

SEANOE, a publisher of scientific data in the field of marine sciences

Fred Merceur, Ifremer (France), Frederic.merceur@ifremer.fr

Michèle Fichaut, Ifremer (France), Michele.Fichaut@ifremer.fr

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In 2015, Ifremer opened SEANOE¹ (SEA scieNtific Open data Edition), a publishing tool of marine scientific datasets.

Data published by SEANOE are freely available. They can be used in accordance with the terms of the Creative Commons license selected by the author of data. SEANOE contributes to Open Access / Open Science movement for a free access for everyone to all scientific data financed by public funds for the benefit of research.

An embargo limited to 2 years on a dataset is possible in order to restrict access to data of a publication under scientific review, for example.

Each data set published by SEANOE has a DOI, which enables it to be cited in a publication in a reliable and sustainable way.

Assessment of 3 years management of SEANOE

A majority of scientists is not used to publish and share the data associated to articles: the positive return to suggestion made to Ifremer authors of scientific papers to publish the data sets linked to their publications is less than 1%.

But the situation could change in the near future thanks to the increasing number of publishers (e.g : PLOS ONE, Elsevier) requiring that the data used in a publication is cited and freely accessible online. It will improve credibility and transparency of the articles.

Furthermore, to convince authors to publish datasets in SEANOE, Ifremer has developed a set of services such as:

- A pro-active survey of citation of DOIs set by SEANOE (bibliography)
- The automatic provision of download statistics to authors
- In addition to properly cite the dataset, the authors can ask users to cite some additional work(s) when using the dataset in a publication
- ...

If only a few² datasets have been published in SEANOE yet, there are some grounds for satisfaction:

- Most authors are happy with the provided service. They highlight the simplicity and the speed of the publication process and the quality of Landing Pages.
- The analysis of download statistics shows that datasets published in SEANOE have an international visibility, mainly through search engines such as Google.
- The number of SEANOE DOI citations is relatively high compared to the number of datasets.

¹ <http://www.seanoe.org>

² In April 2018, 300 datasets are available in SEANOE

Data replication from SEANOE to EMODnet Ingestion

The automated replication of the data published in SEANOE to EMODnet data ingestion portal (emodnet-ingestion.eu) is under study. It would allow reporting to Marine European data centers the existence and the availability of datasets published in SEANOE. Then the data centers will be able to ingest them into other international databases such as SeaDataNet and EMODnet thematic ones, if the dataset falls into their domains of interest

From a technical point a view, this should not be a problem. However, most of dataset published in SEANOE are available under the CC-BY creative commons license. This means that the authors ask to be cited when the dataset is used. This may not be compatible with systems such as SeaDataNet that do not handle metadata on authors, but only on originator organisations. So only dataset published with the CC0 (Public Domain) license may have to be duplicated in EMODnet Ingestion or a specific authorization for this replication may have to be provided by the authors. This kind of problems will be addressed in frame of this study in order to find an appropriate solution.

The screenshot shows the SEANOE landing page for the dataset "The 2014 Greenland-Portugal GEOVIDE water masses data (GO-SHIP A25 and GEOTRACES GA01)". The page is structured as follows:

- Header:** SEANOE Sea scientific open data edition
- Title:** The 2014 Greenland-Portugal GEOVIDE water masses data (GO-SHIP A25 and GEOTRACES GA01)
- Metadata:**
 - Date: 2018-04-12
 - Temporal extent: 2014-05-15 -2014-06-30
 - Author(s): Garcia-Ibañez Maribel I., Pérez Fiz F., Lherminier Pascale, Zunino Rodriguez Patricia, Mercier Herlé, Tréguer Paul
 - Affiliation(s): 1: Uni Research Climate, Bjerknes Centre for Climate Research, Bergen 5008, Norway; 2: Instituto de Investigaciones Marinas (IIM, CSIC), Eduardo Cabello 6, 36208 Vigo, Spain; 3: Ifremer, Univ. Brest, CNRS, IRD, LOPS UMR 6523, IUEM, F-29280, Plouzané, France; 4: Centre National de la Recherche Scientifique (CNRS), Ifremer, Institut de Recherche pour le Développement (IRD), Université de Bretagne Occidentale (UBO), Laboratoire d'Océanographie Physique et Spatiale (LOPS), Centre Ifremer de Bretagne, 29280, Plouzané, France; 5: Univ. Brest, Environmental Sciences Laboratory (LEMAR, UMR 6539) at the European Institute for Marine Studies (IUEM), 29280 Plouzané, France
 - DOI: 10.17882/54739
 - Publisher: SEANOE
 - Note: ANR GEOVIDE (2014-2018)
 - Keyword(s): OVIDE, Circulation, Water Masses, GEOTRACES, North Atlantic
 - Abstract: The GEOVIDE cruise was carried out coast to coast between Portugal and Newfoundland via the south tip of Greenland, following the OVIDE line in the eastern part and crossing the Labrador Sea in the western part. The classical hydrographic rosette was cast 163 times at 78 different geographical positions called stations. While the CTD-O2 probe acquired continuous profiles of the "physical" variables (pressure, temperature, salinity and dissolved oxygen), 22 Niskin bottles were closed at different levels during the upcast to provide samples for biogeochemical analysis. After calibration, we find precisions for pressure, temperature, salinity and dissolved oxygen that fit the GO-SHIP international quality requirements. In parallel, but not simultaneously, a trace-metal rosette (TMR) was cast 53 times, also acquiring profiles of physical variables, and equipped with 24 Go-Flo bottles adapted for the sampling of trace metals. Depending on the number of operations, stations were identified as "Short" (one single CTD cast), "Large" (3 CTD casts), "XLarge" (up to 6) and "Super" (up to 13). All along the track of the ship, current magnitude and direction was measured by Ship Acoustic Doppler Current Profilers, down to 1000m depth.
 - License: CC BY (Creative Commons Attribution)
 - Acknowledgments: We gratefully acknowledge the crew of the R/V Pourquoi Pas? vessel and her captain Gilles Ferrand for their help and assistance during the cruise.
- Data Table:**

File	Size	Format	Processing	Access
Water masses in the 2014 GEOVIDE cruise	207 KB	CSV	Processed data	Open access
- How to cite:** Garcia-Ibañez Maribel I., Pérez Fiz F., Lherminier Pascale, Zunino Rodriguez Patricia, Mercier Herlé, Tréguer Paul (2018). The 2014 Greenland-Portugal GEOVIDE water masses data (GO-SHIP A25 and GEOTRACES GA01). SEANOE. <http://doi.org/10.17882/54739>
In addition to properly cite this dataset, it would be appreciated that the following work(s) be cited too, when using this dataset in a publication:
Garcia-Ibañez Maribel I., Pérez Fiz F., Lherminier Pascale, Zunino Patricia, Mercier Herlé, Tréguer Paul (2018). Water mass distributions and transports for the 2014 GEOVIDE cruise in the North Atlantic. *Biogeosciences*, 15(7), 2075-2090. <http://doi.org/10.5194/bg-15-2075-2018>
- Additional Features:**
 - Click to download the data (DATA button)
 - Download metadata (TXT, RIS, XLS)
 - Oceanographic cruises (GEOVIDE, OVIDE)
 - References (Zunino Patricia, Lherminier Pascale, Mercier Herlé, Danisault Nathalie, Garcia-Ibañez Maribel I., Pérez Fiz F. (2017). The GEOVIDE cruise in May-June 2014 reveals an intense Meridional Overturning Circulation over a cold and fresh subpolar North Atlantic. *Biogeosciences*, 14(23), 5323-5342.
 - Related datasets (Lherminier, Pascale, Sarthou, Germaine (2017). The 2014 Greenland-Portugal GEOVIDE CTD02 hydrographic and SADCP data (GO-SHIP A25 and GEOTRACES GA01). SEANOE.
 - Share (Social media icons)
- Footer:** CONTACT, LEGAL NOTICE

Figure 1: The Landing Page of a French dataset published in SEANOE