BASEMAPS GUIDE

DETAILED INSTRUCTIONS ON HOW TO USE BASEMAPS

HELCOM

Interreg Baltic Sea Region

EUROPEAN UNION

EUROPEAN REGIONAL DEVELOPMENT FUND

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What is BASEMAPS?

www.basemaps.helcom.fi

BASEMAPS is a map service to access Baltic Sea maritime spatial planning (MSP) data from the original source where it is stored.

The story of BASEMAPS (BAltic SEa MAP Service) dates back to 2012 when a project called BaltSeaPlan recommended building a tool to access Baltic Sea decentralized MSP data based on Marine Spatial Data Infrastructure (MSDI).

Planners realized there was a need to work with transboundary and up-to-date data that was reliable to make their own national MSP plans.

Working with centralized database solutions was (and still probably is) the best option to get a large amount of harmonized data from data providers.

However, these centralized databases do not guarantee that the data is up to date. Planners needed a solution to get data published and maintained by the original official source.

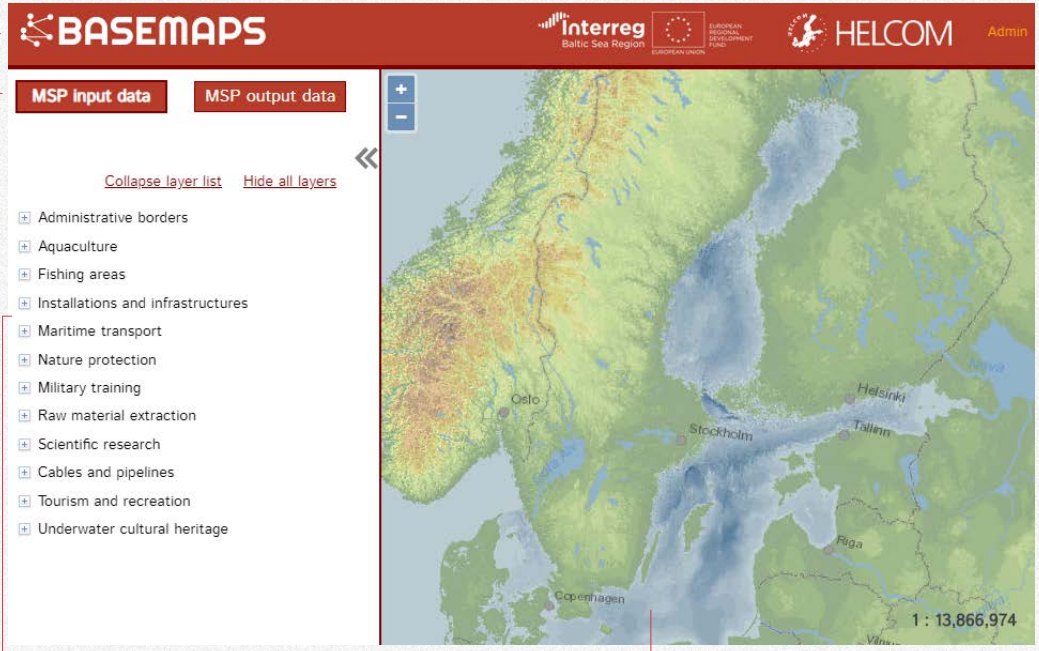
That solution is called BASEMAPS.

BASEMAPS allows users to view and download data/metadata published by national data providers through OGC open geospatial standards—WMS and WFS. It is also possible to access downloadable services and ArcGIS REST Map layers.

It is aimed for planners, data providers and authorities dealing with maritime spatial planning in the Baltic Sea.

HELCOM led the development of BASEMAPS under the Interreg funded Baltic LINes project (2016-2019).

BASEMAPS structure



BASEMAPS is organized in four parts:

1. The banner
2. The input / output data buttons
3. The layer list
4. The map viewer

The banner

- BASEMAPS: link to the map service (basemaps.helcom.fi). It is used to refresh the window if needed.
- Interreg: the funding programme. The link directs to the official Baltic LINes page hosted by VASAB.
- HELCOM: official home page of the Helsinki Commission that designed, developed and hosts BASEMAPS.
- Admin: Password protected administration panel where data providers can add and edit services. The administration rights are given by HELCOM.

Input and output data

Input and output data are the terms used to differentiate between data to create plans and the plans

MSP input data opens by default and includes various thematic data layers which have been considered relevant for MSP purposes.

The section contains both national data harvested from national data providers (when available) as well as centralized dataset provided by HELCOM.

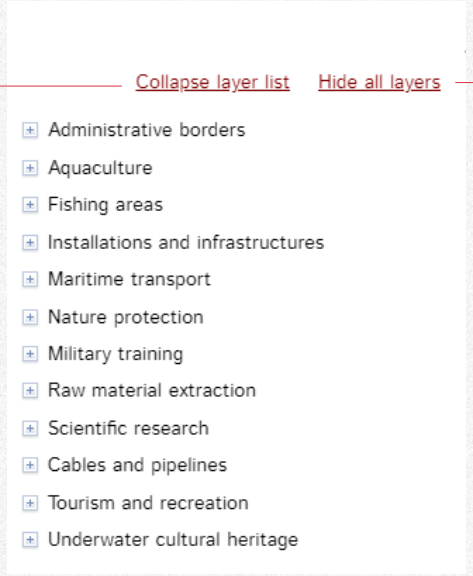
MSP planners can use input data if they want to access transboundary data.

MSP output data, on the other hand, contains national MSP plans harmonized according to HELCOM-VASAB guidelines on transboundary MSP output data structure.

These plans were created based on various input data. MSP planners can use output data to check what other countries in the Baltic Sea have already planned.

The MSP output data section is still under development.

Layer list

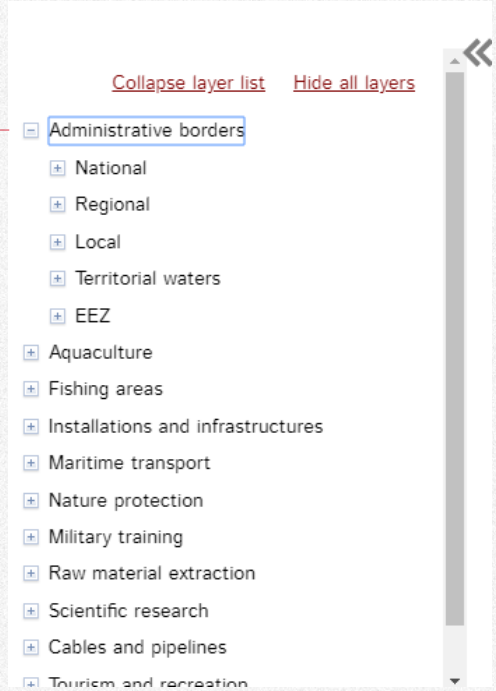


All services are stored in the layer list. The layer list is divided in thematic categories that are relevant for MSP. There are a couple of buttons to help users navigate through all categories:

Collapse layer list: it closes all the opened categories. This is useful if users have opened a lot of them and want to return to the original state.

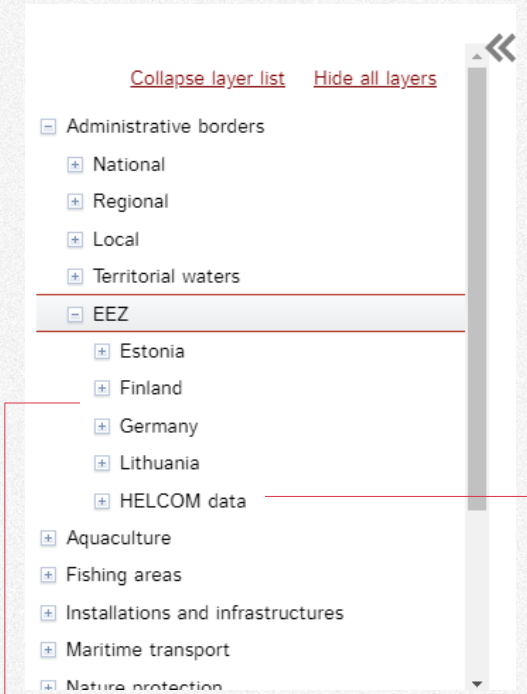
Hide all layers: it hides all the layers that users have activated. It is useful if they have activated many layers and want to see an empty map.

Categories



A tree is opened by clicking on the cross button

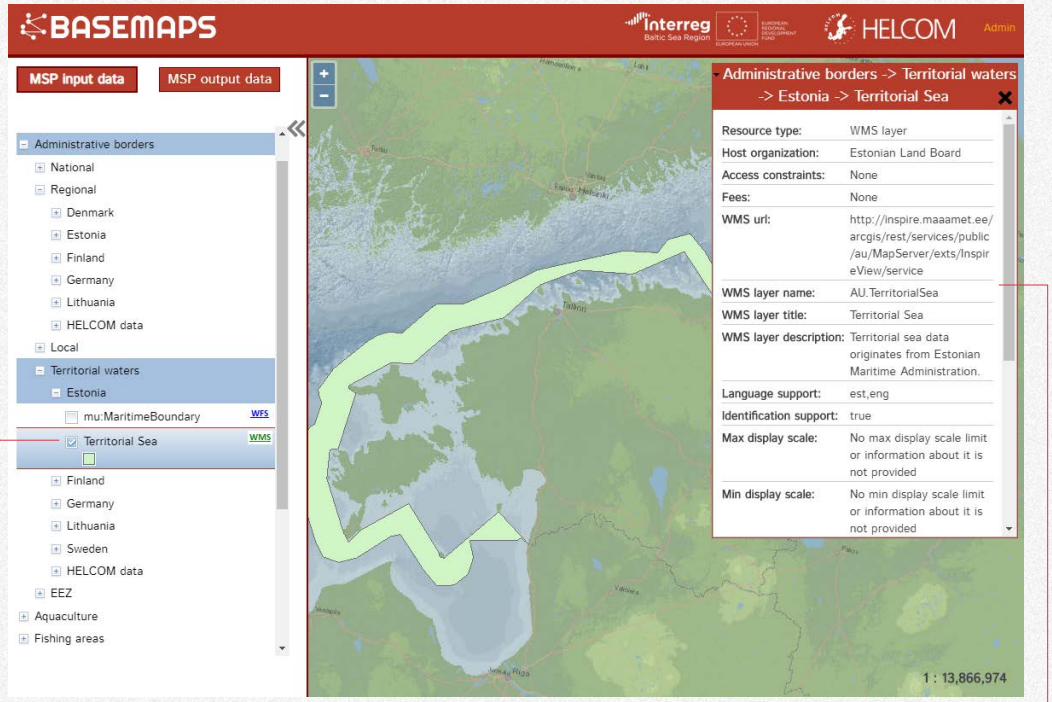
Most root categories, the ones users see when BASEMAPS is opened, contain subcategories as in the case of Administrative borders.



When users open those subcategories they see the countries that have provided data to BASEMAPS.

HELCOM data contains links to services from its centralized and harmonized database. It is useful in case there are gaps in the data.

Types or services

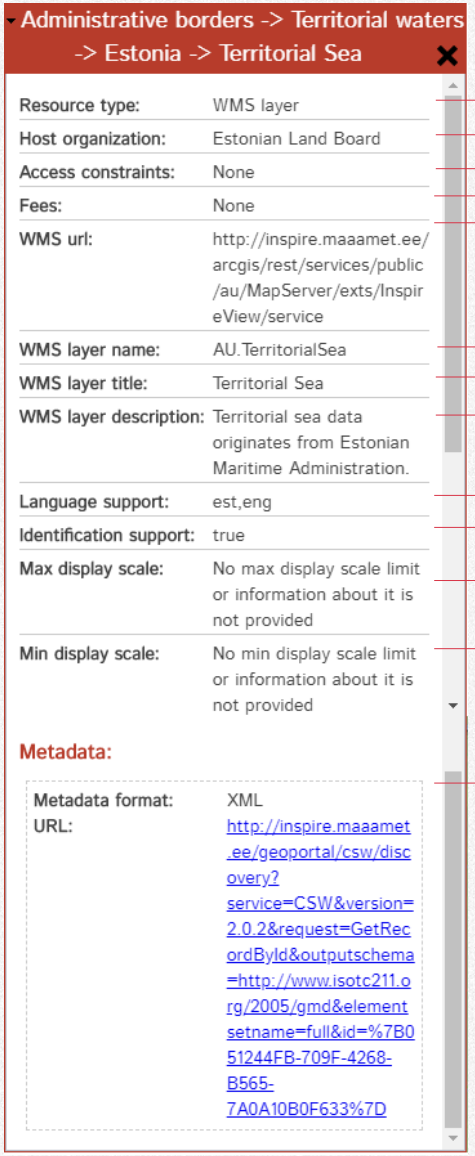


There can be up to four types of services available in BASEMAPS. A small icon is displayed besides the layer name: WMS, WFS, AGS or DLD.

To view a layer users click on the WMS checkbox ☑ which also opens the metadata window.

- **WMS (Web Map Service)**: it shows the georeferenced image published through a standard OGC WMS
- **WFS (Web Feature Services):** These services provide data in GML format.
- **AGS (ArcGIS REST services)**: data providers might want to publish ArcGIS Rest services instead of or in addition to WMS
- **DLD (Downloadable services)**: there is also the option for data providers to publish download services instead of WFS

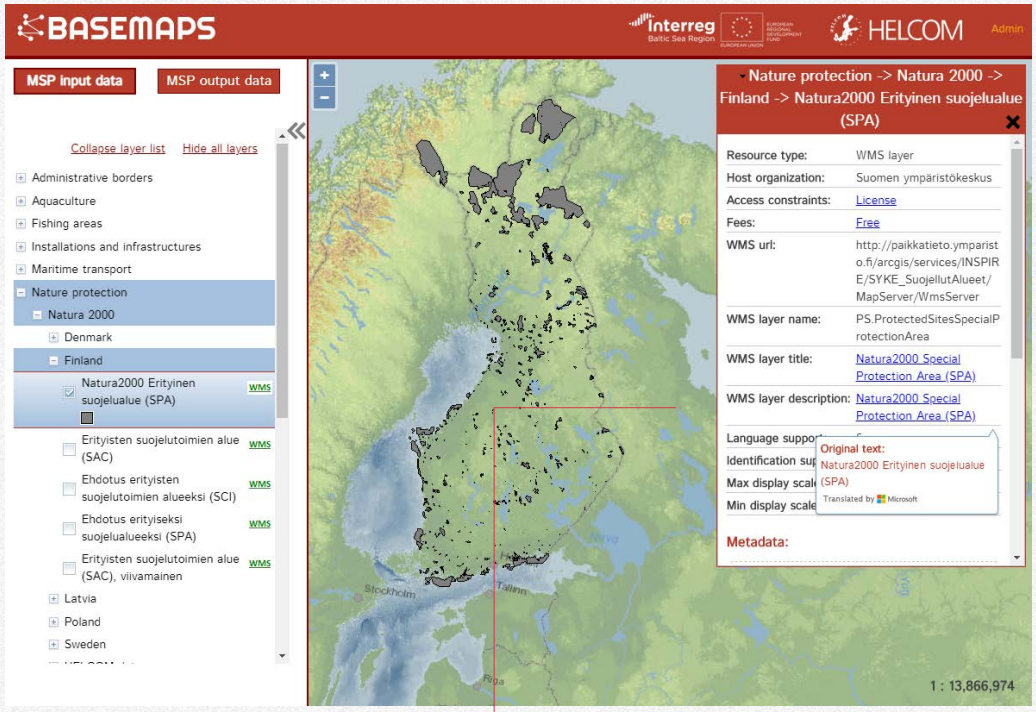
Metadata



Metadata information comes from GetCapabilities and contains the following information:

- Type of service (WMS, WFS, AGS or DLD)
- Data provider
- Any kind of rights restrictions
- Possible fees to access data
- Link to the layer's link. To view GetCapabilities in browser users must paste the URL and add this string at the end: *?request=GetCapabilities&service=WMS*
- Name of layer as the data provider has published it
- Title of layer
- A short description of layer
- All languages supported by the service
- (Only for WMS) If *true* users can click on the map and get information
- (Only for WMS) Above this scale the layer will not be displayed
- (Only for WMS) Below this scale the layer will not be displayed
- Link to metadata. It may come from GetCapabilities or be provided by data provider

Tag translation



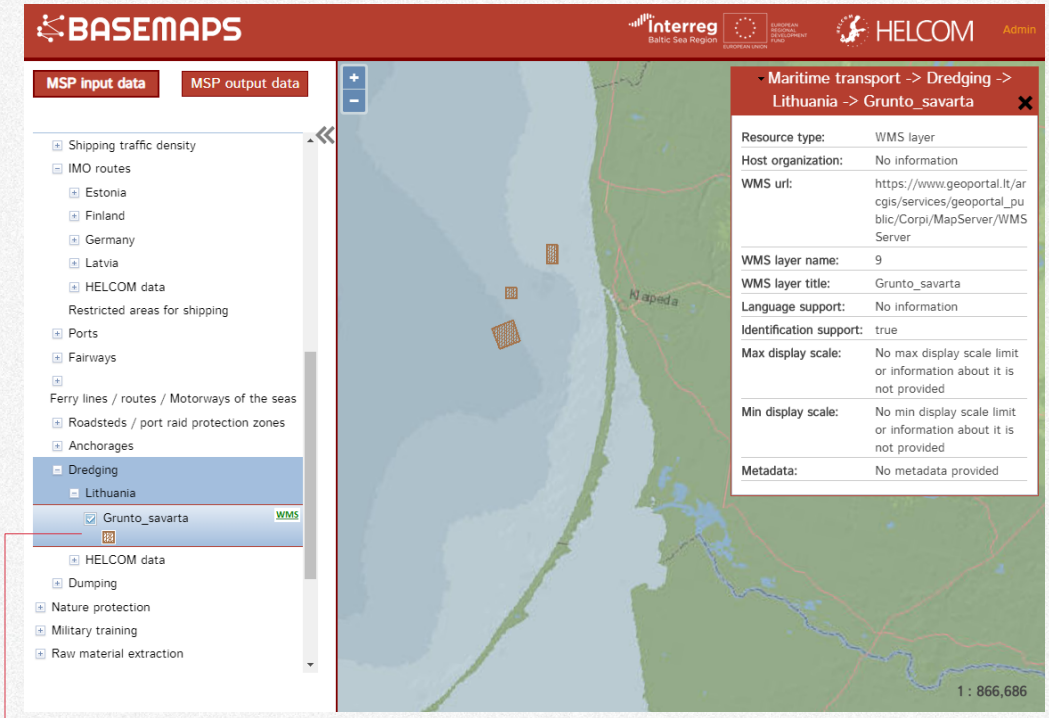
Some data providers publish data in their original language which makes it difficult to understand for users from other countries.

Therefore, some tags in the metadata are automatically translated by BASEMAPS. They are displayed in underlined blue text:

- Access constraints
- Fees
- WMS layer name
- WMS layer description

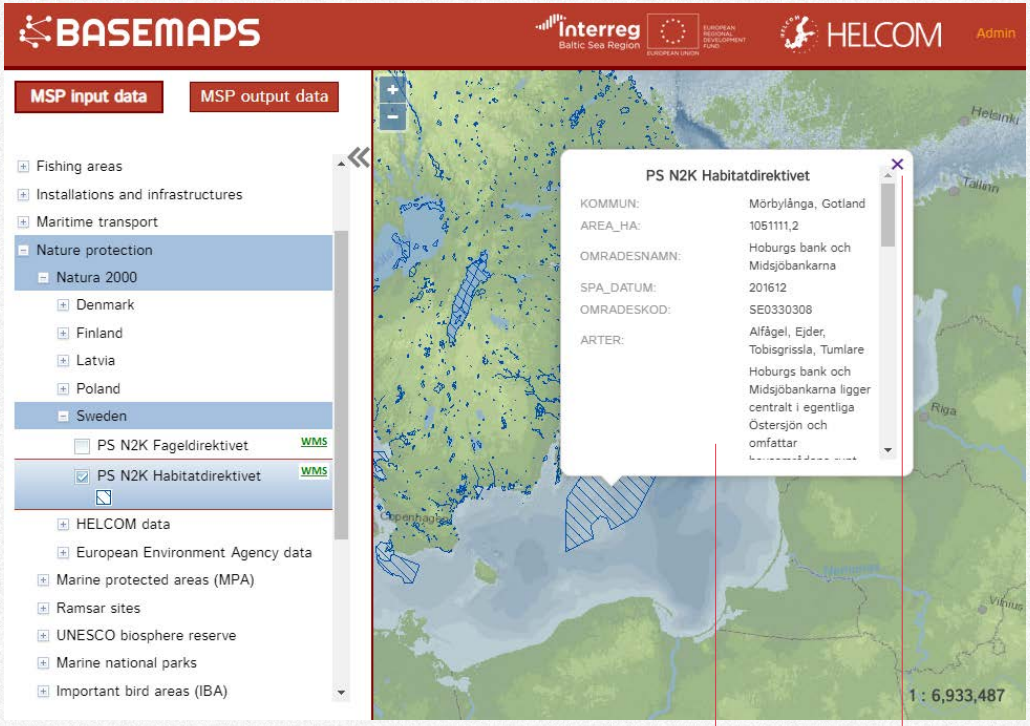
When the user hovers over the translated tag a small window shows the original text.

Legend (only for WMS)



The legend of the layer is available only for WMS services and it is below the layer name. It comes from the provided GetCapabilities.

Identification (only for WMS)



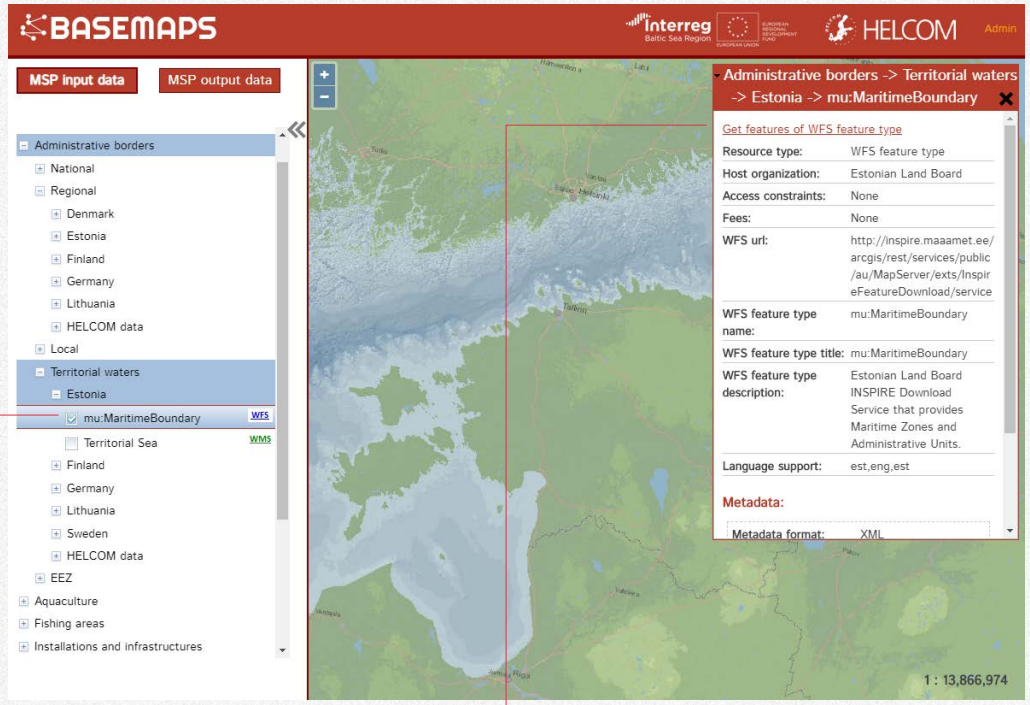
Users can click on the displayed layer to see its attributes.

A pop-up window will display all features' attributes. When the list of attributes is long users can scroll it down using the scroll bar.

The pop-up window can be closed either by clicking on the cross on the top-right corner or clicking somewhere else on the screen.

The displayed information may be in national language.

WFS



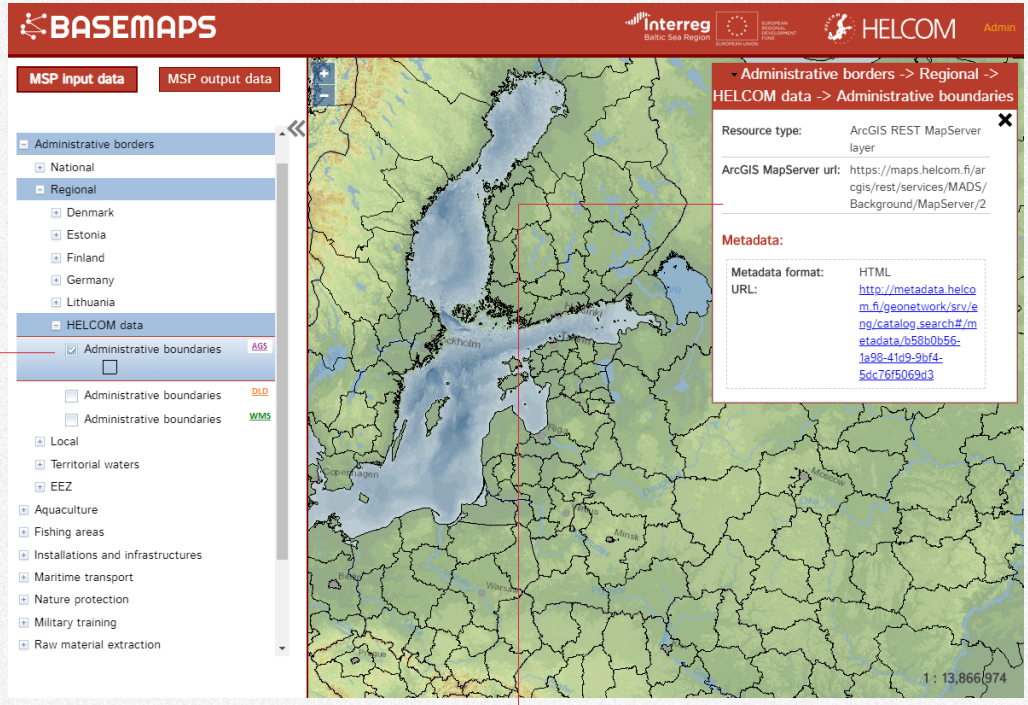
To get the data from WFS services users click on the checkbox corresponding to that service.

No layer is displayed. Instead, users get data by clicking on the link in the metadata window “Get features of WFS feature type”

The metadata is similar to WMS. Only the fields about identification and scale are missing.

Downloading can be time-consuming depending on the size of the layer and the internet connection.

ArcGIS REST services

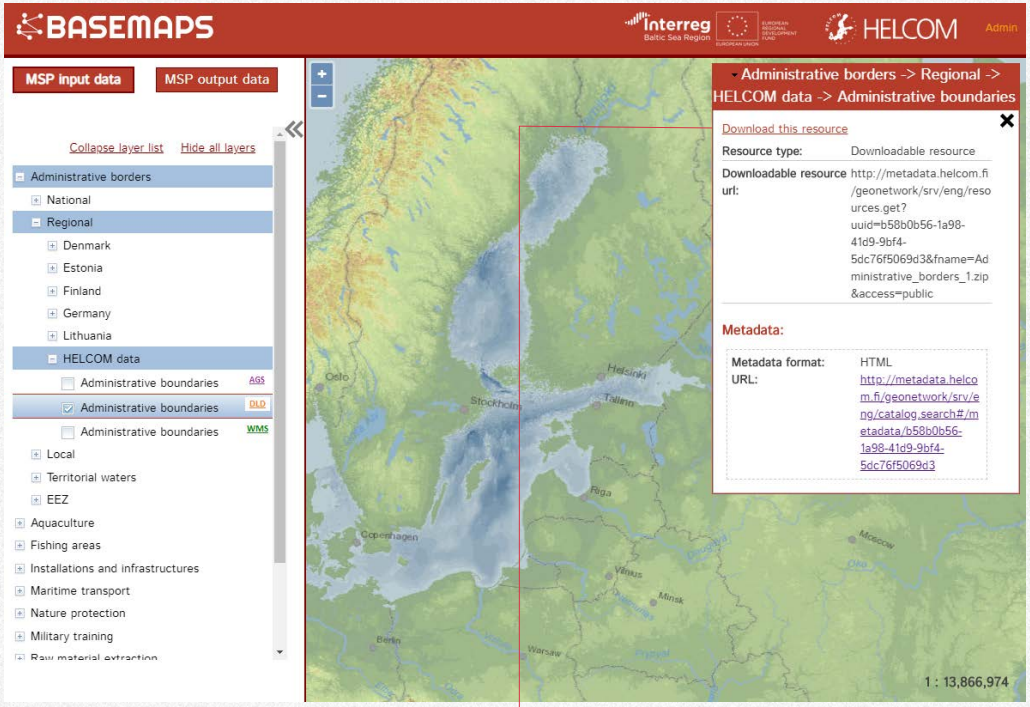


BASEMAPS allows users to view ArcGIS REST mapserver layers. Data providers might want to publish this type of services if WMS services are not available.

The metadata contains:

- Resource type: to check that it's a REST service.
- ArcGIS MapServer url: link to the REST url
- Metadata format: the format can be HTML or XLM
- URL: link to metadata

Download services



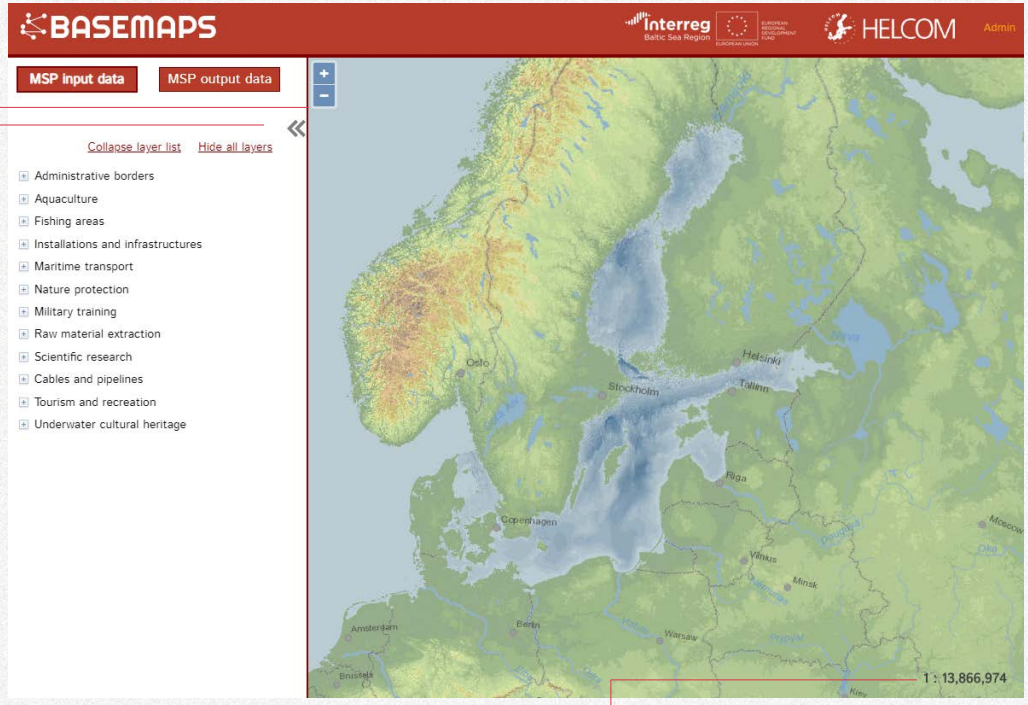
Data providers might want to publish download services in addition to or instead of WFS. Download services contain a link to the layer usually as zip file.

BASEMAPS does not display the layer when clicking on the checkbox. Instead, a link is provided to download the file.

The metadata contains:

- Resource type: to check that it's a REST service.
- Downloadable resource url: link to the REST url
- Metadata format: the format can be HTML or XLM
- URL: link to metadata

Map viewer



The map viewer shows a map in Lambert projection where all layers are displayed.

There are three elements to help users view data:

- Collapse tree to close the tree categories and make the map bigger.
- Zoom buttons to zoom in and out. Also the wheel mouse is supported.
- Scale: some layers have scale restrictions so users can check here and in the layer's metadata in case they are not displayed.

  The maximum scale is almost 1:450.000.000 and the minimum 1:2

Frequently Asked Questions

Why are there empty categories?

Some categories are empty because no country has provided data.

Why is the layer not showing?

Check that you have ticked the WMS or ArcGIS REST services checkbox ☑ as they are the only services that are displayed. Also, be sure that the layer does not have any maximum or minimum display scale (check Max and Min display scale in metadata). If so, zoom in or out accordingly with the help of the scale at the bottom-right map corner.

Some tags are weirdly translated, why?

BASEMAPS uses a translator service that can occasionally output a not so accurate translation.

Why is the layer name not in English?

All services in BASEMAPS come from national data providers who may want to publish data in their language. BASEMAPS only translates some tags in the metadata (see page 11)

What kind of services are available in BASEMAPS?

BASEMAPS can display WMS and ArcGIS REST services. Datasets can be downloaded thorough WFS and download services.

Contact information and credits

For support about BASEMAPS functionality and getting users rights: data@helcom.fi

For support about national data contact the national provider whose contact information can be found in the host organization tag in the metadata.

BASEMAPS has been developed by HELCOM during the Interreg funded Baltic LINes project (2016-2019).

The code is open source and is available in GitHub.