




# MDA & IMIS



*Data repositories as treasure chests for documented data*



Vlaams Instituut voor de Zee vzw  
Flanders Marine Institute

*Elien Dewitte*





# Data repositories as a (hidden) treasure chest?

- Hidden
  - Often secured files
  - Not linked to other information or systems
  - Unknown or uncertified repositories
- Treasure
  - Valuable data
  - Unique information



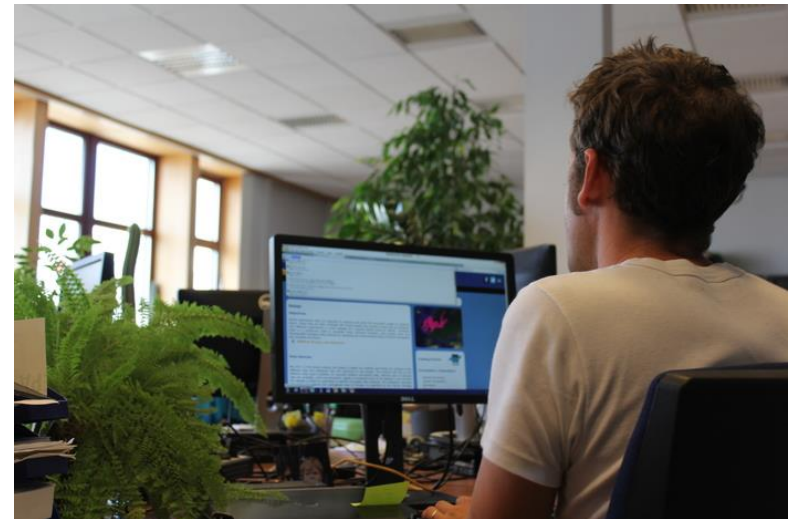


# How to break it “open”?

*A shared responsibility*

Research

Data managers  
& stewards





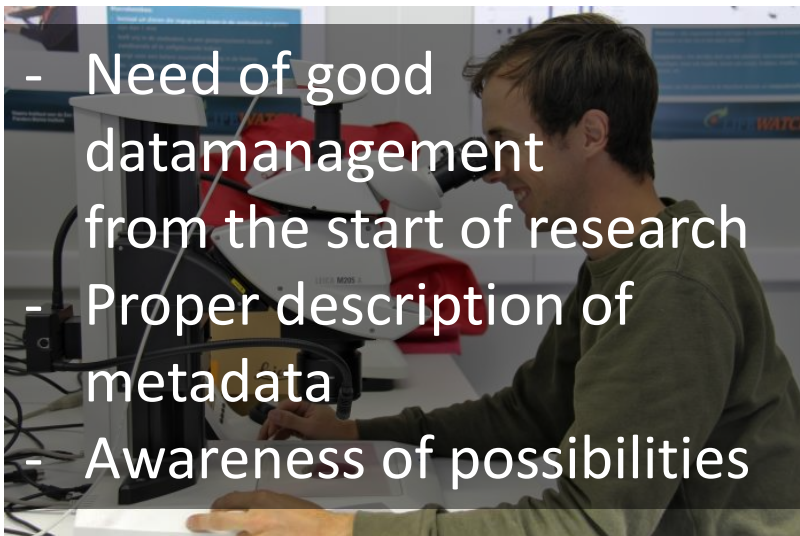
# How to break it “open”?

*A shared responsibility*



## Research

## Data managers & stewards



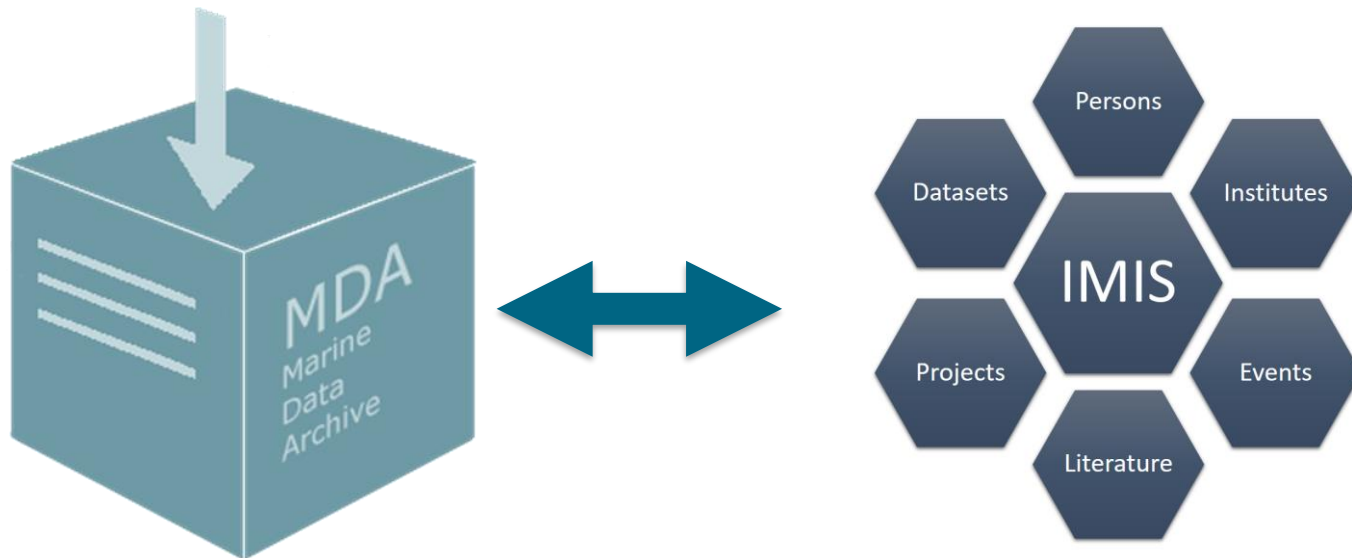


# How to break it “open”?

*Finding the key @VLIZ-DataCentre*



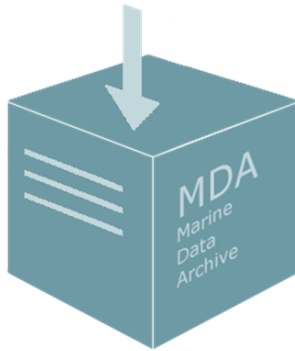
- Connect the “hidden” data to “open” datasets



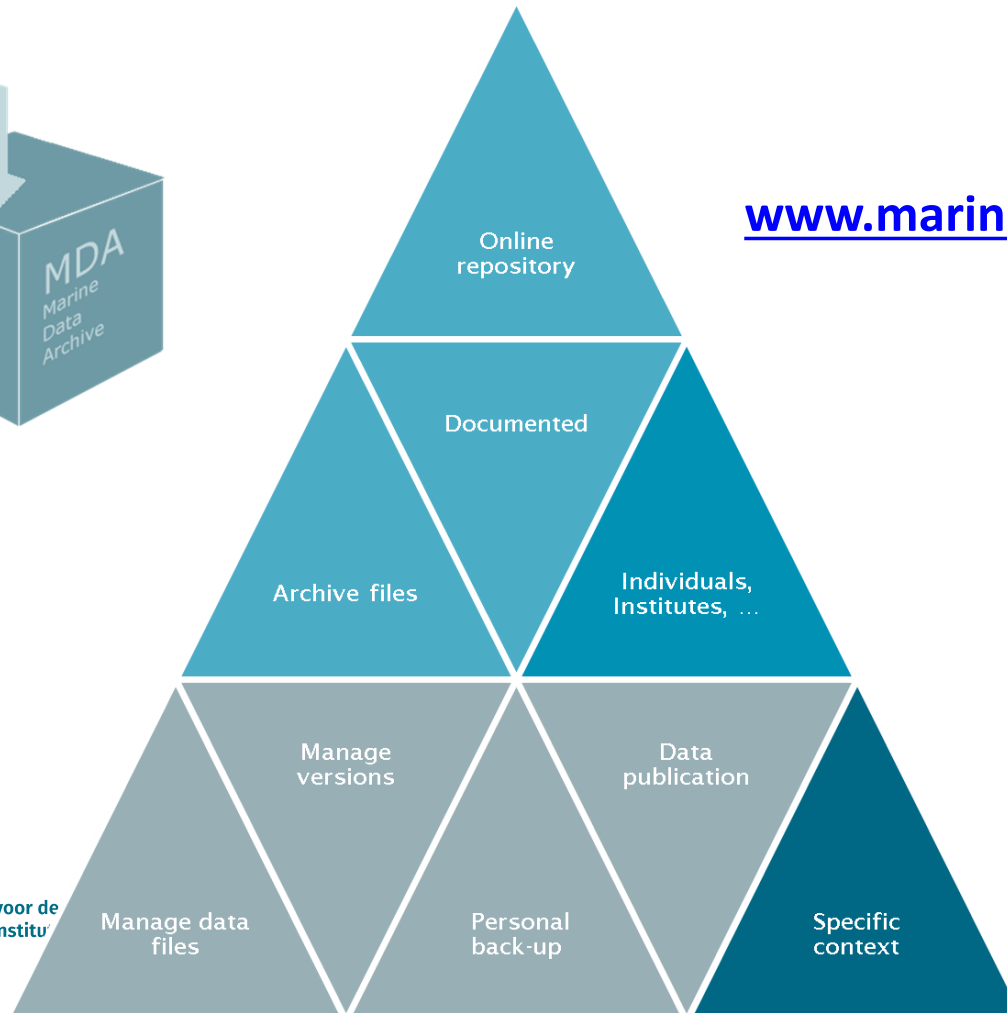


# How to break it “open”?

*Finding the key @VLIZ-DataCentre*



[www.marinedataarchive.org](http://www.marinedataarchive.org)



Vlaams Instituut voor de  
Flanders Marine Instituut





# How to break it “open”?

## *Archiving data @VLIZ*

Marine Data Archive  
File Upload Tool



Elien Dewitte

Drop files here, paste, [browse](#) or  
import from



My Device



Link







# How to break it “open”?

## Archiving data @VLIZ

The screenshot shows a file explorer window with a folder structure on the left and a table of data files in the main area. A context menu is open over the first file in the table.

**Folder Structure:**

- Jerico-NEXT - Public
  - Quarantine (0)
  - JRAP1
    - CruiseRVSimonStevin\_April2018
      - CruiseData
      - CTD data
      - Flowcytometer data
      - Sea and Meteo
    - CruiseRVSimonStevin\_May2016
    - CruiseRVSimonStevin\_May2017
    - CruiseRVSimonStevin\_May2019
    - lfemer\_IBTS\_2015\_2016\_2017
    - lfemer\_PHYCO2017

**Table of Data Files:**

File Name	Author(s)	Data type	Provider	Archive date	End Year	File size
LW_2017_protocol_1	Mortelmans J	Flowcytometer data	Flanders Marine Institute	2018-11-26 13:29:32	2018	21.42 MB
LW_2017_protocol_1	Mortelmans J	Flowcytometer data	Flanders Marine Institute	2018-11-26	2018	21.42 MB
LW_2017_protocol_1	Mortelmans J	Flowcytometer data	Flanders Marine Institute	2018-11-26	2018	21.42 MB
LW_2017_protocol_1	Mortelmans J	Flowcytometer data	Flanders Marine Institute	2018-11-26	2018	21.42 MB
LW_2017_protocol_1	Mortelmans J	Flowcytometer data	Flanders Marine Institute	2018-11-26	2018	21.42 MB
LW_2017_protocol_1	Mortelmans J	Flowcytometer data	Flanders Marine Institute	2018-11-26	2018	21.42 MB
LW_2017_protocol_1	Mortelmans J	Flowcytometer data	Flanders Marine Institute	2018-11-26	2018	21.42 MB
LW_2017_protocol_1	Mortelmans J	Flowcytometer data	Flanders Marine Institute	2018-11-26	2018	21.42 MB
LW_2017_protocol_1	Mortelmans J	Flowcytometer data	Flanders Marine Institute	2018-11-26	2018	21.42 MB
LW_2017_protocol_1	Mortelmans J	Flowcytometer data	Flanders Marine Institute	2018-11-26	2018	21.42 MB

**Context Menu Options:**

- Go to file
- Archive file
- New version
- Move
- Delete
- Download
- Group in fileset
- Edit metadata
- Show metadata
- Apply template

**Metadata for Selected File:**

- Archived by: Mortelmans J
- Author(s): Mortelmans J
- Start Year: 2018
- Data type: Flowcytometer data
- Path: Jerico-NEXT - Public/JRAP1/CruiseRVSimonStevin\_April2018/Flowcytometer data/
- Summary: During the Jerico-NEXT - Public/JRAP1/CruiseRVSimonStevin\_April2018, the FlowCytometer on board of the RV Simon Stevin collected phytoplankton data following two protocols (pr1, pr2), every 30 minutes.







## Metadata

### Content

Biotic composition	phytoplankton
Deployment	Underway
Sampling frequency	< daily
Sampling device	Flowcytometer
Parameters (biotic)	Phytoplankton taxonomy-related abundance per unit volume of the water column
Parameter(s)	<ul style="list-style-type: none"><li>• FL Red per particle</li><li>• SWS per particle</li><li>• FL Yellow per particle</li><li>• FL Orange per particle</li><li>• FWS per particle</li><li>• FL Red 2 per particle</li><li>• Curvature per particle</li></ul>

### Geographic scope

Sea area(s)	North Sea (MRGID2350)
Coordinate reference	WGS84 (epsg: 4326)
Location	Southern Bight of the North Sea, Thames estuary, Channel
Max. longitude	51
Min. longitude	50
Max. latitude	3
Min. latitude	2

### Temporal scope

First date	2018-04-16
Last date	2018-04-20

### Additional information

Free labels	<ul style="list-style-type: none"><li>• Sampling platform:RV Simon Stevin</li><li>• Link:<a href="http://www.jerico-ri.eu/">http://www.jerico-ri.eu/</a></li><li>• Project:JericoNext 2017</li><li>• CruiseSummaryReport:<a href="http://seadata.bsh.de/Cgi-csr/retrieve_sdn2/csrreport.pl?project=SDN&amp;session=70367&amp;v1=10&amp;v2=1&amp;pcode=11SS">http://seadata.bsh.de/Cgi-csr/retrieve_sdn2/csrreport.pl?project=SDN&amp;session=70367&amp;v1=10&amp;v2=1&amp;pcode=11SS</a></li><li>• Keyword:JericoNext</li></ul>
-------------	---

Linked files

### Protocol labels

Protocol values	<ul style="list-style-type: none"><li>• SWS:60</li><li>• smarttrigger FL Red (max):6</li><li>• normal trigger SWS:33</li><li>• FI Red2:95</li><li>• Protocol Local Name:2Åµl/6min</li><li>• FI Red:95</li><li>• FI Yellow:80</li><li>• FI Orange:80</li><li>• Pump speed:Protocol 1</li><li>• Protocol Description:Low pumpspeed and low FL red smarttrigger: for measuring pico-, nano- and microphytoplankton</li></ul>
-----------------	---



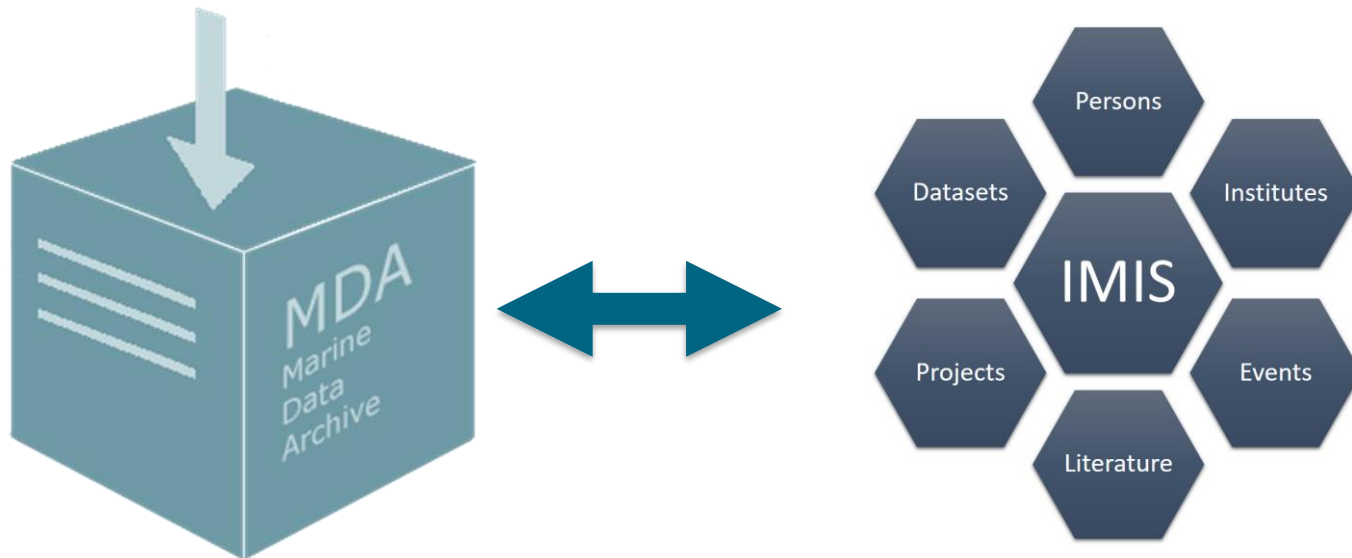


# How to break it “open”?

## *Finding the key @VLIZ-DataCentre*



- Connect the “hidden” data to “open” datasets





# How to break it “open”?

*describing data @VLIZ*

- Integrated Marine Information System:  
<http://www.vliz.be/en/imis?module=dataset>
  - Metadata description of your data
    - Keywords
    - Geographic and taxonomic references
    - Temporal scope
    - Abstract
    - Authors & Institutes
    - Citation
    - Linked publications, projects, ...





# How to break it “open”?

## *describing data @VLIZ*

Submitting your data:

<http://www.vliz.be/en/submit-form>

**General**

Person filling in this form\* [i](#)  Institute [i](#)

Contact email\*

Full name of the dataset\* [i](#)  Acronym [i](#)

Citation\* [i](#)

Access Constraints [i](#)

Abstract\* [i](#)

Extensive description of the dataset [i](#)

Keyword(s) [i](#)  [\[lookup\]](#)

Habitat [i](#)  Marine waters  Brackish waters  Fresh waters  Terrestrial

Status of the data collection [i](#)

Data origin [i](#)  Data type [i](#)

**People involved** [i](#)

Name and contact of person	Institute	Role
<input type="text"/>	<input type="text"/>	<input type="text"/>

**Temporal cover**

Date of first record [i](#) year  month  day

Date of last record [i](#)

Temporal resolution [i](#)

**Geographical cover**

Geographical scope\* [i](#)  [\[lookup\]](#) Min. lat  Min. lon  Max. lat  Max. lon

**Taxonomic cover**

Taxonomic scope [i](#)  [\[lookup in WoRMS\]](#)

**Measurements** [i](#)

Parameter	Unit	Method
<input type="text"/>	<input type="text"/>	<input type="text"/>

**Reference**

Reference(s) of publication(s) that was based on this dataset (one reference per textfield) [i](#)

Reference(s) of publication(s) that describe this dataset in detail (one reference per textfield) [i](#)

Format in which the dataset is available [i](#)

**Projects**

Projects that are related to this dataset (one reference per textfield) [i](#)

**The dataset** [i](#)

Upload dataset file (max. 10MB) [i](#)

No file selected.

Indicate how we can obtain or reference your dataset [i](#)

Request DOI [i](#)

**Data Integration** [i](#)

Contribute your biological and physicochemical data of the Scheldt Estuary to the [Scheldt data portal](#)

Contribute your biological and physicochemical data of the BCP to [IMERS](#)

Contribute your marine species distribution data of Europe to [EurOBIS](#)

Contribute your taxonomic information to [WoRMS](#)

**Comments**

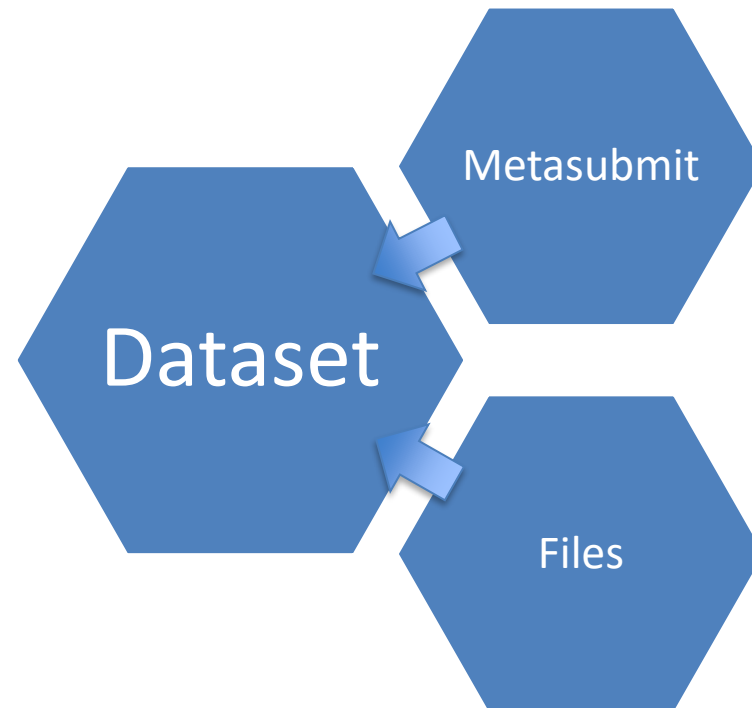
Is the dataset complete? Any additional comments? [i](#)



# How to break it “open”?

*describing data @VLIZ*

From submitting data to final dataset





# How to break it “open”?

## *describing data @VLIZ*

<http://www.vliz.be/en/imis?module=dataset&dasid=5712>

## IMIS

[Publications](#) | [Institutes](#) | [Persons](#) | [Datasets](#) | [Feedback](#)

[\[ report an error in this record \]](#)

### Subtidal epibenthos and demersal fish monitoring in function of a 2013-2016

#### Citable as data publication

Aquatic environment and quality group; Flanders research institute for agriculture, fisheries and food demersal fish monitoring in function of a foreshore suppletion at the Belgian coast, period 2013-2016. [DOI: 10.14284/343](#)

Contact: [Van Hoey, Gert](#)

#### Access data



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

#### Special collections:

available through [EurOBIS](#)  
[Belgian marine datasets](#)

[EMODNE](#)

#### Description

What ecological effects does a foreshore suppletion, and a beach suppletion, have on the marine foreshore suppletion (400.000m<sup>2</sup>) was by means of an experimental set-up in the shallow coastal conducted at Mariakerke (681243m<sup>2</sup>) and Middelkerke (968754m<sup>2</sup>). For the Mariakerke area, we control area (Bredene), before as after the suppletion, whereas for Middelkerke only the data after focus on the fauna within the sediment (macrofauna) and on the sediment (hyperbenthos, epi-an

#### Scope

Themes: [Biology](#) > [Benthos](#), [Biology](#) > [Fish](#)

Keywords: [Marine](#), [Coastal defences](#), [Demersal fishes](#), [Epibenthos](#), [foreshore suppletion](#), [ANE](#), [Cephalaspidomorphi](#), [Cephalopoda](#), [Decapoda](#), [Echinodermata](#), [Gastropoda](#)

#### Geographical coverage

ANE, Belgium, Belgian Continental Shelf (BCS) [\[Marine Regions\]](#)

#### Temporal coverage

2013 - 2016

#### Taxonomic coverage

[Actinopterygii](#) [\[WoRMS\]](#)  
[Cephalaspidomorphi](#) [\[WoRMS\]](#)  
[Cephalopoda](#) [\[WoRMS\]](#)  
[Decapoda](#) [\[WoRMS\]](#)  
[Echinodermata](#) [\[WoRMS\]](#)  
[Gastropoda](#) [\[WoRMS\]](#)

#### Contributors

Vlaamse overheid; Beleidsdomein Landbouw en Visserij; Instituut voor landbouw-, visserij en voedingsonderzoek; Kenniseenheid: Dier, Aquatisch Milieu en Kwaliteit. [more](#), [data creator](#)

Vlaamse overheid; Beleidsdomein Landbouw en Visserij; Instituut voor landbouw-, visserij en voedingsonderzoek (ILVO). [more](#), [data provider](#)

[Van Hoey, Gert](#)

#### Related datasets

Parent dataset:

[4shore](#): Benthos, hyperbenthos and fish monitoring in function of coastal defence along Belgian coast, period 2013-2016, [more](#)

#### Publication

Describing this dataset

[Colson, L. et al.](#) (2017). Ecologische monitoring in het kader van het Masterplan Kustveiligheid: Middelkerke (t1-situatie): Eindrapport. *ILVO Mededeling*, 233. Instituut voor Landbouw-, Visserij- en Voedingsonderzoek: Merelbeke. 34 pp., [more](#)

[Colson, L. et al.](#) (2016). Ecologische monitoring strand- en vooroever in functie van suppletie activiteiten: Eindrapport. *ILVO Mededeling*, 219. Instituut voor Landbouw- en Visserijonderzoek: Merelbeke. 109 pp., [more](#)

Dataset status: [In Progress](#)

Data type: [Data](#)

Data origin: [Research: field survey](#)

Metadata record created: [2017-06-30](#)

Information last updated: [2017-06-30](#)



# How to break it “open”?

## *describing data @VLIZ*

Machine readable metadatasets:

- show=html (default return offered in current website)
- show=json (JSON format)

```
<eml:eml xsi:schemaLocation="eml://ecoinformatics.org/eml-2.1.1 http://rs.gbif.org/schema/eml-gbif-profile/1.1/eml.xsd" packageId="eml.1.1" system="http://www.vliz.be/imis" xml:lang="en">
```

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  Subtidal epibenthos and demersal fish monitoring in function of a foreshore suppletion at the Belgian coast, period 2013-2016
</title>
<creator>
  <individualName>
    <givenName>Gert</givenName>
    <surName>Van Hoey</surName>
  </individualName>
  <organizationName>
    Vlaamse overheid; Beleidsdomein Landbouw en Visserij; Instituut voor landbouw- , visserij en voedingsonderzoek; Kenniseenheid: Dier; Aquatisch Milieu en Kwaliteit
  </organizationName>
  <electronicMailAddress>Gert.Vanhoey@ilvo.vlaanderen.be</electronicMailAddress>
</creator>
<metadataProvider>
  <individualName>
    <givenName>Gert</givenName>
    <surName>Van Hoey</surName>
  </individualName>
  <organizationName>
    Vlaamse overheid; Beleidsdomein Landbouw en Visserij; Instituut voor landbouw- , visserij en voedingsonderzoek; Kenniseenheid: Dier; Aquatisch Milieu en Kwaliteit
  </organizationName>
  <electronicMailAddress>Gert.Vanhoey@ilvo.vlaanderen.be</electronicMailAddress>
</metadataProvider>
<pubDate>2020-02-27</pubDate>
<language>en</language>
<abstract>
  <para>
    What ecological effects does a foreshore suppletion, and a beach suppletion, have on the marine ecosystem in the intertidal and shallow surf zone (&lt;math>6\text{ m}</math> depth)? The foreshore suppletion (400.000m2) was by means of an experimental set-up in the shallow coastal zone (-1 to -2m TAW) of Mariakerke. Beside it, a beach nourishment was conducted at Mariakerke (681243m2) and Middelkerke (968754m2). For the Mariakerke area, we collect biological and sedimentological samples in the impact area and in a control area (Bredene), before as after the suppletion, whereas for Middelkerke only the data after suppletion was part of the study. We monitor the marine ecosystem with a focus on the fauna within the sediment (macrofauna) and on the sediment (hyperbenthos, epi- and demersal fish fauna) in the intertidal zone and subtidal zone.
  </para>
</abstract>
<keywordSet>
  <keyword>Coastal defences</keyword>
  <keyword>Demersal fishes</keyword>
```



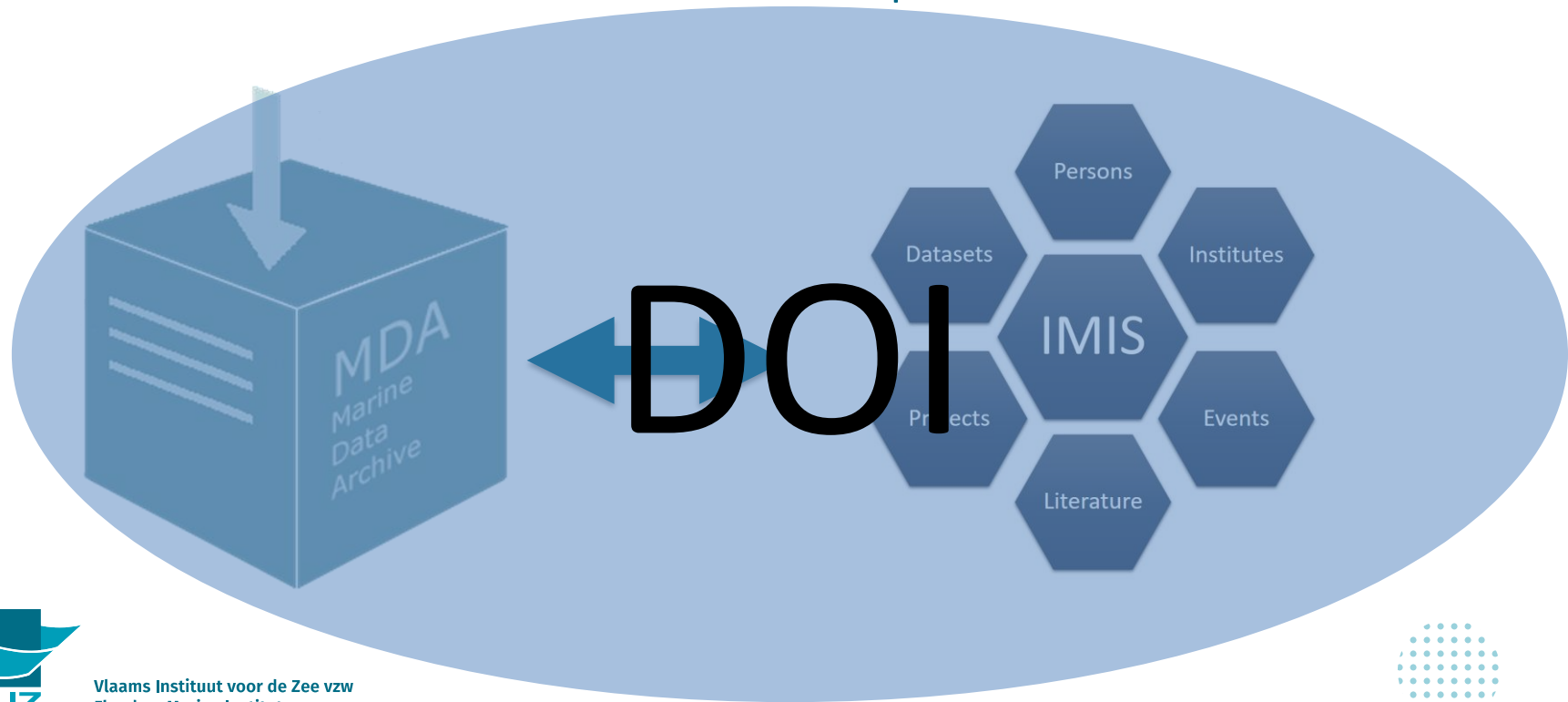


# How to break it “open”?

## *Finding the key @VLIZ-DataCentre*



- Connect the “hidden” data to “open” datasets





# Data repositories as an open treasure chest?

*DOI's*

- What?
  - Unique identifier for data
- Why?
  - Enforces data to be “FAIR”
  - Required by many publishers, funders or governments
  - Increases the visibility of your work
  - Makes your dataset citeable





# Data repositories as an open treasure chest?

## DOI's

- Metadata description in IMIS
- Data publicly available in MDA (evt. moratorium possible)
- Unique citation and link
- Dataformat (and metadata) on archive is quality controlled by VLIZ DataCentre
- Versions of datasets

## IMIS

log in

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[\[ report an error in this record \]](#)

[\[ view external version \]](#)



### Subtidal epibenthos and demersal fish monitoring in function of a foreshore suppletion at the Belgian coast, period 2013-2016

Citable as data publication

Aquatic environment and quality group; Flanders research institute for agriculture, fisheries and food (ILVO), Belgium; (2018): Subtidal epibenthos and demersal fish monitoring in function of a foreshore suppletion at the Belgian coast, period 2013-2016. Marine Data Archive. <https://doi.org/10.14284/343>

[Download Data](#)

Contact: Van Hoey, Gert



Vlaams Instituut voor de Zee vzw  
Flanders Marine Institute



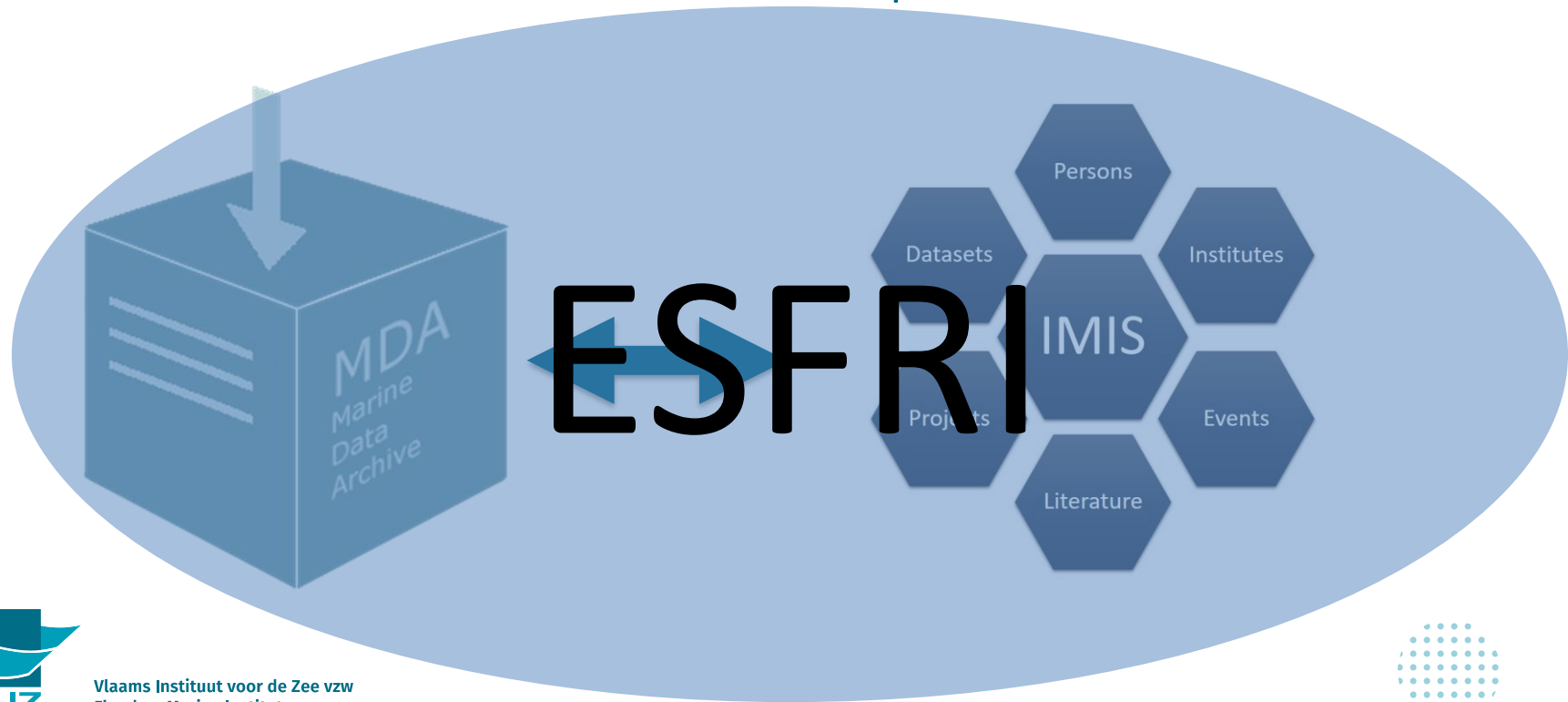


# How to break it “open”?

*Finding the key @VLIZ-DataCentre*



- Connect the “hidden” data to “open” datasets





# Data repositories as an open treasure chest?

*Connecting to RI's , institutes and projects*

[ report an error in this record ]

[ view external version ]



## Subtidal epibenthos and demersal fish monitoring in function of a foreshore suppletion at the Belgian coast, period 2013-2016

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[Download Data](#)

Contact: [Van Hoey, Gert](#)

Access data



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



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Flanders Marine Institute





# Data repositories as an “open” treasure chest?

*Connecting to RI's, institutes and projects*

- RI's and datasystems in IMIS & MDA:
  - LifeWatch Belgium
    - MarineRegions
    - WoRMS
    - (Eur)OBIS
  - EMBRC
  - EMODnet-Biology
- Institutes using IMIS & MDA:
  - Ugent – Marbiol
  - Ugent - Ghentoxlab
  - NIOO
  - ILVO
- Projects using IMIS & MDA:
  - AssemblePlus
  - ScheldeMonitor
  - JericoNext
  - ... Several other local and international projects (4DEmon, Biotide, CREST, OMES, ...)



**EMBRC**  
EUROPEAN  
MARINE  
BIOLOGICAL  
RESOURCE  
CENTRE



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



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Flanders Marine Institute





# Questions?

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

[mda@vliz.be](mailto:mda@vliz.be)

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