Marinet2 Bring Your Own Data (BYOD) Workshop
23rd June 2020

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MaRINET2

Data publication, citation and preservation

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why publishing your dataset in a trusted data repository ?

- To get a DOI for your dataset which enables it to be cited in a publication in a reliable and sustainable way: More and more publishers require authors to make all data described in articles fully available without restriction (ex : Plos One, Elsevier, ..) and cited by a DOI
- To offer a better visibility to your dataset
- For long term archiving offered by most trusted repositories

Why publishing and citing data in articles ?

- If the data is available for re-use, it could accelerate scientific progress
- It is possible to replay a dataset to check a result : « Sharing data is seen as key to improving data integrity and for enhancing transparency and reproducibility of the scientific enterprise[1] »
- Articles that cite a dataset with a DOI are easy to detect : the articles' reporting may demonstrate that the project / infrastructure that produced the dataset is useful

1 : https://dx.doi.org/10.1371/journal.pone.0189288

DOI (Digital Object Identifier)

- A digital object identifier (DOI) is a unique alphanumeric string to identify content (10.17882/39746)
- It is mainly known for articles but DOI can also be set to datasets, cruises, …
- A DOI can be introduced by
  - The string « DOI » : DOI:10.17882/39746
  - A DOI resolver : https://doi.org/10.17882/39746

DOI Redirection

- A click on a DOI resolves to a Landing page :

  https://doi.org/10.5281/zenodo.2541205

  https://zenodo.org/record/2541205

- The URL of a Landing page can be updated : if a dataset location is moved on the WEB, it still can be found through its DOI. So DOI helps to offer more reliable citations in bibliography

Use a DOI in a citation

References

YES

1. Ben Rais Lasram F, Guilhaumon F, Mouillot D. Fish diversity patterns in the Mediterranean Sea: deviations from a mid-domain model. Mar Ecol Prog Ser. 2009; 376: 253–267. doi: 10.3354/meps07786

2. Rahbek C, Graves G. Multiscale assessment of patterns of avian species richness. Proc Natl Acad Sci. 2001; 98: 4534–4539. Available: http://www.pnas.org/content/98/8/4534.short PMID: 11296292

NO

3. Macpherson E, Duarte C. Patterns in species richness, size, and latitudinal range of East Atlantic fishes. Ecography (Cop). 1994; 17: 242–248. Available: http://onlinelibrary.wiley.com/doi/10.1111/j.1600-0587.1994.tb00099.x/abstract.

4. Rex MA, Stuart CT, Hessler RR, Allen JA, Sanders HL, Wilson GFDG. Global-scale latitudinal patterns of species diversity in the deep-sea benthos. Nature. 1993; 636–639.

YES

5. Macpherson E. Large-scale species-richness gradients in the Atlantic Ocean. Proc R Soc. 2002; 269: 1715–20. doi: 10.1098/rspb.2002.2091

NO

6. Moutin T, Raimbault P. Primary production, carbon export and nutrients availability in western and eastern Mediterranean Sea in early summer 1996 (MINOS cruise). J Mar Syst. 2002; 33–34: 273–288. Available: http://www.sciencedirect.com/science/article/pii/S0924796302000623.

Defining a DOI strategy (a two levels granularity to define)

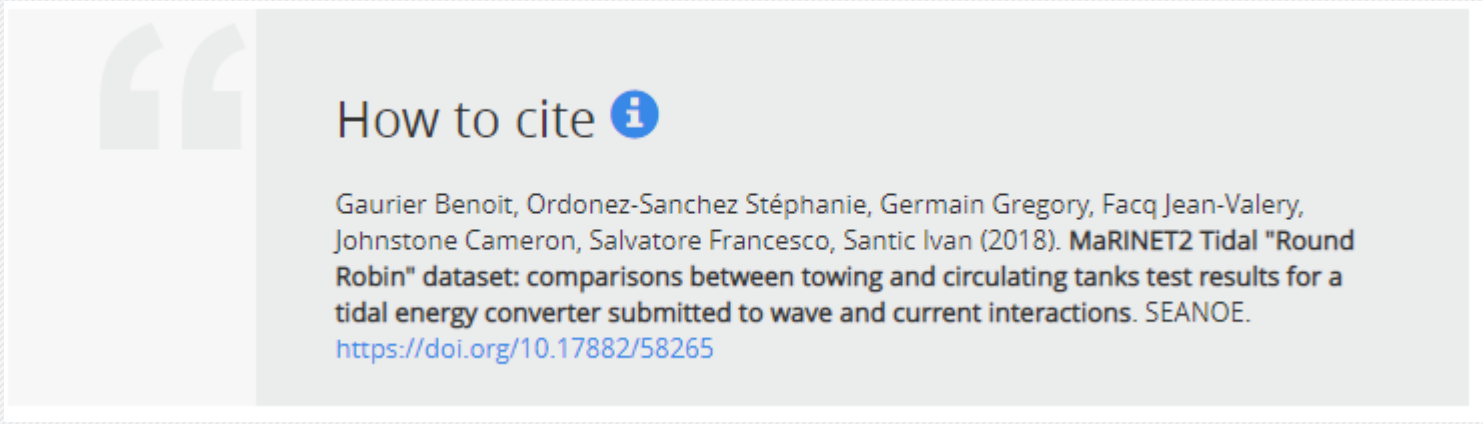
- Too high a level will make the access less simple
- Too low a level will make the citation impossible
- Try to guess how most articles will use the data ?
- Remenber that you can load several data files in the same DOI :

Data

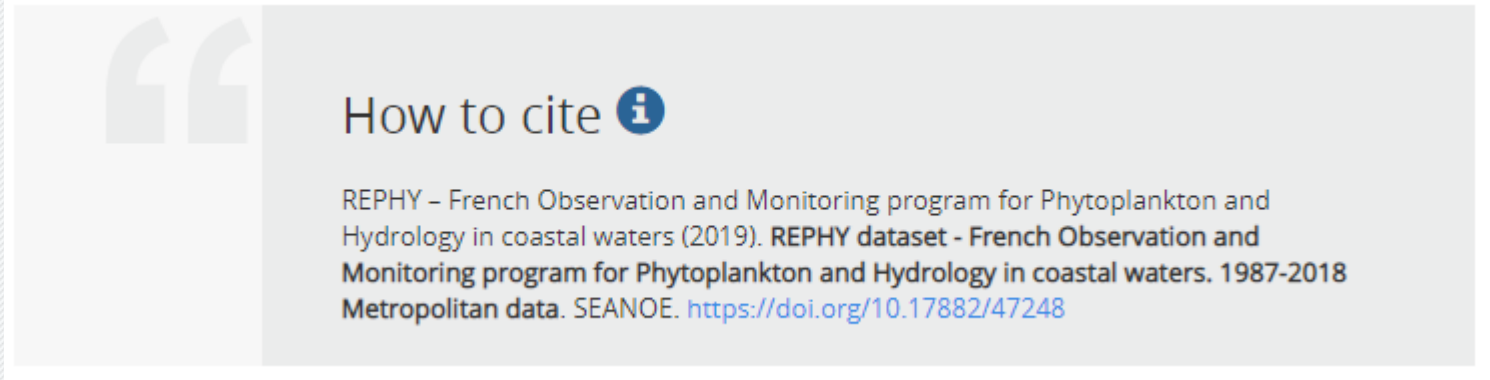
File	Size	Format	Processing	Access
LDV	29 MB	TEXTE	Raw data	Access on demand until 2020-10-01
PIV	2 GB	TEXTE	Processed data	Access on demand until 2020-10-01
Turbine	62 MB	TEXTE	Raw data	Access on demand until 2020-10-01
Read Me	6 MB	PDF		Open access

Defining the author's list of a dataset

- A list of peoples



- A list of projects / organisations (that may be associated to a list of contributors)



Should I use the same DOI or get a specific one for each version?

- Do you need to cite the different versions with a specific list of authors, …?
- The version's management may be forced by technical constraints (size of the dataset)

Dataset

File	Size	Format	Processing	Access	Key
2010-2015 deployments	20 MB	NC, NetCDF	Quality controlled data	Open access	43298
2010-2014 deployments	14 MB	NC, NetCDF	Quality controlled data	Restricted access	43276
2010-2013 deployments	2 MB	XLS, XLSX	Quality controlled data	Restricted access	43283

One unique DOI for all versions

- The citation instruction to authors is simpler
- Better visibility in Google Results
- Easier to manage the backlogs of articles
- Some publishers allow setting fragment to version within a unique DOI

> Pouvreau Stephane, Maurer Daniele, Auby Isabelle, Lagarde Franck, Le Gall Patrik, Cochet Hélène, Bouquet Anne-Lise, Geay Amélie, Mille Dominique (2016). VELYGER Database: The Oyster Larvae Monitoring French Project. 2008-2016 data. SEANOE. https://doi.org/10.17882/41888#50720

Dataset publishers

- **Zenodo** (https://zenodo.org), all data, managed by the CERN, free, 50 Go maximum per dataset

- **SEANOE**(https://www.seanoe.org), Only Marine data, managed by Ifremer, free, 100 Go maximum per dataset

- …

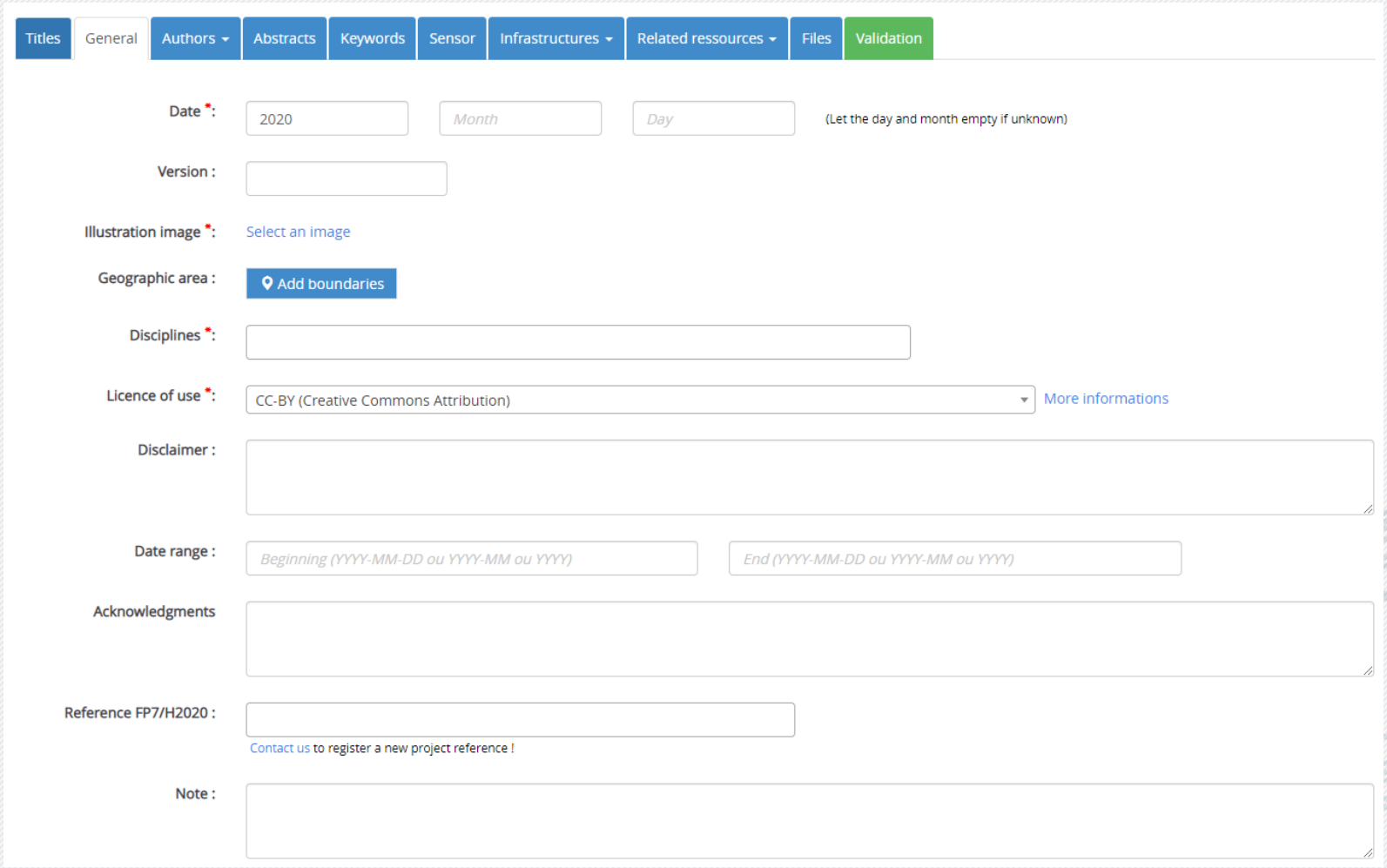
SEANOE (Seascientific open data publication)

- Datasets published by SEANOE are available for free (an embargo limited to 2 years on a set of data is possible)
- 100 Go max per dataset (for bigger datasets, Ifremer may offer another solution, please contact us)
- Datasets can be used in accordance with the terms of the Creative Commons license selected by the author of the data
- SEANOE is part of the Sismer datacenter that has been certified (CoreTrustSeal)

Long -term data archiving of datasets published by SEANOE

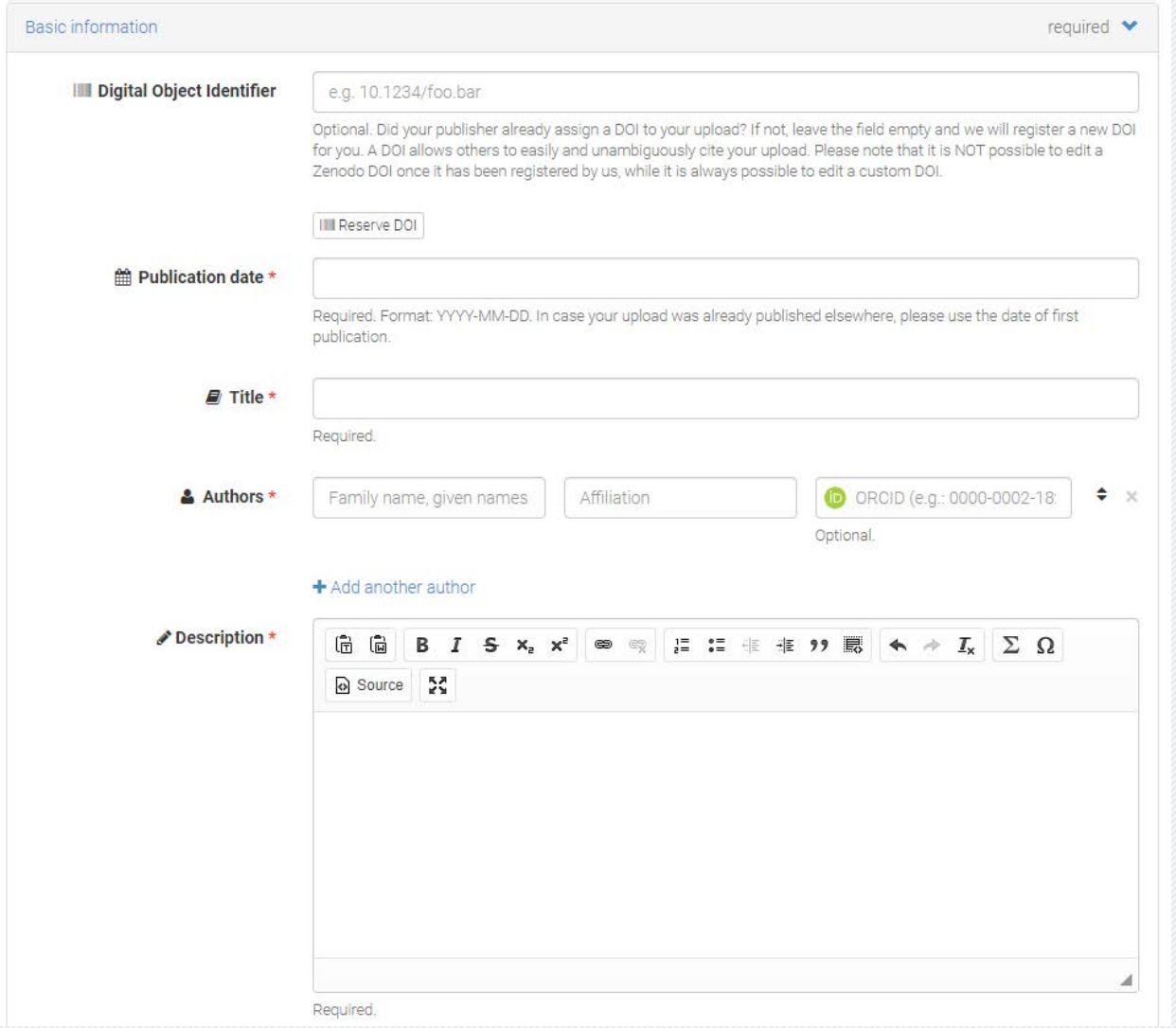
- Managed by Ifremer's IT team
- Both metadata (in JSON) and data files are saved on HSM (Hierarchical Storage Management)
- Double copy on 2 magnetic tape libraries (LTO), located in 2 separate buildings.
- Daily survey
- The technology is changed every 4 years
- …

Upload a dataset in SEANOE (https://www.seanoe.org/upload /)



Upload a dataset in ZENODO

(https://zenodo.org/deposit/)



Towing and circulating tanks tidal energy converter test results

Click to download the data

DATA

Date 2018-10

Temporal extent 2013-12 -2014-04

Author(s) Gaurier Benoit[1], Germain Gregory[1], Facq Jean-Valery[1], Day Sandy[2], Johnstone Cameron[3], Di Felice Fabio[4], Costanzo Marcello[4]

Affiliation(s)
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2 : University of Strathclyde, Kelvin Hydrodynamics Laboratory, Glasgow, UK
3 : University of Strathclyde, Energy Systems Research Unit, Glasgow, UK
4 : CNR-INSEAN, Propulsion and Cavitation Laboratory, Rome, Italy

DOI 10.17882/57450

Publisher SEANOE

Abstract

A comparative "Round Robin" testing program has been conducted as part of the EC FP VII MaRINET program in order to evaluate the impact of different experimental facilities on the test results. The aim of the trials was to test the same model tidal turbine in four different test facilities to explore the sensitivity of the results to the choice of facility. The facilities used in the testing program include two towing tanks, at CNR-INSEAN (Rome, 220 m long) and at Strathclyde University (Glasgow, 76 m long), and two recirculating tanks at CNR-INSEAN (Rome) and at IFREMER (Boulogne sur mer).

The model consists of a three-bladed horizontal axis turbine, which is D=0.7m in diameter. The rotor is connected to a motor-gearbox assembly consisting of a gearbox, a DC motor, a ballast load and a motor speed control unit, providing an active rotor speed control. The turbine blades are designed from a NACA 63-418 profile. A torque meter is placed between the rotor and the gearbox for torque measurements.

The forces and moments acting on the structure are obtained by means of a six-component load cell, which measures the three force components and the three moment components and the torque by a torque sensor directly fixed between the rotor and the motor. All signals coming from the load-cell, the torque-meter and the motor are recorded synchronously at a sample frequency of 100Hz.

Views of the turbine in the IFREMER flume tank at rest, during a measurement in the KHL towing tank from an underwater camera, in the empty CNR-INSEAN flume tank and during a carriage reverse in the CNR-INSEAN towing tank.

Download metadata
TXT, RIS, XLS, RTF, BIBTEX

Project(s) FP7/H2020
MARINET

for each measurement point, but is adjusted manually.

Licence

Utilisation

Data are published without any warranty, express or implied. The user assumes all risk arising from his/her use of data. Data are intended to be research-quality and include estimates of data quality and accuracy, but it is possible that these estimates or the data themselves contain errors. It is the sole responsibility of the user to assess if the data are appropriate for his/her use, and to interpret the data, data quality, and data accuracy accordingly. Authors welcome users to ask questions and report problems.

Data

File	Size	Format	Processing	Access
59558.zip	110 MB	TEXTE	Quality controlled data	Open access

Top of the page

How to cite

Gaurier Benoit, Germain Gregory, Facq Jean-Valery, Day Sandy, Johnstone Cameron, Di Felice Fabio, Costanzo Marcello (2018). **Towing and circulating tanks tidal energy converter test results**. SEANOE. https://doi.org/10.17882/57450

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 :

Gaurier Benoit, Germain Gregory, Facq Jean-Valery, Johnstone C.M., Grant A.D., Day A.H., Nixon E., Di Felice F., Costanzo M. (2015). **Tidal Energy "Round Robin" Tests Comparisons between towing tank and circulating tank results**. *International Journal of Marine Energy*, 12, 87-109. Publisher's official version : https://doi.org/10.1016/j.ijome.2015.05.005 , Open Access version : https://archimer.ifremer.fr/doc/00270/38163/

Gregory, Facq Jean-Valery, Bacchetti Thomas (2018). Wave and current flume tank of IFREMER at Boulogne-sur-mer. Description of the facility and its equipment. 19CSMBL18.

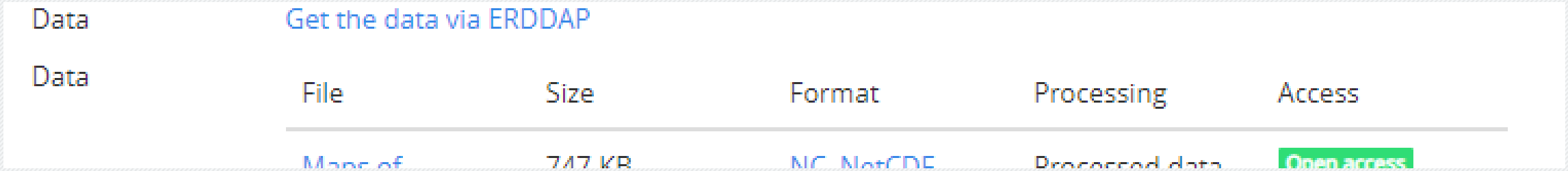
Gaurier Benoit, Germain Gregory, Facq Jean-Valery, Johnstone C.M., Grant A.D., Day A.H., Nixon E., Di Felice F., Costanzo M. (2015). Tidal Energy "Round Robin" Tests Comparisons between towing tank and circulating tank results. International Journal of Marine Energy, 12, 87-109.

Related datasets

Gaurier Benoit, Ordonez-Sanchez Stéphanie, Germain Gregory, Facq Jean-Valery, Johnstone Cameron, Salvatore Francesco, Santic Ivan (2018). MaRINET2 Tidal "Round Robin" dataset: comparisons between towing and circulating tanks test results for a tidal energy converter submitted to wave and current interactions. SEANOE.

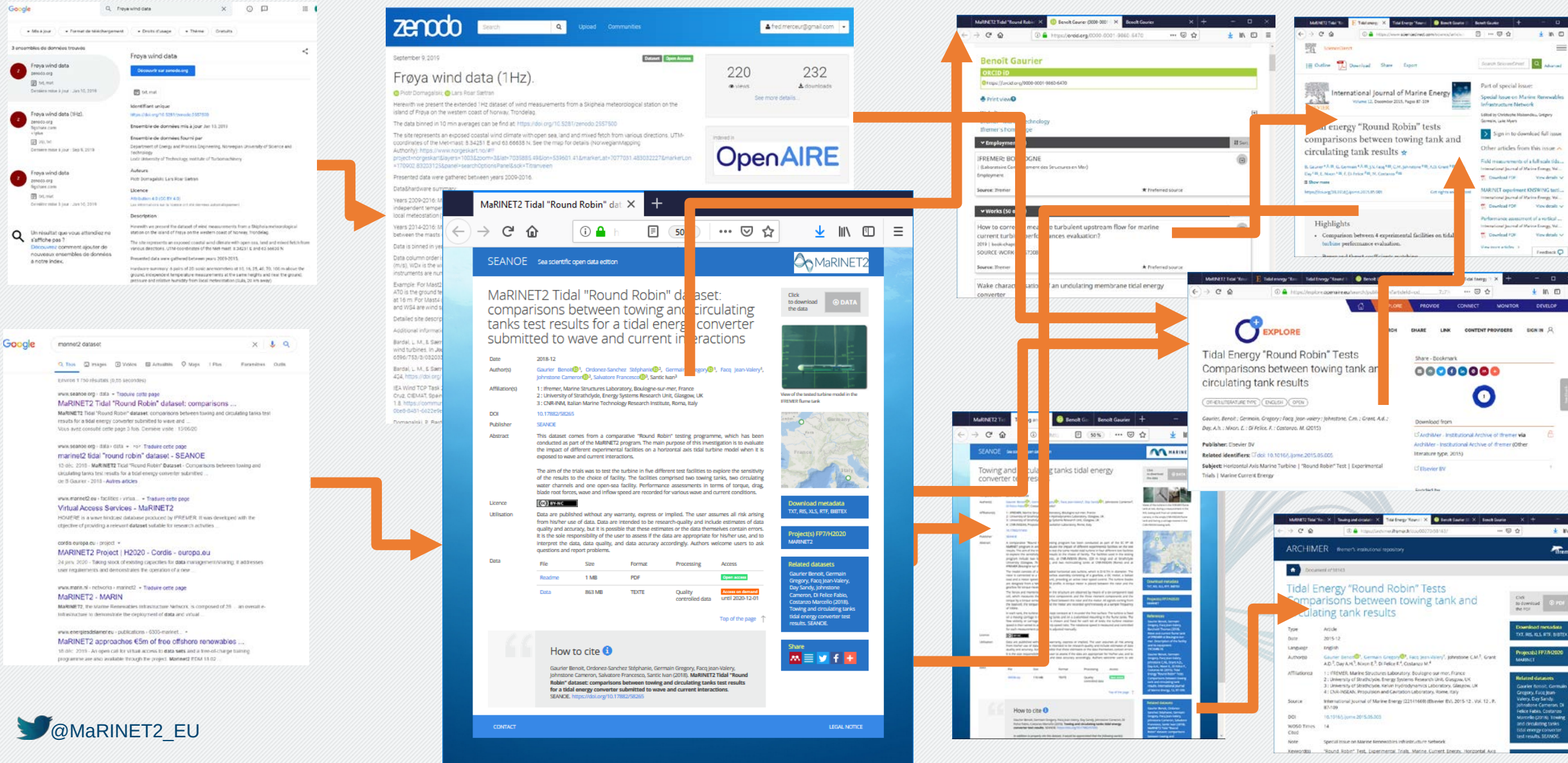
Share

Provide multi access to data from the DOI



Data	Get the data via ERDDAP			
Data				
File	Size	Format	Processing	Access
Maps of	747 KB	NC_NetCDF	Processed data	Open access

Towards a linked information architecture



@MaRINET2_EU

DOI : a way to an extended audience

Date	Dataset	Internet Service Provide	Country	Town	Referring url
2020/06/02 15:27:46	Experimental measurements of a synchronized flow velocity and a marine current turbine power production	Ecole Normale Superieure de Lyon	France	Lyon	
2020/05/28 07:27:59	Towing and circulating tanks tidal energy converter test results	University of California, San Diego	United States		
2020/05/04 08:54:21	Towing and circulating tanks tidal energy converter test results	Universita' della Calabria	Italy	Rende	
2020/04/18 16:51:08	Three tidal turbines in interaction: an experimental data-set on wake and performances	The University of Edinburgh	United Kingdom	Edinburgh	
2020/03/02 17:41:57	Three tidal turbines in interaction: an experimental data-set on wake and performances	Centre de Ressources Informatiques, Universite de	France	Caen	https://www.google.com/
2020/03/02 12:06:14	MaRINET2 Tidal "Round Robin" dataset: comparisons between towing and circulating tanks test results for a tidal energy converter submitted to wave and current interactions	University of Exeter	United Kingdom	Exeter	https://www.google.com/
2020/02/27 16:53:20	Three tidal turbines in interaction: an experimental data-set on wake and performances	Cardiff University	United Kingdom	Cardiff	
2020/02/26 16:40:09	Experimental measurements of a synchronized flow velocity and a marine current turbine power production	The College of William and Mary	United States		
2020/02/25 10:13:43	Three tidal turbines in interaction: an experimental data-set on wake and performances	Cardiff University	United Kingdom	Cardiff	https://www.google.com/
2020/02/24 18:48:21	Three tidal turbines in interaction: an experimental data-set on wake and performances	Cardiff University	United Kingdom	Cardiff	
2020/02/08 00:57:16	Towing and circulating tanks tidal energy converter test results	The Pennsylvania State University	United States	State College	https://www.google.com/
2020/02/07 11:09:34	Three tidal turbines in interaction: an experimental data-set on wake and performances	The University of Strathclyde	United Kingdom	Glasgow	
2020/01/31 13:35:21	Experimental measurements of a synchronized flow velocity and a marine current turbine power production	Centre de Toulouse	France	Toulouse	
2020/01/24 16:08:13	Experimental measurements of a synchronized flow velocity and a marine current turbine power production	CRI Universite de Brest	France	Brest	
2020/01/13 13:52:23	Experimental measurements of a synchronized flow velocity and a marine current turbine power production	INRIA Institut National de Recherche En Informatiq	France	Mouans-Sartoux	https://zimbra.inria.fr/
2020/01/13 11:51:47	MaRINET2 Tidal "Round Robin" dataset: comparisons between towing and circulating tanks test results for a tidal energy converter submitted to wave and current interactions	The University of Strathclyde	United Kingdom	Glasgow	https://www.google.com/
2019/12/19 13:34:07	MaRINET2 Tidal "Round Robin" dataset: comparisons between towing and circulating tanks test results for a tidal energy converter submitted to wave and current interactions	Danmarks Tekniske Universitet	Denmark	Roskilde	https://www.seanoe.org/
2019/11/29 13:48:54	MaRINET2 Tidal "Round Robin" dataset: comparisons between towing and circulating tanks test results for a tidal energy converter submitted to wave and current interactions	Universidade do Porto	Portugal	Ramada	https://search.datacite.org/works/10.17882/58265
2019/11/28 10:23:11	MaRINET2 Tidal "Round Robin" dataset: comparisons between towing and circulating tanks test results for a tidal energy converter submitted to wave and current interactions	Letterkenny Institute of Technology	Ireland	Donegal	https://www.google.com/
2019/11/27 14:39:20	Towing and circulating tanks tidal energy converter test results	Danmarks Tekniske Universitet	Denmark	Roskilde	https://www.seanoe.org/

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