

Data retrieval and access using the LifeWatch web services

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Say you want to study the distribution of macrobenthos in the North Sea and its interaction with the environment.

For this you would need:

- Distribution data
- Additional environmental data (temperature, salinity, etc.)

→ Where can you find this data?

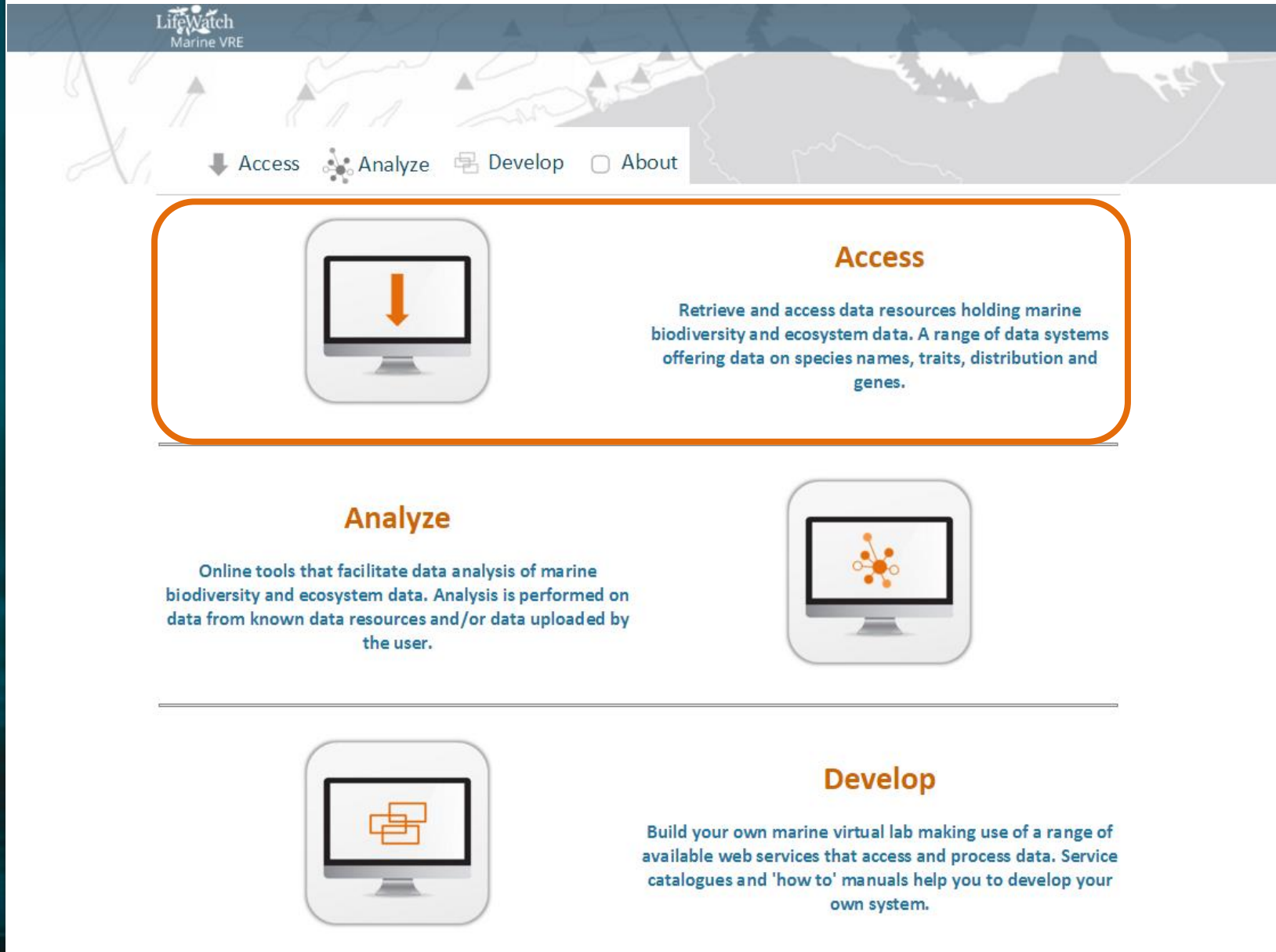
→ The LifeWatch Marine Virtual Research Environment!

<http://marine.lifewatch.eu/>

STEP 1:

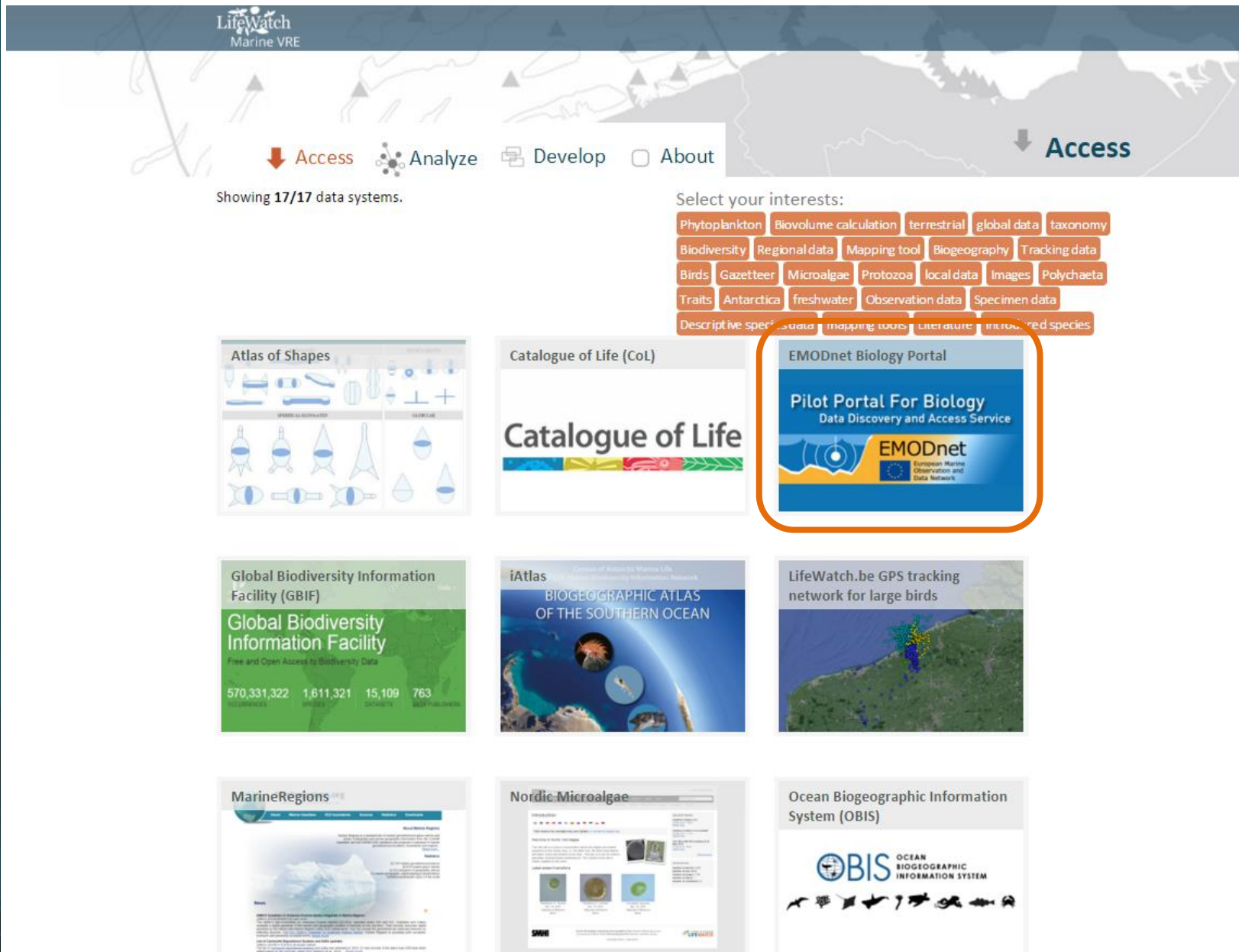
Find distribution data

STEP 1: Find DISTRIBUTION data



The screenshot shows the LifeWatch Marine VRE interface. At the top, there is a navigation bar with the text 'LifeWatch Marine VRE' and a menu with four items: 'Access' (with a downward arrow icon), 'Analyze' (with a network icon), 'Develop' (with a document icon), and 'About' (with a square icon). Below the navigation bar, the 'Access' section is highlighted with an orange border. It features a computer monitor icon with a large orange downward arrow on the screen. To the right of the icon, the word 'Access' is written in orange, followed by a description: 'Retrieve and access data resources holding marine biodiversity and ecosystem data. A range of data systems offering data on species names, traits, distribution and genes.' Below this, the 'Analyze' section is visible, featuring a computer monitor icon with a network diagram on the screen. To the left of the icon, the word 'Analyze' is written in orange, followed by a description: 'Online tools that facilitate data analysis of marine biodiversity and ecosystem data. Analysis is performed on data from known data resources and/or data uploaded by the user.' Below this, the 'Develop' section is visible, featuring a computer monitor icon with a document icon on the screen. To the right of the icon, the word 'Develop' is written in orange, followed by a description: 'Build your own marine virtual lab making use of a range of available web services that access and process data. Service catalogues and 'how to' manuals help you to develop your own system.'

STEP 1: Find DISTRIBUTION data



The screenshot displays the LifeWatch Marine VRE interface. At the top, there is a navigation bar with the text "LifeWatch Marine VRE" and a map background. Below the navigation bar, there are four main sections:

- Access:** A red arrow pointing down, followed by the word "Access".
- Analyze:** A network icon, followed by the word "Analyze".
- Develop:** A document icon, followed by the word "Develop".
- About:** A square icon, followed by the word "About".

Below these sections, it says "Showing 17/17 data systems." To the right, there is a section titled "Select your interests:" with a grid of buttons for various topics:

- Phytoplankton, Biovolume calculation, terrestrial, global data, taxonomy
- Biodiversity, Regional data, Mapping tool, Biogeography, Tracking data
- Birds, Gazetteer, Microalgae, Protozoa, local data, Images, Polychaeta
- Traits, Antarctica, freshwater, Observation data, Specimen data
- Descriptive species data, mapping tools, literature, introduced species

Below the interest grid, there are several data system thumbnails:

- Atlas of Shapes:** A thumbnail showing various shapes and diagrams.
- Catalogue of Life (CoL):** A thumbnail with the text "Catalogue of Life" and a colorful bar.
- EMODnet Biology Portal:** A thumbnail with the text "EMODnet Biology Portal" and "Pilot Portal For Biology Data Discovery and Access Service". This thumbnail is highlighted with an orange border.
- Global Biodiversity Information Facility (GBIF):** A thumbnail with the text "Global Biodiversity Information Facility" and "Free and Open Access to Biodiversity Data". It also displays statistics: 570,331,322, 1,611,321, 15,109, and 763.
- iAtlas:** A thumbnail with the text "iAtlas" and "BIOGEOGRAPHIC ATLAS OF THE SOUTHERN OCEAN".
- LifeWatch.be GPS tracking network for large birds:** A thumbnail showing a map with tracking data.
- MarineRegions:** A thumbnail showing a map of the North Atlantic.
- Nordic Microalgae:** A thumbnail showing various microalgae species.
- Ocean Biogeographic Information System (OBIS):** A thumbnail with the text "OBIS" and "OCEAN BIOGEOGRAPHIC INFORMATION SYSTEM".

STEP 1:
Find
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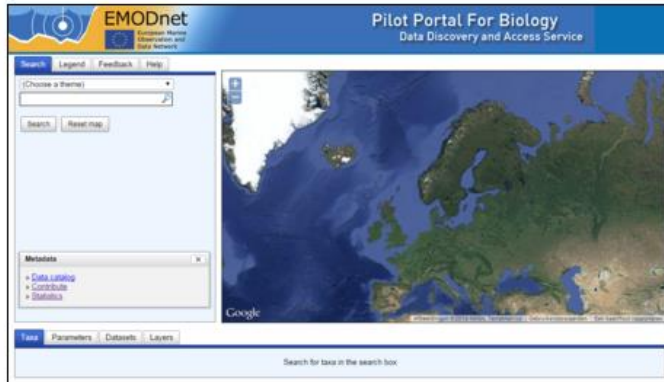


 Access
  Analyze
  Develop
  About

Biology Portal of the European Marine Observation and Data Network (EMODnet)

Marine biodiversity data are essential to measure and study the ecosystem health of maritime basins. These data are often collected with limited spatial and temporal scope and are scattered over different organizations in small datasets for a specific species group or habitat. Therefore there is a continuous need to assemble these individual datasets, and process them into interoperable biological data products for assessing the environmental state of overall ecosystems and complete sea basins.

One of the main objectives of EMODnet Biology is to allow public access and viewing of data, metadata and data products of marine species occurring in European marine waters through the EMODnet Biology Data Portal.



Website:

<http://www.emodnet-biology.eu/portal/index.php>

Tags:

marine
Biodiversity
Regional data
Mapping tool

Developed by:

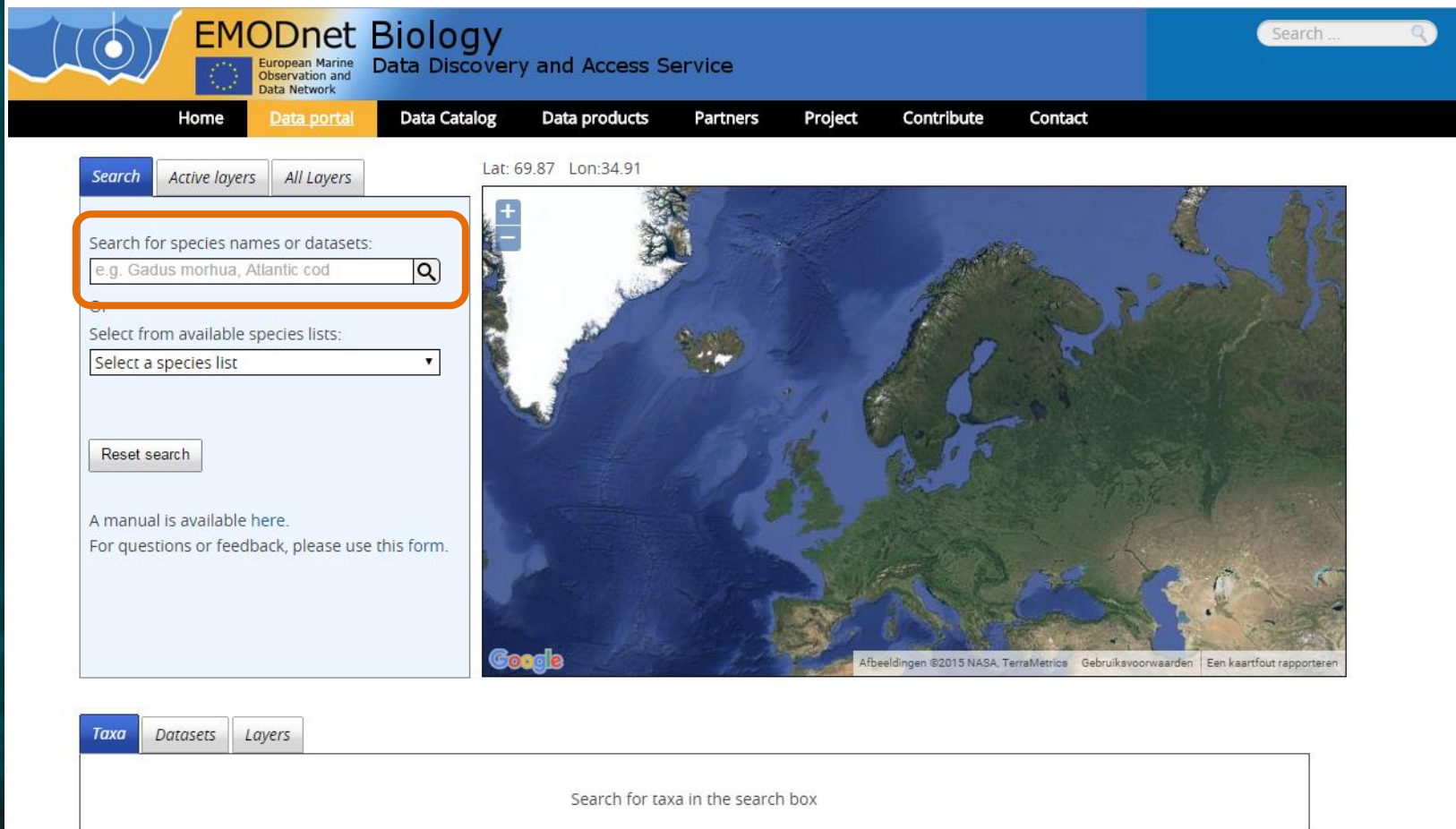
The EMODnet Biology Data Portal is developed and maintained by the Flanders Marine Institute (VLIZ).

Web services:

A set of **gridded map layers** will be produced showing the average abundance of at least three species per species group for different time windows (seasonal, annual or multi-annual as appropriate) using geospatial modeling. The accuracy of the method will be quantified, as well as the precision of the specific results and data used to calculate the products. In addition, spatially distributed **data products** specifically relevant for Marine Strategy Framework Directive Descriptor 2 (non-indigenous species) will be created. It will receive additional environmental information from other lots of EMODnet, e.g. on benthic habitat characteristics and water masses, to be used as co-factors in the gridding. More detailed information about the EMODnet Biology data products and services can be read [here](#).




STEP 1: Find DISTRIBUTION data



EMODnet Biology
Data Discovery and Access Service

Home Data portal Data Catalog Data products Partners Project Contribute Contact

Search ...

Search Active layers All Layers

Search for species names or datasets:
e.g. Gadus morhua, Atlantic cod

Select from available species lists:
Select a species list

Reset search

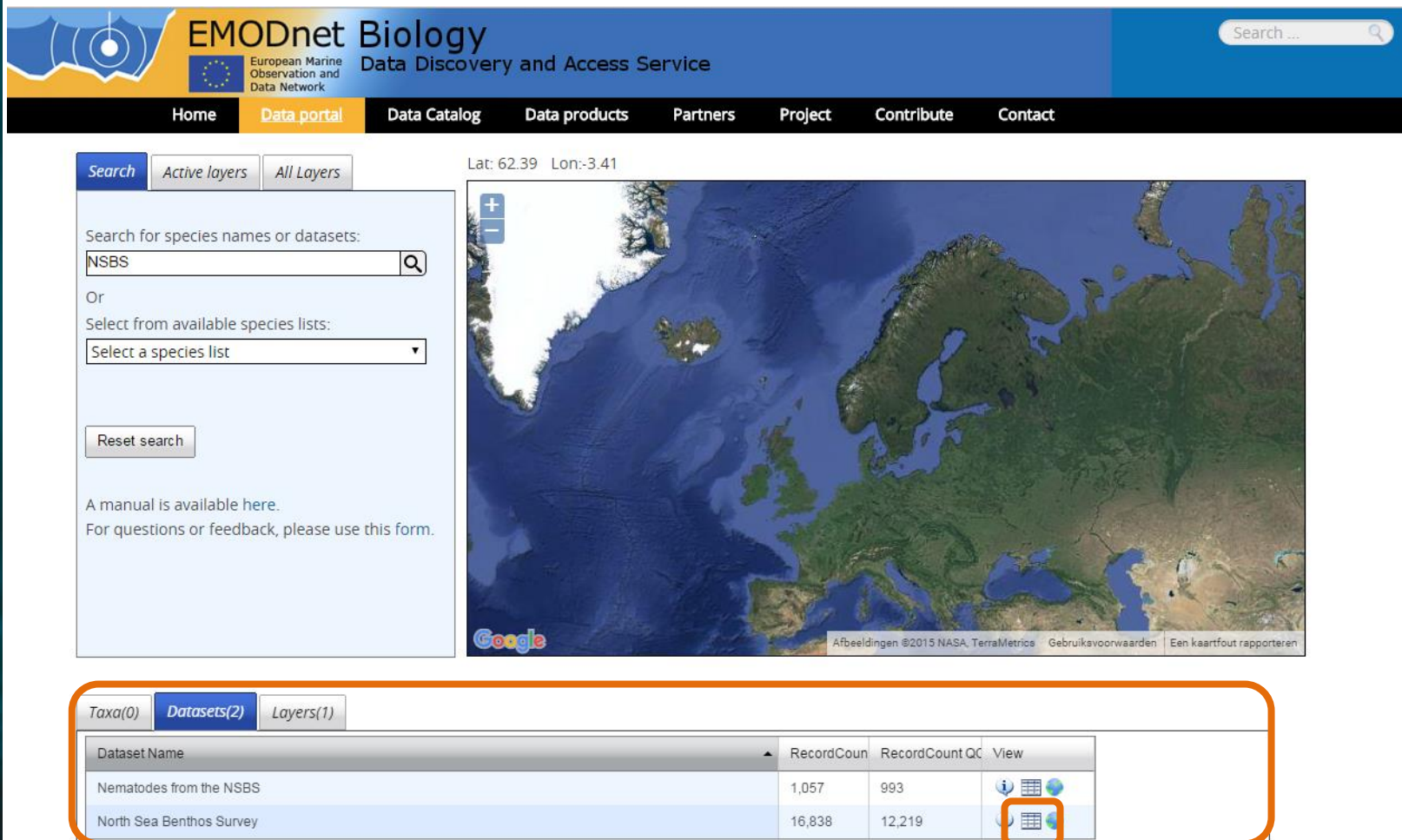
A manual is available [here](#).
For questions or feedback, please use this form.

Lat: 69.87 Lon:34.91

Taxa Datasets Layers

Search for taxa in the search box

STEP 1: Find DISTRIBUTION data



EMODnet Biology
Data Discovery and Access Service

Home Data portal Data Catalog Data products Partners Project Contribute Contact

Search ...

Search Active layers All Layers

Search for species names or datasets:
NSBS

Or
Select from available species lists:
Select a species list

Reset search

A manual is available [here](#).
For questions or feedback, please use this [form](#).

Lat: 62.39 Lon: -3.41

Google

Afbeeldingen ©2015 NASA, TerraMetrics Gebruiksvoorwaarden Een kaartfout rapporteren

Taxa(0) Datasets(2) Layers(1)

Dataset Name	RecordCount	RecordCount QC	View
Nematodes from the NSBS	1,057	993	  
North Sea Benthos Survey	16,838	12,219	  

STEP 1:

Find

DISTRIBUTION

data

Taxa(0) Datasets(2) Layers(1) **Data**

Dataset: North Sea Benthos Survey (16838) Dataset: North Sea Benthos Survey (16838)

 Hide/show columns

Dataset: North Sea Benthos Survey undefined [citations]

<< < 1 2 3 4 5 6 7 8 9 10 > >>

DateLastModified	CatalogNumber	ScientificName	Year	Month	Day	Lon.	Lat.	Precision (m)	MinDepth (m)	MaxDepth (m)	Sex	IndCount	SampleSize	InstitutionCode	Metadata	QC
2004-08-27	1000_1_1079	Apseudes spinosus	1985	1	1	0.5	58.25		61	61		20	1 m²	VLIZ	67	1
2004-08-27	1000_1_1085	Leucon (Leucon) nasica	1985	1	1	0.5	58.25		61	61		489.8	1 m²	VLIZ	67	1
2004-08-27	1000_1_1093	Diastylis tumida	1985	1	1	0.5	58.25		61	61		20	1 m²	VLIZ	67	1
2004-08-27	1000_1_1094	Leptostylis villosa	1985	1	1	0.5	58.25		61	61		100	1 m²	VLIZ	67	1
2004-08-27	1000_1_1187	Harpinia antennaria	1985	1	1	0.5	58.25		61	61		10	1 m²	VLIZ	67	1
2004-08-27	1000_1_1231	Eriopisa elongata	1985	1	1	0.5	58.25		61	61		158.5	1 m²	VLIZ	67	1
2004-08-27	1000_1_1320	Nuculana minuta	1985	1	1	0.5	58.25		61	61		20	1 m²	VLIZ	67	1
2004-08-27	1000_1_1333	Limatula subauriculata	1985	1	1	0.5	58.25		61	61		10	1 m²	VLIZ	67	1
2004-08-27	1000_1_1344	Thyasira	1985	1	1	0.5	58.25		61	61		120.2	1 m²	VLIZ	67	1
2004-08-27	1000_1_1402	Cuspidaria rostrata	1985	1	1	0.5	58.25		61	61		20	1 m²	VLIZ	67	1
2004-08-27	1000_1_1502	Philine scabra	1985	1	1	0.5	58.25		61	61		10	1 m²	VLIZ	67	1
2004-08-27	1000_1_1638	Holothuroidea	1985	1	1	0.5	58.25		61	61		30.2	1 m²	VLIZ	67	0
2004-08-27	1000_1_1662	Ascidacea	1985	1	1	0.5	58.25		61	61		30.2	1 m²	VLIZ	67	0
2004-08-27	1000_1_1679	Molgula	1985	1	1	0.5	58.25		61	61		20	1 m²	VLIZ	67	1
2004-08-27	1000_1_1705	Axiothella	1985	1	1	0.5	58.25		61	61		30.2	1 m²	VLIZ	67	1
2004-08-27	1000_1_1713	Crustacea	1985	1	1	0.5	58.25		61	61			1 m²	VLIZ	67	0
2004-08-27	1000_1_1720	Eclypsippe vanelli	1985	1	1	0.5	58.25		61	61		20	1 m²	VLIZ	67	1
2004-08-27	1000_1_1743	Mollusca	1985	1	1	0.5	58.25		61	61			1 m²	VLIZ	67	0
2004-08-27	1000_1_1747	Nemertea	1985	1	1	0.5	58.25		61	61		60.3	1 m²	VLIZ	67	0
2004-08-27	1000_1_1856	Animalia	1985	1	1	0.5	58.25		61	61			1 m²	VLIZ	67	0
2004-08-27	1000_1_2884	Polychaeta	1985	1	1	0.5	58.25		61	61			1 m²	VLIZ	67	0
2004-08-27	1000_1_2896	Lumbrineris hibernica	1985	1	1	0.5	58.25		61	61		20	1 m²	VLIZ	67	1
2004-08-27	1000_1_2899	Lumbrineris latreilli	1985	1	1	0.5	58.25		61	61		10	1 m²	VLIZ	67	1

STEP 1:
Find
DISTRIBUTION
data

Download dataportal



Fill out the form correctly, please. The information will not be used for commercial purposes.

Fields marked with an asterisk are required fields.

Downloading large amounts of data can take up to 10 minutes!.

Name

Organisation

Email*

Country*

For what purposes will you use the data?*

Choose a format

- ☒ Tab delimited text file (first 500000 records)
☐ Excel file (first 1000000 records)

I agree to the [the terms of use](#) ☐

download

Cancel



North_Sea_Benthos_Survey - Microsoft Excel

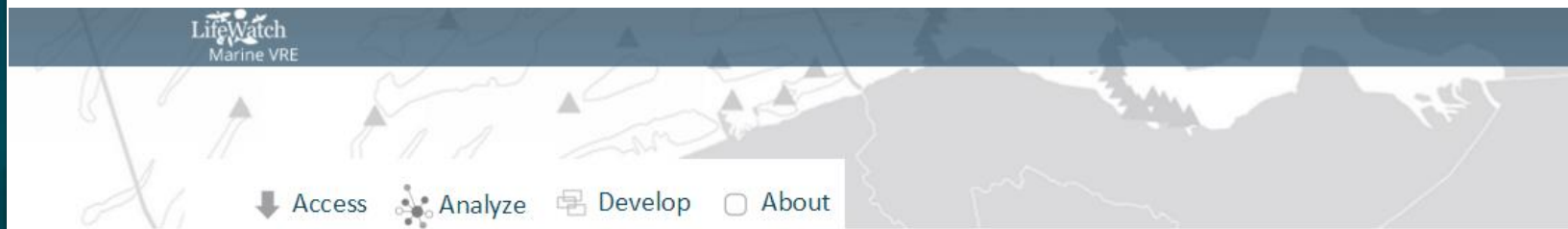
FileHomeInsertPage LayoutFormulasDataReviewView

STEP 2:

**Find additional environmental data,
based on the coordinates in the
distribution data**

STEP 2:

Find additional
environmental
data



Access

Retrieve and access data resources holding marine biodiversity and ecosystem data. A range of data systems offering data on species names, traits, distribution and genes.

Analyze

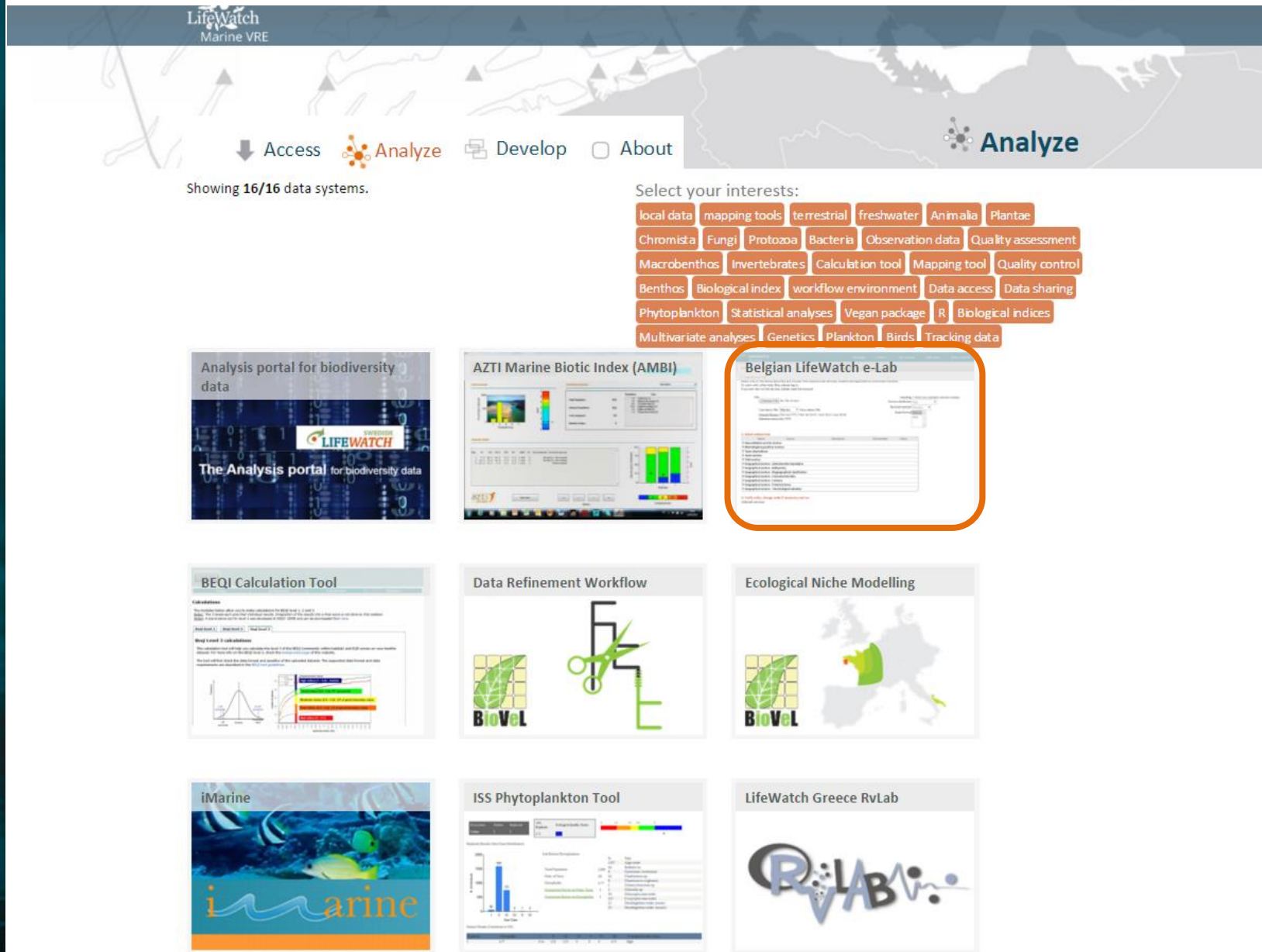
Online tools that facilitate data analysis of marine biodiversity and ecosystem data. Analysis is performed on data from known data resources and/or data uploaded by the user.



Develop

Build your own marine virtual lab making use of a range of available web services that access and process data. Service catalogues and 'how to' manuals help you to develop your own system.

STEP 2: Find additional environmental data

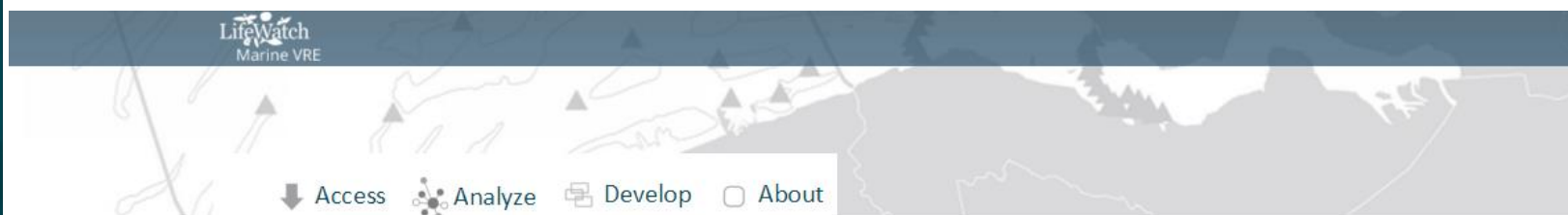


The screenshot displays the LifeWatch Marine VRE interface. At the top, the 'Analyze' section is active, showing a navigation bar with 'Access', 'Analyze', 'Develop', and 'About'. Below the navigation bar, it states 'Showing 16/16 data systems.' and 'Select your interests:' followed by a grid of interest tags including: local data, mapping tools, terrestrial, freshwater, Animala, Plantae, Chromista, Fungi, Protozoa, Bacteria, Observation data, Quality assessment, Macrobenenthos, Invertebrates, Calculation tool, Mapping tool, Quality control, Benthos, Biological index, workflow environment, Data access, Data sharing, Phytoplankton, Statistical analyses, Vegan package, R, Biological indices, Multivariate analyses, Genetics, Plankton, Birds, and Tracking data.

Below the interest tags, there are several data system thumbnails:

- Analysis portal for biodiversity data**: A thumbnail showing the 'The Analysis portal for biodiversity data' with the LifeWatch logo.
- AZTI Marine Biotic Index (AMBI)**: A thumbnail showing a software interface for the AMBI index.
- Belgian LifeWatch e-Lab**: A thumbnail showing a web interface for the Belgian LifeWatch e-Lab, which is highlighted with an orange border.
- BEQI Calculation Tool**: A thumbnail showing a web interface for the BEQI Calculation Tool.
- Data Refinement Workflow**: A thumbnail showing a workflow diagram with the BioVeL logo.
- Ecological Niche Modelling**: A thumbnail showing a map of Europe with a green area highlighted, and the BioVeL logo.
- iMarine**: A thumbnail showing a 3D underwater scene with fish and the iMarine logo.
- ISS Phytoplankton Tool**: A thumbnail showing a software interface for the ISS Phytoplankton Tool.
- LifeWatch Greece RvLab**: A thumbnail showing the RvLab logo.

STEP 2: Find additional environmental data



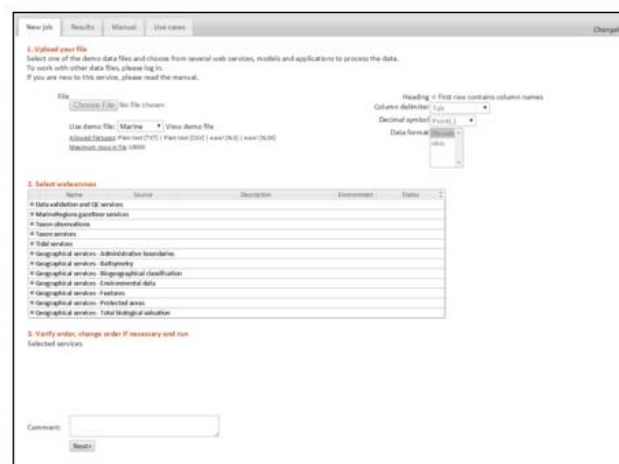
Submitted by vlizadmin on Fri, 09/04/2015 - 10:43

Belgian LifeWatch e-Lab

The ultimate goal of LifeWatch is to set up a network for data exchange and data analysis through web services. Web services are systems that allow communication between two computers over the web, and allow the user to access the most recent and up-to-date information directly from within other applications.

In the framework of LifeWatch Belgium, several web services are being developed to standardize, analyze and visualize your data, and to extract additional data. An online tool was developed where users can select several web services at once in an easy, user friendly way. In this online interface the majority of the web services built by the Belgian LifeWatch partners are available.

These web services can also be used in a concatenated way, where the output of one web services is the input for the next web service. This is demonstrated in a few use cases.



Website:

<http://www.lifewatch.be/data-services>

Tags:

marine
terrestrial
Mapping tool
Calculation tool
Quality control

Developed by:

The online interface of the Belgian LifeWatch e-Lab is developed by the Flanders Marine Institute (VLIZ).

Used data resources:

- MarineRegions (gazetteer)

Log in and password are required!!!

STEP 2: Find additional environmental data



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[Sensors](#)
[Data](#)
[e-Lab](#)
[Taxonomic Backbone](#)

[New job](#)
[Results](#)
[User guide](#)
[Use cases](#)

Logged in as: Stefanie Dekeyzer [\[Log out\]](#)

1. Upload your file

Select one of your data files in the correct format and choose from several web services, models and applications to process the data.
If you are new to this service, please read the [manual](#).

File: No file chosen

Use demo file:

Allowed filetypes: Plain text [TXT] | Plain text [CSV] | excel [XLS] | excel [XLSX]

Maximum rows in file: 60000

Heading ☒ First row contains column names
Column delimiter:
Decimal symbol:
Data format:

2. Select webservices

Name	Source	Description	Environment	Status
☒ Data validation and QC services				
☒ MarineRegions gazetteer services				
☒ Taxon observations				
☒ Taxon services				
☒ Tidal services				
☒ Geographical services - Administrative boundaries				
☒ Geographical services - Bathymetry				
☒ Geographical services - Biogeographical classification				
☒ Geographical services - Environmental data				
☒ Geographical services - Features				
☒ Geographical services - Protected areas				
☒ Geographical services - Total biological valuation				

3. Verify order, change order if necessary and run

Selected services

Comment:

Log in and password are required!!!

STEP 2:

Find additional
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data



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Logged in as: Stefanie Dekeyzer [\[Log out\]](#)

1. Upload your file

Select one of your data files in the correct format and choose from several web services, models and applications to process the data.
If you are new to this service, please read the [manual](#).

File: No file chosen

Use demo file:

Allowed filetypes: Plain text [TXT] | Plain text [CSV] | excel [XLS] | excel [XLSX]

Maximum rows in file: 60000

Heading ☒ First row contains column names

Column delimiter:

Decimal symbol:

Data format:

2. Select webservices

	Name	Source	Description	Environment	Status
☒	Data validation and QC services				
☒	MarineRegions gazetteer services				
☒	Taxon observations				
☒	Taxon services				
☒	Tidal services				
☒	Geographical services - Administrative boundaries				
☒	Geographical services - Bathymetry				
☒	Geographical services - Biogeographical classification				
☒	Geographical services - Environmental data				
☐	Cloud Cover (maximum)	Bio-ORACLE: a global environmental dataset for marine species distribution modeling.	Returns the Cloud Cover (maximum) based on latitude and longitude.	marine	Good
☐	Chlorophyll A (mean)	Bio-ORACLE: a global environmental dataset for marine species distribution modeling.	Returns the Chlorophyll A (mean) based on latitude and longitude.	marine	Good
☐	Chlorophyll A (maximum)	Bio-ORACLE: a global environmental dataset for marine species distribution modeling.	Returns the Chlorophyll A (maximum) based on latitude and longitude.	marine	Good
☐	Sea Surface Temperature (maximum)	Bio-ORACLE: a global environmental dataset for marine species distribution modeling.	Returns the Sea Surface Temperature (maximum) based on latitude and longitude.	marine	Good
☐	Silicate (mean)	Bio-ORACLE: a global environmental dataset for marine species distribution modeling.	Returns the Silicate (mean) based on latitude and longitude.	marine	Good
☐	Diffuse Attenuation	Bio-ORACLE: a global environmental dataset for marine species distribution modeling.	Returns the Diffuse Attenuation (maximum) based on	marine	Good

Log in and password are required!!!

STEP 2:

Find additional
environmental
data

 Project Sensors Data e-Lab Taxonomic Backbone				
☒	Salinity (mean)	Bio-ORACLE: a global environmental dataset for marine species distribution modeling.	Returns the Salinity (mean) based on latitude and longitude.	marine Good
☐	Sea Surface Temperature (range)	Bio-ORACLE: a global environmental dataset for marine species distribution modeling.	Returns the Sea Surface Temperature (range) based on latitude and longitude.	marine Good
☐	Sea Surface Temperature (minimum)	Bio-ORACLE: a global environmental dataset for marine species distribution modeling.	Returns the Sea Surface Temperature (minimum) based on latitude and longitude.	marine Good
☐	Chlorophyll A (minimum)	Bio-ORACLE: a global environmental dataset for marine species distribution modeling.	Returns the Chlorophyll A (minimum) based on latitude and longitude.	marine Good
☐	Diffuse Attenuation (mean)	Bio-ORACLE: a global environmental dataset for marine species distribution modeling.	Returns the Diffuse Attenuation (mean) based on latitude and longitude.	marine Good
☐ Geographical services - Features				
☐ Geographical services - Protected areas				
☐ Geographical services - Total biological valuation				

3. Verify order, change order if necessary and run

Selected services

-
-
-
-
-

Comment:

Next>

Preview of the file 'nsbs_belgian_stations.xlsx' (first 20 records)

Please select a columnname from the dataformat term that corresponds to your column and click 'Start'.

column 6	column 7	column 8	column 9	column 10	column 11	column 12
(none)	Longitude	Latitude	(none)	(none)	(none)	(none)
datecollected	Longitude	Latitude	MinimumDepth	MaximumDepth	Sex	ObservedIn
1986-04-02	2.5	51.25				5.8
1986-04-02	2.5	51.25				2.9
1986-04-18	2.5	51.75	40	40		5.8
1986-04-02	2.5	51.25				13

Selection Overview - click on each of the selected layers to view the required fields

1. Sea Surface Temperature (mean)

2. Salinity (mean)

Legend :

- Field is present in the inputfile.
- Field is present in the output of previous webservices.
- Field is missing from inputfile and from the output of previous webservices.
- Repeated fields detected, choose the preferred field or remove one of the fields.

<Back

Start

STEP 2: Find additional environmental data

Preview of the file 'nsbs_belgian_stations.xlsx' (first 20 records)

Please select a columnname from the dataformat term that corresponds to your column and click 'Start'.

column 6	column 7	column 8	column 9	column 10	column 11	column 12
(none)	Longitude	Latitude	(none)	(none)	(none)	(none)
datecollecte	Longitude	Latitude	MinimumDepth	MaximumDepth	Sex	ObservedIn
1986-04-02	2.5	51.25				5.8
1986-04-02	2.5	51.25				2.9
1986-04-18	2.5	51.75	40	40		5.8
1986-04-02	2.5	51.25				13

Selection Overview - click on each of the selected layers to view the required fields

1. Sea Surface Temperature (mean)

Input columns

- Latitude (column 8)
- Longitude (column 7)

2. Salinity (mean)

Legend :

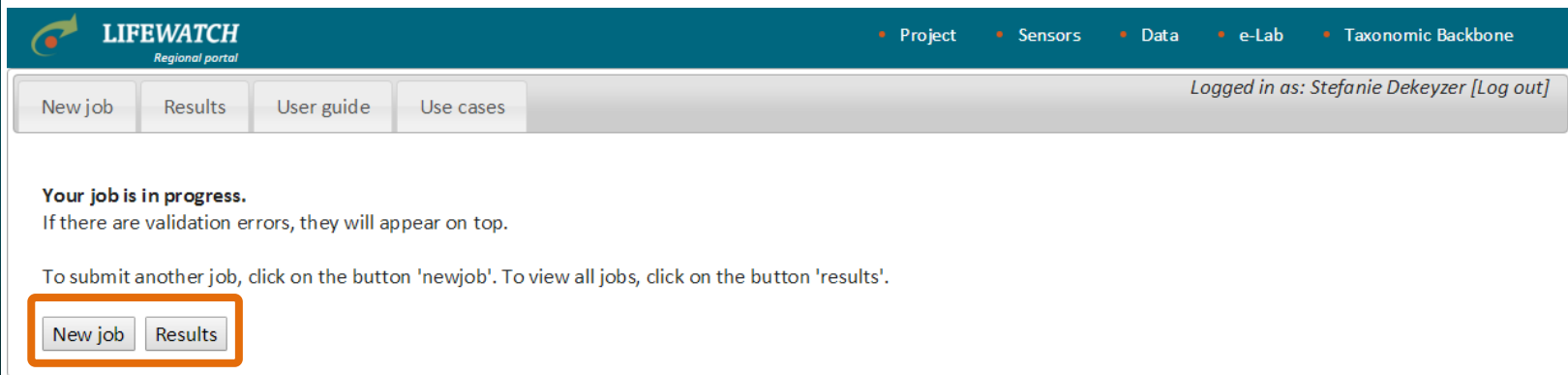
- Field is present in the inputfile.
- Field is present in the output of previous webservices.
- Field is missing from inputfile and from the output of previous webservices.
- Repeated fields detected, choose the preferred field or remove one of the fields.

[<Back](#) [Start](#)

STEP 2:

Find additional environmental data

STEP 2:
Find additional
environmental
data



The screenshot shows the LIFEWATCH Regional portal interface. At the top, there is a dark blue header with the LIFEWATCH logo and the text "Regional portal". To the right of the header, there are navigation links: Project, Sensors, Data, e-Lab, and Taxonomic Backbone. Below the header, there is a light gray navigation bar with buttons for New job, Results, User guide, and Use cases. On the right side of this bar, it says "Logged in as: Stefanie Dekeyzer [Log out]". Below the navigation bar, there is a main content area with the text "Your job is in progress." and "If there are validation errors, they will appear on top." Below this, it says "To submit another job, click on the button 'newjob'. To view all jobs, click on the button 'results'." At the bottom of the main content area, there are two buttons: "New job" and "Results". The "New job" button is highlighted with an orange border.

LIFEWATCH
Regional portal

Project Sensors Data e-Lab Taxonomic Backbone

New job Results User guide Use cases

Logged in as: Stefanie Dekeyzer [Log out]

Your job is in progress.
If there are validation errors, they will appear on top.

To submit another job, click on the button 'newjob'. To view all jobs, click on the button 'results'.

New job Results

LifeWatch is a European research infrastructure - portal development by VLIZ  contact at info@lifewatch.be 



[Project](#)
[Sensors](#)
[Data](#)
[e-Lab](#)
[Taxonomic Backbone](#)

[New job](#)
[Results](#)
[User guide](#)
[Use cases](#)

Logged in as: Stefanie Dekeyzer [Log out]

Below you will find a list of previously executed jobs. [Refresh table](#)

jobs					
date	filename	resultreport	resultfile	status	comment
2015-10-29 10:57	nsbs_belgian_stations.xlsx	result	13791_nsbs_belgian_stations.xlsx	done	
2015-10-29 09:57	nsbs_belgian_stations.xlsx	result	13788_nsbs_belgian_stations.xlsx	done	
2015-10-27 13:48	russianspecies_ok.xlsx	result	13784_russianspecies_ok.xlsx	done	
2015-10-27 13:33	demofile_lifewatch_marine.txt	result	13783_demofile_lifewatch_marine.txt	done	demofile
2015-10-07 13:51	test.xlsx	result	13726_test.xlsx	done	
2015-10-07 13:45	test.xlsx	result	13725_test.xlsx	done	
2015-04-07 13:21	fao_list.xlsx	result	13052_fao_list.xlsx	done	
2014-09-03 15:00	test_file_use_case_2.txt	result	9358_test_file_use_case_2.txt	done	
2014-06-30 09:44	lifewatch_check_kerkyra.txt	result	8292_lifewatch_check_kerkyra.txt	done	
2014-06-30 09:44	lifewatch_check_kerkyra.txt	result	8291_lifewatch_check_kerkyra.txt	done	

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filename = input file, file you uploaded

resultreport = overview of job properties, requested services, a preview of the result file, how many data records each selected service could add, explanation of the added fields

resultfile = input file + additional data requested through selected web services

status = pending, done, error

STEP 2: Find additional environmental data

 **LIFEWATCH**
Regional portal

• Project • Sensors • Data • e-Lab • Taxonomic Backbone

Report

Job properties
Name: Dekeyzer Stefanie
Number job: 13791
Comment:
Inputfile: nsbs_belgian_stations.xlsx
Resultfile: 13791_nsbs_belgian_stations.xlsx

Requested Services (3)

- Properties from GIS layer: Bio-Oracle: Sea Surface Temperature (mean)
- Properties from GIS layer: Bio-Oracle: Salinity (mean)

Preview resultfile


Data from requested GISlayers
Number of results for layer Bio-Oracle: Sea Surface Temperature (mean):332
Number of results for layer Bio-Oracle: Salinity (mean):332

Legend - added fields
required_fields_check: : Are the required fields present and completed? (1=yes, 0=no)
longitude_check: : Validation of the longitude value (1=ok, 0=not ok)
latitude_check: : Validation of the latitude value (1=ok, 0=not ok)

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In the result file, extra columns were added.

STEP 2:

Find additional
environmental
data

NSBS_Belgian_Stations_env_data - Microsoft Excel

	AC2	AC	AD	AE	AF	AG	AH	AI	AJ	IW
		longitu	latitude	bio-ora	bio-oracle: chlorophyll_a (mean)_note	bio-oracle: _sea_surface	bio-oracle: ph (mean)_g	bio-oracle: salinity (mean)	bio-oracle: dissolved ox	en (mea
1					No value for these coordinates	12,27499962	8,173999786	34,4659996	6,113999844	
2					No value for these coordinates	12,27499962	8,173999786	34,4659996	6,113999844	
3					No value for these coordinates	12,18900013	8,175999641	34,61700058	6,034999847	
4					No value for these coordinates	12,27499962	8,173999786	34,4659996	6,113999844	
5					No value for these coordinates	12,27499962	8,173999786	34,4659996	6,113999844	
6					No value for these coordinates	12,18900013	8,175999641	34,61700058	6,034999847	
7					No value for these coordinates	12,18900013	8,175999641	34,61700058	6,034999847	
8					No value for these coordinates	12,11100006	8,18599987	34,14699936	5,866000175	
9					No value for these coordinates	12,11100006	8,18599987	34,14699936	5,866000175	
10					No value for these coordinates	12,11100006	8,18599987	34,14699936	5,866000175	
11					No value for these coordinates	12,11100006	8,18599987	34,14699936	5,866000175	
12					No value for these coordinates	12,11100006	8,18599987	34,14699936	5,866000175	
13					No value for these coordinates	12,27499962	8,173999786	34,4659996	6,113999844	
14					No value for these coordinates	12,11100006	8,18599987	34,14699936	5,866000175	
15					No value for these coordinates	12,11100006	8,18599987	34,14699936	5,866000175	
16					No value for these coordinates	12,27499962	8,173999786	34,4659996	6,113999844	
17					No value for these coordinates	12,18900013	8,175999641	34,61700058	6,034999847	
18					No value for these coordinates	12,11100006	8,18599987	34,14699936	5,866000175	
19					No value for these coordinates	12,18900013	8,175999641	34,61700058	6,034999847	
20					No value for these coordinates	12,11100006	8,18599987	34,14699936	5,866000175	
21					No value for these coordinates	12,11100006	8,18599987	34,14699936	5,866000175	
22					No value for these coordinates	12,18900013	8,175999641	34,61700058	6,034999847	
23					No value for these coordinates	12,11100006	8,18599987	34,14699936	5,866000175	
24					No value for these coordinates	12,27499962	8,173999786	34,4659996	6,113999844	
25					No value for these coordinates	12,27499962	8,173999786	34,4659996	6,113999844	
26					No value for these coordinates	12,11100006	8,18599987	34,14699936	5,866000175	
27					No value for these coordinates	12,18900013	8,175999641	34,61700058	6,034999847	
28					No value for these coordinates	12,27499962	8,173999786	34,4659996	6,113999844	
29					No value for these coordinates	12,18900013	8,175999641	34,61700058	6,034999847	
30					No value for these coordinates	12,11100006	8,18599987	34,14699936	5,866000175	
31					No value for these coordinates	12,27499962	8,173999786	34,4659996	6,113999844	
32					No value for these coordinates	12,27499962	8,173999786	34,4659996	6,113999844	
33					No value for these coordinates	12,18900013	8,175999641	34,61700058	6,034999847	
34					No value for these coordinates	12,11100006	8,18599987	34,14699936	5,866000175	
35					No value for these coordinates	12,11100006	8,18599987	34,14699936	5,866000175	
36					No value for these coordinates	12,27499962	8,173999786	34,4659996	6,113999844	
37					No value for these coordinates	12,18900013	8,175999641	34,61700058	6,034999847	
38					No value for these coordinates	12,27499962	8,173999786	34,4659996	6,113999844	
39					No value for these coordinates	12,18900013	8,175999641	34,61700058	6,034999847	
40					No value for these coordinates	12,18900013	8,175999641	34,61700058	6,034999847	
41					No value for these coordinates	12,27499962	8,173999786	34,4659996	6,113999844	
42					No value for these coordinates	12,11100006	8,18599987	34,14699936	5,866000175	
43					No value for these coordinates	12,18900013	8,175999641	34,61700058	6,034999847	
44					No value for these coordinates	12,18900013	8,175999641	34,61700058	6,034999847	
45					No value for these coordinates	12,11100006	8,18599987	34,14699936	5,866000175	

13788_nsbs_belgian_stations.txt

Questions?

EXERCISE

- 1) Go to the EMODnet Biology Portal and download the North Sea Benthos Survey dataset.
- 2) Go to the Belgian LifeWatch e-Lab and retrieve additional data:
 - Bathymetry
 - Environmental data (e.g. temperature, salinity, oxygen)

HINT: This dataset contains around 16.800 records. To speed up the web services you can opt to only use a selection of the data (e.g. data from the 3 Belgian stations: (1) Lat 51,25; Lon 2,5; (2) Lat 51,50; Lon 3; and (3) Lat 51,75; Lon 2,5).

HINT: you can only select 5 web services at a time.