User Manual

Building Stock Observatory (BSO)

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1 PURPOSE

This document serves as a user guide for the public users of Building Stock Observatory (BSO). It explains the steps each user should follow to be easily navigate the new BSO.

2 SCOPE

The broad aim of the EU Building Stock Observatory is to provide a web-based data platform integrated with a sophisticated BI Solution showing a comprehensive snapshot of buildings’ energy performance across Europe.

The platform is part of the DG ENER website and is available at this URL: https://building-stock-observatory.energy.ec.europa.eu/

The structure of the website is made up of a home page and three data tools: Database, Datamapper and Factsheets.

- The Database containing the whole set of collected indicators.
- The Datamapper, with a visual representation of indicators - View the different data sets in a colour coded map.
- Factsheets, that addresses the most relevant issues related to the implementation of the EU legislation dealing with buildings.

In the next sections the navigation of each data tool will be explained in detail.
3 DATABASE

The Database provides the user access to analytical data in **three domains**: **Building Stock, Renovation Rates, and Energy Consumption**. To access the data, the user must select the domain of interest from the menu, followed by the relevant categories, subcategories, years, and countries.

By clicking the "Get diagram" button, a Power BI report is loaded, filtered based on the user's selections. The report can be viewed in Fullscreen mode by clicking the corresponding button.

The main diagram of the report displays data for all indicators, based on the filters...
selected from the menu. Additional default filters, such as the quantity measured (floor area, number of buildings, energy consumption, etc.) and the type of indicators (real values or percentages), are also included.

Data are initially displayed over the years, but users can easily switch to display the trend over countries by changing the x-axis parameter.

While the report is initially filtered based on the user's menu selections, the user can redirect to any preference using the slicers/buttons provided. To avoid confusion when changing the category of interest, the selected subcategories should be deleted first using the eraser provided with the slicers.
The purpose of “select all” option is to simplify the process for users who want to exclude specific categories while keeping the majority of them. When all categories are selected using the “select all” option, the result should be the same as if no categories were chosen, as the data are not filtered at all.

The information in the main visual can be displayed as a line chart, bar chart, or table.
In case there are no available data for the selection, a corresponding text will be displayed.

A complementary colormap is also provided to show how the variance over two years is distributed among countries.
The variance is calculated based on the maximum and minimum year displayed at the slicer below the map, which affects only this visual. However, when more than one indicator is selected, the reflected information is dependent on the type of indicator. In the case of shares (where the percentage button is selected), the map reflects only the indicator with the maximum share for the latest year.
The specific information is displayed in a tooltip after hovering on the country of preference.

When the real value button is selected, the map reflects the variation over the sum of selected indicators, which introduces the risk of misleading information when the user selects overlapping indicators. For example, in the case below, the number of residential buildings is added twice as it is also the sum of apartment blocks and single-family houses.

The correct selection would be to add indicators of the same level.
The report also provides the user with the ability to find the sources for each value provided, by clicking the "source" button.
Additionally, the user can also export the data shown in the visuals in either xlsx or csv format by selecting "More options" and then "Export data".

This feature enables the user to save the data for further data analysis.
## 4 Datamapper

To access the Datamapper, users must first select the domain of interest from the menu.

By default, the report is loading with three pre-selected slicers, and displays information for shares and one indicator at a time.

**Indicators**
- Share of apartment blocks in the residential floor area
- Share of residential floor area
- Share of single-family houses in the residential floor area

Please note that shares for the "Energy Consumption" domain are not yet available.

Once the report is loaded, users can navigate through all available information. The main diagram, or map, shows the distribution of the indicator's value across European countries for the latest year selected from the year slider below the map.
Users can switch the colour gradient parameter to show variation over the two extreme years. Hovering over countries displays more details in a tooltip.

The value of the indicator is also given in a small descending bar chart.
5 Factsheets

The Factsheets report provides a brief statistical overview of all domains. The report opens to the "General" tab, which displays information on all countries.
Users can navigate through measured quantities, forms of data, and years.

The report includes bar charts or tables to provide an overview of the building stock breakdown for the residential and non-residential categories.
The last two diagrams show the total and deep renovation rates for these categories.

For a more detailed analysis of all domains for a specific country and year, users can navigate to the "Information by Country" tab.