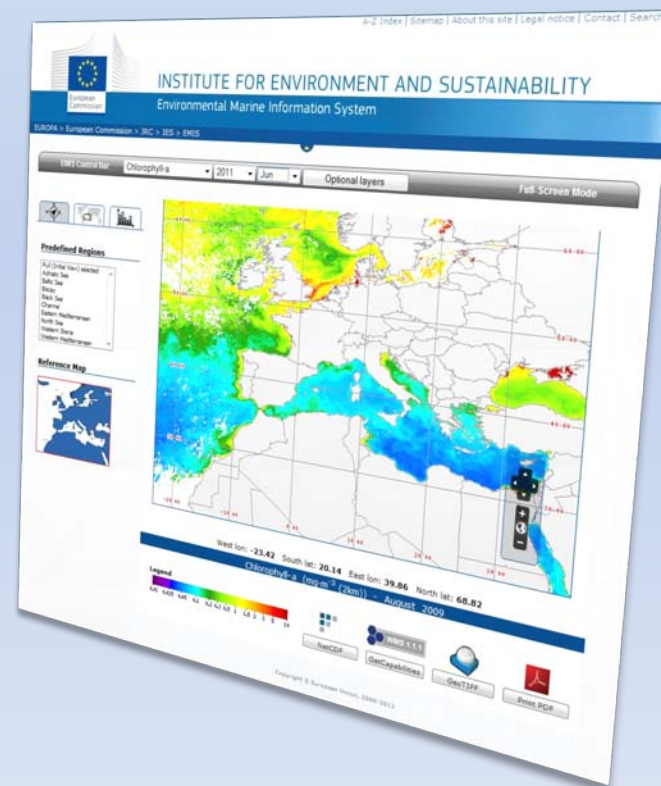


EMIS & AMIS - GIS functionalities tutorial

Environmental Marine Information System (EMIS)
<http://emis.jrc.ec.europa.eu>

African Marine Information System (AMIS)
<http://amis.jrc.ec.europa.eu>

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Presentation of the GIS main functionalities

Visualization and analysis of a variable is performed through the following steps:

1. Variable selection (*Control Bar*)

Variables? ▼ 1990 ▼ Jan ▼

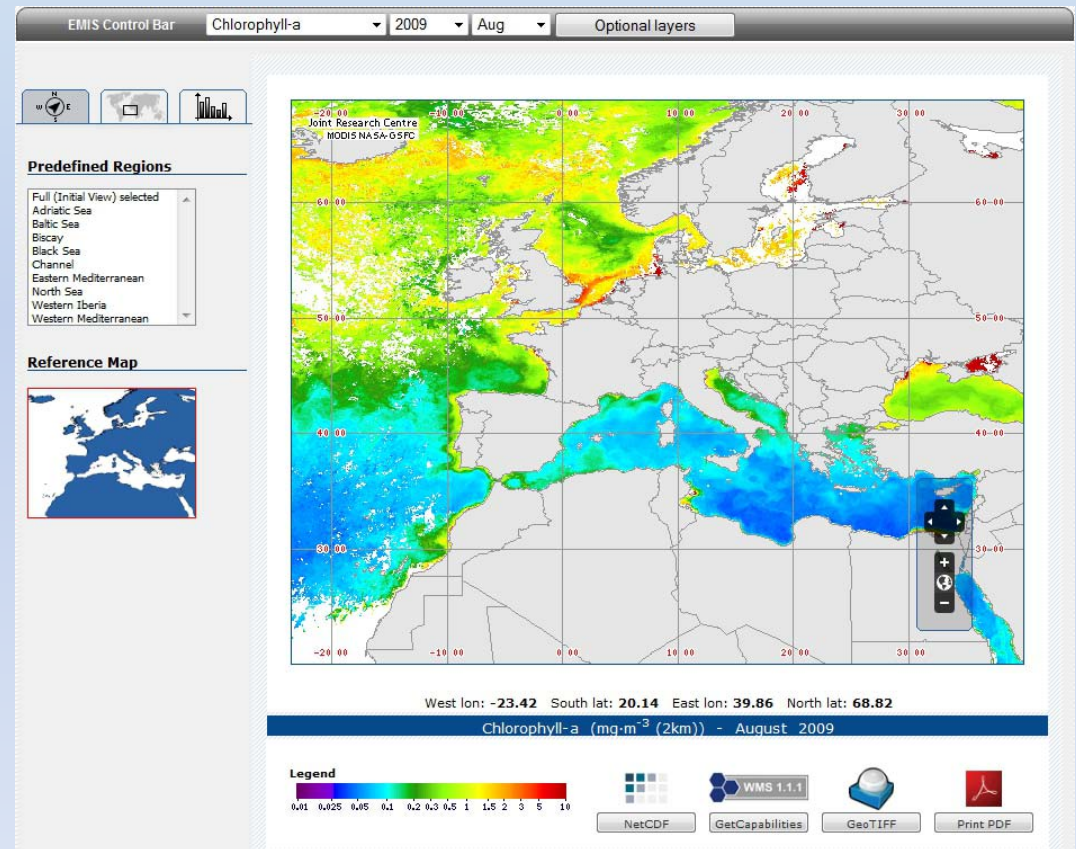
2. Map Navigation (*Tab1*)

3. Definition of a Region of Interest (*Tab2*)

4. Statistical Analysis (*Tab3*)



These operations should be performed in the logical order they appear above; it is nevertheless possible to freely navigate through the different points, with some limitations and cautions.



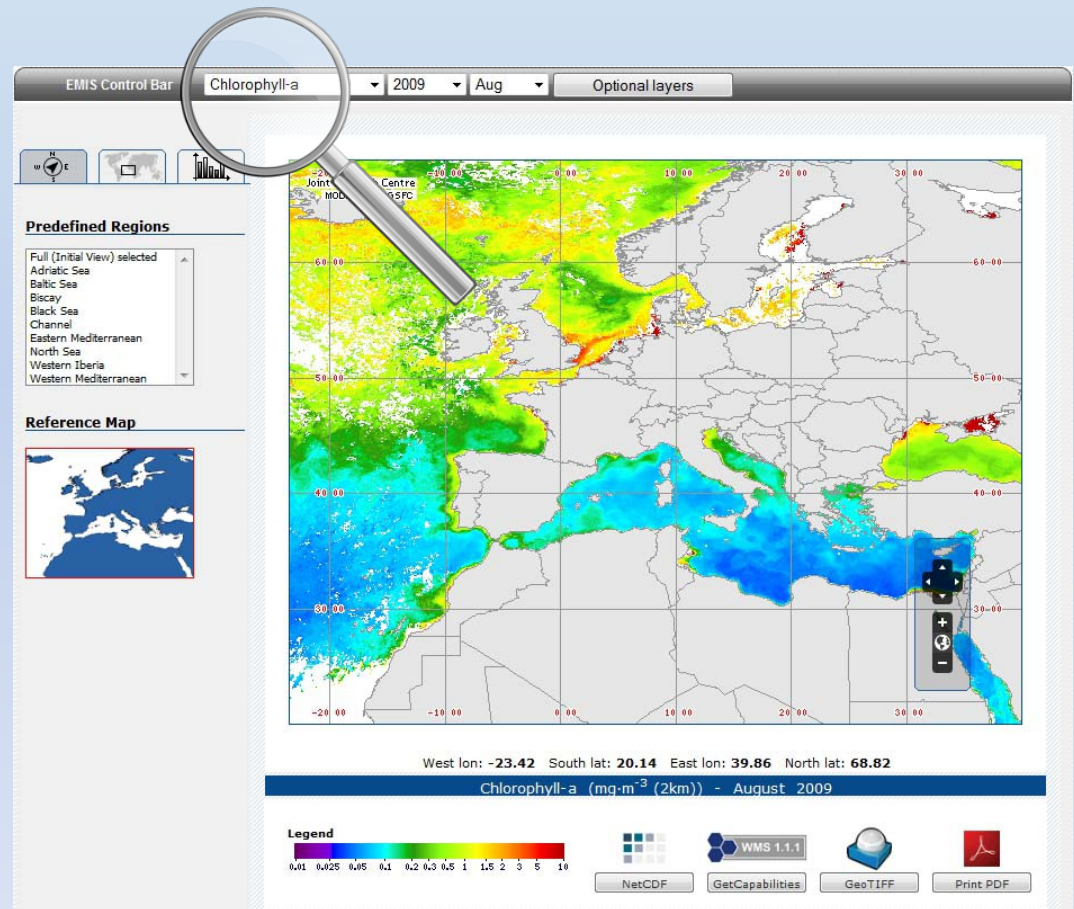
Variable selection

The first pop-up menu of the *Control Bar* allows the selection of the variable to display. You can only select one variable at a time.

Time selection: some variable are defined for every month and year (e.g. Chl-a), others as monthly mean over the available years (i.e. climatology), while bathymetry is, of course, constant (no time selection possible).

The list of available years/months is dynamically updated according to the archived data.

Optional layers: additional layers (lat/lon grid, rivers, basin catchments, country borders, ...) can be activated through the check boxes.



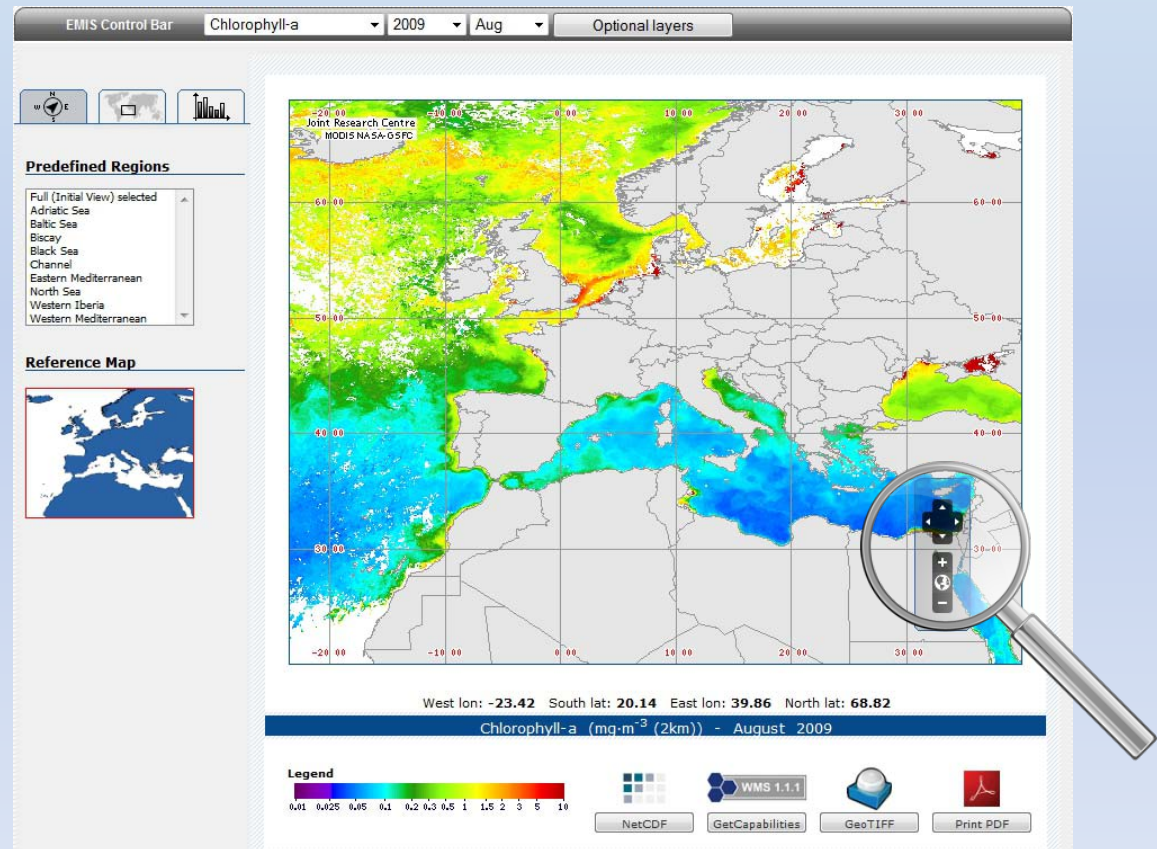
Map navigation (Tab1 & navigation tool)

You can browse the map by using on the navigation tool.

Pan: By clicking on the arrows (W/E/S/N), you can change the displayed region.

Zoom: If Zoom in (+) is selected and you click to a point on the map, this pixel is assumed as center of the new map, which is magnified. Zoom out (-) does the opposite and a click on the earth icon displays the initial map.

Predefined regions: A list of predefined regions is also available in order to easily visualize the main European basins.



Definition of the Region of Interest (Tab2)

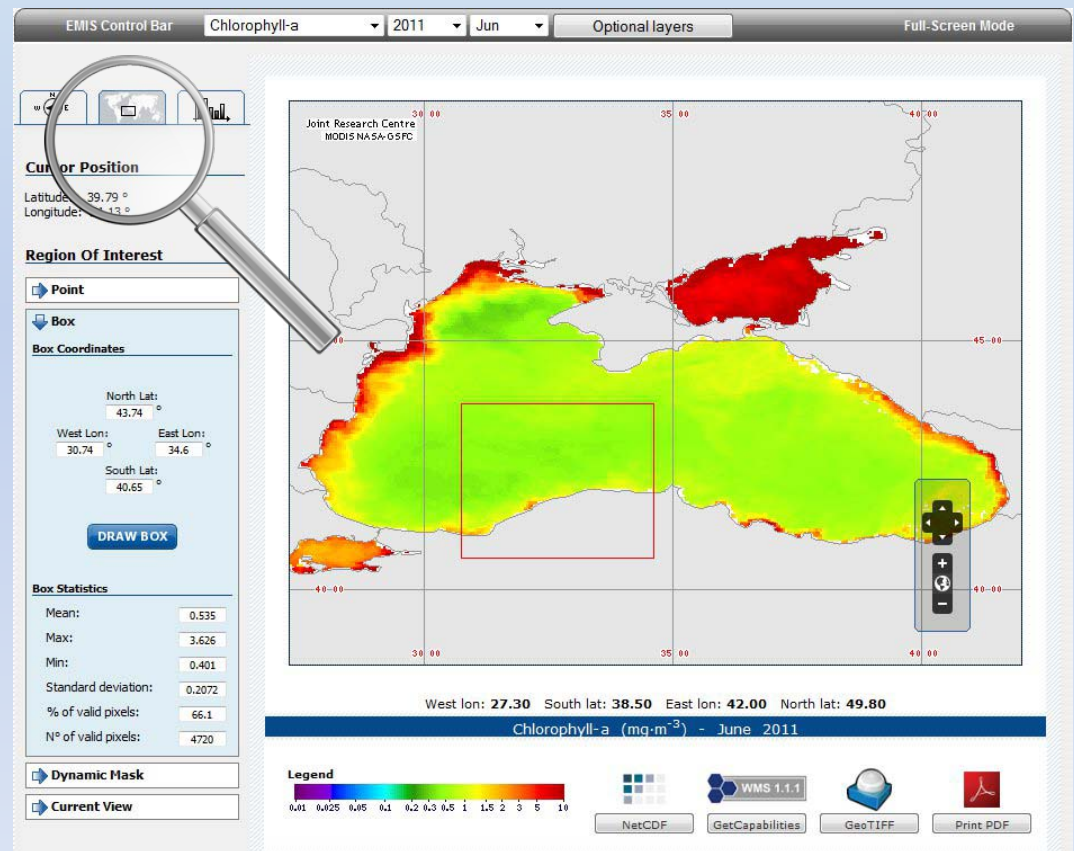
In order to perform any statistical analysis, you have, first, to define a Region Of Interest (ROI). To do it, display the ROI menu by clicking on the second tab. Then, you can choose between:

Point: A single geo-located pixel.

Box: A rectangular area, selected either by the mouse or by entering lat/lon boundaries.

Dynamic Mask: A dynamic mask defined by a condition on the selected variable. You can identify, e.g., all the pixels where SST exceeds a threshold value and use this set of points for further queries to the same variable, or to a different one.

Current View: The region currently represented in the display area.



Statistical analysis (Tab3)

There are different kinds of statistical analysis, which are *always performed on the selected R.O.I.*, whose definition is reported at the top of the left bar.

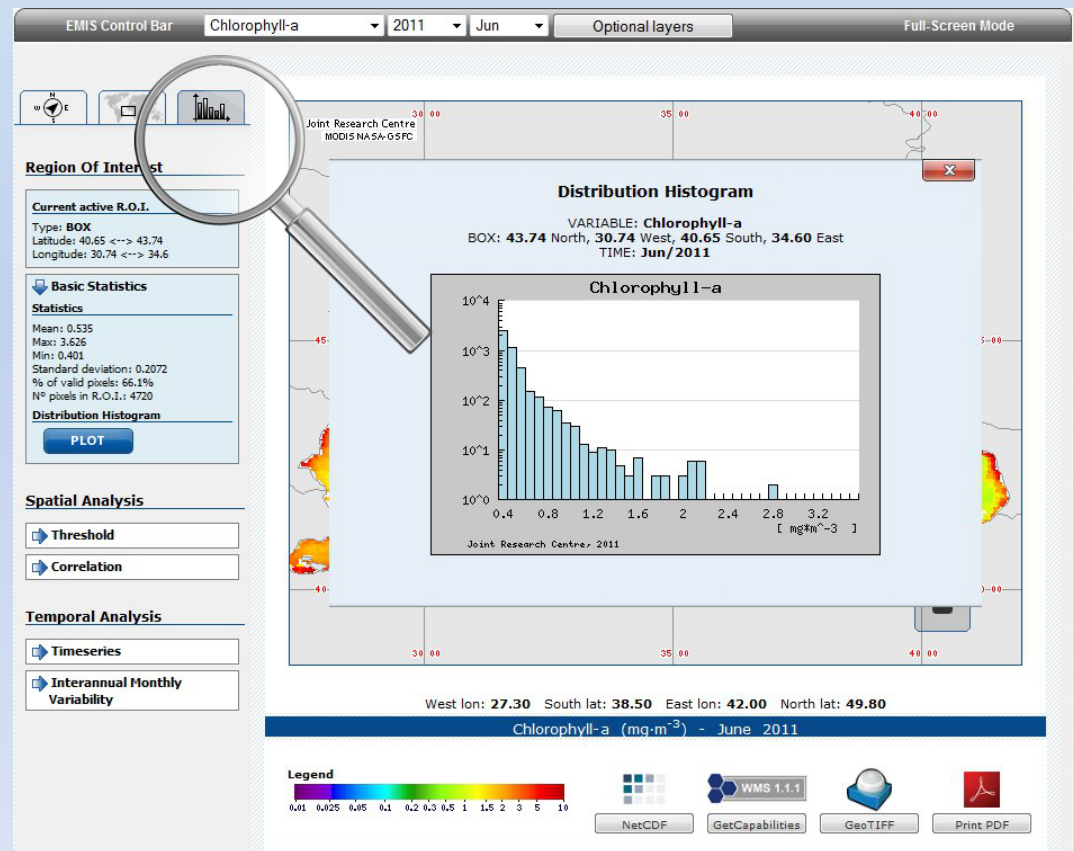
Note that some analysis cannot be performed on all R.O.I. types (e.g., correlation analysis on a single point does not make sense) and, in this case, the options are automatically deactivated in the menu. If the R.O.I. selected is a box, all kinds of analysis are allowed.

There are three types of Statistical Analysis:

Basic Statistics (min, max, mean, std, histogram).

Spatial Analysis (Threshold, Correlation).

Temporal Analysis (Timeseries, Interannual Monthly Variability).



Online (WMS) and Download services

For each selected variable, it is possible to download :

the **NetCDF** dataset related to the variable,

a **geoTIFF** image of the displayed bounds,

a **PDF** document,

or to access the **WMS** service corresponding to the variable.

