

User Guide

Baltic Explorer v 1.0.0

1. Baltic Explorer	2
2. Central concepts	2
2.1 Workspaces	2
2.2 Overlays	3
2.3 Features	3
2.4 Feature layers	3
2.6 Sync	3
3. Users and user roles	3
3.1 Workspace owner	3
3.2 Editor	4
3.3 Anonymous user	4
4. Using Baltic Explorer	4
4.1 Home page	4
4.1.1 User login	5
4.1.2 Creating a user account	5
4.1.3 Accessing workspaces	5
4.1.4 Creating a new workspace	5
4.2 Map interface	6
4.2.1 Main panel	7
4.2.2 Workspace management	8
4.2.3 Browsing and controlling data in the data panel	9
4.2.4 Managing overlays	10
4.2.5 Drawing and editing features	11
4.2.6 Managing feature layers	12
4.2.7 Saving and syncing the workspace	13
4.2.8 Measure tool	14
5. Technical requirements and limitations	15
6. Troubleshooting	16
6.1 The background maps are not visible / Overlays do not appear on the map	16
6.2 Unable to see the workspaces edit button	16
6.3 Unable to save a workspace	16
6.4 Baltic Explorer runs slow	16
6.5 The edges of map tiles are visible	16
6.6 I have forgotten my username or password	16

1. Baltic Explorer

Baltic Explorer is a web-map application that is designed for collaborative maritime spatial planning. With Baltic Explorer you can:

- Explore spatial data and maps of the Baltic Sea from multiple sources
- Draw and edit your own ideas and plans on a map
- Share your work with colleagues in multi-user workspaces
- Work locally or remotely on multiple devices

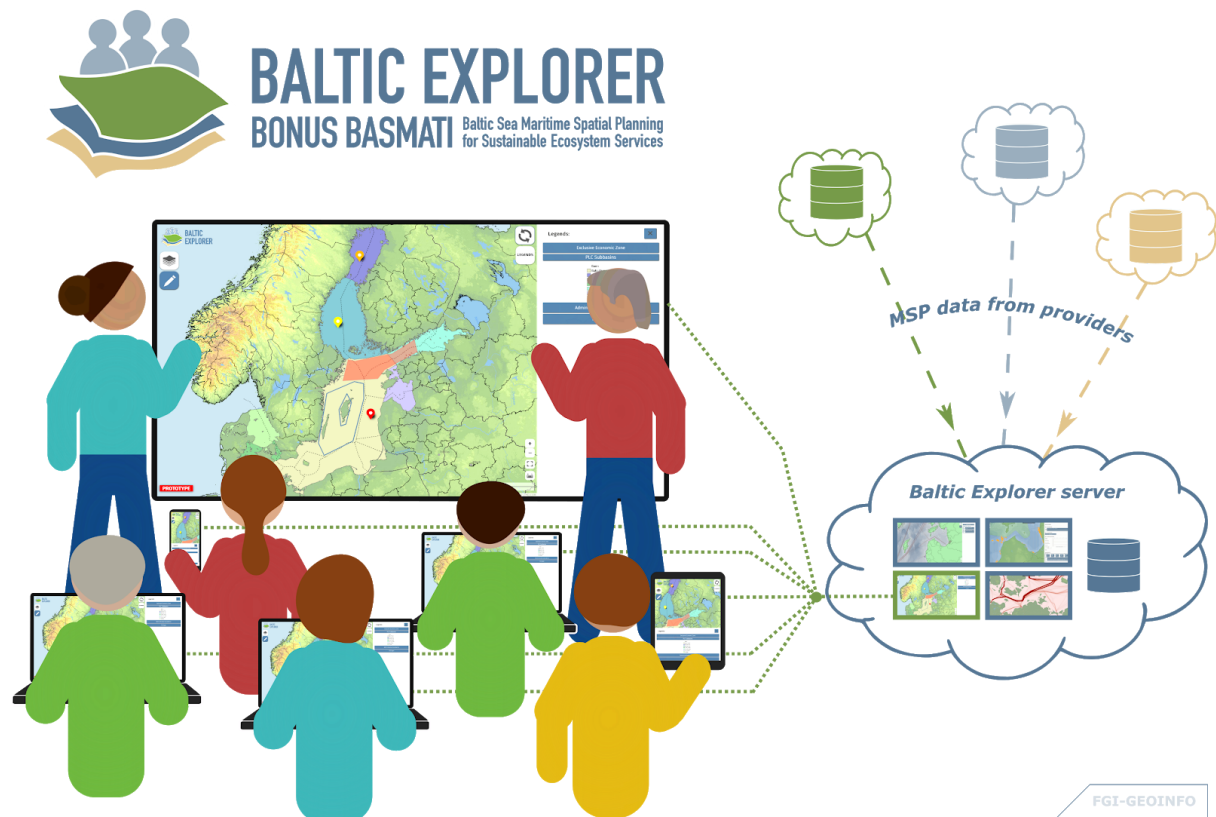


Figure 1. Baltic Explorer is a web map for collaborative maritime spatial planning.

2. Central concepts

2.1 Workspaces

The Baltic Explorer features multi-user workspaces where users can collaborate together in groups. When users draw or add new data to a workspace, once these changes have been saved and stored to the Baltic Explorer server, other users in the workspace can see the changes that have been made. Users who are already inside the workspace will see the changes when they use the sync button (see section 2.5 Sync, below).

2.2 Overlays

Baltic Explorer features overlay data layers from various sources that can be visualised on the map. These layers are not stored within the system. Instead Baltic Explorer provides quick access links to Web Map Service (WMS) layers that access the overlay data from the providers servers. Displayed overlays are workspace specific, which means that all users share the state of overlays on the map.

2.3 Features

Features are vector objects (markers, lines and polygons) that can be drawn on the map. Baltic Explorer enables features to be drawn, edited, imported and exported. Features may represent different real-world objects according to the user's needs. Features are stored in Feature layers.

2.4 Feature layers

Feature layers store features and help users to categorise and organise them. The default style of features drawn to each feature layer can be customised to help distinguish between different themes of data on the map. Each user has their own feature layers. However, the workspace owner can edit other users feature layers and move features between layers.

2.6 Sync

Users can synchronize (sync) their workspace view which will refresh the workspace. All newly added and edited features by other users will be added to the view. Changes to overlays by other users will also be updated. Note that displayed overlays are workspace specific, and are shared by all users.

3. Users and user roles

Baltic Explorer can be used as a logged in (see section *"4.2 Creating a user account"* for signing up to a user account) or anonymously. Logged in users and anonymous users can access and edit workspaces that have been given these rights by the workspace owner. Only signed up users can become workspace owners and have their own feature layers.

3.1 Workspace owner

When a user creates a new workspace the user becomes a workspaces owner. Workspace owners have full access to all parts of their workspaces. They can also edit features and feature layers that other users create in their workspace. This allows the owner to, for example, move features from any layer to another, delete any feature or layer and rename features. The workspace owner decides who can see, access and edit their workspace.

3.2 Editor

When editing rights within a workspace are set to “Only editors can edit”, only users who have been given the editor status in the workspace have the right to draw features and make changes to the workspace such as change the overlays. The workspace owner can assign new editors to a workspace from the workspace settings.

3.3 Anonymous user

Anonymous users can enter public workspaces and even edit workspaces that are set to “Anyone can edit”. In any workspace, all anonymous users edit same feature layer called “Anonymous user”. Multiple simultaneous changes on the layer by different anonymous users cannot be saved. It is encouraged that users sign up to a user account in Baltic Explorer, instead of using anonymous access to workspaces.

4. Using Baltic Explorer

4.1 Home page

From the home page users can access existing workspaces, create new workspaces, log in and out of their user accounts, and sign up for a user account.

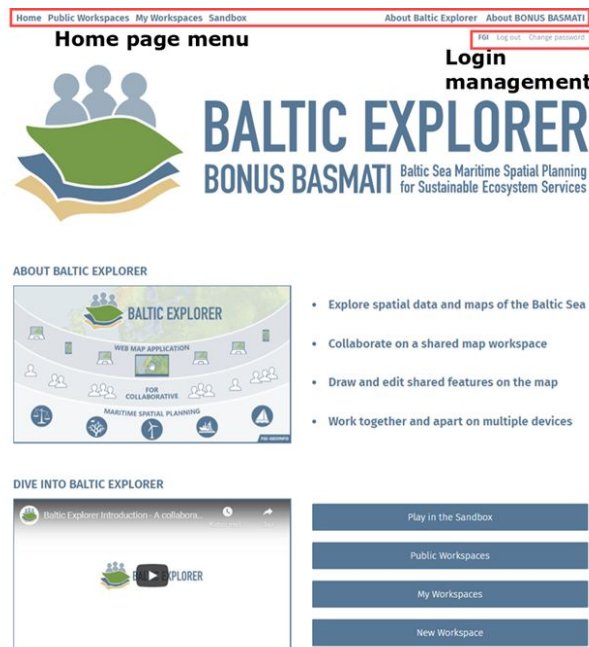


Figure 2. “Public Workspaces”, “My workspaces”, the “Sandbox” and a new workspace are accessed from the Baltic Explorer home page. Signing up and logging in are also accessed from the home page (top).

4.1.1 User login

Log in to an account from the “Log in” button in the login management. The login management can be found in the top right corner of the home page. To create a new account, see section “4.1.2 Creating an account” for more information.

4.1.2 Creating a user account

New users are encouraged to create an account before accessing workspaces. A user account will enable a user to create their own workspaces and act as an identifiable editor in other users workspaces. To create an account, press the “Sign up” button in the login management, at the top right corner of the home page. Enter a username and a password and confirm the password.

NB! In the prototype, it is not possible to retrieve a lost or forgotten username or password. Take good care of your account credentials.

4.1.3 Accessing workspaces

Existing workspaces are accessed by pressing “Public workspaces” or “My workspaces” buttons. This will list all of the workspaces in their respective category. Public workspaces can be viewed by anyone. My workspaces are workspaces where the user is the owner or added as an editor. The home page also contains a quick link to the “Sandbox” workspace of the Baltic Explorer that can be used to try out the system. In the Sandbox anyone can add and edit features including anonymous users. (Figure 3)

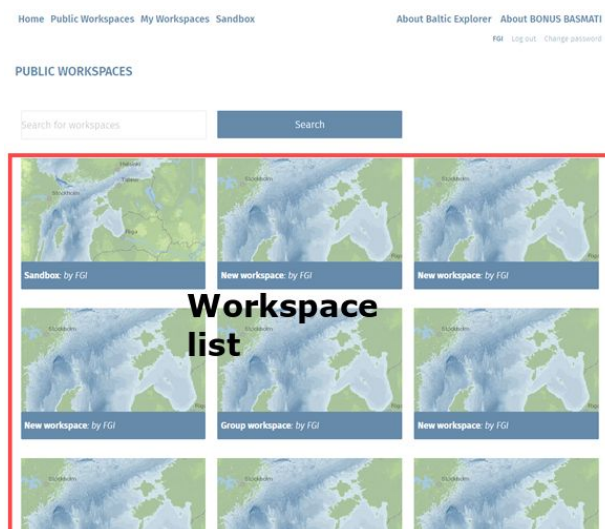


Figure 3. Workspace selection pages lists workspaces (here “Public workspaces”).

4.1.4 Creating a new workspace

Only logged-in users can create new workspaces. Create a new workspace from the “New workspace” button on the home page. Creating a new workspace will direct the user straight to the map interface of the new workspace. The workspace management panel (see section

4.6 *Workspace management*) will be opened when a workspace is first created, and the workspace is immediately ready to be used.

4.2 Map interface

Baltic Explorer workspaces have map-based user interfaces (UI; Figure 4). Users can pan and zoom the map using mouse or by tapping and dragging on touchscreen. Zoom buttons are available on the map (bottom right).

The Baltic Explorer UI consists of buttons and panels. Buttons related to editing are on the left and buttons related to syncing are on the right. Panels show information about the workspace. Panels are opened on the right side of the map or below the map when using Baltic Explorer at small screen sizes. Dark-colored panel backgrounds indicate that the workspace can be edited and prompts the save button (top right) when changes have been made. Light colored panel backgrounds indicate that the workspace is not being edited.

The left side menu has the “Main panel” button, the “Data menu” button and the “Edit features” button. The “Main panel” button opens the main panel. When pressing the “Edit features” button, Baltic Explorer will enter the editing mode, and a feature panel will expand to include controls for drawing new features and accessing the “Feature management panel” (see section 4.2.5 *Drawing and Editing features*).

The top-right menu has the “Sync” button, and when there is something to save, the “Save” button, as well as a “Legend” panel button when overlays are added to the map. Syncing is required to see changes made by other users. The legend panel button will open a panel that displays the legends of all overlays that have been added to the map.

When users perform certain actions in the Baltic Explorer the system may provide some information in an info bar in the middle of the top edge of the UI. The info bar will disappear on its own after a few seconds. It can also be closed by pressing the cross on the right side of the bar. The lower-right corner of the map features the “Zoom control” buttons, the “Measure tool”, a scale bar and credits for content that is displayed in the map view.

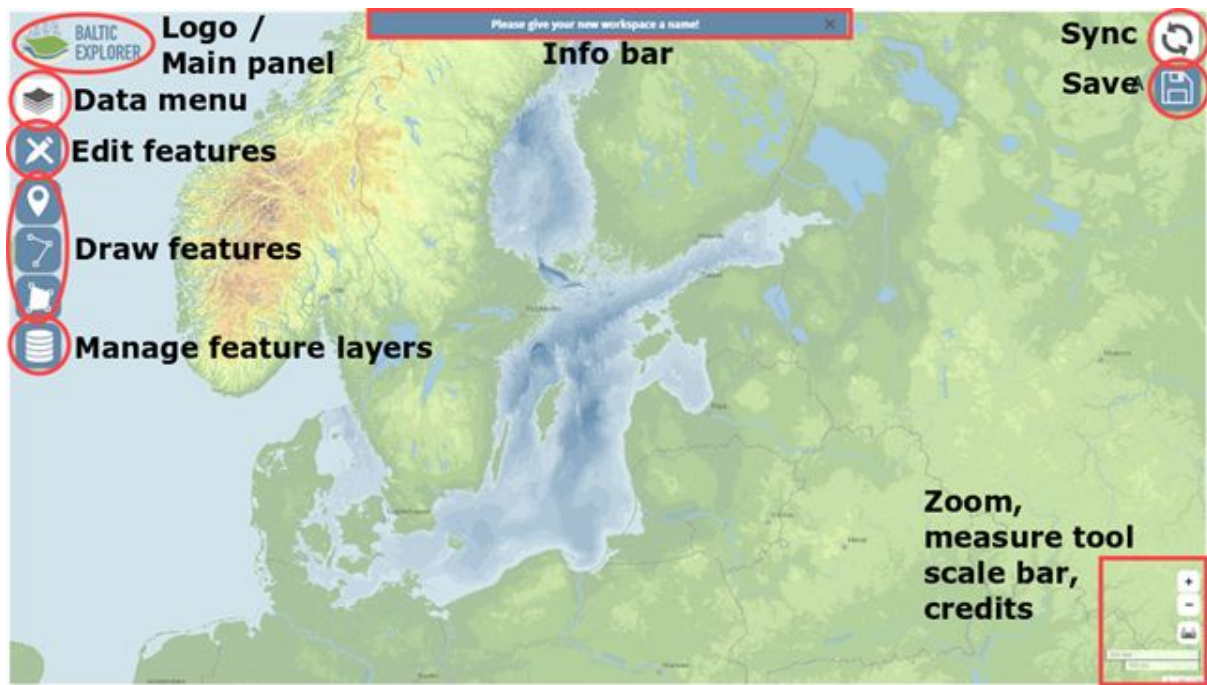


Figure 4. The Baltic Explorer map-based user interface in workspaces.

4.2.1 Main panel

When opening the main panel by pressing the “Main panel” button (top-left), users will first see the info panel (Figure 5). The info panel provides basic information about Baltic Explorer, and enables users to access the user guide, home page, summary of the workspace and, for the owner, workspace management.

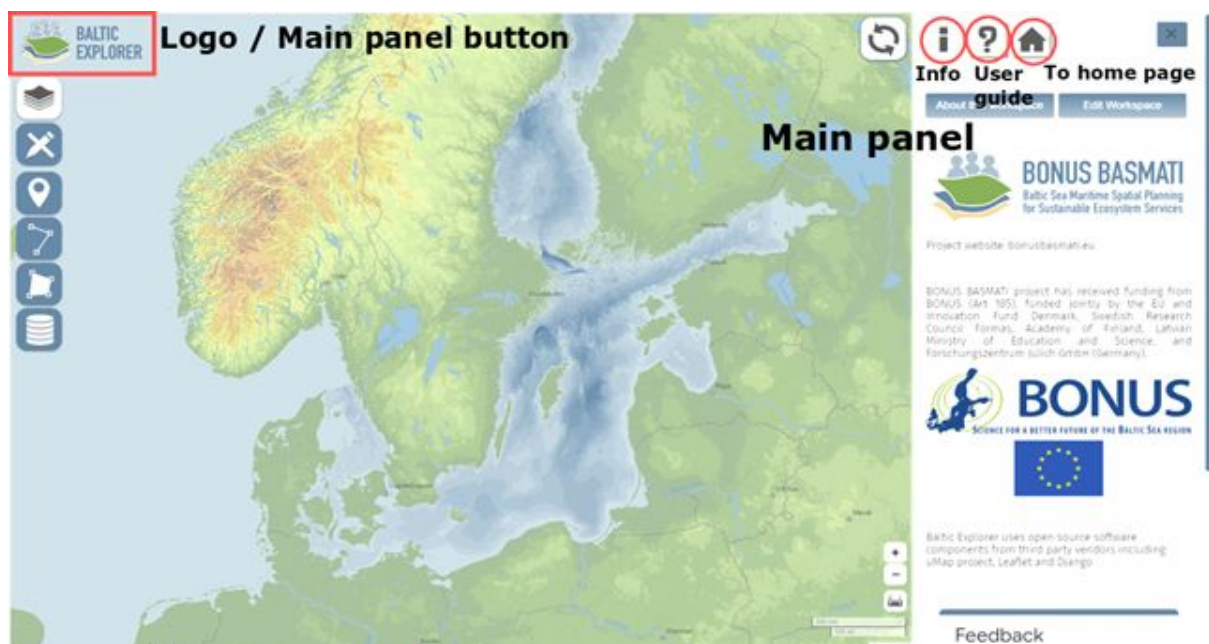


Figure 5. The “Main panel” offers general information for everyone and workspace management for the owner of the workspace.

4.2.2 Workspace management

Workspace management can be accessed by pressing the “Main panel” button and then from the main panel the “Edit workspace” button. Workspace management is available to workspace owners only (Figure 6). From the “Workspace settings” panel, the workspace owner can edit the name and description of the workspace, edit the default map view by limiting the map bounds, control UI elements, restrict access and editing of the workspace, and add editor users to the workspace.

Through “Advanced actions” the owner can delete or clone the workspace. Cloning the workspace will create an exact replica of the current workspace and open it. The owner can also delete, download and import vector data. Downloading the data can be done in the following standard formats: *geojson*, *gpx*, *kml*, and in the Baltic Explorer full map format, which is the same as cloning the workspace but just having it in a file format. The full map file can be uploaded to replace the edited workspace. Importing data can be done in the following standard formats: *geojson*, *csv*, *gpx*, *kml*, *osm*, *georss* and in the Baltic Explorer full map format.



Figure 6. The owner of the workspace can edit workspace settings, such as workspace name and visibility of the workspace to others.

The owner can edit all the workspace settings: visibility, editing and editors (Figure 7). Visibility: public, hidden (default) or private, controls who can see the workspace. Editing: everyone, editors (default) or owner, controls which user groups can edit the workspace. Editors list: owner (default), controls which users are editors of the workspace. To add an editor the owner can start to type the name of the editor and select the editor from the appeared list below. The workspace must be saved to apply the changes. The workspace will appear in the selected users of the “My Workspaces” page list.



Figure 7. Setting a workspace public but only editable by editors allows everyone to see the workspace but only selected users to edit its contents.

4.2.3 Browsing and controlling data in the data panel

The “Data” panel, accessed by pressing the “Data panel” button (top left) lists the features that have been drawn or imported to the map as well as the overlays that have been added (Figure 8). In addition, users can access the “Background maps” panel where they can change background map of the workspace.

Features are organised according to the feature layers to which they belong. Feature layers can be hidden and zoomed to from the “Data” panel. Users can also edit or delete feature layers that are assigned to the user. Workspace owners can edit and delete any feature or layer. In addition, users can press the features to zoom to them, or if created by them access the feature edit panel from the pencil symbol.

In the data panel, users can also press on and off overlays that are on the map. Users can also change the opacity and view the legend of overlays by pressing on the overlay buttons in the panel. The order of the overlays can be changed by dragging the overlay above or below another overlay. From the “Data” panel users can also access the “Overlay management” panel.

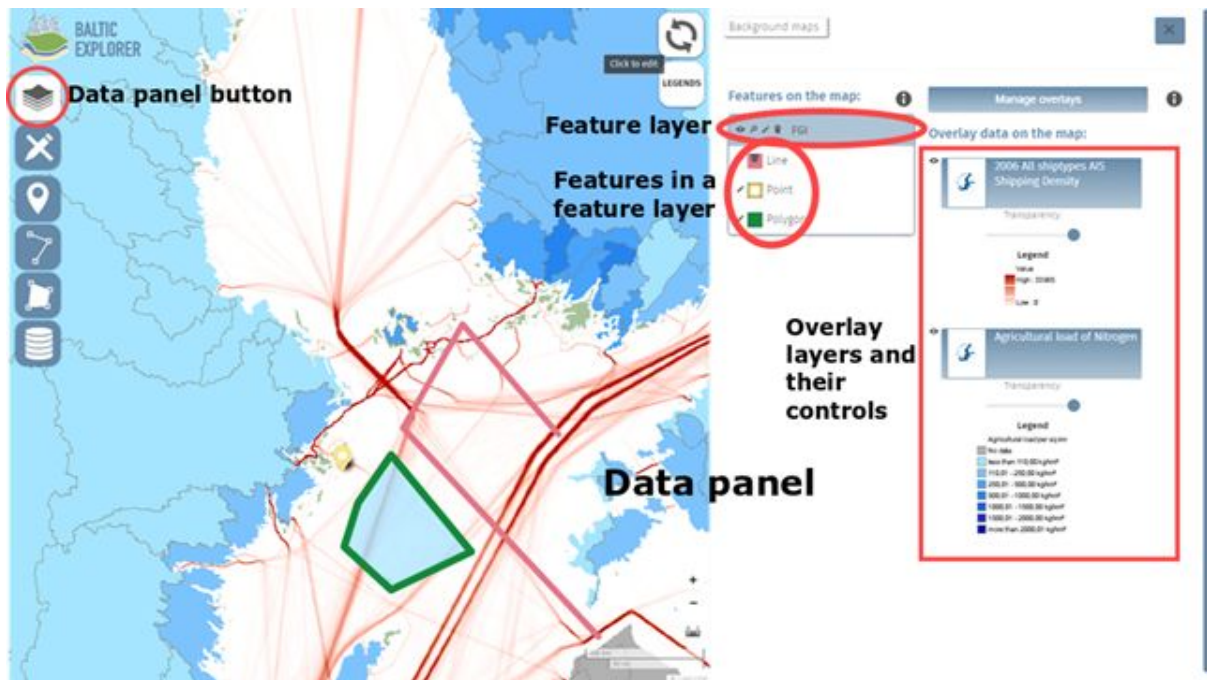


Figure 8. Background maps, features on the map and overlay management are accessed from the “Data” panel.

4.2.4 Managing overlays

The “Overlay management” panel lists all the overlays that are available in the Baltic Explorer (Figure 9). Overlay management panel is opened by pressing the “Data panel” button (top left) and pressing the “Manage overlays” button from the data panel. The data in the overlay panel is categorised according to data providers. Each provider has defined their own categorisation, and the data is further organised according to these categories. To help users find datasets among more than thousand overlays, there is a search function that will search data from all overlay data in the Baltic Explorer.

Overlays are selected to be visualised on the map by pressing on an overlay. This will move the overlay to the top of the overlay panel and also show it on the data panel. Pressing the overlay that is on the top of the overlay panel will remove the overlay from the map view, the “Data” panel and the “Overlay” panel. The removed overlay will return to its category in the “Overlay” panel.



Figure 9. Overlay management panel categorizes more than a thousand overlays ready to be selected to be displayed on the map.

4.2.5 Drawing and editing features

Users who are allowed to edit in a workspace can draw markers, lines and polygons on the map. Pressing the (Pencil) “Enable or disable editing” button will open the drawing menu and from there the desired feature type can be selected. The pointer will change into a cross-hair when drawing features on the map. Place the marker or starting node of a line or polygon by pressing the desired location on the map. Lines and polygons may have any number of nodes (white boxes along the line). A new node is drawn by pressing on the map again. To finish drawing a polyline or a polygon, press a second time on the last node.

When a drawing a feature is finished, the feature editing panel opens automatically. From here, users can select a layer for the feature, give the feature a name and description, enter comments about the feature and change its style (Figure 10).

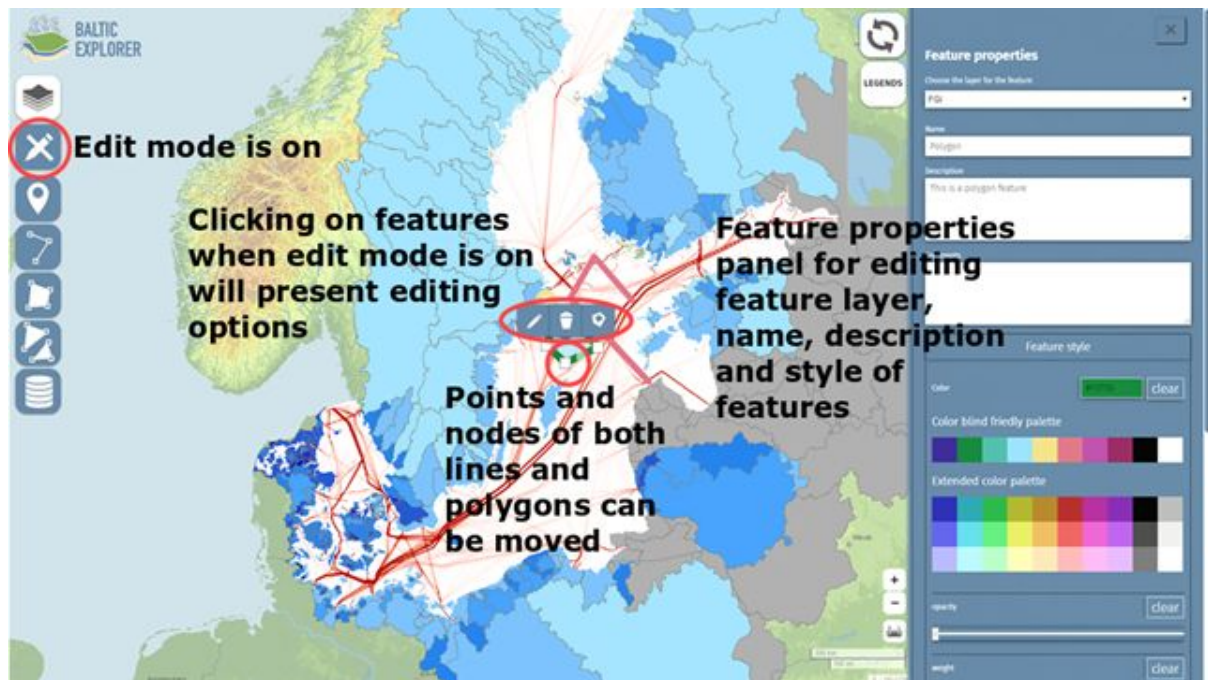


Figure 10. Drawn and edited features can be shared to others by saving the workspace. Pressing the “Sync” button will show what others have created and edited.

The following markup can be used with the description for text formatting:

simple star for italic
 double star for bold
 # one hash for main heading
 ## two hashes for second heading
 ### three hashes for third heading
 Simple link: [[http://example.com]]
 Link with text: [[http://example.com|text of the link]]
 Image: {{http://image.url.com}}
 Image with custom width (in px): {{http://image.url.com|width}}
 --- for an horizontal rule

Advanced feature editing includes moving the feature on the map and changing the feature shape. This functionality is easiest to perform with mouse input, but can be also made with touch input though accuracy and speed will likely suffer.

To move or reshape feature enter edit mode by pressing the edit button. To move a marker on the map press on the marker and drag it to a new position. To move a line on the map press on the line, press the “toggle edit mode” button, press long on the line and drag the line to a new position. To move a polygon press on the polygon, press the “toggle edit mode” button, press long on the polygon and drag the polygon to a new position. To move an individual node on either a line or a polygon, press on a node (white box) and drag it to a new position.

To add a new node inside a line or a polygon, press on a transparent node (transparent white box). To continue a line, press the first or the last node on a line, press the “continue line” button and press on the map to add a new node. To delete a node on a line or a polygon, press the feature, press a node, press the “delete this vertex” button. To add a new line to a line feature press the “add a line to current multi” button. To split a line, press a the line, press the “toggle edit mode”, press a node (white box), press the “split line” button. To add a new polygon into a polygon feature, press the polygon, press the “add a new polygon to this multi” button and draw the polygon on the map. To add a hole to a polygon, press the polygon, press the “toggle edit mode” button, press the “start a hole here” button, add nodes, press on the last node to create the hole.

4.2.6 Managing feature layers

The “Feature layer management” panel enables users to hide, add, edit and remove feature layers (Figure 11). Order of the layers can be changed by dragging the feature layer above or below another feature layer.

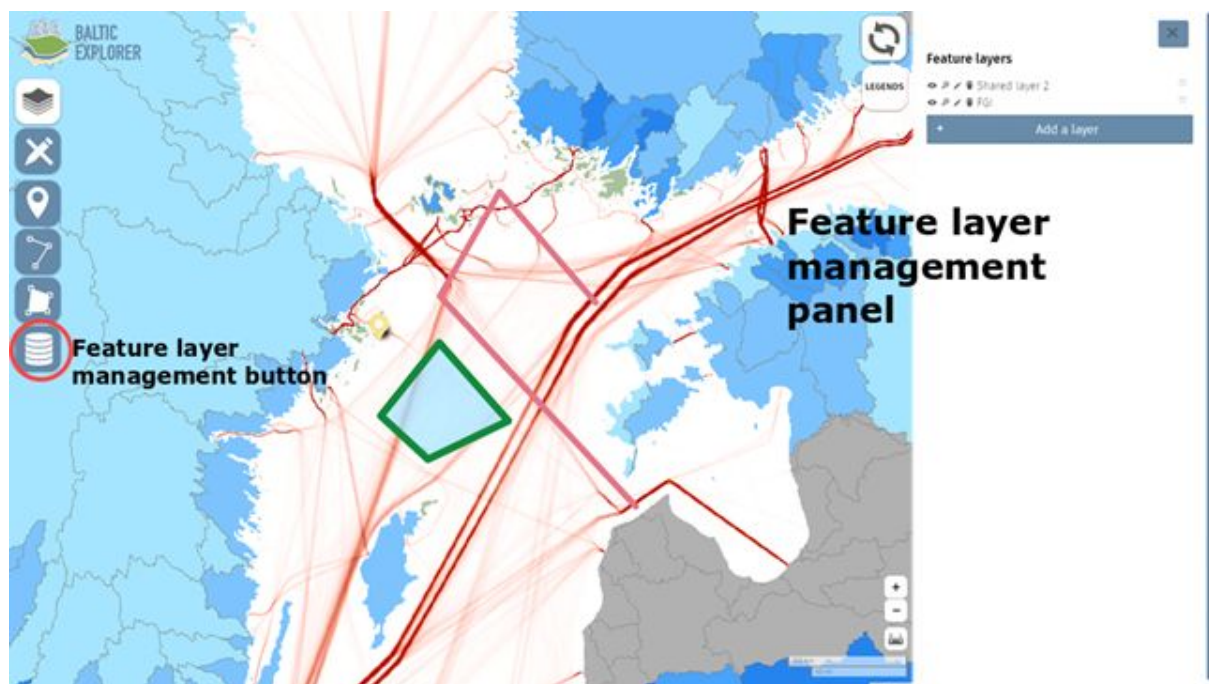


Figure 11. The “Feature layer management” panel enables users to hide, add, edit and remove feature layers.

New feature layers are named after the user who creates them. “Description” enables users to describe their layers differently, and enables distinction between feature layers with the same name. “Description” is displayed with the name of the layer when drawing new features, as well as in the “Data” and “Feature layer management” panels. Feature layers can be given default styles that will apply to all new features drawn to that layer (Figure 12).



Figure 12. The panel for editing feature layer properties allows users to customize their layer.

The workspace owner can give a feature layer any name and therefore create or rename layers to make them editable by other users (Figure 12). To give rights to a layer for another user, the owner can rename the layer with the user's username by pressing the pencil button next to the feature layer and then giving the layer a new name.

4.2.7 Saving and syncing a workspace

A workspace is a shared environment that can host multiple users who add and edit features simultaneously. Pressing the "Sync" button will refresh the user's workspace and show all the features created and edited since the last sync by any user. Pressing the "Save" button will save and share any features created or edited by the user to the workspace for other users to see and possibly edit (after the others have synced their workspace view). If the save button is not pressed and the user leaves the workspace the changes will not be saved. The user is prompted to confirm for not saving the workspace.

The workspace view of a user can be different depending on when the user has last synced their workspace view (Figure 13). It is advised to take the habit of saving and syncing after each addition or edit. It is also advised to add and edit features in small increments. For example, if a user has to edit 30 features on the map, saving and syncing after each edit is advised for two reasons. First, this will keep all other users updated on what the user is doing and second, this will keep the editing user updated about what others have done. However, if the situation requires, a user can withhold saving or syncing the workspace until they are ready to share their additions and changes.

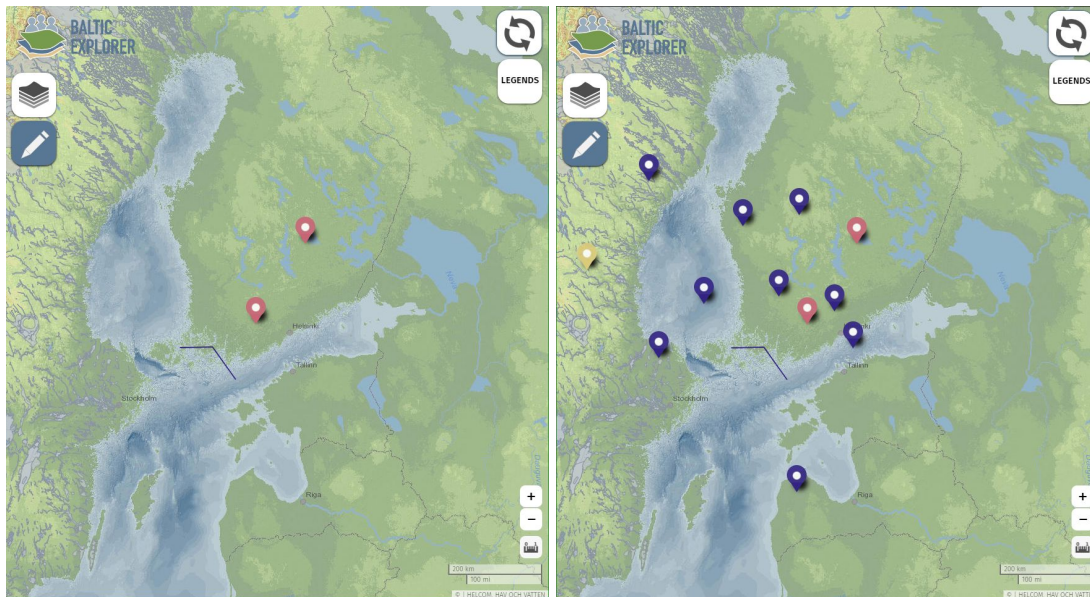


Figure 13. The same workspace where the first user has not synced their view while the second user has been keeping their view updated.

4.2.8 Measure tool

Baltic Explorer features a measure tool that enables users to measure distances on the map, the length of a line feature, or the area of a polygon (Figures 14 and 15). Select the measure tool and the desired unit (kilometres, miles, nautical miles). Press on the map to start measuring, or hover (place cursor over) a feature on the map to display its length or area. Measured distances can go through multiple nodes that change the angle of the measured line. Make a new node by pressing on the map after creating the initial starting point. Stop measuring by pressing on the last node a second time. Measurements are not stored in the Baltic Explorer.

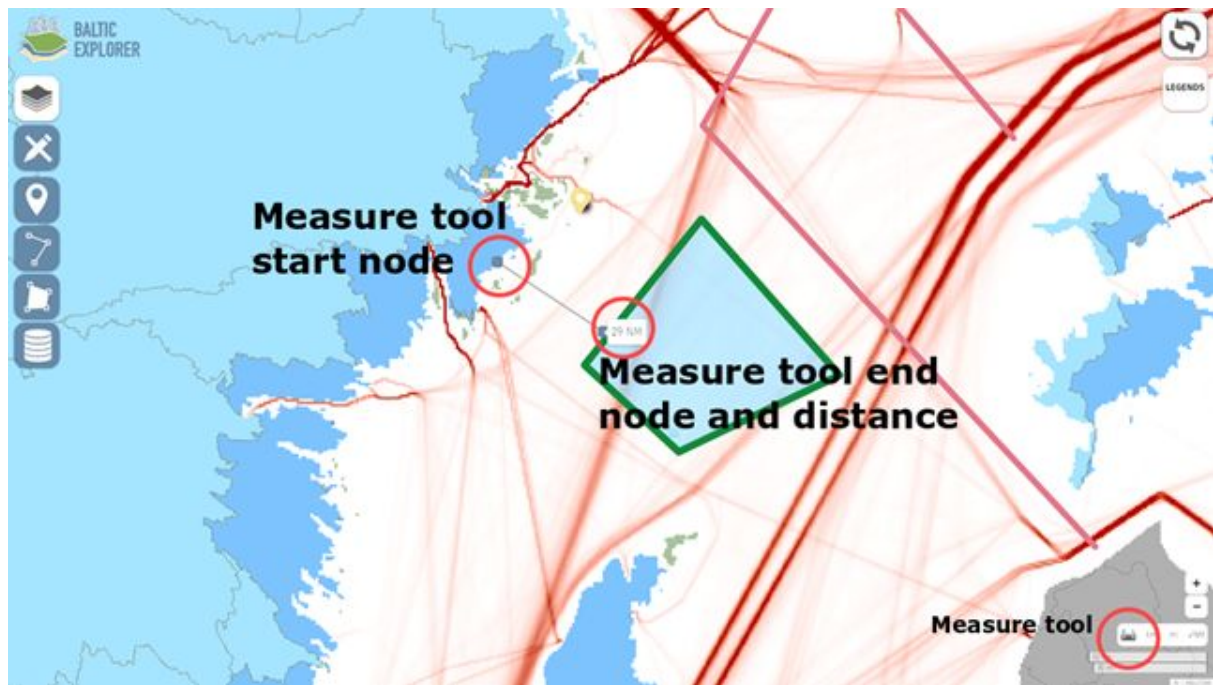


Figure 14. "Measure tool" button is on the bottom right.

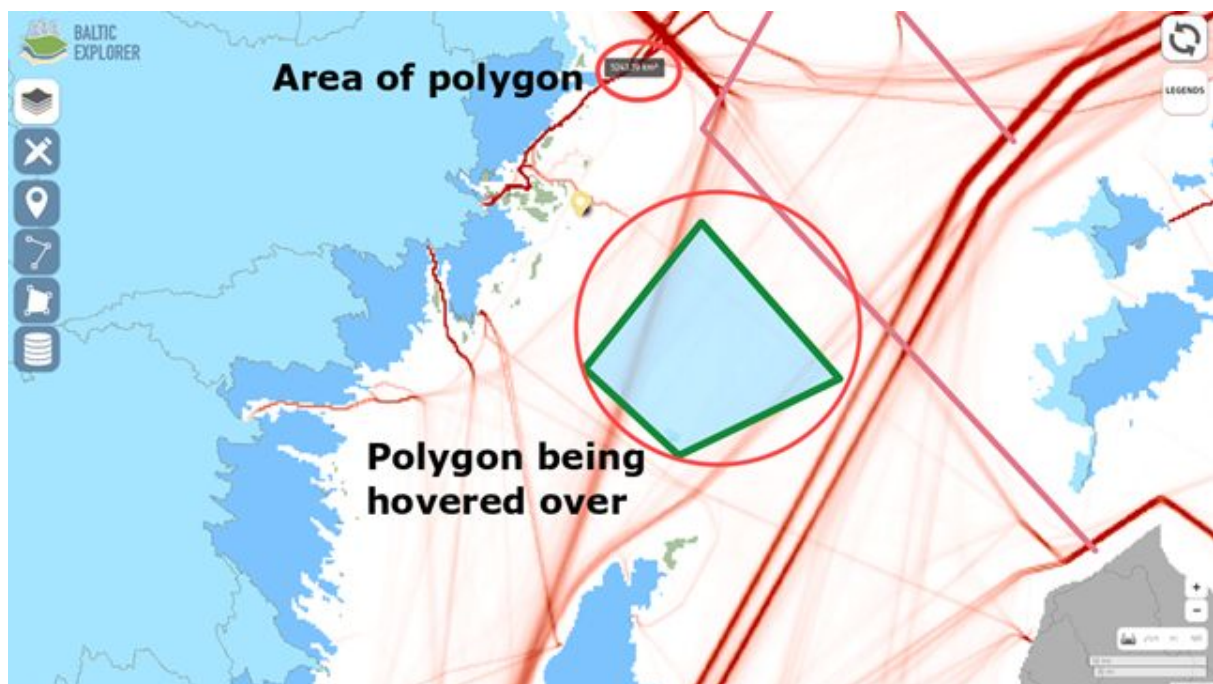


Figure 15. Measuring length of line features or area of polygon features

5. Technical requirements and limitations

The Baltic Explorer runs on web browsers that support JavaScript and functions best with the Chrome and Firefox browsers. Other browsers may or may not work.

The user interface supports a variety of screen sizes, including common mobile phone, tablet, laptop, desktop and large touch screens. However, when using a touchscreen some features that require hover (cursor over) are inaccessible.

6. Troubleshooting

6.1 The background maps are not visible / Overlays do not appear on the map

The Baltic Explorer relies on background maps and overlay data from external providers. These maps and data are loaded from the providers' databases. If the background maps or overlays are not loaded or the maps are slow to load, there might be an issue in the connection to those databases. Try switching to another background map in the background maps panel.

6.2 Unable to see the “Edit features” button of a workspace

Check that you are logged in. Check if the workspace is listed in “My workspaces”. If the “Edit features” button is not visible in “My workspaces”, you have not been given editor rights by the workspace owner.

6.3 Unable to save a workspace

Check that you are logged in to Baltic Explorer.

6.4 Baltic Explorer runs slow

The performance of Baltic Explorer can be slowed down by numerous issues, including a slow network connection, server issues, much data on the map etc. Users can try to increase performance by hiding feature layers from the map or by removing overlays. It is also worth to check your network connection.

If too many overlays cause issues, users can remove overlays from the map and restrain from saving the changes. This way the overlays will remain on the map for other users.

6.5 Thin unexpected lines appear on the map

These are probably gaps between map tiles due to the browser's scaling functionality. Set your browser zoom level to 100% (Ctrl + 0).

6.6 I have forgotten my username or password

Contact the Baltic Explorer administration or create a new account.