A new urban-rural typology, developed using grid data

Hugo Poelman
European Commission – DG Regional Policy
hugo.poelman@ec.europa.eu

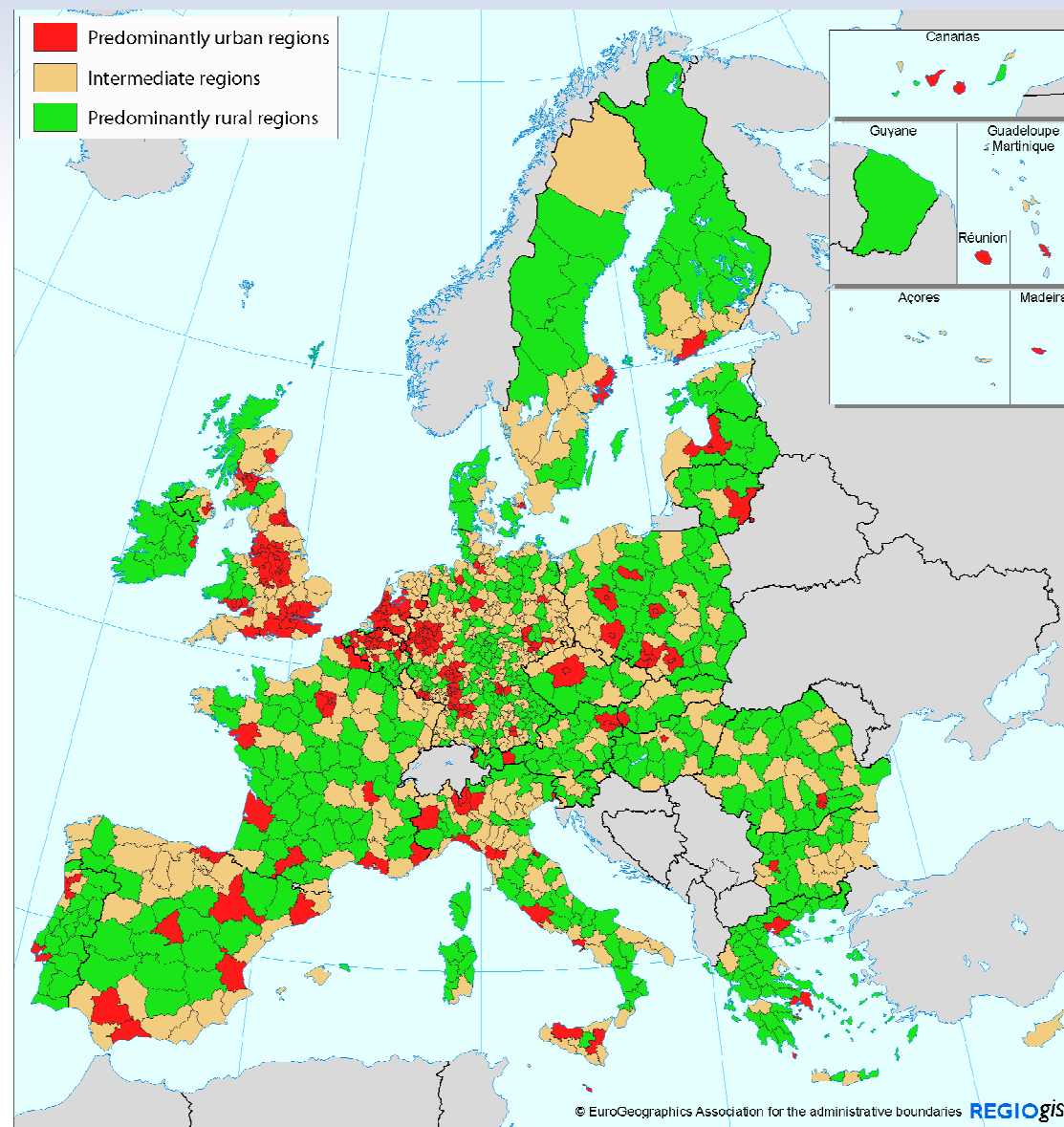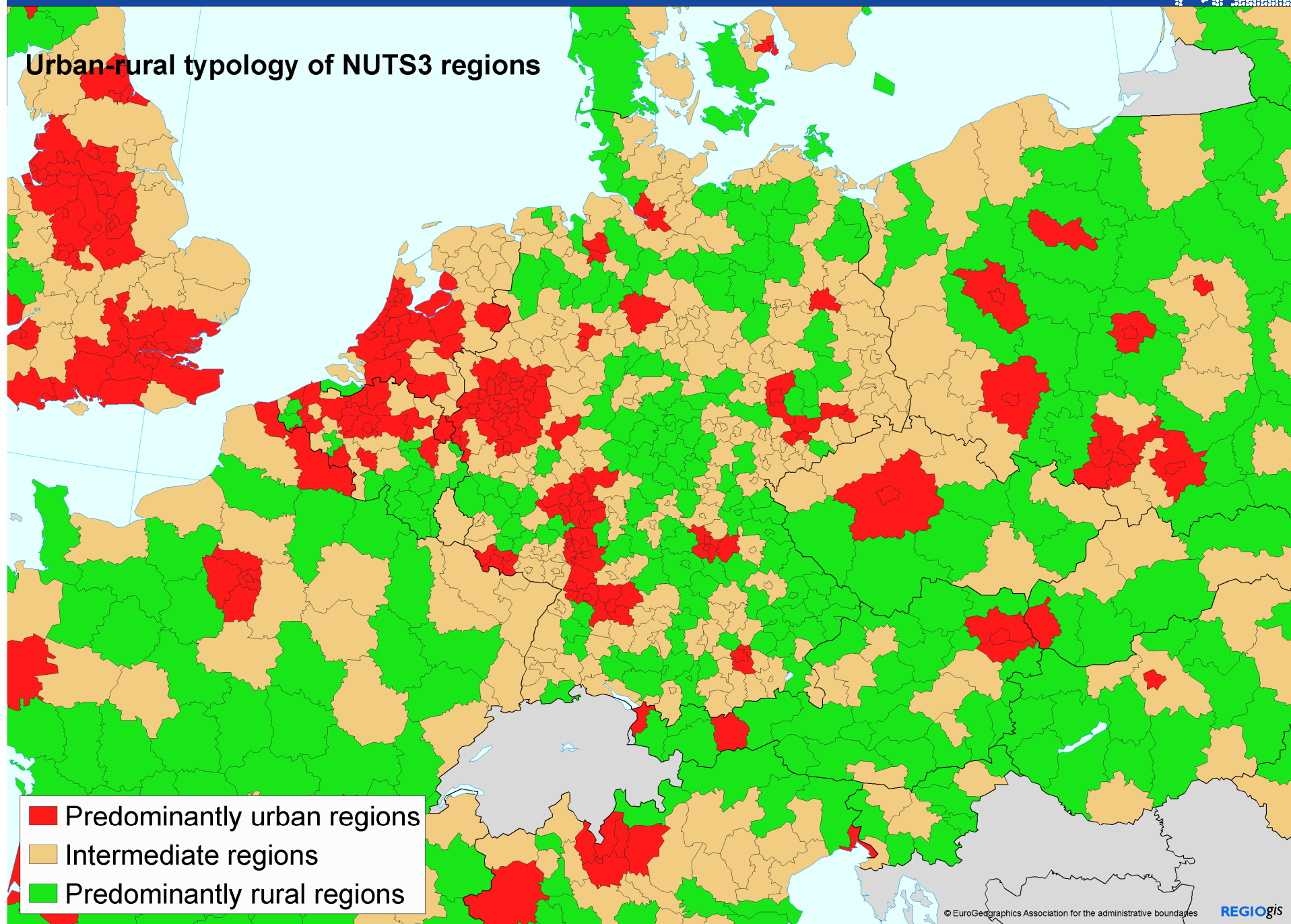*EFGS workshop, Tallinn, 6 October 2010*

A new typology

- Classifying EU NUTS3 regions
- A variant of the OECD methodology
- Aiming to provide a consistent basis for describing urban, intermediate and rural regions in various Commission reports and publications
- Developed by:
  – DG Agriculture and Rural Development
  – DG Regional Policy
  – Eurostat
  – DG Joint Research Centre

Urban-rural typology of NUTS3 regions

Urban-rural typology of NUTS3 regions

Legend:
- Predominantly urban regions
- Intermediate regions
- Predominantly rural regions

© EuroGeographics Association for the administrative boundaries

REGIOgis

Why a new typology?

- Distortions using the OECD methodology at NUTS3 level
  - Large variation in area of local administrative units (LAU2)
  - Large variation in area of NUTS3 regions
 - Some city centres separated from surroundings, at NUTS3 level

The OECD methodology

- Local level: LAU2 with density < 150 inh./km² is rural

- Regional level: NUTS3:
  - Predominantly urban: population share of rural LAU2 < 15%
  - Intermediate: population share of rural LAU2 between 15% and 50%
  - Predominantly rural: population share of rural LAU2 > 50%

- Size of urban centres:
  - Urban centre > 200000 inh. and more than 25% of regions' population: rural region becomes intermediate
  - Urban centre > 500000 inh. and more than 25% of regions' population: intermediate region becomes predominantly urban

European Union
Regional Policy

OECD urban rural typology applied to NUTS 3 regions

Predominantly urban regions
Intermediate regions
Predominantly rural regions

Canarias

Guyane

Guadeloupe & Martinique

Réunion

Açores

Madeira

© EuroGeographics Association for the administrative boundaries **REGIO**gis

7

OCED urban rural typology applied to NUTS 3 regions

OECD urban rural typology applied to NUTS 3 regions

■ Predominantly urban regions
■ Intermediate regions
■ Predominantly rural regions
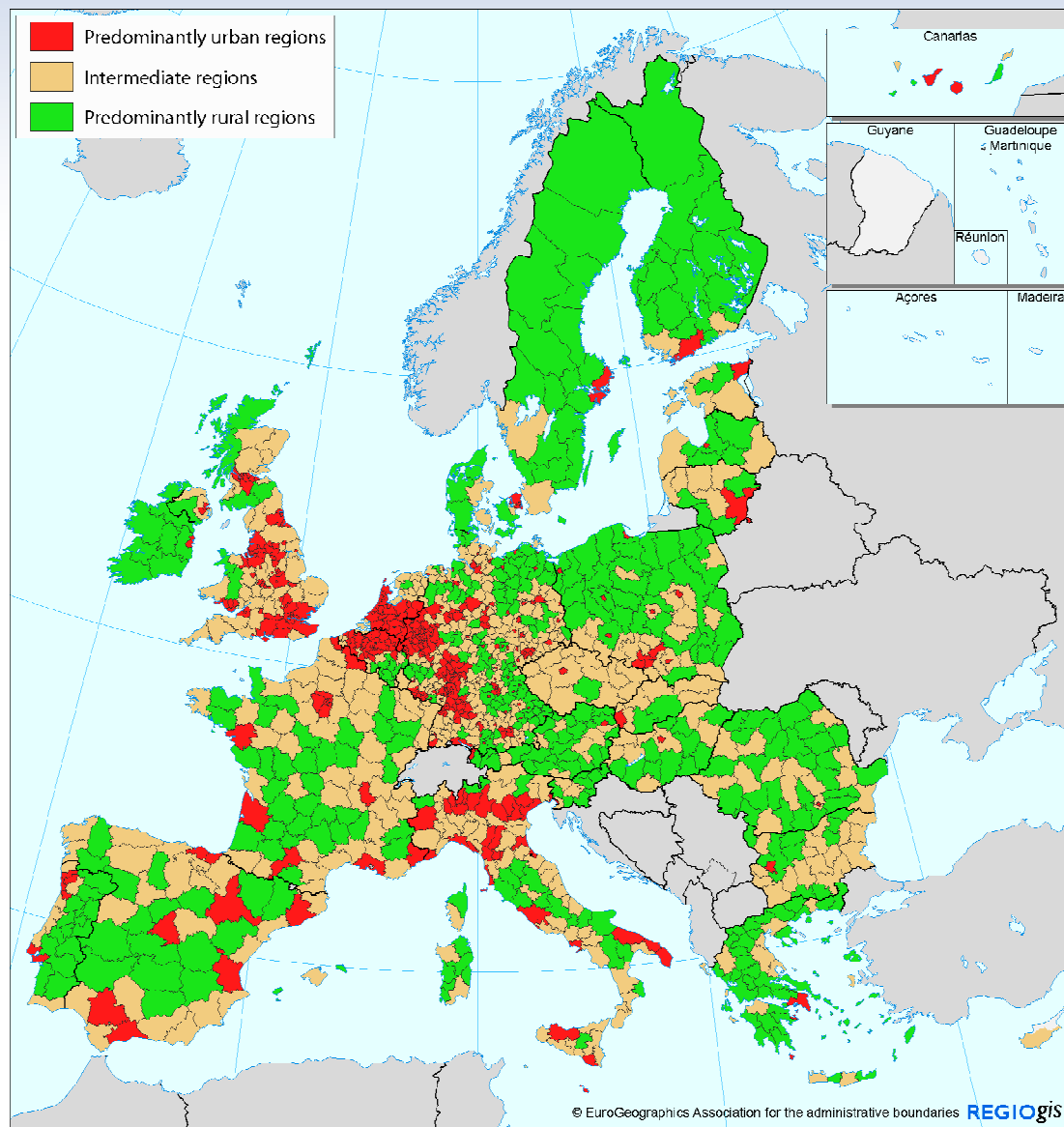
REGIOgis
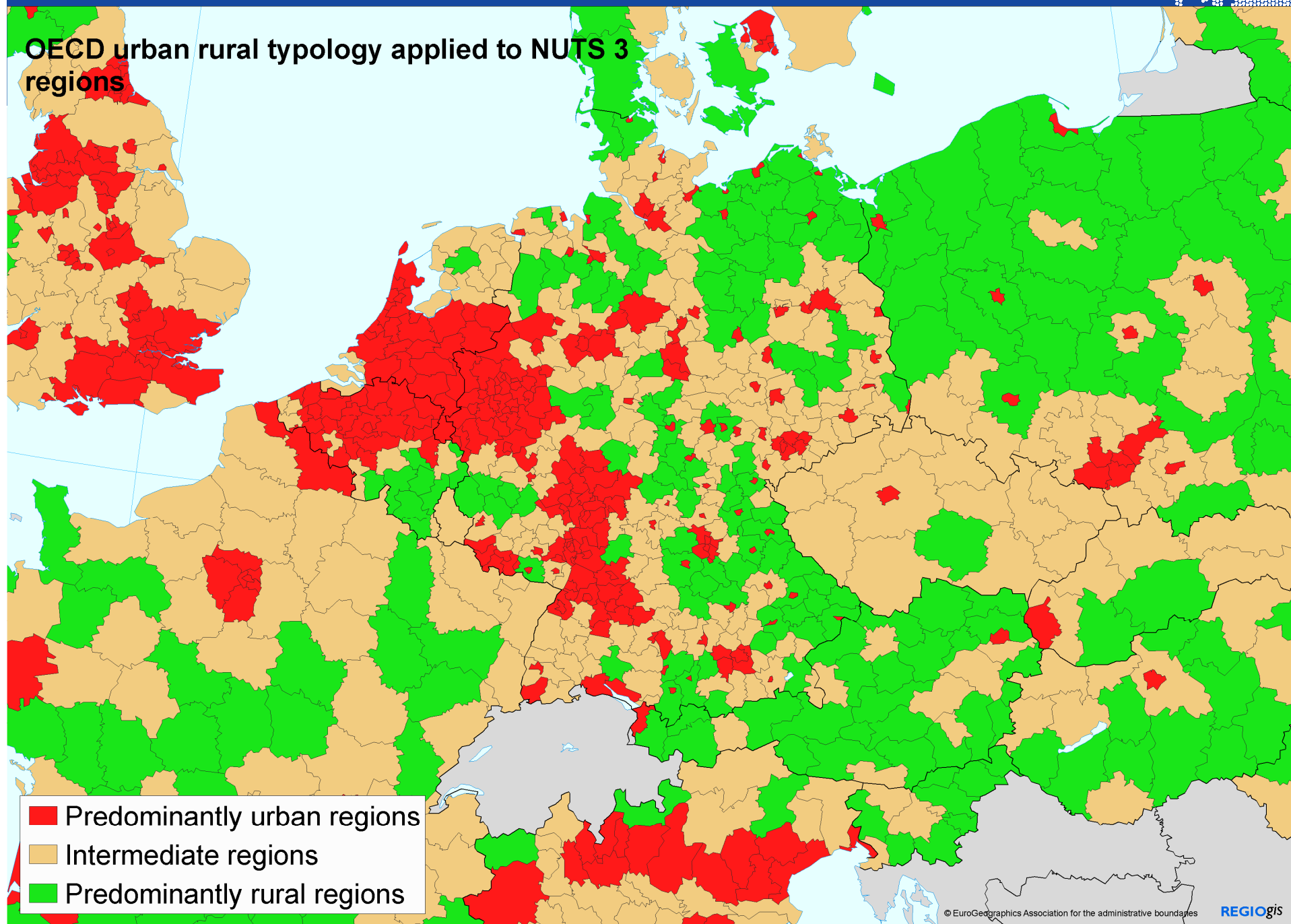
The new typology: local level

- Units: 1 km² grid cells

- Population grid: registered population when available, otherwise disaggregation grid (JRC)

- Identify population living in urban areas:
  - Selection of grid cells with density > 300 inh./km²
  - Only groups of grid cells, representing a total population of > 5000 inhabitants
  - Contiguity is evaluated including diagonals

Clusters of grid cells with population density > 300 inh./km^2 and total population > 5000 inh.
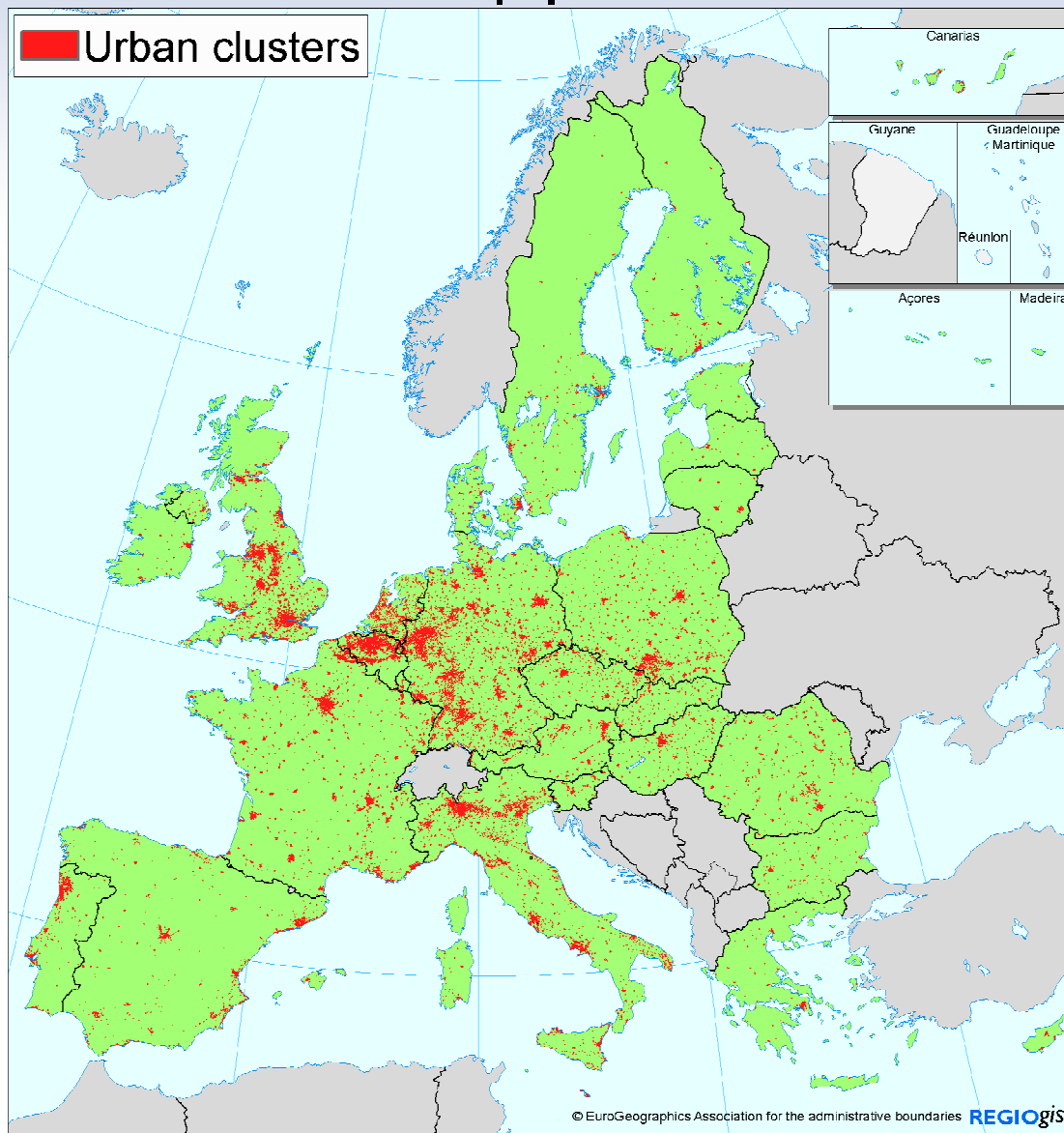
Clusters of grid cells with population density > 300 inh/Km² and total population > 5000 inh.

Urban clusters

© EuroGeographics Association for the administrative boundaries

REGIOgis
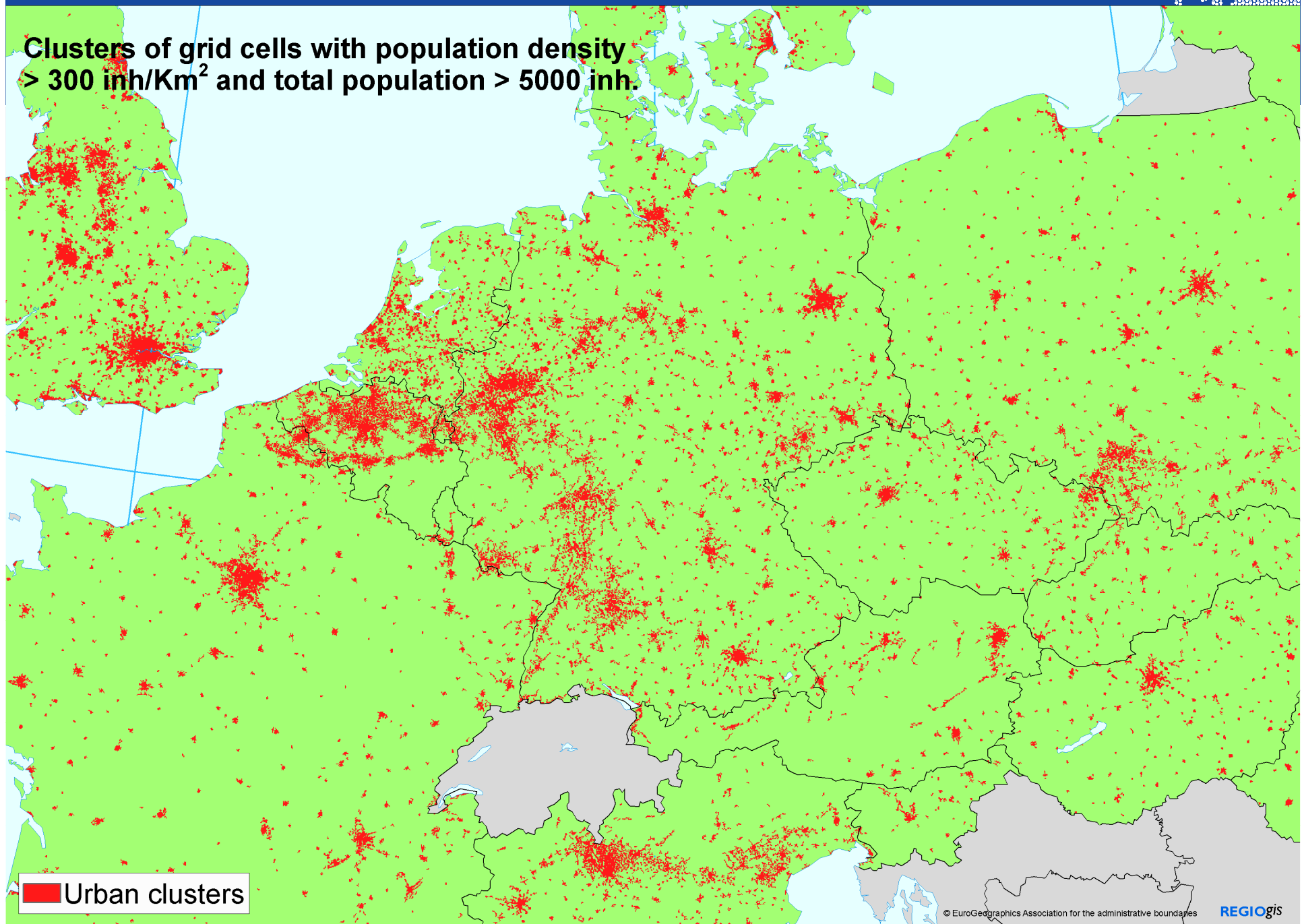
Results at local level

- 32% of EU population lives in "rural" raster cells

- More balanced distribution in comparison to OECD result:

  – Increase of rural population in densely populated countries

  – Decrease of rural population in sparsely populated countries with large local administrative units

The new typology: regional level

- Principle: three categories of regions, based on the population share in rural raster cells
  - Predominantly urban: population share of rural raster cells < 20%
  - Intermediate: population share of rural raster cells between 20% and 50%
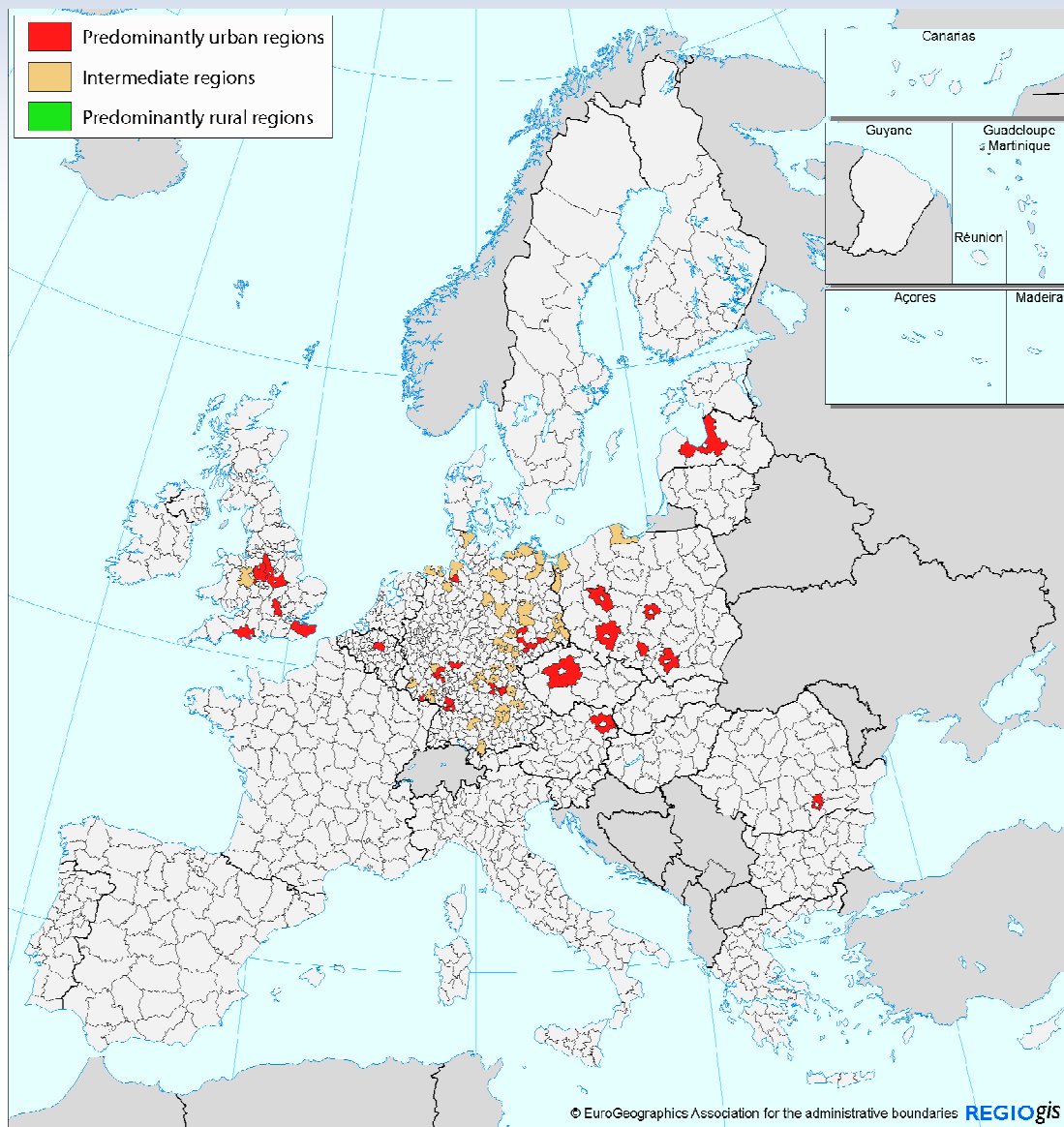 - Predominantly rural: population share of rural raster cells > 50%
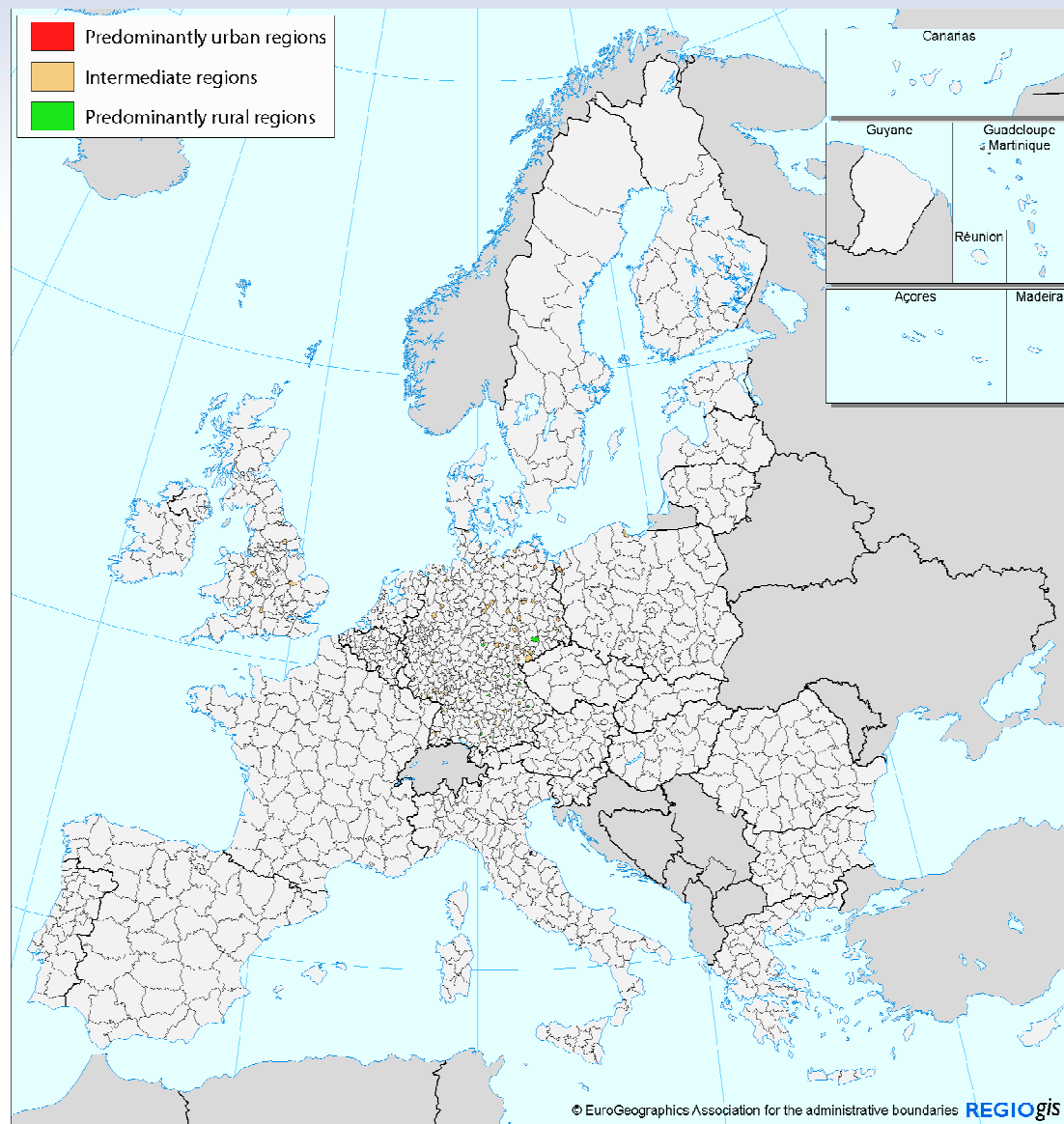
Classifying small NUTS3 regions

- 247 NUTS3 regions are smaller than 500 km²

- Enhance the comparability of the classification by combining small NUTS3s with their neighbour(s)

  – Only for the sake of determining the type of NUTS3 region

  – Only when the combination of regions makes a difference in the resulting typology

  – 142 NUTS3 regions have been grouped into 114 groupings

European Union
Regional Policy

NUTS 3 regions classified as more urban when grouping regions of less than 500 km2

Legend:
- Predominantly urban regions (red)
- Intermediate regions (tan)
- Predominantly rural regions (green)

© EuroGeographics Association for the administrative boundaries REGIOgis

15

NUTS 3 regions classified as more rural when grouping regions of less than 500 km2

Legend:
- Predominantly urban regions
- Intermediate regions
- Predominantly rural regions

© EuroGeographics Association for the administrative boundaries REGIO*gis*

16

NUTS 3 regions classified as more urban when grouping regions of less than 500 km2

Predominantly urban regions

Intermediate regions

Predominantly rural regions

© EuroGeographics Association for the administrative boundaries

REGIOgis

NUTS 3 regions classified as more rural when grouping regions of less than 500 km2

Predominantly urban regions

Intermediate regions

Predominantly rural regions

© EuroGeographics Association for the administrative boundaries

REGIO*gis*

The influence of major cities

- The presence of cities is taken into account in the same way as in the OECD typology
  - 7 regions move from predominantly rural to intermediate (with cities > 200,000 inh.)
  - 16 regions move from intermediate to predominantly urban (with cities > 500,000 inhabitants)
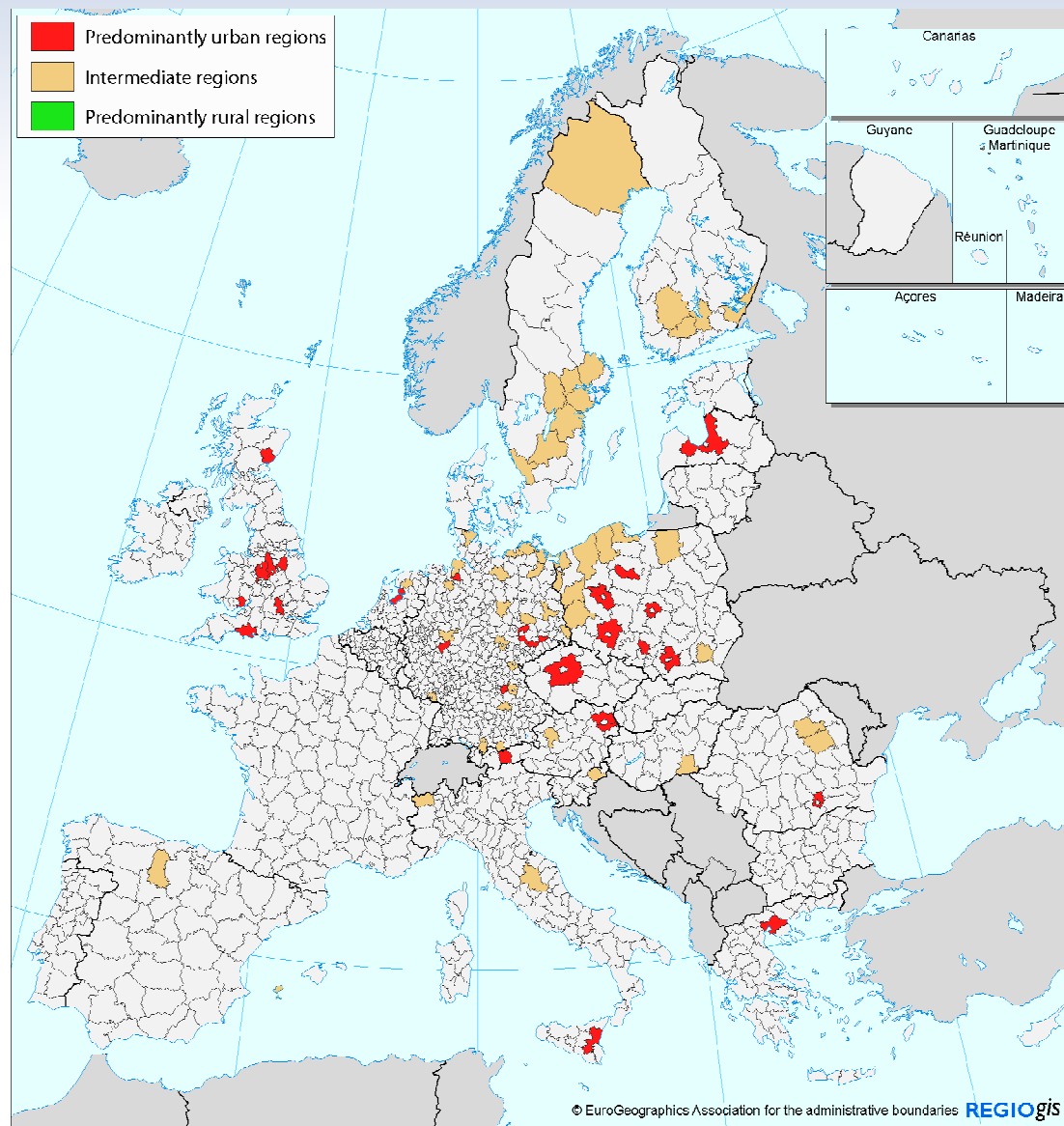
Results, compared to the OECD typology

- Increase of EU population share in predominantly rural regions

- Intermediate regions' population share is stable

- Decrease of population share in predominantly urban regions

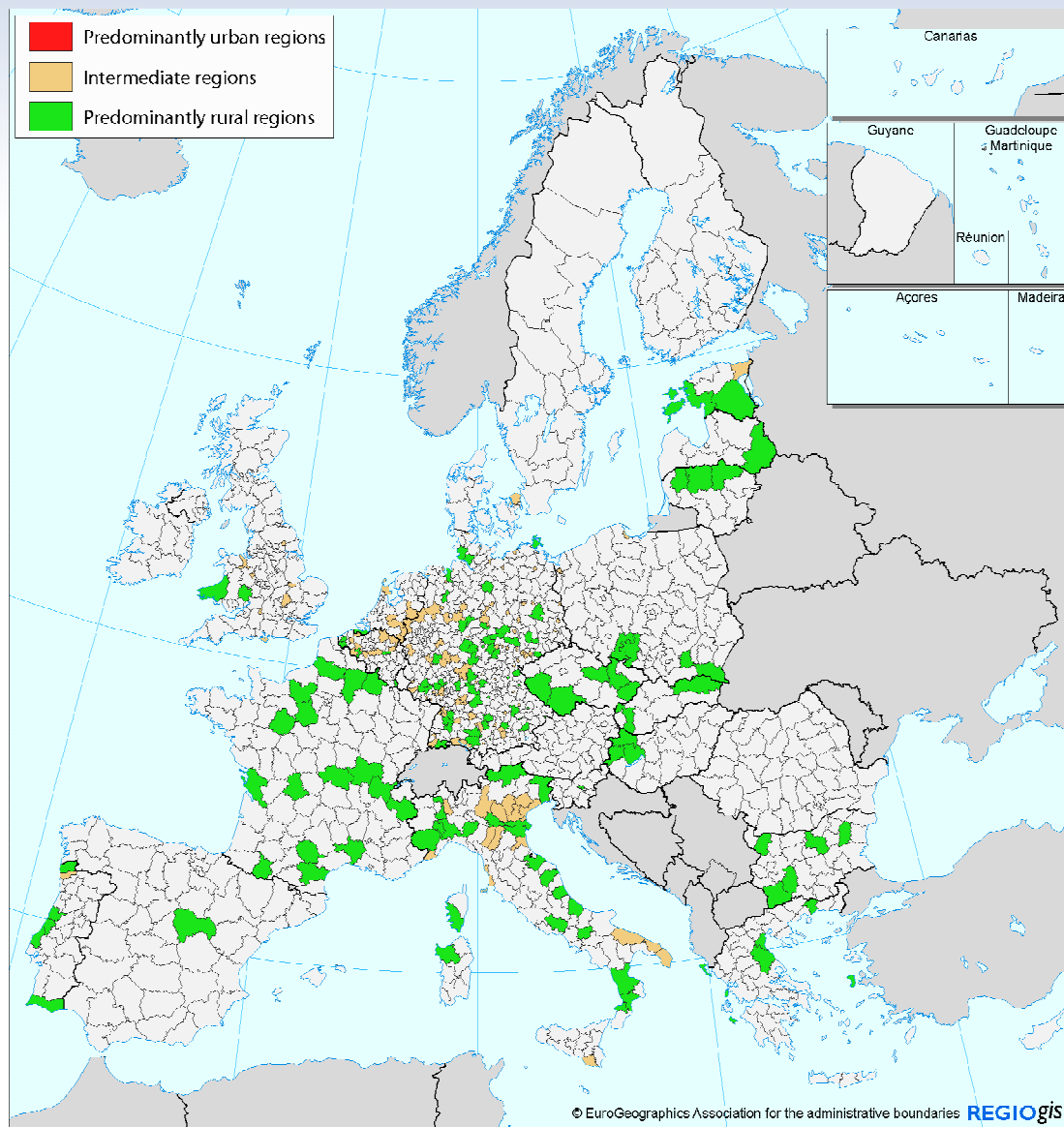- Less urban: BE, NL

- Less rural: FI, SE

European Union
Regional Policy

NUTS 3 regions classified as more urban in comparison to the OECD typology

Legend:
- Predominantly urban regions
- Intermediate regions
- Predominantly rural regions

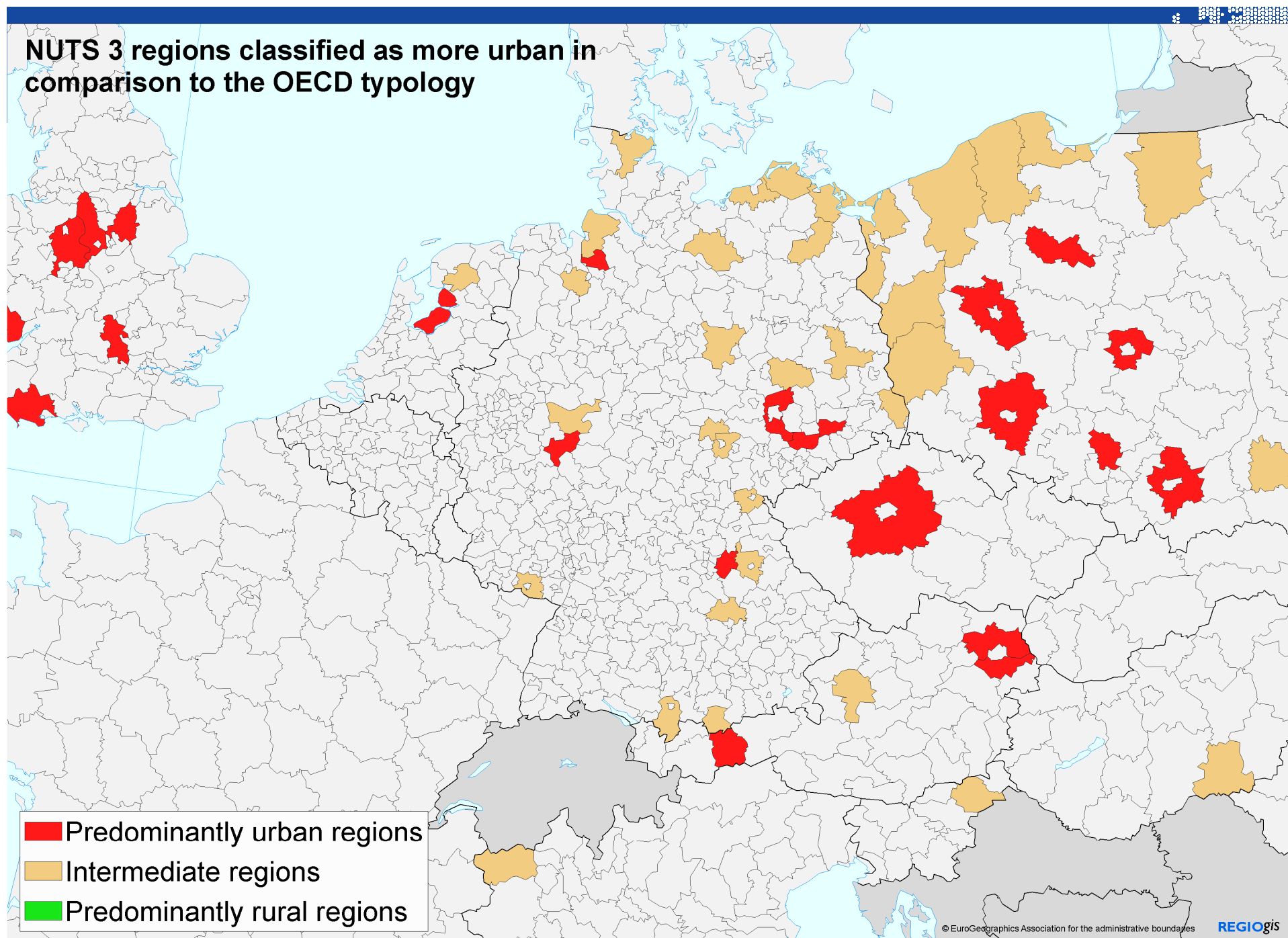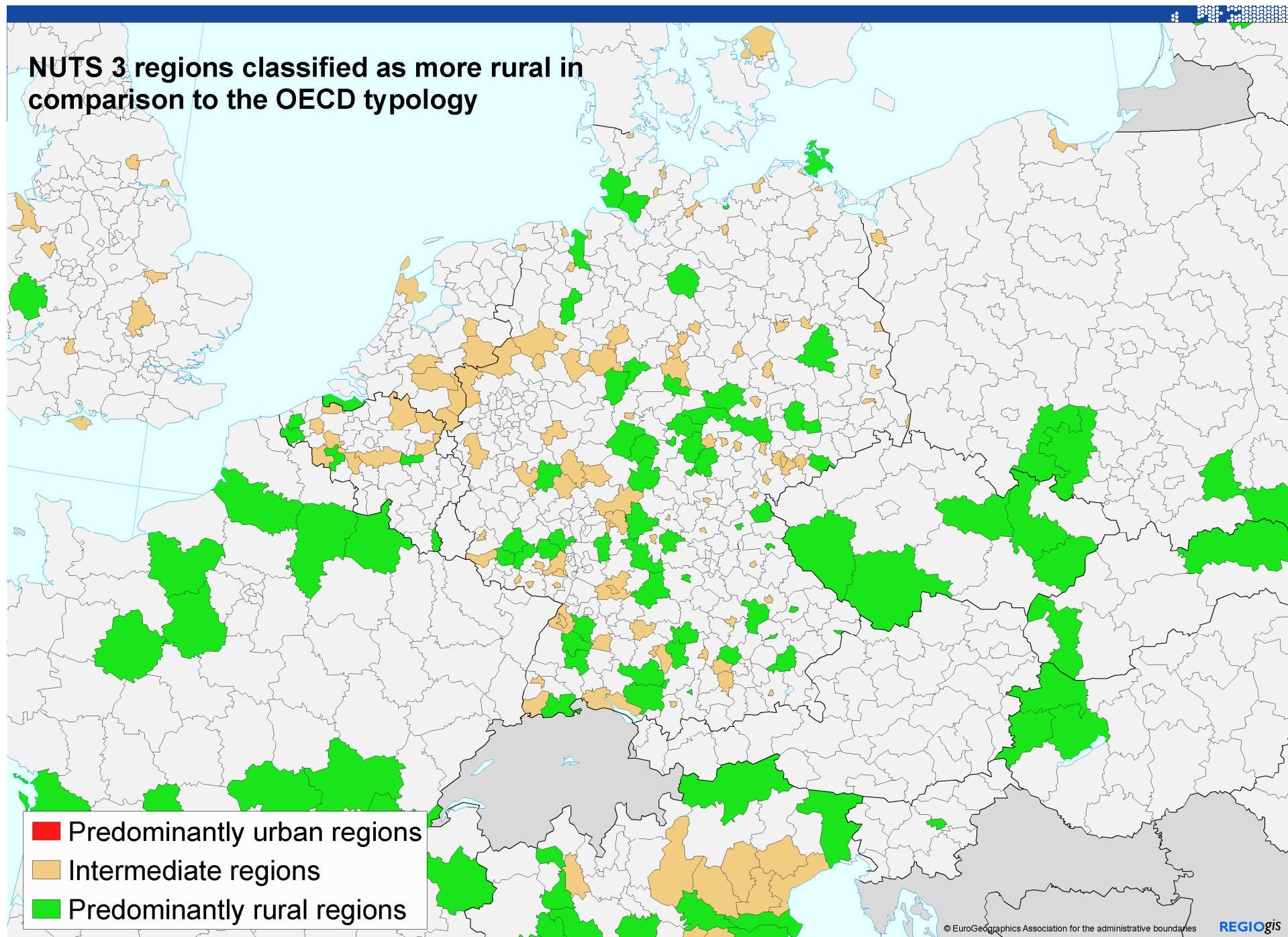© EuroGeographics Association for the administrative boundaries REGIO*gis*

NUTS 3 regions classified as more rural in comparison to the OECD typology

NUTS 3 regions classified as more urban in comparison to the OECD typology

Legend:
- **Predominantly urban regions** (red)
- **Intermediate regions** (tan)
- **Predominantly rural regions** (green)

© EuroGeographics Association for the administrative boundaries

REGIOgis

NUTS 3 regions classified as more rural in comparison to the OECD typology

Legend:
- 🟥 Predominantly urban regions
- 🟧 Intermediate regions
- 🟩 Predominantly rural regions

© EuroGeographics Association for the administrative boundaries

REGIOgis

Future developments

- Typology to be updated after NUTS modification
- Update foreseen based on new population grid (e.g. including new census data and/or new land cover data)
- Urban/rural classification of LAU2 units, based on grid data