

webODV Data Extractor HowTo

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This document describes briefly the basic functionality of the webODV Data Extractor.

General

We restrict the number of your webODV data extractor sessions or instances to **4**, i.e. you can only use this number of extractor instances simultaneously, e.g. in different browser tabs. For downloading data in the background we restrict the number of processes to **4**. Your session will be automatically closed after 1 h of inactivity. If this happens, we will save the current state of the extractor and inform you by a pop-up message. At the moment the current state of the extractor will be saved in your browser, i.e. it will be restored in a follow up session in the same browser as long as you do not delete your browser's cache.

1. Select cruises / domain / time range

The screenshot displays the webODV Data Extractor interface. At the top, the EMODnet logo and 'CHEMISTRY' title are visible, along with links for 'HELPDESK' and 'DATA PROTECTION NOTICE'. The breadcrumb path reads: 'webODV emodnet_chem > eutrophication > Arctic > Eutrophication_Arctic_profiles_2021.odv'. A navigation bar at the top contains four steps: '1. SELECT CRUISES / DOMAIN / TIME RANGE' (highlighted), '2. Select variables', '3. Download', and '4. Exit'. Below this, instructions state: 'Click *Zoom in* to define a sub-region, *Apply* to select the sub-region, or *Zoom out* to return to full domain. Select *Time Range* in the format mm/dd/yyyy.'

The main interface is divided into three columns. The left column contains controls for 'CRUISES' (869 ITEMS SELECTED), 'MAP DOMAIN' (ZOOM MODE, ZOOM OUT, FULL RANGE, GLOBAL), 'TIME RANGE' (from: 01/01/1850, to: 12/31/2021), and 'RESET' (PAGE, GLOBAL). The center column features a map of the Arctic region with a grid and a blue line indicating a selected cruise track. The right column shows 'SELECTION STATUS' (Stations: 114642 of 114721, Output variables: 10 of 16), 'EXPORT IMAGE' (Download), 'DATA PREVIEW' (Scatter plot), and 'SELECTED VARIABLES (OR)' (listing various water body parameters like dissolved oxygen, phosphate, silicate, nitrate, and nitrite).

At the bottom, a footer indicates '© Copyright 2020 - EMODnet - THE EUROPEAN MARINE OBSERVATION AND DATA NETWORK'.

To extract data you have to follow the four steps indicated on the top pager bar. The pages do not have to be visited by order, rather you can jump between them. Click with the left mouse button or use the keyboards arrow keys for navigation.

SELECTION STATUS

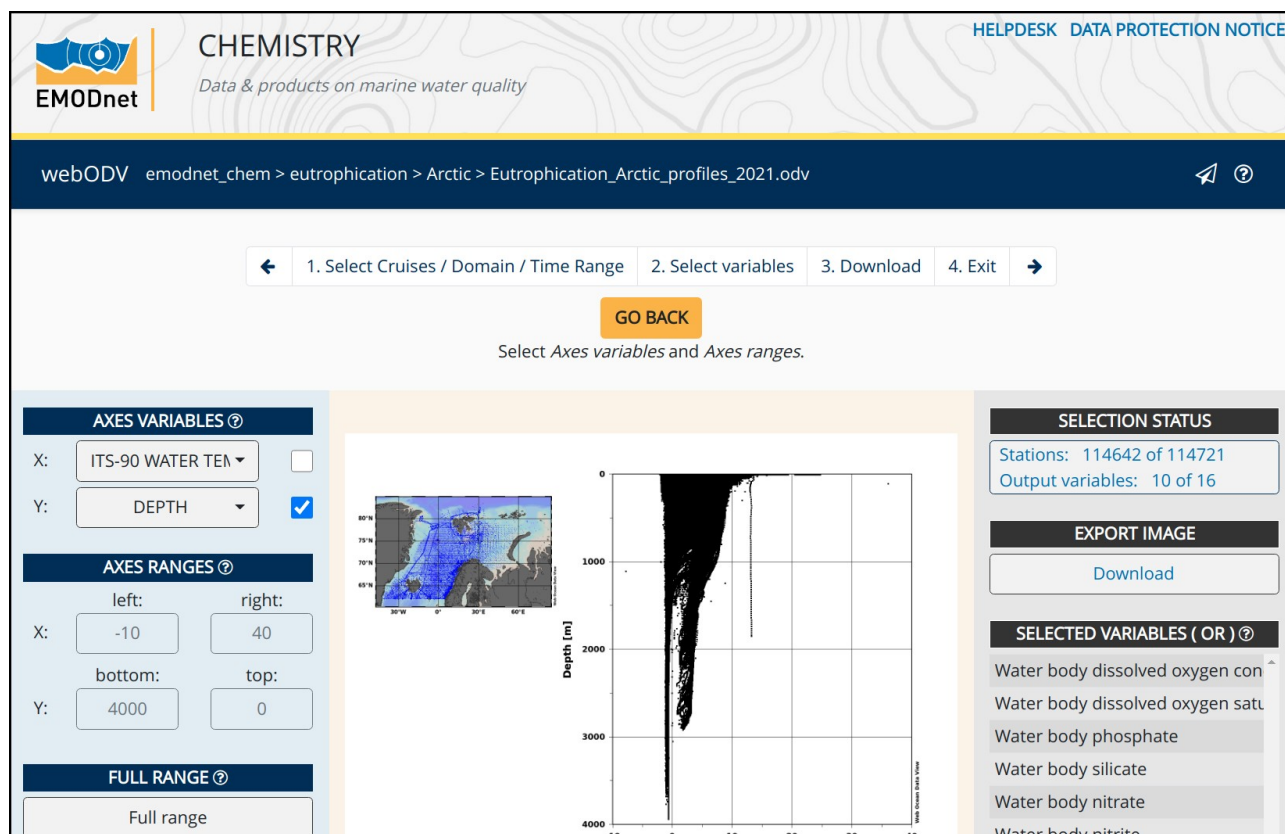
This info box informs about the number of selected stations and output variables. A download of data with selecting zero stations or variables is not possible and error messages will appear in the case.

EXPORT IMAGE

Download the current map as a high quality .png image.

DATA PREVIEW

Switch to the visualisation layout and create a scatter plot of the data. Select x and y axes variables, set axes ranges and hide/show outliers.



SELECTED VARIABLES (OR)

This list shows the currently selected variables, whereas the actual selection takes place on page two. The OR or AND in brackets indicates the selection mode and is explained below in the context of variable selection.

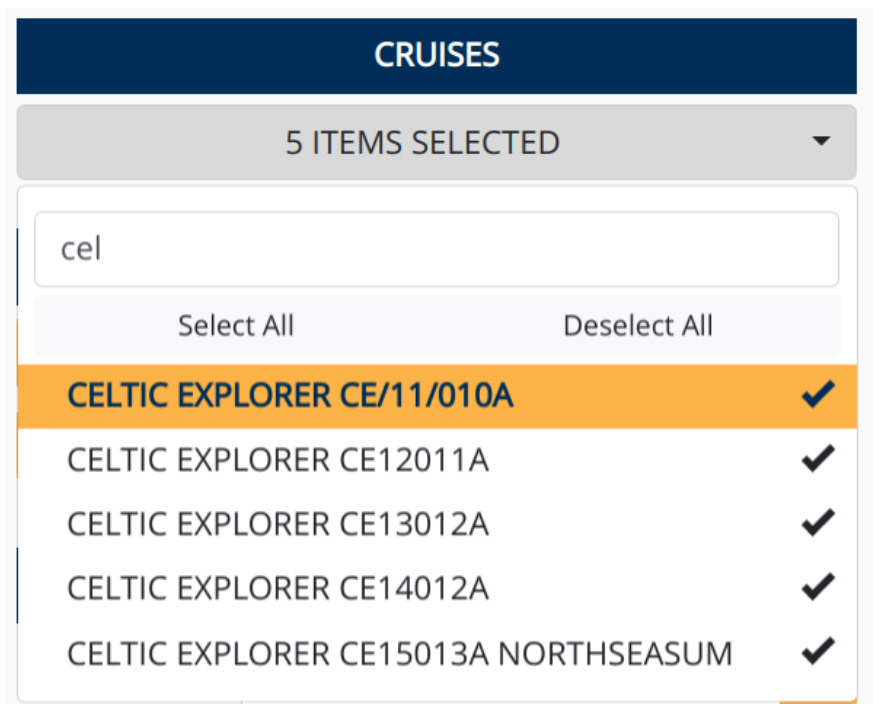
STATION INFO

This dropdown menu provides information (meta data) about a clicked station (blue dot) in the map.

CRUISES

A dropdown for selecting and deselecting cruises by names. Options are to *Select All* or *Deselect All*.

Additionally a search function is provided as explained below:



The screenshot shows a web interface for selecting cruises. At the top is a dark blue header with the word "CRUISES" in white. Below it is a grey bar with the text "5 ITEMS SELECTED" and a downward arrow. Underneath is a search input field containing the text "cel". Below the search field are two buttons: "Select All" and "Deselect All". Below these buttons is a list of five cruise entries, each with a checkmark to its right. The first entry, "CELTIC EXPLORER CE/11/010A", is highlighted in orange and has a blue checkmark. The other four entries are in grey and have grey checkmarks.

| CRUISES | |
|--------------------------------------|--------------|
| 5 ITEMS SELECTED | |
| cel | |
| Select All | Deselect All |
| CELTIC EXPLORER CE/11/010A | ✓ |
| CELTIC EXPLORER CE12011A | ✓ |
| CELTIC EXPLORER CE13012A | ✓ |
| CELTIC EXPLORER CE14012A | ✓ |
| CELTIC EXPLORER CE15013A NORTHSEASUM | ✓ |

To start with the search function it makes sense to first *Deselect All*. Then the list of search results is updated in real-time while typing. A click on *Select All* checks then only the search results, which is the desired selection.

MAP DOMAIN

A click on *ZOOM MODE* activates the interactive zoom function within the map. The size of the new zoom rectangle can be changed by moving edges or corners of the rectangle with clicking and dragging the mouse. New rectangles can be created by clicking into the map, while holding the left mouse button and dragging.

ZOOM OUT automatically zooms out of the selected region. *FULL RANGE* creates a map including all stations, but no "station free" area. *GLOBAL* displays a global map.

TIME RANGE

Select a date in the format mm/dd/yyyy by directly editing within the field or use the calendar widget. Range: 01/01/1850-12/31/2021. Click on the widget's top line to switch between years, click again to switch between decades and so on.

RESET

Finally, two reset buttons are provided. The *Page* button resets the current page to default values, whereas the *Global* button resets all settings of the Extractor back for this dataset.

2. Select variables

The screenshot displays the EMODnet Chemistry webODV interface. The top header includes the EMODnet logo, the word "CHEMISTRY", and the tagline "Data & products on marine water quality". On the right, there are links for "HELPDESK" and "DATA PROTECTION NOTICE". The breadcrumb navigation shows the path: "webODV > emodnet_chem > eutrophication > Arctic > Eutrophication_Arctic_profiles_2021.odv". A progress bar at the top indicates the current step is "2. SELECT VARIABLES", with previous steps being "1. Select Cruises / Domain / Time Range", "3. Download", and "4. Exit". Below the progress bar, it says "Select variables from the treeview.".

The interface is divided into three main sections:

- LOGIC:** Contains radio buttons for "OR" (selected) and "AND".
- TREEVIEW:** Includes buttons for "Collapse all", "Expand all", "Check all", "Uncheck all", and a "RESET" button with a "Global" option.
- VARIABLES:** Features a world map showing the Arctic region, a search bar, and a list of variables with checkboxes:
 - ☒ Water body dissolved oxygen concentration
 - ☒ Water body dissolved oxygen saturation
 - ☒ Water body phosphate
 - ☐ Water body total phosphorus
 - ☒ Water body silicate
 - ☒ Water body nitrate

On the right side, there are two panels:

- SELECTION STATUS:** Shows "Stations: 14945 of 114721" and "Output variables: 10 of 16".
- DATA PREVIEW:** Includes a "Scatter plot" button and a small scatter plot visualization.
- SELECTED VARIABLES (OR):** A list of the selected variables, including "Water body dissolved oxygen con", "Water body dissolved oxygen sat", "Water body phosphate", "Water body silicate", "Water body nitrate", and "Water body nitrite".

The second page provides the variable selection for the final download. Disabled gray items indicate that these variables are not available for the station selection. Two modes are available for the variable selection:

OR mode: In this case all stations in the map are shown, which have data for one **OR** more of selected variables.

AND mode: Only stations are shown, that have data for **ALL** of the selected variables.

Note that the stations in the map change dynamically according to the selected variables.

4. Download

The screenshot shows the EMODnet Chemistry webODV interface. The breadcrumb path is: webODV > emodnet_chem > eutrophication > Arctic > Eutrophication_Arctic_profiles_2021.odv. The interface includes a navigation bar with 'HELPDESK' and 'DATA PROTECTION NOTICE' links. A progress bar at the top indicates the current step: '3. DOWNLOAD'. Below the progress bar, a map of the Arctic region is displayed, showing sampling stations and selected variables. The map is overlaid with a grid and labels for latitude (76°N to 81°N) and longitude (5°E to 30°E). On the left, there are buttons for 'DOWNLOAD' and 'RESET', with a 'Global' button under 'RESET'. The 'DOWNLOAD' section lists three options: 'ASCII SPREADSHEET (.TXT)', 'ODV COLLECTION (.ODV)', and 'NETCDF (.NC)'. On the right, the 'SELECTION STATUS' section shows 'Stations: 14945 of 114721' and 'Output variables: 10 of 16'. The 'DATA PREVIEW' section shows a 'Scatter plot' button and a small plot. The 'SELECTED VARIABLES (OR)' section lists five variables: 'Water body dissolved oxygen con', 'Water body dissolved oxygen sat', 'Water body phosphate', 'Water body silicate', and 'Water body nitrate'.

The download page allows to download the selected data in different formats, ASCII SPREADSHEET (.txt), ODV COLLECTION (.odv) or NETCDF (.nc). Prior to downloading the data, users have to authenticate with MarineID, which is shown in a pop up:

This screenshot shows the same EMODnet Chemistry webODV interface as the previous one, but with a 'Authenticate with Marine-ID' pop-up window in the foreground. The pop-up window has a title bar and a close button. It features the 'MARINE ID' logo and a login form with fields for 'Username' and 'Password'. There is a checkbox for 'Warn me before logging me into other sites.' and a 'LOGIN' button. Below the login form, there is a security notice: 'For security reasons, please Log Out and Exit your web browser when you are done accessing services that require authentication!'. There are links for 'Register', 'Forgotten password', 'Forgotten username', and 'Change password'. At the bottom, it states 'Marine-id supports user authentication for EMODnet, SeaDataNet, Coriolis data services.' and includes logos for EMODnet, SeaDataNet, and Coriolis. The background of the page is dimmed, showing the same navigation and data selection options as before.

In the user is not already registered at MarineID, account creation is now possible.
After login in, we will ask for the reason of downloading this dataset as shown below:

The screenshot displays the webODV interface with a modal form titled "Please share with us the reason for downloading this data." The form contains the following fields:

- Data usage:** A dropdown menu with "EDUCATION/RESEARCH" selected.
- Organization name:** A text input field containing "AWI".
- Type of organization:** A dropdown menu with "ACADEMIA/RESEARCH" selected.

At the bottom of the modal are two buttons: "START PROCESSING" (highlighted in orange) and "Cancel".

The background interface includes the EMODnet logo, navigation links for "webODV" and "emodnet", and a sidebar with download options: "DOWNLOAD", "ASCII SPREADSHEET", "ODV COLLECTION (.ODV)", "NETCDF (.NC)", and a "RESET" button with a "Global" option. The main area shows a map of the North Atlantic with a data collection area outlined in blue. The right sidebar displays "SELECTION STATUS" (14945 of 114721 variables, 10 of 16) and a "DATA PREVIEW" section with a "Scatter plot" button and a list of "SELECTED VARIABLES (OR) ©":

- Water body dissolved oxygen con
- Water body dissolved oxygen satu
- Water body phosphate
- Water body silicate
- Water body nitrate
- Water body nitrite

By hitting the “START PROCESSING” button, the download process starts in the background. As soon as the data are ready for download the user is informed by email, which includes the download link. Note that the email address provided at MarineID is used. Finally the data can be downloaded as a .zip file.

5. Exit

The last page simply brings the user back to the webODV homepage.