

## IMIS: Integrated Marine Information System

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**Abstract:** The Flanders Marine Institute has taken the initiative to build an integrated information tool, called IMIS. The objective of this database is to provide information on all topics relevant to marine sciences - be it people with their expertise, institutions and their mandate, publications, etc. Different types of 'knowledge items' correspond to different modules in the system, each with their own entry into the database. These modules are (currently): Persons, Institutes, Literature, Journals, Conferences, Projects and Datasets. IMIS version 1.0 (accessible at: <http://www.vliz.be/vmcddata/Imis/index.htm>) is in operation and the VMDC (Flanders Marine Data and Information Centre) schedules a new enhanced version in 2002.

### Introduction

The Flanders Marine Institute, VLIZ was established in 1999. One of its primary goals is to provide the necessary tools for coordinated marine research in Flanders. The VMDC (Flanders Marine Data and Information Centre) has some more specific objectives, within this framework :

- To provide data and information to researchers, public authorities and other interested parties, in a suitable and prompt way
- To stimulate networking and to maximally centralise the nationally and internationally available data of research groups and governmental authorities
- To develop and maintain databases for interdisciplinary research, according to the established international standards
- To integrate various kinds of data, and perform consistency and quality controls

VMDC took the initiative to build a system, called **IMIS (Integrated Marine Information System)**, with multiple functionalities. Its main goal is to map the marine-scientific landscape in Flanders in its totality.

But how did this idea come up?

## **Historical development**

In May 2000, VLIZ decided to build an online information system, mainly based on the large literature collection the institute inherited from two former marine-scientific institutes.

In a first phase we looked at several commercially available cataloguing programmes. Soon we realised that cataloguing software is an excellent tool to store and retrieve information on titles available on library shelves. But records in a library catalogue do not tell us where the authors work, we cannot find out in what subject fields they are active, we do not know anything about their colleagues, and we cannot ask them for this information, as any contact data (address, e-mail, telephone) are missing.

In a second phase we started looking for software that could present all these variables in an integrated, concise format. Surprisingly, not much came up. What we found were still more library catalogues and many many software tools that could present us splendid directories of all kinds. Still, not one developer apparently had looked into the possibility of linking these two concepts into a brand new one: presenting all the different data sets in one interface!

This diagnosis, and the fact VLIZ had the inhouse expertise, led us to a drastical solution: building the whole product ourselves!

First, we agreed on some very important basics.

- The developed product should be as compatible as possible with other currently used platforms, and database programmes.
- The record structure should be compliant with the ASFIS-structure (Aquatic Sciences & Fisheries Information System). This was necessary as one of the VLIZ objectives is to become the ASFA Input Center for Belgium.
- The finished product will be distributed freely to all interested parties, especially in developing countries, with the objective to enable an international information network based on the same system everywhere.
- All data and information in the information system should be accessible to all users without thresholds; this meant implementing a web-based interface.
- Finally, the developed database should be an open system, without any thresholds to source codes, to make changes and improvements possible where and when needed.

The road we have chosen did mean hard work. As with any new product, problems come up at the least expected time and place, and a lot still needs to be done. However, after one year of hard thinking, programming, testing, refusing, restarting, hoping and with a

lot of cooperation and good humour, we were able to implement a first version of our 'integration idea'. IMIS 1.0 was born.

## **Technical description**

### **IMIS Integrated Marine Information System**

As explained already, IMIS is intended to be an integrated management system for a variety of information and data sources. The current system enables the management of:

- Library catalogue
- Directory of scientists and institutions
- Catalogue of research projects
- Metadata of ocean data sets
- Database of conferences and events

The integrated approach allows for cross-referencing between the information sources e.g. the Author field in the bibliographic database crosslinks to a record in the directory of scientists.

### **TECHNICAL SOLUTION DESCRIPTION**

IMIS is developed as an SQL-server relational database system running on a MS NT server. For web serving the Apache 1.3.9 web server software is used. Accordingly cgi-bin applications were developed in VBasic 6.0 and the library CGI VB 1.4 (Kevin O'Brien, 1996).

For data entry, forms were developed in MS-Access, linked to the SQL-server database using ODBC.

### **TECHNICAL REQUIREMENTS**

CONFIG 1: Less than 10 simultaneous users

- Database engine: In this case SQL-server is not required and can be replaced with MSDE that is included in MS-Office Professional 2000 (but is not installed by default).
- Data entry: MS-Access 2000
- OPAC: web server. Currently tested only with Apache web server (v. 1.3.9)

CONFIG 2: more than 10 simultaneous users

- Database engine: SQL-server 2000 Standard version (Academic Price: US\$1500)
- Data entry: MS-Access 2000
- OPAC: web server. Currently tested only with Apache web server (v. 1.3.9)

Note: it is possible to develop an IMIS system with another RDBMS (eg ORACLE, mySQL, Filemaker) if the RDBMS is ODBC compliant. However, this has not been tested and additional engineering work may be required.

## LIBRARY MANAGEMENT MODULE

The current IMIS library module allows for catalogue management only. In order to allow for possible collaboration with ASFA as an ASFA input centre, IMIS uses the ASFIS (ASFISIS-3) record structure and scroll-lists (controlled vocabulary) such as ASFA Thesaurus, ASFA Geographic Descriptors, ASFA Journal Title Monitoring List. VLIZ decided not to use the ASFA Taxonomic Authority list because it is too limited. VLIZ is considering the use of the ITIS Taxonomic Reference list (as is the case also for ASFA).

An IMIS bibliographic record allows for 3 levels: analytic, monographic and serial. An interesting advantage of the relation structure is that e.g. for 20 chapters of a book, the monographic information needs to be entered only once in IMIS, whereas ASFISIS will require 20 duplicates.

IMIS allows for the generation of a user notification when new records have been created in the catalogue.

IMIS plans to add several library functions in the near future:

### PATRONS

- add/edit patron info
- patron groups and rights
- address labels

### CIRCULATION

- charge/discharge/renew item to patron
- reserve/unreserved item for patron
- notifications

### ORDERS

- create/update/receive order

### SUPPLIERS

- create/edit supplier

Also SERIALS CONTROL will be added (verify arrival of serials and generate warnings of non-arrival)

## IMIS LIBRARY MODULE: TECHNICAL INFO

Vlizlit.mdb is started up in Access on the workstation:

**Authors:** reference list of authors (surname, first name, initials)

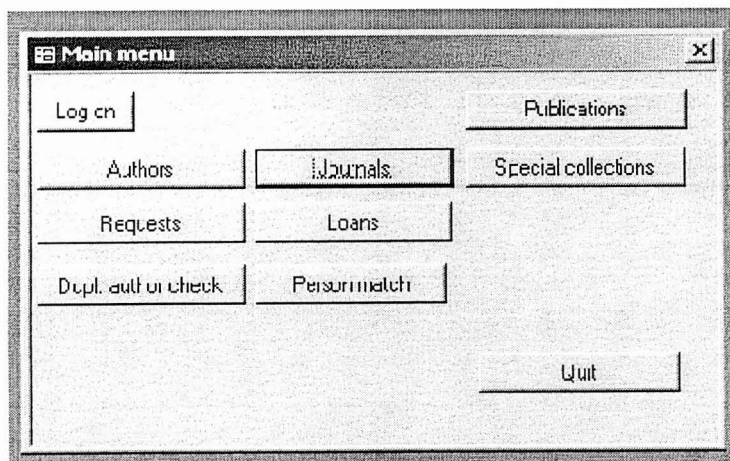
**Journals:** list of all journals and of the library holdings of these journals

**Requests & Loans:** library management tools

**Duplicate Authors:** checking tool to eliminate duplicate input

**Person match:** linking author names to person name in Persons-module

**Special collections:** enables identification of eg donated collections or specific bibliographies



**Journals:** main entry form to enter bibliographic descriptions

**JournalForm: Form**

ID: 4  In Antelope Public   
 Approved for distribution

JourTitle: Acta Adriatica

JourAbbrev: Acta Adriat.

Publisher: Institute of Oceanography and Fisheries

City: Split, Croatia

ISSN: 0001-5113 ASFACode: 000005

ASFA Inp. C.: CS Shelf Location: 1a

URL:

Holdings Management Remarks Memo

Order	From	Year	Volume	Number	Till	Year	Volume	Number
10	1932	1	1	1966	13	1		
20	1970	14	1	1978	17	15		
30	1978	19	1	1988	29	2		
40	1990	31	1	1999	41	suppl.		
50	2000	41	1					

Record: 11 of 3506

**Publications:** main entry form to enter bibliographic descriptions

Basic mandatory fields are situated in the main section. Several tab-sheets allow data input related to the specific bibliographic form of the record:

- **Analytic:** relation to the source publication
- **Abstracts:** English abstract and original language abstracts when available
- **Keywords:** Thesaurus, geographical terms, taxonomic terms and free keywords are added here as needed
- **Description:** standard description of physical features and general content description
- **Address:** corresponding author's address
- **Special collection:** enables identification of e.g. donated collections or specific bibliographies

**Main form and Analytic tab-sheet**

**Publications: Form**

BIBID: 21018 In library  Public

Bb Lcvc: AS Approved for distribution

Englsh Title: New evidences on the marine Holocene in the western Belgian coastal plain

OrigTitle:

Language title: English  Translated by input centre

Author	Ed	Cor	Order	
▶ Baeteman, C	1	1	1	Details

Analytic **Abstracts** | Keywords | Description | Address | Spec. Coll.

▶ AnaID: 17167

Publication Date: 1970

Volume: 07

Issue: 1

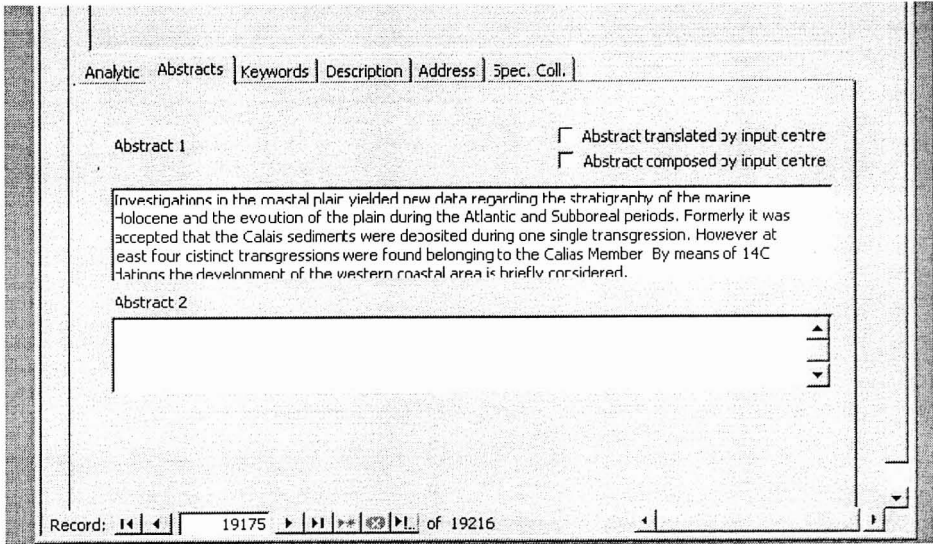
Pagination: 49-54

Journal: Bull. Belg. Ver. Geologie

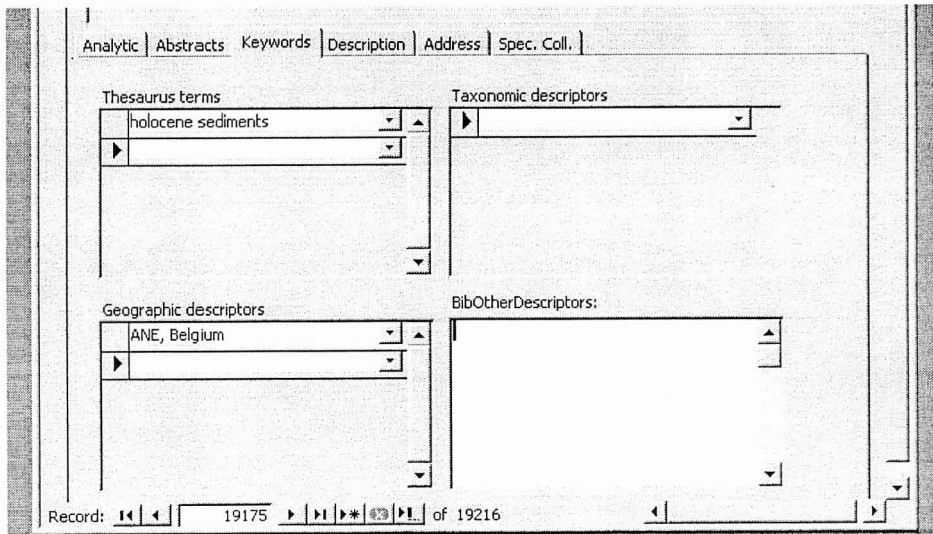
Book/Monograph:

Record: 14 | 19175 | 19216

**Abstracts tab-sheet**



**Keywords tab-sheet**





## Description tab-sheet

Analytic	Abstracts	Keywords	Description	Address	Spec. Coll.
Environment:	<input checked="" type="checkbox"/> Marine	<input type="checkbox"/> Brackish	<input type="checkbox"/> Freshwater		
Document type:	Journal article	Phys. medium:	Paper		
BibNotes:	<input type="text"/>				
Literary styles:	<input type="text"/>				
Languages:	English	<input checked="" type="checkbox"/> Summary			
	*		<input type="checkbox"/> Summary		

Record: 19175 of 19216

## Address tab-sheet

Analytic	Abstracts	Keywords	Description	Address	Spec. Coll.
AdrLine1:	Belgische Geologische Dienst				
AdrLine2:	Jennerstraat 13				
AdrLine3:	B-1000 brussel				
Country:	Belgium				
Phone:					
Fax:					
Email:	cecile.basteman@mineco.fgov.be				

Record: 19175 of 19216

## Special collections tab-sheet

Analytic | Abstracts | Keywords | Description | Address | Spec. Coll. |

▶	▼	▲
▶	▼	▲
▶	▼	▲

Record: 19175 of 19216

## WEB-BASED OPAC

The screenshot shows a web browser window titled "Integrated Marine Information System - Microsoft Internet Explorer". The address bar shows the URL "http://www.vliz.be/vmckdata/lms/bbsrch.htm". The page header features the Flanders Marine Institute logo and name. A vertical navigation menu on the left lists various sections: info, Background, Activities, Our coast..., Databases, IMIS, Ecosystem, Institute, Literature, Journal, Publications, Project, Dataset, About, NS Research, MASHFA, Experts, Medical Research, People, Calendar, Links, and Contact. The main content area is titled "IMIS - Search for publications". It includes a search form with the following fields: Title, Author (containing "mees"), Initials, Abstract/Title word, Word in any field, Publication year, and Acquisition date (dd/mm/yyyy)(note) with a dropdown menu set to "Later than". A "Search!" button is located at the bottom right of the form. Below the form, a "Note" section states: "This search option can be used to check recent acquisitions in the library. The date used is the date that the record was created in the database. For retrospective input (which is a main activity in the library, and will continue to be so for quite a while), this is obviously a later date than the one when the publication came to the library." The Windows taskbar at the bottom shows the Start button, several icons, and open applications including "Kleur ni...", "IMIS - M...", "Main menu", "Untitled...", "Publicat...", "Integra...", and "Docume...". The system clock shows "16:55".

The current web-based OPAC is quite basic allowing for searching in Title, Author, Initials (of author name), Abstract or Title word, Word in any field, Publication year and Acquisition date.

VLIZ Integrated Marine Information System: Literature - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://www.vliz.be/cg-bin/vmdc2web.exe

## Flanders Marine Institute

**IMIS: Literature**

first | prev. | Records 1 to 10 of 57 | next | last

De Troch, M.; Mees, J.; Wakwabi, E.O. (1998) Diets of abundant fishes from beach seine catches in seagrass beds of a tropical bay (Gazi Bay, Kenya). *Belg. J. Zool.* 128(2): 135-154. ([Details](#))

Mees, J.; Jones, M.B. (1997) The hyperbenthos. *Oceanogr. Mar. Biol. Ann. Rev.* 35: 221-255. ([Details](#))

Lock, K.; Beyst, B.; Mees, J. (1999) Circadiel patterns in the tidal plankton of a sandy beach in Zeebrugge (Belgium). *Belg. J. Zool.* 129(2): 339-352. ([Details](#))

De Troch, M.; Mees, J.; Papadopoulos, I.; Wakwabi, E.O. (1996) Fish communities in a tropical bay (Gazi Bay, Kenya): seagrass beds vs. unvegetated areas. *Neth. J. Zool.* 46(3-4): 236-252. ([Details](#))

Mees, J.; Reijnders, P.J.H. (1994) The harbour seal, *Phoca vitulina*, in the Oosterschelde: decline and possibilities for recovery. Pp 547-555 in Niennuis, P.H.; Smaal, A.C. (Ed.) *Hydrobiologia* 282/283. *The Oosterschelde Estuary (The Netherlands): a case-study of a changing ecosystem. Developments in Hydrobiology, 97*. Kluwer Academic Publishers: Dordrecht, The Netherlands. ([Details](#))

Cattrijsse, A.; Mees, J.; Hamerlynck, O. (1993) The hyperbenthic Amphipoda and Isopoda of the Voordelta and the Westerschelde estuary. *Cah. Biol. Mar.* 34: 187-200. ([Details](#))


Verslycke, T.; Janssen, C.; Lock, K.; Mees, J. (2000) First occurrence of the Pontocaspian invader *Hemimysis anomala* (Sars, 1907) in Belgium (Crustacea: Mysidacea). *Belg. J. Zool.* 130(2): 157-158. ([Details](#))

Start | Re: Kieu... | IMIS - M... | Main menu | Untitled ... | Publicati... | VLIZ In... | Docume... | 16:58

VLIZ Integrated Marine Information System: Literature - Microsoft Internet Explorer

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Address http://www.vliz.be/cgi-bin/vmdc2web.exe?action=Lit&LitID=300

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IMIS: Details of publication

### Diets of abundant fishes from beach seine catches in seagrass beds of a tropical bay (Gazi Bay, Kenya)

Full citation: De Troch, M.; Mees, J.; Wakwabi, E.O. (1998). Diets of abundant fishes from beach seine catches in seagrass beds of a tropical bay (Gazi Bay, Kenya). *Belg. J. Zool.* 128(2): 135-154.

Availability: Present in the library

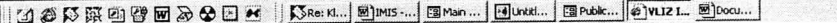
**Abstract**

The composition of the diet of 14 fish species that were common in beach seine catches over the seagrass beds of Gazi Bay (Kenya) was investigated. Three trophic guilds could be distinguished based on dietary diversity and on the numerical and gravimetric composition of the diet. *Herklotsichthys quadrimaculatus*, *Stolephorus indicus* and *Athennomorus duodecimalis* were planktivores. Their stomach fullness index was low and the diet was not diverse. The main food items were harpacticoid and calanoid copepods and brachyuran zoea and megalopae. *Apogon thermalis*, *Fowiera aurita*, *Paramonacanthus barnardi*, *Mulluoides flavolineatus*, *Lutjanus fulvillamma*, *L. argentimaculatus* and *Gerres acinaces* were benthivores, mainly feeding on small epi- and hyperbenthic prey. Their diet was very diverse and it was dominated by Amphipoda (Gammaridea), Tanaidacea and Mysidacea. Their fullness indices were low, but a little bit higher than those observed for the planktivores. A third group were the 'piscivores'. *Bothus myriaster*, *Fistularia commersonii*, *Sphyaena barracuda* and *Plotosus lineatus*. The dominant items in the food spectrum of these species were postlarval fishes and large nektonic invertebrates (gammaridean amphipods, mysids, shrimp and crabs). Their diet was not diverse and the fullness index was much higher than that of the other species examined. All other species caught were further classified according to the following feeding guilds: herbivores, planktivores, benthivores (epi- and hyperbenthivores) and piscivores. The ichthyofauna of Gazi Bay was clearly dominated by benthivores.

**Author(s)**

- De Troch, M.
- Mees, J.

Contact  
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In cases where a 'directory of scientists' record exists the user can click on to see the full description of the selected author:

VLIZ Integrated Marine Information Systems Person - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address <http://www.vliz.be/cgi-bin/vmdc2web?action=AutID&AutID=698> Links

**IMIS: Details on Person**

**De Troch, Marleen**

Initials: M.

**Institute**

[Universiteit Gent \(RUG\): Vakgroep Biologie, Afdeling Mariene Biologie](#)

Postal address K.L. Ledeganckstraat 35  
B-9000 Gent  
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E-Mail: [lsoldje\\_DeGrem@rug.ac.be](mailto:lsoldje_DeGrem@rug.ac.be)  
URL: [allserv.rug.ac.be/~qdsmet/MarBiolwebsite/](http://allserv.rug.ac.be/~qdsmet/MarBiolwebsite/)

**Direct contact**

Phone: +32-(0)9-264 52 14  
Fax: +32-(0)9-264 53 44  
E-Mail: [marleen.defroch@rug.ac.be](mailto:marleen.defroch@rug.ac.be)

**Publications in IMIS: [List](#)**

**Project(s)**

- [Ecologie van copepoden: structurele en functionele biodiversiteit in tropische zeegrasvelden\\_I](#)
- [Ecologie van copepoden: structurele en functionele biodiversiteit in tropische zeegrasvelden\\_II](#)
- [Effect van biogeografische isolatie op mariene biodiversiteit: harpacticoid copepoden in tropische zeegrasvelden als modelstudie](#)

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From here it is possible to click through to full information on the institution, to see what projects the researcher is working on, or to go back from here to a list of papers

VLIZ Integrated Marine Information System: Institute/Organisation - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www.vliz.be/cgi-bin/vmd2web.exe?action=InstID&InstID=13>

**Universiteit Gent (RUG): Vakgroep Biologie: Afdeling Mariene Biologie**

Institute: Universiteit Gent (RUG)  
Level 2/Department: Vakgroep Biologie  
Level 3/Lab: Afdeling Mariene Biologie  
Type: Scientific

**Address**

Postal address: K.L. Ledeganckstraat 35  
B-9000 Gent  
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Fax: +32-(0)9-264 53 44  
E-Mail: [isolde\\_DeGrem@rug.ac.be](mailto:isolde_DeGrem@rug.ac.be)  
URL: [allserv.rug.ac.be/~gdsml/MarBiolwebsite/](http://allserv.rug.ac.be/~gdsml/MarBiolwebsite/)

**People**


- [Baetens, Katryn](#)
- [Beyst, Bregje](#)
- [Bonne, Wandy](#)
- [Buyle, Gwen](#)
- [Calcoen, Peter](#)
- [Chavatte, Natascha](#)
- [Christ, Veerle](#)
- [Cloet, Belinda](#)
- [Cormejo, Maria Herminia](#)
- [Cornilly, Wim](#)
- [De Backer, Wim](#)
- [De Brabander, Els](#)
- [De Grem, Isolde](#)
- [De Mesel, Ilse](#)
- [De Ridder, Benjamin](#)
- [De Smet, G...](#)

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Address http://www.vliz.be/cgi-bin/vmd2web.exe?action=ProjID&ProjID=213

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**IMIS - Project details**

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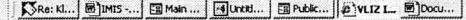
Ecologie van copepoden: structurele en functionele biodiversiteit in tropische zeegrasvelden I

---

Short name: Biodiversiteit van copepoden in zeegrasvelden  
 Reference number: 1128697N  
 Period: 10/1996 - 9/1998  
 Sponsor: Fonds voor Wetenschappelijk Onderzoek - Vlaanderen

**Institutions and Scientists**

- Universiteit Gent (RUG), Vakgroep Biologie, Afdeling Mariene Biologie
  - De Troch

Start |  |  | Re: kl... | IMIS ... | Main ... | Linkt... | Publik... | VLIZ L... | Docu... | 17:08



VLIZ Integrated Marine Information System: Literature - Microsoft Internet Explorer

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Address http://www.vliz.be/cgi-bin/vmdc2web.exe?action=Liter&Skijs=0&aName=De+Troch&aInk=M%2E Links

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### IMIS: Literature

De Troch, M.; Mees, J.; Wakwabi, E.O. (1998). Diets of abundant fishes from beach seine catches in seagrass beds of a tropical bay (Gazi Bay, Kenya). *Belg. J. Zool.* 128(2): 135-154. ([Details](#))

De Troch, M.; Mees, J.; Papadopoulos, I.; Wakwabi, E.O. (1996). Fish communities in a tropical bay (Gazi Bay, Kenya): seagrass beds vs. unvegetated areas. *Neth. J. Zool.* 46(3-4): 236-252. ([Details](#))

Chatterjee, T.; De Troch, M. (2000). Halacaridae (Acan) from Gazi Bay (Kenya): description and biogeography of three new and two known species. *Hydrobiologia* 427: 177-194. ([Details](#))

De Troch, M.; Fiers, F.; Vincx, M. (2000). Range extension and microhabitat of *Lightiella incisa* (Cephalocarida). *J. Zool. Lond.* 251: 199-204. ([Details](#))

Fiers, F.; De Troch, M. (2000). New Tetragnonicipitidae (Copepoda, Harpacticoida) from the Indo-Pacific. *Hydrobiologia* 434: 97-144. ([Details](#))

De Troch, M. (1995). Gemeenschapsanalyse en trofische organisatie van de ichthyofauna in een tropische baai (Gazi Bay, Kenya). [Community analysis and trophic organisation of the ichthyofauna in a tropical bay (Gazi Bay, Kenya)] BSc thesis, Universiteit Gent (RUG). 136 pp. ([Details](#))

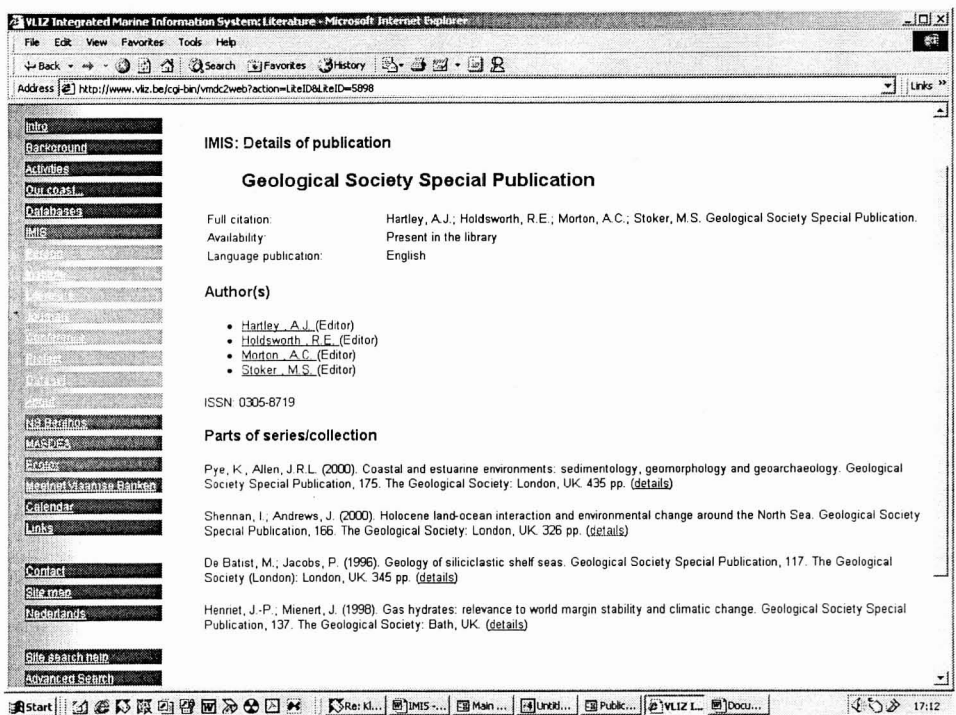
De Troch, M.; Gurdebeke, S.; Fiers, F.; Vincx, M. (2001). Zonation and structuring factors of meiofauna communities in a tropical seagrass bed (Gazi Bay, Kenya). *J. Sea Res.* 45: 45-61. ([Details](#))

De Troch, M. (2001). Ecologie van harpacticoide copepoden: structurele biodiversiteit in tropische zeegrasvelden. [Ecology of harpacticoid copepods: structural biodiversity in tropical seagrass beds.] PhD thesis, Universiteit Gent (RUG). 254 pp. ([Details](#))

De Troch, M.; Fiers, F.; Vincx, M. (2001). Alpha and beta diversity of harpacticoid copepods in a tropical seagrass bed: the relation between diversity and species' range size distribution. *Mar. Ecol. Progr. Ser.* 215: 225-236. ([Details](#))

Start | Re: kl... | IMIS... | Main... | Untid... | Publc... | VLIZ I... | Docu... | 17:09

For a monograph series, the separate monographs in the series are listed



For a monograph in a series, the series information is displayed

VLIZ Integrated Marine Information System: Literature - Microsoft Internet Explorer

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**IMIS: Details of publication**

**Holocene land-ocean interaction and environmental change around the North Sea**

Full citation: Shennan, I., Andrews, J. (2000). Holocene land-ocean interaction and environmental change around the North Sea. Geological Society Special Publication, 166. The Geological Society, London, UK. 326 pp.

Availability: Present in the library

Language publication: English

**Author(s)**

- Shennan, I. (Editor)
- Andrews, J. (Editor)

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**Monograph information**

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Hartley, A.J.; Holdsworth, R.E.; Morton, A.C.; Stoker, M.S. Geological Society Special Publication. ([Details](#))

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Separate records for chapters in a monograph are also listed

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### Parts of monograph

Ridgway, J.; Andrews, J.E.; Ellis, S.; Horton, B.P.; Innes, J.B.; Knox, R.W.O.B.; McArthur, J.J.; Maher, B.A.; Metcalfe, S.E.; Mitlehner, A.; Parkes, A.; Rees, J.G.; Samways, G.M.; Shennan, I. (2000). Analysis and interpretation of Holocene sedimentary sequences in the Humber estuary. Pp 9-39 in Shennan, I., Andrews, J. (Ed.). *Holocene land-ocean interaction and environmental change around the North Sea. Geological Society Special Publication, 166*. The Geological Society, London, UK. ([details](#))

Horton, B.P.; Edwards, R.J.; Lloyd, J.M. (2000). Implications of a microfossil-based transfer function in Holocene sea-level studies. Pp 41-54 in Shennan, I., Andrews, J. (Ed.). *Holocene land-ocean interaction and environmental change around the North Sea. Geological Society Special Publication, 166*. The Geological Society, London, UK. ([details](#))

Baillif, I.K.; Tooley, M.J. (2000). Luminescence dating of fine-grain Holocene sediments from a coastal setting. Pp 55-67 in Shennan, I., Andrews, J. (Ed.). *Holocene land-ocean interaction and environmental change around the North Sea. Geological Society Special Publication, 166*. The Geological Society, London, UK. ([details](#))

Shennan, I.; Andrews, J. (2000). An introduction to Holocene land-ocean interaction and environmental change around the western North Sea. Pp 1-7 in Shennan, I., Andrews, J. (Ed.). *Holocene land-ocean interaction and environmental change around the North Sea. Geological Society Special Publication, 166*. The Geological Society, London, UK. ([details](#))

Clarke, M.L.; Rendell, H.M. (2000). The development of a methodology for luminescence dating of Holocene sediments at the land-ocean interface. Pp 69-96 in Shennan, I., Andrews, J. (Ed.). *Holocene land-ocean interaction and environmental change around the North Sea. Geological Society Special Publication, 166*. The Geological Society, London, UK. ([details](#))

Macklin, M.G.; Taylor, M.P.; Hudson-Edwards, K.A.; Howard, A.J. (2000). Holocene environmental change in the Yorkshire Ouse basin and its influence on river dynamics and sediment fluxes to the coastal zone. Pp 87-96 in Shennan, I., Andrews, J. (Ed.). *Holocene land-ocean interaction and environmental change around the North Sea. Geological Society Special Publication, 166*. The Geological Society, London, UK. ([details](#))

Metcalfe, S.E.; Ellis, S.; Horton, B.P.; Innes, J.B.; McArthur, J.; Mitlehner, A.; Parkes, A.; Pethick, J.S.; Rees, J.; Ridgway, J.; Rutherford, M.M.; Shennan, I.; Tooley, M.J. (2000). The Holocene evolution of the Humber Estuary: reconstructing change in a dynamic environment. Pp 97-118 in Shennan, I., Andrews, J. (Ed.). *Holocene land-ocean interaction and environmental change around the North Sea. Geological Society Special Publication, 166*. The Geological Society, London, UK. ([details](#))

Rees, J.G.; Ridgway, J.; Ellis, S.; Knox, R.W.O.B.; Newsham, R.; Parkes, A. (2000). Holocene sediment storage in the Humber Estuary. Pp 119-143 in Shennan, I., Andrews, J. (Ed.). *Holocene land-ocean interaction and environmental change around the North Sea. Geological Society Special Publication, 166*. The Geological Society, London, UK. ([details](#))

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In the Conference module information on conferences and symposia is listed:

**Flanders Marine Institute**

**IMIS: Conference details**

**Studiedag: 'Beheer van kust en zee: beleidsondersteunend onderzoek in Vlaanderen'**

Organisers: Vlaams Instituut voor de Zee (VLIZ)  
City/Place: Thermane Palace, Oostende  
Country: Belgium  
Beginndate: 11/9/2001  
Enddate: 11/9/2001  
EMail address: [info@vliz.be](mailto:info@vliz.be)  
web site: <http://www.vliz.be>

Proceedings: Mees, J.; Seys, J. (2001) Beheer van kust en zee: beleidsondersteunend onderzoek in Vlaanderen: Studiedag, Oostende, 9 november 2001. [Coastal and marine management: policy supporting research in Flanders: Symposium, Oostende, 9 November, 2001] VLIZ Special Publication, 4. Vlaams Instituut voor de Zee (VLIZ): Oostende, Belgium. IV, 82 pp. (details)

Again, if Proceedings have been published, the references are listed in IMIS:

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IMIS: Details of publication

**Beheer van kust en zee: beleidsondersteunend onderzoek in Vlaanderen: Studiedag, Oostende, 9 november 2001. [Coastal and marine management: policy supporting research in Flanders: Symposium, Oostende, 9 November, 2001.]**

Full citation: Mees, J.; Sveys, J. (2001) Beheer van kust en zee: beleidsondersteunend onderzoek in Vlaanderen: Studiedag, Oostende, 9 november 2001. [Coastal and marine management: policy supporting research in Flanders: Symposium, Oostende, 9 November, 2001] VLIZ Special Publication, 4. Vlaams Instituut voor de Zee (VLIZ). Oostende, Belgium. IV, 82 pp.

Availability: Present in the library

Language original title: Dutch , title translated at input centre

Language publication: Dutch

Author(s)

- Mees, J. (Editor)
- Sveys, J. (Editor)

Monograph information

Publisher: Vlaams Instituut voor de Zee (VLIZ)

City: Oostende, Belgium

Volume in series: 4

Conference:

Title: Studiedag: Beheer van kust en zee: beleidsondersteunend onderzoek in Vlaanderen'

Organisers: Vlaams Instituut voor de Zee (VLIZ)

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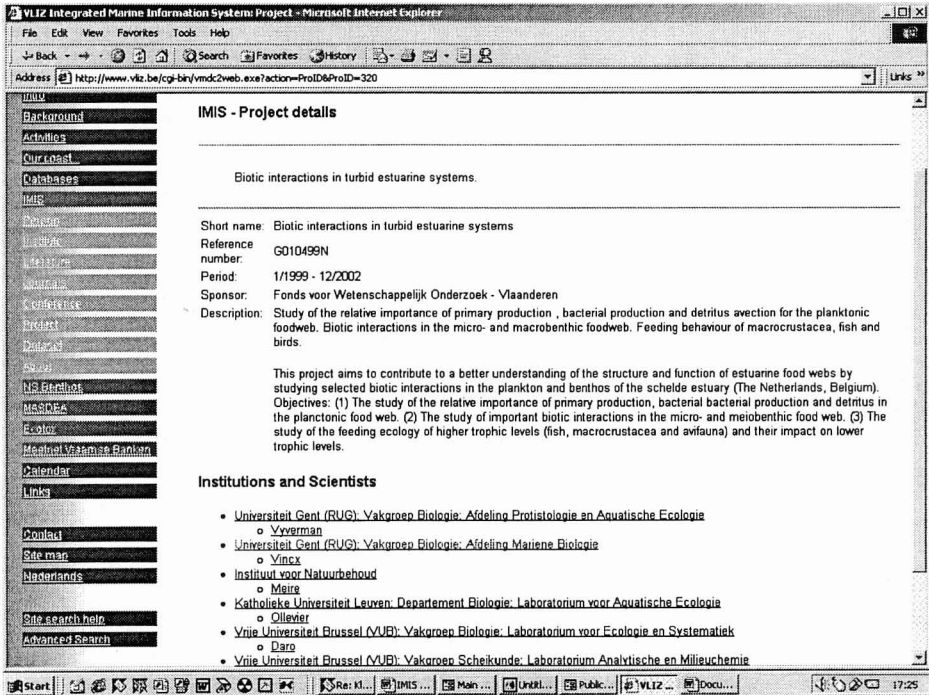
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The Projects module contains data regarding current and finished projects:



Again, links are available to the involved Institutes and persons:

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**Universiteit Gent (RUG): Vakgroep Biologie: Afdeling Protistologie en Aquatische Ecologie**

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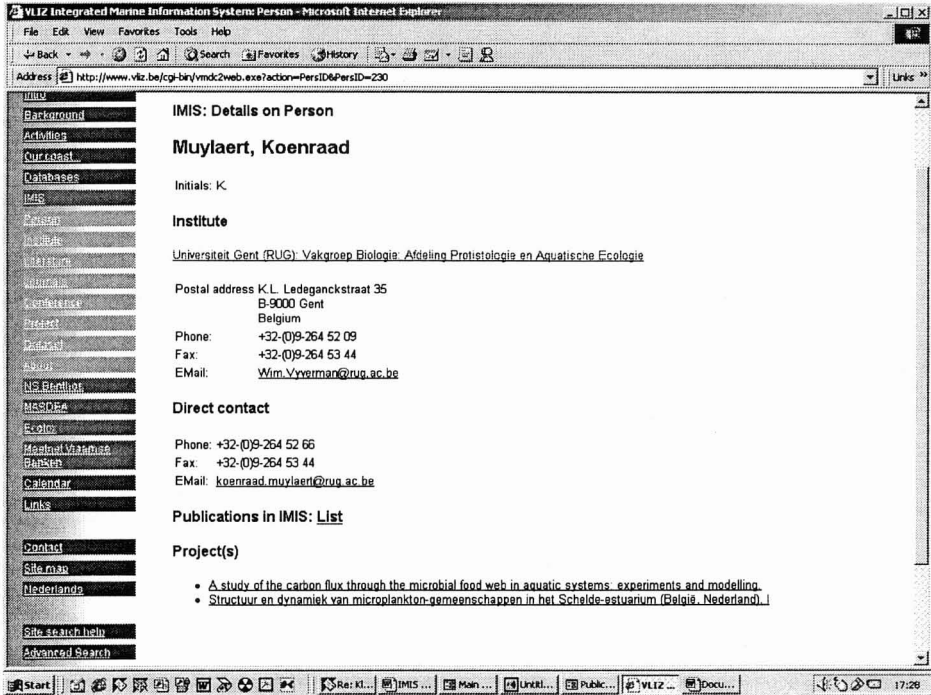
**People**

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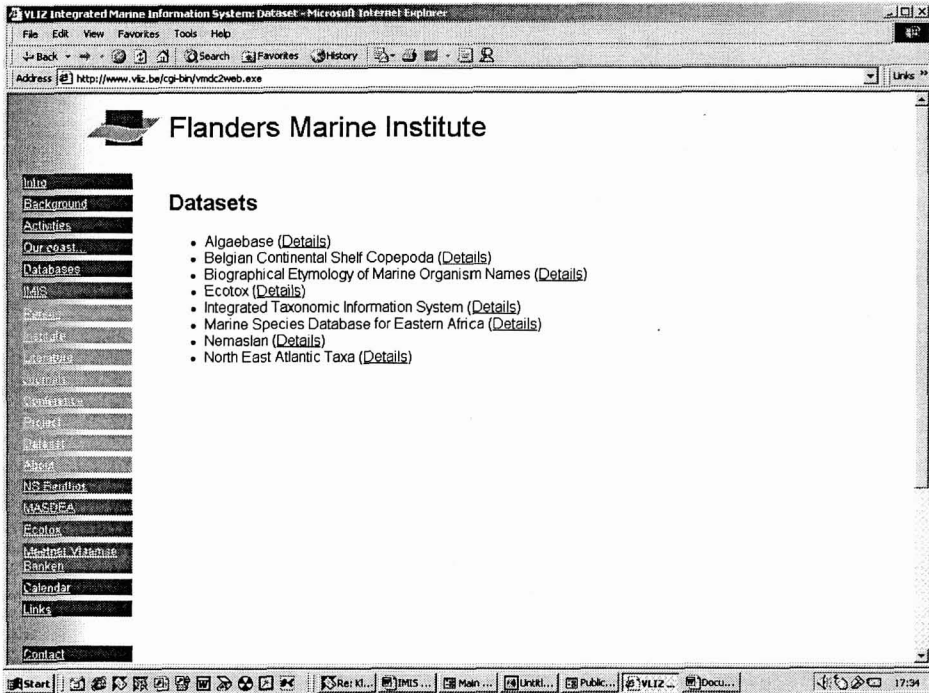
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Again, from these screens, access is given to all other modules, e.g. Persons



Finally, a list of available datasets is also presented, (experimental to date)



### The good, the bad and the future

Very quickly, the marine community in Flanders started using the new information system. From the beginning people highly appreciated the integrated presentation of marine information. One single access point (the web-interface of IMIS) provided all answers to the FAQ of our marine researcher: who, where, what, when, with whom, why? Coming from a situation where one had to spend days and weeks to gather this kind of data (by phone, fax, letters, personal communication, etc.), this new tool was a long-awaited asset.

Soon enough, however, some weak points in the system became visible:

- An integrated information system gives the user an impression of completeness, but the input of data remains an intensive, relatively slow process. So, many names, addresses, core publications and other important data are still missing.
- At the level of integration of the different modules, some obvious links were missing (e.g. the merging of publication lists of an author, publishing as Prudhoe, J. and Prudhoe, J.R.M.).

- Solutions were needed to link on line full text documents to records in the databases on a permanent basis.
- A solution was needed to link references to a printed article, as well as to the same article published on a CD-ROM (or on another physical form).
- Users notified us of the need for a two-way information management: identified remote users must be able to manage and add information to the system, and have the ability of extracting data and references in a personalised format.

All these problems and other flaws of the system needed to be resolved, as well on the level of data gathering, input management as database structure and functionality. So the decision to write version 2 of IMIS was an obvious one.

However, as IMIS 1.0 proves to be a widely used and appreciated tool within the Flemish marine community, we can give the necessary time and attention to the writing and implementing of this new version. Due to the fact IMIS already exists and works, the Flemish marine community is rapidly moving towards a similar model of coordination and structural contacts, as well with VLIZ as with each other. The massive feedback we receive from all users proves that the tool was needed, but also that it is far from perfect, and needs a lot of attention to grow into a strong valuable information tool. We believe this is possible, and that integrated information management will be the best choice for the future.

