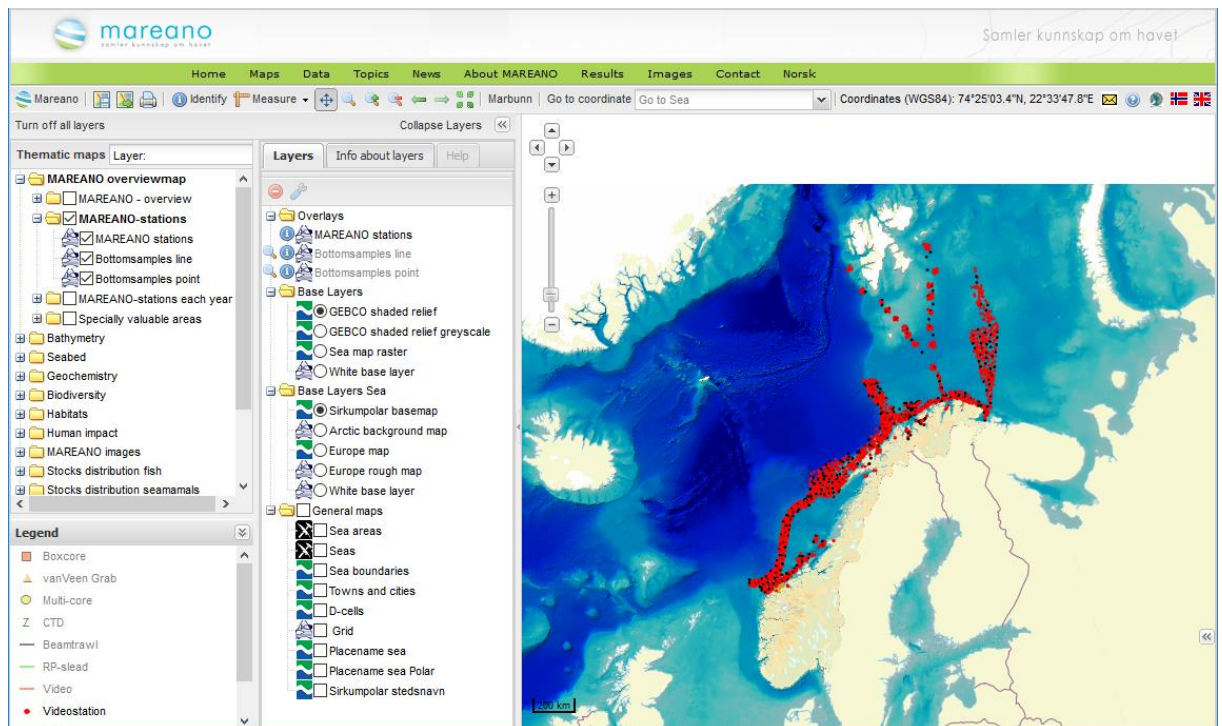


## Explanation to the MAREANO map client

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 / Base Layers Sea and on the bottom general maps), Info about layers folder (shows active layers metadata) and help folder.



MAREANO map client workspace

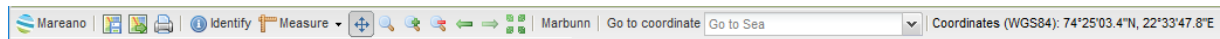
### Map Window

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.


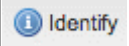
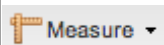



## Tools in the toolbar:



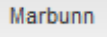
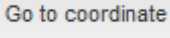
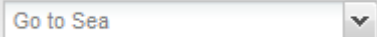
### Main toolbar



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

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

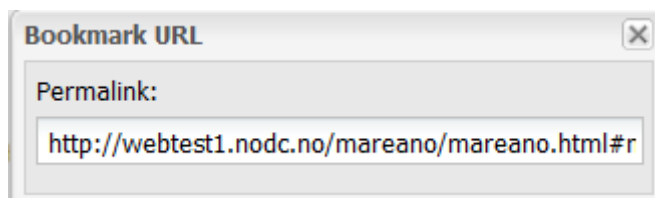


#### *Save map tool*

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 (internetaddress) 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.

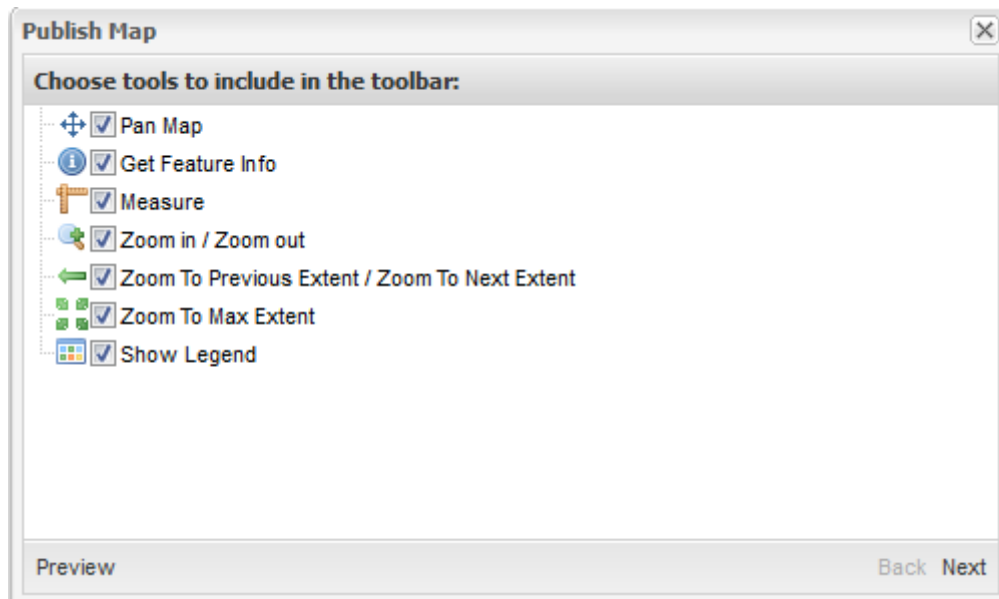
Click *Publish Map* button on the *GeoExplorer toolbar* to display the *Publish map* dialog box.



### *Publish map tool*

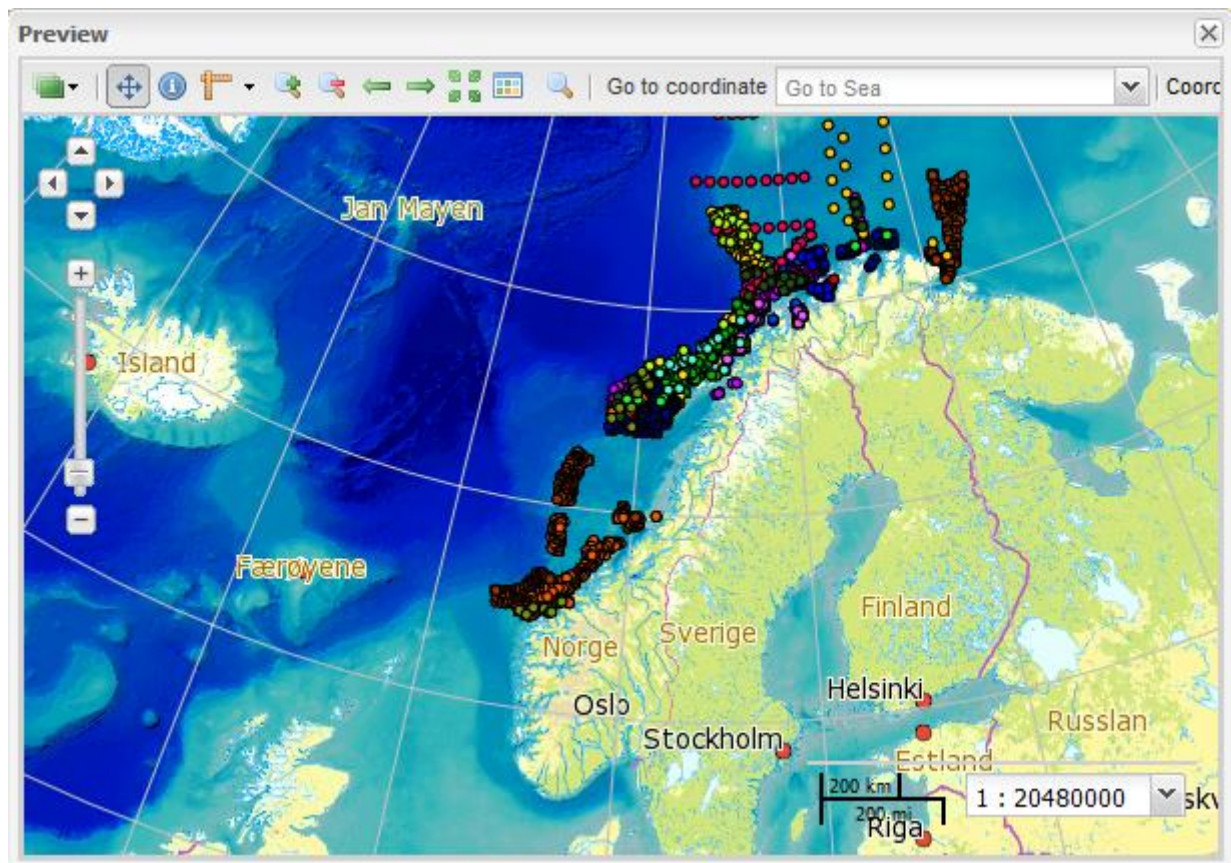
#### Tool selection

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:

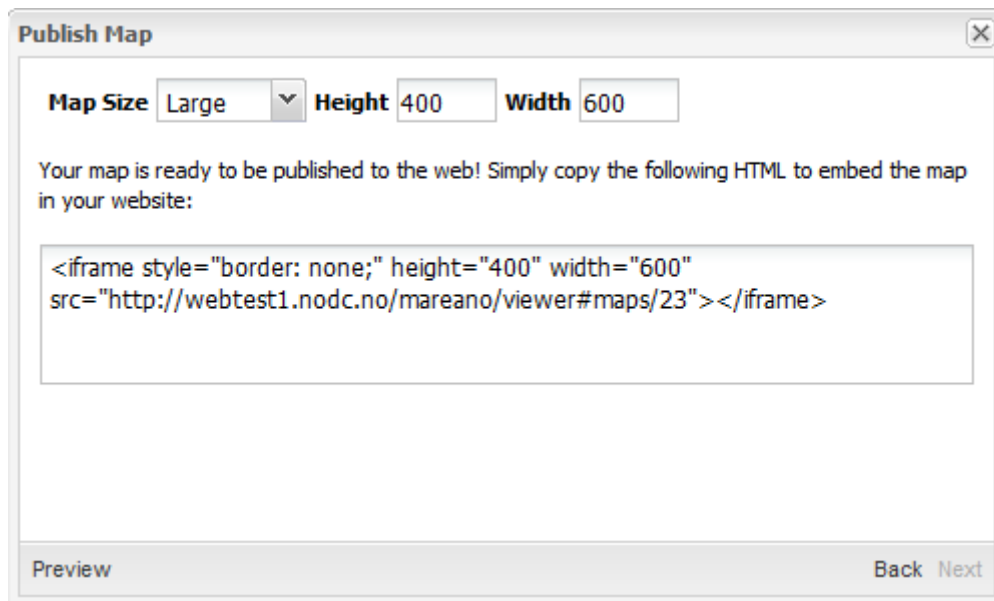
Button	Name	Description
	Layer Switcher	A List of available <i>Overlays</i> and <i>Base Maps</i> . Click a layer in the list to switch the map display to that layer.
	About this Map	Displays information about the GeoExplorer Mareano application

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

### HTML generation

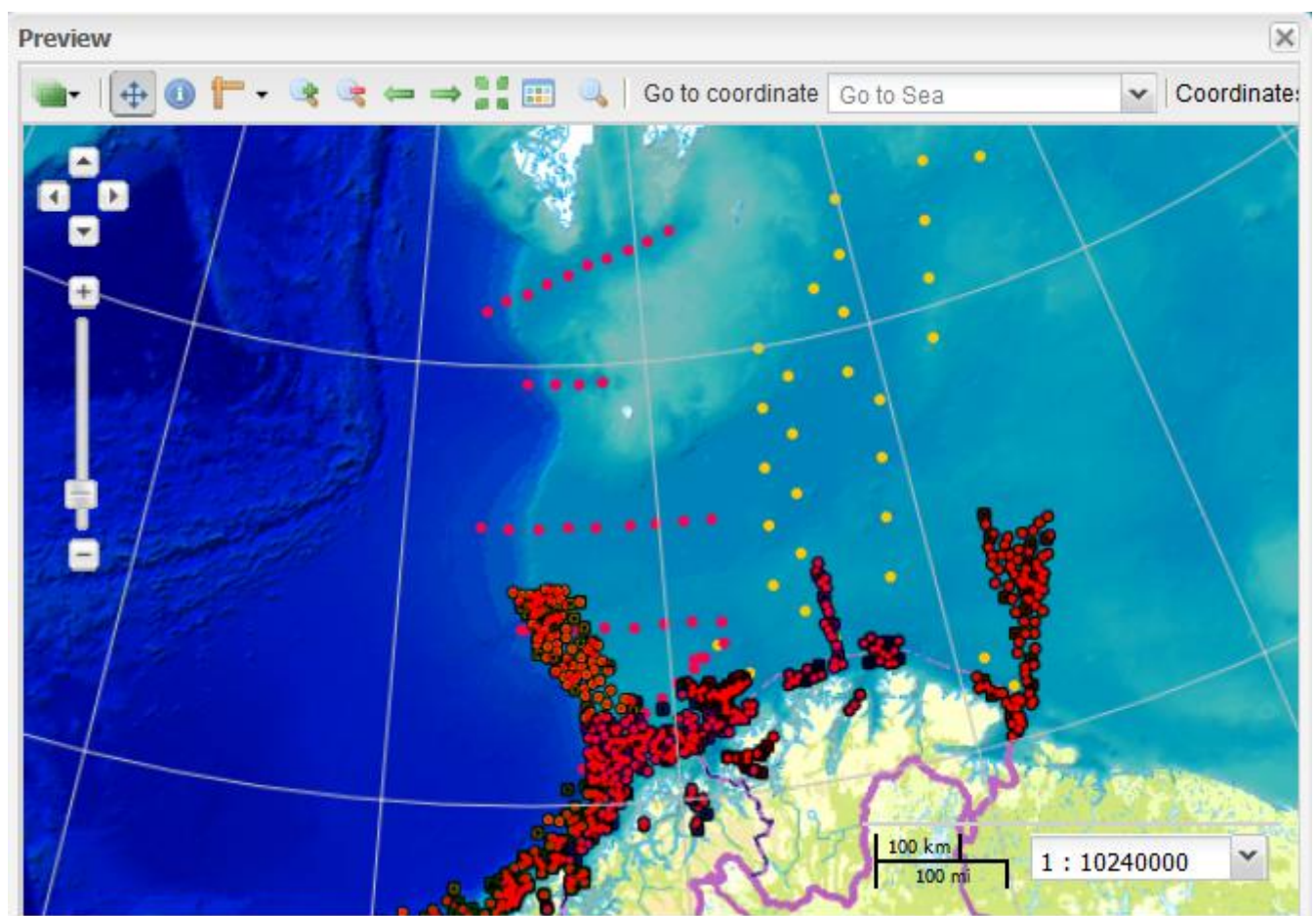
The next panel will contain the HTML code for your map application. The predefined *Map Size* options are *Mini* (100x100 px), *Small* (200x300 px), *Large* (400x600 px), and *Premium* (600x800 px). You can adjust the *Height* and *Width* settings as required.





### *Generating HTML code*

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

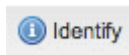


### *Published map*

## Get Feature Info

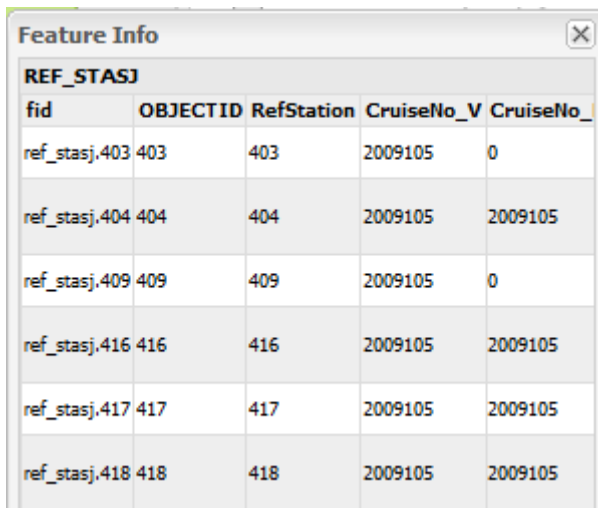
The Get Feature Info tool will return attribute information for any features, in all visible layers, identified at a given location in the *Map Window*.

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.

The image shows a 'Feature Info' dialog box with a title bar and a close button. It contains a table with five columns: 'fid', 'OBJECTID', 'RefStation', 'CruiseNo\_V', and 'CruiseNo\_'. The table has six rows of data, each representing a different feature identified at a specific location.

REF_STASJ				
fid	OBJECTID	RefStation	CruiseNo_V	CruiseNo_
ref_stasj,403	403	403	2009105	0
ref_stasj,404	404	404	2009105	2009105
ref_stasj,409	409	409	2009105	0
ref_stasj,416	416	416	2009105	2009105
ref_stasj,417	417	417	2009105	2009105
ref_stasj,418	418	418	2009105	2009105

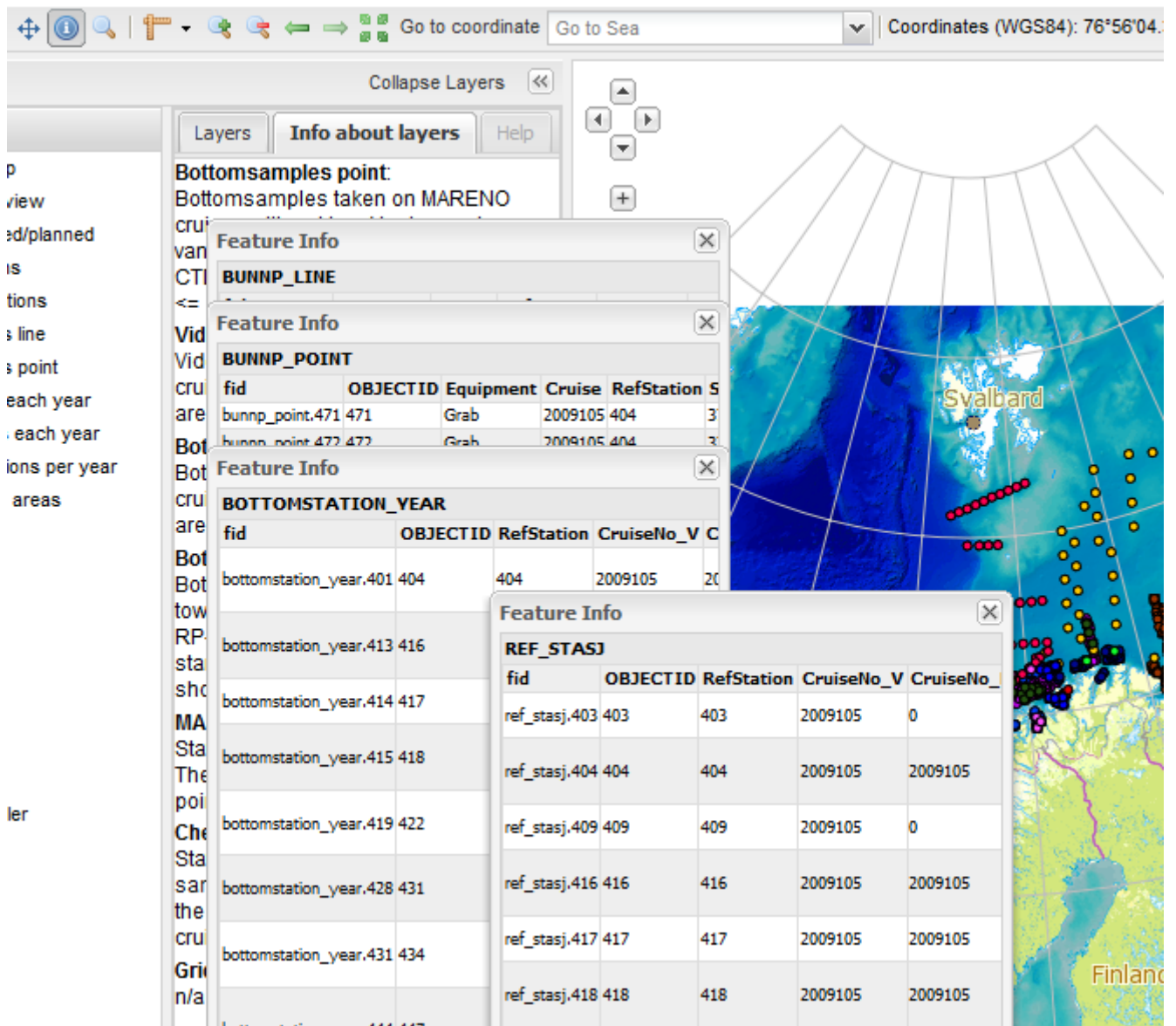
### *Get Feature Info* tool

#### 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

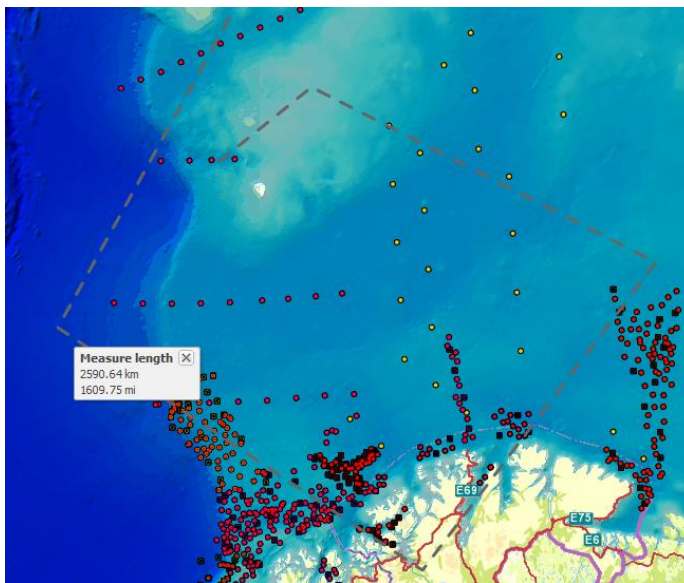
The *Length* tool will measure directly on the *Map Window*. The measurement value represents the sum of one or more line segments or curves.

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



*Length measure tool*

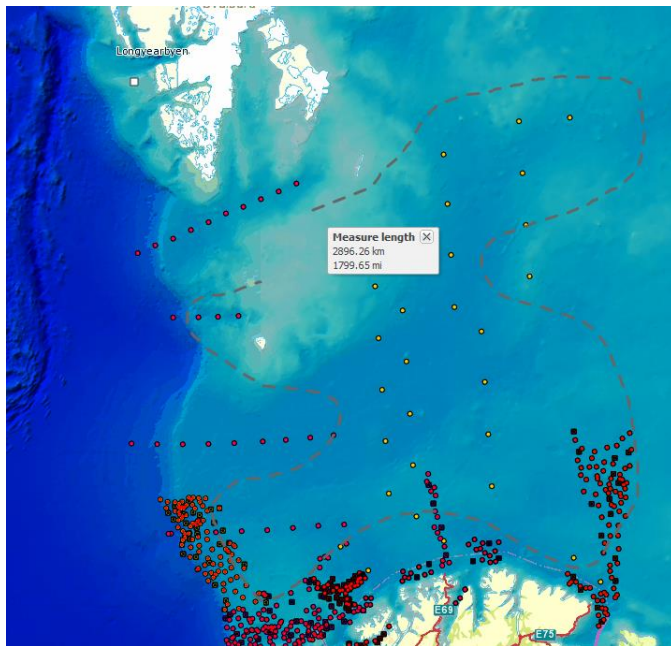
2. To start the measurement, click a location on the map. As you move the mouse from that location, a dashed line will extend from the initial point. Click somewhere else on the map to create a second point. The length of the line segment between the two points will be displayed (in both kilometers and 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.

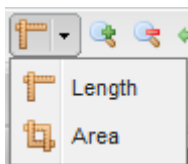


*Length measurement with freehand drawing*

## Area

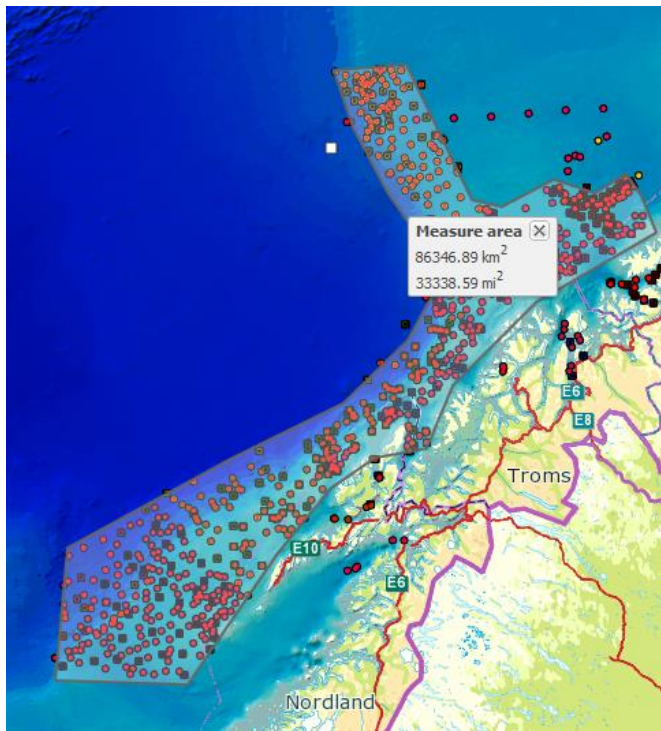
The *Area* tool measures directly on the *Map Window*. The measurement value represents the area of a polygon made up of one or more line segments or curves.

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



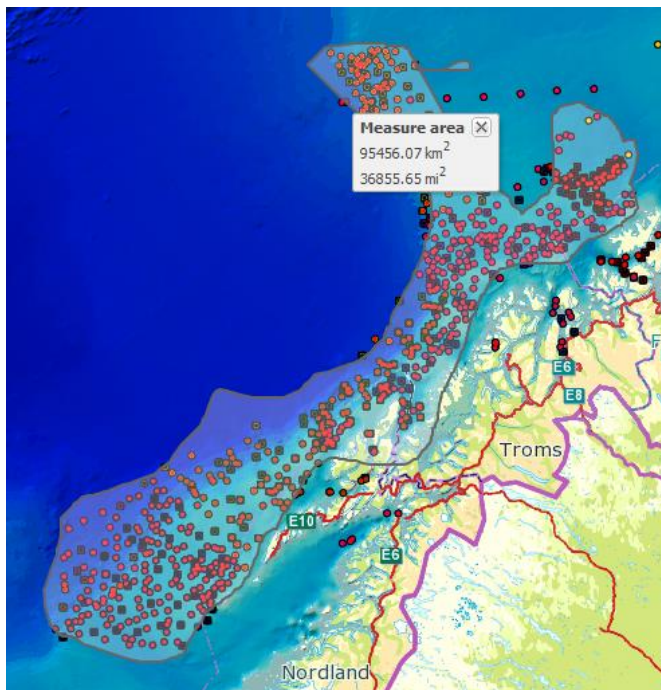
*Area measure tool*

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*



## Marbunn

In Marbunn data over observed species from Mareano can be viewed and downloaded.



Species list from Mareano

[Contact](#)

### View and download species list

**Observations from Video**  

Lophelia pertusa

Select species to view in the map

Download

**Observations from Samples**  

Select species to view in the map

Download

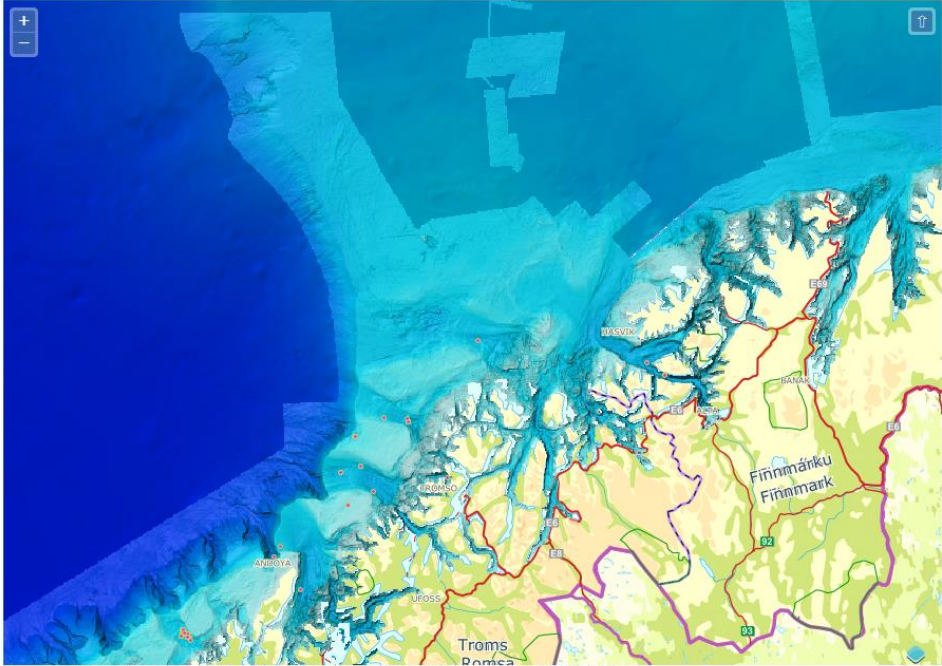
**Cruises**  

Cruises

Filter selected species by cruise

**Video**  
Lophelia pertusa

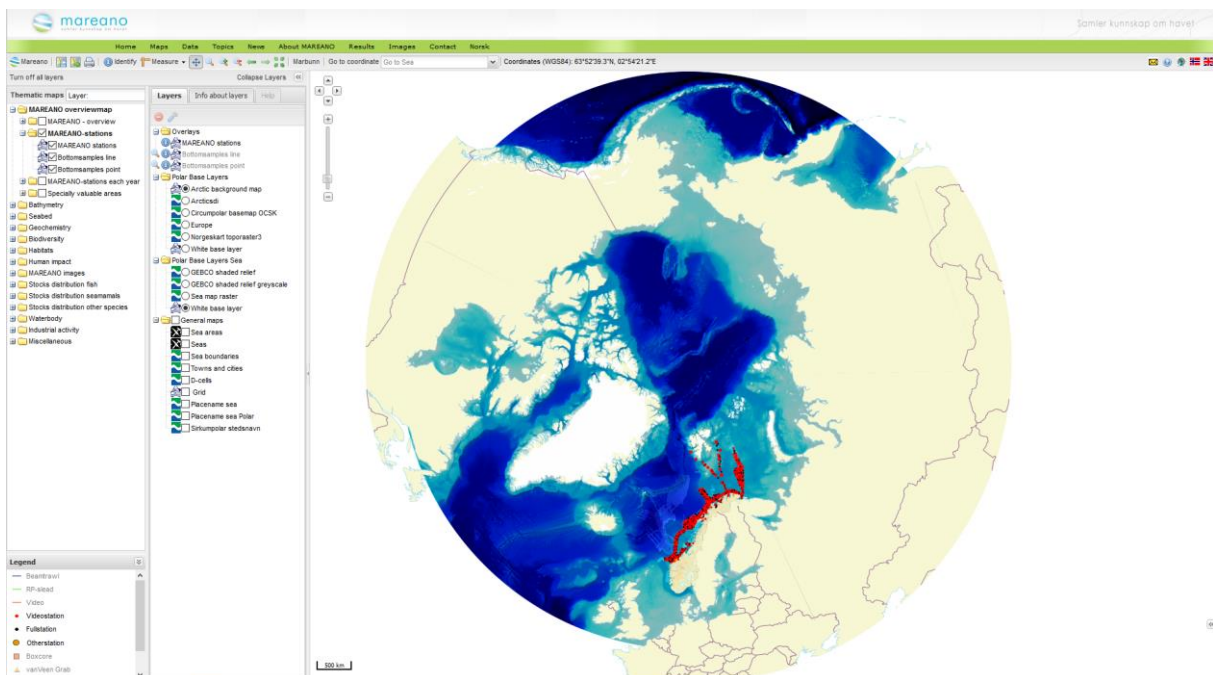
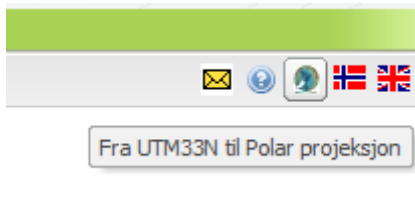
**Sledge, beamtrawl and grab**



The biological Mareano data can also be downloaded through [EMODnet Biology](#).  
Search for Mareano.

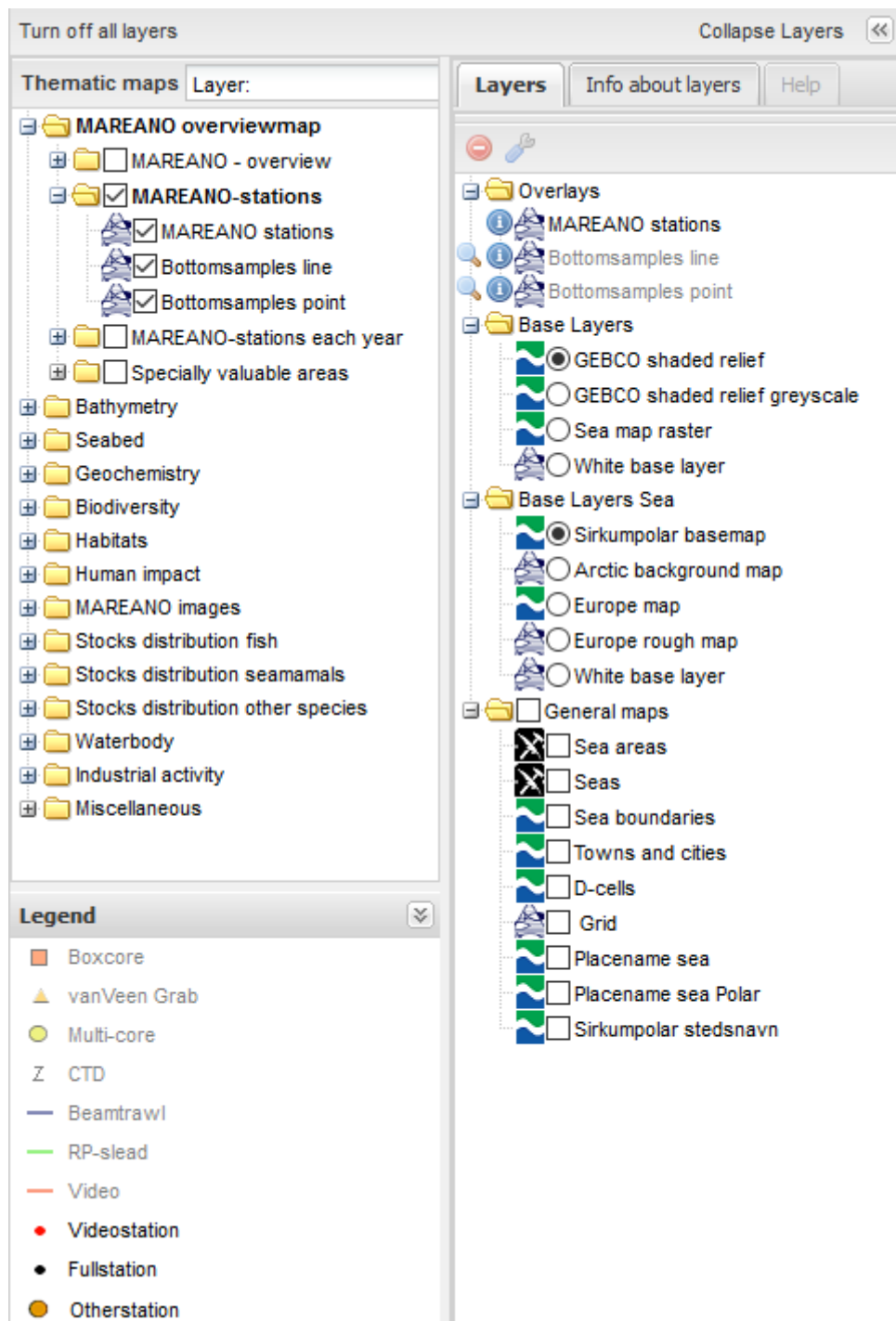
## From UTM33N to Polar projection

By pressing the globus button you change the projection to the Mareano map from UTM33 to Polar projection. In the Polar projection the whole area around the North pole is shown.





## 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 / base layers sea 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 four folders Overlays, Base Layers, Base Layers Sea 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

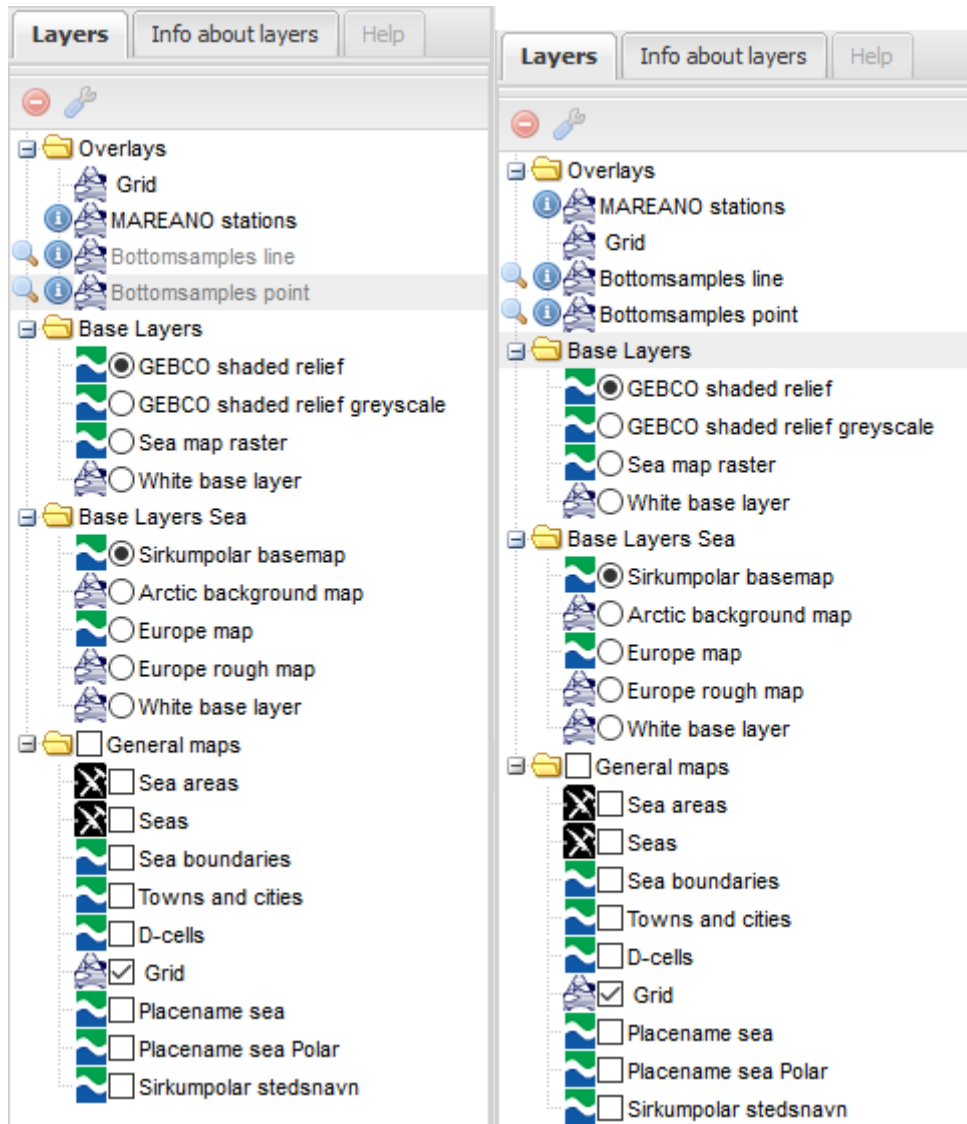
The *Base Layer / Base Layer Sea* folders contains base, or background, layers. A base layer will always be drawn beneath all other *Overlays* layers. Although only two base layers can be active at any time, it is multiple base layers in the list. It is also possible to drag layers between the *Base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

## 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 layers 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.

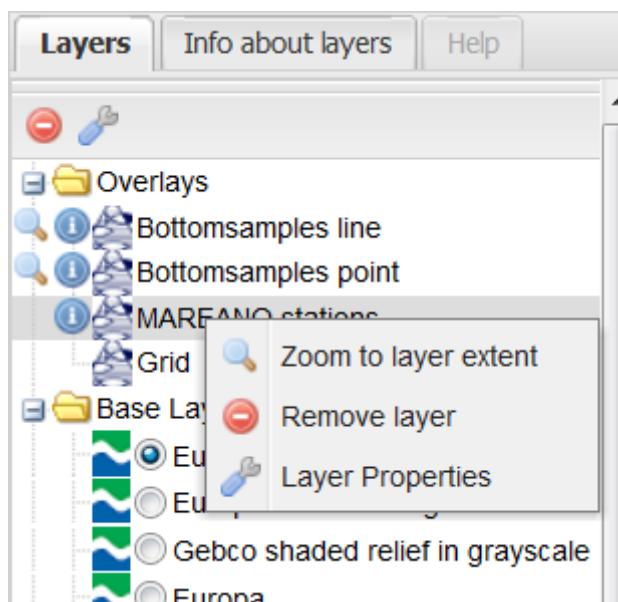
## Layerspanel toolbar

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

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

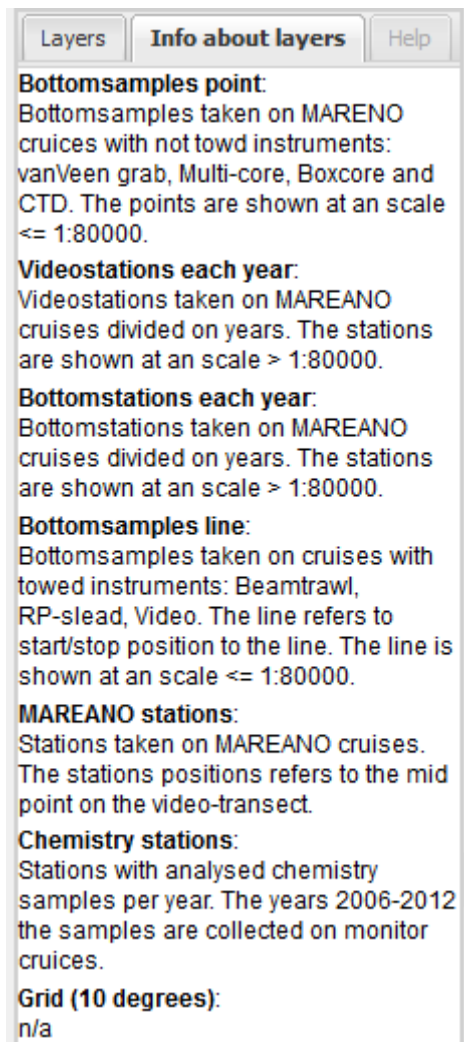
## Layers panel shortcut menu

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



*Layer shortcut menu*

## Info about layers



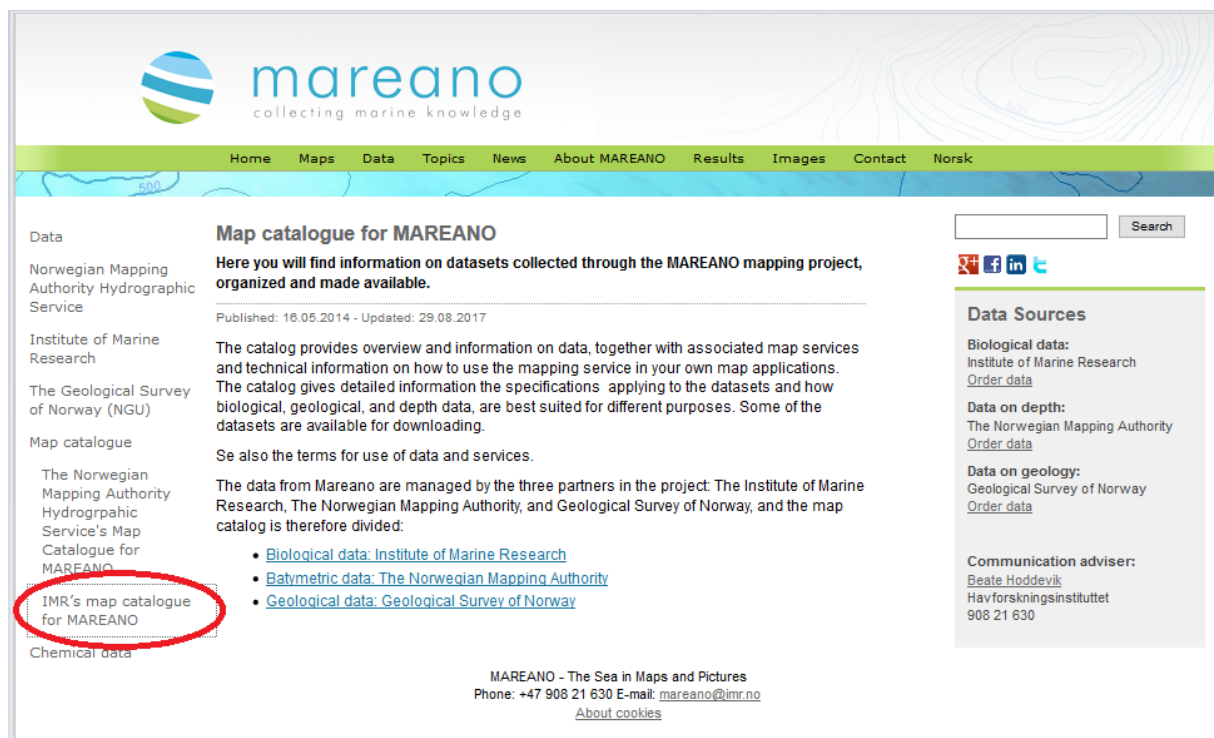
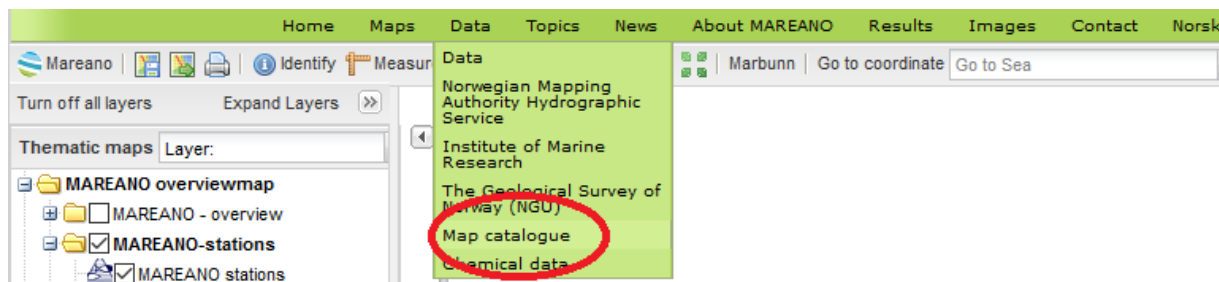
### *Info about layers*

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

## Map catalog and data download

Beneath the menu header Data in the green menu line at the top of the map client you will get information on how you can download data from Norwegian Mapping Authority Hydrographic Service, Institute of Marine Research and The Geological Survey of Norway. Also links to map catalogs are available. By following the links shown below you will get to the IMR map catalog.

It is explained how you can preshow each map layer, search for map layers in Geoserver and metadata in Geonetworks.





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Norsk

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Norwegian Mapping Authority Hydrographic Service

Institute of Marine Research

The Geological Survey of Norway (NGU)

Map catalogue

The Norwegian Mapping Authority Hydrographic Service's Map Catalogue for MAREANO

IMR's map catalogue for MAREANO

Chemical data

IMR's map catalogue for MAREANO

The map catalogue gives an overview of the institute's Mareano map layers, possibility to download data available meta data.

Published: 16.05.2014 - Updated: 16.02.2017

The map catalogue:

Show map layers Geoserver: Shows the map layers in the Geoserver map preview window. Click the features in the map to see the attributes.

Downloading data Geoserver: Open the Layer preview catalogue. Insert the map layer's Geoserver name in the search box, choose the wanted map layer to download in the "Select one"-box, go to the bottom and choose "shape-file".

Please note: Firefox is only recommended for downloading.

Metadata Geonetworks: For some map layers, there are metadata on the Institute of Marine Research's Geonetworks metadataport. In Geonetworks, the name of the map layer must be written in the search box "What?", then click on "Search".

The services/maps can be used freely under the following terms:

- If the customer/user wants to include the map services/data in their own solutions, the organized map services shall be used directly.
- Registration form should also be filled in.
- When using our map services/data, the source must always be specified.
- If the map services/data are to be used commercially, the Institute of Marine Research must be contacted in advance.

Connecting to Geoserved: URL for connecting to WMS and WFS servers: <http://maps.imr.no/geoserver/ows?>

Kartgruppe	Kartlag	Geoserver-navn	Vis kartlag Geoserver	Datanedlasting Geoserver	Metadata Geonetworks
Sea currents	Arctic water	arctic_water	<a href="#">Link</a>	<a href="#">Link</a>	<a href="#">Link</a>
	Costal water	costal_water	<a href="#">Link</a>	<a href="#">Link</a>	<a href="#">Link</a>
	Atlantic water	atlantic_water	<a href="#">Link</a>	<a href="#">Link</a>	<a href="#">Link</a>
	Polar front	polar_front	<a href="#">Link</a>	<a href="#">Link</a>	<a href="#">Link</a>
Vulnerable habitats	Hardbunns-korallskog	Hardbunnskorallskog	<a href="#">Link</a>	<a href="#">Link</a>	
	Svampspikel-bunn	Blotbunn_svampsamfunn	<a href="#">Link</a>	<a href="#">Link</a>	
	Sjofjaerbunn	Sjofjaerbunn	<a href="#">Link</a>	<a href="#">Link</a>	
	Hardbunns-svampsamfunn	Hardbunns-svampsamfunn	<a href="#">Link</a>	<a href="#">Link</a>	
	Blotbunnskorallskog	Blotbunnskorallskog	<a href="#">Link</a>	<a href="#">Link</a>	
	Dypvannsjofjaer	Dypvannsjofjaer	<a href="#">Link</a>	<a href="#">Link</a>	
	Glassvampbestander	Glassvampbestander	<a href="#">Link</a>	<a href="#">Link</a>	
Biodiversity from video	Artsmangfold fra video	AntallArterFraVideo	<a href="#">Link</a>	<a href="#">Link</a>	
Top-ten species	Topp 10 arter	topp_10_arter	<a href="#">Link</a>	<a href="#">Link</a>	

Search

Questions?

Please contact the Norwegian Marine Data Centre at the Institute of marine Research if you have any questions about the map catalogue.

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