

Launch C-scope

Combining Sea and Coastal Planning in Europe

VLIZ – Flanders Marine Institute

Oostende, April 29, 2009

Vlaams instituut voor de zee



Organisation and structure

- Non-profit organisation, established in 1999
- VLIZ management
 - Board of directors, Scientific Committee
 - Cooperation agreements with institutes / research groups
- VLIZ staff (29 FTE)
- VLIZ Subsidy
 - Flemish government (95%)
 - Province of West-Flanders (5%)
 - + projects
- Five-year management agreements



VLIZ is a scientific institution, but does not conduct scientific research

- Marine datacentre
- Logistic support
- Marine (digital) library
- Communication desk
- Focal point

VLIZ does not generate data

- Except for data acquisition system on board of the R/V Zeeleeuw
- Added value by integrating data sets from different sources
- Added value by creating data compilations

InnovOcean site



Vlaams instituut voor de zee





Promoting multidisciplinary marine sciences

Field of action

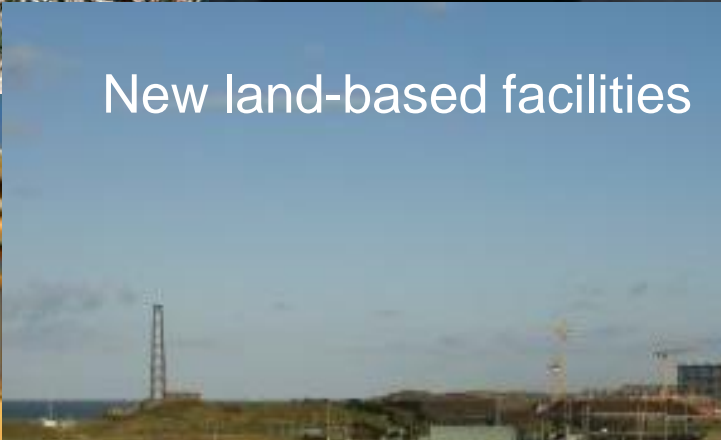
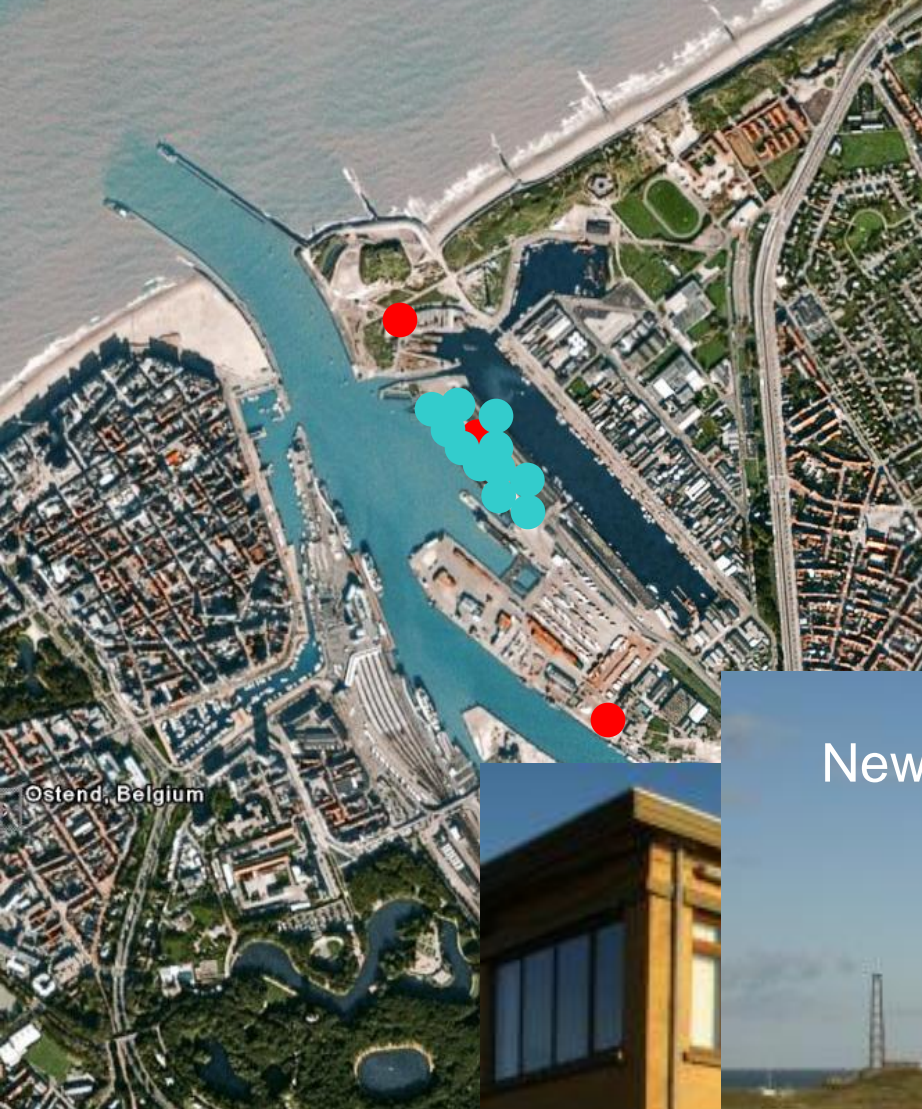
All coastal and tidal systems

- open sea
- beaches
- dunes
- coastal polders
- mud flats and marshes
- estuaries

All areas where Flemish marine scientists are/were active

- North Sea, Northeast Atlantic, ...
- Deep sea, Arctic-Antarctica, tropics, ...





New land-based facilities

Provinciaal Ankerpunt



Steunpunt
NME-Kust

Vlaamse Overheid - MDK

- MRCC
- Scheepvaartbegeleiding



Structuur Kustwacht



For who?

- Scientists at universities and research institutes
- Government and administrations at the local, provincial, regional, federal, European and multilateral level
- Private companies
- Education: teachers, schools, high schools, environmental education, ...
- Media & public
- Individuals



Logistic support

Facilities at sea RV Zeeleeuw



- 150 days - 1100h
 - 14 projects, 11 research teams
 - Educational trips
 - Equipment and infrastructure
 - Monitoring
 - incl. Schelde estuary (40 days – 300h)

Land-based facilities:



- Green houses
- storage facilities, freezers etc.
- Meeting rooms; Conference hall



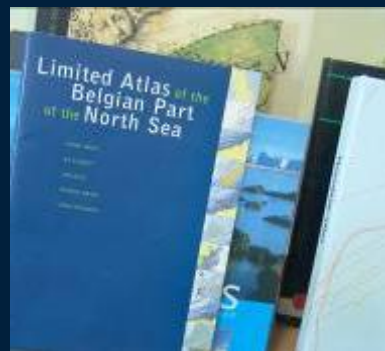
At sea



Marine Library



- Largest marine collection available in Belgium
- Services
- Open Marine Archive
- Integrated Marine Information System-IMIS



VLIZ Data & Information Center



① Document



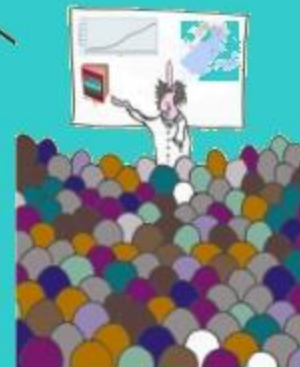
② Archive

No

Yes



④ Redistribute



③ Integrate



1. Inventory and document



IMIS

Integrated Marine Information System

<http://www.vliz.be/vmdcdata/imis2>





Search in

Website

You are here: [VLIZ](#) >

Services

for scientists
for policy makers
for education
for entrepreneurs
for the press
for enthusiasts

Realisations

Databases
Websites
Publications
Events
Projects
Cooperation

[Calendar](#)[News](#)[Contact](#)[Persons](#) | [Institutes](#) | [Publications](#) | [Journals](#) | [Projects](#) | [Events](#) | [Infrastructure](#) | [Datasets](#) | [Maps](#) | [URLs](#)

Integrated Marine Information System (IMIS)

The objective of this IMIS-database is to provide information on all topics relevant to marine sciences - be it people with their expertise, institutions and their mandate, publications,... Different types of 'knowledge items' correspond to different modules in the system, each with their own entry into the database (see below, or in the menu on the left, for a list of these).

Information relevant to marine sciences in the Flanders, or to the southern part of the North Sea, is actively pursued. We hope to achieve a reasonably comprehensive coverage here, of course counting on feedback from our users, drawing our attention to possible errors/omissions. Information from further afield is also stored, and users are welcome to comment, but the VMDC will not actively go and look for this information.

Select an action next to the available modules (note: you need an account to be able to create or alter data):

- | | |
|--|---|
| <ul style="list-style-type: none">• Persons search edit• Institutes search edit• Publications search• Journals search• Infrastructure search | <ul style="list-style-type: none">• Events search edit• Projects search edit• Datasets search• Maps search• URLs search |
|--|---|



If you are currently listed in our database, but do not want your record to be visible on our web site, please [contact us](#).

IMIS is a work in progress, and data entry is by no means complete. We do hope, however, that we have records on all relevant people and institutions from Flanders, and the vast majority of our colleagues from the south of the country. Please contact us for additions and corrections. We are aware that the literature lists are not complete; we're working on it. But do contact us if you find mistakes in existing records. We will contact individual scientists/research groups to try and make these lists complete.

Click [here](#) to get an overview of the current number of public records in the database.

IMIS is a SQL Server database, and this determines the [wildcards](#) that can be used in the search screens.



- IMIS: Integrated Marine Information System -

[log in](#)

[Persons](#) | [Institutes](#) | [Publications](#) | [Journals](#) | [Projects](#) | [Events](#) | [Infrastructure](#) | [Datasets](#) | [Maps](#) | [URLs](#)

Datasets [108]

Search in all fields:

Title:

Institute:

Person:

Word in abstract:

Theme:

Type:

Begin date: before [MM/yyyy]

End date: before [MM/yyyy]

Archived:

Special collection:

Thesaurus term: [[search](#)]

Taxonomic term: [[search](#)]

Other term: [[search](#)]

Geographical term: [[search](#)]

Marine Expertise:

Topic:

[show full list](#)

[Search options](#)

Module Datasets

Module Persons

Responsibles (2)

- **Borges, Alberto Vieira**, data manager [Université de Liège; Faculté des Sciences; Département d'Astrophysique, Géophysique et Océanographie; Unité d'océanographie chimique, [details](#)]
- **Borges, Alberto Vieira**, dataset record author [Université de Liège; Faculté des Sciences; Département d'Astrophysique, Géophysique et Océanographie; Unité d'océanographie chimique, [details](#)]

Temporal coverage:

- From September 1999 on [In Progress]
- **Periodicity:** Quasi continuous (< 1 min.)
- From September 2002 on [In Progress]
- **Periodicity:** Weekly

Geographical cover:

- Belgium, Zeeschelde, Sint-Annastrand [[gazetteer](#)]

Parameters:

- **Matrix:** Water, **Parameter:** Alkalinity
- **Matrix:** Water, **Parameter:** Ammonium
- **Matrix:** Water, **Parameter:** Biogenic Silica
- **Matrix:** Water, **Parameter:** Carbon dioxide partial pressure, **Methodology:** Continuous measurements
- **Matrix:** Water, **Parameter:** Chlorophyll a
- **Matrix:** Water, **Parameter:** Dissolved Organic Carbon
- **Matrix:** Water, **Parameter:** Dissolved organic phosphate
- **Matrix:** Water, **Parameter:** Dissolved Silica
- **Matrix:** Water, **Parameter:** Nitrate
- **Matrix:** Water, **Parameter:** Nitrite
- **Matrix:** Water, **Parameter:** Oxygen
- **Matrix:** Water, **Parameter:** Phosphate
- **Matrix:** Water, **Parameter:** Salinity, **Methodology:** Continuous measurements
- **Matrix:** Water, **Parameter:** Temperature in water, **Methodology:** Continuous measurements
- **Matrix:** Water, **Parameter:** Total Dissolved Phosphorus
- **Matrix:** Water, **Parameter:** Total Particulate Inorganic Phosphorus
- **Matrix:** Water, **Parameter:** Total Particulate Phosphorus
- **Matrix:** Water, **Parameter:** Total Phosphorus
- **Matrix:** Water, **Parameter:** Total Suspended Matter

Instance:

Medium: PC - Hard disk
Storage insitute: Université de Liège; Faculté des Sciences; Département d'Astrophysique, Géophysique et Océanographie; Unité d'océanographie chimique, [details](#)
Contact: **Borges, Alberto Vieira** [Université de Liège; Faculté des Sciences; Département d'Astrophysique, Géophysique et Océanographie; Unité d'océanographie chimique, [details](#)]

Project:

- Carbon and nutrients cycles in the inner Scheldt estuary (Sainte-Anna), [details](#)

- IMIS: Integrated Marine Information System -

[log in](#)
[Persons](#) | [Institutes](#) | [Publications](#) | [Journals](#) | [Projects](#) | [Events](#) | [Infrastructure](#) | [Datasets](#) | [Maps](#) | [URLs](#)

Dr Borges, Alberto Vieira [card]

[Report an error in this record](#)

Institutes (2)

[Top](#) | [Publications](#) | [Projects](#) | [Datasets](#)

Université de Liège; Faculté des Sciences; Département d'Astrophysique, Géophysique et Océanographie; Unité d'océanographie chimique, [details](#)

Function: Researcher

Direct contact at institute:

Phone: +32-(0)4-366 31 87

Email: alberto.borges@ulg.ac.be

GHER: Université de Liège; Faculté des Sciences; Département d'Astrophysique, Géophysique et Océanographie; Unité de Geohydrodynamics and Environment Research, [details](#)

Direct contact at institute:

Phone: +32-(0)4-366 31 87

Email: alberto.borges@ulg.ac.be

Projects (8)

[Top](#) | [Institutes](#) | [Publications](#) | [Datasets](#)

- Integrated Study of Southern Ocean Biogeochemistry and Climate Interactions in the Anthropocene, [details](#)
- BELCOLOUR-2 : Optical remote sensing of marine, coastal and inland waters, [details](#)
- Carbon and nutrients cycles in the inner Scheldt estuary (Sainte-Anna), [details](#)
- Cluster Eutrophication, [details](#)
- Nutrients Cycling and the Trophic Status of Coastal Ecosystems, [details](#)
- Role of pelagic calcification and export of carbonate production in climate change, [details](#)
- Southern European Seas: Assessing and Modelling Ecosystem changes, [details](#)
- Gather and promote Surface Ocean - Lower Atmosphere related belgian efforts, [details](#)

Datasets (3)

[Top](#) | [Institutes](#) | [Publications](#) | [Projects](#)

- BIOGEST project dataset: Biogas Transfer in Estuaries, [details](#)
- Continuous acquisition of inorganic and organic carbon and associated parameters at the station Ste Anna, Antwerp, [details](#)
- EUROTROPH project dataset: Nutrients Cycling and the Trophic Status of Coastal Ecosystems, [details](#)

Publications (47) [27 peer reviewed] [Split up]

[Top](#) | [Institutes](#) | [Projects](#) | [Datasets](#)

- **Abiril, G. et al.** (2003). Carbonate dissolution in the turbid and eutrophic Loire estuary. *Mar. Ecol. Progr. Ser.* 259: 129-138, [details](#)
- **Álvarez-Salgado, X.A. et al.** (2001). Off-shelf fluxes of labile materials by an upwelling filament in the NW Iberian upwelling system. *Prog. Oceanogr.* 50(2-4): 321-337, [details](#)
- **Álvarez-Salgado, X.A. et al.** (2003). Thermohaline, chemical and biological characterisation of the poleward flowing Portugal coastal counter current off NW Spain. *Prog. Oceanogr.* 56(2): 281-321, [details](#)



Module Datasets

Parameters:

[Top](#) | [Responsibles](#) | [Instance](#) | [Publications](#) | [URL](#)

- **Matrix:** Atmosphere/Air, **Parameter:** Wind speed
- **Matrix:** Biota, **Parameter:** Biomass, **Methodology:** Eppley Method, [Protocol](#)
- **Matrix:** Water, **Parameter:** Ammonium
- **Matrix:** Water, **Parameter:** Light intensity
- **Matrix:** Water, **Parameter:** Nitrate
- **Matrix:** Water, **Parameter:** Phosphate
- **Matrix:** Water, **Parameter:** Silicate
- **Matrix:** Water, **Parameter:** Suspended material
- **Matrix:** Water, **Parameter:** Transparency, **Methodology:** Secchi disk
- **Matrix:** Water, **Parameter:** Water temperature

Instance:

[Top](#) | [Responsibles](#) | [Parameters](#) | [Publications](#) | [URL](#)**Medium:** Server**Location:** MDA**Storage insitute:** [VLIZ: Vlaams Instituut voor de Zee, details](#)**Contacts:**

- [Claus, Simon](#) [[VLIZ: Vlaams Instituut voor de Zee, details](#)]
- [Hernandez, Francisco](#) [[VLIZ: Vlaams Instituut voor de Zee, details](#)]

URLs:

- Archived file: mda.vliz.be/mda/directlink.php?fid=VLIZ_00000005_1210856309
- Archived file: mda.vliz.be/mda/directlink.php?fid=VLIZ_00000005_1210856594

Publications (3)

[Top](#) | [Responsibles](#) | [Parameters](#) | [Instance](#) | [URL](#)

Based on this dataset:

- **Bakker, C. et al.** (1994). A new trend in the development of the phytoplankton in the Oosterschelde (SW Netherlands) during and after the construction of a storm-surge barrier. *Hydrobiologia* 282-283: 79-100, [details](#)
- **Bakker, C. et al.** (1994). A new trend in the development of the phytoplankton in the Oosterschelde (SW Netherlands) during and after the construction of a storm-surge barrier, *in:* Nienhuis, P.H.; Smaal, A.C. (Ed.) (1994). *The Oosterschelde Estuary (The Netherlands): a case-study of a changing ecosystem*. *Hydrobiologia*, 97: pp. 79-100 [Other original], [details](#)
- **Bakker, C. et al.** (1990). Changes in seasonal succession of phytoplankton induced by the storm-surge barrier in the Oosterschelde (S.W. Netherlands). *J. Plankton Res.* 12(5): 947-972 [Other original], [details](#)

link to
Marine Data Archive



2. Archive



MDA
Marine Data Archive

<http://mda.vliz.be>




Archiving system

[About](#) | [Guidelines](#) | [Create account](#) | [Workspaces](#) | [File actions](#) | [Datatypes](#)

[to the archive](#)


▶ STEP 5 : Upload a new file


 Files can be uploaded at folder-level.


When uploading a file, specify [File properties](#) (step 2), [Extra attributes](#) (step 3) and give a [Description](#) of your file (step 4). These are the **metadata** of your file.


UPLOAD NEW FILE


File properties | **Extra attributes** | **Description**


File: 


Filename: 


Creationdate: 


Author(s): 

Dataprovider: 

Email Dataprovider: 

Condition of Use: 

Datatype: 

Summary: 

Underlined items are required.

Menu

- Home
- Workspace
- To do
- Bugs
- Manual
- Troubleshooting
- Future
- Contact

username: Simon Claus
logout

PRIVATE SHARED PUBLIC

- ENDIS - INRAM
- NIOO-CEME
- NIOO-CEME Ecosystem Studies
- NIOO-CEME Marine Microbiology
- NIOO-CEME Monitoring Taskgroup
- NIOO-CEME Spatial Ecology
- OMES
- TROPHOS - WESTBANKS
- Ugent - MARBIOL
- Scripties Biologie 2006-2007
 - Charlotte De Busschere
 - densiteiten_Nematoda.zip 2007-06-11 09:20:05
 - grafieken.zip 2007-06-11 09:20:36
 - statistiek.zip 2007-06-11 09:21:09
 - thesis_Finaal.pdf 2007-06-11 09:13:42
 - Thesis.mdb 2007-06-11 09:19:03
 - Christophe Legrand
 - Eline Van Puyvelde
 - Els Heynssens
 - Jan Reubens
 - Sharon Vandewalle



FILE METADATA

File properties	Extra attributes	Description
Filename:	densiteiten_Nematoda.zip	
Direct link:	mda.vliz.be/mda/directlink.php?fid=VLIZ_00000011_1181533605	
Creationdate:	2007-06-11	
Author(s):	Charlotte De Busschere	
Dataprovider:	Marbiol	
Email dataprovider:		
Datatype:	General	
Summary:	Nematode density files	
Changes:		

Close

Updates

12/07/2007
Update: dates and date times now ISO 8601 compliant.

22/06/2007
Update: added possibility to link files to other files in the marine data archive and fixed bug in coordinates.

05/06/2007
Update: the direct link page offers 2 ways to get a copy of a file: either you log in (if you have access to the MDA and to the file) or you request the file via email. The forms used are a try out for the new user interface.

30/03/2007
Update: cleaned up javascript, fixed bug with buttons for attributes with property multiple, added VLIZ datatypes, fixed bug with UTF-8 encoding in forms, up to date to do-list, started with manual (only definitions),...

20/03/2007
Update: extra datatypes, adjusted datamodel, new icons & new feature : upload similar file

05/03/2007
Production.

- Menu
- Home
- Workspace
- To do
- Bugs
- Manual
- Troubleshooting
- Future
- Contact
- username: Simon Claus
- logout

PRIVATE SHARED PUBLIC

- ENDIS - INRAM
- NIOO-CEME
- NIOO-CEME Ecosystem Studies
- NIOO-CEME Marine Microbiology
- NIOO-CEME Monitoring Taskgroup
- NIOO-CEME Spatial Ecology
- OMES
- TROPHOS - WESTBANKS
- Ugent - MARBIOL
- Scripties Biologie 2006-2007
 - Charlotte De Busschere
 - densiteiten_Nematoda.zip 2007-06-11 09:20:05
 - grafieken.zip 2007-06-11 09:20:36
 - statistiek.zip 2007-06-11 09:21:09
 - thesis_Finaal.pdf 2007-06-11 09:13:42
 - Thesis.mdb 2007-06-11 09:19:03
 - Christophe Legrand
 - Eline Van Puyvelde
 - Els Heynssens
 - Jan Reubens
 - Sharon Vandewalle

UPLOAD NEW FILE

File properties | Extra attributes | Description

CONTENT

Bio. comp.: ⓘ

Abund. data: ⓘ

Biomass data: ⓘ

Biometrics: ⓘ

Abiotic meas.: ⓘ

GEOGRAPHICAL SCOPE

Min. longitude: ⓘ

Max. longitude: ⓘ

Min. latitude: ⓘ

Max. latitude: ⓘ

Location: ⓘ

TEMPORAL SCOPE

First date: ⓘ

Last date: ⓘ

DATA AUTHORITY

Data owner: ⓘ

Cond. of use: ⓘ

OTHER

Notes: + - ⓘ

Underlined items are required.

Cancel Reset Upload new file

3. Integrate



EUROBIS
Data Portal

...

<http://www.vliz.be/vmdcdata>



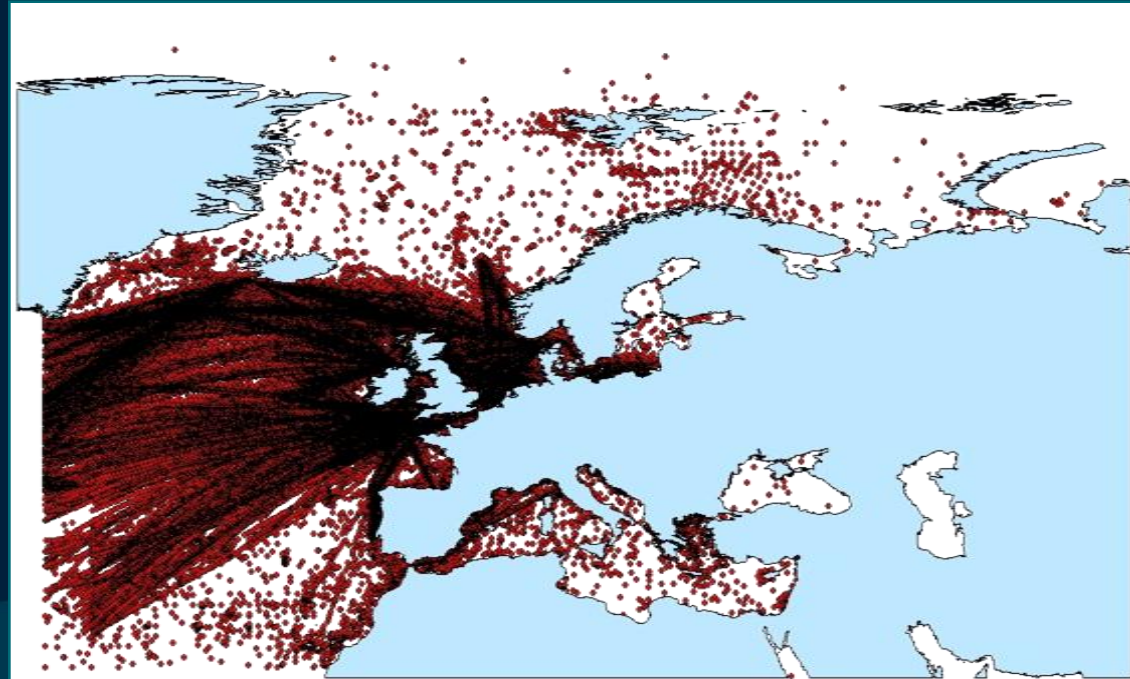
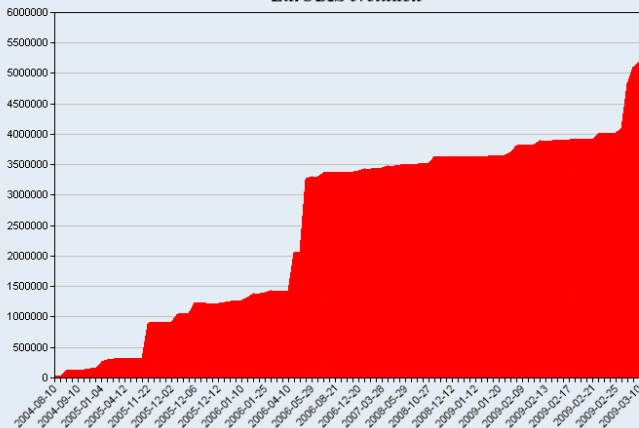
Biological data holdings

- **Taxonomic Data: World Register of Marine Species (WoRMS)**
- **EurOBIS: European Ocean Biogeographic Information System**

Statistics (March 2009)

- **171 Datasets (data providers)**
- **5,204,807 distribution records**

EurOBIS evolution



Geographic Information Systems

1. VLIMAR Gazetteer

Standardisation Marine Placenames for data systems:

Online list of geo-objects

Placename, Placetype, Coordinates

Relations ~ hierachical

2. MARBOUND: Maritime Boundaries Database

Maritime boundaries (Polyline, Polygon (~ EEZ))

Website – free downloadable EEZ layers (shapefiles);

<http://www.vliz.be/vmdcdata/marbound>

> 2300 registered users

Map interface (open-source MapServer (OGC))

Application: National species checklists



VLIZ Maritime Boundaries Geodatabase



VLIZ Maritime Boundaries Geodatabase



Home

Map Interface

Search Database

Download

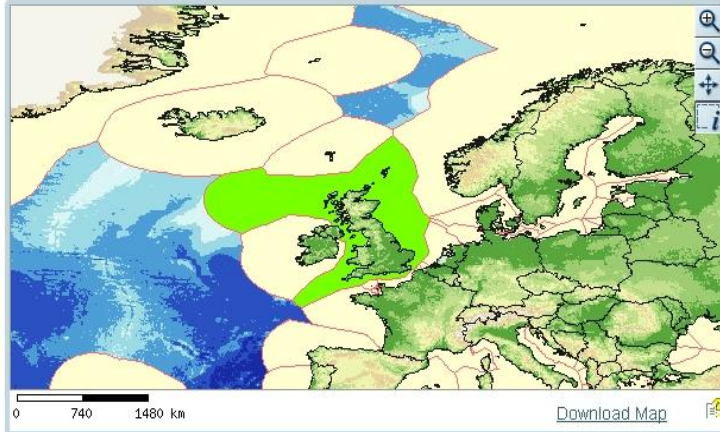
Forum

General Info

Methodology

Contact

Links



Information

Exclusive Economic Zone

EEZ	Country	Sovereign
United Kingdom Exclusive Economic Zone	United Kingdom	United Kingdom

Legend

Layer
<input checked="" type="checkbox"/> Topography
<input checked="" type="checkbox"/> EEZ
<input checked="" type="checkbox"/> Countries
<input type="checkbox"/> Boundaries
<input checked="" type="checkbox"/> Redraw Map

Keymap



Java Mode Enabled
Click to Disable

!Make sure You have installed a recent version of **Java**. If the map does not display, download the newest version of Java [here](#). If You don't want to use Java, click the disable button above!



Home

Map Interface

Search Database

Download

Forum

General Info

Methodology

Contact

Links

United Kingdom

[Go To Map](#) [Feedback](#)

Dependencies and overseas territories: [Anguilla](#), [Ascension](#), [Bermuda](#), [British Indian Ocean Territory](#), [British Virgin Islands](#), [Cayman Islands](#), [Falkland Islands](#), [Gibraltar](#), [Guernsey](#), [Jersey](#), [Montserrat](#), [Pitcairn](#), [Saint Helena](#), [South Georgia and the South Sandwich Islands](#), [Tristan da Cunha](#), [Turks and Caicos Islands](#)

Download: As [GML](#) (Geographic MarkUp Language)

Boundaries established in treaties

[Belgium](#) ([Go To Map](#)) ([Download boundary coordinates as GML](#))

Originator: VLIZ

Digital Documents:

Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Kingdom of Belgium relating to the delimitation of the continental shelf between the two countries 29 May 1991(1) ([Download](#))

[Denmark](#) ([Go To Map](#)) ([Download boundary coordinates as GML](#))

Originator: VLIZ

Digital Documents:

Executive Order No. 584 of 24 June 1996 concerning Denmark's Exclusive Economic Zone ([Download](#))

[Faeroe Islands](#) ([Go To Map](#)) ([Download boundary coordinates as GML](#))

Originator: VLIZ

Digital Documents:

Agreement between the Government of the Kingdom of Denmark, together with the Home Government of the Faeroe Islands, on the one hand, and the Government of the United Kingdom of Great Britain and Northern Ireland, on the other hand, relating to Maritime Delimitation in the Area between the Faeroe Islands and the United Kingdom, 18 May 1999 ([Download](#))

[France](#) ([Go To Map](#)) ([Download boundary coordinates as GML](#))

Originator: VLIZ

Digital Documents:

Agreement between the Government of the French Republic and the Government of the United Kingdom of Great Britain and Northern Ireland relating to the Delimitation of the Continental Shelf in the Area East of 30 Minutes West of the Greenwich Meridian, 24 June 1982 ([Download](#))

Agreement between the Government of the French Republic and the Government of the United Kingdom of Great Britain and Northern Ireland relating to the completion of the delimitation of the continental shelf in the southern North Sea, 23 July 1991 ([Download](#))

3. Schelde estuary Geo Data Portal

- **Integrated data portal on Schelde Estuary (BE-NL)**
 - Biological/physical/chemical/sampling data
 - Monitoring data
 - Maps/GIS layers for spatial planning and environmental management
 - Metadata (Literature, Datasets, Publications)
- **Dataproviders from BE/NL**
 - Chemical, ecology, environment, biological, fisheries, indicators
- **Data 'Atlas' of the Schelde (International Coastal Atlas Network: ICAN)**
- **OGC compliant Web Services (GeoServer, GML)**
 - Web Feature Service (WFS)~vector data
 - Web Map Service (WMS)~maps
- **INSPIRE Directive**





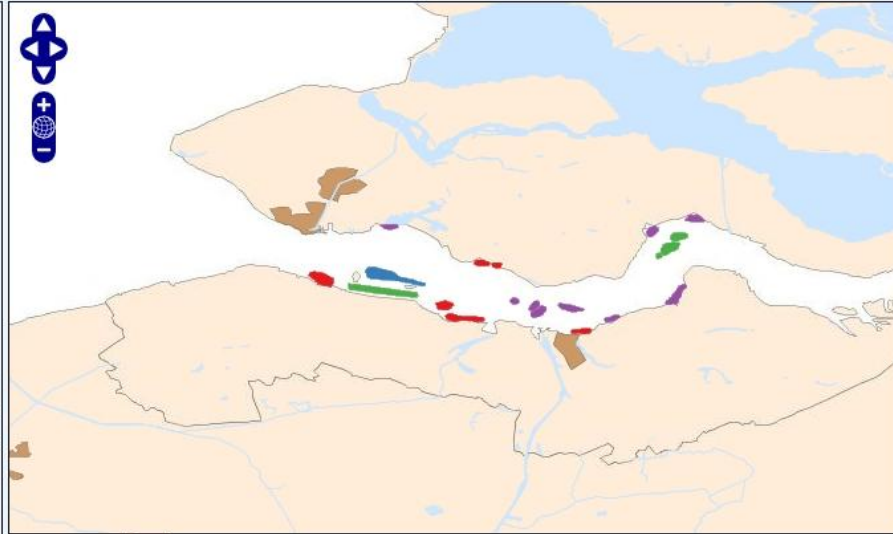
Kaart Zoeken

Parameter: Visg

Parameters

Kaart Zoeken

- Basiskaart #
- Landsat7
- World Map
- Administratieve grenzen**
- Landen(update2008)
- Chemische kenmerken**
- Lozingspunten 1994 Nederland
- Verdeling zoet en zout water (Venice System)
- Westerschelde - Lokale bodemkwaliteit
- Westerschelde - Zonering
- Fauna**
- Westerschelde - Visgronden kokkels
 - 0-5
 - 10-15
 - 15-20
 - 5-10
- Fysische kenmerken**
- Bathymetrie Noordzee + Westerschelde
- Bathymetrie Schelde (detail)
- Waterafvoer stroomgebied 1979
- Westerschelde - Banken
- Westerschelde - Drempels
- Westerschelde - Swales
- Gebruik**
- Baggerlocaties 1998
- Kabels, leidingen en zinkers 1998
- Scheepsbewegingen 1994 - Binnenvaart en zeevaart
- Steden
- Stortlocaties
- Veiligheid - individueel risico 10⁻⁶



3.34232, 51.57004
Scale = 1 : 433K



Kaart

Zoeken

Totale stikstof in mg N-tot./l...

Totale stikstof in mg N-tot./l in SPM

<< first < prev 1 2 3 4 5 6 7 8 9 10 next > last >>

Lat.	Long.	Datum	Diepte	Waarde
51.49	4.1376	1995-05-08 07:26:00	0.5	0.1215969
51.49	4.1376	1995-05-08 07:28:00	20.89999	0.1387945
51.522	4.0402	1995-05-08 07:59:00	0.5	0.1588106
51.522	4.0402	1995-05-08 08:00:00	15.60000	0.1242029
51.547	3.9268	1995-05-08 08:37:00	36.5	0.1491867
51.547	3.9268	1995-05-08 08:39:00	0.600000	0.1217127
51.595	3.8898	1995-05-08 09:08:00	0.5	0.1908397
51.595	3.8898	1995-05-08 09:09:00	11.19999	0.1619047
51.612	3.7595	1995-05-08 09:50:00	0.5	0.2466846
51.612	3.7595	1995-05-08 09:51:00	15.19999	0.2177039
51.619	3.92	1995-05-08 10:33:00	0.600000	0.1341347
51.619	3.92	1995-05-08 10:34:00	18.10000	0.1251168
51.625	4.0791	1995-05-08 11:19:00	0.5	- 0.0058664
51.625	4.0791	1995-05-08 11:21:00	15.60000	0.0236715
51.612	3.7595	1995-05-19 05:42:56	11.10000	0.2482644
51.49	4.1376	1995-05-19 07:52:00	0.600000	0.0910069
51.49	4.1376	1995-05-19 07:54:00	22.89999	0.0964738
51.522	4.0402	1995-05-19 08:24:00	0.699999	0.058962
51.522	4.0402	1995-05-19 08:25:00	16.60000	0.0533221
51.547	3.9268	1995-05-19 08:56:00	0.800000	0.0486413
51.547	3.9268	1995-05-19 08:58:00	33	0.1192917
51.595	3.8898	1995-05-19 09:22:00	0.699999	0.1578282
51.595	3.8898	1995-05-19 09:23:00	17.10000	0.325406
51.612	3.7595	1995-05-19 09:59:00	0.699999	0.1588166
51.619	3.92	1995-05-19 10:52:00	0.5	0.1437814
51.619	3.92	1995-05-19 10:53:00	17.39999	0.1817936
51.625	4.0791	1995-05-19 11:41:00	0.400000	0.0824052

4. Redistribute

Internet
Publications
Networks

! Not without explicit permission of the data owners !



Seadatanet

IODE



OBIS

ICES



Figures & Policy

- link between research and management
 - supply of data- and information; with focus on numbers
 - scientifically sound, objective, relevant
 - transparent communication, acknowledgement of source
-
- Facts & Figures: 'SeaStats'
 - Indicators
 - Policy support
 - Partnerships & Cooperation



1. SeaStats

Figures Policy

- About Figures&Policy
- Policy support
- Indicators
- Project support
- Seastats
- Non-native species
- Sea Fisheries Belgium

- Calendar
- News
- Contact

Looking for stats about temperature in the sea



Looking for more seastats...

Deep-sea (23)

Figure	Description	Document	Source	Question
14287	'seamounts' with summit heights of more than 1000m above the surrounding area have been predicted based on satellite data (2007*)		UNEP	
906	depth of first dive in deepsea world, by Beebe and Barton in their bathysphere, in 1932 (2004*)		Gould C. G.	
450-2742 years	estimated maximum life span of gold corals (<i>Gerardia spp.</i>), found on seamounts in the deep-sea (2006*)		Roark et al.	
1800 years	estimated maximum life span of gold corals (<i>Gerardia spp.</i>), found on seamounts in the deep-sea (2007*)		Bergquist et al. (2000) in UNEP	
200 years	estimated maximum life span of the orange roughy (<i>Hoplostethus atlanticus</i>) commercially exploited fish in the deep-sea (2007*)		Bergquist et al. (2000) in UNEP	
0,3-8,3 million	estimated number of species diversity living in the deep-sea		Grassle&Maciolek(1992) novaro et al.	
0,7 cm/year	sea level rise	Vol 447(717) May 2000 doi:10.1038/nature05827	nature	
11 km	depth of the deepest part of the ocean	LETTERS	t and Verfaillie	
2377 years	life span of the longest lived tree		oark et al.	
200 mill. year	maximal age of the oldest living tree		wn E. et al. UNEP	
0,0001 %	of the area of the sea a new t		and t et al.	
87 %	of the area of the sea a new t		UNEP	
2-3 %	of the area of the sea a new t		UNEP	
90 %	of the area of the sea a new t		ler, G. et al.	
40 %	of the area of the sea a new t		U?NEP	
65 %	of the area of the sea a new t		6 in Danovaro et al 2008	
20-100 mm/year	of ne		UNEP	
2-3 cm/thousand year	rema		UNEP	
4650 m	recor		UNEP	
	RNCM			
Figure	Description	Document	Source	Question
2-5 km	the w		VLIZ	
2 years	time i		et al. in UNEP	

First insights into the biodiversity and biogeography of the Southern Ocean deep sea

Angelika Brandt¹, Andrew J. Gooday², Simone N. Brandão¹, Saskia Brix¹, Wiebke Brökeland¹, Tomas Cedhagen³, Madhumita Choudhury¹, Nils Cornelius², Bruno Danis², Ilse De Mesele³, Robert J. Diaz⁴, David C. Gillan², Brigitte Ebbe⁵, John A. Howe⁶, Dorte Janussen¹⁰, Stefanie Kaiser¹, Katrin Linse¹¹, Marina Maljutina², Jan Pawłowski¹¹, Michael Rauped¹² & Ann Vanreusel⁹



Shallow marine benthic communities around Antarctica show high levels of endemism, gigantism, slow growth, longevity and late maturity, as well as adaptive radiations that have generated considerable biodiversity in some taxa¹. The deeper parts of the Southern Ocean exhibit some unique environmental features, including a very deep continental shelf² and a weakly stratified water column, and are the source for much of the deep water in the world ocean. These features suggest that deep-sea faunas around the Antarctic may be related both to adjacent shelf communities and to those in other oceans. Unlike shallow-water Antarctic benthic communities, however, little is known about life in this vast deep-sea region³. Here, we report new data from recent sampling expeditions in the deep Weddell Sea and adjacent areas (748–6,348 m water depth) that reveal high levels of new biodiversity; for example, 674 isopod species, of which 383 were new to science. Bathymetric and biogeographic trends varied between taxa. In groups such as the isopods and polychaetes, slope assemblages included species that have invaded from the shelf. In

trench floor, channel levees and adjacent to fracture zones, and from water depths between 774 and 6,348 m (Fig. 1; Supplementary Discussion; Supplementary Tables 1, 2; Supplementary Figs 1, 2). This material has greatly improved our knowledge of the biodiversity of benthic communities in the deep Southern Ocean and enabled us to test ideas about large-scale biogeographic and other macroecological patterns⁴ among deep-water faunas. The richness of species inhabiting deep-sea sediments was first demonstrated during the 1960s⁵. Since then, scientists have sought to understand the mechanisms that maintain these high levels of benthic diversity at local⁶ and regional⁷ scales. We analysed species assemblages in ANDEEP samples across a range of taxonomic groups, representing the meiofauna, macrofauna and megafauna (Fig. 2) and found substantial levels of unrecorded biodiversity (see Supplementary Material). The Foraminifera were represented by 150 live species, including 72 monothalamos species, most of them undescribed. The acrotarotids belonged to typical cosmopolitan deep-sea genera (Supplementary Fig. 3), but more than half of the 57

- search through the full list of seastats
- know more? search through frequently asked questions about the sea
- do you have interesting stats to add to this list, contact the Seastats-team

2. Policy support


List and factsheets non-endemic species BNS and estuaries

Milieurapport Vlaanderen MIRA

Achtergronddocument


Thema kust & zee



Niet-inheemse soorten van het Belgisch deel van de Noordzee en aanpalende estuaria

Brakwatermossel

De brakwatermossel *Mytilopsis leucophaea* is een Amerikaanse soort die bij ons terecht kwam via scheepvaart. De soort is typisch voor riviermondingen en komt in België voor in de Schelde. De brakwatermossel veroorzaakt aangroei of 'biofouling' problemen in veel industriële sites in Europa, doordat de mossel zich gaan vestigen in koelwatersystemen. Het feit dat deze soort goed bestand is tegen schommelingen in temperatuur en zoutgehalte maakt het extra moeilijk om efficiënte tegenmaatregelen te nemen.



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Wetenschappelijke naam
Mytilopsis leucophaea (Conrad, 1831)

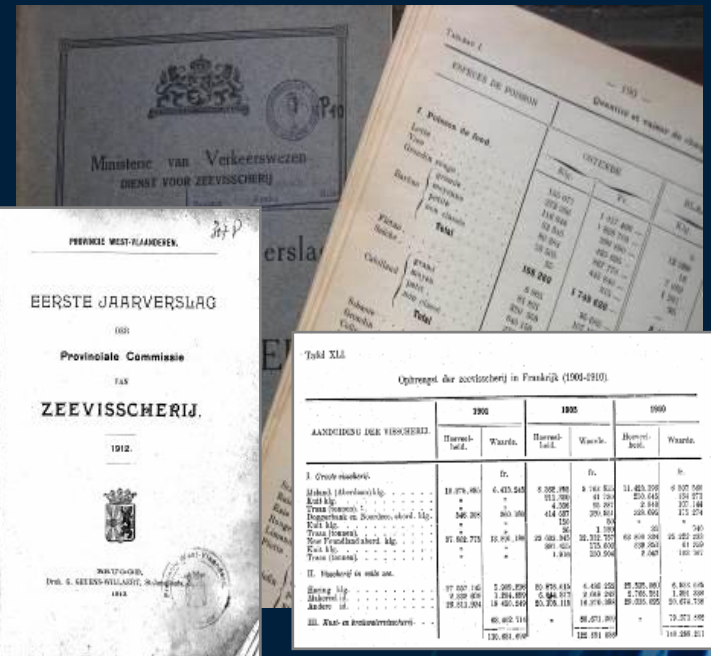
Oorspronkelijke verspreiding
Het genus *Mytilopsis* was 60 miljoen jaar terug al aanwezig in Europa [1]. Dertig miljoen jaar geleden werd Amerika vanuit deze Europese populaties gekoloniseerd. De brakwatermossel *Mytilopsis leucophaea* komt daar voor in estuaria langs de Atlantische kust, vanaf de Hudson rivier tot aan de Golf van Mexico. Ongeveer vijf miljoen jaar geleden stierf het genus *Mytilopsis* uit in Europa, maar deze mosselen belandden terug in onze streken door menselijk handelen [2,3,4].

Eerste waarneming in België
Ongeveer vijf miljoen jaar geleden verdween het genus volledig uit Europese wateren. Daarna was het wachten tot 1835, met waarnemingen van de brakwatermossel in de haven van Antwerpen [5].

Verspreiding in België
De soort komt bij ons vooral voor in de koelwatersystemen van enkele bedrijven en in rond de haven van Antwerpen [6]. In 1960 was de soort ook aanwezig in Nieuwpoort [7] en ook in het kanaal Gent-Terneuzen werd de soort al waargenomen [8].

Verspreiding in onze buurlanden
In Nederland komt de brakwatermossel voor in koelwatersystemen van enkele bedrijven aan de Schelde en de Rijn, maar er werden ook al exemplaren gevonden die voortgevoerd zaten aan natuurlijke oppervlakten zoals rotsen en hout, zoals bijvoorbeeld in het Kanaal Gent-Terneuzen, het Noordzeekanaal en het Deltagebied [8].

Vlaams instituut voor de zee



Ministere van Verkeerswezen
DIENST VOOR ZEEVISSCHERIJ

PROVINCIE WEST-VLAANDEREN

EERSTE JAARVERSLAG
1881
Provinciale Commissie
FAR
ZEEVISSCHERIJ.
1912.

Opbrengst der zeevisserij in Frankrijk (1900-1910)

AANDICHTING DER VISSERIJ	1900		1905		1910	
	Haarv.- totaal	Waarde	Haarv.- totaal	Waarde	Haarv.- totaal	Waarde
I. Grote visscherij		fr.		fr.		fr.
Makreel (Hollandisch) kg	19.074.981	6.423.247	5.592.981	8.164.812	11.483.292	6.507.589
Kool kg	*	812.284	161.784	223.442	124.873	124.873
Tromp (mossel) kg	*	4.208	80.247	2.844	2.844	27.144
Doggerhaai en Zwamhaai, streek kg	546.395	343.386	414.287	293.841	258.692	171.274
Kool kg	*	52	58	58	*	241
Tromp (mossel) kg	*	1.818	86.808.084	25.022.253	14.509	14.509
Kool kg	*	891.621	123.865	159.264	14.509	14.509
Tromp (mossel) kg	*	1.918	100.556	7.047	163.361	163.361
II. Visscherij in zee uit						
Bareng kg	37.020.142	5.295.839	80.875.619	4.466.250	95.225.385	6.816.616
Alskorrel kg	2.039.484	2.254.265	2.254.265	2.254.265	2.254.265	2.254.265
Alskorrel kg	38.212.284	14.462.549	83.278.118	18.916.385	85.035.255	35.674.738
Alskorrel kg	*	*	*	*	*	*
III. Kool en brackwatermossel	60.462.511	*	86.271.281	*	73.271.281	*
Totaal	126.611.618	*	126.611.618	*	126.611.618	*

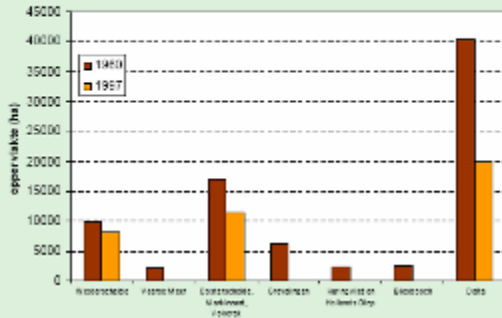
Historical fisheries data

Flanders Environmental Assessment (VMM) chapter 'Coast & Sea'

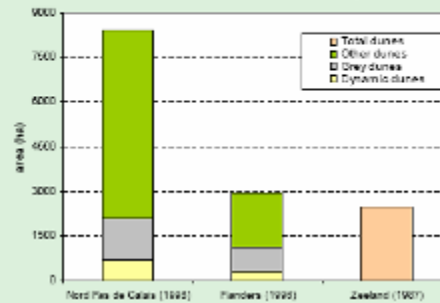
3. Indicators for Coast and Sea

Changes to significant coastal and marine habitats and species

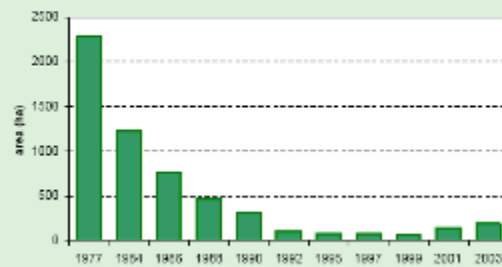
Change in mudflats in the Delta area—The Netherlands (1980-1997)



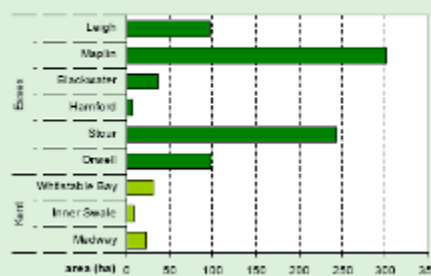
Area of coastal dunes in SAIL sub-regions



Change in Area of Seagrass habitat (Zostera) - Goeterscheide, Zeeland



Area of Seagrass habitat (Zostera) - UK - 1972



Coastal barometer:

keeping a finger on the pulse for the **Belgian** coastal area
(Coordination centre for Integrated Coastal Zone Management)

But also:

- **Southern North Sea**
- **Europe**: common methodology and indicators (*DEDUCE*).



Information & Communication



Provide objective, scientific information on marine research in Flanders/Belgium to:

- public at large
- education
- press
- ...

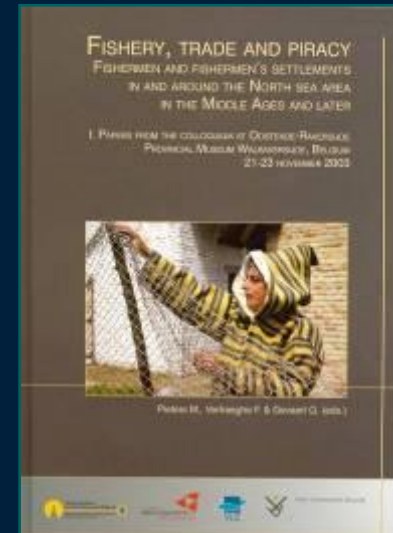
through:

symposia & workshops, public events, infodesk, questions/answers, publications, movies & picture galleries, educational project & teaching packages, posters, ...

Scientific awards



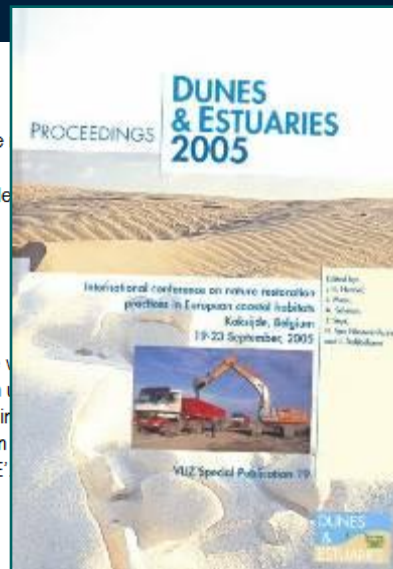
• Publications



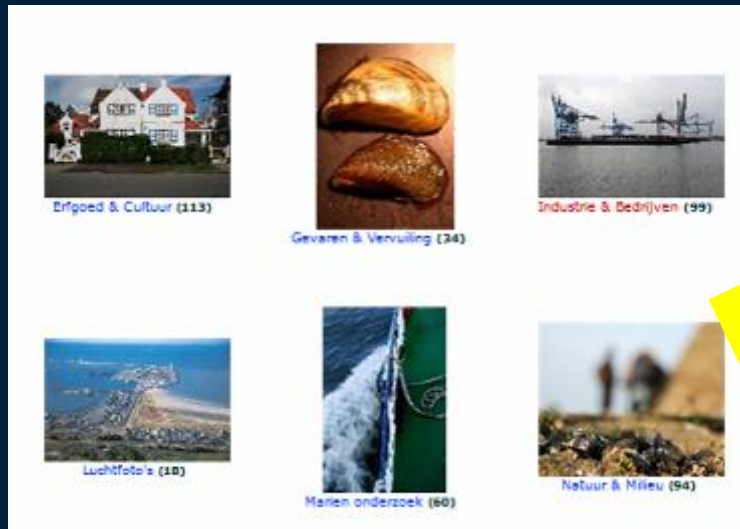
VLIZINE
 jrg. 9, nr. 6-7 (juni-juli 2008)
 Hét e-zine met praktische informatie over onderzoek en beleid door en voor Vlaamse wetenschappers.
 Deze gratis on line uitgave van het Vlaams Instituut voor de Zee vzw verschijnt maandelijks onder alle geïnteresseerden.
 V.U.: Jan Mees
 Redactie: Jan Seys, Nancy Fockedeij, Jan Haspelslagh en Ann-Katrien Lescauwraet
 Reacties naar jan.seys@vliz.be

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- 1. Kalender**
- 1.1. Nationaal Visserijmuseum heropend na grondige facelift
 - 1.2. Europees topevenement 'BioMarine' van 20 tot 24 oktober in Frankrijk
 - 1.3. Zomerwandelingen: natuur en erfgoed
 - 1.4. Giftige zeedieren in de picture tijdens Europees congres in Leuven
 - 1.5. Tour d'horizon: de visserij beleven in Ostende



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