

HELCOM Map and Data Service User Manual

February 2012

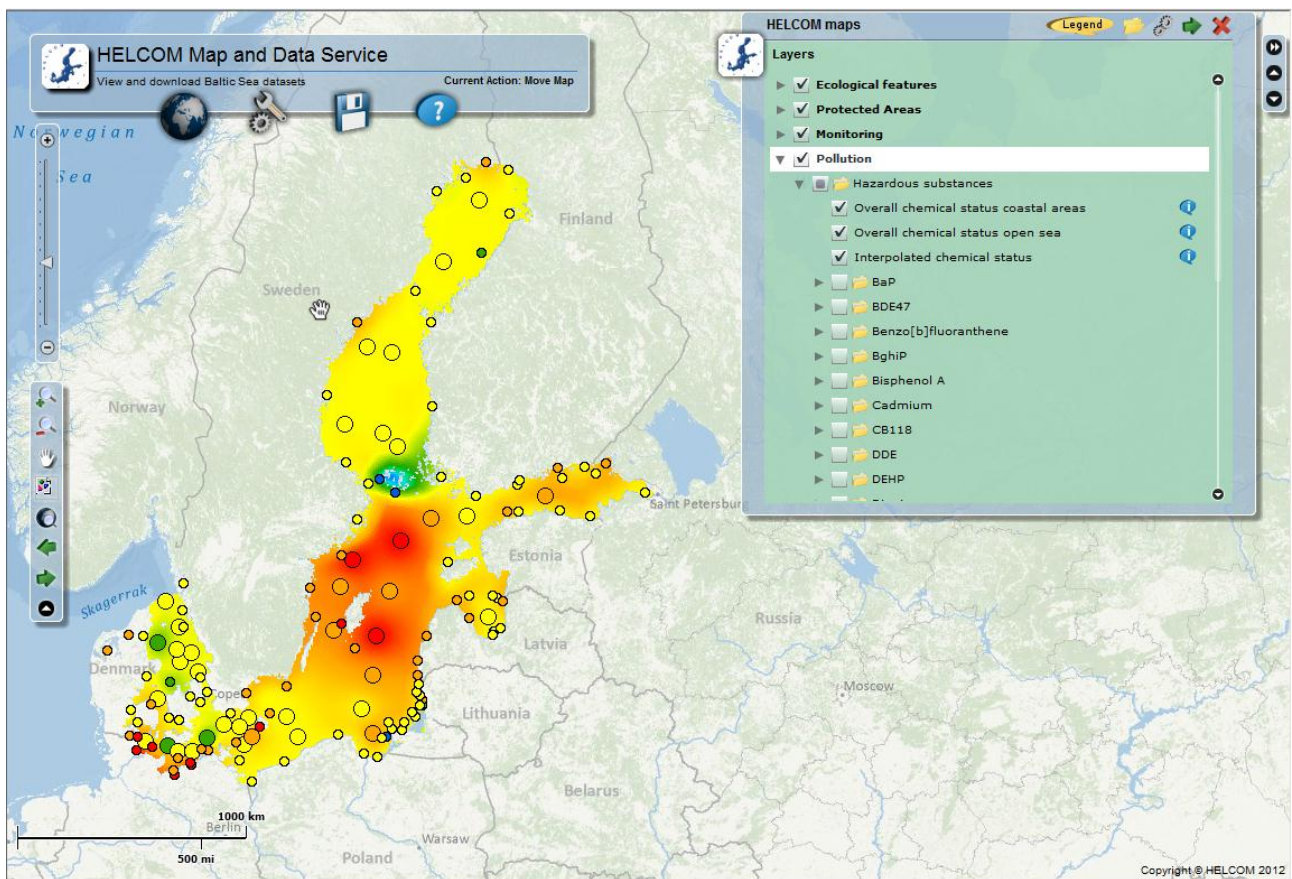


Table of contents

Table of contents.....	2
1. General.....	3
2. Basic map functions.....	3
2.1 Selecting visible map layers.....	3
2.2 Viewing legend.....	4
2.3 Viewing metadata of the layer.....	5
2.4 Zooming and moving the map.....	6
2.5 Identify tool (view attributes).....	6
3. Data delivery functions.....	7
3.1 Downloading maps.....	7
3.2 Web map service (WMS)	8
3.3 Download COMBINE Monitoring data.....	8
4. Map tools.....	9
4.1 Query builder tool.....	9
4.2 Draw tool.....	10
4.3 Identify tool.....	10
4.4 Export map tool.....	11

1. General

This manual has been written for the users of the HELCOM Map and Data service. The most important objective of this manual is to explain how to use the map service. The manual contains all the needed information to visualize, download and query datasets in the map service.

In case of any questions or feedback, please contact jeni.kaitaranta@helcom.fi.

2. Basic map functions

2.1 Selecting visible map layers

There are numerous layers in the map service. The layers are grouped under thematic folders (Ecological features etc.) in a window on the right hand side of the start page (Figure 1). The folders can be opened with a single click. Layers can be selected to be visualized on the map by ticking the box next to the layer name (Figure 2).

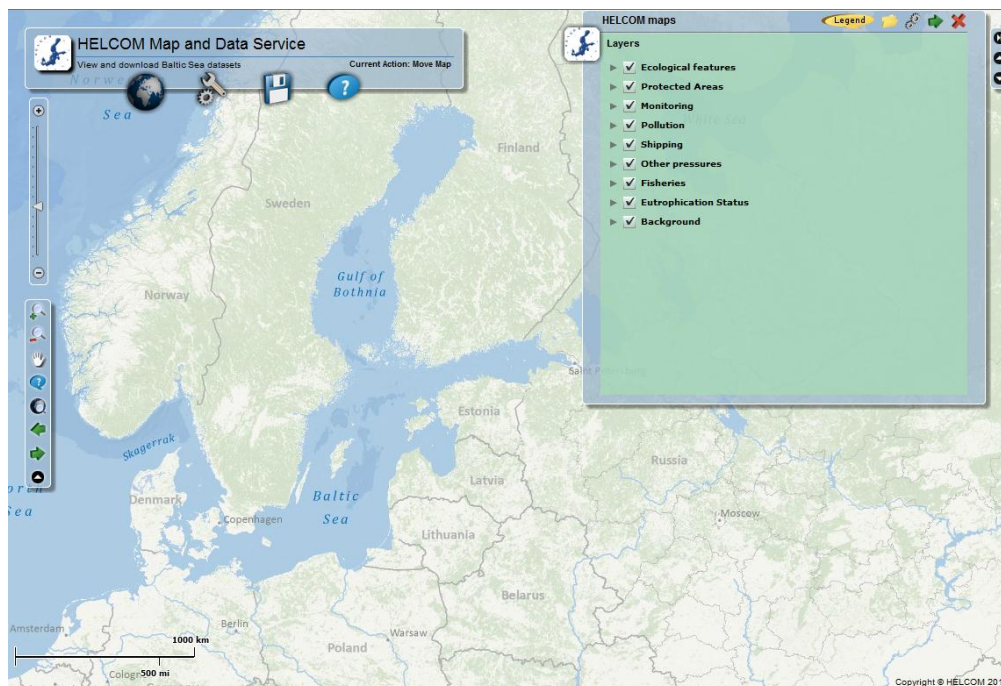


Figure 1. Map service front page.

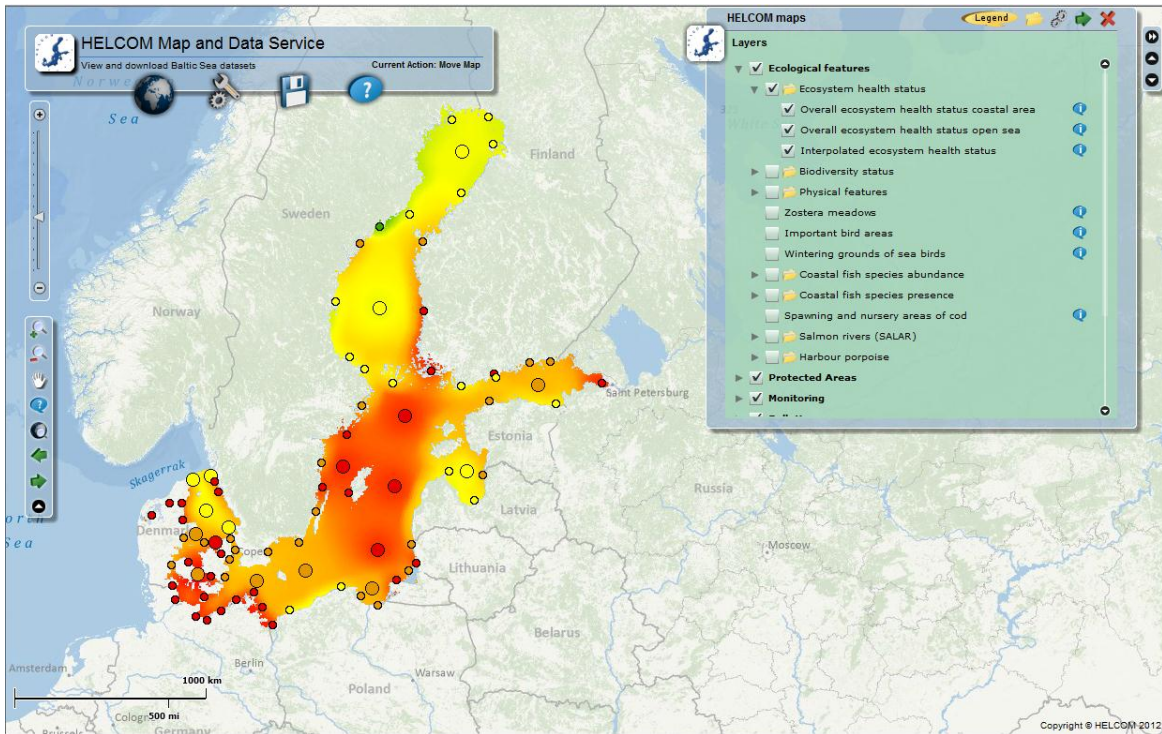


Figure 2. Selecting visible layers (Currently visualized: Ecosystem health status maps).

NOTE: If some of the thematic folders do not open, press the refresh button of your browser to reload the map page and try again.

2.2 Viewing legend

The legend of the selected layers can be seen by clicking the “Legend” text on the upper right hand side of the page (Figure 3a). When legend view is enabled the user can switch back to layer selection view by clicking the folder icon (Figure 3b) on the upper right hand side of the page. Transparency of each thematic folder can be adjusted by clicking transparency button (wheels image) on the upper right corner. The legend/layers window can be hidden or uncovered with arrow symbols on the right hand side of the window.

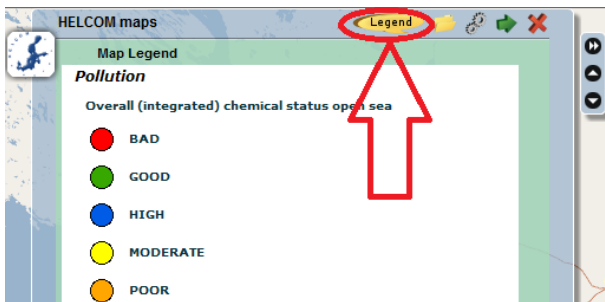


Figure 3a. Map legend view for the selected layer(s).

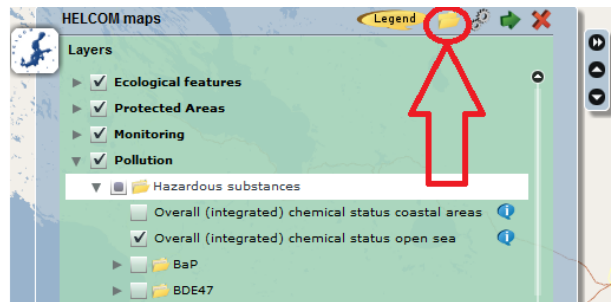


Figure 3b. Layer selection view.

NOTE: If the legend figure is not loaded properly, it is recommended to zoom or move the map to refresh the legend image. Refreshing the page and reloading may also help.

2.3 Viewing metadata of the layer

The metadata information for each layer can be opened from the button on the right hand side of each layer (Figure 4). This opens a popup window with documented metadata information of the layer (Figure 5). Metadata file can also be downloaded by downloading the map layer (see 4.1 Downloading maps).

NOTE: Currently metadata is best viewed with Internet Explorer 8. When using Firefox, installing add-on IE Tab V2 (<https://addons.mozilla.org/en-US/firefox/addon/ie-tab-2-ff-36/>) and viewing the page with IE Tab displays the metadata correctly.

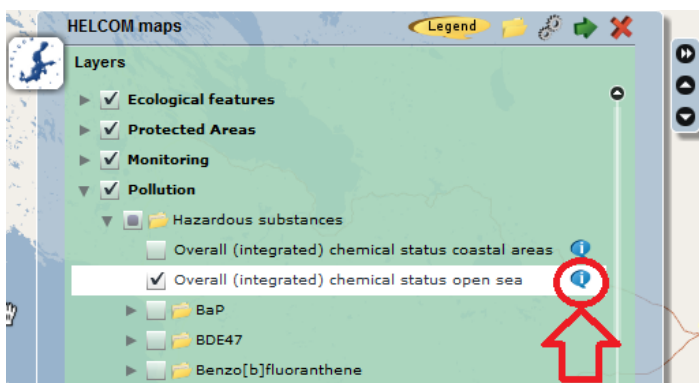


Figure 4. Metadata information button.

Integrated classification of hazardous substances in offshore areas (CHASE)

Data format: SDE Feature Class

Coordinate system: ETRS_1989_LAEA

Location: <http://maps.helcom.fi/website/mapservice/index.html>

Abstract: This dataset was produced for the thematic report on hazardous substances in the Baltic Sea. Map presents integrated classification of the hazardous substances status in offshore assessment units. The hazardous substances status has been assessed and classified at 144 sites (together with coastal sites) in the Baltic Sea using the HELCOM Hazardous Substances Status Assessment Tool (CHASE), which is a multimetric indicator-based tool developed for the HELCOM integrated thematic assessment of hazardous substances. The integrated CHASE assessment of hazardous substances in the Baltic Sea is based on quality assured monitoring data (1999-2007) on various chemicals, the radionuclide cesium-137 and certain indicators of biological effects. For further information, see publication BSEP120B, (<http://www.helcom.fi/stc/files/Publications/Proceedings/bsep120B.pdf>).

ISO and ESRI Metadata:

- [Metadata Information](#)
- [Resource Identification Information](#)
- [Spatial Representation Information](#)
- [Reference System Information](#)
- [Distribution Information](#)
- [Geoprocessing History](#)

Metadata elements shown with blue text are defined in the International Organization for Standardization's (ISO) document 19115 *Geographic Information - Metadata*. Elements shown with green text are defined by ESRI and will be documented as extensions to the ISO 19115. Elements shown with a green asterisk (*) will be automatically updated by ArcCatalog.

Figure 5. Metadata information window.

2.4 Zooming and moving the map

Zooming and moving the map can be done with buttons located in the navigation toolbar on the left hand side of the page (Figure 6). Zooming can also be done by scrolling mouse wheel or moving by keyboard arrow buttons.

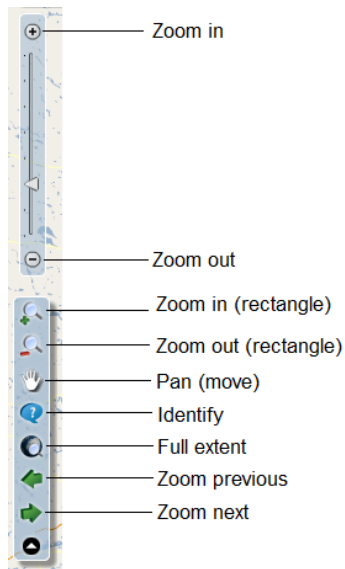


Figure 6. Navigation toolbar functions.

2.5 Identify tool (view attributes)

With the identify tool in the navigation toolbar (see Figure 6) it is possible to view attribute information of each map object by clicking the object (Figure 7).

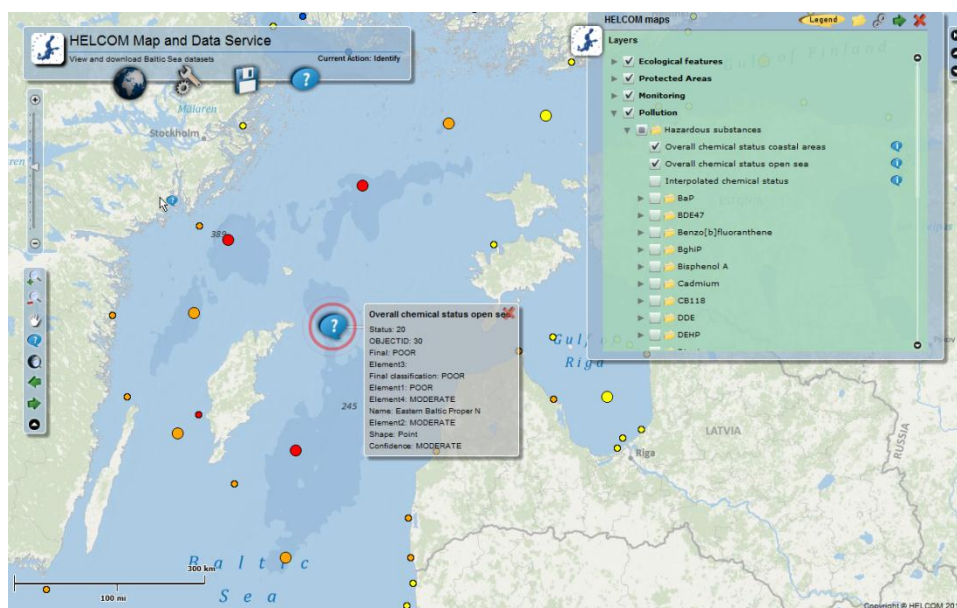


Figure 7. Map page showing attribute values of the selected map object.

3. Data delivery functions

Most of the datasets in the map service can be downloaded by the user. The simplest way to get access to the data is to download map files using the download tool. There is also possibility to connect to the HELCOM GIS Server via Web Map Service (WMS) interface. Under Data delivery menu it is also possible to download HELCOM COMBINE oceanographic monitoring data via link to ICES Data Center.

3.1 Downloading maps

The map files can be downloaded by selecting “ESRI Shapefiles” under the Data Delivery menu (Figure 8). This opens the download window (Figure 9) where the user can select the layer and start the download. Downloading is possible for one layer at a time. Map layer will be delivered as a packed zip file with metadata file included.

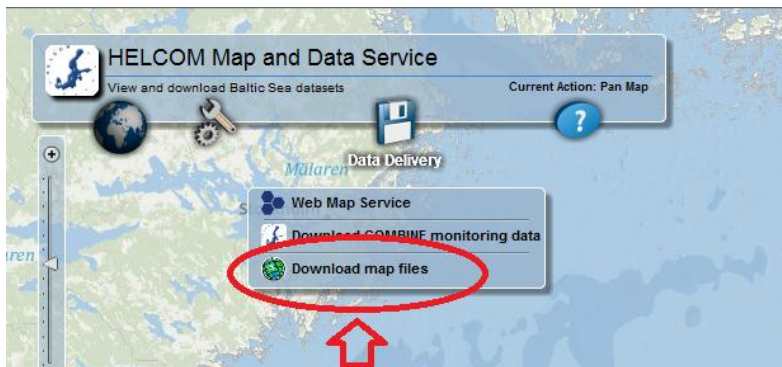


Figure 8. Downloading maps functionality in the data delivery menu.

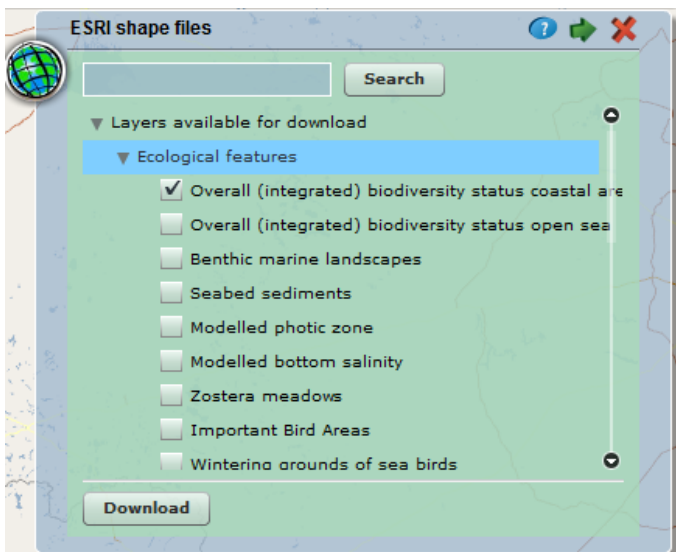


Figure 9. Selecting the layer in the download window.

3.2 Web Map Services (WMS)

Instructions on how to establish WMS connection HELCOM server can be obtained by clicking “Web map services” in the Data Delivery menu (Figure 10). This opens a window with detailed instructions and video on how to establish the connection to a desktop computer with ArcGIS or GAIA software. Address of the WMS services is:

<http://maps.helcom.fi/ArcGIS/services/DataDelivery/MapServer/WMServer>

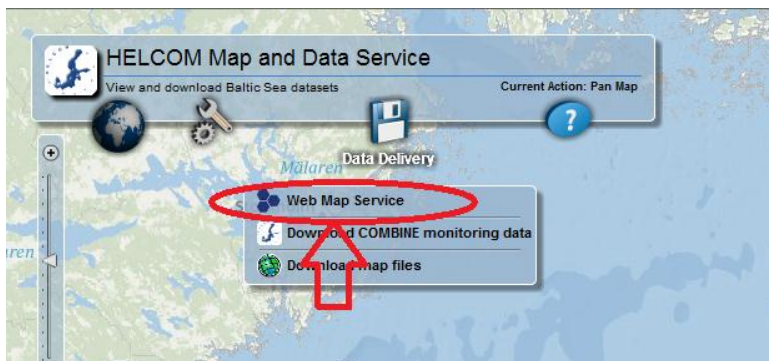


Figure10. Web map service instructions under data delivery menu.

3.3 Download COMBINE monitoring data from ICES data center

HELCOM COMBINE monitoring data can be downloaded from International Council of the Exploration of the Sea (ICES) data center. By selecting “Download COMBINE monitoring data” in the map service (Figure 11), a pop-up window opens and redirects the user to ICES Oceanographic data download page. From there the complete Baltic Sea dataset and station datasets are available in comma separated format (.csv) in zip package.

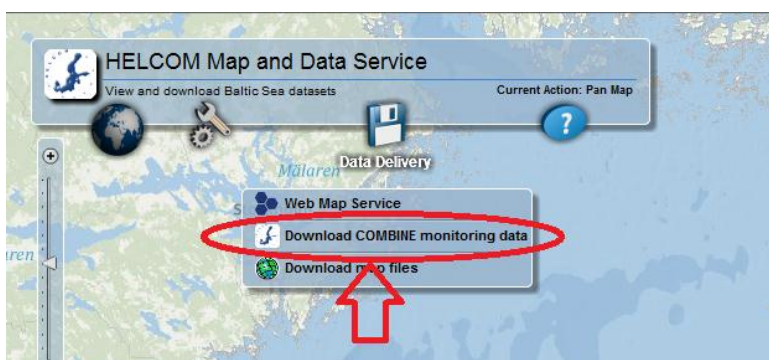


Figure11. Downloading COMBINE monitoring data under data delivery menu.

4. Map Tools

There are some basic GIS functionalities available in the HELCOM Map and Data Service under the Tools menu (Figure 11). The user can build simple queries and perform searches. Also there is possibility to draw objects on the map and save the result in picture format.



Figure 11. Tools menu content.

4.1 Query builder tool

Selecting the query builder tool opens the query builder window (Figure 12). First the user needs to choose the thematic map service for query, for example "Ecological feature". After map service selection the user can either

- I) make an attribute query by selecting "Attribute filter" sheet
- II) make a spatial query by selecting "Spatial filter" sheet

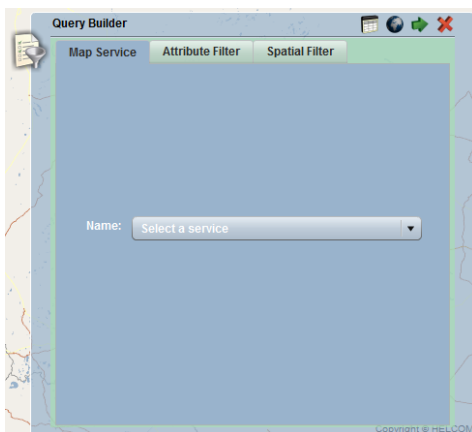


Figure 12. Query builder window.

Making an attribute filter query requires that the target map layer is selected in the attribute filter sheet (Figure 13). After the target layer selection, the selection of queried attributes (columns) can be done. When the field is selected, unique values of the field is displayed in the "Values" menu. With the operator buttons it is possible to form a simple SQL query to filter out the desired result. The SQL query clause is formed in the "filter" field and can be executed by pressing the "Search" button. Selected features are then visualized in the map and table of

selected attributes can be viewed by clicking the table image on upper right pane of the Query builder window. In the example case (Figure 13) there have been selected observations from Sweden by an SQL filter clause (COUNTRY = 'Sweden') from map layer "TBT in sediment".

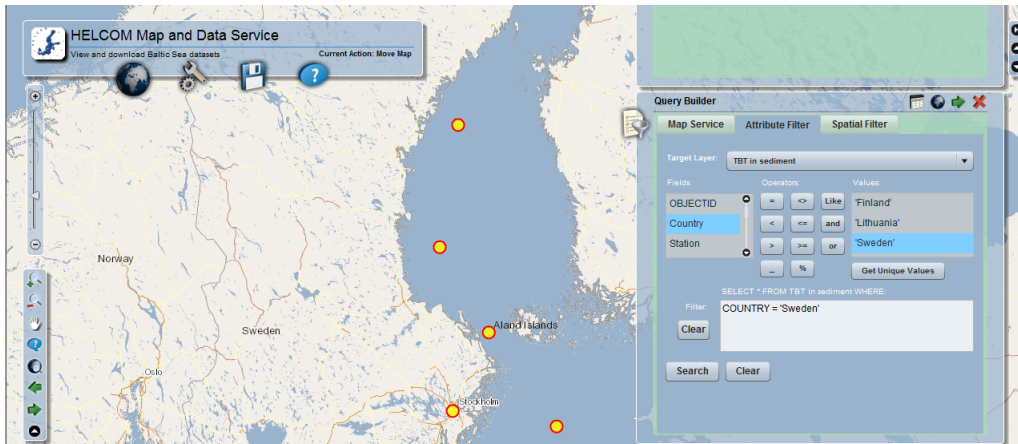


Figure 13. Example of attribute query.

Making spatial filter query requires that the target map layer is selected in the attribute filter sheet (Figure 13). After that the user can click the spatial filter sheet to appear (Figure 14). The spatial filter can be used to select features intersecting, overlapping or within a certain search area. The selection criterion is defined with "Select features with" menu. Optional buffer size can be applied to certain range in "Optional buffer" window. After the selection the user can draw on the map with one of the following tools: point, polyline or polygon. Double clicking ends the drawing task and by pressing the search button the features of the selected layer are selected based on the defined spatial definition and drawn object.

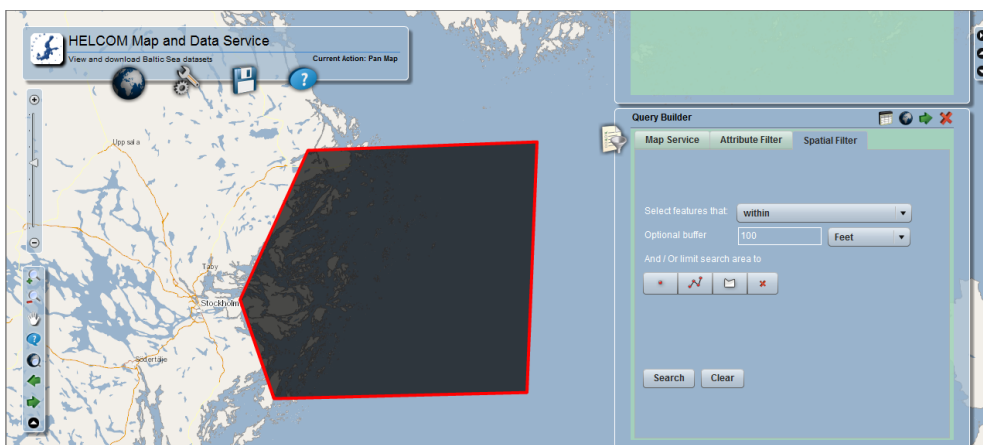


Figure 14. Example of spatial search by polygon area.

4.2 Draw tool

Selecting the draw tool opens the draw tool window (Figure 15). It is possible to add text and draw points, lines or polygons on the map. The graphics information can be saved and loaded

again to be viewed in the HELCOM Map and Data Service. Screen image can be saved by Export map tool (See 4.4 Export map tool).

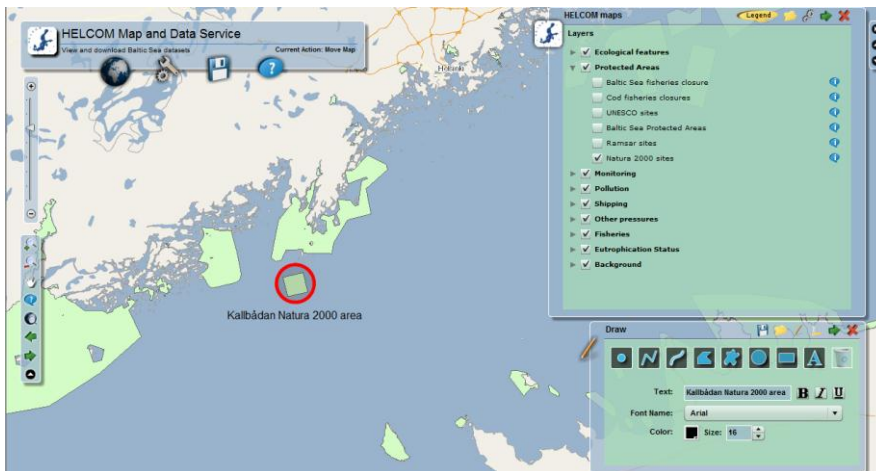


Figure 15. Example of the drawing tool.

4.3 Identify tool

The identify feature can be used also from the Tools menu. This opens the Identify tool window where attributes of the selected map features are displayed (Figure 16).



Figure 16. Identify tool window.

4.4 Export map tool

Map view can be saved as a screenshot by selecting the “Export map” function from the tools menu (Figure 17). Recommended format for map figures is png.

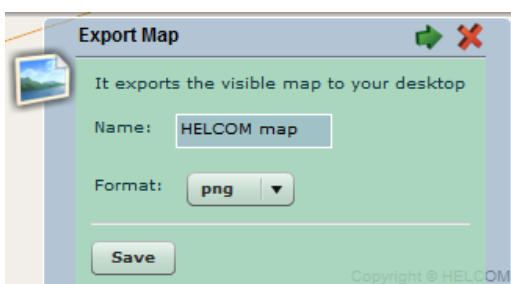


Figure 17. Export map tool window.