SeaDataNet

Management of the glider data in SeaDataNet RI

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GROOM II meeting, July 5, 2022
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SeaDataNet

- European RI created by several EU projects and managed by the NODCs of 35 countries bordering the European seas

EU – MAST

EU –MASTII

EU-FP5

EU-FP6

EU-FP7

H2020

90s

EDMED

Euronodim

MEDATLAS

2002-2005

Sea-Search

2006-2011

SeaDataNet

2011-2015

SeaDataNet II

2016-2021

SeaDataCloud

SeaDataNet - Objectives

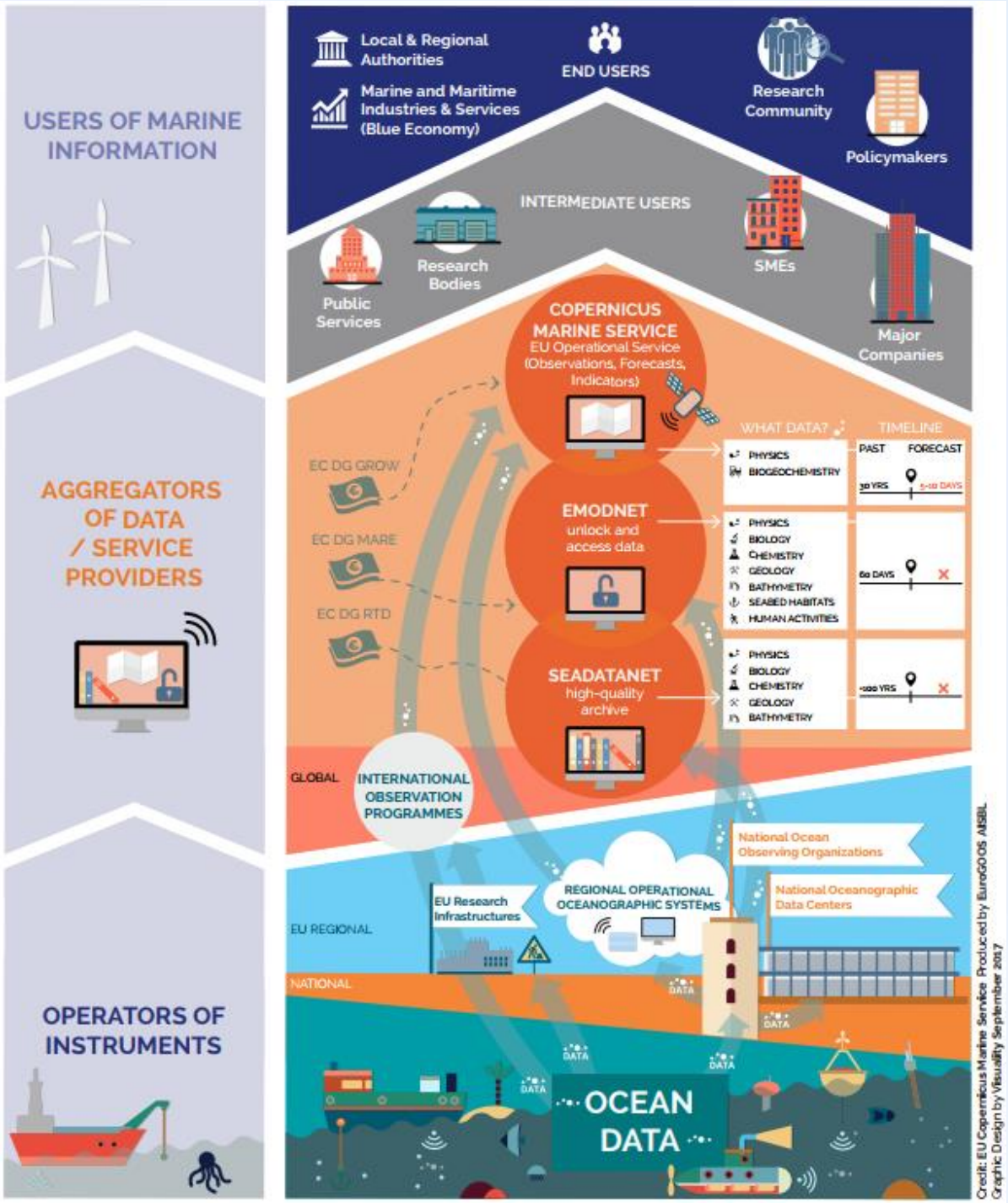
- Federation of the oceanographic data centres of 35 countries bordering the European seas
- Creation of a single virtual data centre, allowing a user searching for oceanographic data to connect to all 35 countries from a single user interface
- Distribute complete datasets in specific sea basins to privileged users (modellers)
- Creation and dissemination of products (climatologies and aggregated datasets) made from the data put into the infrastructure

SeaDataNet Status

- SeaDataNet is managed by:
  - All the partners, for data input
  - Core partners for the maintenance and upgrade of the SeaDataNet services and tools (Ifremer, NOC-BODC, MARIS, ULiège, AWI)
- Legal Status : SeaDataNet is an AISBL (Non-profit International association), under Belgian Law, with its headquarters in Brussels (RBINS)
- Funded by European projects related directly to SDN infrastructure or EMODnet projects or other project (ENVRI-FAIR, BLUECLOUD, …) where members of the AISBL are involved.

SeaDataNet

European landscape in terms of Marine Data management: 3 main components



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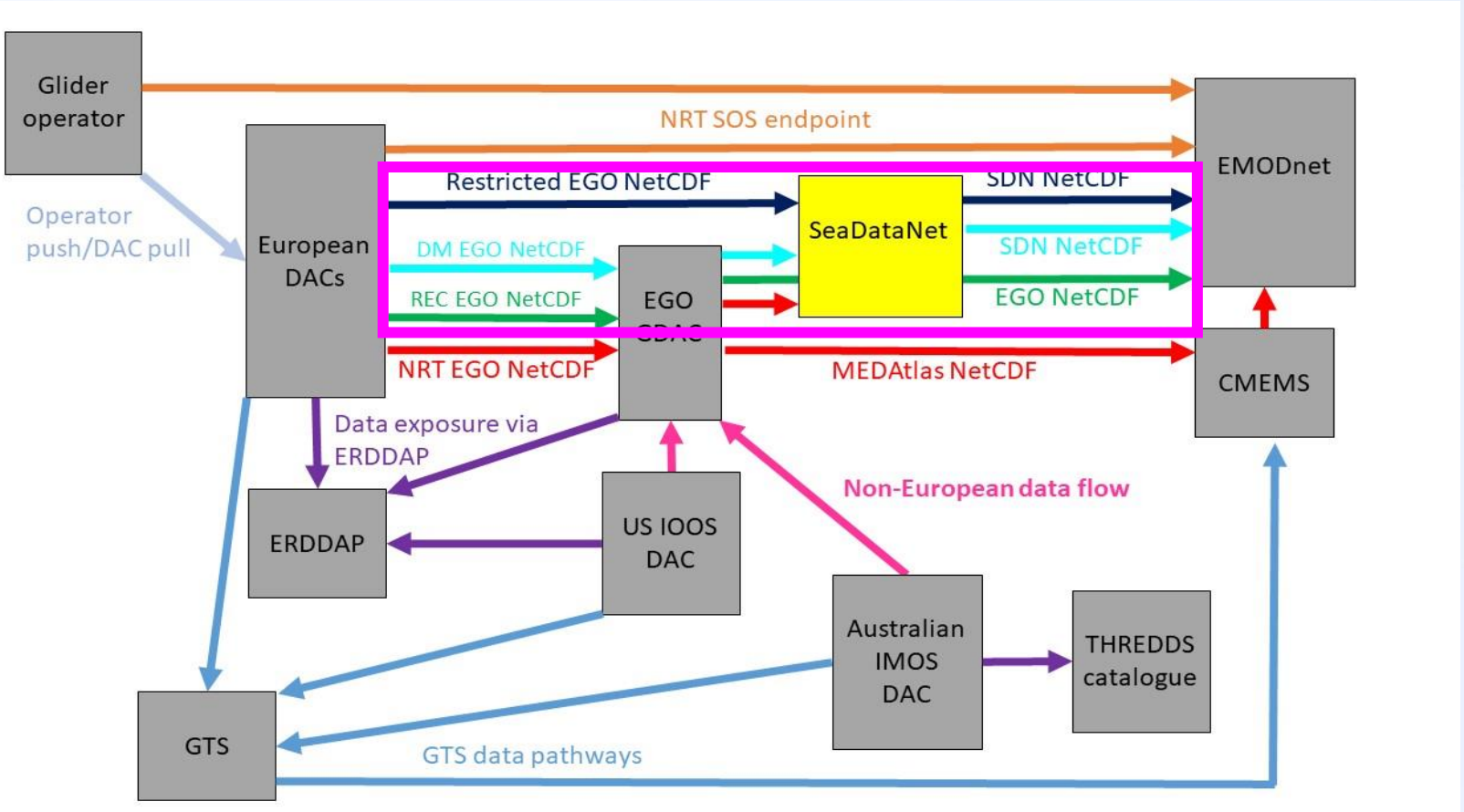
Mandate for Glider data

- In the frame of the H2020 SeaDataCloud project (2016-2021), one task (led by NOC-BODC) was to expand the data types handled by SeaDataNet to include HF-Radar, Flow Cytometer and **Glider** data
  - *SeaDataCloud partners ingesting, validating and storing glider data will be expected to align their operation with the glider data management protocols established and being developed under the EU EGO (Everyone's Gliding Observatories) initiative….*
- One deliverable*:*
  - ***D9.14**: SeaDataNet data management protocols for glider data* ➔ *Describing how to map EGO file to SDN format*

Glider data integration in SeaDataNet



Processing of the EGO data files

- Development of a converter from EGO format to SeaDataNet netCDF format ➔ implemented in OCTOPUS software

OCTOPUS is a multi-format Checker, Converter and Splitter tool.

- OCTOPUS checks the compliance of a file to the SeaDataNet ODV, netCDF and MedAtlas standard formats The checks for ODV and netCDF are described in the FAQ section.
- OCTOPUS converts files in a given SeaDataNet format to another SeaDataNet format (e.g.: ODV to netCDF, netCDF to ODV, MedAtlas to NetCDF, MedAtlas to ODV)
- OCTOPUS checks the ODV SDN variant formats for biology, microlitter and flow cytometry, it can converts them from ODV variant to ODV variant
- OCTOPUS checks the SeaDataNet netCDF format for HF-Radar, no conversion are possible for this format.
- OCTOPUS has also additional functions such as:
  - Split a multi-station SeaDataNet file into mono-station SeaDataNet files
  - Extract station(s) from SeaDataNet files
  - Convert MGD v81 and v98 to SeaDataNet ODV files
  - Convert EGO glider files to netCDF (CFPOINT) format

Which data files?

- EGO files from the GDAC-Coriolis managed at IFREMER

Organisation	Country	NB glider
DFO	Canada	65
Memorial University of Newfoundland (MUN)	Canada	3
Cyprus Oceanography Center (OC)	Cyprus	4
Tallin	Estonia	7
Finnish Meteorological Institute	Finland	2
DT INSU	France	190
Alseamar-Alcen	France	7
GEOMAR	Germany	99
AWI	Germany	3
Helmholtz-Zentrum Geesthacht (HZG)	Germany	10
HCMR	Greece	2
Marine Institute	Ireland	3
CMRE	Italy	11
OGS	Italy	11
University of Bergen	Norway	8
PLOCAN	Spain	27
SOCIB	Spain	108
BODC	UK	45
University of Gothenburg (UoG)	Sweden	1
		606

Converting the EGO data files to SDN format

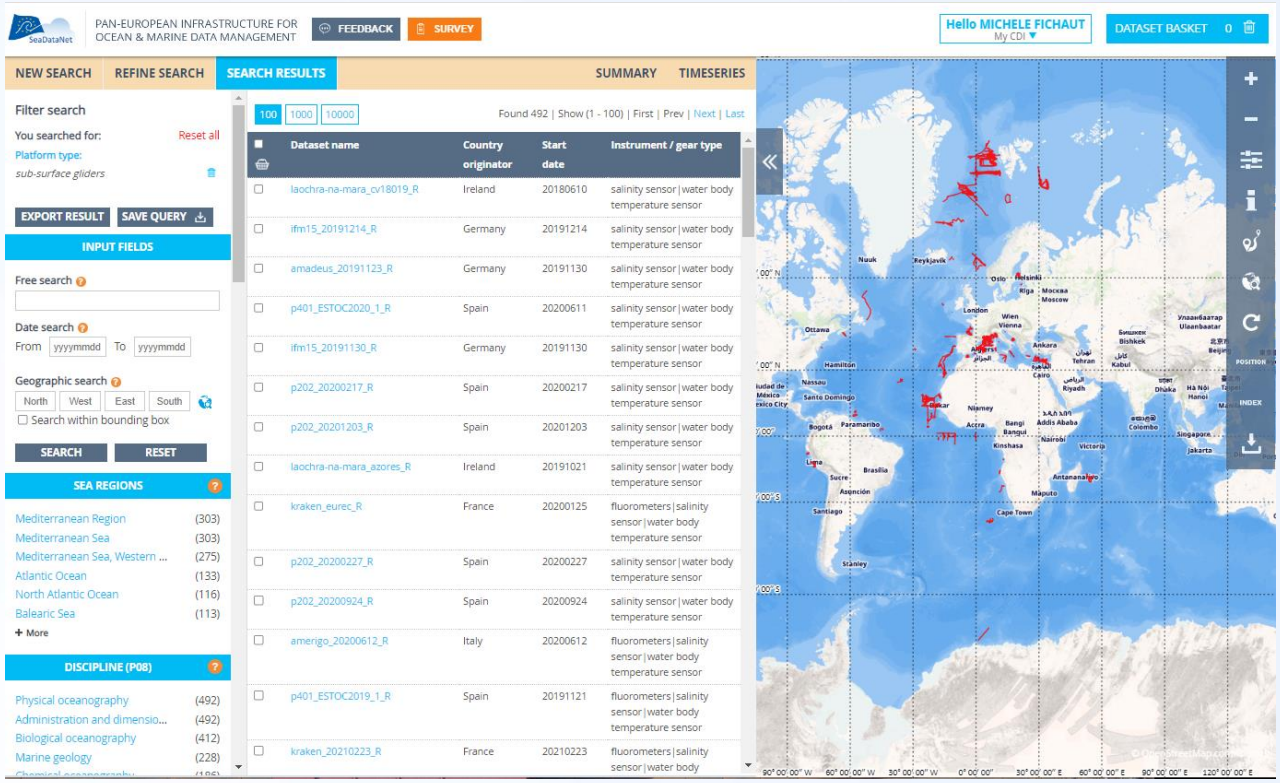
- Conversion detected many errors in the EGO files (only 58 files could be directly converted)
  - Global attributes missing (:title) or containing wrong (:platform_code) values
  - Missing PRES:positive attribute
  - Wrong values for the flags declared as bytes (:flag_values= 0., 1., 2➔ :flag_values= 0b, 1b, 2b)
  - Inconsistencies between flag and values ➔ Flag 9 on values
  - Shift between values and QC on longitude
  - Wrong or missing mapping to P01 (BODC parameter codes) and P06 (BODC vocabs for units)
  - Missing mappings in P01 and C17 (ICES platform vocabulary)

Correcting the EGO data when possible

- Error corrected **on a copy** of the GDAC files
- Conversion detected many errors in the EGO files
  - Global attributes missing (:title) or containing wrong (:platform_code) values
  - Missing PRES:positive attribute
  - Wrong values for the flags declared as bytes (:flag_values= 0., 1., 2➔ :flag_values= 0b, 1b, 2b)
  - Inconsistencies between flag and values ➔ Flag 9 on values
  - Shift between values and QC on longitude
  - Wrong or missing mapping to P01 (BODC parameter codes) and P06 (BODC vocabs for units)
  - Missing mappings in P01 and C17 (ICES platform vocabulary)
- Errors reported back to the data providers: corrections on-going at DFO and CSIC

Glider data in SeaDataNet

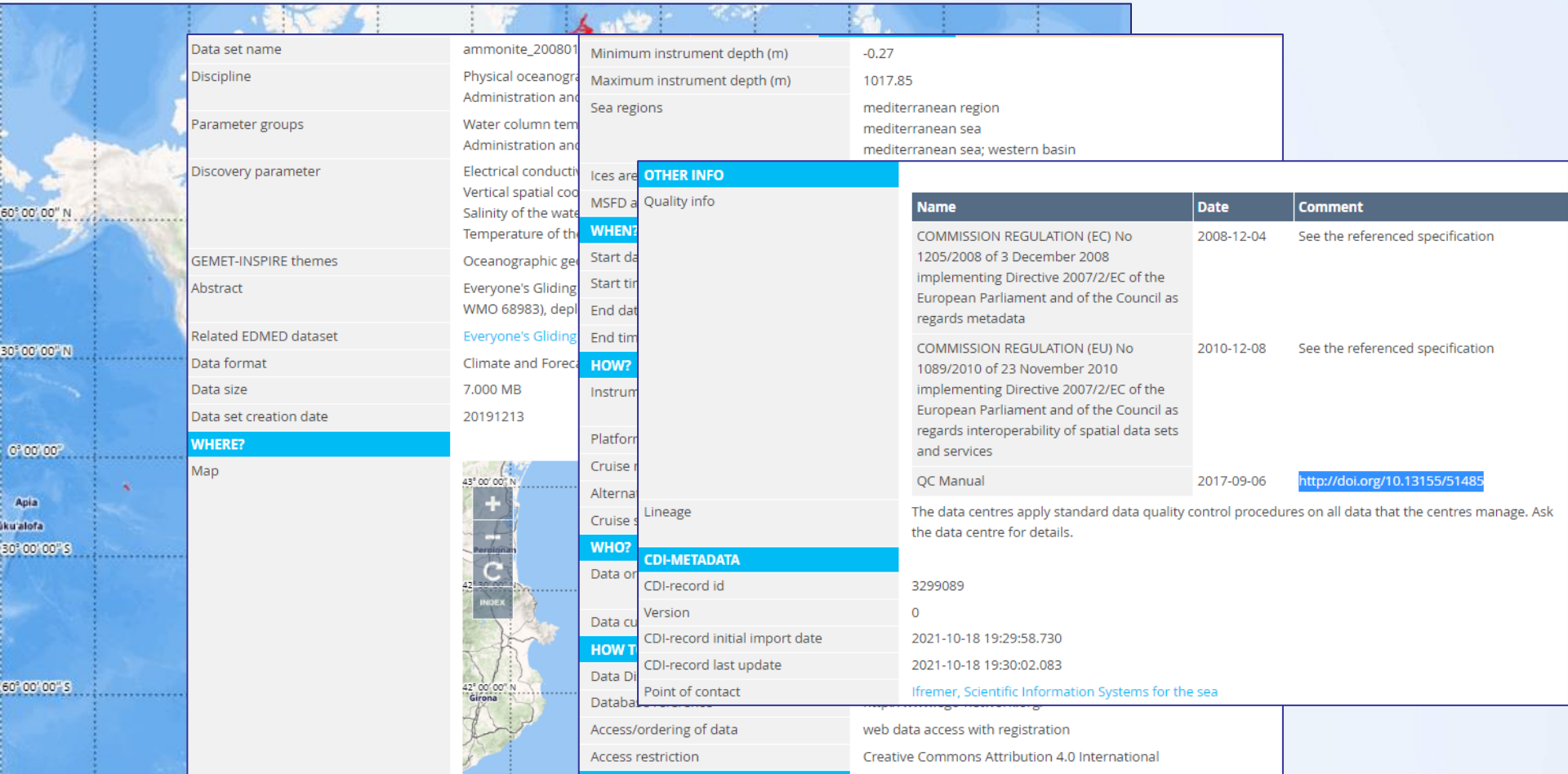
- From October 2021 to April 2022 => 492 glider files uploaded in SeaDataNet (**81%** of the GDAC-Coriolis content). Updated with new datafiles planned every 3 months



- Data available here

Glider data in SeaDataNet

- For each file metadata is available



Data set name	ammonite_200801
Discipline	Physical oceanogra… Administration and…
Parameter groups	Water column tem… Administration and…
Discovery parameter	Electrical conducti… Vertical spatial coo… Salinity of the wate… Temperature of th…
GEMET-INSPIRE themes	Oceanographic ge…
Abstract	Everyone's Gliding… WMO 68983), depl…
Related EDMED dataset	Everyone's Gliding…
Data format	Climate and Foreca…
Data size	7.000 MB
Data set creation date	20191213
WHERE?	
Map	

Minimum instrument depth (m)	-0.27
Maximum instrument depth (m)	1017.85
Sea regions	mediterranean region mediterranean sea mediterranean sea; western basin
Ices are…	
MSFD a…	
WHEN?	
Start da…	
Start tim…	
End dat…	
End tim…	
HOW?	
Instrum…	
Platform…	
Cruise n…	
Alterna…	
Cruise s…	
WHO?	
Data or…	
Data cu…	
HOW T…	
Data Di…	
Databa…	
Access/ordering of data	web data access with registration
Access restriction	Creative Commons Attribution 4.0 International

OTHER INFO

Quality info

Name	Date	Comment
COMMISSION REGULATION (EC) No 1205/2008 of 3 December 2008 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards metadata	2008-12-04	See the referenced specification
COMMISSION REGULATION (EU) No 1089/2010 of 23 November 2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards interoperability of spatial data sets and services	2010-12-08	See the referenced specification
QC Manual	2017-09-06	http://doi.org/10.13155/51485

Lineage: The data centres apply standard data quality control procedures on all data that the centres manage. Ask the data centre for details.

CDI-METADATA

CDI-record id	3299089
Version	0
CDI-record initial import date	2021-10-18 19:29:58.730
CDI-record last update	2021-10-18 19:30:02.083
Point of contact	Ifremer, Scientific Information Systems for the sea

Glider data in SeaDataNet

- Glider data download from SeaDataNet since October 2021 : 1,560 files, bigger downloads for modellers