

Description of the SEAFOODplus map service

This service is used to transfer any given nautical position (a catch position, for instance) to easily understandable maps. The maps can for instance be used by retailer shops and home delivery services to show catch areas to the end consumer.

The service is free and available for everyone to use. The service is provided from a DIFRES online server.

The nautical positions defined in the TraceFish technical standard (www.tracefish.org) are used as the basis.

For a given position, two maps will be made available as shown in Figures 1 and 2: an overview map and a more detailed map.

Figure 1. Overview map.

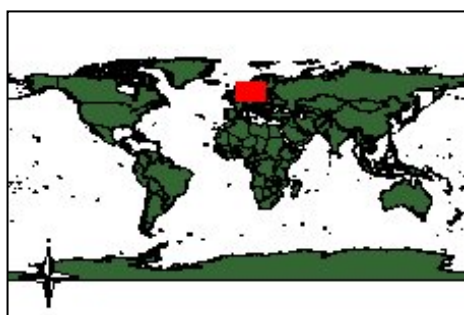


Figure 2. Detailed map.



You can test the SEAFOODplus map service yourself using this link:

<http://gis01.dfu.min.dk/tracefish/webformEng.aspx>

A similar Danish test version is available here: <http://gis01.dfu.min.dk/tracefish/webform1.aspx>

The map service can also send the maps produced from the given nautical positions to your email address.

If you want to incorporate the map service into other software packages, you can use the guidelines described below.

Reference:

Peter Sandbeck Dept. of IT and Engineering DIFRES and

Marco Thorup Frederiksen, Dept. of Seafood Research DIFRES, 2007.

The developers/authors take no responsibility for the content of this file.

The SEAFOODplus map service has been developed as a part of the SEAFOODplus project 6.1 Methods.

Technical introduction (aimed at software engineers)

The SEAFOODplus map service is an XML Web service, which produces map files based on a set of coordinates. The Web service offers one method, called MapInMail, with the following profile:

```
<summary>
    Creates a map and an overview map showing the position of a coordinate set. The two maps
    are sent to the email address as attached jpeg files. Returns a http reference to the detailed
    map. In case of an error, a reference to the error picture is returned
</summary>
<param name="strMail">The email address</param>
<param name="lonDegree">Longitude degree</param>
<param name="lonMinute">Longitude minute</param>
<param name="lonSecond">Longitude second</param>
<param name="latDegree">Latitude degree</param>
<param name="latMinute">Latitude minute</param>
<param name="latSecond">Latitude second</param>
<author>Peter Sandbeck, Danish Institute for Fisheries Research</author>
<updated>04/02/2005</updated>
```

The format of the coordinates is the TraceFish format for coordinates.

Output from the Web service

The Web service produces a detailed map showing the position as a red square and an overview map showing the map envelope of the detailed map on a world map (see Figure 1 and 2). The maps are automatically sent to the email address in the strMail parameter. If the strMail parameter is empty, no maps are sent. The Web service returns the URL of the detailed map. If the map production fails, an URL of the error image is returned and this error image is also sent to the email address.

Implementation

The maps are produced by an ESRI ArcIMS map service on the Web service server. The basic map has two layers, the world map and a worldwide net of squares with the size of $\frac{1}{2} * \frac{1}{2}$ degree. The web service finds the square according to the position, and shows the square on the map. The map envelope is 12*8 degrees with the position in the middle, if possible. The overview map shows the map envelope as a square on the world map. Since it is not possible to show the two maps as a composite image, both images are sent to the email address.

The web service is a .Net XML Web service programmed in C#. The web service requests the map service in an ArcXML request, gets the map URL from the ArcXML response and sends the image files as attached files in the email. The format of the image files is JPEG.

Use of the web service in programs

The web service can be consumed by a program in two ways. In a .Net program, a reference to the web service can be defined. The address of the web service is:

<http://gis01.dfu.min.dk/Webservice1/tracefishmap.asmx>

The “Tracefish map service“ is exactly the same as the “SEAFOODplus map service”

Another way is to include the tracefishMap dll in the project, and call the method in this dll. The calling program must implement a code to retract the files from the received emails.