ESPON

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Territorial Monitoring for the Baltic Sea Region

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Part C | Scientific Report

Volume C6 | Presentation Tool User Manual

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This report presents a more detailed overview of the analytical approach to be applied by the project. This Applied Research Project is conducted within the framework of the ESPON 2013 Programme, partly financed by the European Regional Development Fund.

The partnership behind the ESPON Programme consists of the EU Commission and the Member States of the EU27, plus Iceland, Liechtenstein, Norway and Switzerland. Each partner is represented in the ESPON Monitoring Committee.

This report does not necessarily reflect the opinion of the members of the Monitoring Committee.

Information on the ESPON Programme and projects can be found on www.espon.eu

The web site provides the possibility to download and examine the most recent documents produced by finalised and ongoing ESPON projects.

This basic report exists only in an electronic version.

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List of authors

Carsten Schürmann (RRG)

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1 Background

The TeMo *Presentation Tool* will act as the standard gateway for the users to access the territorial monitoring system for the Baltic Sea Region.

The tool is implemented as a simple and easy-to-use local browser application.

Being the standard information gateway, the *Presentation Tool* provides electronic access to the following TeMo output:

- Domains, subdomains and indicators
- Headline indicators
- Demonstration examples and case studies
- Map files and Excel files
- Documents and reports
- Relevant ESPON, VASAB and INTERREG websites
- TPG and contact information

When the user navigates through the domains and subdomains, he can select the indicator he is interested in. Each indicator is presented on one dedicated page, subdivided by tabs, with indicator description, map gallery, statistics, tables and map download, implementation, and metadata.

The most important headline indicators can directly be accessed via the tool. Headline indicators represent a subset of the main indicators, which are statistically significant to represent an entire domain.

In addition to the presentation of individual indicators, the browser application is also gateway to the demonstration examples and case studies. Initially, four demonstration examples are being developed in the TeMo project: (i) overall benchmarking, (ii) migration (thematic scope), (iii) cross-border areas (geographical scope), and (iv) territorial cohesion (cross-cutting issue).

All maps and Excel files produced in the project are made available through the presentation tool, either indicator-by-indicator via the indicator pages, or from the application pages.

All documents produced in TeMo are also accessible through the browser application. The documents can be downloaded as PDF files from the application, partly in both English and Russian versions.

The main navigation bar provides links to relevant ESPON, VASAB and INTERREG websites, as well as company and contact information about the TeMO transnational project group, implementing this monitoring system.

2 Deployment, Installation and Tool Launch

The TeMo *Presentation Tool* is deployed in two ways: either as compressed zip file, or on CD-ROM/DVD.

As the tool is developed as local browser application, it does not rely on any specific hardware and software, provided that an actual web browser is installed on the local PC, supporting common web technologies (html, css).

If the user receives the *Presentation Tool* as compressed zip file, he should copy the zip file to any desired folder, and unzip the compressed file. If the user received the tool via CD-ROM or DVD, he could either start it directly from CD-ROM/DVD (root directory), or he may copy the contents of the CD-ROM/DVD to his local hard drive, and run the tool from there.

Either way, the user can just launch the *Presentation Tool* by clicking at the

`TeMo_Presentation_Tool.htm`

file.

If the tool is launched from CD-ROM/DVD, performance might be slow. In such cases, it is recommended to copy all the contents from CD-ROM/DVD to local hard drive, and to run the tool from the hard drive.

3 Advantages of the Browser Application

The advantages of implementing the *Presentation Tool* as local browser application can be summarized as follows:

- *Information access*: it is the central gateway of TeMo to access all information from within one application, i.e. from one place, in an easy manner. Indicator description and maps, findings, charts, Excel files and benchmarks will be accessible through this gateway, so as metadata, domain, subdomain and indicator descriptions.
- *Domain, sub-domain and indicator-driven approach*: The application follows a domain, sub-domain and indicator-driven approach. Navigation is guided by the domains, sub-domains and indicators, as its building blocks. At the lowest level, all information for one single indicator are presented at one place, at one hand.
- *Hyperlink navigation*: The browser application will rely on simple hyperlink navigation. The application guides the user through the domains, sub-domains and indicators by simply clicking on hierarchical hyperlinks. Since the beginning of the WWW, people are familiar with this concept of user interaction.
- *Independence from software or OS requirements*: The browser application is based on simple HTML techniques. Other (commercial) software than web browsers are not required to run the application. Moreover, a browser application based on HTML is independent from any operating system, and does not need to be formally installed. Just a click on the starting html file will open the application.
- *Independence from GIS*: The browser application is also independent from any GIS software. ArcGIS or other GIS software is not needed to launch the monitoring system; however, interested GIS professionals can use ArcGIS or other GIS software to do their own types of analysis.
- *Enhanced contents*: Compared to the standard ESPON reports, where there is only limited space to present several indicator maps, the web browser tool allows to implement a series of map for every indicator such as state maps for several years, different difference maps, discontinuity maps, as well as similar maps from related studies. By that the presentation tool includes enhanced contents, offering more options and higher flexibility for the users.
- *Easy sharing*: The entire monitoring system including all input data, maps and Excel files is delivered on one CD-ROM[1]. The browser application can be launched directly from this CD-ROM, or, after copying the contents of the CD-ROM to a local hard drive, from any PC. The monitoring system, along with all its components, can then easily be shared with interested people just by handing over the CD-ROM (DVD).
- *Easy implementation*: A territorial monitoring system based upon HTML standards is rather easy to implement for the TPG, compared to developing dedicated software.
- *Website options*: Finally, the browser application based on HTML can be easily transformed into a formal website without significant amendments, if ESPON or VASAB are requiring this in the future.

Thus, from the central *Presentation Tool*, all other elements of the monitoring system can be accessed easily, without changing the medium.

[1] Optionally on DVD, subject to the final size of the database.

4 The Presentation Tool

4.1 General Navigation

When launching the presentation tool from the htm file, the following start screen pops up (landing/home page) (Figure 1):

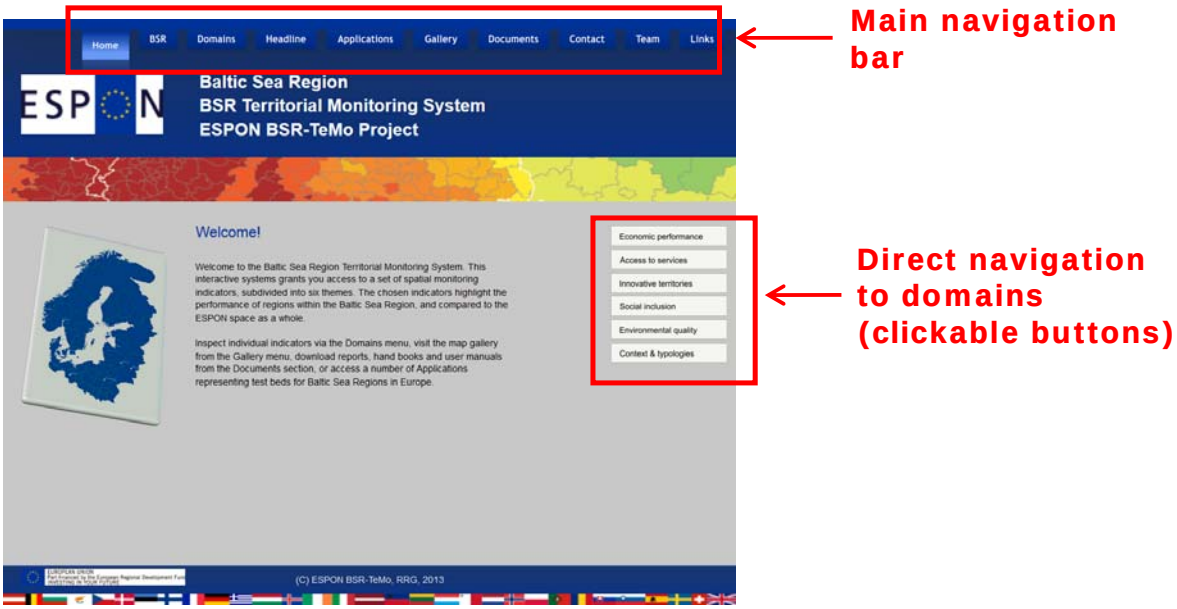


Figure 1. Welcome page of the presentation tool (landing/home page).

From the landing (home) page, the user can either use the clickable buttons at the right hand side of the main part, to directly navigate to the individual domain page (six different domains are available), or he may use the main navigation bar at the top to access domains, headline indicators, applications, the map gallery, the downloadable documents, or contact or TPG team information, or the links section.

The following domains can directly be accessed from the landing page:

- Economic performance
- Access to services
- Innovative territories
- Social inclusion
- Environmental quality
- Context & typologies

The same domains are also accessible via the respective menu in the navigation bar (Figure 2). In addition, the navigation bar provides access to the following contents via the menus:

- Introduction to Baltic Sea Region
- Headline indicators
- Applications
- Map gallery
- Documents
- Contact information
- Team composition
- External links

The navigation bar is accessible from all pages of the *Presentation Tool*.

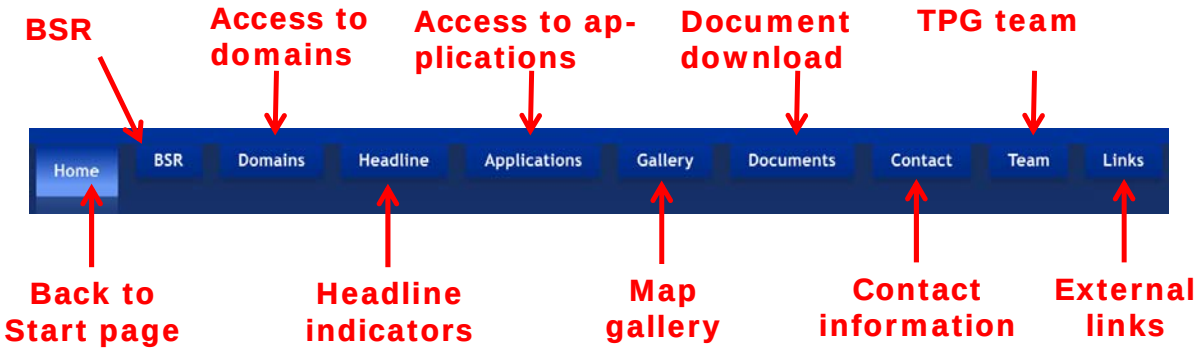


Figure 2. Navigation bar.

The BSR menu gives access to a general introduction to the Baltic Sea Region in terms of physical map, administrative situation, spatial structure, and transportation networks. This information is not directly linked to the monitoring system as such, but provides useful background information. Chapter 4.2 introduces this menu.

From the ***Domain***s menu, the user can select one of the five domains and from there the respective indicators. The individual indicator pages then provide indicator definition, results, indicator maps and statistics, Excel file and map downloads, and indicator metadata in a standardized way. The ***Headline*** menu grants fast access to the headline indicators. From the ***Applications*** menu, one can select any of the four implemented demonstration examples, which are also presented in a standardized way, including application description, policy context, results, illustrations (charts, maps and tables), and download options. The ***Gallery*** menu provides quick access to all produced maps, followed by the ***Documents*** menu where all TeMo documents can be viewed or downloaded in PDF file format.

Once the user clicks any domain name from the landing page or via the **DOMAINS** menu, the respective domain overview page appears. As an example, Figure 3 illustrates the page of the domain **Economic performance and competitiveness**. This domain includes three sub-domains (**macroeconomic development**, **labour market** and **demography)**, with two and three indicators assigned to each subdomain, respectively. The indicator names are hyperlinks, i.e. when clicking the names the user is guided to the chosen indicator page.

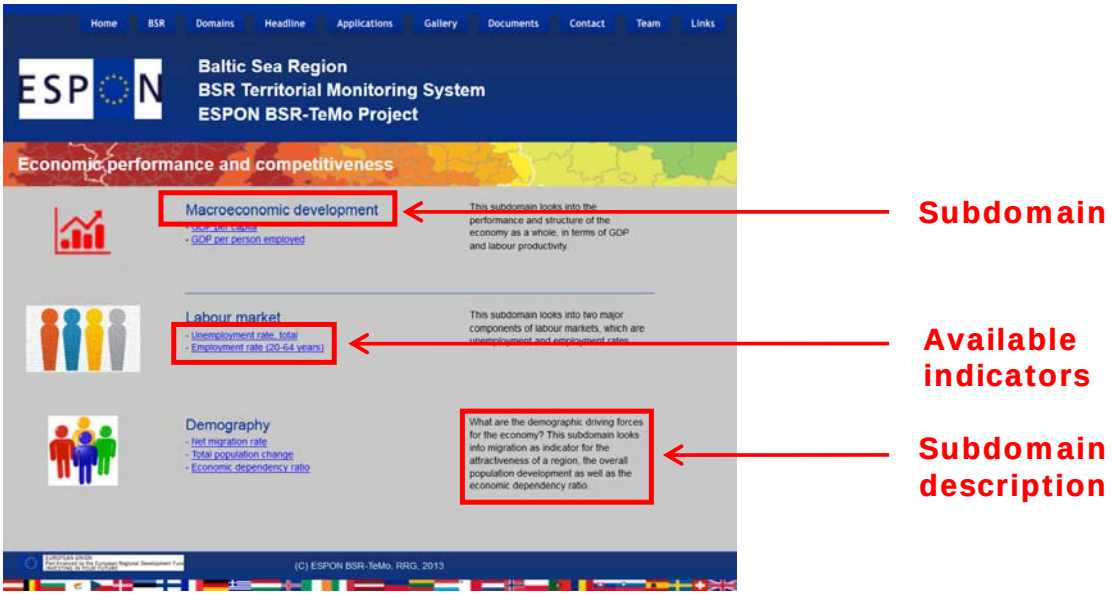


Figure 3. Domain page 'economic performance'.

When the user clicks any indicator name, the indicator page of the desired indicator opens (Figure 4). This page is the central information place for individual indicators, where maps, charts, benchmarks, descriptions, metadata and other types of information are presented in a standardized manner. Chapter 4.3 introduces the indicator presentation pages. A shortcut to access the most relevant indicators, the so-called *headline indicators*, provides the menu **HEADLINE**. From the dropdown list (Figure 4) the user may select and directly access the headline indicator he is currently interested in. Selecting any headline indicator guides the user to the respective indicator presentation page.

Figure 4. Headline indicators dropdown list.

The **APPLICATIONS** menu is the gateway to access the demonstration examples. Besides an overview page, direct access to the overall benchmarking, the migration case study, the cross-border case study, as well as to the territorial cohesion case study is provided through the dropdown list (Figure 5). Chapter 4.6 provides more details about the applications menu.

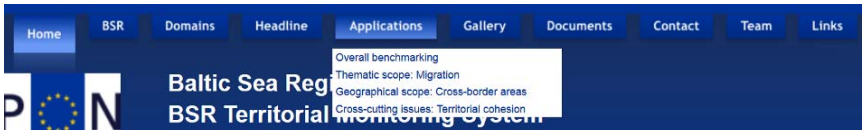


Figure 5. Applications dropdown list.

The **GALLERY** menu offers access to different map galleries (Figure 6), with one gallery per domain. Through the map galleries the user just can quickly flip through and inspect the associated maps (see Chapter 4.8 for more information).

Figure 6. Gallery dropdown list.

The **DOCUMENTS** menu opens a page to download all reports, handbooks and user manuals produced by ESPON TeMo (Chapter 4.c). By clicking **CONTACT** or **TEAM** menu, the user gets access to contact information of the TeMo lead partner, as well as of the overall TPG (Chapter 4.t). Finally, the **LINKS** menu provides a collection of useful external hyperlinks.

4.2 The Baltic Sea Region

This part of the *Presentation Tool* is dedicated to provide basis background information on the Baltic Sea Region. Even though it is not considered part of the core monitoring system, the general information provided herein helps understanding the spatial dynamics and spatial patterns analyzed with the monitoring system.

When launching the **BSR** menu from the top navigation bar, the Baltic Sea Region overview page appears (Figure 7). This page is almost empty except for the navigation bar at the left hand side, which has six buttons providing access to the following information:

- Physical map
- Administrative situation
- VASAB
- Spatial structures (system of cities and towns)
- Transport infrastructures (with further sub-menus on roads, railways, airports, ferries and ports)
- Map download section

Each sub-page of this area has a similar structure, consisting of a short descriptive text, and a main map. Figure 8 exemplifies this by using the **PHYSICAL MAP** category.

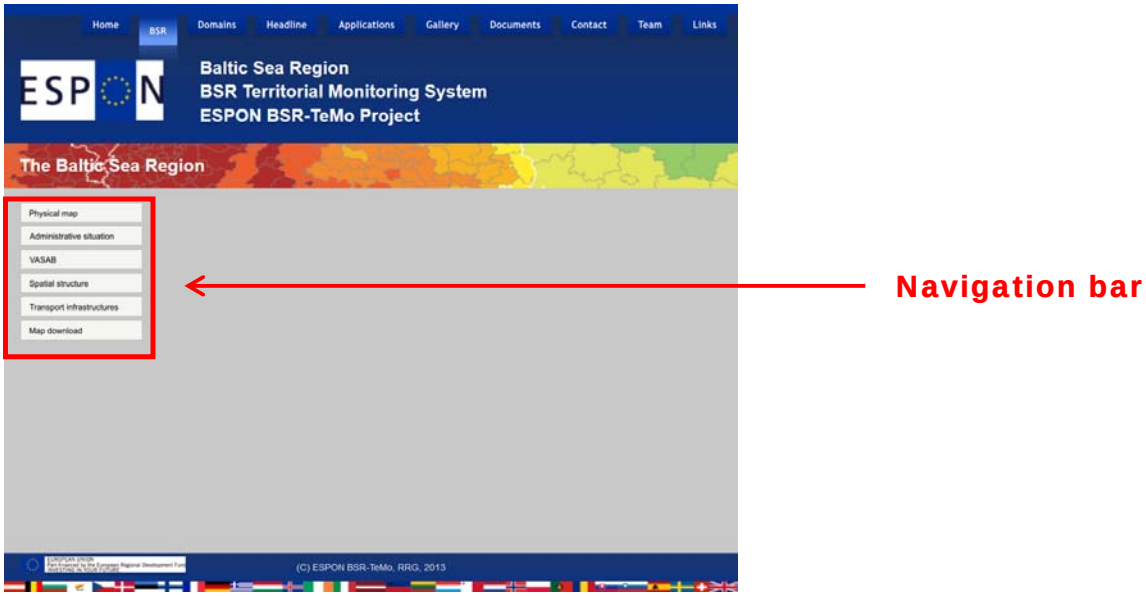


Figure 7. Baltic Sea Region introductory page.

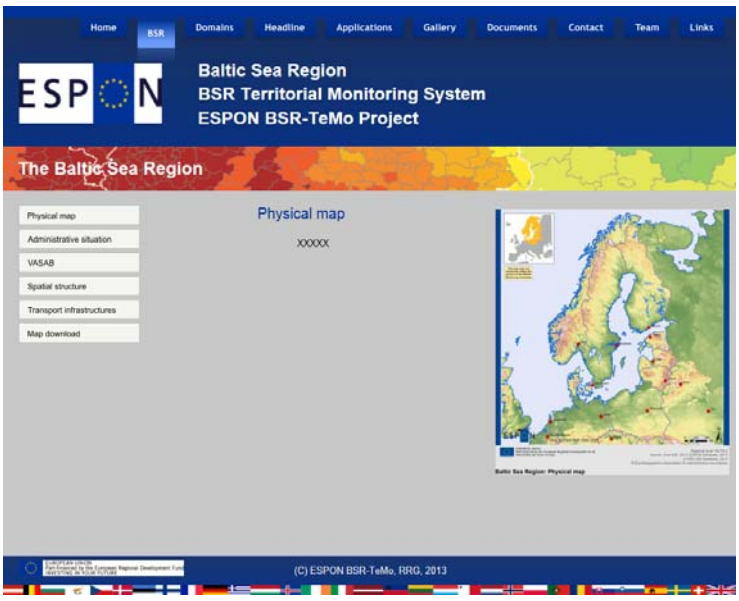


Figure 8: Baltic Sea Region physical map.

The **TRANSPORT INFRASTRUCTURE** menu has four sub-menus giving way to descriptions of **ROADS**, **RAILWAYS**, **AIRPORTS** and **FERRIES AND PORTS**.

By clicking the **MAP DOWNLOAD** button the user may download all overview maps provided through the Baltic Sea Region section of the Presentation Tool, in **PNG**, **AI** or **SVG** file format (Figure 9).

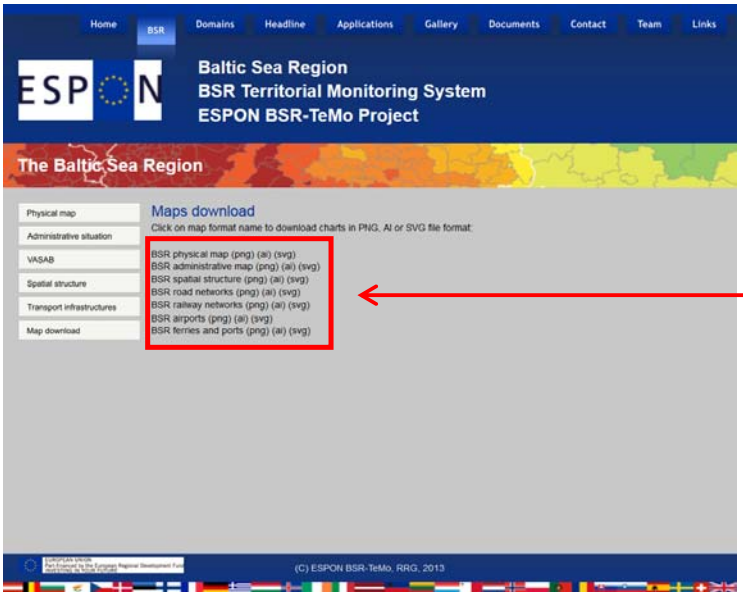


Figure 9. Baltic Sea Region map download section.

4.3 Indicator Presentation

The indicator overview page appears quite simple (Figure 10); the indicator name is indicated in bold in the upper banner area. Headline indicators are indicated by superscript 'H' at the end of the indicator name. At the left hand side, the navigation tabs allow to visit different indicator information, indicator content, and download sections. These tabs provide access to

- Indicator description (indicator)
- Map gallery (different visual materials)
- Statistics (summary statistics)
- Tables & Maps (download of Excel file, and of related maps in PNG, AI, and SVG file format)
- Implementation hints
- Metadata information

These tabs are available at the overview pages of all indicators. When launching the indicator overview page first, the illustration area for the indicator is empty first. Only if the user clicks on any menu from the navigation bar, the respective content is shown.

The navigation arrows in the upper banner allow navigating through the list of indicators. Clicking the backward and forward arrow will open the previous or the next indicator.

When clicking the **INDICATOR** tab, information about the indicator definition, the indicator importance, and the main findings are presented. Additionally, the main BSR overview map is displayed (Figure 11). When clicking the **MAP GALLERY** tab, the map gallery opens displaying different types of indicator maps (Figure 12). The standard BSR overview map is shown by default; in addition, at the right side alternative maps for the BSR are available. Clicking any of these alternative maps will change the display of the main map accordingly. Standard monitoring maps include the standard BSR map, the same map for the entire ESPON Space, as well as a difference or development map (for displaying temporal dynamics). Alternative, or additional maps may include maps of the same indicator produced in other ESPON projects, or in other studies, which have a dif-

ferent geographical coverage, use different spatial scale (for instance, LAU-2 or raster maps), or are in other ways related to the respective indicator. At this place, also below NUTS-3 region maps will be displayed, if available. The number, list and scope of standard and alternative maps available in the **MAP GALLERY** tab depends on the chosen indicator.

Figure 10. Indicator overview page.

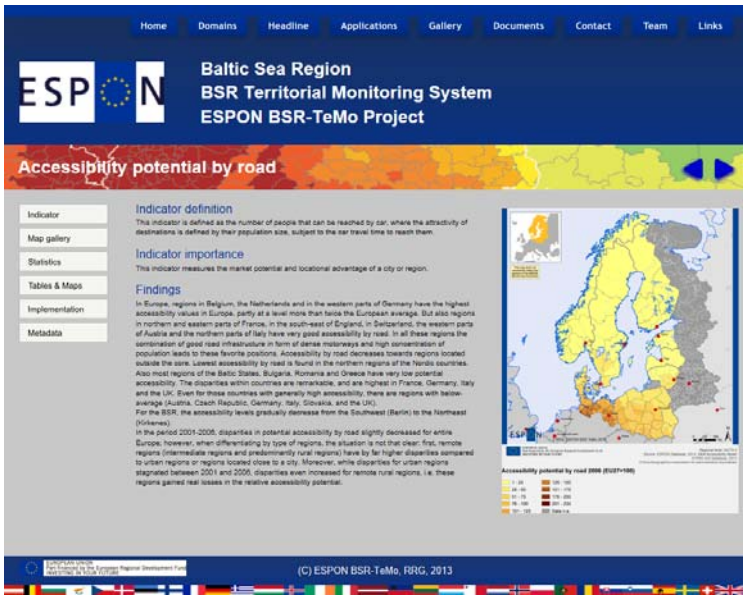


Figure 11. Indicator description.

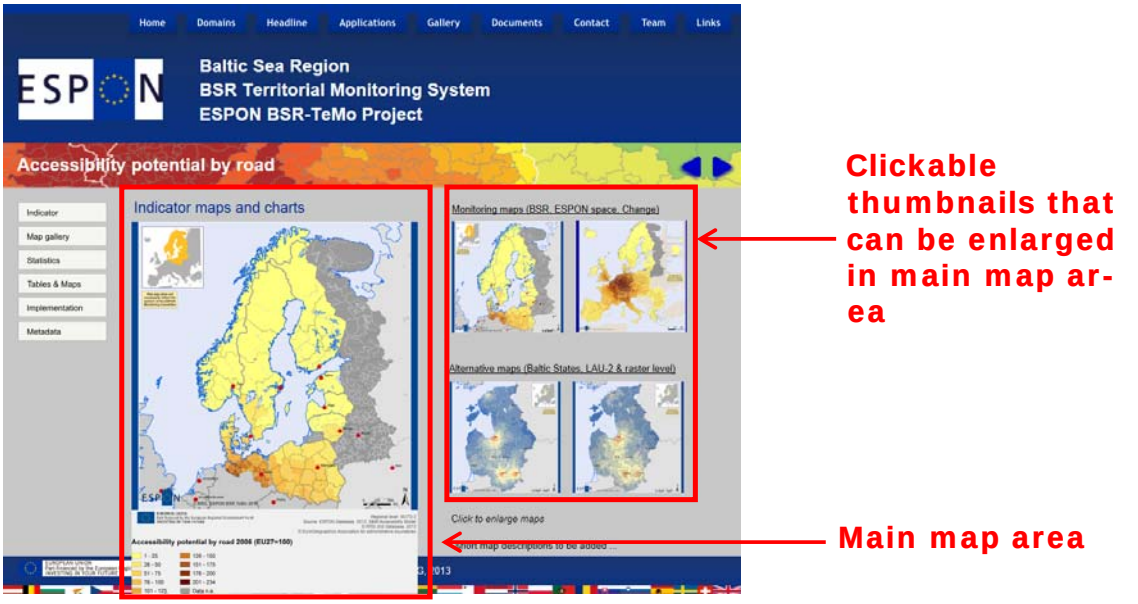


Figure 12. Indicator map gallery.

For many indicators the *Presentation Tool* also provides access to alternative maps (Figures 13 and 14); alternative maps are a collection of related indicator maps produced in other (ESPON) projects, or produced at alternative spatial scales such as LAU-2 or raster level. When hovering over the thumbnails, a short description appears describing the map content and map context. When clicking at these thumbnails, the clicked map will be enlarged in the main map display area. At this place, the *Presentation Tool* offers display of alternative (i.e. non standard-BSR maps) maps.

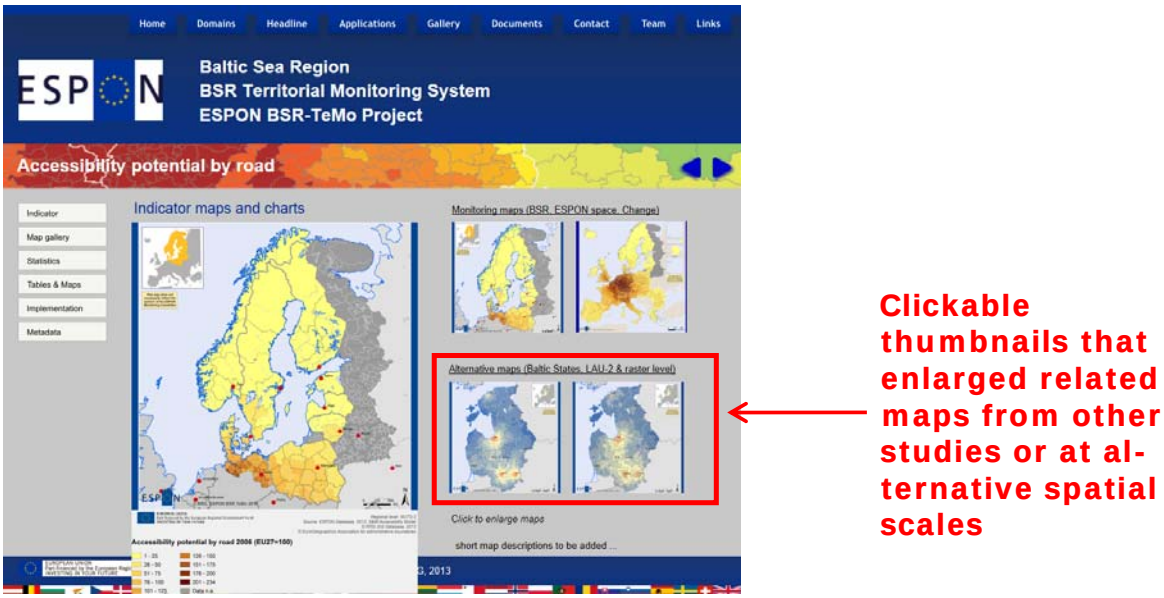


Figure 13. Alternative maps section.

When clicking the **STATISTICS** tab, summary statistics at national level for all BSR countries will be provided (Figure 15). The left part of the table gives the information about minimum, mean, maximum and coefficient of variation for each BSR country; in addition, the right part provides the same summary statistics for different region aggregates, such

as BSR region as total, BSR region without Russia and Germany, BSR region Eastern, Western, Northern and Southern part, ESPON space and EU27 as a whole. Statistics are always provided for the latest available year. For few indicators no summary statistics can be provided due to their specific nature, such as **BORDER CROSSING** indicator or the **EUTROPHICATION** indicator, as these are no classical region-based indicators.

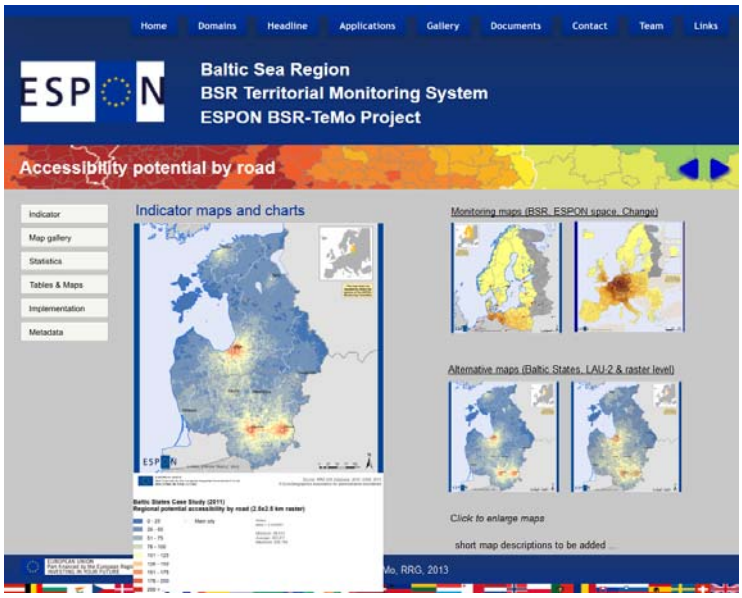


Figure 14. Alternative map displayed in main map area.

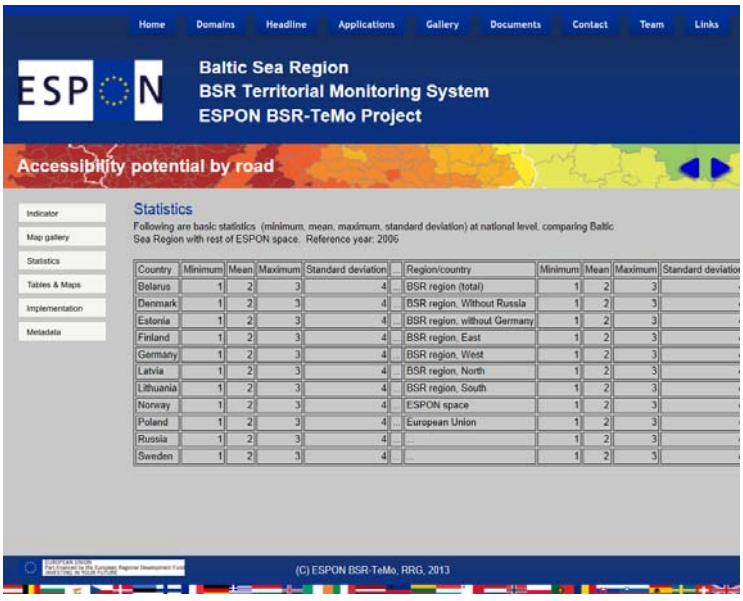


Figure 15. Summary statistics at national and aggregated level.

When clicking the **TABLES&MAPS** tab, a download section opens (Figure 16) for downloading the indicator Excel file (in standard ESPON format), as well as for downloading the series of maps as displayed in the **MAP GALLERY** section. Different map download formats are offered, such as **PNG**, **AI** and **SVG** file formats. In the first part, the standard BSR maps can be downloaded; in addition, for some indicators related maps can also be

downloaded here. Related maps are the additional maps taken from other (ESPON) projects, or represent related indicator maps at different spatial scales, just as LAU-2 or raster levels. Finally, a link to the indicator description in the TeMo Final Report is provided in this tab, where the PDF documents directly opens the respective page where the indicator is described. Next to the download area, the default BSR overview indicator map is displayed. The number of maps offered for download differs by indicator, subject to the number and scope of maps generated / collected for that specific indicator.

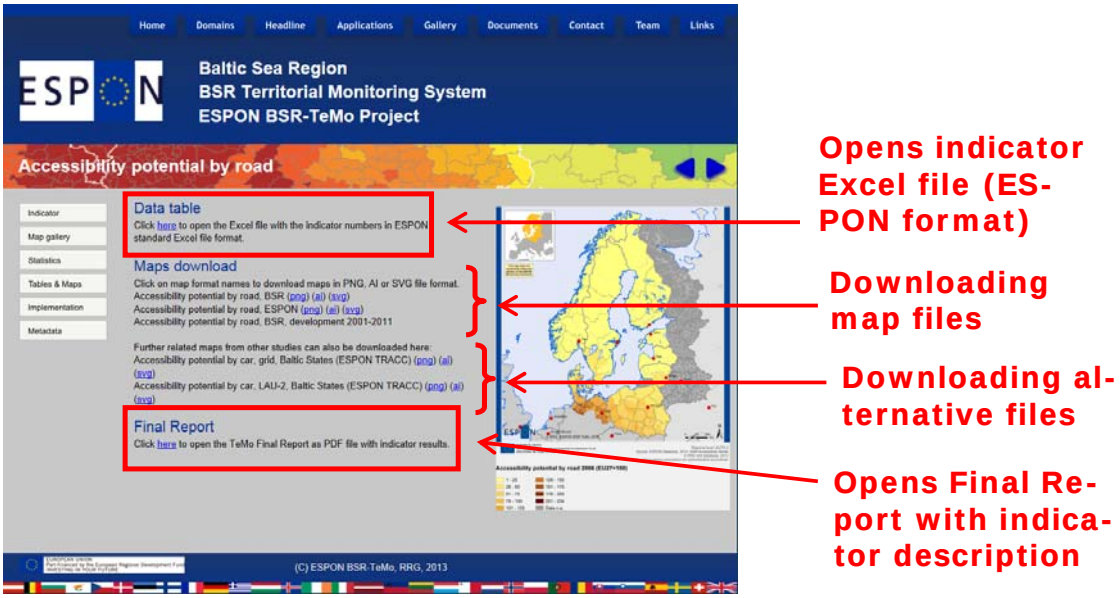


Figure 16. Download section to download Excel and map files.

Clicking the **IMPLEMENTATION** tab (Figure 17) provides useful information about the indicator calculation and implementation, along with the standard BSR overview map.

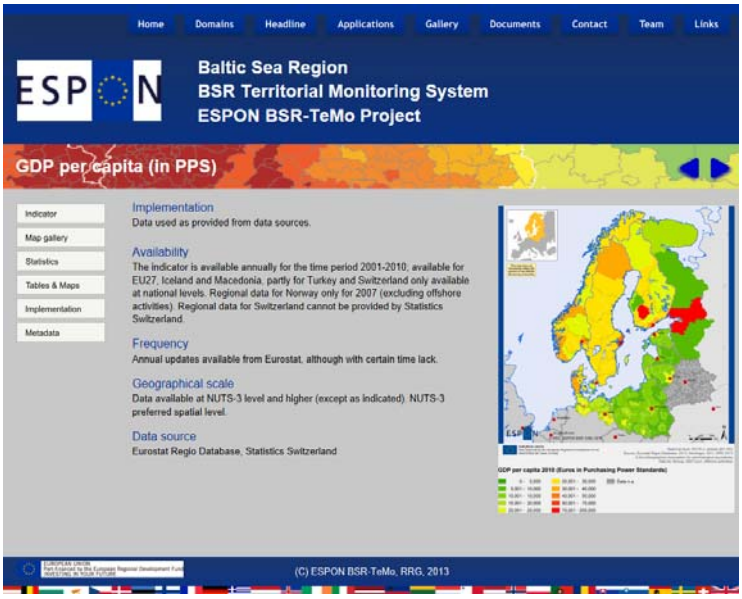


Figure 17. Indicator implementation tab.

Finally, when clicking the **METADATA** tab (Figure 18), useful metadata information are displayed corresponding to the metadata sheet of the standard Excel files. Again, the standard BSR overview indicator map is displayed at the right hand side of this tab.

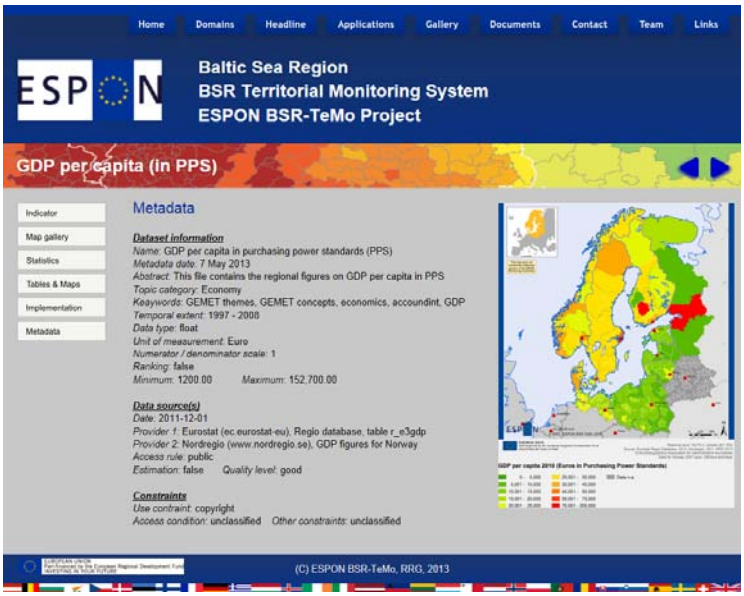


Figure 18. Indicator metadata section.

Through these six tabs, the electronic Presentation Tool gives access to all information related to one single indicator at one place in a simple but convenient way. Compared to the previous paper works, where the user had to read different reports, appendices and Excel files to collect all the information related to one indicator, the browser application simplifies access to indicator information significantly.

4.4 Map Gallery Menu

The **GALLERY** menu offers to select one of the six domains, and then opens a comprehensive map gallery of all maps produced under this domain (see Figure 19 for an example). By clicking on any of the maps, a map slide show opens where the user can conveniently navigate through the maps (Figure 20). This menu is enabling the user a quick walk through all available maps of the monitoring system.

Figure 19. Map gallery.

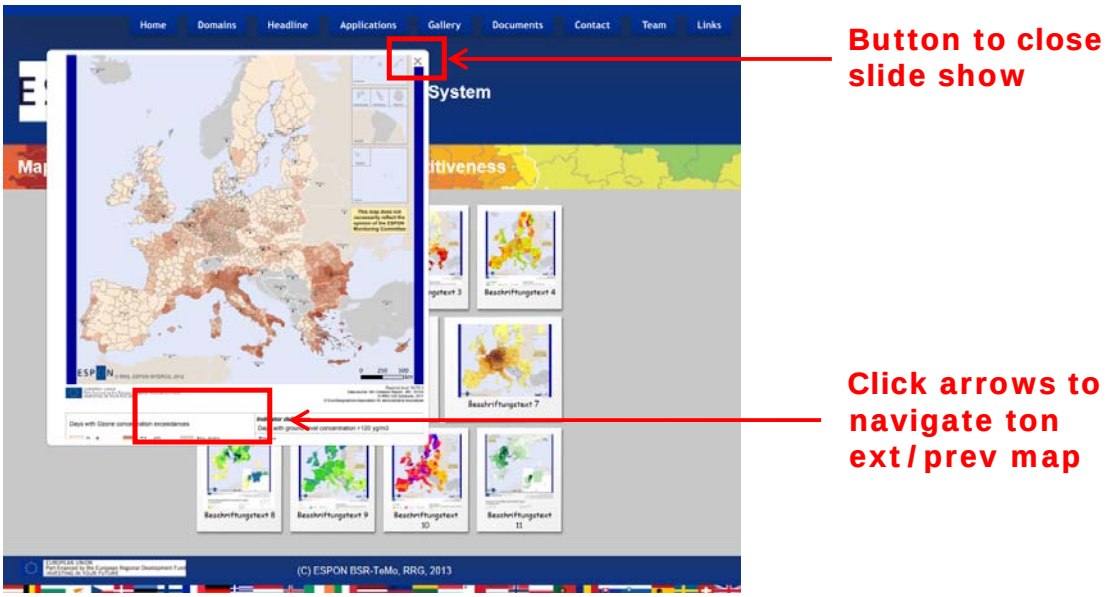


Figure 20. Map gallery with slide show.

4.5 Document Menu

The **DOCUMENTS** menu opens the document download page (Figure 21) from where the user can view, print or download all documents in **PDF** format produced in this project by clicking on the PDF icon (clicking on the text, however, will have no effect). Once any PDF icon is clicked, a dialogue window appears asking the user to open the document, or to save it to hard disc (Figure 22).

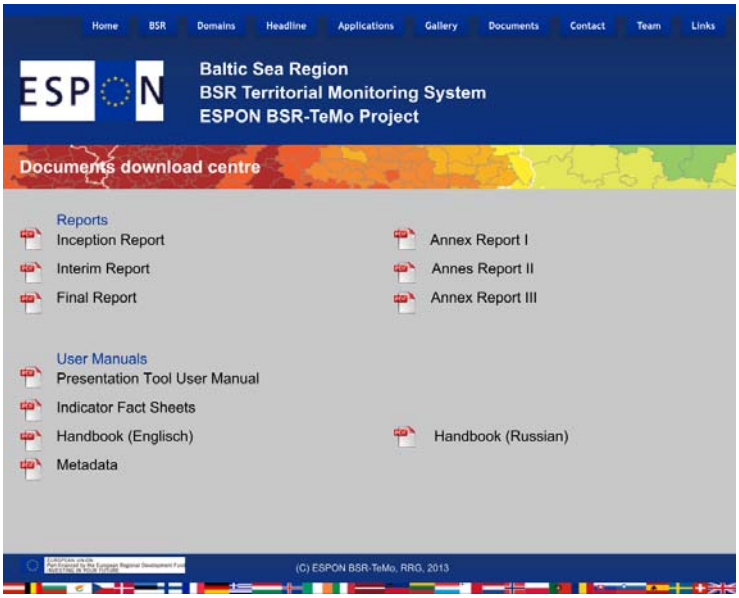


Figure 21. Document download centre.

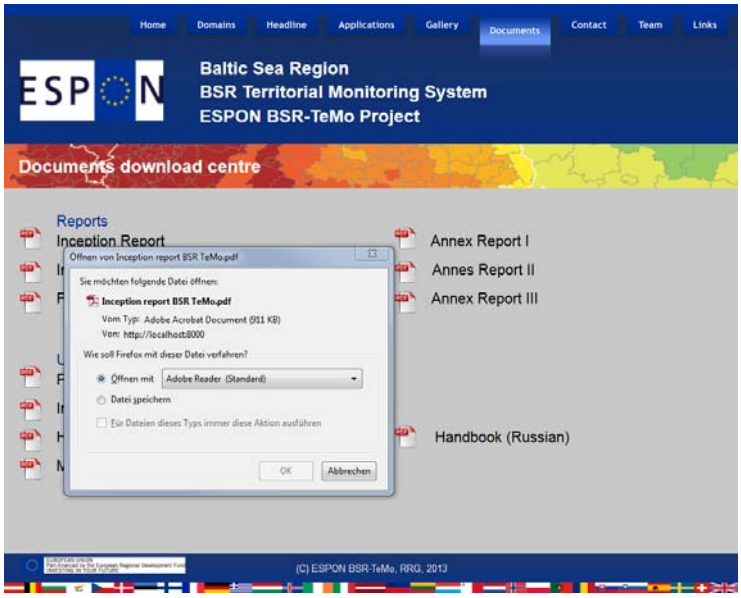


Figure 22. Document download centre save dialogue.

4.6 Application Menu

Applications (demonstration examples, case studies) represent in-depth analyses where several selected indicators from the overall list of TeMo indicators are being used to address and analyse specific policy questions. By doing so, several statistical measures have been applied to investigate spatial patterns and trends. In the TeMo concept, the applications represent the *advanced monitoring system*, contrasted to the *simple monitoring system* consisting of the individual indicator analysis.

Similar to the individual indicators, the four demonstration examples (case studies) are presented in the monitoring system in a standardized way. When selecting any of the

four developed demonstration examples from the **APPLICATIONS** menu, the standard application overview page as shown in Figure 23 opens.

The application name is indicated in the upper banner area. Five tabs are located at the left hand side, providing access to

- **DESCRIPTION**: Application description
- **POLICY CONTEXT**: Policy context of the application
- **RESULTS**: Application results, key messages and findings (text)
- **VISUALIZATION**: Visualization of application results
- **DOWNLOAD CHARTS**: Download maps and charts in PNG file format, and access to the application description in the Final Report
- **DATA SOURCES**: List of data sources used to produce the charts

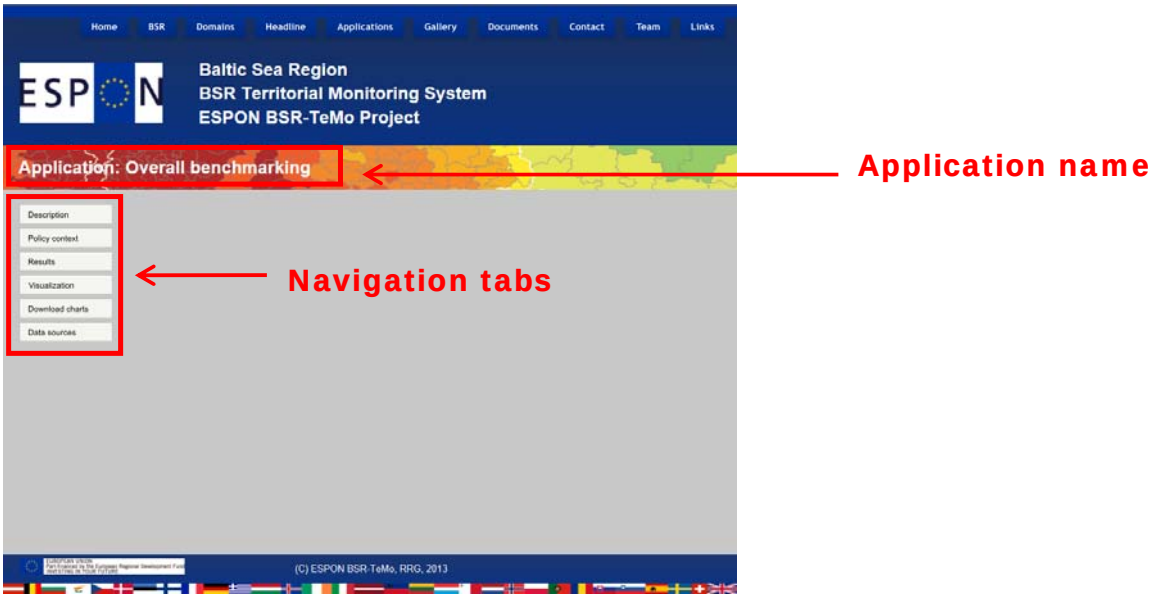


Figure 23. Application overview page.

When clicking the **DESCRIPTION** tab, a brief description of the application appears (Figure 24). Why has this case study been selected? What is the scope of the case studies? Which aspects have been investigated? Which questions addressed? Answers to these questions are provided here in brief. When clicking the **POLICY CONTEXT** tab (Figure 25), a further description of the policy context (background) of this application in the Baltic Sea Region and for VASAB is given.

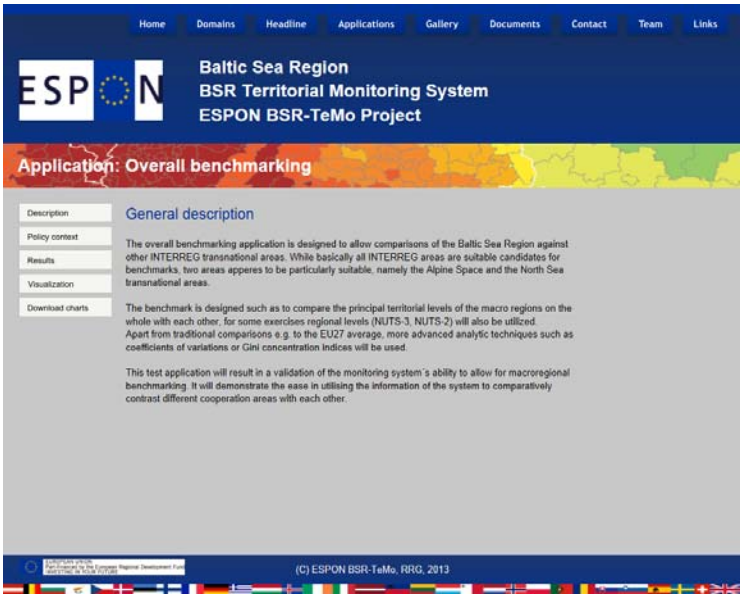


Figure 24. Application description.

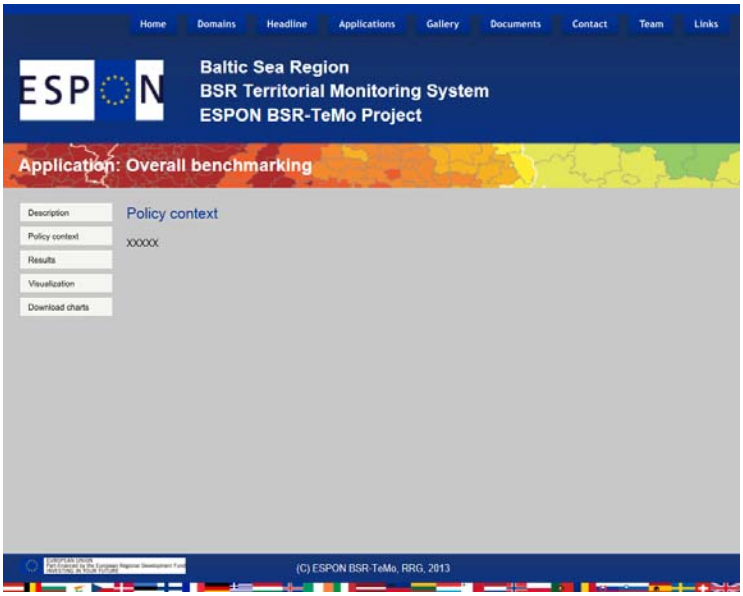


Figure 25. Application policy context.

When clicking the **RESULTS** tab (Figure 26), a short description of the main findings of this demonstration example is given here, addressing the questions raised in the **DESCRIPTION** tab. When clicking on the **VISUALIZATION** tab (Figure 27), a new tab opens with all the produced maps, charts and graphs for that application. The number, type, and scope of these maps and charts differ from application to application. Underneath each chart/map, a short text appears describing the main findings of the illustration. For the application on territorial cohesion (cross-cutting issues), the **VISUALIZATION** menu offers a number of sub-menus structuring the rich basket of output materials. All these illustrations are offered for downloaded in PNG file format for further processing when clicking the **DOWNLOAD CHARTS** tab (Figure 28). Here, also a direct link to the description of the selected application in the Final Report is available. The final menu,

i.e. **DATA SOURCES** (Figure 29), lists the data sources used to produce the maps and charts for the application.

All materials provided through the application pages correspond to the contents and materials as provided in Annex Report XX to the TeMo Draft Final Report.

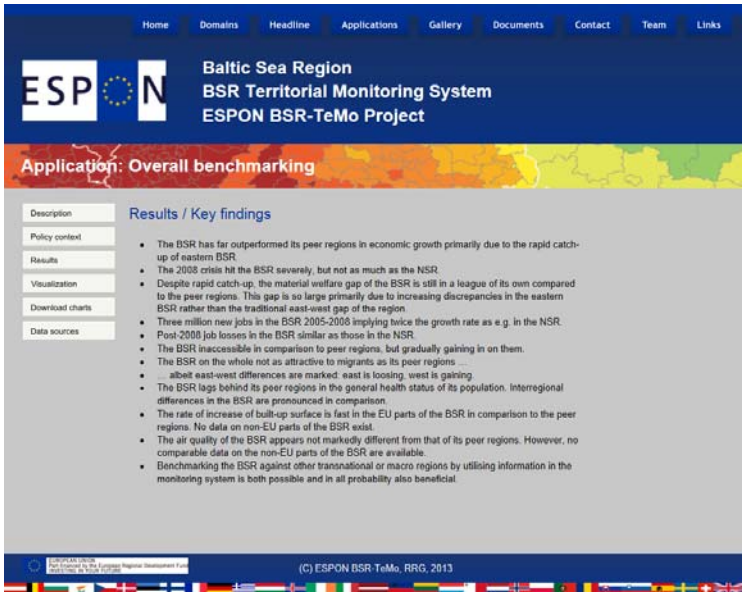


Figure 26. Application results.

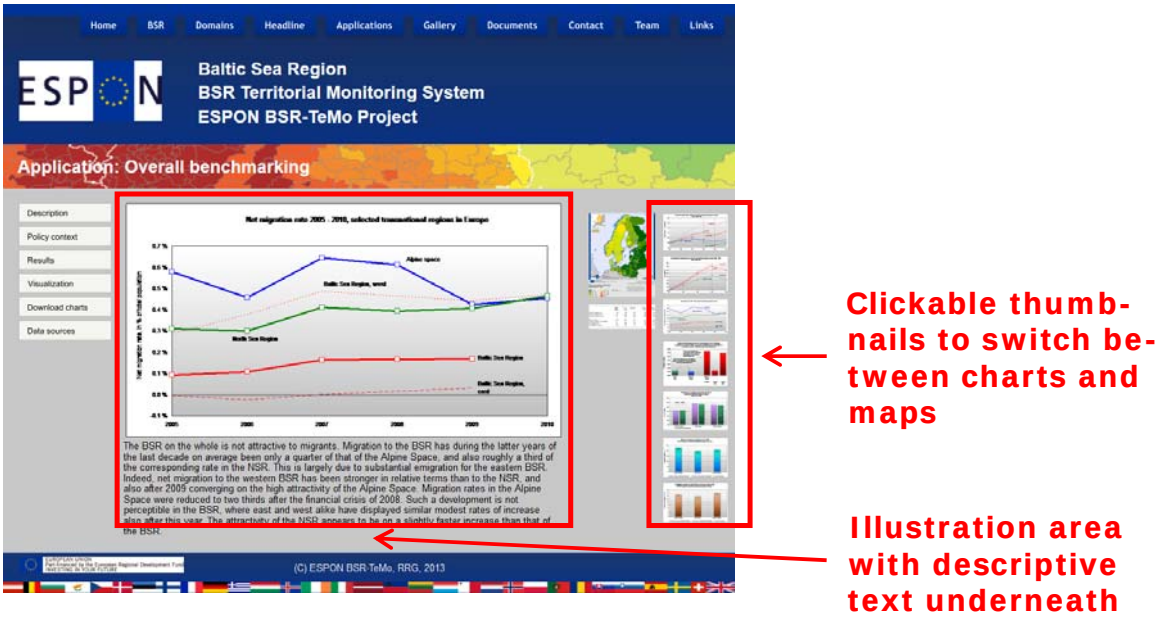


Figure 27. Application visualization.

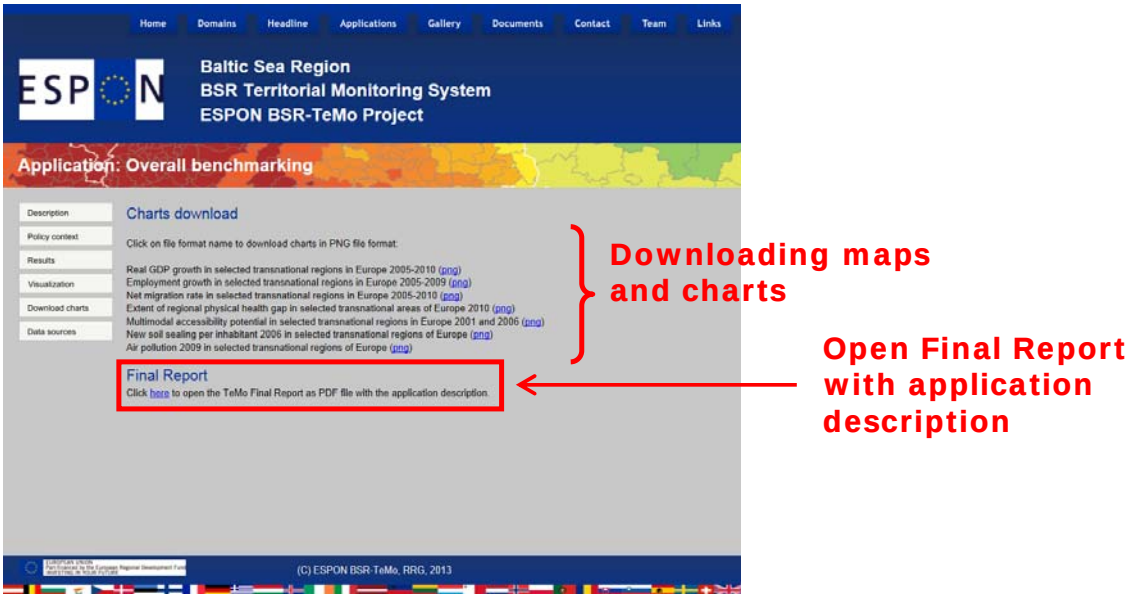


Figure 28. Application download maps and charts tab.

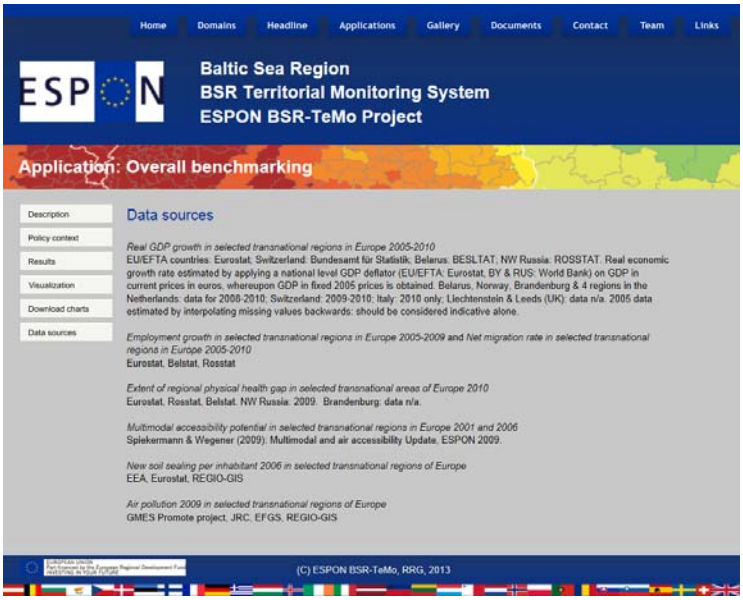


Figure 29. Application data sources tab.

4.7 Contact, Team and Links Menus

In order to retrieve contact information about the BSR TeMo project coordinator, the user may click the **CONTACT** menu (Figure 30) or navigate to the **TEAM** menu to get an overview about the composition of the transnational project group (Figure 31). External links towards ESPON and VASAB web resources can be accessed via the **LINKS** menu.

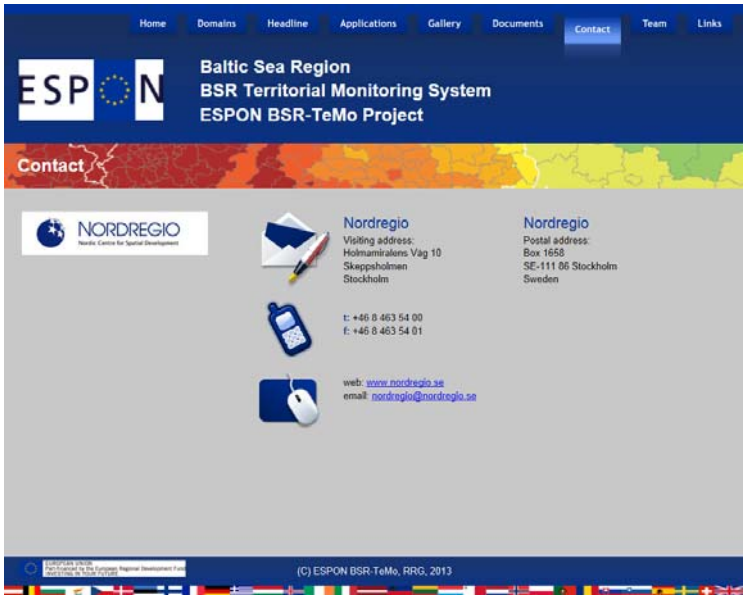


Figure 30. Contact information.

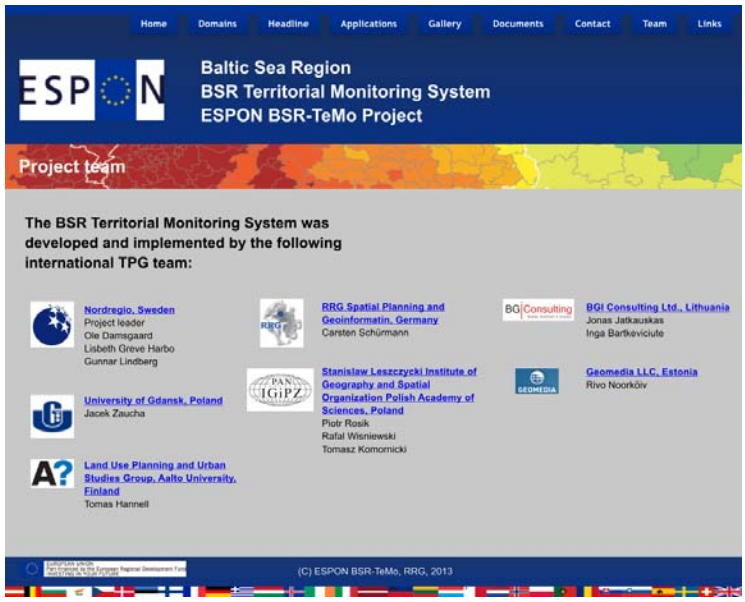


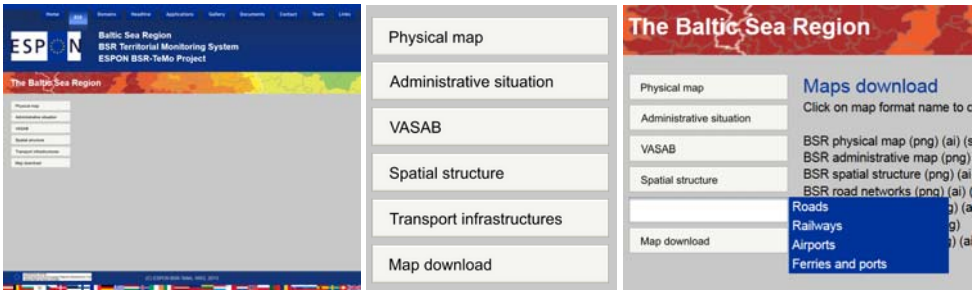
Figure 31. Team contact information.

5. Screenshot Gallery

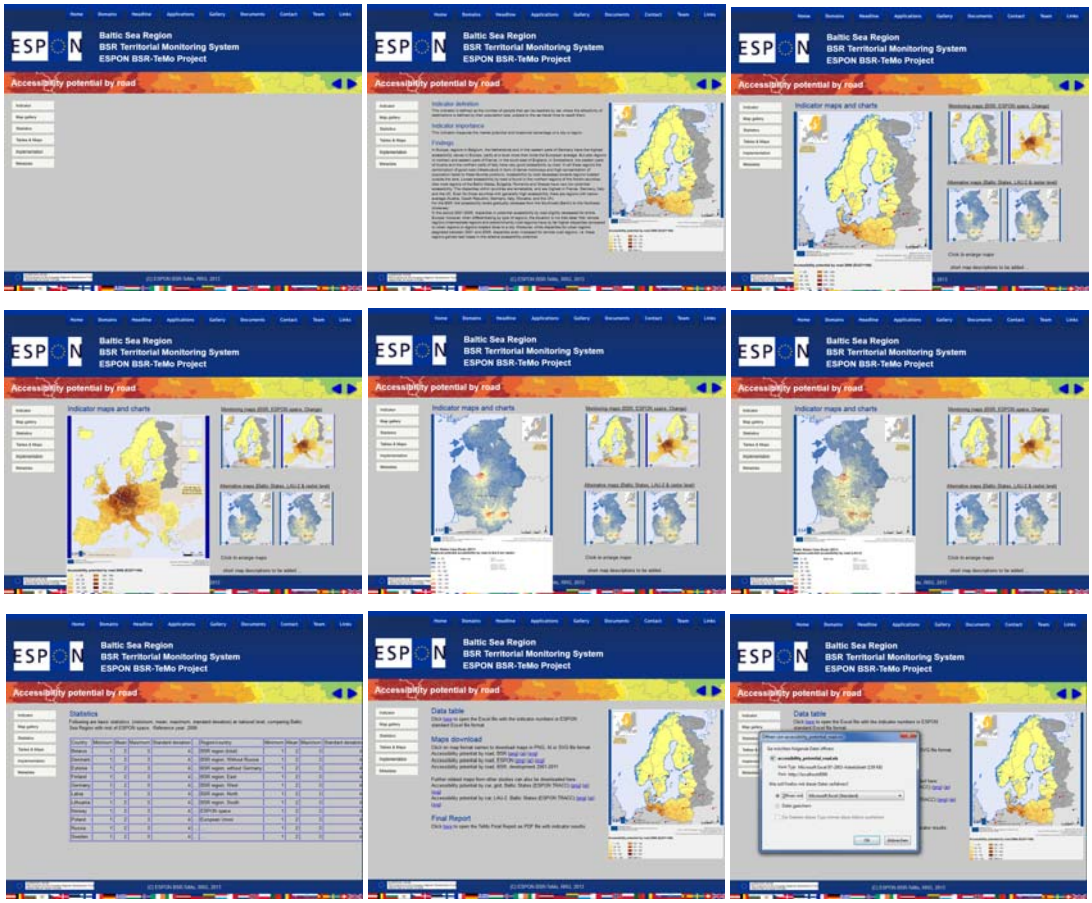
This chapter gives an uncommented gallery of screenshots of the *Presentation Tool* following the main user way of navigation in the tool. As far as the indicators and demonstration examples are concerned, a full set of screenshots for one indicator (accessibility potential by road) and for one demonstration example (overall benchmarking) are presented at the following pages.

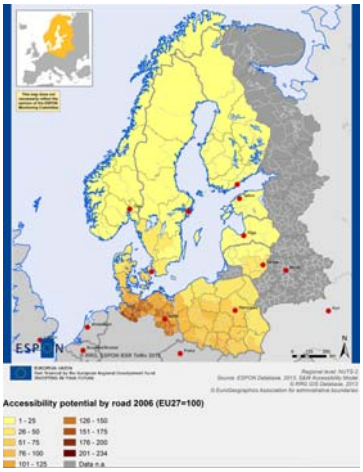
Navigation

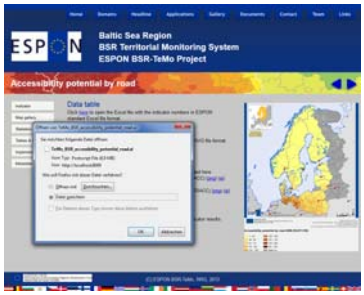
The Baltic Sea Region

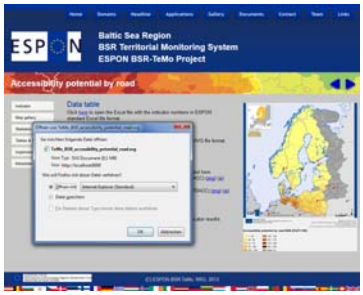


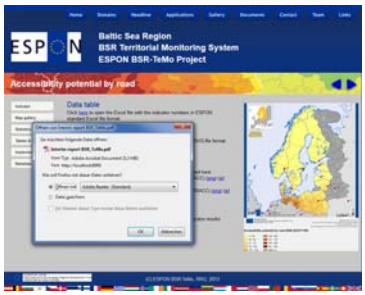
Indicator presentation



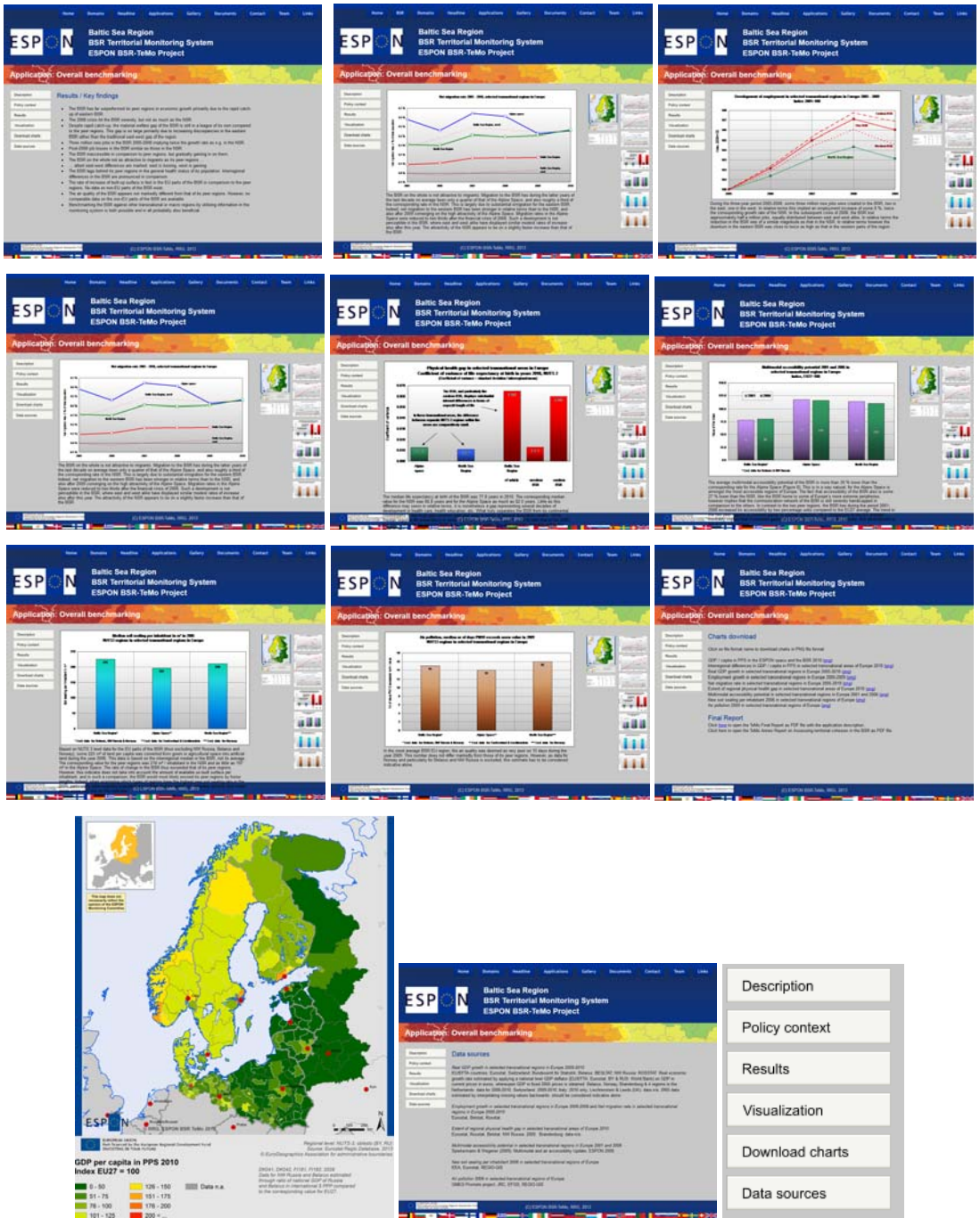








Application presentation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BSR Territorial Monitoring System
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Application: Overall benchmarking
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