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EnviMap Documentation

EnviMap is a web application used for visualizing data from GeoServer. It provides support for managing data layers, areas, customization, and creation of custom areas. It has been developed for EnviLab portal in collaboration with the Institute of Computer Science at Masaryk University.

1 FOR USERS - HOW TO USE THE APPLICATION

1.1 VISUALIZING LAYERS AND AREAS ON THE MAP

If you want to work with layers you need to make sure that you are in *Layering Tool* mode. To switch to *Layering tool* mode click *Views -> Layering tool* in the main menu.

Layering tool mode page consists of two parts – a sidebar on the left and a map on the right. In the sidebar there are two tabs – Layers and Areas.

The *Layers* tab contains all layers loaded from the GeoServer divided into collapsible sections. To edit a layer, use a button with a pencil icon that is located next to the layer name. To add a layer to the map, you need to use the slider located on the right, next to the edit. After clicking on the layer name, you will see additional information about the layer. If you want to search for a specific layer, you can use a search box on top of the sidebar.
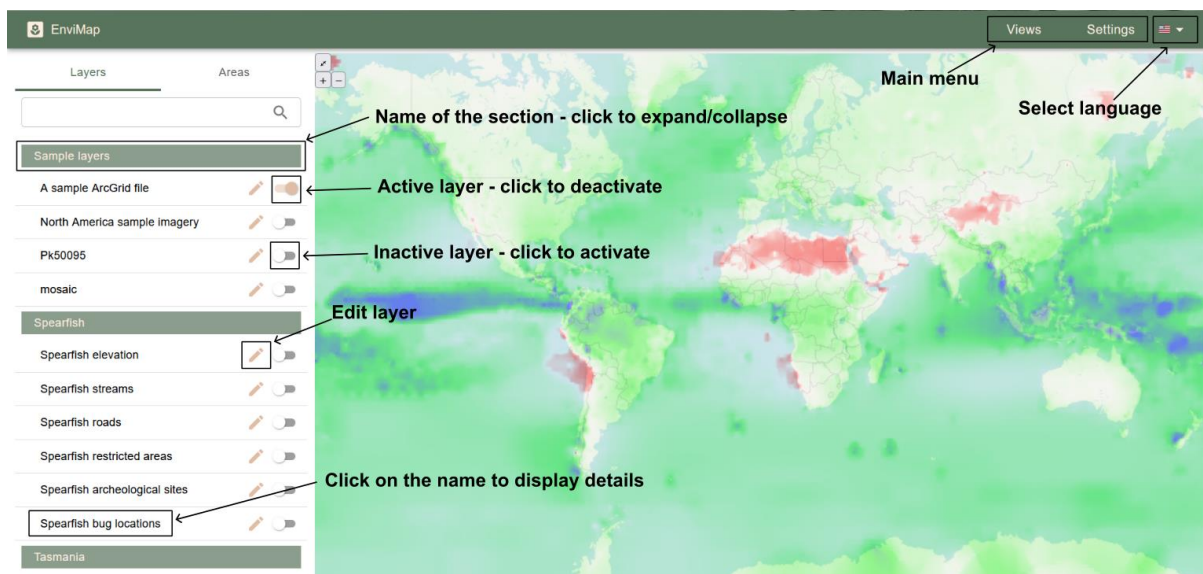

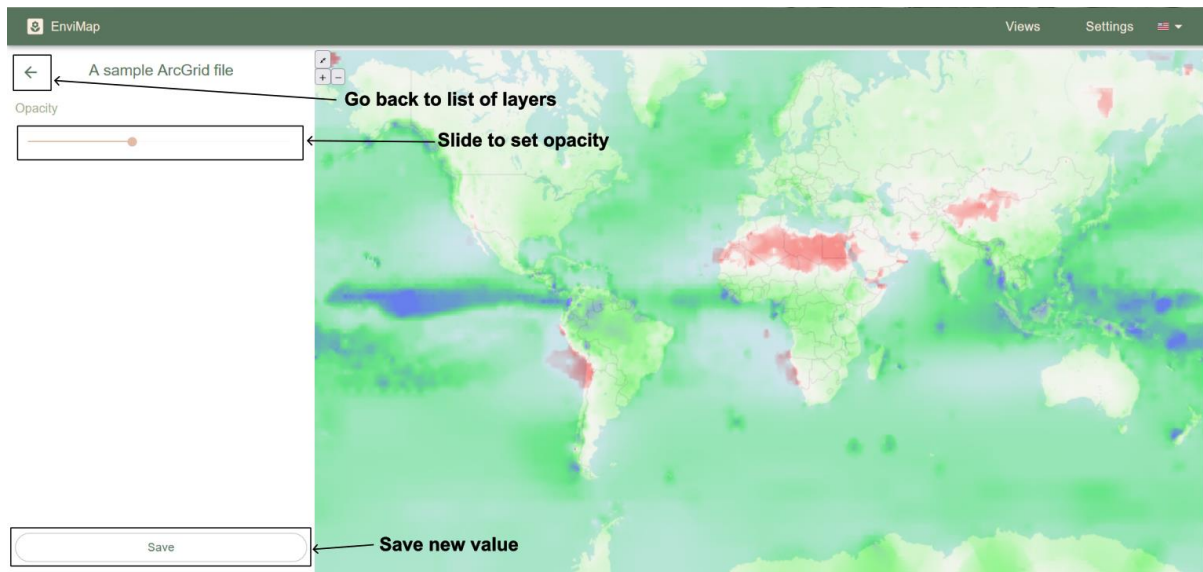*Figure 1 Layering tool window with list of layers*

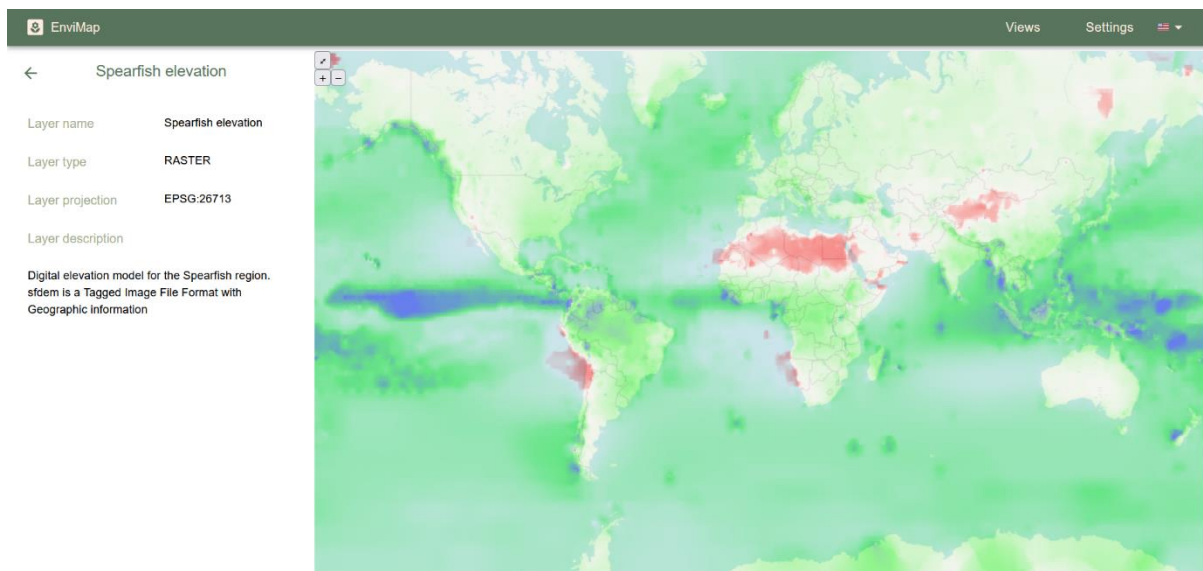*Figure 2 Layering tool window with edit layer*

Figure 3 Layering tool window with layer detail

The *Areas* tab contains all areas loaded from GeoServer. The areas follow a hierarchical structure. Apart from areas loaded from the GeoServer, you will find here custom areas that you created. The custom areas are marked with a special icon. To zoom into an area, use a button with a magnifying glass icon located next to the area name. The area that you are currently zoomed into is marked with bold text font. If you want to search for a specific area, you can use a search box on top of the sidebar.
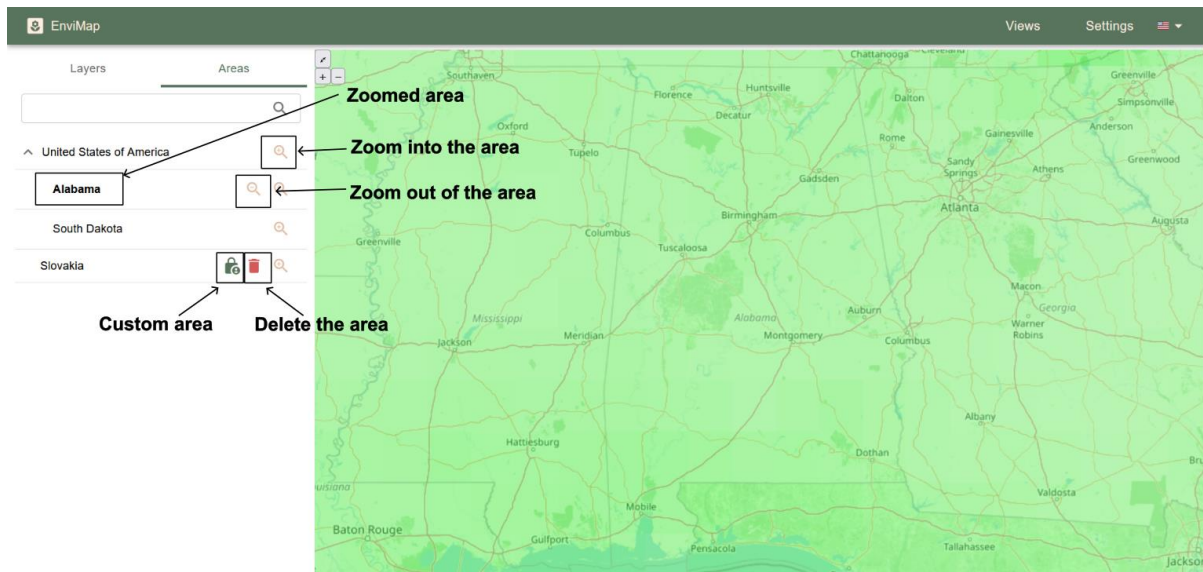
Figure 4 Layering tool window with areas list

If there are any active layers, you can click on the layer on the map to display additional information. After clicking on the layer, you will see a popup window with information about all layers that have data for the coordinates you clicked on.
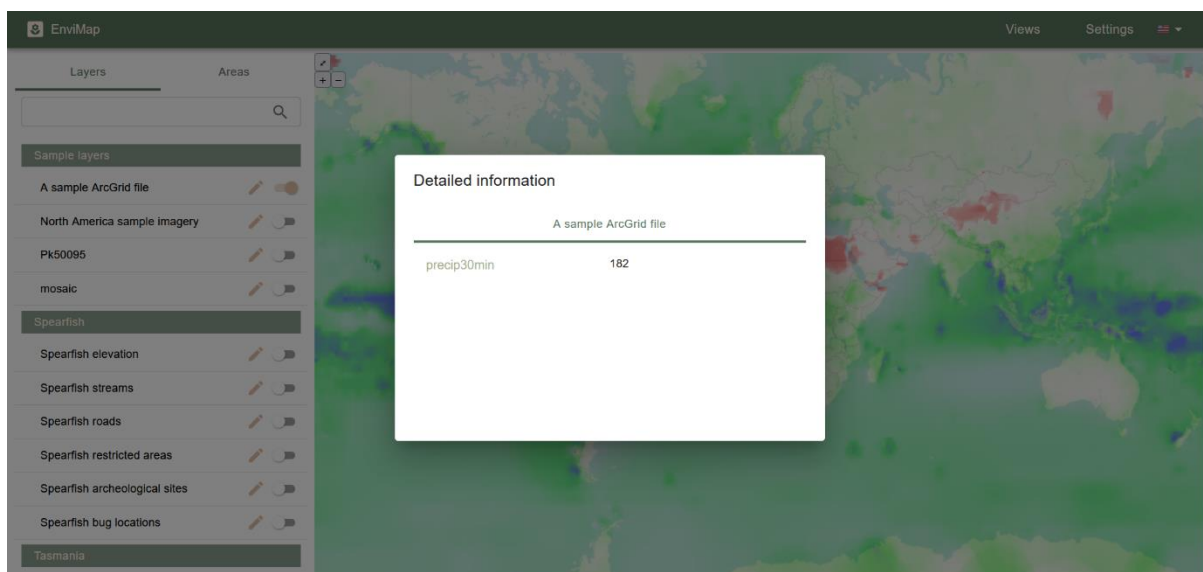

Figure 5 Layering tool window with layer detail on the map

1.2 CREATING CUSTOM AREAS

If you want to create custom areas, you need to make sure that you are in *Area editor tool* mode. To switch to *Area editor tool* mode, click *Views -> Area editor tool* in the main menu.

Area editor tool mode page consists of three main parts – interaction selector on the top on the left side, set of buttons on the top on the right side and a map.

First you need to select an interaction type – you can choose from points, lines, and polygons. You can combine multiple interaction types to define one area. After selecting an interaction type, you can click on the map to define a new area. If you make a mistake, you can either use a button with an arrow icon to undo your selection or a button with trash can to completely

delete your selection. When you are satisfied with your selection, click the *save* button. This will open a pop-up window, where you need to provide a name for your newly created area.
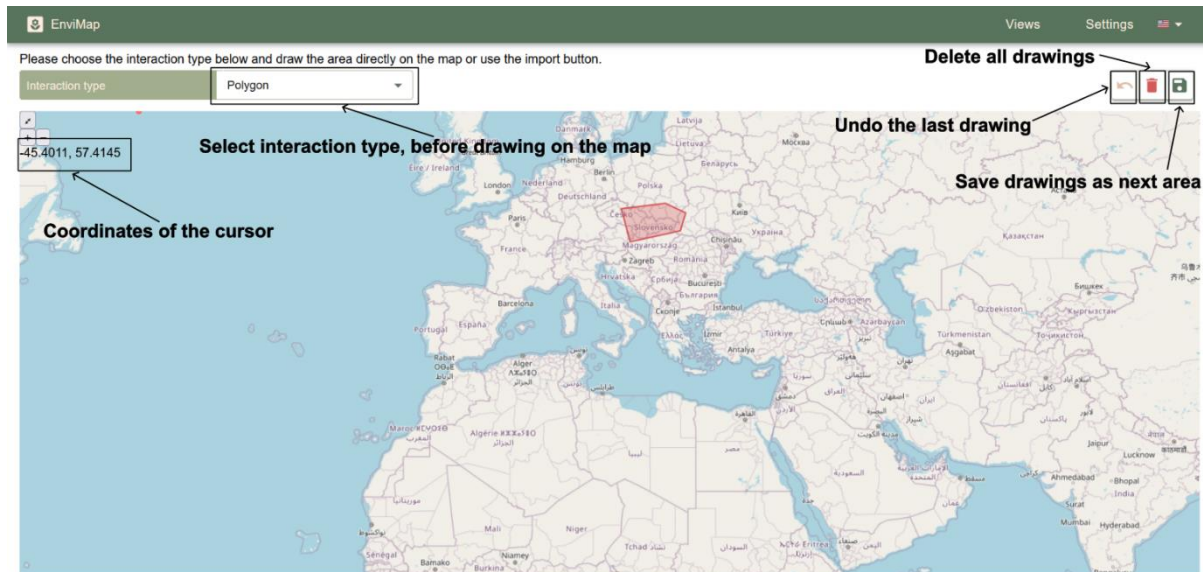

Figure 6 Area editor tool window

1.3 CUSTOMIZATION

Since the list of layers and areas loaded from the GeoServer may be long, you can select only certain layers and areas that will appear in the sidebar. To select your favorite layer and areas click *Settings* in the main menu. After clicking you will be redirected to a settings page where you can click on stars to mark your favorite layers and areas. If you made a mistake and do not wish to save your changes, you can click on the button with the reset icon located on the top. If you want to save your changes, click on the button with the save icon before exiting the page. To search for a specific layer or area, use a search bar on the top of the page.
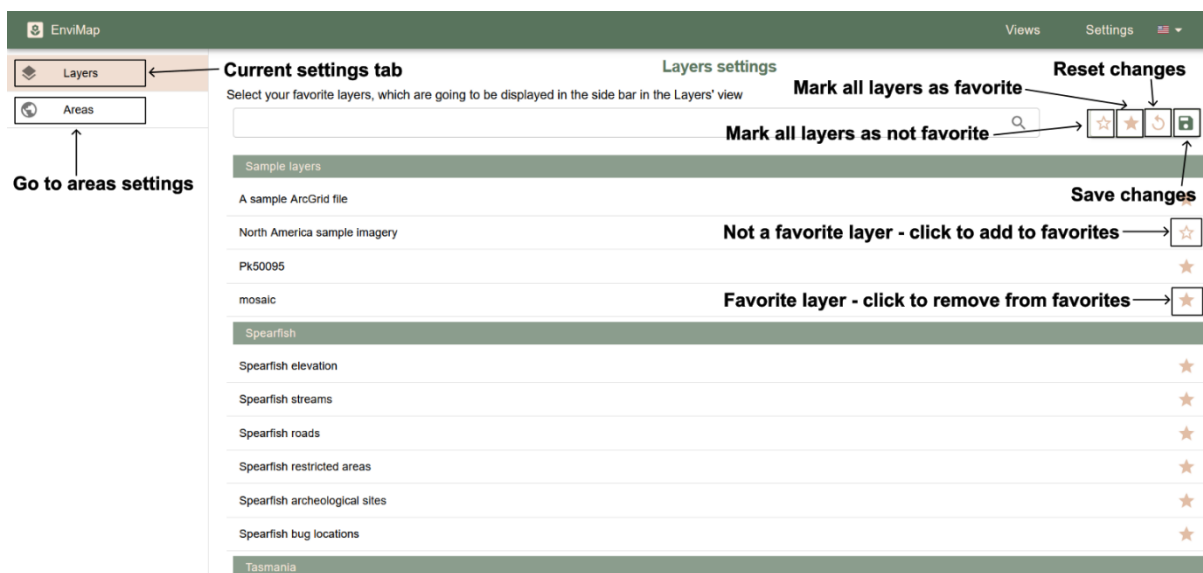

Figure 7 Settings window - layers settings

Figure 8 Settings window - areas settings

2 FOR ADMINISTRATORS – LAYOUT OPTIONS

EnviMap application supports 5 types of layout parts – sidebar, map, graph data window, table data window and text data window. To define a layout, you need to provide a configuration file to specify which of these windows should be active and how they should be positioned. The configuration file needs to be in a *src -> layoutConfigurations* folder in the frontend part of the application and have the following format.
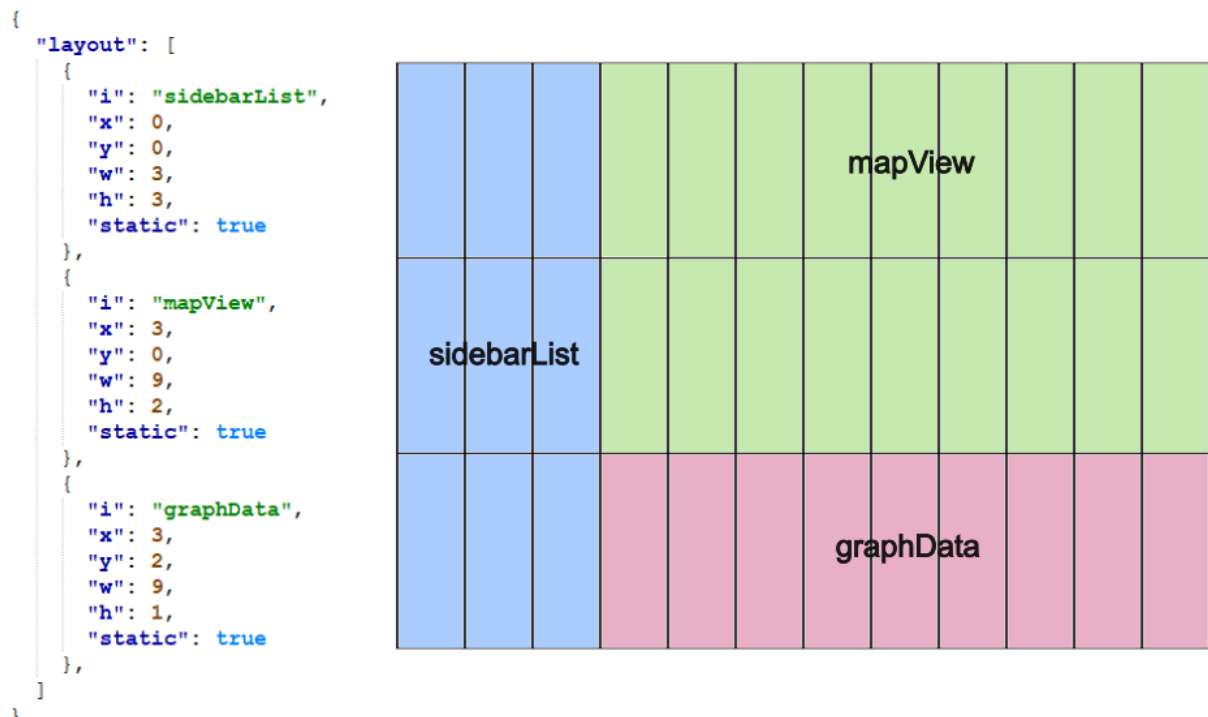

Figure 9 Example of the layout configuration file

To switch between different layout configurations, you need to go to *src -> pages -> LayerViewPage.js* in the frontend part of the application and manually edit the import statement.