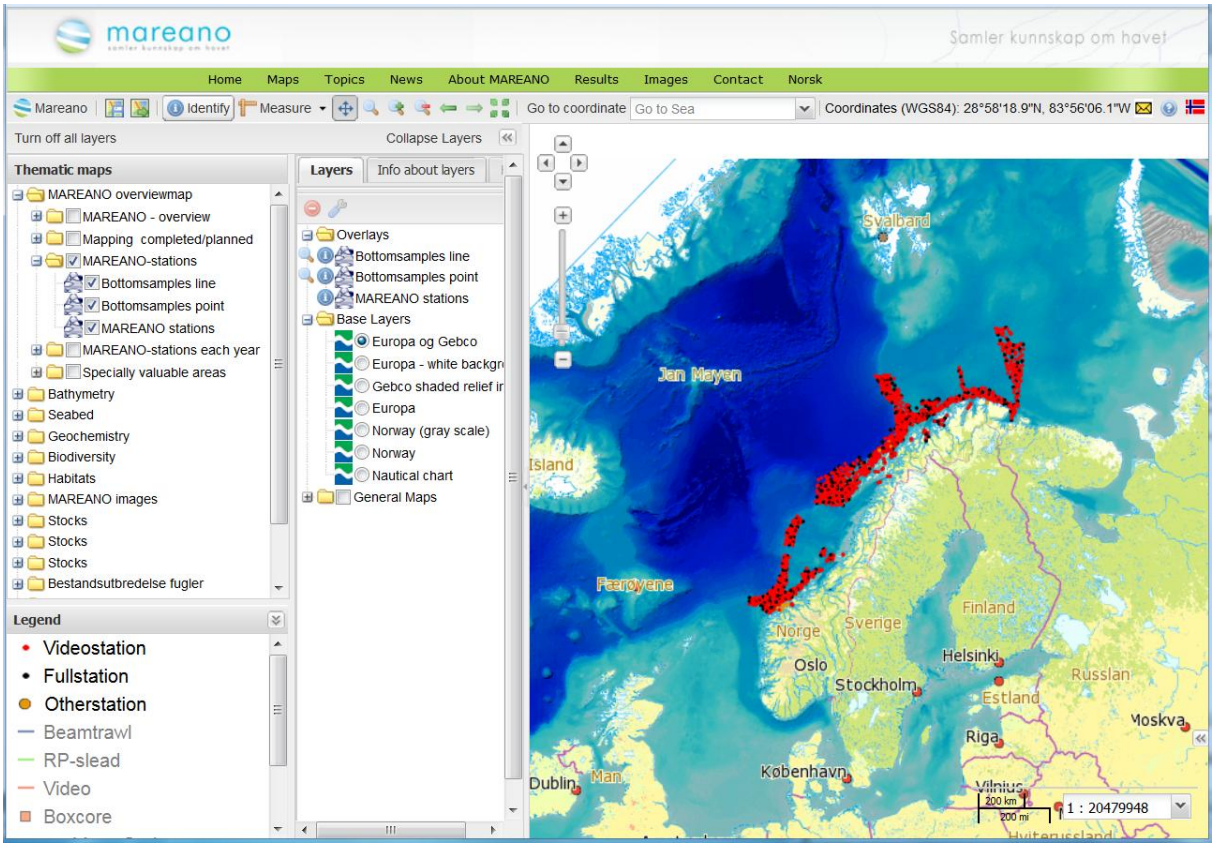
Explanation to the MAREANO map client

MAREANO uses GeoExplorer as map client. Some of the functionality is standard, but some is developed especially for MAREANO

When the map client opens the workspace is divided into three main areas:

1. *Map Window* -Map display window as shows selected maps
2. Main application toolbar
3. *Maplayers panel* –Displays a list of thematic map layers and a list of map layers (the map layers is opened by the Expand layers button) at the same time as the Legend is shown below the list of thematic map layers. In the layers list it is three folders: Layers folder (On top the Overlays list with the active layers, then base layers and on the bottom general maps), Info about layers folder (shows active layers metadata) and help folder.



MAREANO map client workspace

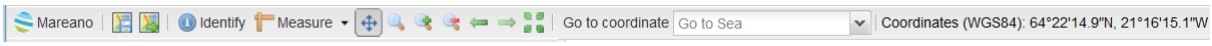
Map Window

The Map Window provides the main display area for any layers that have been added to the Mareano map client. The content of the Map Window is chosen in the Thematic maps / Layers panel.

The order of the map layers can be changed by drag and drop in the map layers list. (Note: Some layers will not be displayed if other map layers are covering it). The main toolbar provides display and navigation tools for zooming, panning, and other tasks.

Tools in the toolbar:

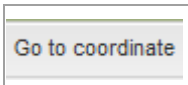
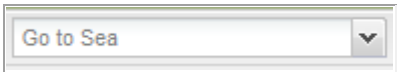
Main toolbar



Main toolbar

Overview over the tools and what they do (see also the description of use further down in the text):

Button	Name	Description
Mareano	MAREANO	Displays information about the Mareano application.
	Save map	Saves the current Map Window composition and generates a URL to revisit the current configuration.
	Publish map	Composes a map application based on the current Map Window and generates HTML code to embed the application into a web page.
Identify	*Identify*	Displays feature information (attributes) for the feature at a user-defined location in the Map Window
Measure	*Measure*	Measures distance or area in the Map Window
	Pan map	Pan the Map Window by click and drag (enabled by default). Shift, click, and drag together zooms in to a user-defined extent.
	Zoom by dragging a box	Zoom to user-defined extent
	Zoom in	Increases the zoom level by one
	Zoom out	Decreases the zoom level by one
	Zoom to previous extent	Returns to the previous map extent

Button	Name	Description
	*Zoom to next extent*	Returns to the next map extent (activated only after using *Zoom to previous extent*)
	*Zoom to max extent*	Zooms to the maximum extent of all layers
	*Go to coordinate*	Goes to chosen coordinate: Position in WGS84 (Latitude, Longitude – for example : 60.2 , 1.5)
	*Go to ocean area*	Goes to chosen ocean area.

Use of the tools in the toolbar:

Save map

With the map client you can save the current map configuration. This configuration will include the list of layers, with ordering settings preserved, and the current *Map Window* extent. These configurations are saved in the form of a URL, which may be bookmarked.

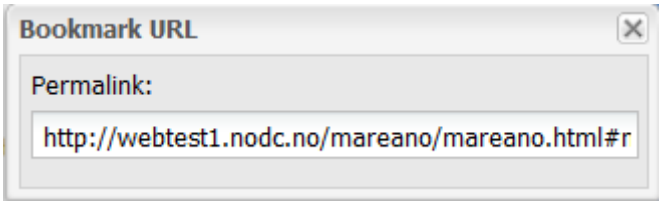
To save the current map configuration, click Save *Map button* on the *toolbar*.

Save map tool

A pop-up window will display with a URL. Save or bookmark this URL to reload the current map client configuration at a later time.

Save permalink in bookmark URL:

When making an URL you get an URL (internettadress) as shows both in the popup-box and in the address bar to the web browser. **NB** when you make a new map, in the address bar it has to be written: http://www.mareano.no/kart/mareano.html if not, the first map is overwritten by the second.



Save map URL

Configuration files

GeoExplorer saves map configurations in a SQLite file called geoexplorer.db. Although it is not possible to edit configurations in GeoExplorer, they can be viewed and edited using a SQLite client.

Publish map

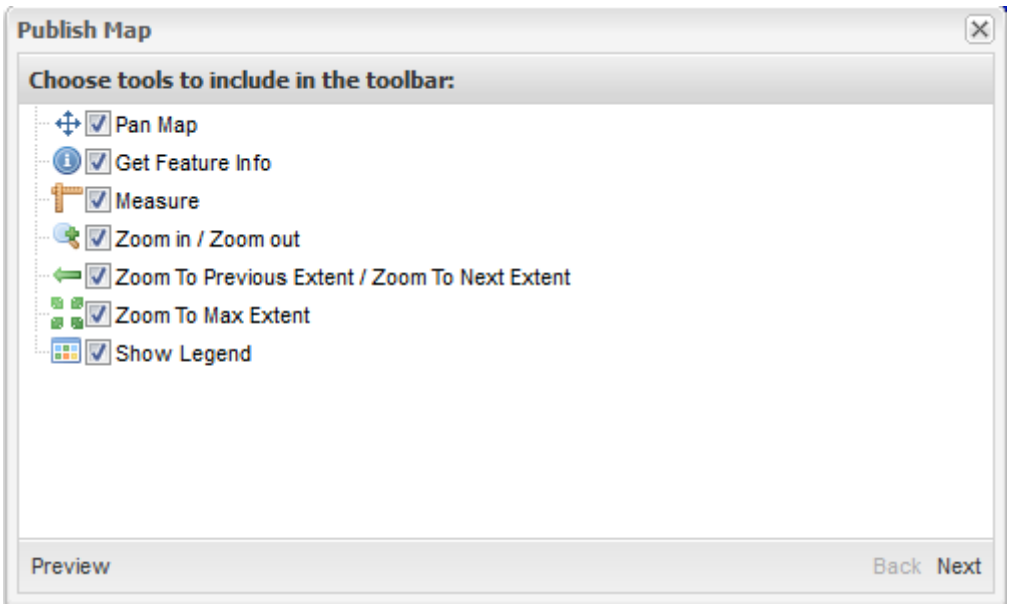
The *Publish map* tool will generate a map application that can be embedded in a web page. You can customize the tools to include in the map application toolbar.

Click *Publish Map* button on the *GeoExplorer toolbar* to display the *Publish map* dialog box.

Publish map tool

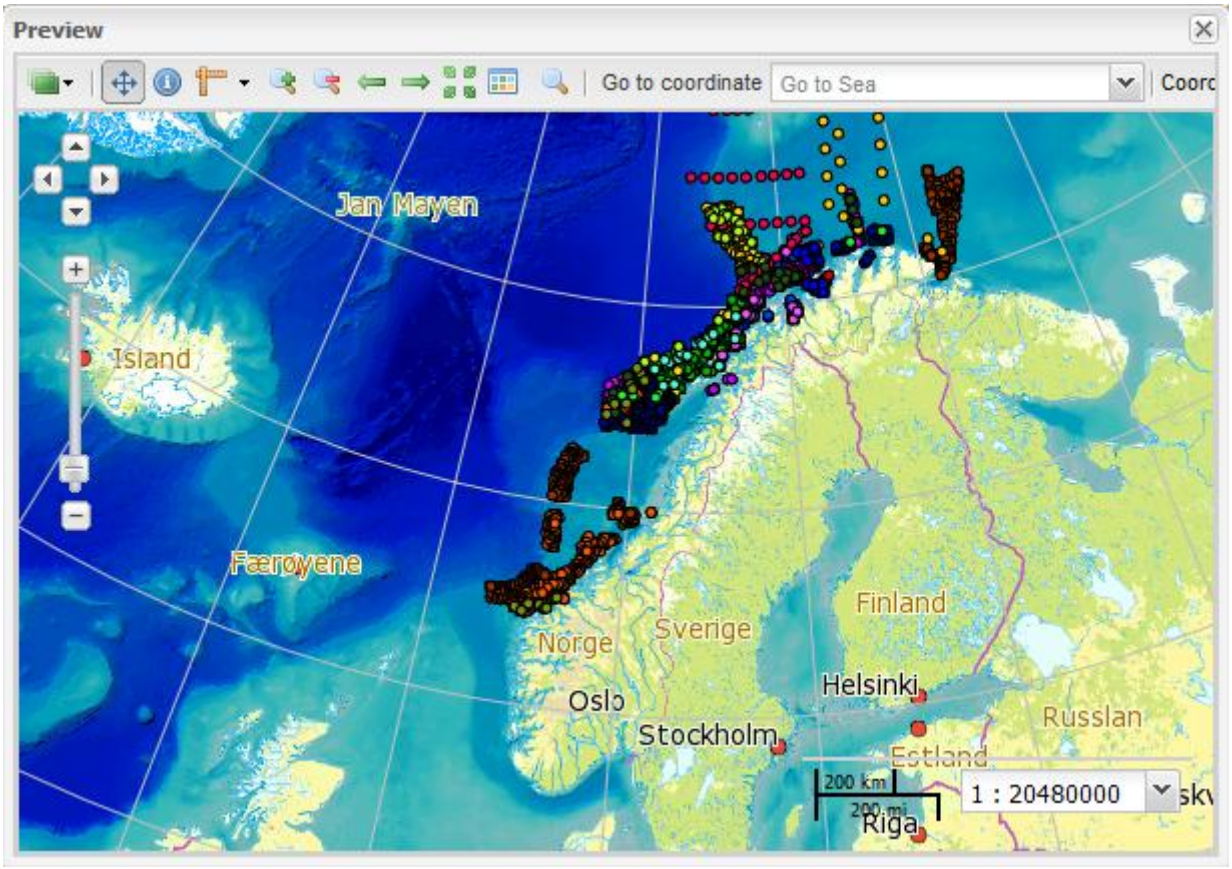
Tool selection

The first panel of options allows you to select the tools you will require in the published map. By default, all the tools are selected. To remove a tool, clear the check box beside the tool you wish to exclude.



Publish map tool selection

Click the *Preview* button to generate a preview of the map application. The map preview will open in a new *Preview* window.



Previewing a map

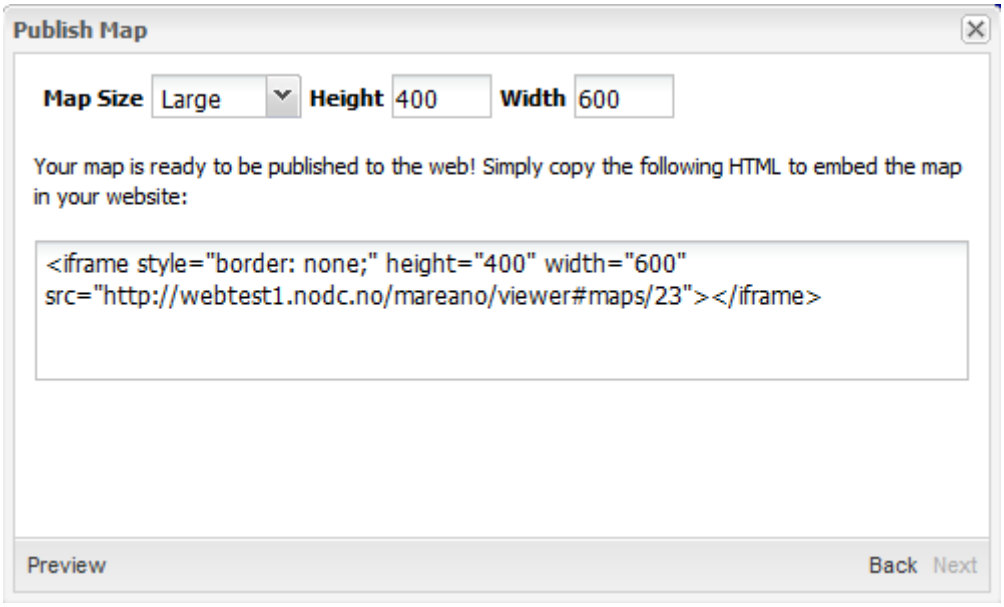
The tools in the published map will include the tools you selected, plus the following two additional tools:

Button	Name	Description
	Layer Switcher	A List of available *Overlays* and *Base Maps*. Click a layer in the list to switch the map display to that layer.
	About this Map	Displays information about the GeoExplorer Mareano application

Close the *Preview* window to return to the *Publish map* dialog box. Click *Next* to continue.

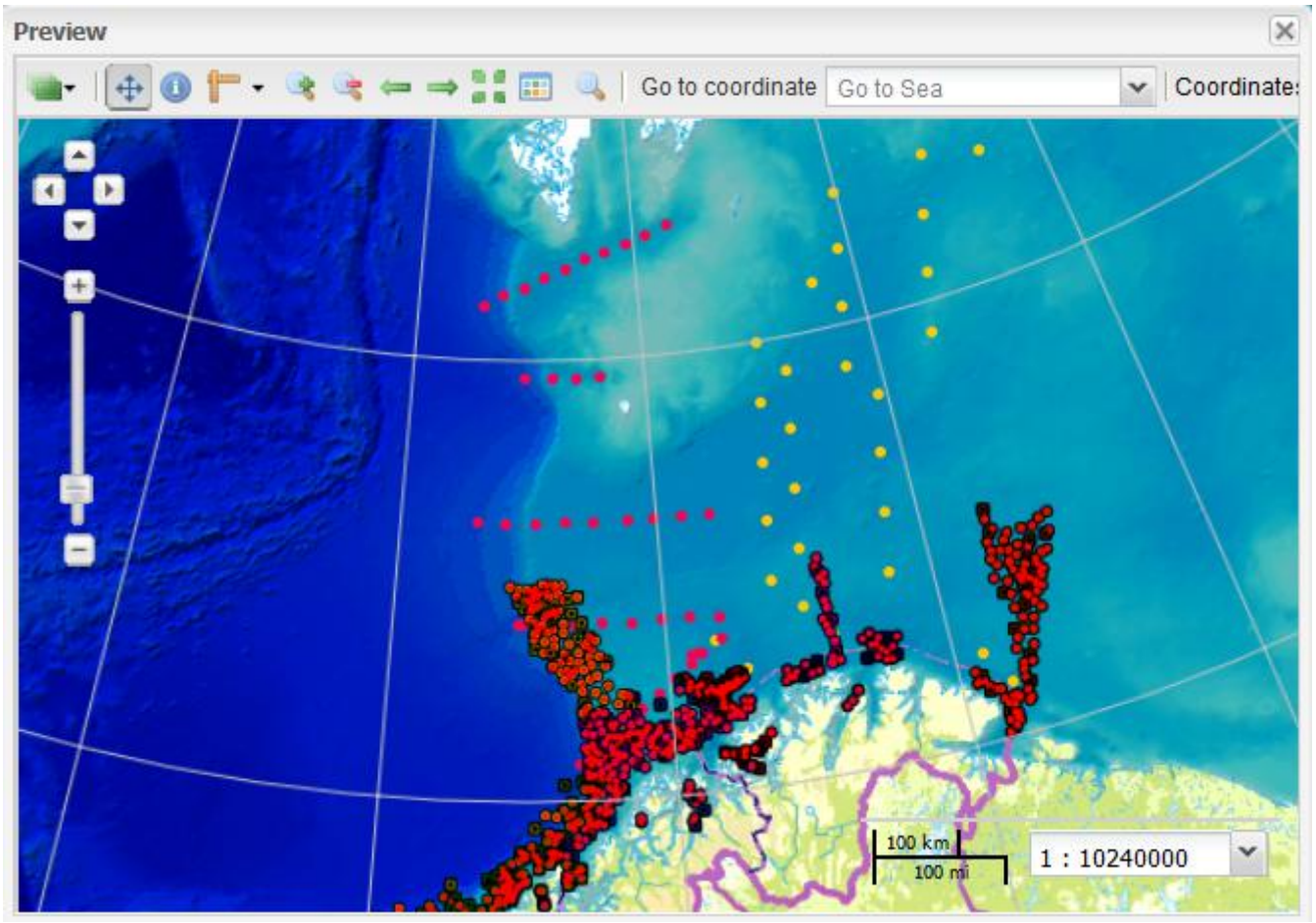
HTML generation

The next panel will contain the HMTL code for your map application. The predefined *Map Size* options are *Mini* (100x100 px), *Small* (200x300 px), *Large* (400x600 px), and *Premium* (600x800 px). You can adjust the *Height* and *Width* settings as required.



Generating HTML code

Copy this HTML code into a web page to display the map application.

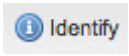


Published map

Get Feature Info

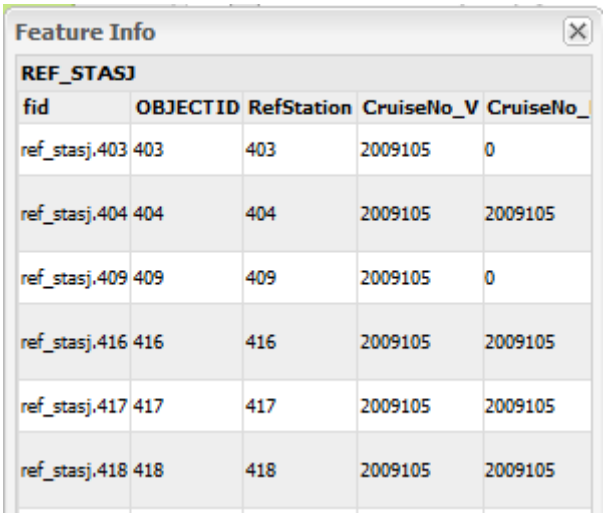
The Get Feature Info tool will return attribute information for any features, in all visible layers, identified at a given location in the *Map Window*.

To activate this tool, click *Get Feature Info* on the *toolbar*.



Get Feature Info tool

With the *Identify* tool activated, click a location on the map. If a feature is found at that location, the *Feature Info* dialog box will be displayed, listing the feature's attribute information. If no features are found at that location, the *Feature Info* dialog box will not open.

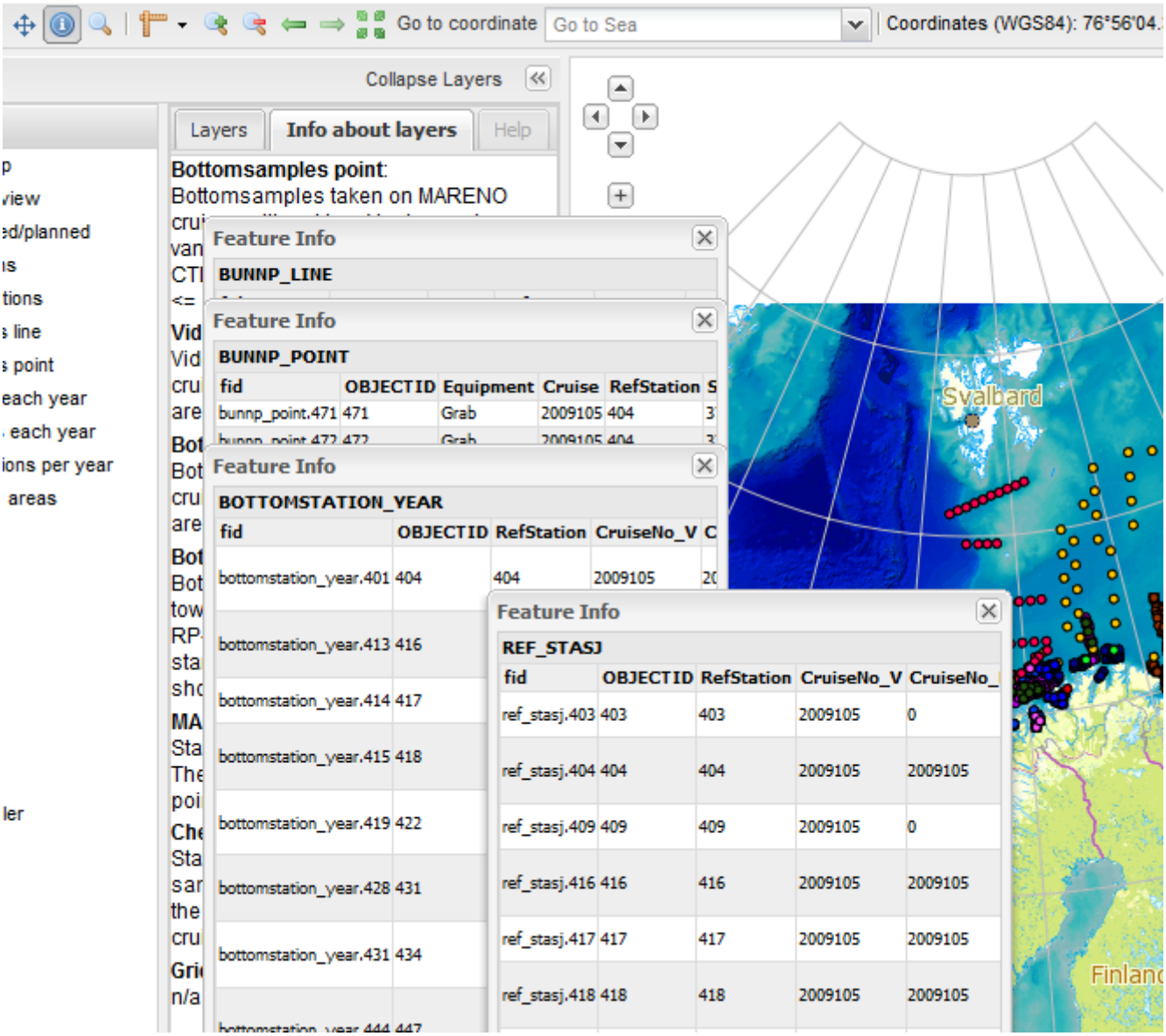


Get Feature Info tool

Note

You can't use the *Identify* tool to identify features in a *Base Maps* layer.

If multiple features are found at that location, multiple layers will be listed in multiple Feature Info dialog boxes. Click and drag a Feature Info dialog box to expand its attribute list.



Get Feature Info multiple features

Note:

The feature information displayed is the server's response to a WMS *GetFeatureInfo* request. This is typically a tabular listing of features and attributes, and is read-only in the map client. To customize the HTML output of the GetFeatureInfo request, edit the settings on the server.

Measure Length and Area

The *Length* and *Area* measure tools will calculate the length, in one dimension, or area, in two dimensions, for a given section of the map.

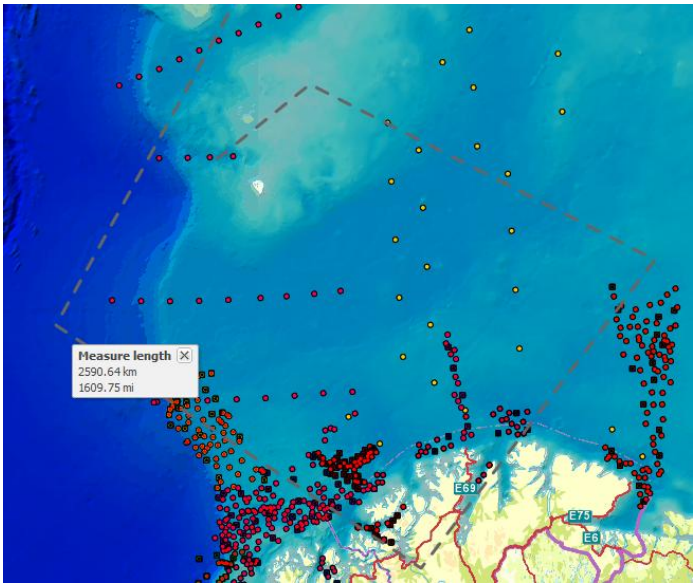
Length

The *Length* tool will measure directly on the *Map Window*. The measurement value represents the sum of one or more line segments or curves.

1. To activate the *Length* measure tool, click *Measure* on the *Mareano toolbar* and then click *Length*.

Length measure tool

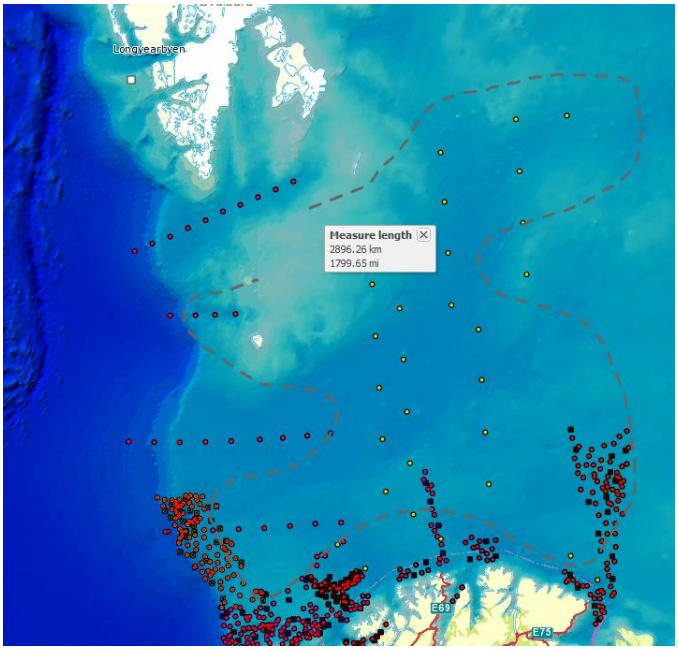
2. To start the measurement, click a location on the map. As you move the mouse from that location, a dashed line will extend from the initial point. Click somewhere else on the map to create a second point. The length of the line segment between the two points will be displayed (in both kilometers and miles) in the *Measure length* pop-up window. To continue the measurement, click additional points on the map. The reported length will be the cumulative total of the length of all line segments.



Length measurement with line segments

3. To finish measuring the length, double-click a location on the map. The measured line will disappear from the *Map Window* when the *Measure length* pop-up window is closed.

Sometimes straight line segments may not be the best option for measuring length, so measurement by freehand drawing is also supported. To activate freehand drawing, hold down Shift, click, and hold down the left mouse button while moving the mouse around the map. The dashed line will follow the mouse movements. You can combine line segments and freehand drawing in the same measurement.



Length measurement with freehand drawing

Area

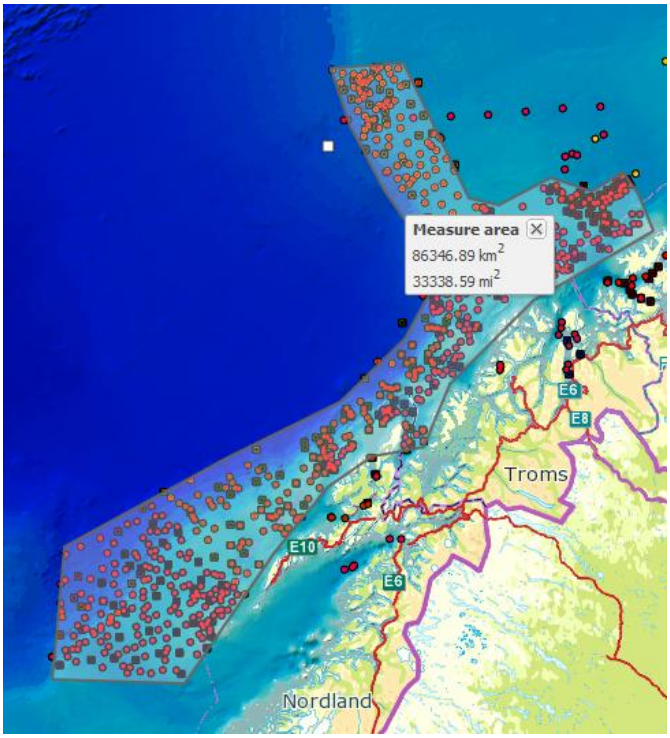
The *Area* tool measures directly on the *Map Window*. The measurement value represents the area of a polygon made up of one or more line segments or curves.

1. To activate the *Area* measure tool, click *Measure* on the *GeoExplorer toolbar* and then click *Area*.

Area measure tool

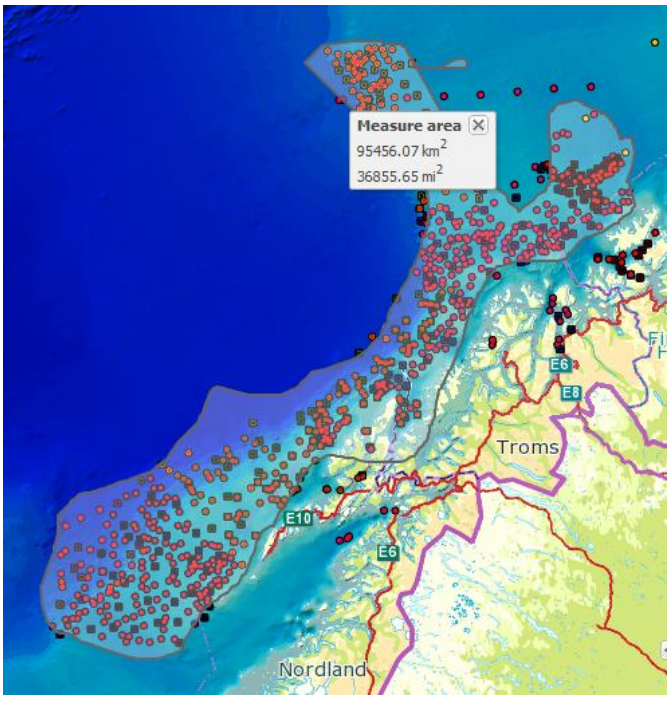
2. To start the measurement, click a location on the map. As you move the mouse away from that point, a solid line will extend from the initial point. Click again to create a second point. These points will become the vertices of the polygon that will be measured. To continue the measurement, click additional points on the map. After three vertices have been added to the map, the current area measurement will be displayed (in both square kilometers and square miles) in the *Measure area* pop-up window.

3. To finish measuring the area, double-click a location on the map. The measured area outline will disappear from the Map Window when the *Measure area* pop-up window is closed.



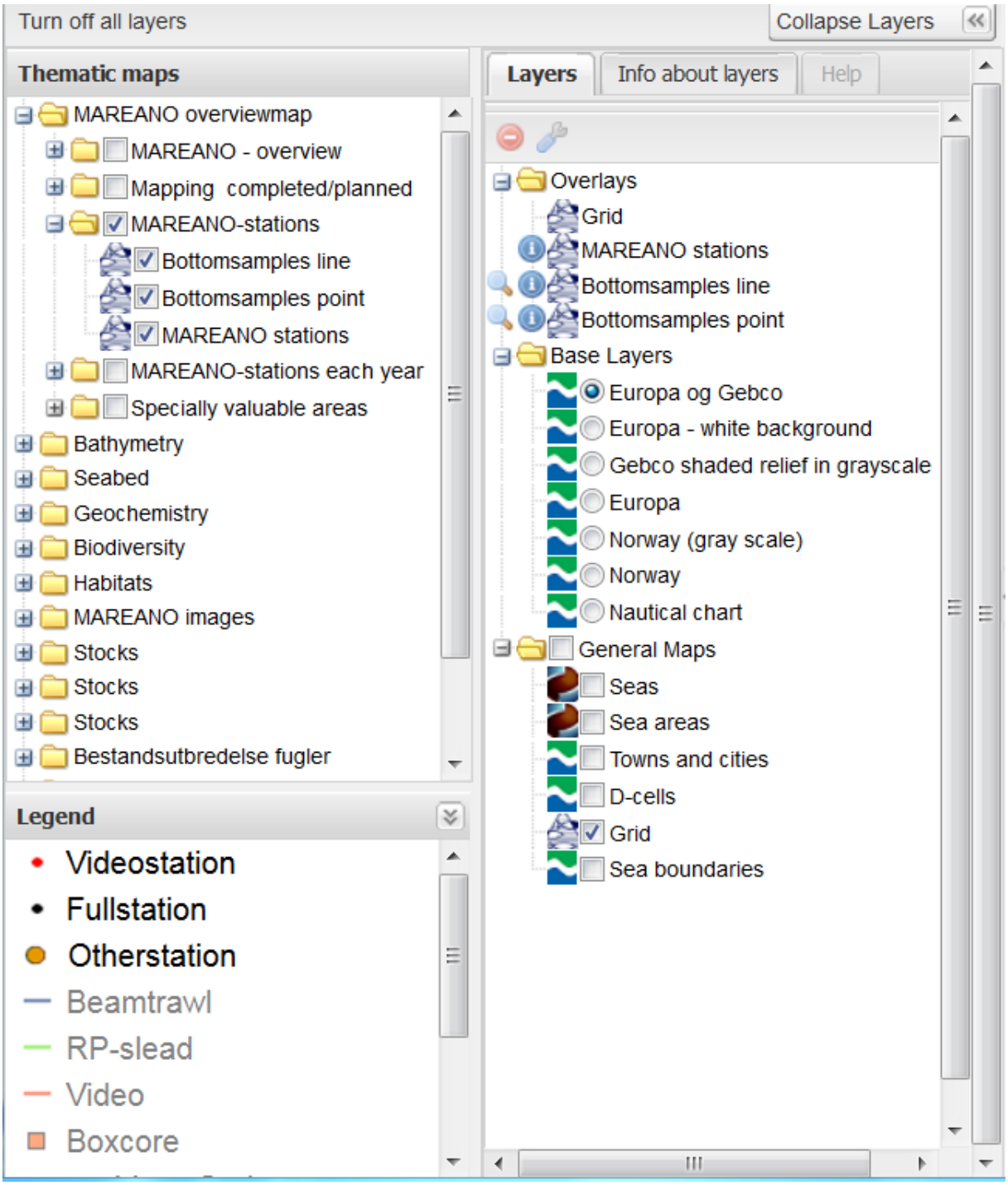
Area measurement with a polygon

Sometimes straight line segments may not be the best option for measuring area, so measurement by freehand drawing is also supported. To activate freehand drawing, hold down Shift, click, and hold down the left mouse button while moving the mouse around the map. The solid line will follow the mouse movements. You can combine line segments and freehand drawing in the same measurement.



Area measurement with freehand drawing

Overview over the choices in the maplayers-panel



Maplayers panel

Maplayers panel–Displays a list of thematic map layers and a list of layers at the same time as the Legends are shown below the list of thematic map layers. In the layers list it is three folders: Layers folder (On top the Layers toolbar, then the Overlays list with the active layers, then base layers and on the bottom general maps), Info about layers folder (shows active layers metadata) and help folder.

Layers panel contains a list of layers, divided in three folders Overlays, Base Layers and General Maps on top is the Layers toolbar.

The display of the individual layers can be configured as required. To make a layer invisible, clear the check box next to layer. To make the layer visible again, select the check box.

Overlays

You can *Add layers* to the list by selecting the check box next to the layer in the Thematic maps list.

Base Layer

The *Base Layer* folder contains base, or background, layers. A base layer will always be drawn beneath all other *Overlays* layers. Although only one base layer can be active at any time, it is multiple base layers in the list. It is also possible to drag layers between the *Base Layer* folder and the *Overlays* folder.

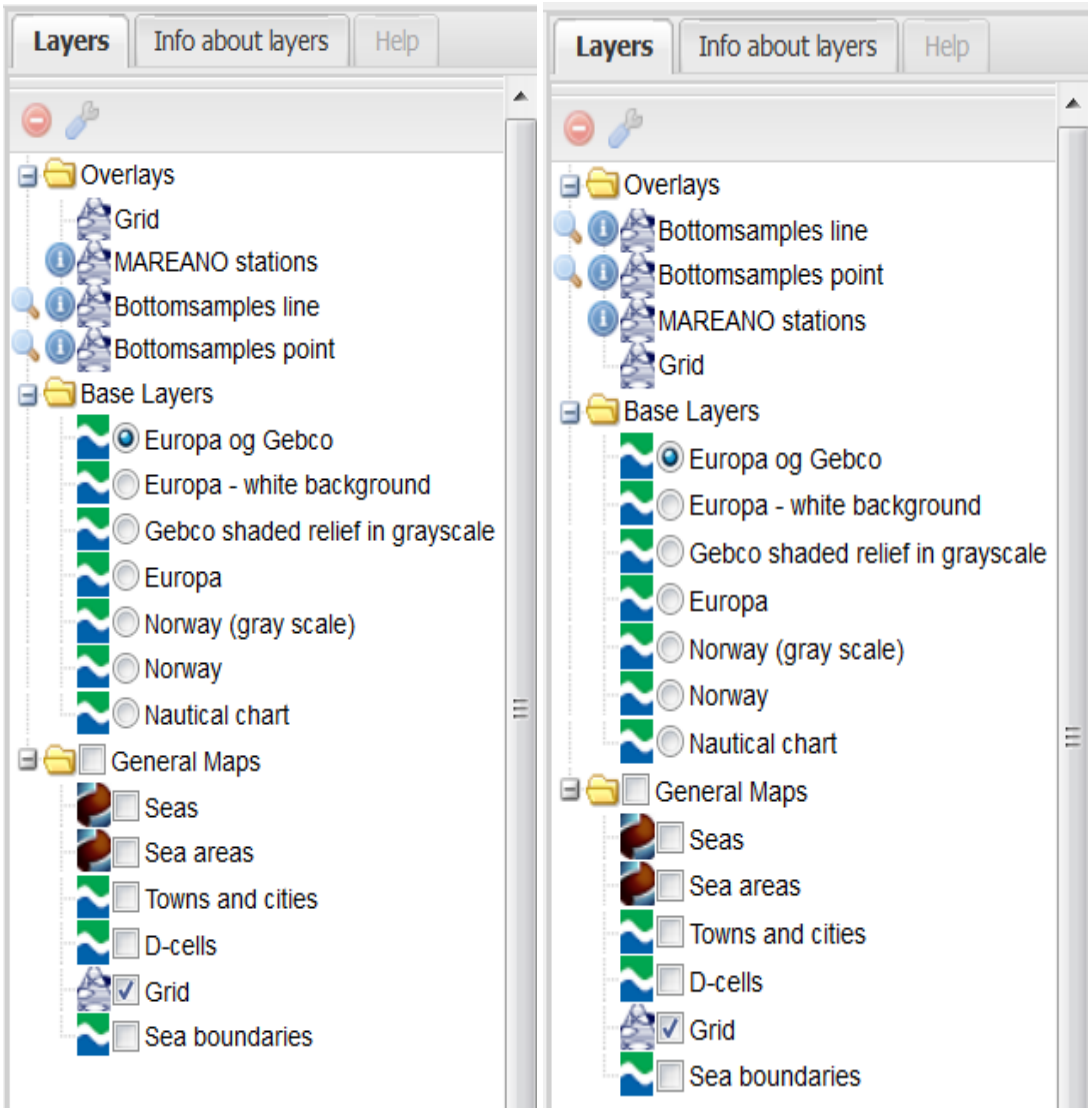
The default base layer is Europe and Gebco.

General Maps

The General Maps folder contains general overlay maps as grids. When selected the layer is displayed in the Overlays folder.

Layer order

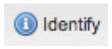
Layers in the *Layers* panel may be reordered to affect the rendering, or draw, order. To change the layer order, click and drag the layers in the *Overlays* list in the *Maplayers panel*. The layers will be rendered in the order in which they are listed—the layer at the top of the list will display on the top of all of the other layers, the next layer will be drawn below that, and so on. The selected base layer will *always* be drawn beneath all *Overlays* layers. General Maps will always initially be rendered on top of the layers in the Overlays folder and the Base Layer, but can be moved as the other layers in the Overlay folder.



Change the drawing order to the layers in the Overlays folder by drag and drop.

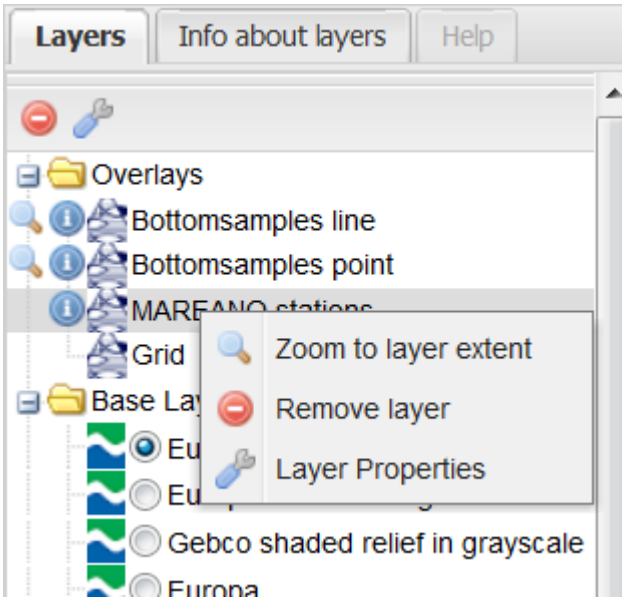
Layerspanel toolbar

The *Layers* panel toolbar provides access to the following tools:

Button	Name	Description
	*Remove layer*	Removes the currently selected layer from the list
	Zoom to layer extent	Zooms to layer extent
	*Layer Properties*	Displays the *Layer Properties* for viewing and the properties of the selected layer (layer name, title and description). For attribute information, use the Get feature info tool.
	This layer got Feature info	The i mark shows that the map layer got attribute information. Use the tool  get feature info to show the attribute information.

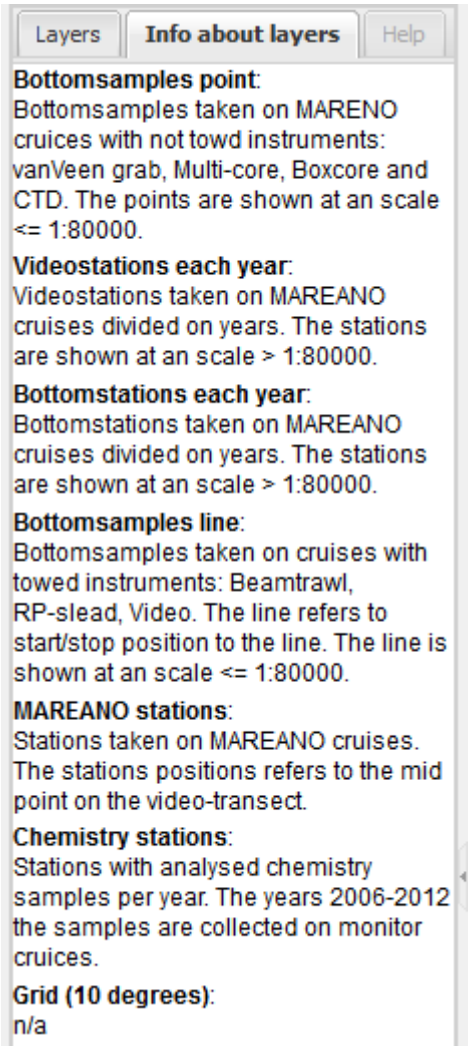
Layers panel shortcut menu

You can also right-click an entry in the layers list to display a shortcut menu.



Layer shortcut menu

Info about layers



Info about layers

The Info about Layers panel displays the properties of the currently selected layers, including layer name and description.