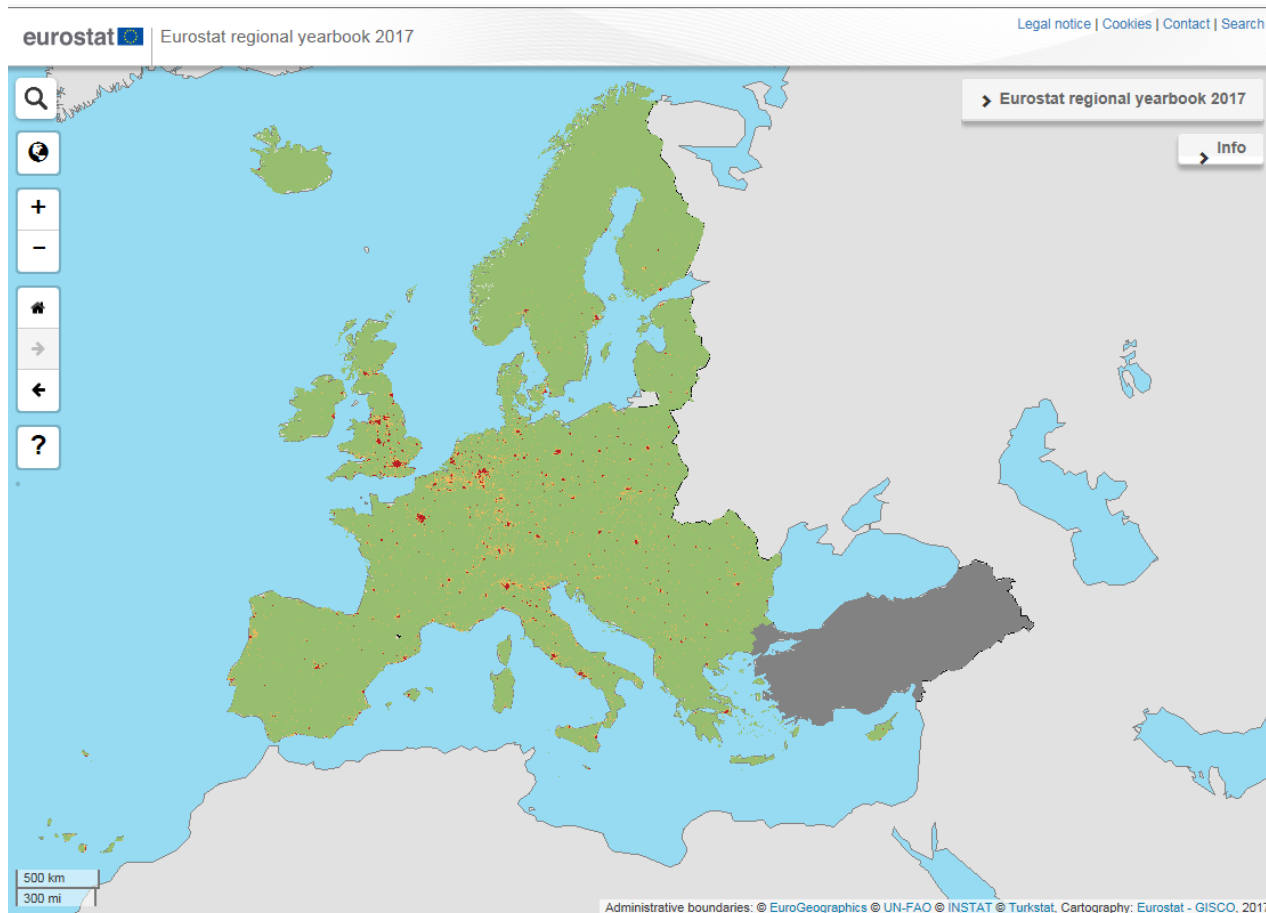
# Spatial analysis

- *Delineate areas*
- *Network analysis*
- *Catchment areas*
- *Disaggregation*





**... Commission (Eurostat) shall maintain and publish [...] Union typologies composed of territorial units at the levels of NUTS, LAU and grid cells.**



[Eurostat regional yearbook 2017](#)[Info](#)

200 km

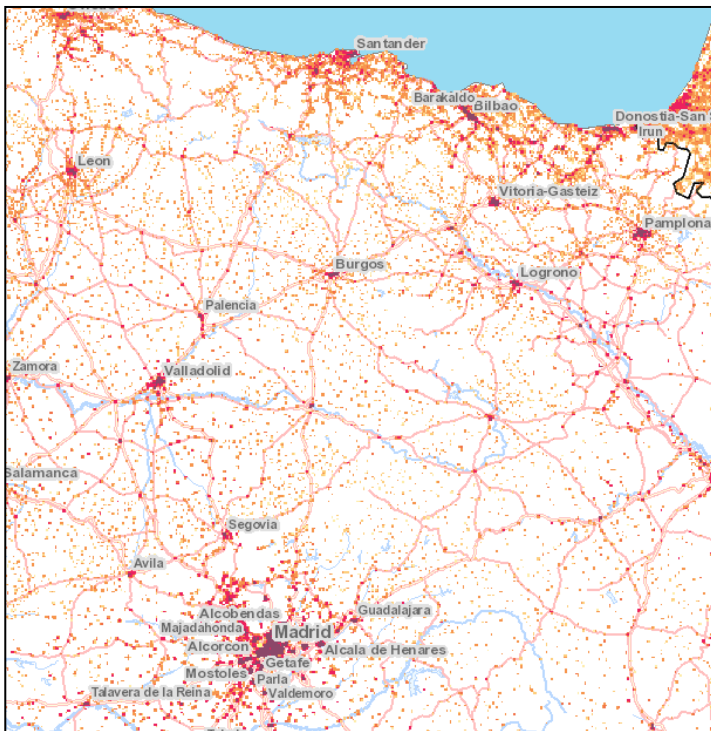
100 mi

# Spatial analysis for transport

## *Airport Catchment Analysis*

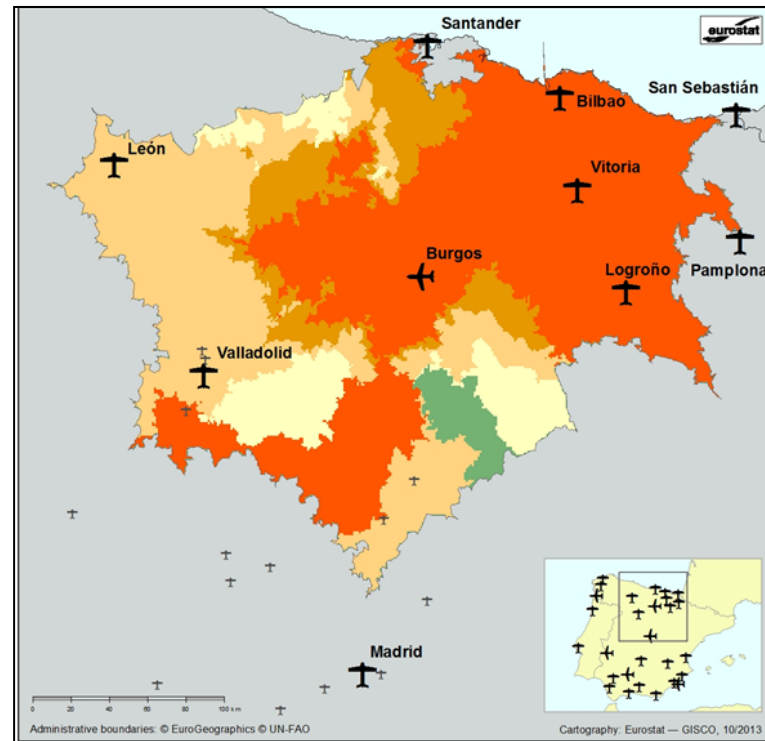


EUROPEAN  
COURT  
OF AUDITORS



### Input:

- Airports
- Transport network
- Population



### Output:

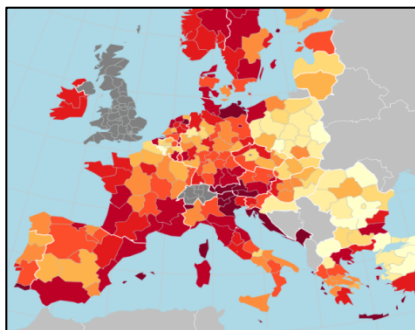
- Accessibility indicators on airports



# Spatial analysis for tourism statistics (Eurostat)

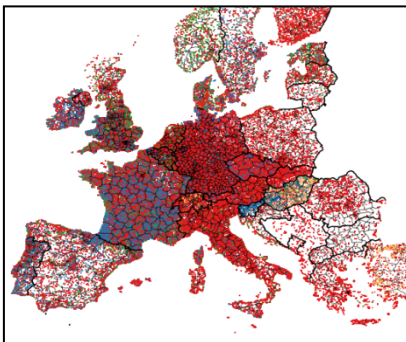
## *Disaggregation*

**NUTS 2 statistics  
on touristic activity**

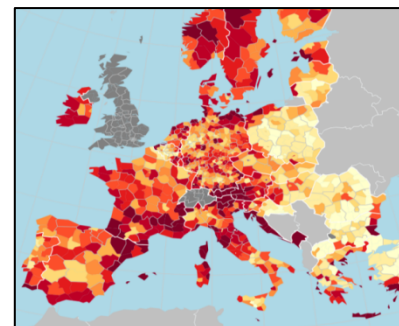


+

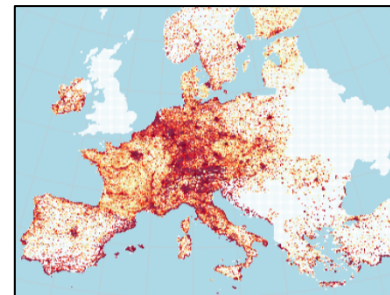
**Geographical  
location of touristic  
accomodations**



**NUTS 3 statistics  
on touristic activity**



**10km grid statistics  
on touristic activity**



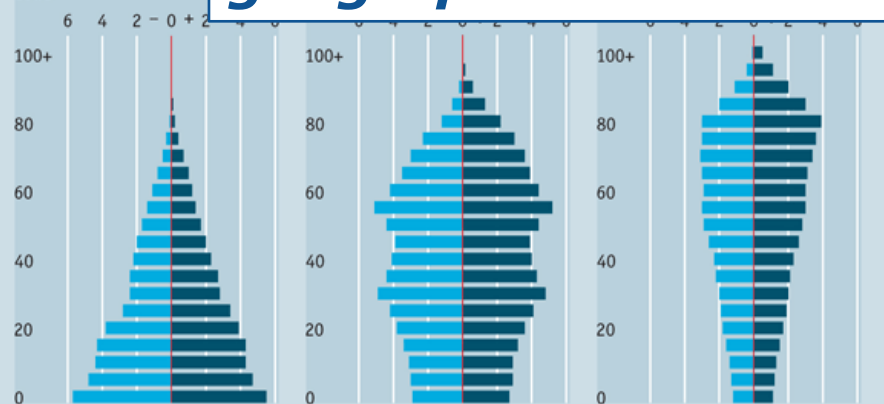


*... as well as in the rest of the  
Commission*



***None of the Commission's current priorities can be addresses without reliable European geographical information***

From pyramid to ki  
Japan's population by age  
1950



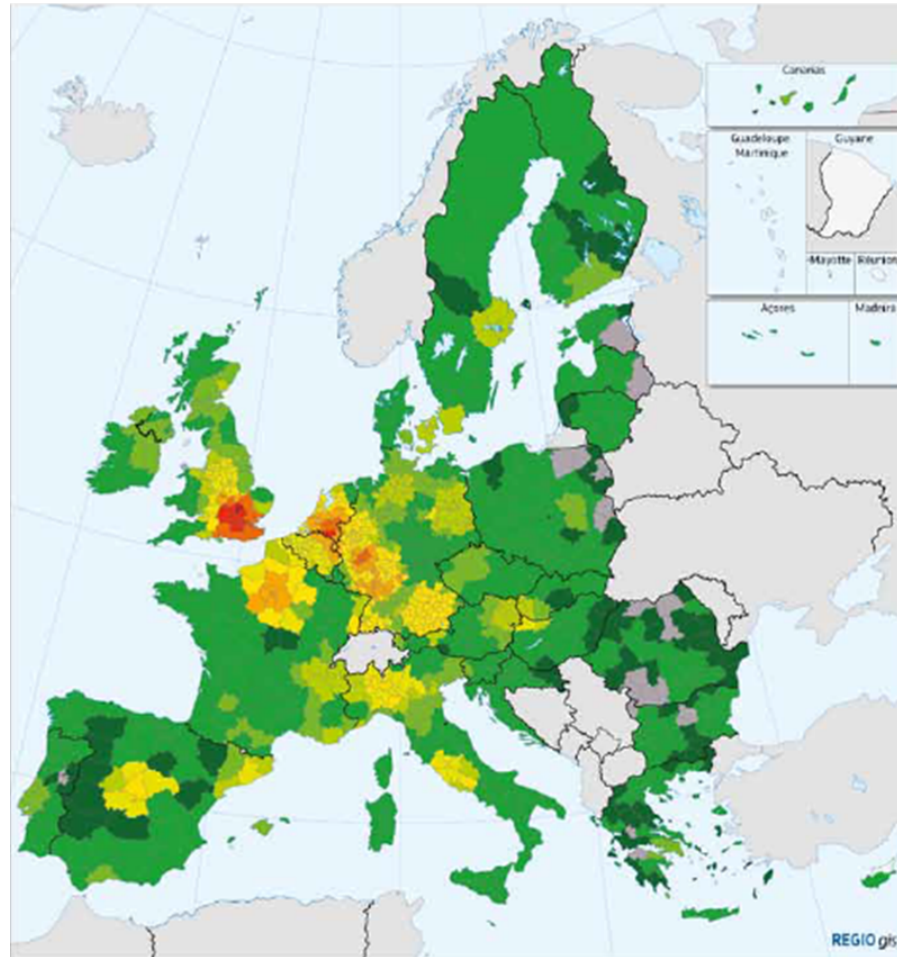
Source: National Institute of Population and Social Security Research



European  
Commission

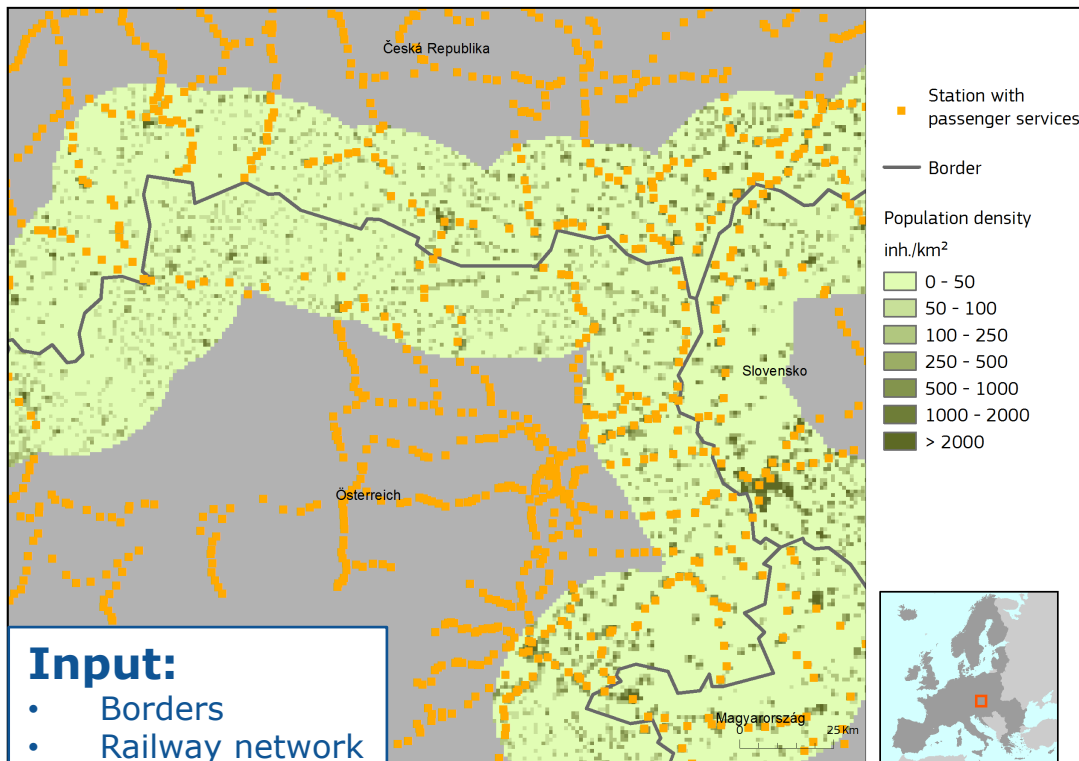
# GI for transport (DG REGIO)

*Access to  
passenger  
flights using  
road network  
and airport  
locations*



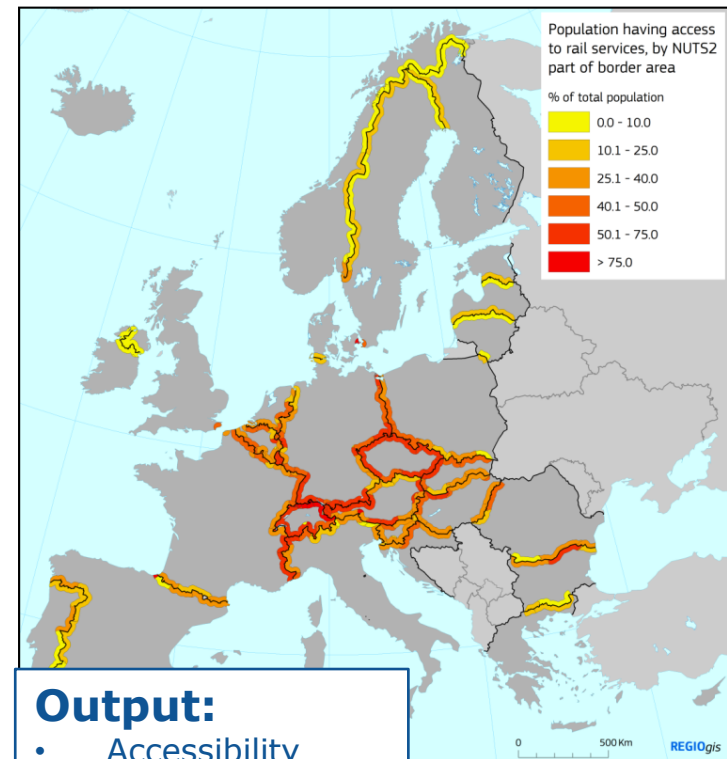
# GI for transport (DG REGIO)

## *Assessment of passenger rail accessibility in Europe's border areas*



### Input:

- Borders
- Railway network
- Population

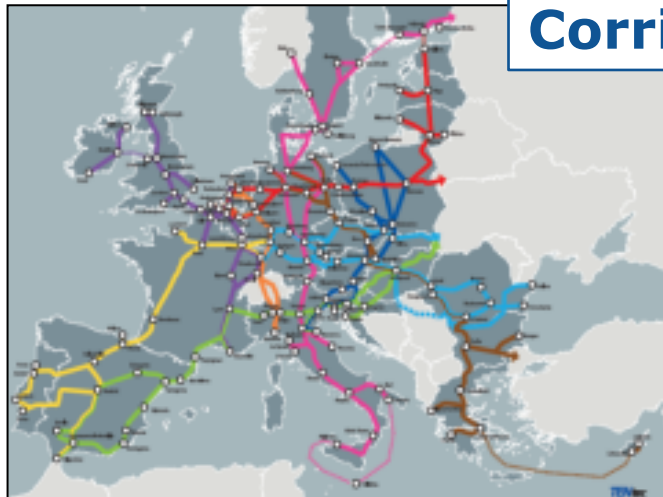


### Output:

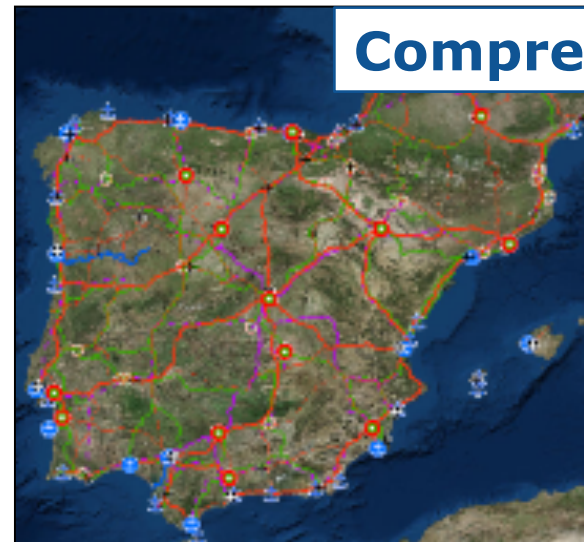
- Accessibility indicators on border regions

# GI for transport (DG MOVE/ENER)

- *Definition of Trans-European Networks of Transport (TEN-T)*
- *Need for GI on roads, railways, inland waterways, Ports, airports, multimodal platforms*
- *3 levels of granularity: Corridors, CORE, comprehensive*



**Corridors**

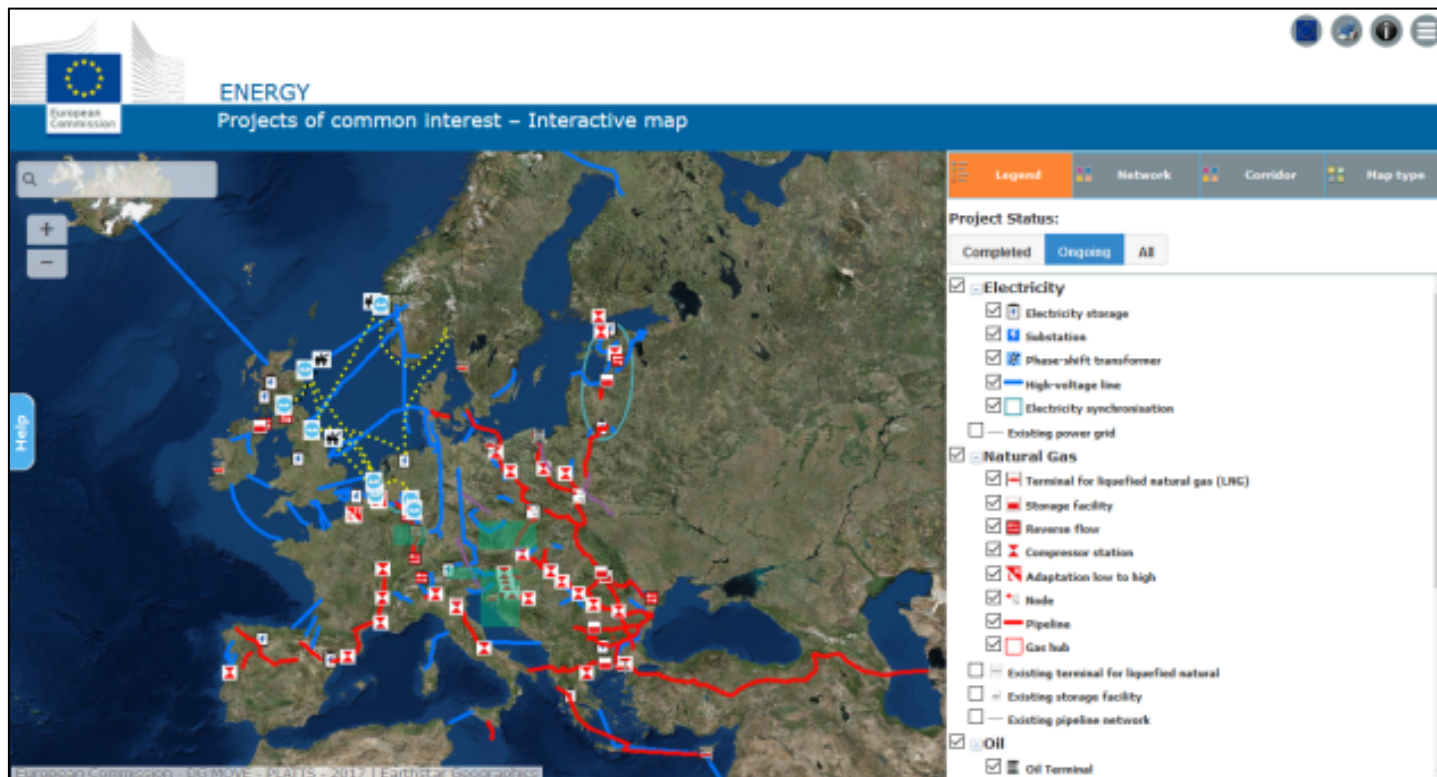


**Comprehensive**



# GI for Energy Policy

- *Definition of Projects of Common Interest (PCIs)*
- *Need for GI on electricity, gas oil, smart grid, etc.*





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# EBM Strengths and weaknesses

## **Strengths**

*Authoritative data from Member States*

*Integrated dataset for Europe*

*Detail until commune level (LAU 2)*

*Good geometrical level of detail (1:100k)*

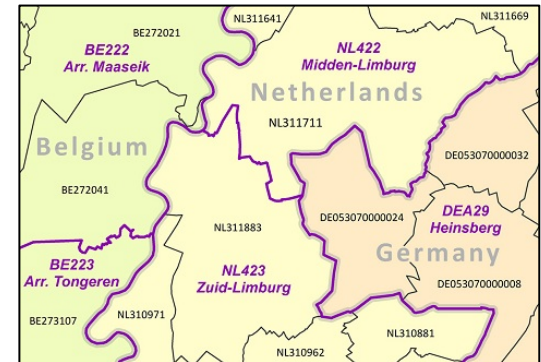
## **Weaknesses**

*Licensing conditions*

*Timeliness, update frequency*

*Geometric consistency between versions (unchanged boundaries)*

*Geographical coverage (Eastern European Countries, Middle East)*



# ERM Strengths and weaknesses

## DATUMS

### Strengths

*Authoritative data from Member States*

*Integrated dataset for Europe*

*Integrated transport networks*

*Harmonised classifications*

*Consistency across themes*

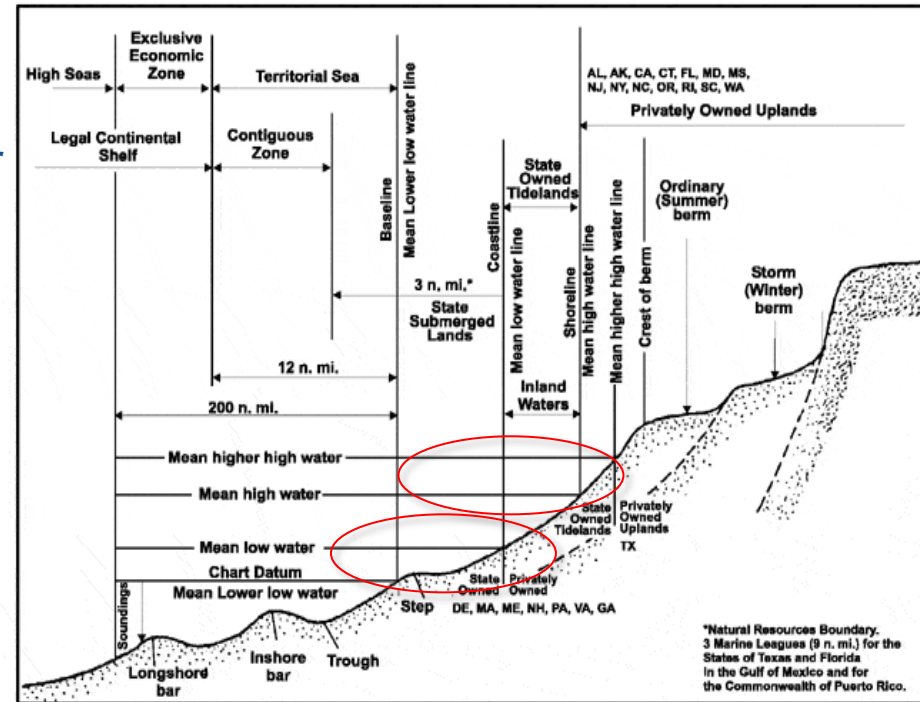
### Weaknesses

*Too coarse resolution (1:250k)*

*Licensing conditions*

*Update frequency and timeliness*

*Issues with completeness and topology*

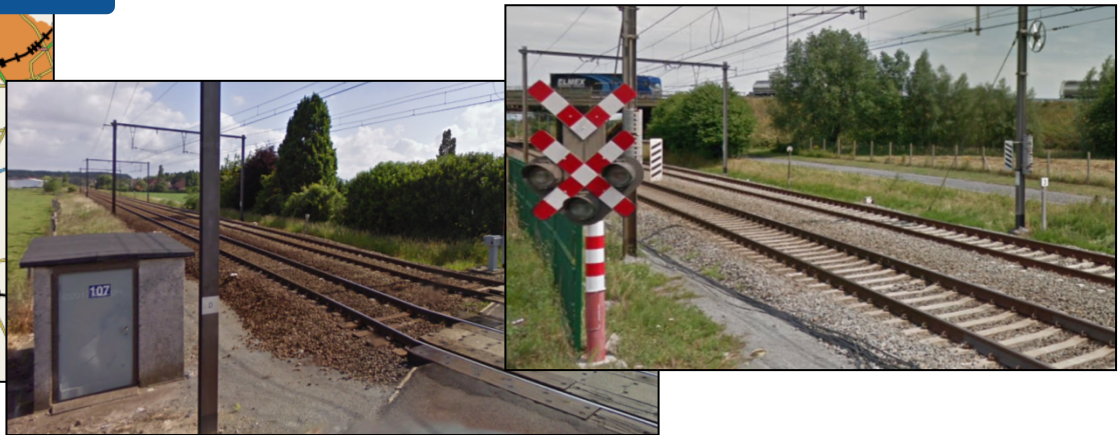


European  
Commission

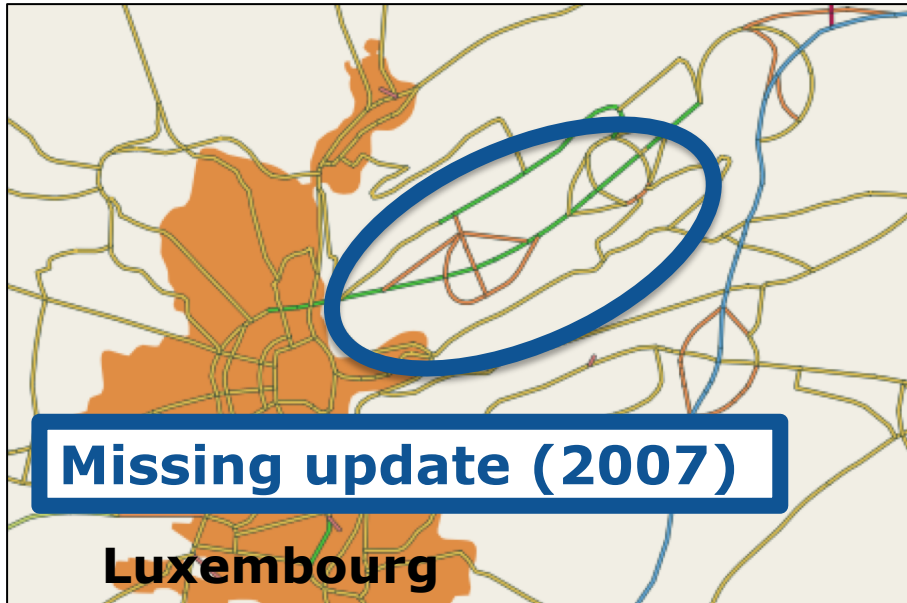
# Example of limitation in ERM



- *Completeness/topology in railway network*
- *Significant impact on spatial analyses' reliability*



# Example of limitation in ERM



- *Temporal accuracy in road network*
- *Significant impact on spatial analyses*

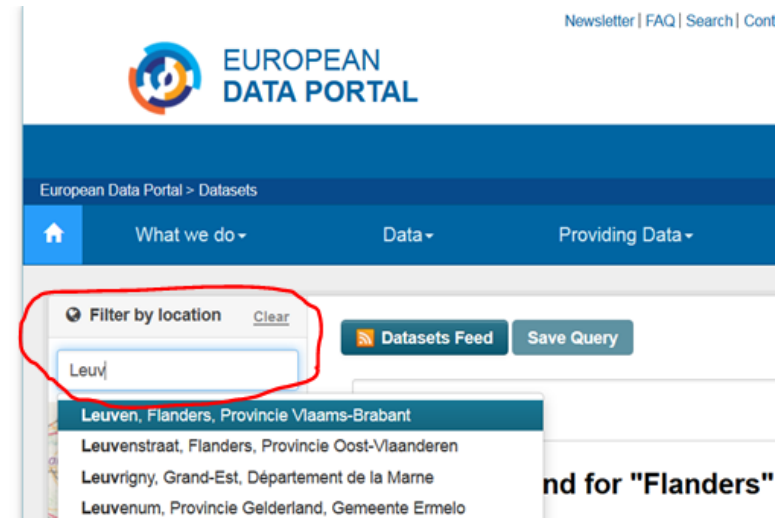


# EU wide geospatial products desperately needed

*EuroGeoNames (EGN \*2006 - + 200?)*

## **Background**

- *The Commission is struggling with the use of authoritative geographical names inside and outside EU on a daily basis*
- *There is a huge demand for harmonized authoritative and complete geographical names data in a Web-Services-Infrastructure*
- *Use cases are mapping and search for locations/ gazetteer*





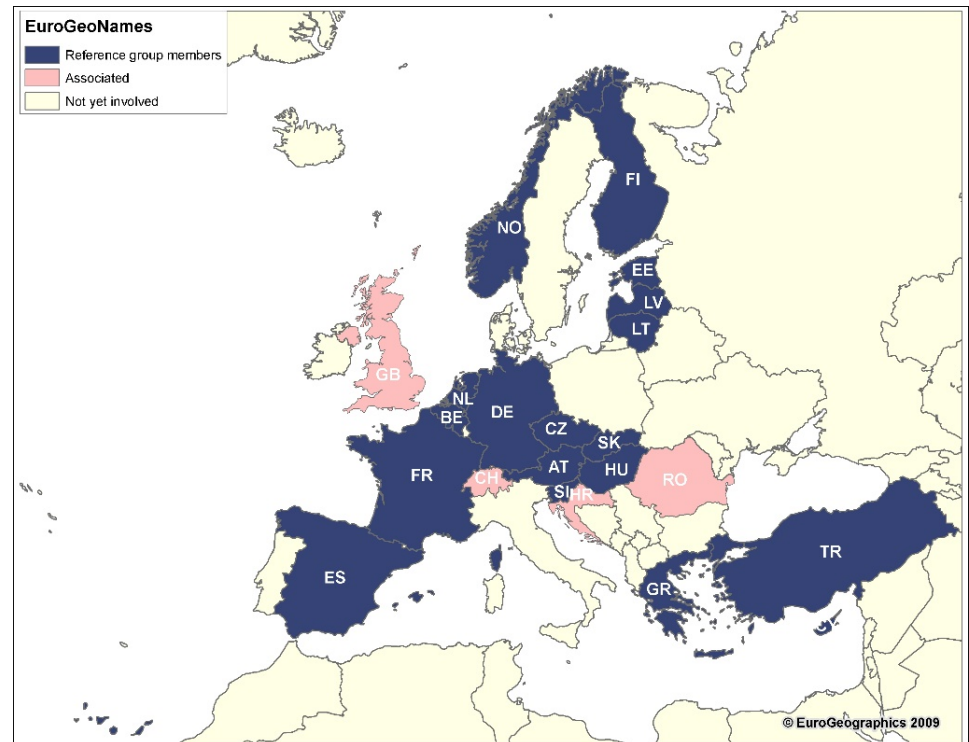
***Situation:*** Cyprus authorities strongly regret and object to the use of illegal toponyms in the interactive map of Cyprus



**Reaction:** For illustration only "The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the European Union."

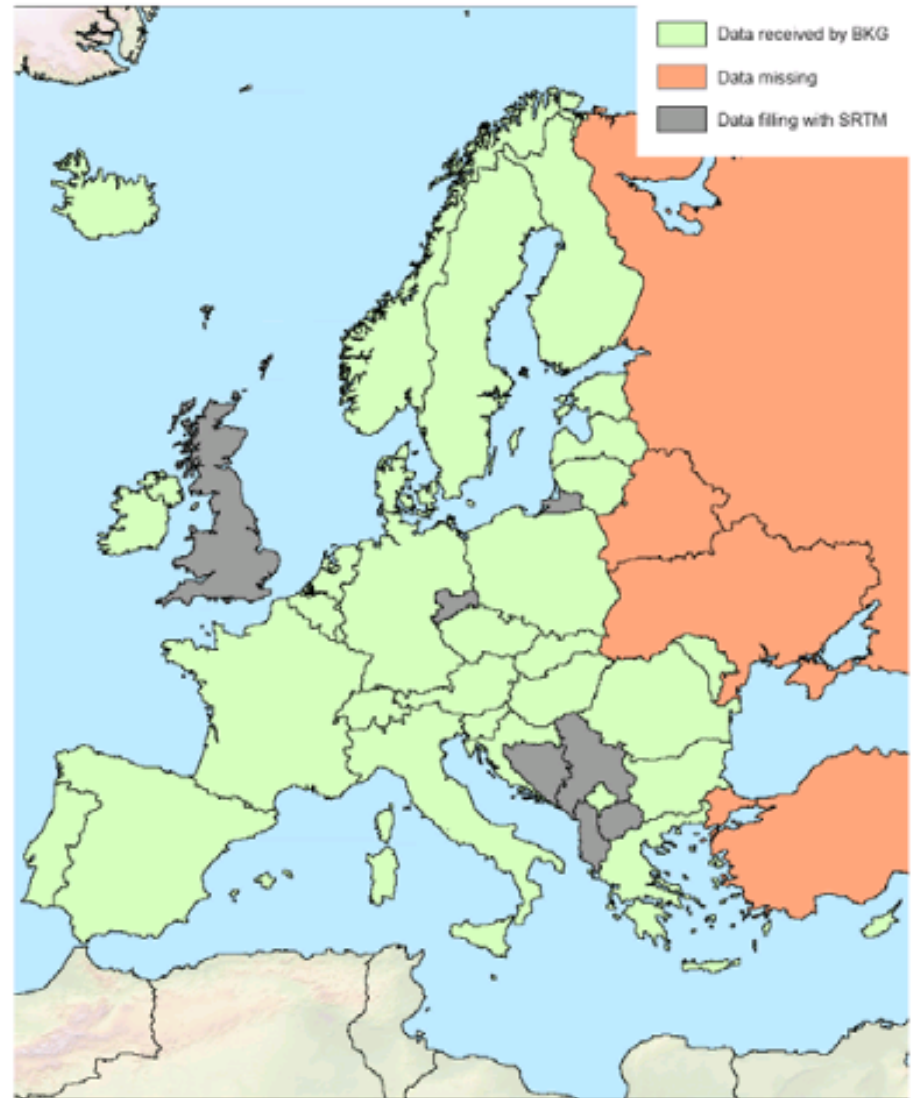
# And why did the Commission decide not to use EuroGeonames?

- *Incomplete geographical coverage*
- *Complicated license conditions with excessive liability provisions – already in the test license*



# EuroDEM

- *Digital Elevation Model with a 60m resolution*
- *Input data from different sources with accuracy/ cell size (TIN, Raster, Contour lines, SRTM) with various accuracies*
- *Restrictive Licence Model and quite expensive*





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# Wish list for the future

## ***Enhanced data quality***

- *Better resolution/level of detail (1:100k - 1:50k)*
- *Wider thematic coverage (Addresses, Postal codes, Points of Interest, UN-GGIM: Europe Core data.*
- *Stable identifiers*
- *Better completeness, positional accuracy, topological quality*
- *Coverage to Eastern Countries, Middle East, North Africa*

## ***Enhanced data support***

- *Better timeliness & update frequency (continuous?)*
- *Feedback collection mechanism – better responsiveness*

## ***Enhanced access and use conditions***

- *Better licensing conditions for redistribution*

## ***Enhanced cooperation for data integration***

- *Intensive cooperation between NMCAs and NSIs for SDGs and GI for statistics*



# From national to European geographical data production and integration

*National level: NMCA's and NSIs*



*European level: EMCAs, ESS and others*

# Thank you for more than 25 years of excellent cooperation

From SABE 1991 ...



... to 2018 EXM and OpenELS

**OpenELS** | European Location Services



eurostat 



European  
Commission