ESPON Online Mapping Tool

RIMAP Help

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1. Introduction

RIMAP (Rich Internet Mapping Tool) is a Project included in the ESPON 2013 program.

ESPON (European Observation Network for Territorial Development and Cohesion) projects cover a wide range of research with the aim to give support to the development and cohesion territorial policies

The development of the Scientific ESPON tools is targeted to policy regulators in all the territorial levels and to socio-economic Scientifics and students

RIMAP is conceived for an On-line tool development upon ESPON 2013 Database. This tool is online, available via ESPON website and provides a toolbox to visualize and analyze data in maps and diagrams.

ESPON 2013 Database stores hundreds of indicators keeping the observation of the socio-economic behavior in the European territories.

These indicators are provided by other ESPON projects and from other sources such as EUROSTAT or EEA.

RIMAP is interactive, includes some analysis tools and aims to disseminate the ESPON labor.

More information about the ESPON program and the RIMAP Project can be found in these links:
www.espon.eu
http://www.espon.eu/main/Menu_Projects/Menu_ScientificPlatform/rimap.html

RIMAP has been developed by:

Technological Institute of Construction
http://www.aidico.com

1.1. Overview

RIMAP is conceived for an On-line tool development upon ESPON 2013 Database. This tool is online, available via ESPON website and provides a toolbox to visualize and analyze data in maps and diagrams.

The main objective of RIMAP is to provide access to and enabling using the ESPON knowledge base in an easy and highly digestible manner. This will be done by giving people the possibility to produce, visualize, analyze and download maps and diagrams of data and indicators that are directly coming from the ESPON 2013 Database.

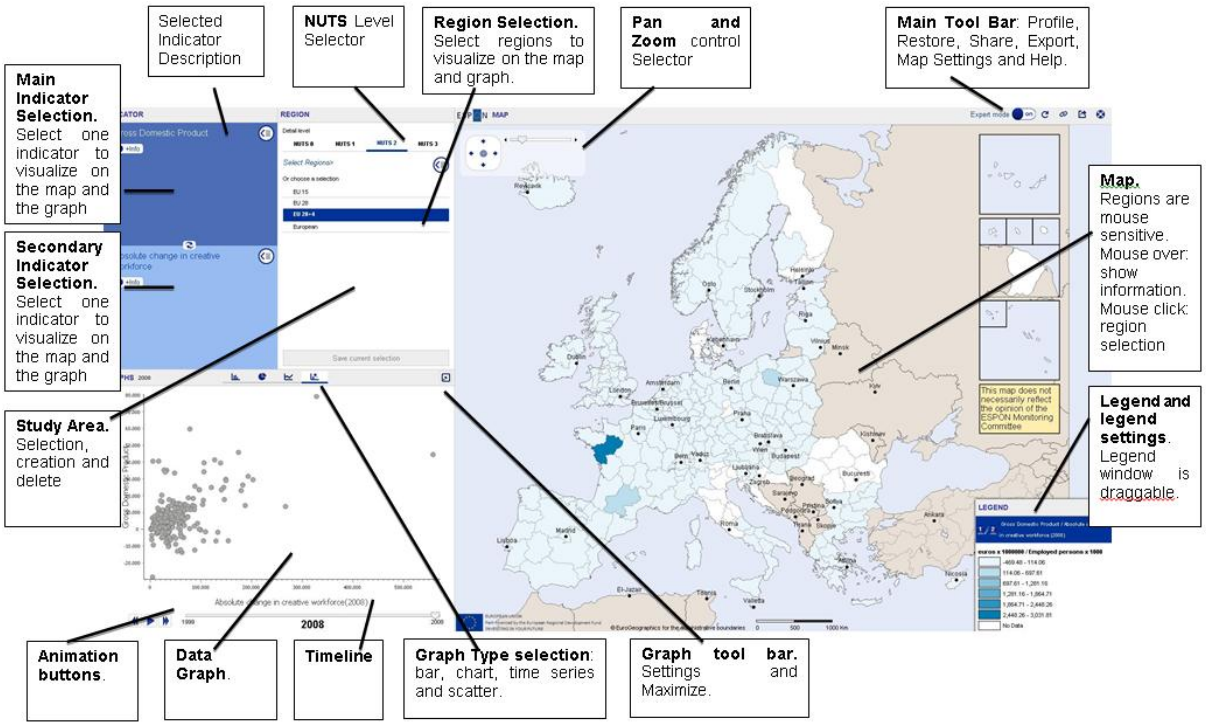


Figure 1 RIMAP Scheme

2. Profile and dissemination

2.2. Profile Selection: Basic / Expert mode.

Two well differentiated User profiles have been defined:

- Basic Mode. This mode should be quite simple, offering the most important functionalities.
- Expert Mode. This mode will integrate all the possibilities, integrating some analysis functionalities.

To switch from basic mode to expert mode, the user has to click the button 

and to switch from expert mode to basic mode, the user has to click the button 

Both buttons are placed at the main tool bar.

This handbook contains all the functionalities available to the tool. An asterisk has been used to highlight those features available only to the expert profile.

2.3. Export Image

RIMAP facilitates to export the map through an image in different formats: .pdf, .jpg and .png.

To do it, user has to click the button  at the main tool bar.

After this, several options are shown to choose the export format.

Figure 2 Export options

The user must select the .pdf, .jpg or png option

Note: To use this feature successfully it is recommended to use the Chrome Browser v32

2.4. Export Data

RIMAP facilitates to export the data through an .xls file.

To do it, user has to click the button  at the main tool bar, after this, several options are shown to choose the export format (Figure 2).

The user must select the xls option, once selected one option, a file in xls format is downloaded.

2.5. Share

Nowadays, the Information Society uses the networks to share knowledge. Thus, the user can share a link to the map clicking the button  at the main tool bar.

Once this option is selected, a window is open showing the link and offering several ways to share it: e-mail and social networks.

Figure 3 Share options

3. Concepts

3.1. Indicators

The main goal of RIMAP is to visualize and analyze the value of a set of indicators contained into the ESPON Database at different regional levels (NUTS) along time.

User can select the indicator by clicking on located at the left top of the indicator region.

Indicators are classified by Theme, Project or Policy.

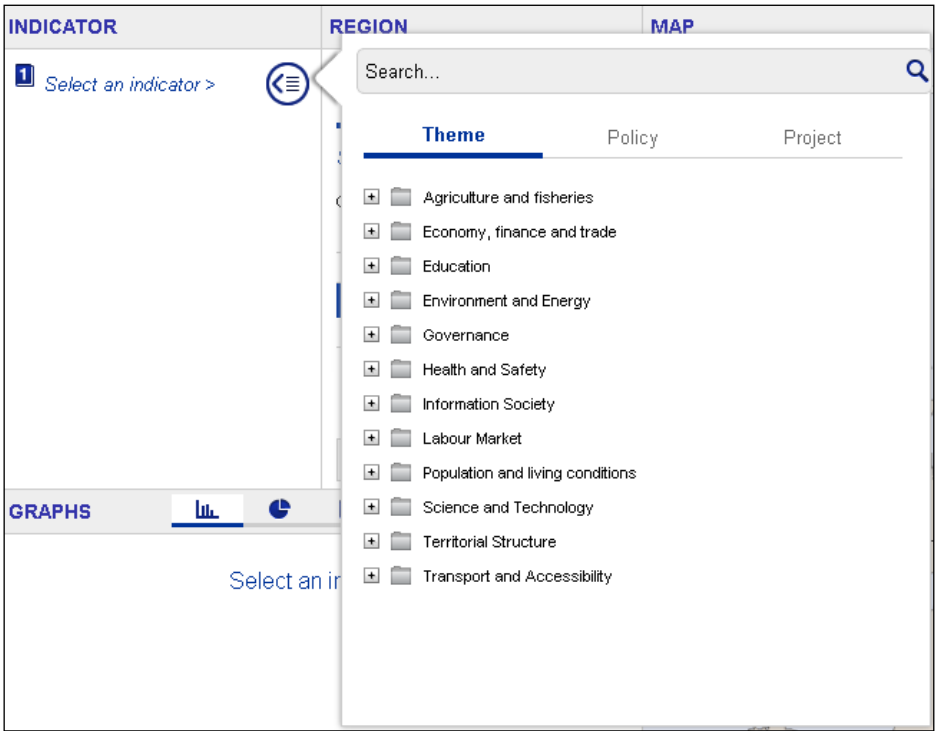


Figure 4 Indicators List

3.2. Keyword search

The ESPON Database contains more than 500 indicators. A Keyword Search Bar is available offering search results as the user is typing (Figure 5).

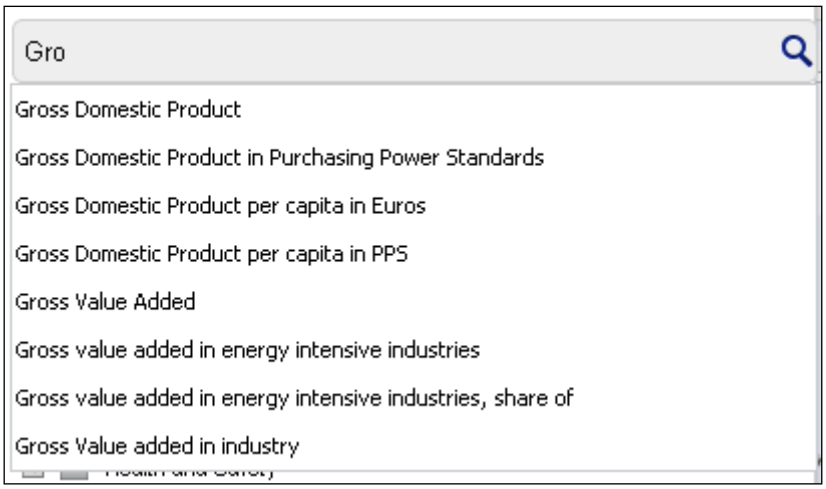


Figure 5 Search results of Keyword search

3.3. Geographic selection

The geographic elementary zones in RIMAP are NUTS (Nomenclature of Territorial Units for Statistics).

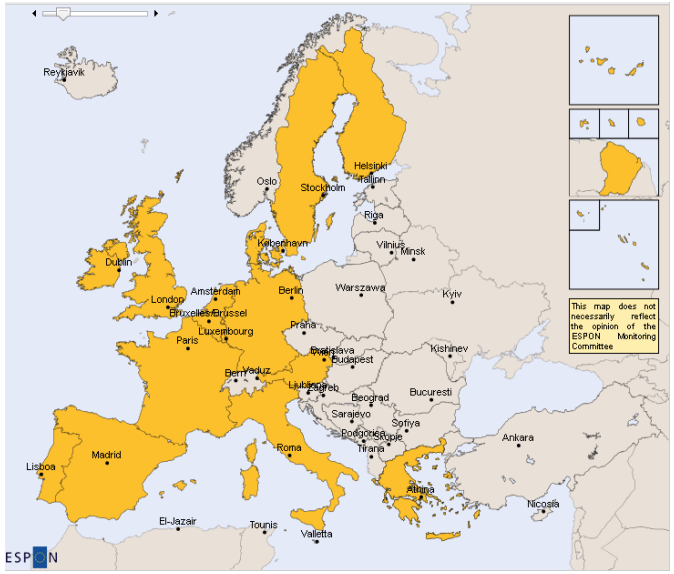
NUTS is the official division of the EU for regional statistics. It was introduced by Eurostat more than 30 years ago with the purpose to provide a single uniform breakdown of territorial units for the production of regional statistics for the European Union. Four NUTS levels are available: NUTS0 (Country level), NUTS1, NUTS2 and NUTS3.

The first NUTS division was published in 1999. National interests require changing the regional breakdown of a country which are the basic cause for the need to publish revised versions of the NUTS divisions, published in 2003, 2006 and 2010. RIMAP uses the NUTS division that matches the data selected.

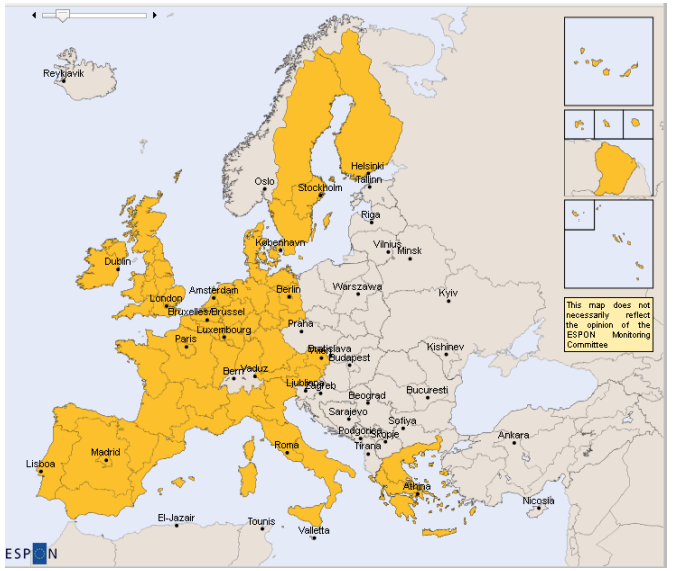
User can change the NUTS LEVEL clicking on the NUTS Level Bar (Figure 6). This action will refresh automatically the Map and the Graph.

Only NUTS levels for which data is available can be selected.

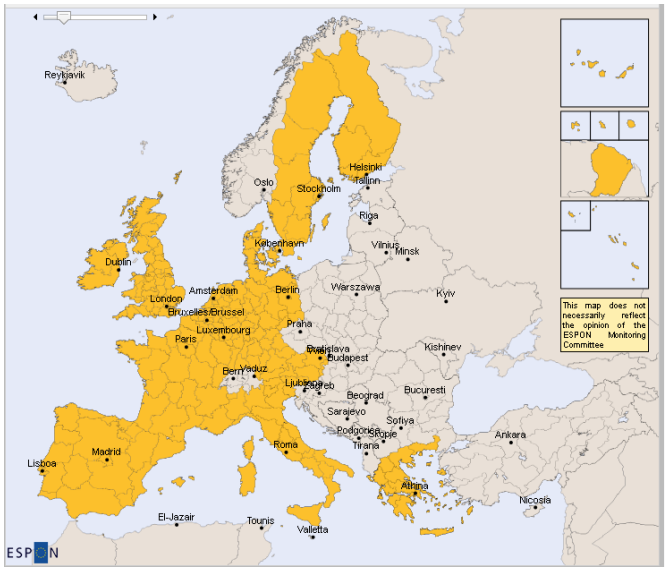
Figure 6 NUTS Level Bar



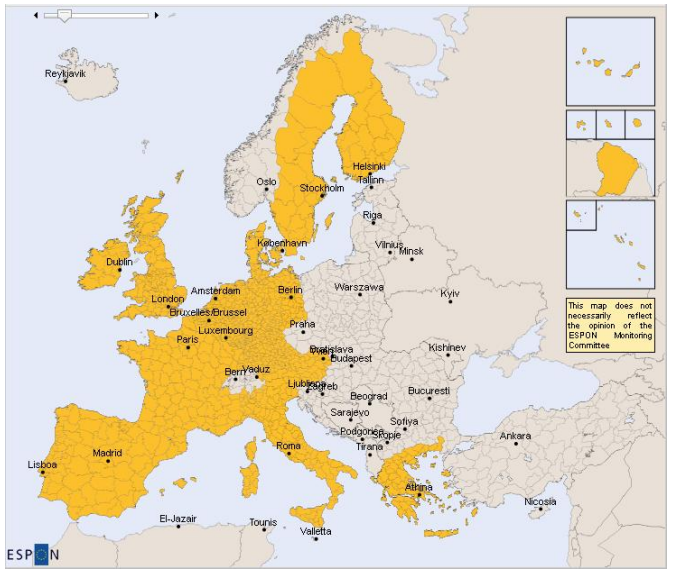
NUTS0 – COUNTRY LEVEL



NUTS1 LEVEL



NUTS2 LEVEL



NUTS3 LEVEL

Figure 7 NUTS Level Detail

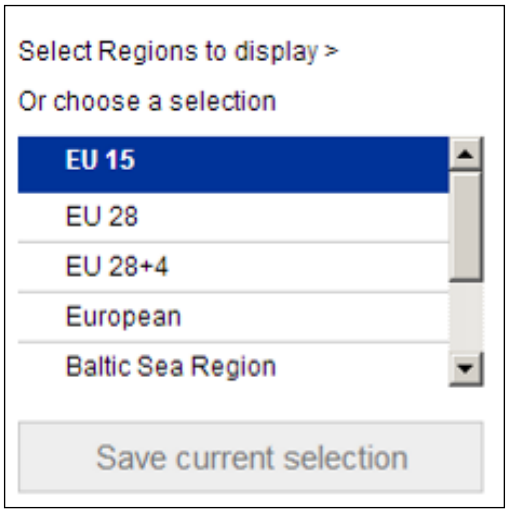
3.4. Study area(s): Predefined, created by user.

Territories can be grouped in Study Areas order to facilitate the behavior of an indicator in all those territories.

Default Study Areas

RIMAP has defined some Default Study Areas:

- EU15.
- EU28.
- EU28+4.
- European.
- Baltic Region (NUTS2 and NUTS3 Level) *
- Mediterranean Region (NUTS2 and NUTS3 Level) *
- Danube Region (NUTS2 and NUTS3 Level) *
- Northwest Region (NUTS2 and NUTS3 Level) *
- Alpine Space (NUTS3 Level) *
- Atlantic Coast (NUTS3 Level) *
- Central Europe (NUTS3 Level) *
- North Sea (NUTS3 Level) *
- South East Europe (NUTS3 Level) *
- South West Europe (NUTS3 Level) *

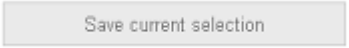


These Study Areas can be selected at the top of the Region section.

Custom Study Areas

User can create its own Study Areas being available along the user session following these steps:

1. Territories Selection.
   Territories can be selected or deselected directly on the map (clicking on them) or clicking on the regions list.

2. Save Study Area.
   Once have been defined the Study Area, it must be saved clicking on 

. Then, a window is shown where the name of the Study Area must be introduced.

Custom Study Areas can be deleted clicking on  .

3.5. Year Selection

One of the three variables managed in RIMAP to generate the maps is When.

By default, RIMAP selects the last year included in the ESPON Database, however, user can change between the years available clicking on the Time slide bar.

Figure 8 Time Slide Bar

3.6. Animation controls

Some animation controls have been included in RIMAP to avoid see the evolution of an indicator along the time in the map and the graph automatically.

These controls are located at the left of the Time Slide Bar (Figure 9).

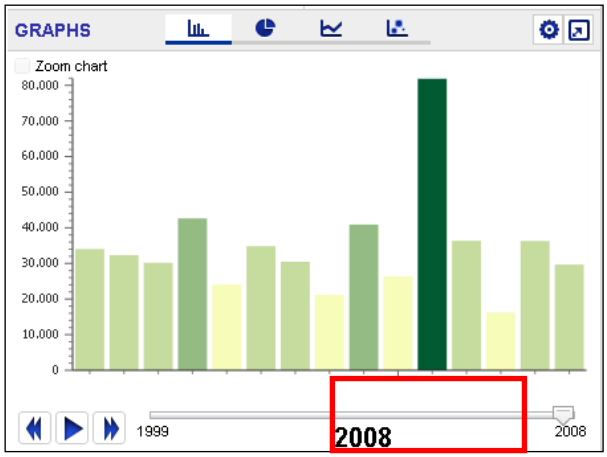


Figure 9 Animation Controls

RIMAP includes four animation controls:

- Play : When user clicks over this button, the animation starts since the year selected until the last year available or if user clicks over the pause button.
- Pause : This button only appears while the animation is being carried out. User can stop it clicking on this button.
- Forward : When user clicks over this button, the current year changes until the last year available.
- Backward : When user clicks over this button, the current year changes until the first year available.

4. Visualization

4.1. Overview

The Map Area is the most important area in RIMAP. This area will show the indicator value for the territories selected.

Map Area is mouse sensitive, keeping the selection/deselection of regions by clicking, and showing the indicator value when the mouse is over them.

Each type of data must be painted in the map in a different way:

- Absolute data: A dot with a size proportional to the value. Two colours (positive and negative) will be used.
- Relative data: The region will be painted with a variation of colours (from light to dark).
- Typology data. The region will be painted with an assigned colour (one by typology).

Two indicators can be shown at the same time in the map. Both indicators are painted in a different way depending of the type of each indicator, as the following table describes.

Indicator 2: Indicator 1:	**Absolute (2A)**	**Relative (2R)**	**Typology (2T)**
Absolute (1A)	Ratio 1A/2A: area + col.var. ratio based	1A: dot + size prop. 2R: area + col.var.	1A: dot + size prop. 2T: area + col.diff.
Relative (1R)	1R: area + col.var. 2A: dot + size prop.	1R: area + col.var. 2R: area texture	1R: area + col.var. 2T: area texture
Typology (1T) (qual. data)	1T: area + col.diff. 2A: dot + size prop.	1T: area texture 2R: area + col.var.	1T: area + col.var. 2T: area texture

4.2. Choropleth Map.

A Choropleth Map is a map in which areas are coloured in proportion to the value of an indicator.

In RIMAP, this Map is used when the indicator is Relative or Typology. Moreover, it's used when two absolute indicators are selected, showing the ratio between them.

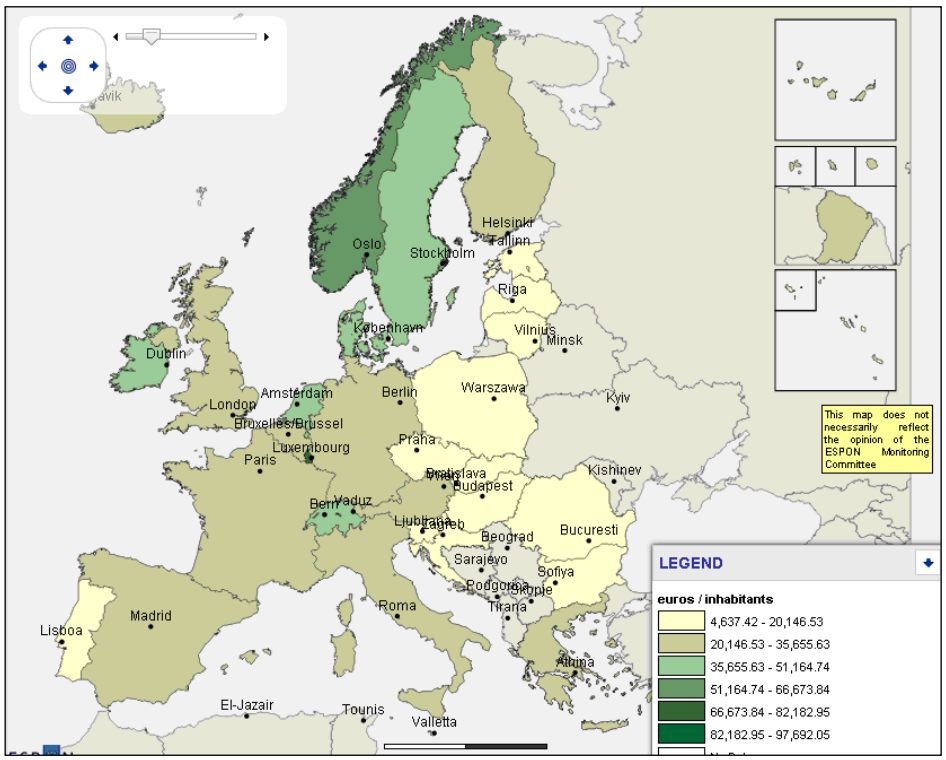


Figure 10 Choropleth Graph

4.3. Dot Map.

A Dot Map is a map where a dot is presented over each region. The dot's size is in proportion to the value of an indicator. Dots are used to present absolute data.

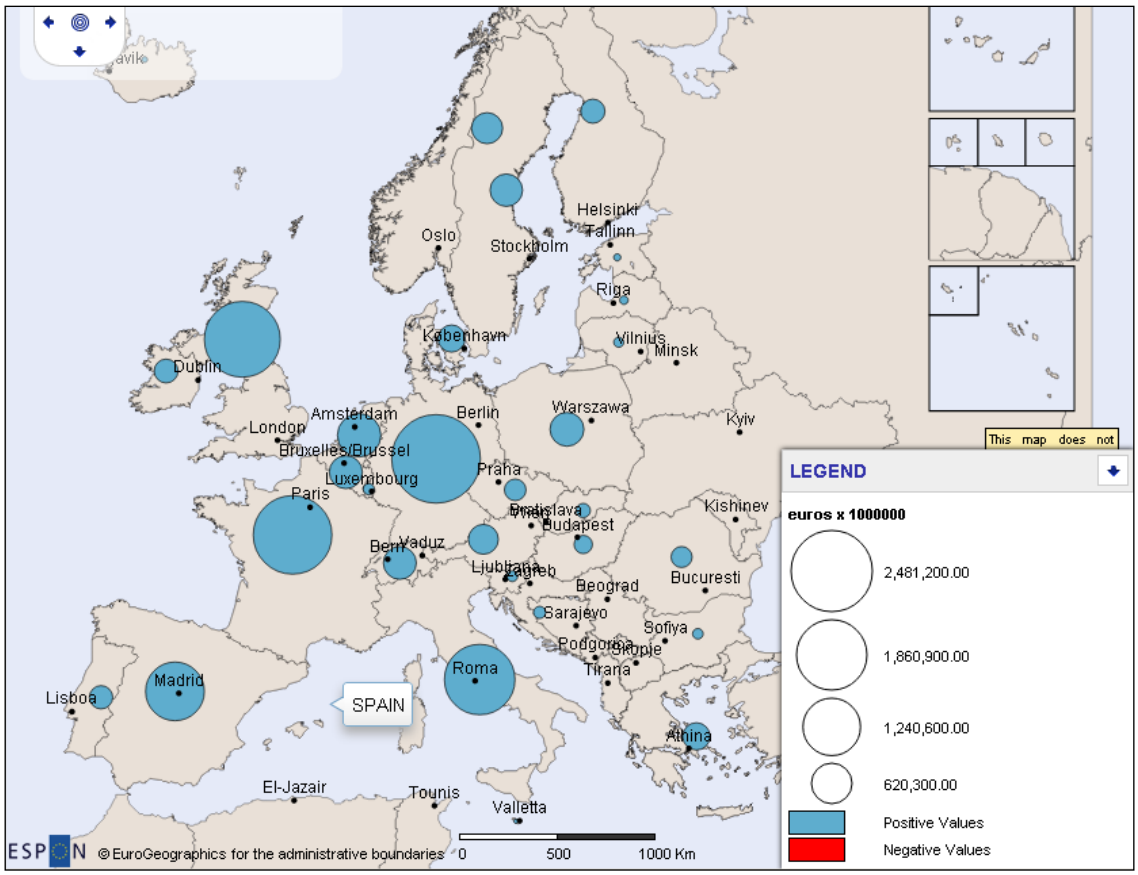


Figure 11 Dot Map

4.4. Map Settings *

User can customize the map clicking on the map settings button  at the Main Tool Bar.

Two issues can be customized:

- Capitals. User can set the type, size and color of the capitals symbol, as well as the font type and size of the Capital Label.

- Region borders. User can set the size and color of the region borders to each NUTS Level.

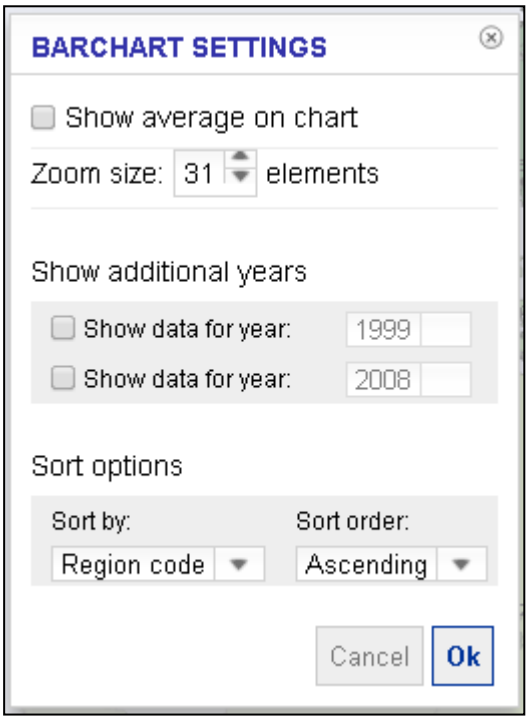


Figure 12 Dot Map settings

4.4. Bar chart

A bar chart is a chart with rectangular bars with lengths proportional to the value of an indicator.

User has to click on the button  to see the bar chart.

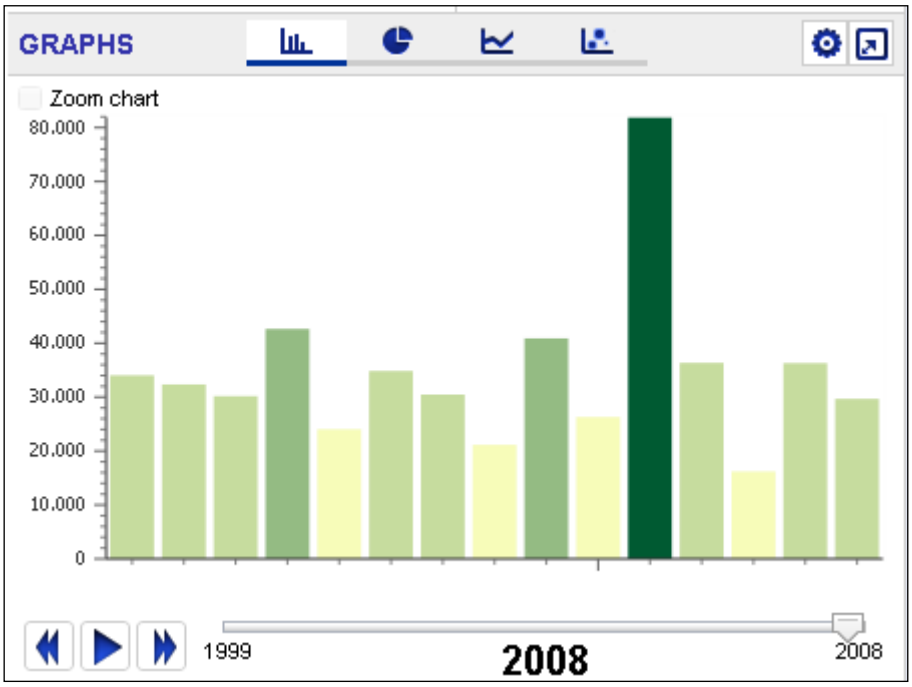


Figure 13 Bar Chart

The bar chart is mouse sensitive, so, when user locates the mouse over a bar, it's highlighted (at Map too) and a tooltip appears with information about the name of the region and the indicator value (see Figure 14).

Several Bar chart options can be set:

- To show or not the average.
- To show two additional bars with information from other years.
- To sort the bars (ascending or descending) based on several criteria: Region name or Indicator Value.

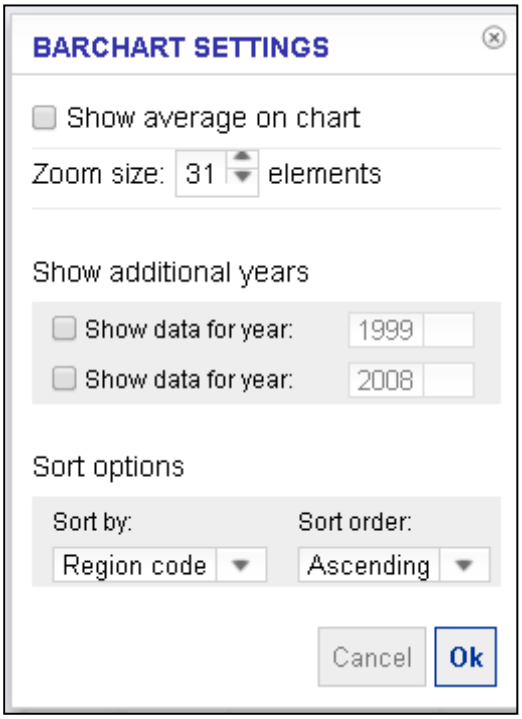


Figure 14 Bar Chart setting

4.5. Pie Chart

A pie chart is a circular chart divided into sectors. The size of each sector represents the proportional value of that sector in front the total.

User has to click on the button  to see the pie chart.

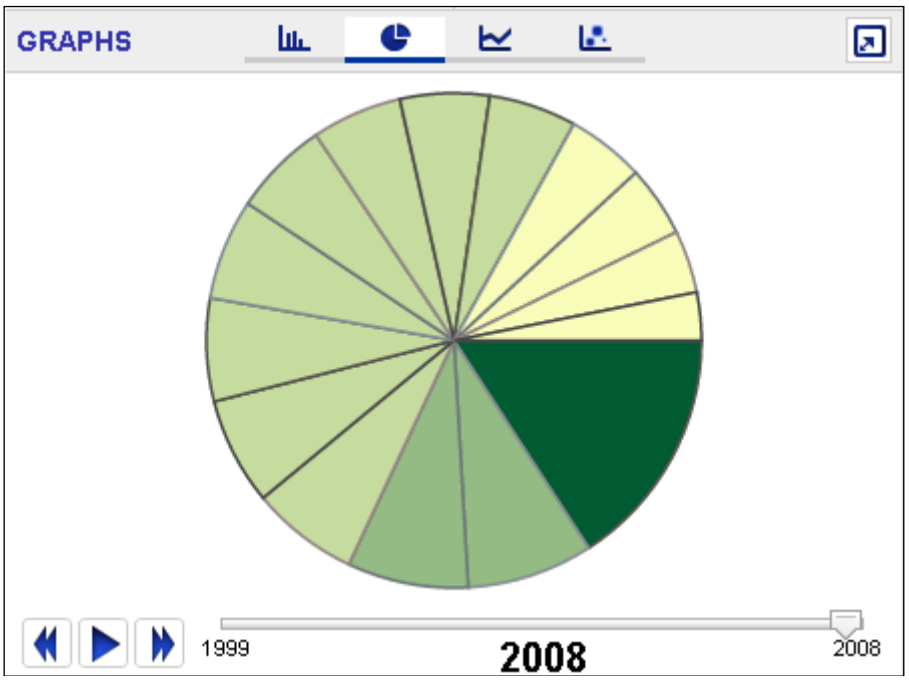


Figure 15 Pie Chart

The pie chart is mouse sensitive, so, when user locates the mouse over a sector, it's highlighted (at Map too) and a tooltip appears with information about the name of the region and the indicator value

Several Pie chart options can be set:

- To show two additional pies with information from other years.
- To cluster some sectors based on several criteria: Number of total sectors, sectors with a lower indicator value than a baseline value and sectors which added arise to a baseline value.

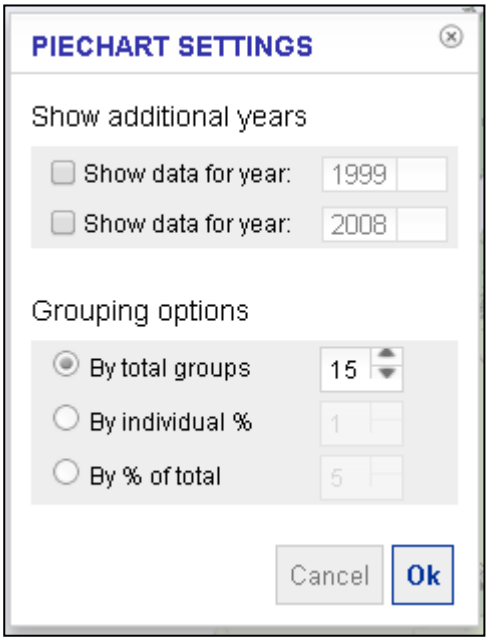


Figure 16 Pie Chart settings

4.6. Time Graph

To see the evolution of an indicator along the time in the Study Area, RIMAP has included a Time Graph.
User has to click on the button  to see the Line Graph.

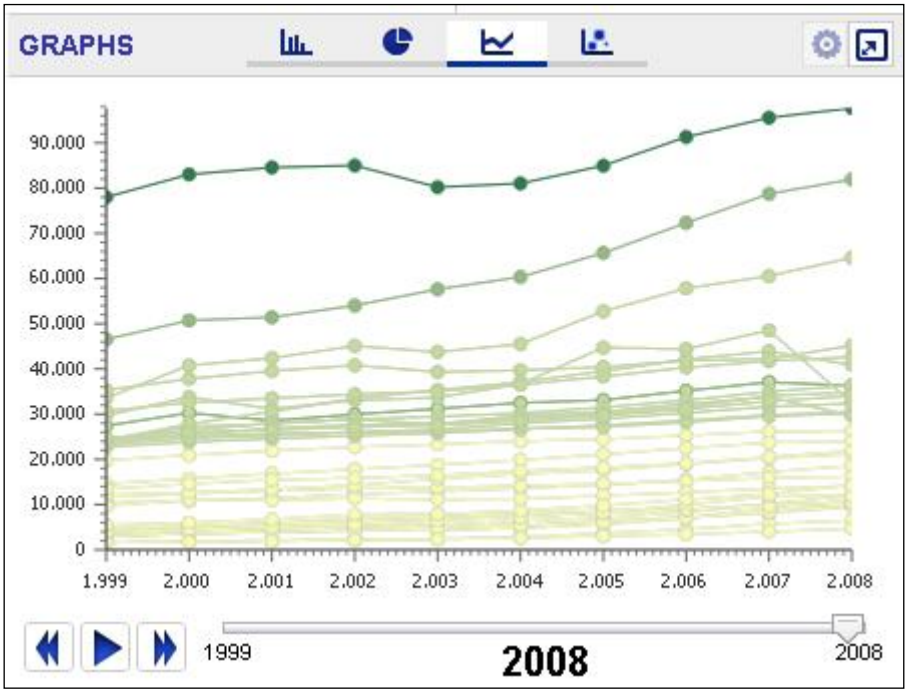


Figure 17 Line Graph

Each mark indicates the indicator value of a territory in a given year.

The time graph is mouse sensitive, so, when user locates the mouse over a mark, it's highlighted (at Map too) and a tooltip appears with information about the name of the region and the indicator value.

4.7. Scatter Plot

A common tool to analyze two indicators at same time is the Scatter Diagram. In RIMAP, user can access to the tool clicking on the button .

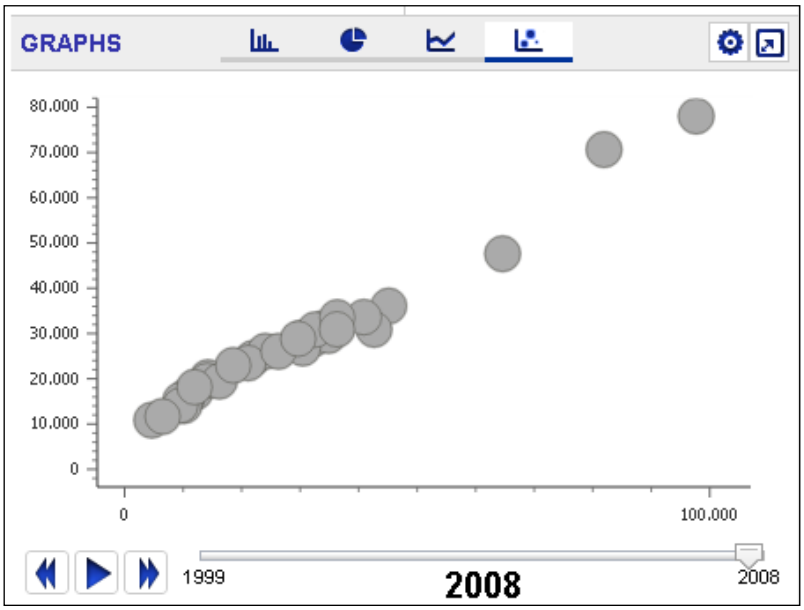


Figure 18 Scatter Plot

Several Scatter options can be set:

- Bubble color
- Selected Year.

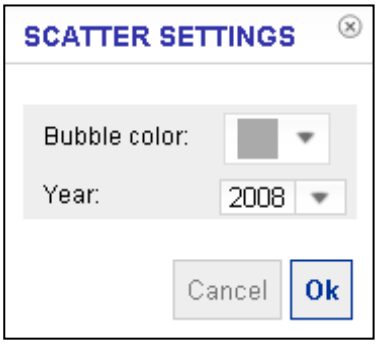


Figure 19 Scatter Plot settings

4.8. Range Settings

User can customize the indicators representation clicking on the legend settings button  at the Legend Window.

- Absolute Values:
  - Data Color Scheme: User can select positive and negative color.
- Relative Values:
  - Number of Total Ranges: From 4 to 12 ranges.
  - The calculation method: Lineal, Quantiles or Jenks.
  - The Break Value: None, Zero, Average or Custom.
  - Color Scheme: User can select between 6 default color schemes.
  - User can create its own custom color scheme clicking on  .
- Typology Data:
  - Color Scheme: User can create its own custom color scheme.
  - User can create its own custom color scheme clicking on  .
- No Data:
  - Color Scheme: User can select the No Data color (white by default).

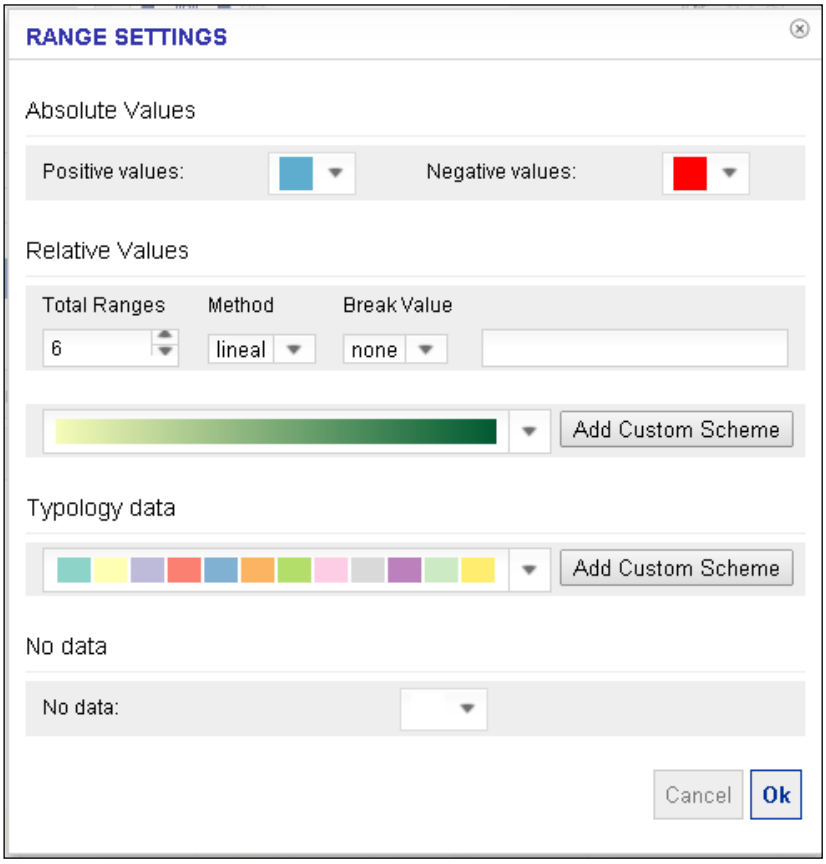


Figure 20 Range settings

5. Tutorials

5.1. Guide

- RIMAP User Guide.

5.2. Videos

- How to Create a Map.
- How to Create a Study Area.
- Charts.
- Indicators Comparison.
- How to configure the settings.
- How to export and share a Map.