

Funded by  
the European Union



**DTO-BioFlow**  
Integration of biodiversity monitoring  
data into the Digital Twin Ocean

# Submitting Imaging data to EurOBIS

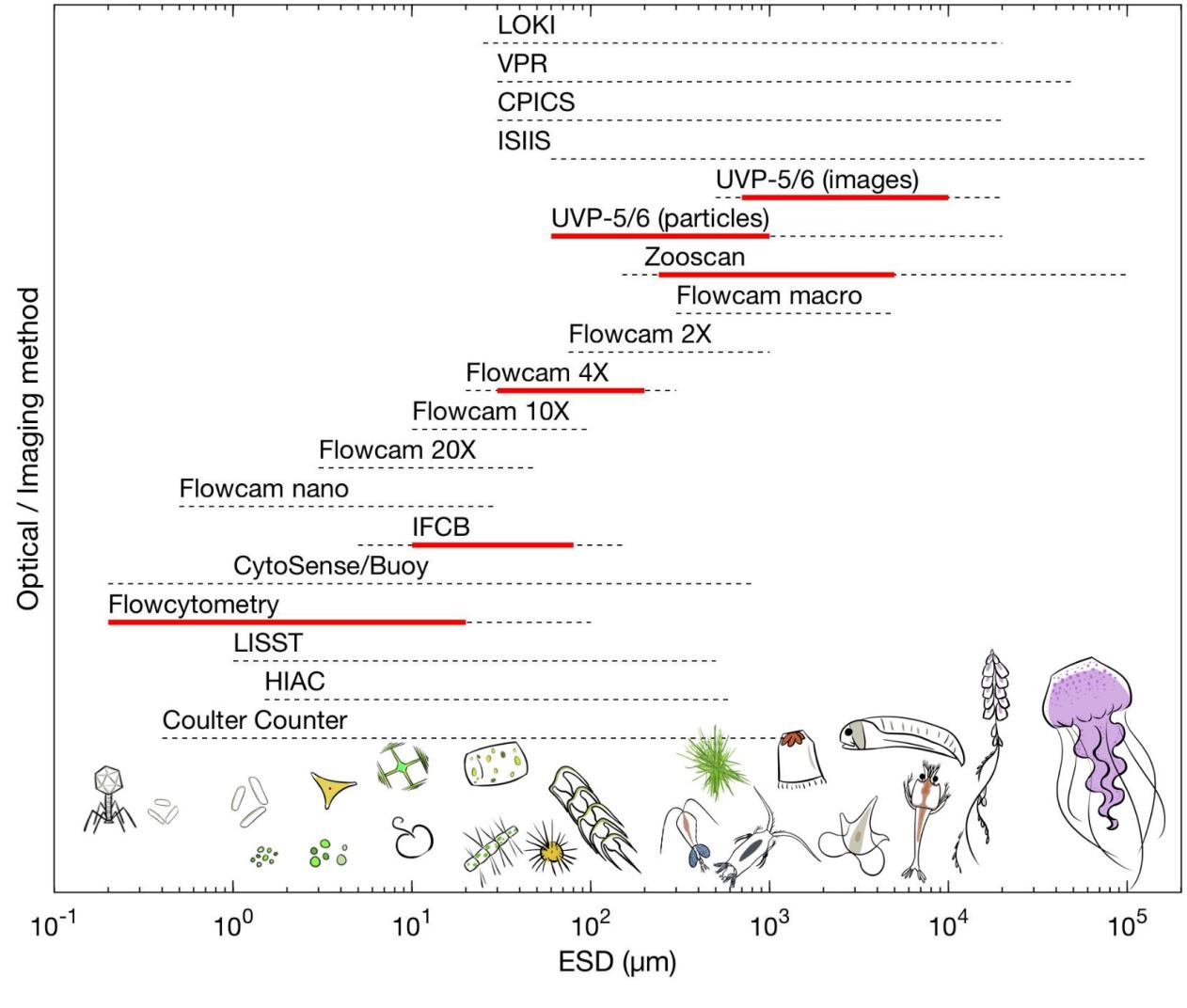
Patricia Martin-Cabrera (VLIZ)



# Plankton Imaging instruments



Credit: David Lucquet



# Imaging data

 **Ecotaxa** <sup>2.6</sup>

Exploration [?](#)  
Randomly selected project: DK\_MR21201

Not logged ( [log in / register](#) )

[Update view & apply filters](#) # images : 100 [Zoom](#) : 100

[Clear filters](#) [Share page](#) [Hide filters](#)

Project  [X](#)

Sample [i](#) [Advanced](#) [Clear](#)  
 Sample

Depth [i](#) [Clear](#)  
[▼](#) Min [m] [▲](#) Max [m]

Location [Clear](#)  
West [North](#) [South](#) East

[Open map](#)

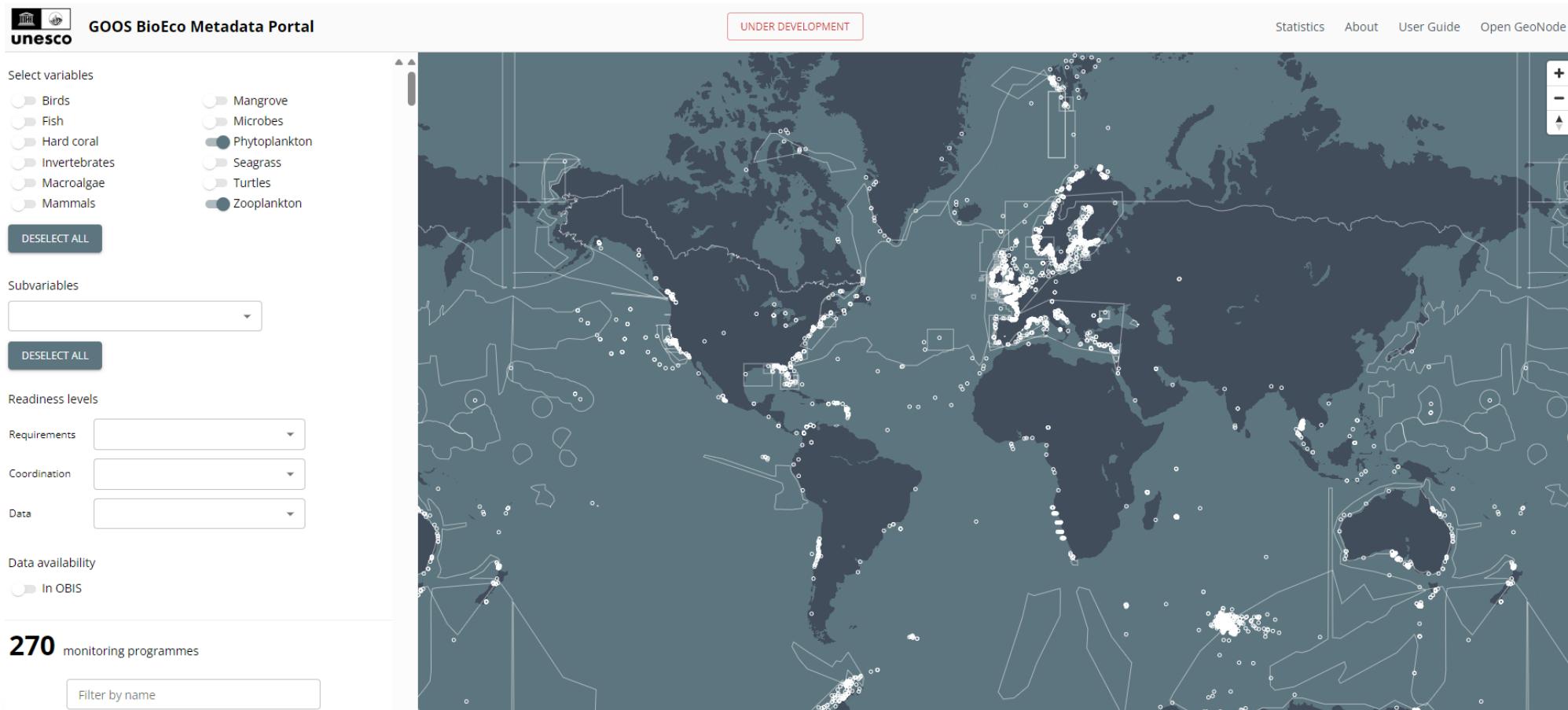
Global map of all objects of the application. (To see filtered for a project, use 'Open map')



Tiles © ArcGIS



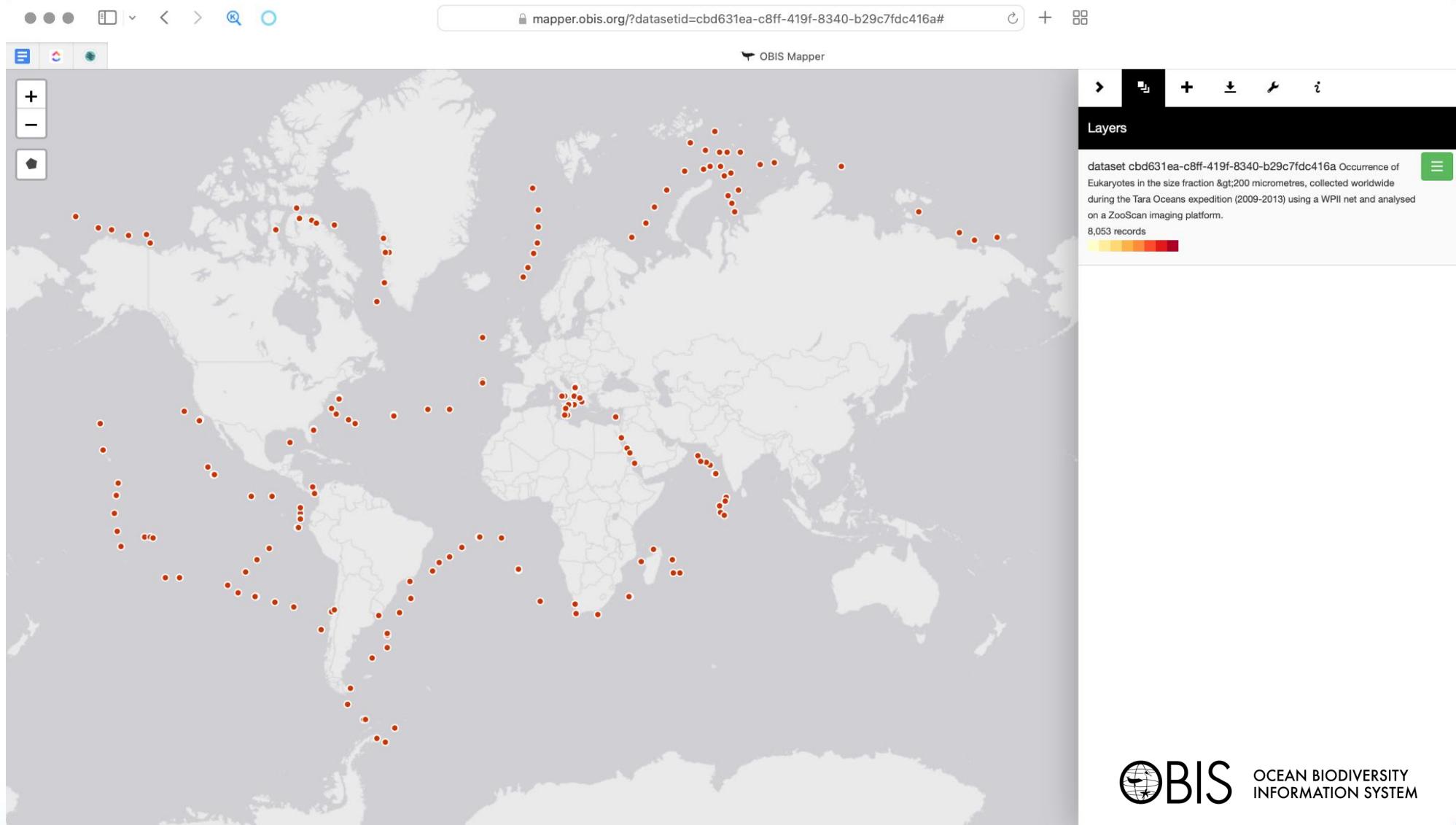
# Plankton monitoring programmes



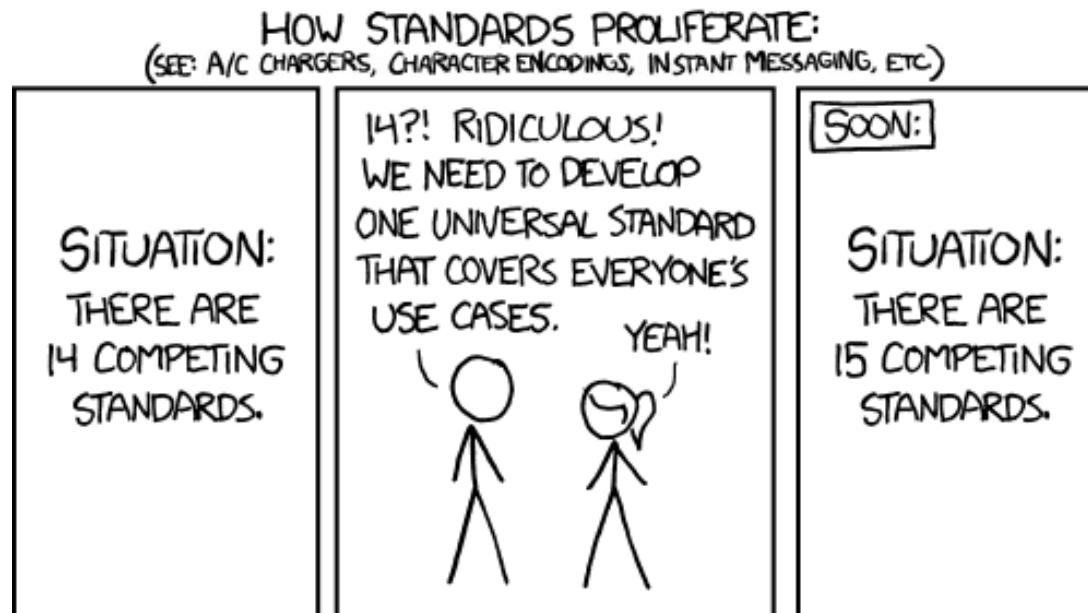
<https://bioeco.goosocean.org/?variables=35%2C36>



# The goal



# Need for best practices



Best practices & recommendations  
for plankton imaging data management

Ensuring effective data flow towards European data infrastructures

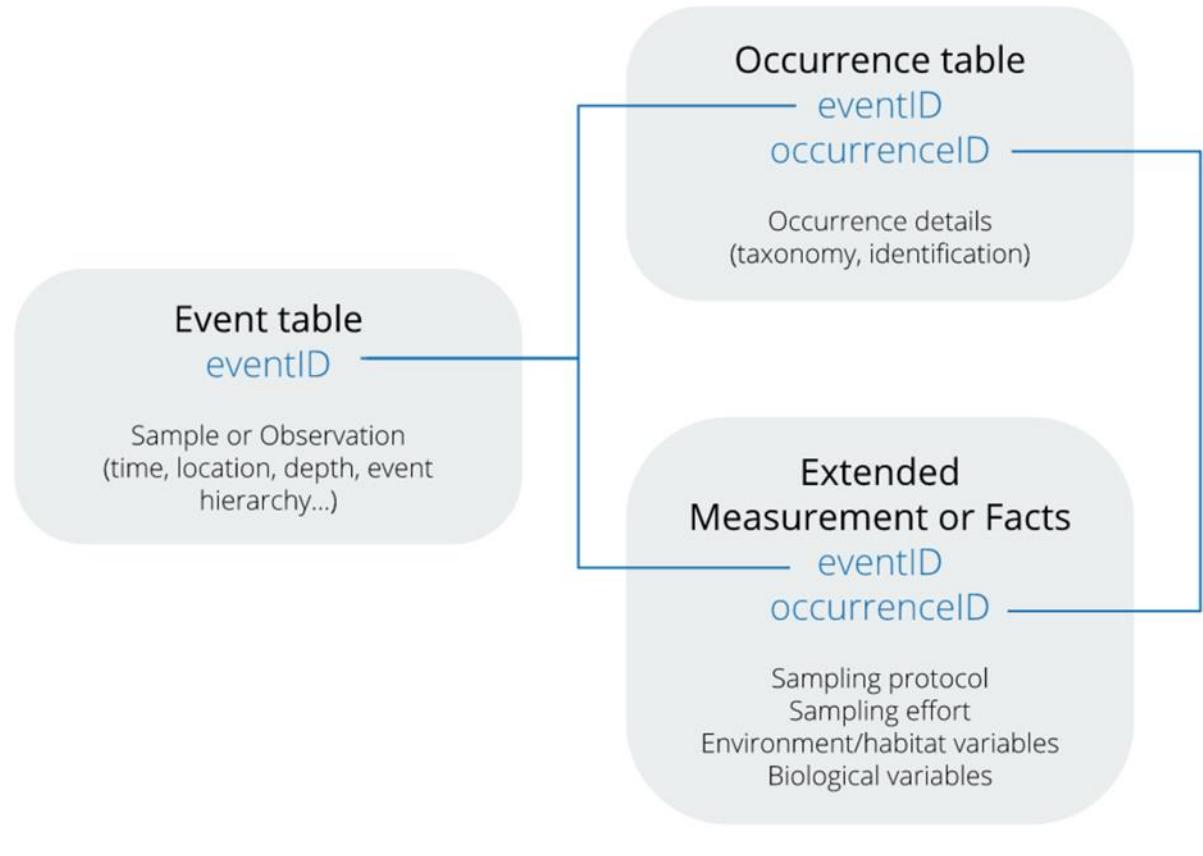
Patricia Martin-Cabrera, Fabien Lombard, Klas O. Möller, Jean-Olivier Irisson, Saskia Ruhl, Markus Lindh,  
Veronique Creach, Lars Stemmann, Lennert Schepers

Flanders Marine Institute, VLIZ (Belgium), Institut de la Mer de Villefranche, CNRS – Sorbonne Université (France), Centre  
for Environment, Fisheries and Aquaculture Science, CEFAS, (UK), Institute of Coastal Research, Helmholtz-Zentrum  
Geesthacht, Hereon Geesthacht, (Germany), Swedish Meteorological and Hydrological Institute, SMHI (Sweden)

<http://dx.doi.org/10.25607/OPB-1742>

Combining information on plankton taxonomy + abundances + images

# OBIS-ENV-DATA Format



Biodiversity  
Information  
Standards  
**T D W G**



**WoRMS**  
World Register of Marine Species



**Marineregions.org**  
towards a standard for georeferenced marine names

# Event table

<https://www.vliz.be/nl/imis?module=dataset&dasid=8218>

eventID	type	parentEventID	eventDate	decimalLongitude	decimalLatitude	institutionCode	datasetName
IFCB_Uto_2021	SamplingCampaign		2021	59.78	21.37	SYKE	IFCB Utö 2021 JERICO-RI Gulf of Finland Pilot Supersite
D20210119T120754_IFCB114	sample	IFCB_Uto_2021	2021-01-19T12:07:54Z				
D20210126T115652_IFCB114	sample	IFCB_Uto_2021	2021-01-26T11:56:52Z				
D20210202T121139_IFCB114	sample	IFCB_Uto_2021	2021-02-02T12:11:39Z				
D20210209T130733_IFCB114	sample	IFCB_Uto_2021	2021-02-09T13:07:33Z				
D20210216T115258_IFCB114	sample	IFCB_Uto_2021	2021-02-16T11:52:58Z				

# The Ocurrence table

eventID	occurrenceID	basisOfRecord	identifiedBy	identificationVerificationStatus	identificationReferences	associatedMedia	scientificName	scientificNameID
D20210119T120754_IFCB114_B114	D20210119T120754_IFCB114_19542	MachineObservation	Maria Tello	ValidatedByHuman	<a href="https://github.com/hsosik/ifcb-analysis/wiki/Instructions-for-manual-annotation-of-images">https://github.com/hsosik/ifcb-analysis/wiki/Instructions-for-manual-annotation-of-images</a>	<a href="http://hdl.handle.net/11304/0272fea2-1f04-4120-98c7-411001bbce5b">http://hdl.handle.net/11304/0272fea2-1f04-4120-98c7-411001bbce5b</a>	Dinophyceae	urn:lsid:marinespecies.org:taxname:19542
D20210119T120754_IFCB114_B114	D20210119T120754_IFCB114_109392	MachineObservation	Maria Tello	ValidatedByHuman	<a href="https://github.com/hsosik/ifcb-analysis/wiki/Instructions-for-manual-annotation-of-images">https://github.com/hsosik/ifcb-analysis/wiki/Instructions-for-manual-annotation-of-images</a>		Gymnodiniales	urn:lsid:marinespecies.org:taxname:109392
D20210119T120754_IFCB114_B114	D20210119T120754_IFCB114_178611	MachineObservation	Maria Tello	ValidatedByHuman	<a href="https://github.com/hsosik/ifcb-analysis/wiki/Instructions-for-manual-annotation-of-images">https://github.com/hsosik/ifcb-analysis/wiki/Instructions-for-manual-annotation-of-images</a>		Oocystis	urn:lsid:marinespecies.org:taxname:178611

# The Emof table

eventID	type	parentEventID	eventDate	decimalLongitude	decimalLatitude	institutionCode	datasetName
IFCB_Uto_2021	Sampling Campaign		2021	59.78	21.37	SYKE	IFCB Utö 2021 JERICO-RI Gulf of Finland Pilot Supersite
D20210119T120754_IFCB114	sample	IFCB_Uto_2021	2021-01-19T12:07:54Z				

eventID	measurementType	measurementTypeID	measurementValue	measurementValueID	measurementUnit	measurementUnitID
IFCB_Uto_2021	Imaging instrument name	not applicable	IFCB	<a href="http://vocab.nerc.ac.uk/collection/L22/current/TOOL1588/">http://vocab.nerc.ac.uk/collection/L22/current/TOOL1588/</a>	not applicable	<a href="http://vocab.nerc.ac.uk/collection/P06/current/XXXX/">http://vocab.nerc.ac.uk/collection/P06/current/XXXX/</a>
IFCB_Uto_2021	Sampling protocol	<a href="http://vocab.nerc.ac.uk/collection/P01/current/SAMPPROT/">http://vocab.nerc.ac.uk/collection/P01/current/SAMPPROT/</a>	Water is pumped continuously for the station's flowthrough measurements, from 250 m offshore, with underwater pump (Grundfos SP3A-9N)	not applicable	not applicable	<a href="http://vocab.nerc.ac.uk/collection/P06/current/XXXX/">http://vocab.nerc.ac.uk/collection/P06/current/XXXX/</a>
IFCB_Uto_2021	Sampling instrument name	<a href="http://vocab.nerc.ac.uk/collection/Q01/current/Q0100002/">http://vocab.nerc.ac.uk/collection/Q01/current/Q0100002/</a>	Flow-through system	not applicable	not applicable	
D20210119T120754_IFCB114	Biovolume	<a href="http://vocab.nerc.ac.uk/collection/P01/current/SDBIOL14/">http://vocab.nerc.ac.uk/collection/P01/current/SDBIOL14/</a>	139890.04	not applicable	um3	<a href="http://vocab.nerc.ac.uk/collection/P06/current/UMCU/">http://vocab.nerc.ac.uk/collection/P06/current/UMCU/</a>

# Aggregated occurrences

## Event table

eventID	type	parentEventID	eventDate	decimalLongitude	decimalLatitude	institutionCode	datasetName
x1	Station visit		2022-01-01	3	52	VLIZ	LifeWatch observatory data: zooplankton observations in the Belgian Part of the North Sea
x1.1	sample	x1					
x1.1.1	sub-occurrence	x1.1					
x1.1.2	sub-occurrence	x1.1					
x1.1.3	sub-occurrence	x1.1					
x1.1.4	sub-occurrence	x1.1					

# Aggregated occurrences

eventID	type	parentEventID	eventDate	decimalLongitude	decimalLatitude
x1	Station visit		2022-01-01	3	52
x1.1	sample	x1			

eventID	occurrenceID	basisOfRecord	identifiedBy	identificationVerificationStatus	identificationReferences	associatedMedia	scientificName	scientificNameID
x1.1.1	eventx1.1-occ1-b	MachineObservation		PredictedByMachine	Plankton Identifier		Oithonidae	urn:lsid:marinespecies.org:taxname:106422
x1.1.2	eventx1.1-occ2-b	MachineObservation	Jonas M	ValidatedByHuman	Plankton Identifier		Acartia nana	urn:lsid:marinespecies.org:taxname:346029
x1.1.3	eventx1.1-occ3-b	MachineObservation		PredictedByMachine	Plankton Identifier	<a href="https://ecotaxa.obs-vlfr.fr/objectdetails/260796823?w=863&amp;h=569">https://ecotaxa.obs-vlfr.fr/objectdetails/260796823?w=863&amp;h=569</a>	Calanoida	urn:lsid:marinespecies.org:taxname:1100
x1.1.4	eventx1.1-occ4-b	MachineObservation		PredictedByMachine	Plankton Identifier		Candaciidae	urn:lsid:marinespecies.org:taxname:104080
x1.1	eventx1.1-occ5-b	MachineObservation		PredictedByMachine	Plankton Identifier		Copepoda	urn:lsid:marinespecies.org:taxname:1080

<b>eMoF column name</b>					
<b>eventID</b>	StationVisit:1	StationVisit:1	StationVisit:1	StationVisit:1	StationVisit:1_Sample:1
<b>measurementValue</b>	Simon Stevin	WP-2 standard net as described by UNESCO Working Party 2 (1968)	Hydroptic ZooSCAN imaging sensor	0.5	40
<b>measurementType</b>	Concept Sampling platform name  The NERC Vocabulary Server (NVS)	Concept Sampling instrument name	Imaging instrument name	Concept Sub-sampling coefficient	Concept Sample volume
		Concept Sampling net mesh size			
		Concept Sampling device aperture surface area			
$\text{Volume sampled in situ} = \frac{\text{Sample volume}}{\text{Sub-sampling coefficient}}$					

Schematic representation of sample collection for the ZooSCAN and how to populate this information on the eMoF table with the corresponding BODC vocabularies. In this example, if for example a Motoda box is used to split samples in halves, then “Subsampling coefficient”=0.5, and the final imaged volume “Sample volume”= 40 litre. Then, the volume sampled in situ=  $40/0.5= 80$  litre.



eventID	type	parentEventID	eventDate	decimalLongitude	decimalLatitude
x1	Station visit		2022-01-01	3	52
x1.1	sample	x1	2022-01-01	3	52

eventID	occurrenceID	measurementType	measurementTypeID	measurementValue	measurementValueID	measurementUnit	measurementUnitID
x1		Sampling platform name	<a href="http://vocab.nerc.ac.uk/collection/Q01/current/Q0100001/">http://vocab.nerc.ac.uk/collection/Q01/current/Q0100001/</a>	Simon Stevin	<a href="http://vocab.nerc.ac.uk/collection/C17/current/11SS/">http://vocab.nerc.ac.uk/collection/C17/current/11SS/</a>	not applicable	<a href="http://vocab.nerc.ac.uk/collection/S02/current/S029/">http://vocab.nerc.ac.uk/collection/S02/current/S029/</a>
x1		Sampling instrument name	<a href="http://vocab.nerc.ac.uk/collection/Q01/current/Q0100002/">http://vocab.nerc.ac.uk/collection/Q01/current/Q0100002/</a>	WP-2 standard net as described by UNESCO Working Party 2 (1968)	<a href="http://vocab.nerc.ac.uk/collection/L22/current/NETT0168/">http://vocab.nerc.ac.uk/collection/L22/current/NETT0168/</a>	not applicable	<a href="http://vocab.nerc.ac.uk/collection/S02/current/S029/">http://vocab.nerc.ac.uk/collection/S02/current/S029/</a>
x1		Sampling net mesh size	<a href="http://vocab.nerc.ac.uk/collection/Q01/current/Q0100015/">http://vocab.nerc.ac.uk/collection/Q01/current/Q0100015/</a>	200	not applicable	Micrometres (microns)	<a href="http://vocab.nerc.ac.uk/collection/P06/current/UMIC/">http://vocab.nerc.ac.uk/collection/P06/current/UMIC/</a>
x1		Sampling device aperture surface area	<a href="http://vocab.nerc.ac.uk/collection/Q01/current/Q0100017/">http://vocab.nerc.ac.uk/collection/Q01/current/Q0100017/</a>	0.25	not applicable	Square metres	<a href="http://vocab.nerc.ac.uk/collection/P06/current/UMSQ/">http://vocab.nerc.ac.uk/collection/P06/current/UMSQ/</a>
x1		Imaging instrument name	BODC Term requested	Hydroptic ZooSCAN imaging sensor	<a href="http://vocab.nerc.ac.uk/collection/L22/current/TOOL1581/">http://vocab.nerc.ac.uk/collection/L22/current/TOOL1581/</a>	not applicable	<a href="http://vocab.nerc.ac.uk/collection/S02/current/S029/">http://vocab.nerc.ac.uk/collection/S02/current/S029/</a>
x1		Subsampling coefficient	<a href="http://vocab.nerc.ac.uk/collection/P01/current/SSAMPC01/">http://vocab.nerc.ac.uk/collection/P01/current/SSAMPC01/</a>	0.5	not applicable	not applicable	<a href="http://vocab.nerc.ac.uk/collection/S02/current/S029/">http://vocab.nerc.ac.uk/collection/S02/current/S029/</a>
x1.1		Sample volume	<a href="http://vocab.nerc.ac.uk/collection/P01/current/VOLXXXXX/">http://vocab.nerc.ac.uk/collection/P01/current/VOLXXXXX/</a>	40	not applicable	Millilitres	<a href="http://vocab.nerc.ac.uk/collection/P06/current/VVML/">http://vocab.nerc.ac.uk/collection/P06/current/VVML/</a>
x1.1	eventx1.1-occ5-c	Abundance of biological entity specified elsewhere per unit volume of the water body	<a href="http://vocab.nerc.ac.uk/collection/P01/current/SDBIOL01/">http://vocab.nerc.ac.uk/collection/P01/current/SDBIOL01/</a>	0.8743	not applicable	Number per cubic metre	<a href="http://vocab.nerc.ac.uk/collection/P06/current/UPMM/">http://vocab.nerc.ac.uk/collection/P06/current/UPMM/</a>

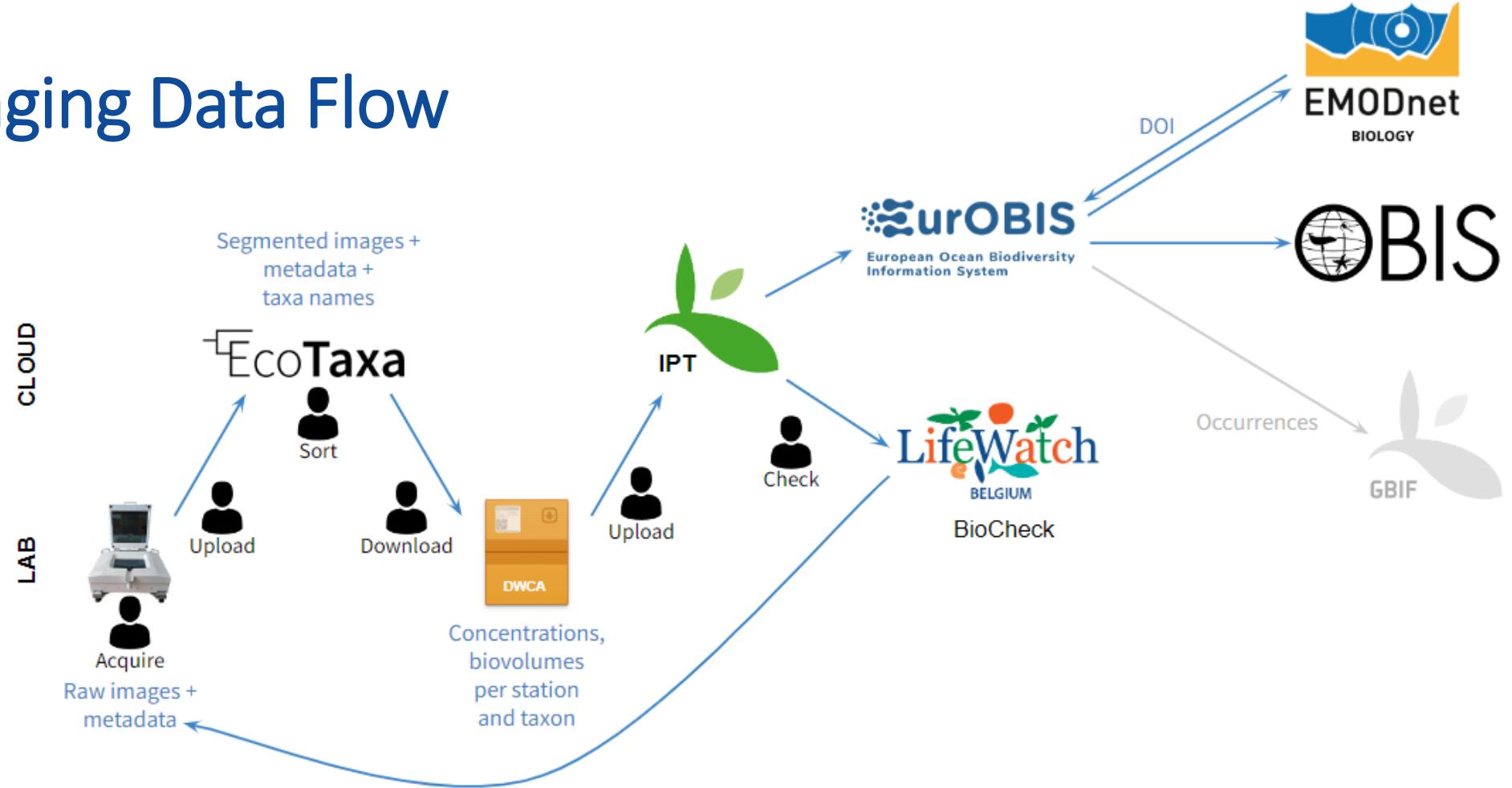


## Imaging data flow

*From instrument to OBIS*



## Plankton Imaging Data Flow



# In EcoTaxa

Screenshot of the EcoTaxa software interface showing a zooplankton specimen and its taxonomic details.

The interface includes:

- Header:** ecotaxa.obs-vlfr.fr/prj/714
- Project:** EcoTaxa 2.6
- Filter:** Taxo=Alciopidae
- User:** Jean-Olivier Iriksen (log out)
- Search Bar:** Zooscan Tara Oceans MTN 300 ALL NETS - NEW! (64, 0, 0 / 64)
- Toolbar:** Update view & apply filter, Select all, Display, Status, Action
- Taxonomy filter:** Other filters, Actinopterygii, Annelida, Alciopidae (highlighted with an orange arrow), Chaetognatha, Cnidaria, Hydrozoa, Siphonophorae, Ablyidae, Abylopsis tetragona, bract, eudoxie, gonophore.
- Specimen View:** A large image of a dark, segmented zooplankton larva with a long tail-like appendage. A scale bar indicates 1 mm.
- Detail View:** A smaller image of the same zooplankton larva, also labeled Alciopidae, with a scale bar indicating 1 mm.

# In EcoTaxa

Screenshot of the EcoTaxa software interface showing a zooplankton sample record.

The main window displays the following details:

- Project:** Zooscan Tara Oceans MTN 300 ALL NETS - NEW! (managed by Fabien Lombard, Louis Caray-Counil)
- Classification:** Alciopidae
- External link:** <http://www.zooscan.obs-vlfr.fr/>
- Complementary information (edit):** Image list: 1
- Sample details:**

Parameter	Value	Parameter	Value
Original ID	tara_oceans_2010_042_n_mtn_5_300	longitude	73.91
scan_operator	corinne_desnos	program	tara_oceans_2009_2013
bottomdepth	99999	other_ref	I36
tow_type	1	net_mesh	300
zmax	60	tot_vol	42
eudoxie	< Abylopsis tetragona	sample_qc	1111
duration	nan	cable_length	800
cable_speed	9999	open	nan

A large orange arrow points from the text "Sample metadata" to the "Sample details" table.



# In EcoTaxa

Screenshot of the EcoTaxa 2.6 software interface showing a detailed view of a zooplankton specimen from the Zooscan Tara Oceans MTN 300 ALL NETS project.

The left sidebar shows a taxonomy filter tree:

- Actinopterygii: 658 items
  - egg < Actinopterygii: 109 items
  - scale: 357 items
- Annelida: 257 items
  - Alciopidae: 64 items (highlighted with a red arrow)
  - Phyllodocidae: 54 items
  - Tomopteridae: 284 items
  - larvae < Annelida: 48 items
  - part < Annelida: 618 items
  - Branchiostoma lanceolatum: 20 items
- Chaetognatha: 8565 items
  - head < Chaetognatha: 1383 items
  - tail < Chaetognatha: 1883 items
- Cnidaria < Metazoa: 37 items
  - Actiniaria: 15 items
- Hydrozoa: 113 items
  - Aglaura: 383 items
  - Obelia: 3 items
  - Rhopalonema velatum: 79 items
- Siphonophorae: 12 items
  - Abyliidae: 17 items
- Abylopsidae: 7 items
  - Abylopsis tetragona: 81 items
    - bract < Abylopsis tetragona: 81 items
    - eudoxie < Abylopsis tetragona: 18 items
    - gonophore < Abylopsis tetragona: 46 items

Object metadata

# Going through BioCheck

[LifeWatch & EMODnet Biology QC tool](#)

LifeWatch & EMODnet Biology QC tool

- [Data overview](#)
- [Issues found](#)
- [Issues on map](#)
- [Invalid Event Records](#)
- [Invalid Occurrence Records](#)
- [Invalid eMoF Records](#)
- [OBIS Event Hierarchy tree](#)
- [About](#)

Welcome to the LifeWatch and EMODnet Biology data quality control tool. This tool allows you to assess to what extend a dataset published on an IPT or a DwC-A file meets the EMODnet Biology Data Quality Criteria. Provide the URL to the homepage of the IPT resource in the field 'Link to IPT resource' and click on load. This may take a few minutes for large (+100K occurrence records) datasets. Then navigate through the different tabs above to get detailed QC information, or press the download button to resolve the issues later. The About tab lists which QC checks are carried out, and how the tables and error messages must be interpreted.

To share a report you can use 'http://rshiny.lifewatch.be/BioCheck/?baseurl=' + <URL to your IPT> + '&resource=' + <shortname of the resource>. So for example http://rshiny.lifewatch.be/BioCheck/?baseurl=http://ipt.vliz.be/training&resource=biofun\_2009

**Overview of the dataset: Occurrence of Eukaryotes in the size fraction >300 micrometres, collected worldwide during the Tara Oceans expedition (2009-2013) using a Multinet and analysed on a ZooScan imaging platform**

**Overview of event and occurrence records**

type	basisOfRecord	n_events	n_present
NA	MachineObservation	285	9484

**Link to IPT resource**

**Add event hierarchy tree?**

**Load**

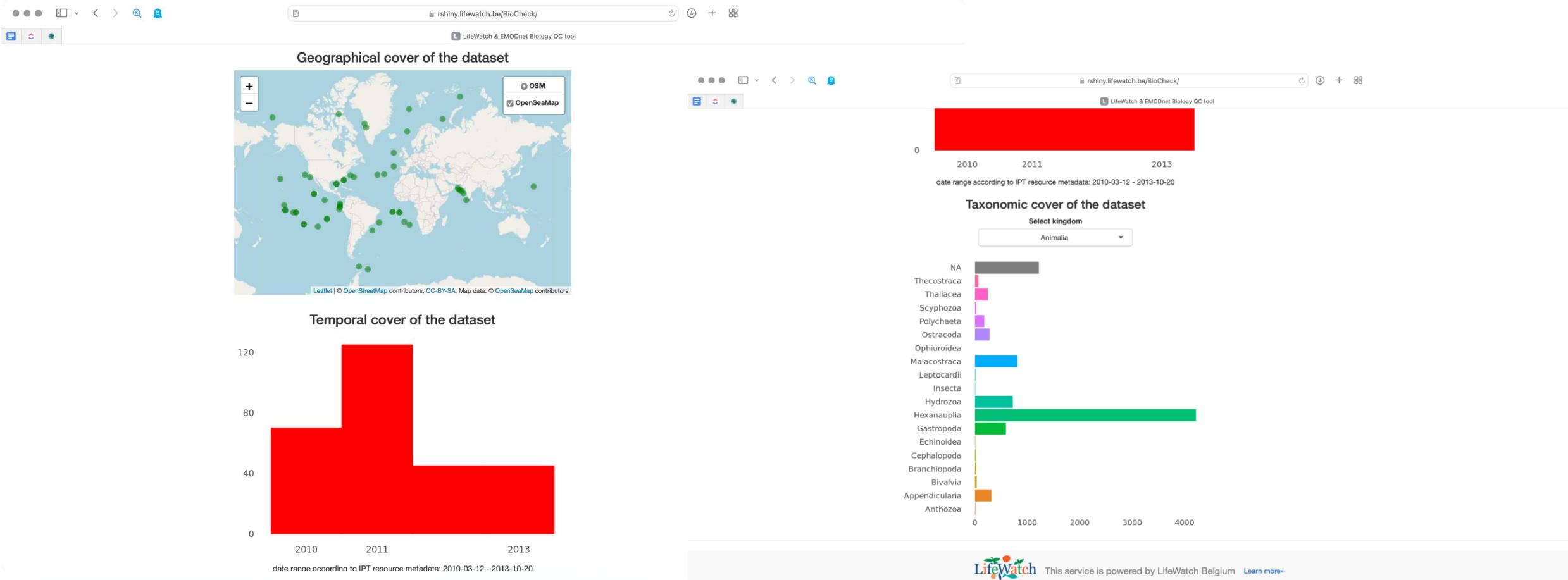
**Download report**

**Overview of the measurement or fact records**

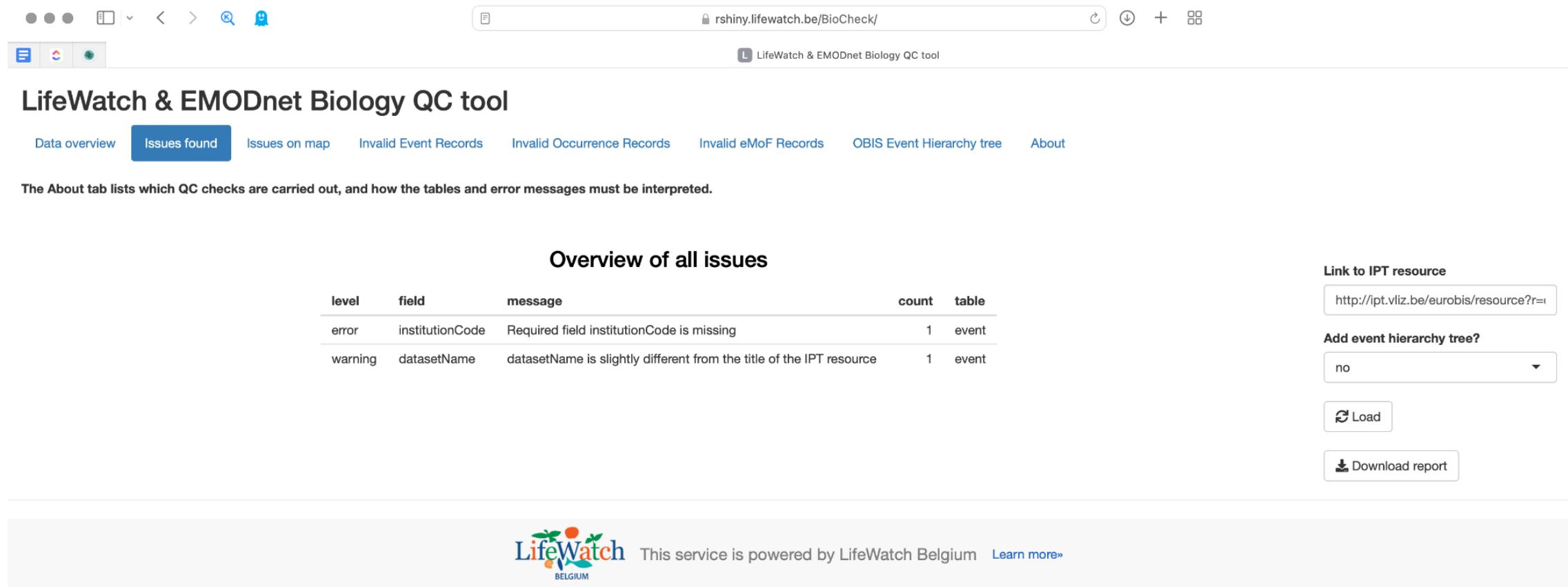
IDlink	measurementType	minValue	maxValue	measurementUnit	count	TypeID_standardUnit	TypeID_name	TypeID_definition
eventMoF	Sampling device aperture surface area	0.50	0.50	Square metres	285	NA	Sampling device aperture surface area	The 2-dimensional size of the opening of a sampling device (e.g. a grab or a trawl); the type of device is specified elsewhere
eventMoF	Sampling instrument name	NA	NA	NA	285	NA	Sampling instrument name	The name of the gear or instrument used to collect the sample or make the in-situ measurement or observation.
eventMoF	Sampling net mesh size	300.00	300.00	Micrometres (microns)	285	NA	Sampling net mesh size	The mesh size of the sampling net used to obtain the sample. The type of net is specified elsewhere.
occurrenceMoF	Count (in assayed sample) of biological entity specified elsewhere	1.00	1053.00	NA	9484	Dmless	Count (in assayed sample) of biological entity specified elsewhere	The number of individuals of a biological object (identified elsewhere in the data or metadata) in the sample or observation.

20

# Going through BioCheck



# Going through BioCheck



The screenshot shows a web browser window with the URL [rshiny.lifewatch.be/BioCheck/](http://rshiny.lifewatch.be/BioCheck/). The title bar says "LifeWatch & EMODnet Biology QC tool". The main content area has a heading "Overview of all issues" and a table:

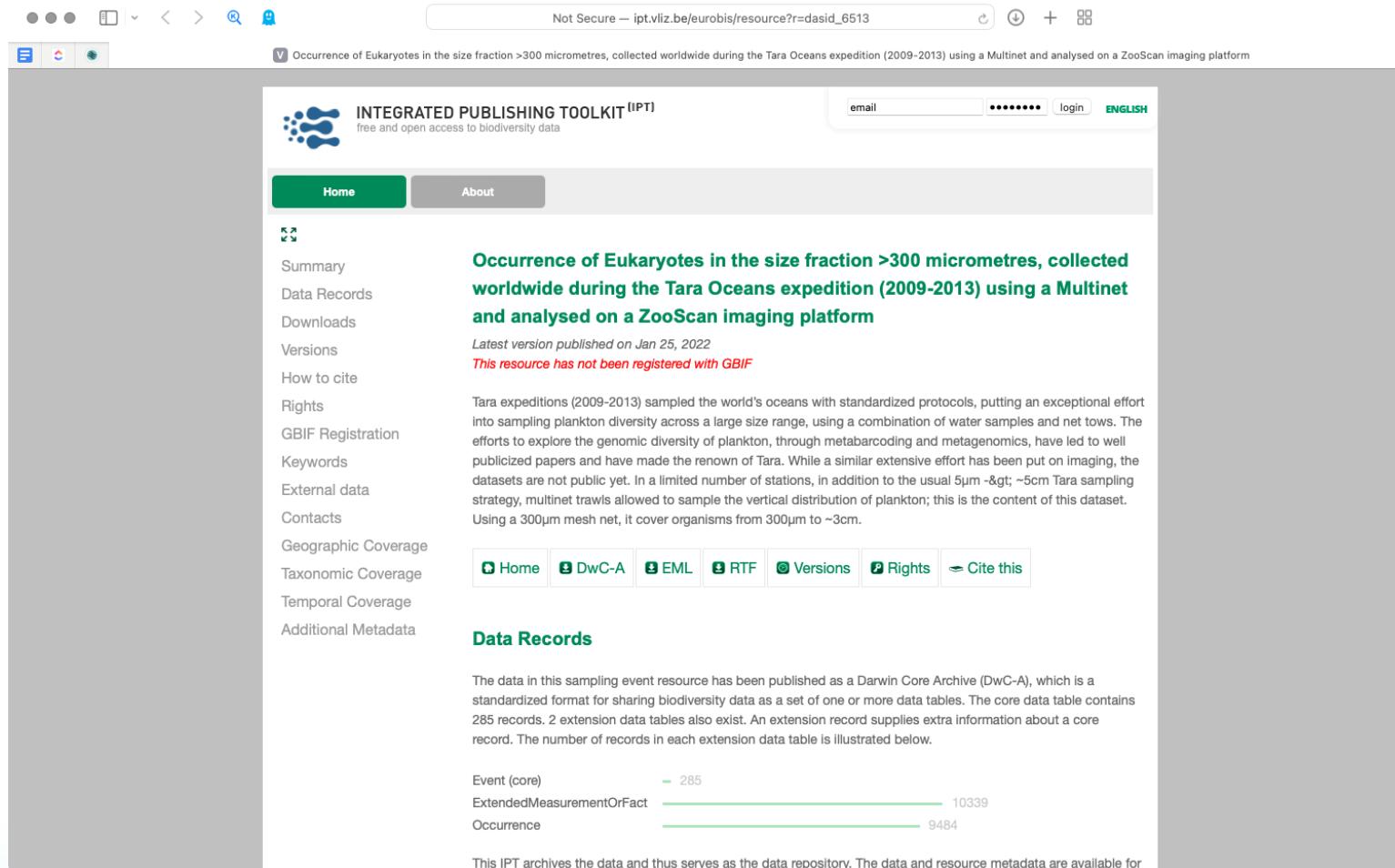
level	field	message	count	table
error	institutionCode	Required field institutionCode is missing	1	event
warning	datasetName	datasetName is slightly different from the title of the IPT resource	1	event

On the right side, there are several buttons and input fields:

- Link to IPT resource:**
- Add event hierarchy tree?**: A dropdown menu set to "no".
- Load**: A button with a circular arrow icon.
- Download report**: A button with a download icon.

At the bottom, it says "This service is powered by LifeWatch Belgium" with a "Learn more»" link.

# In EurOBIS



The screenshot shows a web browser window displaying a dataset page from the Integrated Publishing Toolkit (IPT). The URL in the address bar is "Not Secure — ipt.vliz.be/eurobis/resource?r=dasid\_6513". The page title is "Occurrence of Eukaryotes in the size fraction >300 micrometres, collected worldwide during the Tara Oceans expedition (2009-2013) using a Multinet and analysed on a ZooScan imaging platform". The IPT logo is visible at the top left, along with a login form and language selection (ENGLISH). The main content area includes a sidebar with links like "Summary", "Data Records", "Downloads", etc., and the main content area displays the dataset details. A section titled "Data Records" provides information about the Darwin Core Archive (DwC-A) format and extension tables. At the bottom, there is a note about the data being archived as a resource repository.

Not Secure — ipt.vliz.be/eurobis/resource?r=dasid\_6513

Occurrence of Eukaryotes in the size fraction >300 micrometres, collected worldwide during the Tara Oceans expedition (2009-2013) using a Multinet and analysed on a ZooScan imaging platform

INTEGRATED PUBLISHING TOOLKIT (IPT)  
free and open access to biodiversity data

Home About

Summary Data Records Downloads Versions How to cite Rights GBIF Registration Keywords External data Contacts Geographic Coverage Taxonomic Coverage Temporal Coverage Additional Metadata

Occurrence of Eukaryotes in the size fraction >300 micrometres, collected worldwide during the Tara Oceans expedition (2009-2013) using a Multinet and analysed on a ZooScan imaging platform

Latest version published on Jan 25, 2022  
*This resource has not been registered with GBIF*

Tara expeditions (2009-2013) sampled the world's oceans with standardized protocols, putting an exceptional effort into sampling plankton diversity across a large size range, using a combination of water samples and net tows. The efforts to explore the genomic diversity of plankton, through metabarcoding and metagenomics, have led to well publicized papers and have made the renown of Tara. While a similar extensive effort has been put on imaging, the datasets are not public yet. In a limited number of stations, in addition to the usual 5µm -&gt; ~5cm Tara sampling strategy, multinet trawls allowed to sample the vertical distribution of plankton; this is the content of this dataset. Using a 300µm mesh net, it cover organisms from 300µm to ~3cm.

Home DwC-A EML RTF Versions Rights Cite this

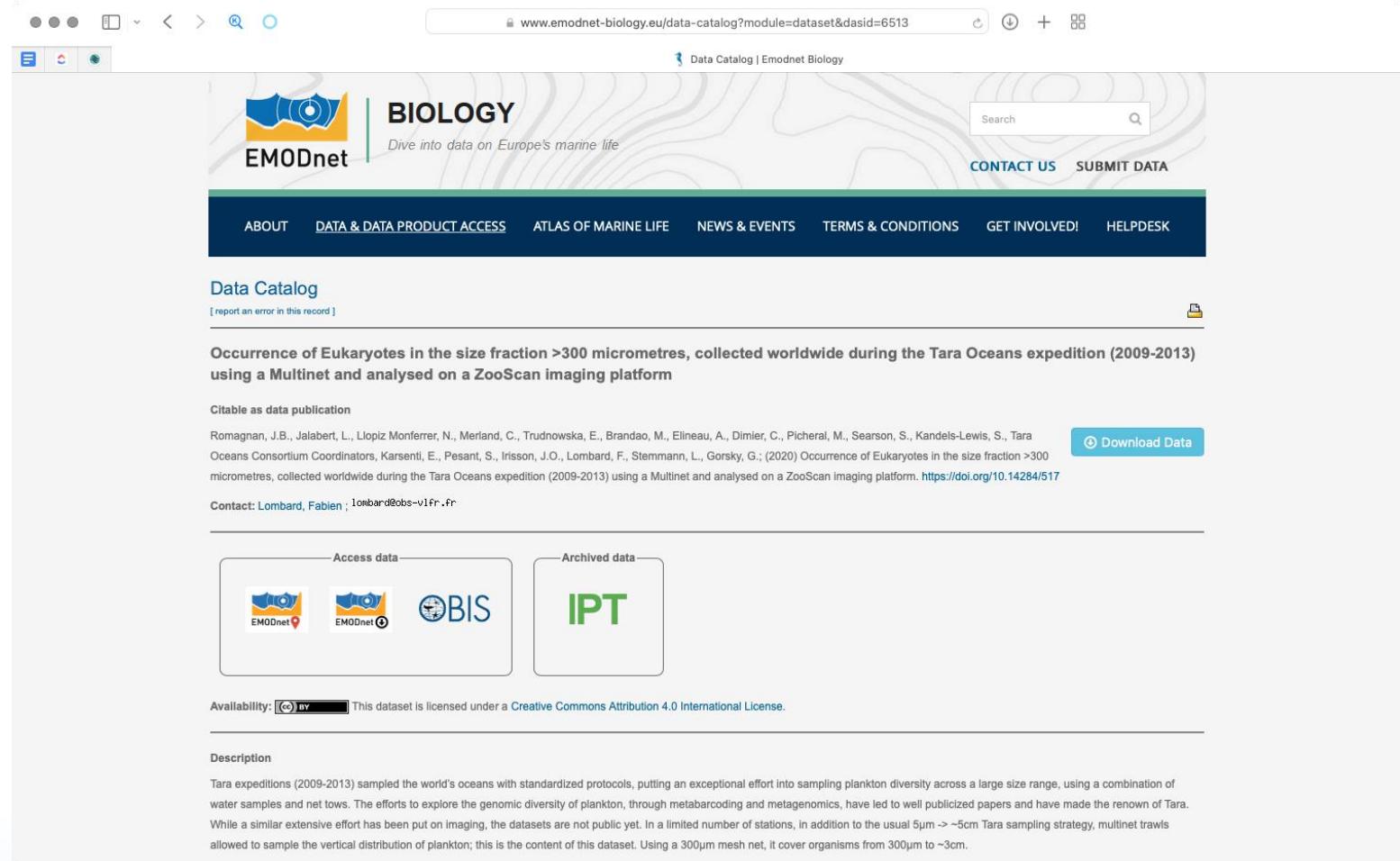
**Data Records**

The data in this sampling event resource has been published as a Darwin Core Archive (DwC-A), which is a standardized format for sharing biodiversity data as a set of one or more data tables. The core data table contains 285 records. 2 extension data tables also exist. An extension record supplies extra information about a core record. The number of records in each extension data table is illustrated below.

Table	Number of Records
Event (core)	285
ExtendedMeasurementOrFact	10339
Occurrence	9484

This IPT archives the data and thus serves as the data repository. The data and resource metadata are available for

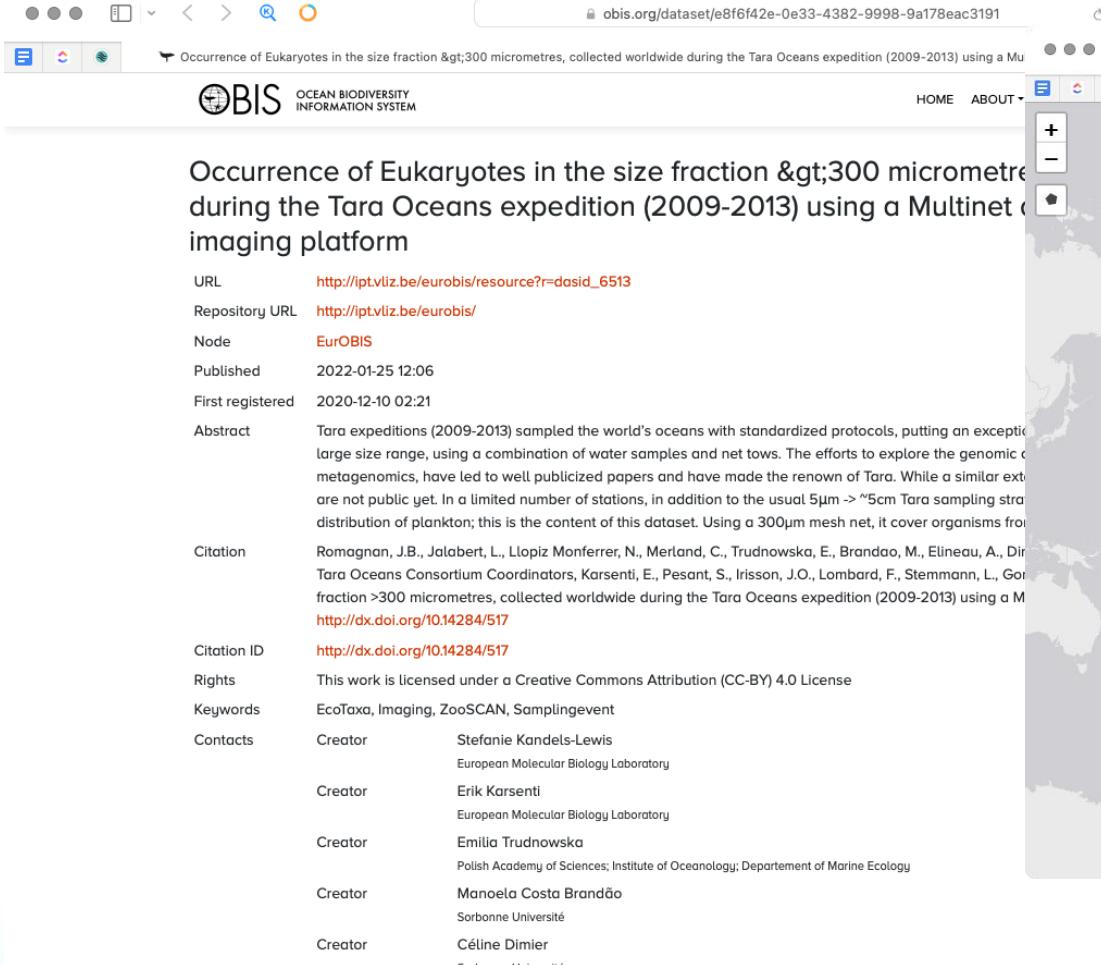
# In EMODnet Biology



The screenshot shows a web browser displaying the EMODnet Biology Data Catalog. The URL in the address bar is [www.emodnet-biology.eu/data-catalog?module=dataset&dasid=6513](http://www.emodnet-biology.eu/data-catalog?module=dataset&dasid=6513). The page header includes the EMODnet logo, the word "BIOLOGY", and a "Data Catalog | Emodnet Biology" link. There is also a search bar and "CONTACT US" and "SUBMIT DATA" buttons.

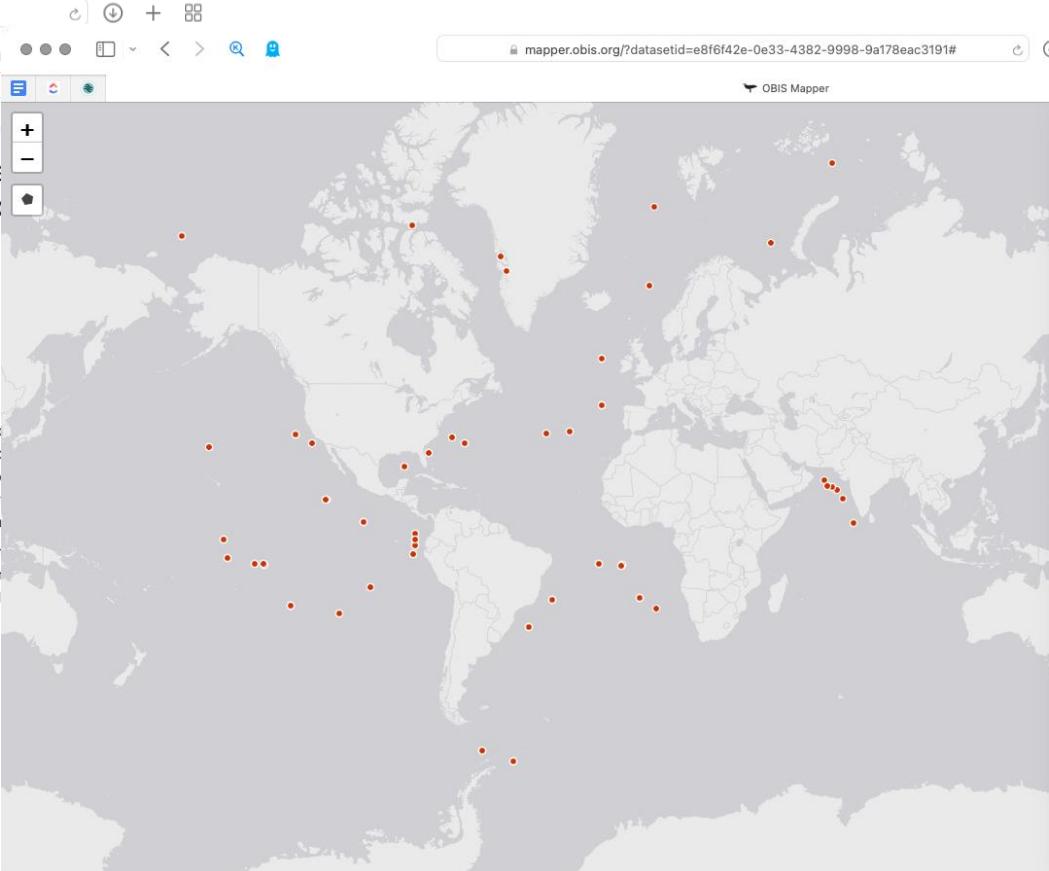
The main content area is titled "Data Catalog" and features a dataset record for "Occurrence of Eukaryotes in the size fraction >300 micrometres, collected worldwide during the Tara Oceans expedition (2009-2013) using a Multinet and analysed on a ZooScan imaging platform". The record is citable as a data publication by Romagnan et al. (2020). It includes a "Download Data" button and contact information for Fabien Lombard. Below the record, there are two boxes: "Access data" containing links to EMODnet and OBIS, and "Archived data" containing a link to IPT. A note about availability indicates the dataset is licensed under a Creative Commons Attribution 4.0 International License. The "Description" section provides details about the Tara expeditions and their sampling methods.

# In OBIS



**Occurrence of Eukaryotes in the size fraction >300 micrometres, collected worldwide during the Tara Oceans expedition (2009-2013) using a Multinet and analysed on a ZooScan imaging platform**

URL [http://ipt.vliz.be/eurobis/resource?r=dataset\\_6513](http://ipt.vliz.be/eurobis/resource?r=dataset_6513)  
 Repository URL <http://ipt.vliz.be/eurobis/>  
 Node [EurOBIS](#)  
 Published 2022-01-25 12:06  
 First registered 2020-12-10 02:21  
 Abstract Tara expeditions (2009-2013) sampled the world's oceans with standardized protocols, putting an exceptional focus on the large size range, using a combination of water samples and net tows. The efforts to explore the genomic diversity of the oceans, metagenomics, have led to well publicized papers and have made the renown of Tara. While a similar extensive sampling effort is not public yet. In a limited number of stations, in addition to the usual 5µm -> "5cm Tara sampling strategy", the distribution of plankton; this is the content of this dataset. Using a 300µm mesh net, it cover organisms from the size fraction >300 micrometres, collected worldwide during the Tara Oceans expedition (2009-2013) using a Multinet and analysed on a ZooScan imaging platform  
<http://dx.doi.org/10.14284/517>  
 Citation ID <http://dx.doi.org/10.14284/517>  
 Rights This work is licensed under a Creative Commons Attribution (CC-BY) 4.0 License  
 Keywords EcoTaxa, Imaging, ZooSCAN, Samplingevent  
 Contacts Creator Stefanie Kandels-Lewis  
 European Molecular Biology Laboratory  
 Creator Erik Karsenti  
 European Molecular Biology Laboratory  
 Creator Emilia Trudnowska  
 Polish Academy of Sciences; Institute of Oceanology; Department of Marine Ecology  
 Creator Manoela Costa Brandão  
 Sorbonne Université  
 Creator Céline Dimier  
 Sorbonne Université



**OBIS Mapper**

Layers

dataset e8f6f42e-0e33-4382-9998-9a178eac3191 Occurrence of Eukaryotes in the size fraction >300 micrometres, collected worldwide during the Tara Oceans expedition (2009-2013) using a Multinet and analysed on a ZooScan imaging platform  
 9,484 records

# How to find this data?

IMIS

[Publications](#) | [Institutes](#) | [Persons](#) | [Datasets](#) | [Projects](#) | [Maps](#)

[report an error in this record]

log in



## LifeWatch observatory data: zooplankton observations by imaging (ZooScan) in the Belgian Part of the North Sea

Citable as data publication

Flanders Marine Institute (VLIZ), Belgium (2022): LifeWatch observatory data: zooplankton observations in the Belgian Part of the North Sea.  
<https://doi.org/10.14284/543> <https://dx.doi.org/10.1002/gdj3.68>

[Download Data](#)

Previous versions (5) [view](#)

Contact: [data@vliz.be](mailto:data@vliz.be)

Access data



Archived data



Also accessible through:

<http://rshiny.lifewatch.be/zooSCAN-data/>

Availability: This dataset is licensed under a [Creative Commons Attribution 4.0 International License](#).



# How to find this data?

IMIS

Publications | Institutes | Persons | Datasets | Projects | Maps

[report an error in this record]

## LifeWatch observatory data: zooplankton observations by imaging (ZooScan) in the Belgian Part of the North Sea

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<https://doi.org/10.14284/543> <https://dx.doi.org/10.1002/gdj3.68>

Previous versions (5) view

Contact: [data@vliz.be](mailto:data@vliz.be)



Also accessible through:  
<http://rshiny.lifewatch.be/zoonscan-data/>

Availability: This dataset is licensed under a [Creative Commons Attribution 4.0 International License](#).

log in



**Blue-Cloud**

Piloting innovative services for Marine Research & the Blue Economy

DATA DISCOVERY & ACCESS SERVICE

?

FEEDBACK

!

### Filter search

You searched for:

plankton

Reset all



#### Free search

#### Date search

From

yyyyymmdd

To

yyyyymmdd

#### Geographic search

North

West

East

South

SEARCH

RESET

Blue Data infrastructures	Level 2 Search	Level 1 Results (334)	
EcoTaxa	Ecotaxa	Level 2 Search 10	
EMODnet	ELIXIR-ENA	Level 2 Search 0	
OBIS	EMODnet Chemistry	Level 2 Search 3	
GBIF	EuroArgo - Argo	Level 2 Search 0	
	EUROBIS - EMODnet Biology	Level 2 Search 277	
	ICOS	ICOS data portal	Level 2 Search 0
	SeaDataNet	Level 2 Search 44	
	SeaDataNet-products	Level 2 Search 0	
	Socat	Level 2 Search 0	

# How to find this data?

IMIS

[ report an error in this record ]

## LifeWatch observatory data: zooplankton observations by imaging (ZooScan) in the Belgian Part of the North Sea

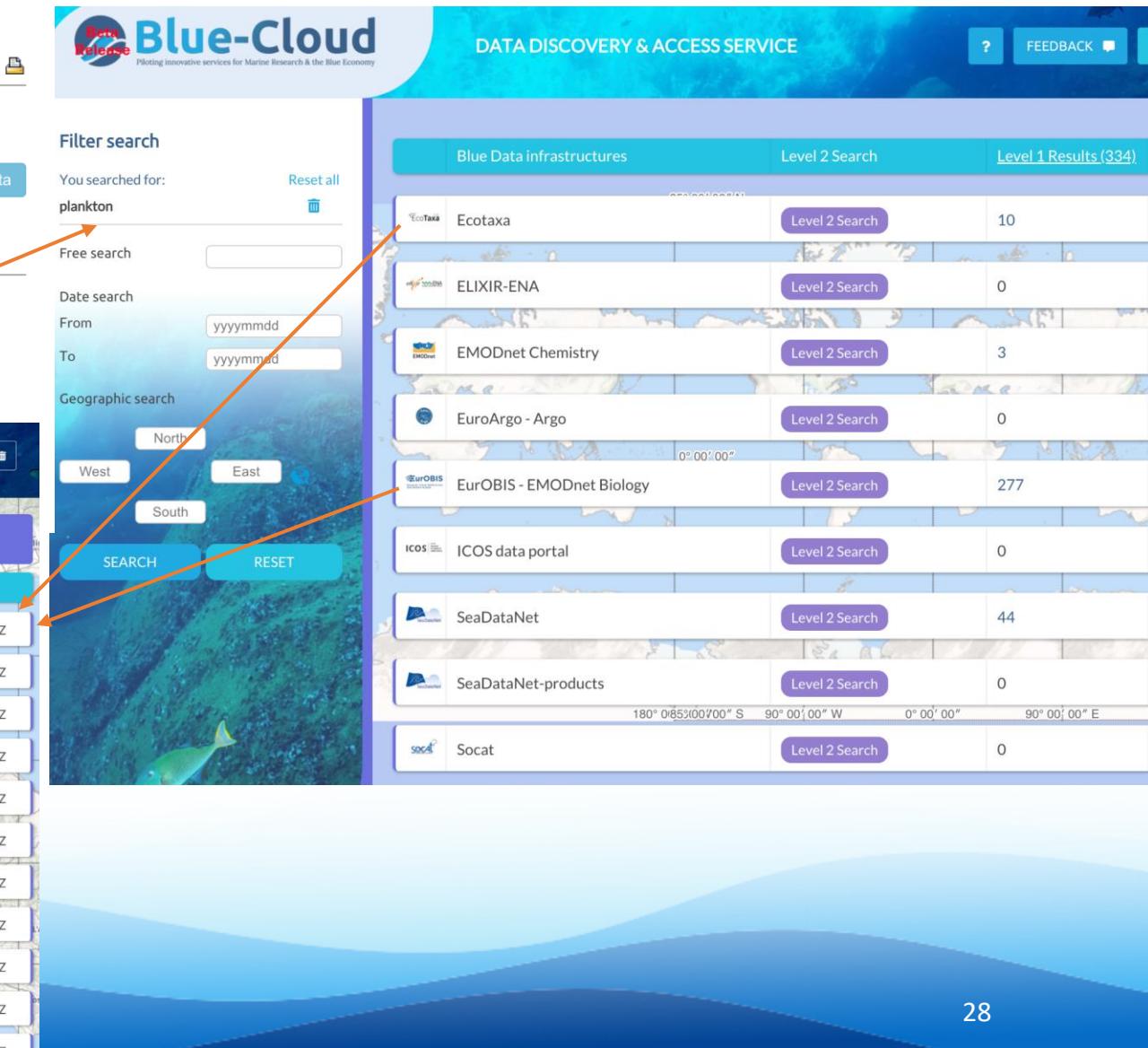
Citable as data publication

Flanders Marine Institute (VLIZ), Belgium (2022): LifeWatch observatory data: zooplankton observations in the Belgian Part of the North Sea.  
<https://doi.org/10.14284/543> <https://dx.doi.org/10.1002/gdj3.68>

Previous versions (5) view

Contact: [data@vliz.be](mailto:data@vliz.be)

log in



**Blue-Cloud**  
Beta release  
DATA DISCOVERY & ACCESS SERVICE

Filter search

You searched for: plankton

Reset all

Free search

Date search

From: yyyyymmdd

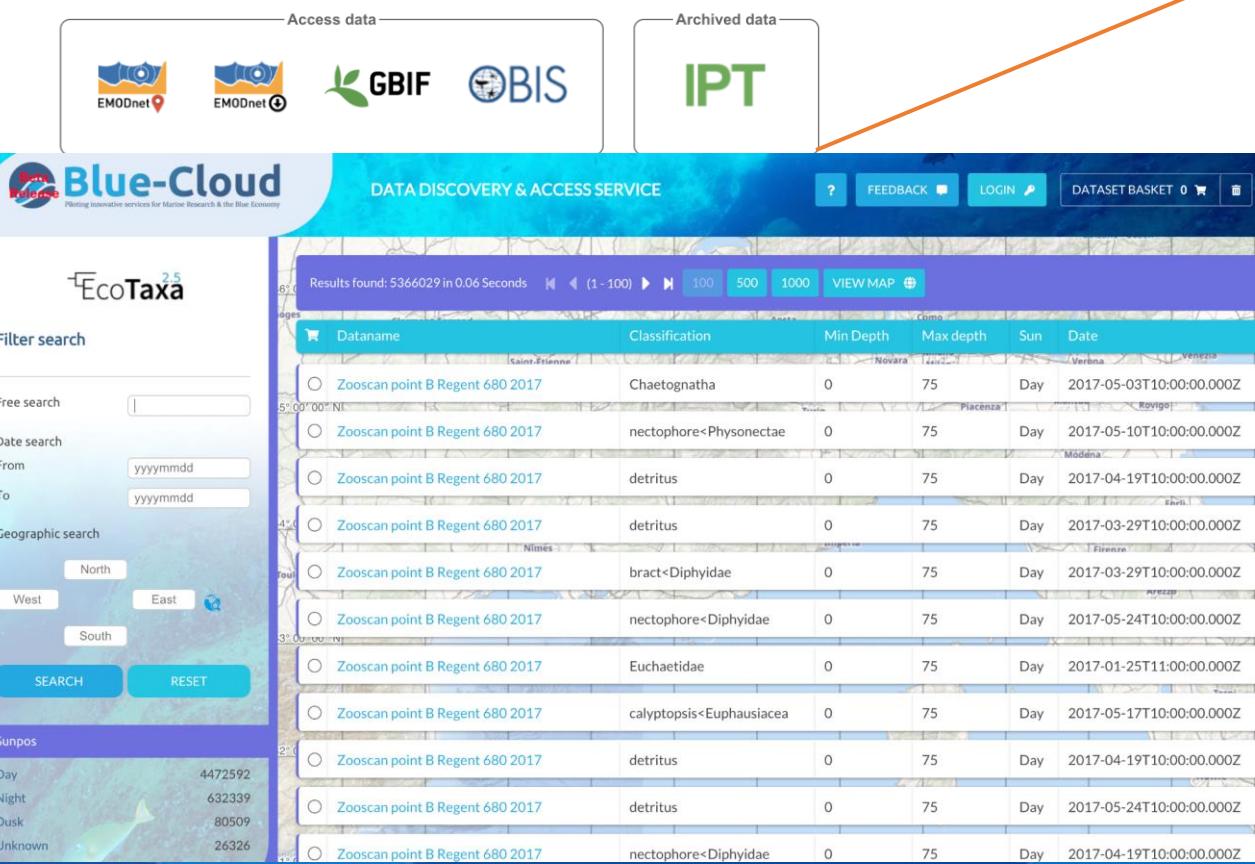
To: yyyyymmdd

Geographic search

North, South, West, East

SEARCH RESET

Blue Data infrastructures	Level 2 Search	Level 1 Results (334)
EcoTaxa	Level 2 Search	10
ELIXIR-ENA	Level 2 Search	0
EMODnet Chemistry	Level 2 Search	3
EuroArgo - Argo	Level 2 Search	0
EuroOBIS - EMODnet Biology	Level 2 Search	277
ICOS data portal	Level 2 Search	0
SeaDataNet	Level 2 Search	44
SeaDataNet-products	Level 2 Search	0
Socat	Level 2 Search	0



**Blue-Cloud**  
Beta release  
DATA DISCOVERY & ACCESS SERVICE

Access data

Archived data

GBIF OBIS IPT

ECOTAXA

Filter search

Free search

Date search

From: yyyyymmdd

To: yyyyymmdd

Geographic search

North, South, West, East

SEARCH RESET

Dataset basket 0

Datename	Classification	Min Depth	Max depth	Sun	Date
Zooscan point B Regent 680 2017	Chaetognatha	0	75	Day	2017-05-03T10:00:00.000Z
Zooscan point B Regent 680 2017	nectophore<Physonectae	0	75	Day	2017-05-10T10:00:00.000Z
Zooscan point B Regent 680 2017	detritus	0	75	Day	2017-04-19T10:00:00.000Z
Zooscan point B Regent 680 2017	detritus	0	75	Day	2017-03-29T10:00:00.000Z
Zooscan point B Regent 680 2017	bract<Diphyidae	0	75	Day	2017-03-29T10:00:00.000Z
Zooscan point B Regent 680 2017	nectophore<Diphyidae	0	75	Day	2017-05-24T10:00:00.000Z
Zooscan point B Regent 680 2017	Euchaetidae	0	75	Day	2017-01-25T11:00:00.000Z
Zooscan point B Regent 680 2017	calyptopsis<Euphausiacea	0	75	Day	2017-05-17T10:00:00.000Z
Zooscan point B Regent 680 2017	detritus	0	75	Day	2017-04-19T10:00:00.000Z
Zooscan point B Regent 680 2017	detritus	0	75	Day	2017-05-24T10:00:00.000Z
Zooscan point B Regent 680 2017	nectophore<Diphyidae	0	75	Day	2017-04-19T10:00:00.000Z

RESULTS FOUND: 5366029 IN 0.06 SECONDS

SUNPOS

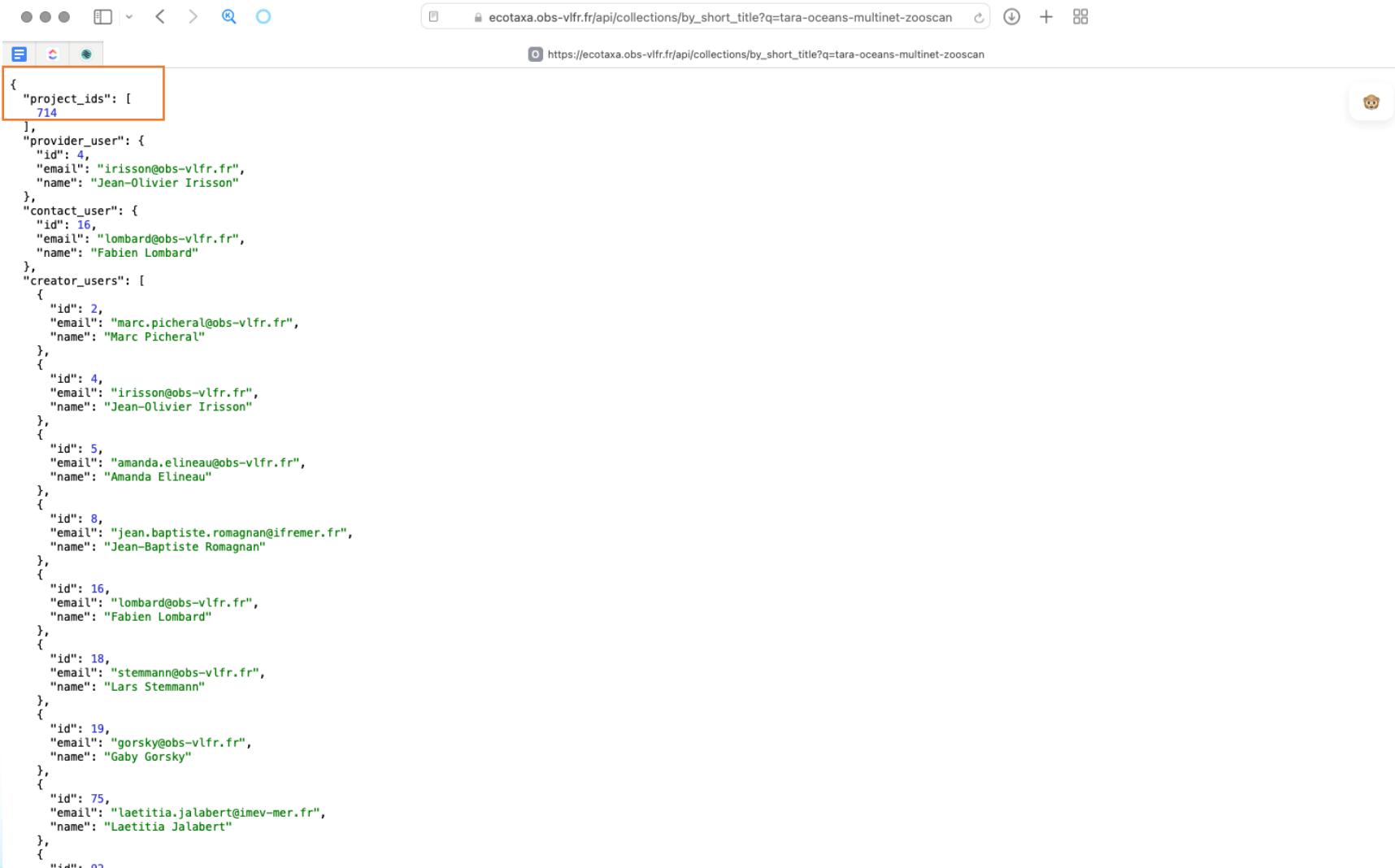
Day: 4472592

Night: 632339

Dusk: 80509

Unknown: 26326

# Back to EcoTaxa



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{
  "project_ids": [
    714,
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      "provider_user": {
        "id": 4,
        "email": "irisson@obs-vlfr.fr",
        "name": "Jean-Olivier Irisson"
      },
      "contact_user": {
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        "name": "Fabien Lombard"
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          "name": "Marc Picheral"
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          "name": "Jean-Olivier Irisson"
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          "name": "Amanda Elineau"
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          "name": "Jean-Baptiste Romagnan"
        },
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        },
        {
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          "name": "Lars Stemmann"
        },
        {
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          "email": "gorsky@obs-vlfr.fr",
          "name": "Gaby Gorsky"
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          "email": "laetitia.jalabert@imev-mer.fr",
          "name": "Laetitia Jalabert"
        },
        {
          "id": 92,
        }
      ]
    }
  ]
}
```

# Back to EcoTaxa

```
{
  "project_ids": [
    714
  ],
  "provider_user": {
    "id": 4,
    "email": "irisson@obs-vlfr.fr",
    "name": "Jean-Olivier Irisson"
  },
  "contact_user": {
    "id": 16,
    "email": "lombard@obs-vlfr.fr",
    "name": "Fabien Lombard"
  },
  "creator_users": [
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      "email": "marc.picheral@obs-vlfr.fr",
      "name": "Marc Picheral"
    },
    {
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      "email": "irisson@obs-vlfr.fr",
      "name": "Jean-Olivier Irisson"
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      "name": "Amanda Elineau"
    },
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      "name": "Jean-Baptiste Romagnan"
    },
    {
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      "name": "Fabien Lombard"
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      "name": "Lars Stemmann"
    },
    {
      "id": 19,
      "email": "gorsky@obs-vlfr.fr",
      "name": "Gaby Gorsky"
    },
    {
      "id": 75,
      "email": "laetitia.jalabert@imev-mer.fr",
      "name": "Laetitia Jalabert"
    },
    {
      "id": 92,
    }
  ]
}
```

ecotaxa.obs-vlfr.fr/prj/714

EcoTaxa Zooscan Tara Oceans MTN 300 ALL NETS - NEW!

Jean-Olivier Irisson (log out)

Action

Zooscan Tara Oceans MTN 300 ALL NETS - NEW! (64, 0, 0 / 64)

Update view & apply filter

Project Filtered Filter: Taxo=Alciopidae

Select all

Taxonomy filter Other filters

Actinopterygii

- egg < Actinopterygii
- scale

Annelida

- Alciopidae
- Phyllodocidae
- Tomopteridae
- larvae < Annelida
- part < Annelida
- Branchiostoma lanceolatum

Chaetognatha

- head < Chaetognatha
- tail < Chaetognatha

Cnidaria < Metazoa

- Actiniaria

Hydrozoa

- Aglaura
- Obelia
- Rhopalonema velatum

Siphonophorae

Abylidiae

Abylopsis tetragona

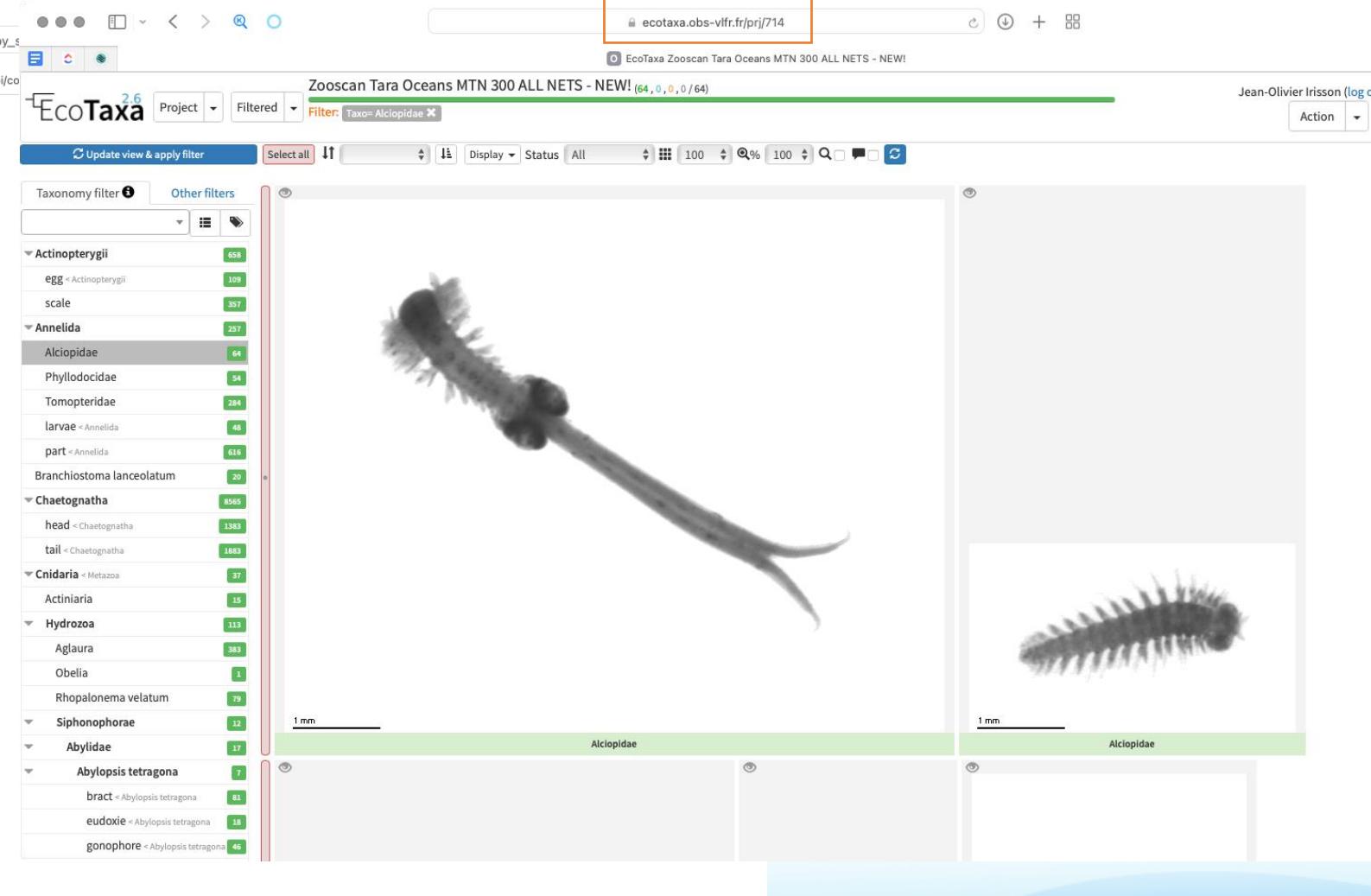
- bract < Abylopsis tetragona
- eudoxie < Abylopsis tetragona
- gonophore < Abylopsis tetragona

1 mm

Alciopidae

1 mm

Alciopidae



# Datasets with images

## Plankton images in OBIS Japan

[Plankton image dataset from a cabled observatory system \(JEDI System/OCEANS\) deployed at coastal area of Oshima island, Tokyo, Japan - Biological Information System for Marine Life \(jamstec.go.jp\)](#)

European Marine Observation and Data Network (EMODnet)

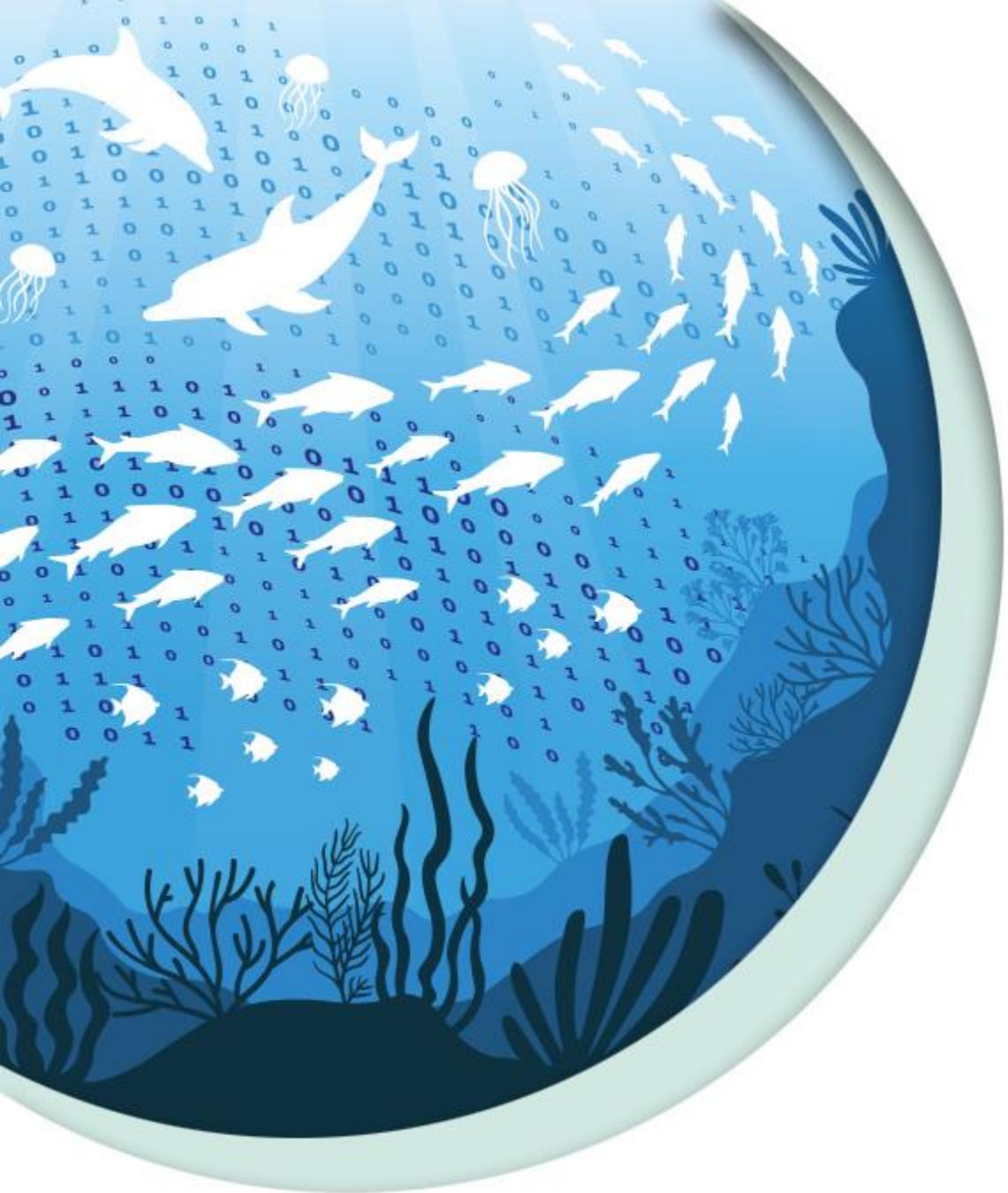
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[Home](#) > [Solution](#) > [Use Cases](#) > EMODnet Biology datasets enriched with standardized associated media information

### EMODnet Biology datasets enriched with standardized associated media information

14 Mar 2023  
User organisation

[EMODnet Biology datasets enriched with standardized associated media information | European Marine Observation and Data Network \(EMODnet\) \(europa.eu\)](#)



# DTO-BioFlow

Integration of biodiversity monitoring  
data into the Digital Twin Ocean

THANKS!